

Biodiversity Protection in an Aspiring Carbon-Neutral Society

A Legal Study on the Relationship between Renewable Energy
and Biodiversity in a European Union Context

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Abstract

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There is a vision in the EU for a transition to a low carbon society, including a carbon-neutral energy system, containing a high share of renewable energy. However, this vision is not isolated from other political goals, such as halting the loss of biodiversity by 2020. Both of these goals are accompanied by EU legislation promoting their respective aims.

One of the central challenges, in light of this transition, is the very nature of the legal system – that it is rather fragmented – both regarding the substantive law applicable to renewable energy activities and the legal processes that renewable energy activities face. The aim is therefore to discuss certain challenges arising from the fragmented legal system applicable to renewable energy activities.

The dissertation is based on EU and Swedish law. First, I investigate the EU's competence in the field of renewable energy and address how such policy may better reflect the protection of biodiversity. Thereafter, in a Swedish context, I analyse the relationship between protection of biodiversity and promotion of renewable energy. Finally, I address the problems arising from the fragmented legal procedures of renewable energy activities, with the main example of wind power installations and new transmission lines.

In general, this study suggests that the current system lacks consistency between renewable energy and nature protection legislation and there is a coordination problem with regards to the permit processes of the development of renewable energy activities. These conclusions point towards a need for a broader perspective on the development of renewable energy activities, which could include: a more integrated planning system for renewable energy activities; exploring the use of derogation rules from the Water Framework Directive; and a more integrated EU renewable energy policy with specific sustainability criteria.

Keywords: Environmental law, nature protection, renewable energy, biodiversity protection, environmental impact assessment

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To Laurence and Hjalmar the Love in my life

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1. Introduction

1.1 Introduction to the topic

1.1.1 Energy and environmental political background

The energy system has evolved over time in response to geological and technological discoveries, energy crises and political leadership. Motivated by advances in knowledge of the energy system's impact on the environment (especially the fossil fuel-intensive energy system's impact on the climate) political leaders have sought to influence the direction of development of energy systems.

It is estimated that almost 80 % of the European Union's greenhouse gas (GHG) emissions originate from fossil fuel (energy) related activities. Hence, the EU can significantly reduce its GHG emissions by switching to renewable and carbon-neutral sources of energy.¹ The EU has therefore focused its climate change mitigation policies in the energy field.² The EU has taken steps towards decreasing the Union's GHG emissions into the biosphere by introducing the 20-20-20 targets with regard to cuts in GHG emissions and increasing energy efficiency and renewable energy.³ In the *EU Energy Roadmap 2050*, a vision of a carbon-neutral energy system by 2050 is presented.⁴ The Roadmap describes different scenarios that explore routes

¹ This dissertation focuses on the increase of renewable energy activities even though the EU will plan to reduce its GHG emissions by energy efficiency measures and by switching to non-renewable energy sources such as nuclear power, or in the transition period, to natural gas, which (arguably) emits less GHG emissions than oil and coal. *Carbon capture storage* is also considered part of a carbon-neutral energy system. However, this dissertation is limited to only looking at the increase in renewable energy production, even though a carbon-neutral energy system may most likely not be composed of only renewable energy installations. See COM(2010) 639 final, p. 2.

² However, energy politics is in addition to climate change concerns, motivated by issues of energy security and the functioning of the internal energy market. The Commission has expressed that energy is very important for society and that the actors in society are dependent on "safe, secure, sustainable and affordable energy", Ibid., p. 2.

³ The European Council, *Conclusions of the Presidency*, 2007, these goals were later adopted in: *The EU Climate and Energy Package*, including: The Emission Trading Directive (2009/29/EC); Decision 406/2009/EC; and the Renewable Energy Directive (2009/28/EC).

⁴ This strategy presents that the EU is committed to reducing the union's GHG emissions to 80-95 % below 1990 levels by 2050; see COM(2011) 885 final, p. 2.

towards decarbonisation of the energy system.⁵ All scenarios suggest that renewable energy will move to the centre of the energy mix in Europe and become a crucial part of a carbon-neutral energy system.⁶

More recently, the EU has created a policy framework for climate and energy in the period from 2020 to 2030 where it is proposed that the Union's reduction target shall be 40 % in 2030 (in relation to emissions in 1990).⁷ The target for renewable energy is suggested to be 27 % and the idea is that the GHG reduction target of 40 % should by itself encourage a larger share of renewable energy without its being legally binding on Member States.⁸ However, this approach has been criticised.⁹ An evaluation of the Renewable Energy Directive, carried out in 2014, indicated that binding national targets have overall been a successful strategy to increase renewable energy in the EU's final energy consumption. In the evaluation it is suggested that a stable post-2020 policy framework with binding targets is crucial for a positive development of renewable energy after 2020.¹⁰ It has yet to be seen whether a new legal framework, with binding targets for renewable energy, is to be developed in the future. This dissertation is based on the 20-20-20 targets where the renewable energy targets are legally binding.¹¹

The focus of this dissertation is solely on the increase of renewable energy activities, even though there are other measures that are also crucial in order to fulfil the climate objectives.¹² In this context, a total transition of the energy system by 2050 requires a rapid increase in *renewable energy activities*.¹³ The European Union has adopted a number of legislative acts to speed up the transition of the energy system. The most important for the introduction of more renewable energy in the energy system is the Renewable Energy Directive, which stipulates binding renewable energy targets for the individual Member States.¹⁴ The targets are to be fulfilled by 2020, but it is left

⁵ See COM(2011) 885 final, p. 4 et seq. In all the scenarios the analysis shows that renewable energy will constitute the biggest share of energy supply in 2050.

⁶ Ibid., p. 7.

⁷ See COM(2014) 15 final, p. 5.

⁸ Ibid., p. 6.

⁹ See, for example: Climate Action Network Europe (CAN), Greenpeace and WWF, *Effective Governance for the EU 2030 Renewable Energy Target: NGO Policy Recommendations*, 2015.

¹⁰ See CE Delft, Ecologic Institute, *Mid-term evaluation of the Renewable Energy Directive A study in the context of the REFIT programme Delft*, April 2015, p. 97. See also: COM(2015) 293 final, p. 14.

¹¹ As codified in the Renewable Energy Directive.

¹² For example, energy efficiency measures, carbon-capture-storage facilities, and nuclear energy etc.

¹³ The term, "renewable energy activities", is not an established concept. I define it in this dissertation to include: production, distribution and storage units of renewable energy. This dissertation focuses primarily on production and distribution units of electricity.

¹⁴ The concept "energy system" is used throughout this dissertation; however, the focus is primarily on renewable electricity production and distribution.

to the individual Member States to achieve that increase as they see fit.¹⁵ Member States are encouraged to establish support schemes with the aim of increasing the share of renewable energy.¹⁶

The transition of the energy system is not only motivated by climate objectives, it is also motivated by issues of energy security and the functioning of the internal energy market.¹⁷ The EU has expressed the importance of an integrated European electricity system in EU documents and proposals. The *Commission's Communication on energy infrastructure priorities for 2020 and beyond*, suggests that “adequate integrated and reliable energy networks are a crucial prerequisite, not only for EU energy policy goals, but also for the EU's economic strategy”.¹⁸ It points out that if the energy infrastructure is not transformed, the rapid development of renewable energy production is hindered. For an increase in renewable energy production, the grid must be strengthened and extended.¹⁹ Hence a transition of the energy system needs, in addition to renewable energy installations, necessary grid and storage infrastructure. This is further emphasised in Article 16 of the Renewable Energy Directive where it is stated that Member States have to ensure guaranteed or prioritised access to the grid for electricity derived from renewable sources. This implies that not only are production sites needed to reach the goals set out in the Directive, but also new grid infrastructure.

The climate change objectives behind this push for an increase in renewable energy production and distribution networks are not the only environmental goals that are to be achieved in the near future. In another European context the EU has pronounced in its 2020 headline target to halt the loss of biodiversity, more precisely:

“Halting the loss of biodiversity and the degradation of ecosystem services in the EU by 2020, and restoring them in so far as feasible, while stepping up the EU contribution to averting global biodiversity loss.”²⁰

The topic of this dissertation is located in the intersection between energy (climate) and environmental law. The main aim of this dissertation is to in-

¹⁵ Member States, however, are bound by certain general EU principles and in Article 13 of the Renewable Energy Directive it is stipulated that the rules and procedures governing renewable energy activities must be necessary and proportionate. This is further discussed in Section 2.5.6.

¹⁶ See Article 3(3)(a) of the Renewable Energy Directive. Sweden's support scheme is an electricity certificate system; see Lag (2011:1200) om elcertifikat (here referred to as the Electricity Certificate Act).

¹⁷ See COM(2010) 639 final, p. 2. However, this study will not further explore those motivations.

¹⁸ COM(2010) 677, p. 4.

¹⁹ *Ibid.*, p. 6.

²⁰ See COM(2011) 244 final, p. 2. The EU strategy has its roots in the Convention on Biological Diversity (CBD), which adopted a global Strategic Plan for biodiversity (2011-2010), adopted at the COP 10, in Nagoya 2010.

investigate what the legal preconditions are towards meeting the climate objective of increasing the share of renewable energy, without neglecting the biodiversity objective. However, these equally important policy goals seem uncoordinated at the EU level.

Even though the renewable energy and biodiversity legislation are separate entities, the issues are closely interlinked. As atmospheric temperature rises and climate change proceeds rapidly, the Earth's ability to sustain its biodiversity becomes increasingly difficult. It is therefore evident that the goals of mitigating climate change and promoting biodiversity are aligned. However, proposed solutions to the two issues are not necessarily complementary and are sometimes even at odds with each other.

Sweden will serve as an example of how the EU's energy and environmental policy has been implemented into its Member States.²¹ Swedish climate and energy politics build on the same pillars as the energy cooperation in the EU. In essence, it aims at integrating ecological sustainability, competitiveness and security of supply.²² The Swedish version adds to the ecological aspects as the EU pillars only mention *sustainability*.²³

In the Swedish context, there are a number of environmental quality objectives established by the Swedish Riksdag, which are relevant in light of the fulfilment of the climate and biodiversity objectives, respectively. Already in the climate objective, *Reduced Climate Impact*, it is emphasised that reaching that goal must be "achieved in such a way and such a pace that biological diversity is preserved".²⁴ There are a number of environmental objectives with the aim of protecting biodiversity where *Flourishing Lakes and Streams*,²⁵ and *A Rich Diversity of Plant and Animal Life*,²⁶ are of interest for the purpose of this dissertation.²⁷ However, these objectives are not considered to be possible to reach in practice, which shows that the development is going in the wrong direction.

Even though the EU energy policy documents often use renewable energy interchangeably with "sustainable" energy, there has not been much reflection on the actual impact of renewable energy on biodiversity.²⁸ It is only more recently, the EU Commission has pointed out, that despite renewable energy, *per se*, being an environmentally friendly energy source compared to

²¹ The major Swedish political parties have recently decided that Sweden should be carbon-neutral by 2045 and in 2040 the electricity system should consist of 100 % renewables, see: the Swedish Energy Agreement (Energioverenskommelsen) of 10 June 2016.

²² See prop. 2008/09:162, p. 19.

²³ See COM(2006)105 final, p. 17.

²⁴ For a description of the objective, see Swedish Environmental Protection Agency, *Sweden's Environmental Objectives – An Introduction*, p. 9.

²⁵ *Ibid.*, p. 16.

²⁶ *Ibid.*, p. 24.

²⁷ These objectives are described in Section 4.2.1.

²⁸ See COM(2010) 639 final; and COM(2001) 264 final.

fossil fuels, it is not necessarily without impact on biodiversity.²⁹ The Commission acknowledges that renewable energy activities may raise sustainability concerns because of their impact on biodiversity and the environment in general.³⁰

1.1.2 Impact on biodiversity from renewable energy production

1.1.2.1 Introduction

This dissertation proceeds from the assumption that renewable energy is typically better for the environment than non-renewable energy.³¹ According to the IPCC, conventional fossil fuels have a much larger impact and pose a much greater risk to biodiversity.³² Fossil fuel production, in addition to chemical pollution, is also associated with the risk of serious accidents, like the 2010 Deepwater Horizon Oil Spill in the Gulf of Mexico, and also has an increasingly large physical impact on land use, as witnessed in the Tar Sands developments in western Canada. However, assuming that our energy system is going to develop into one containing a large share of renewable energy, there are problems that need to be discussed.³³

In the current era, the problem of climate change has added to the discussion of fossil fuels versus renewable energy, with both positive and negative consequences. According to the IPCC, climate change is one of the greatest threats to biodiversity. The 4th Assessment Report of the IPCC suggests that, as the global mean temperature rises towards a critical threshold of 2 degrees Celsius above pre-industrial levels, substantial changes to the structure and function of ecosystems (both terrestrial and marine) will occur and some species will be exposed to increasing risks of extinction.³⁴

Thus, when promoting the development of renewable energy, it is important to ensure that those measures do not impact on biodiversity in a way that jeopardizes resilient ecosystems. The EU's vision of a carbon-neutral energy system requires large-scale production of renewable energy and the building of new transmission lines, all of which have some impact on biodiversity. It is important to balance these interests in the best way.

²⁹ This is arguably an understatement as some renewable energy has a large environmental impact; for example, hydro power. See: COM(2012) 271 final.

³⁰ See COM(2012) 271 final, p. 11.

³¹ The acknowledgment that renewable energy resources are better than fossil fuels has long been acknowledged; see, for example: OECD, *Environmental Impacts of Renewable Energy*, 1988; and International Energy Agency, *Benign Energy? The Environmental Implications of Renewables*, 1998.

³² See IPCC, *Climate Change 2007: Synthesis Report*, 2007.

³³ The impact from renewable energy sources on biodiversity was acknowledged in the report from 1988; see: OECD, *Environmental Impacts of Renewable Energy*, 1988, p.7.

³⁴ See IPCC, *Climate Change 2007: Synthesis Report*, 2007

Earlier it was to a large extent the physical impact that was acknowledged, suggesting that renewable energy primarily produced noise and had a visual impact and required large areas of land (or water) and material inputs. Fossil fuels were suggested to have an impact of a chemical nature, emitting GHG emissions and to contribute to acid rain and water pollution, etc.³⁵ In addition to the physical impact that renewable energy entails, it has also been acknowledged that it has some impact on biodiversity. For example, hydropower generation and ocean energy extraction was acknowledged to have an impact on fish migration and aquatic life, and harvesting biomass was acknowledged to have an effect on soil erosion, and the leaking of fertilizers.³⁶

Today we have a more nuanced picture and it is widely understood that renewable energy production is also associated with some indirect chemical pollution, when assessing the whole life cycle of the energy source, from production to recycling in addition to its physical impact and potential impact on biodiversity. The following sections describe in more detail the associated impact on biodiversity from wind power, hydropower and transmission lines.

1.1.2.2 Wind power's effect on biodiversity

As wind power has started to become more common, so have the scientific studies of its impact on biodiversity. It is primarily birds and bats that are considered to be the most affected by wind power installations through the risk of disturbance and collisions. It is, however, important to remember that birds (and bats) are not only disturbed by wind power; many other man-made structures also give rise to bird collisions, habitat fragmentation and disturbance etc.³⁷ In a study from 2006, the impacts on birds and bats from renewable energy production were assessed. The report suggested that displacement, exclusion and collision mortality were the main potential hazards to birds and bats from wind power installations.³⁸ The results of studies of wind power's effect on birds and bats are, however, not consistent. There are cases showing that birds get "habituated" to wind farms a year after their construction, but there are also studies that show birds have disappeared from areas where wind farms are located.³⁹

³⁵ OECD, *Environmental Impacts of Renewable Energy*, 1988, p. 7.

³⁶ See OECD, *Environmental Impacts of Renewable Energy*, 1988, pp. 9–10. It is important to remember that in 1988 the renewable energy production was mainly in the form of hydro power and the burning of biomass.

³⁷ Such as power lines, tall buildings, windows (e.g. glass corridors), fences and communication towers etc. See Drewitt, A. L. and Langston, R. H. W., *Annals of the New York Academy of Sciences*, vol. 1134, 2008, p. 233.

³⁸ Hötter, H., et al., *Impacts on biodiversity of exploitation of renewable energy sources: the example of birds and bats*, 2006, p. 6.

³⁹ *Ibid.*

The location of the wind power park is of importance in order to avoid impacts on birds.⁴⁰ If located close to mating, migratory routes, feeding grounds, or located in a way that creates a barrier between such sites, the risk is higher than if located further away from such areas.⁴¹ However, it also depends on the type of bird species; some species are more susceptible to collisions than others.⁴² With regard to the collision and disturbance risk of migratory species, the time of year also affects the risk.⁴³ At peak migration time the risk, of course, is higher.

Studies show that the size of a structure (not only wind power turbines) has an effect on the risk of collisions. Lower structures tend to have a lower risk of bird collisions. Also the use of lights on tall structures has an impact, where birds that are attracted to the lights are more likely to collide with the structure. It is not certain what type of light that attracts certain birds, but studies have shown that the intensity and flash duration time are of more importance; the longer the time between flashes the lower the risk. However, the risk is not only of bird mortality. There is a risk that a bird's increase in energy expenditure (due to the disturbance) implies that a migratory bird cannot make it to its final destination.⁴⁴

There are a number of mitigation measures that are technologically possible and may limit the impact on bird species. It is suggested that *location*, *design* and *timing* are important factors to mitigate the negative impacts of renewable energy installations on biodiversity.⁴⁵ For example, the temporary shutdown of turbines;⁴⁶ placing turbines in clusters or along (instead of across) migration routes, and not in a way that fragments areas that birds traverse (for example, from breeding areas to feeding areas);⁴⁷ the minimum use of lighting (used for navigation and aviation) and scaring devices.⁴⁸ There is also technology available that through radar-activation could turn

⁴⁰ The Commission suggests that strategic planning is an important tool to avoid potential impact on biodiversity, and that appropriate siting is the main critical point of departure; see European Commission, *EU Guidance on wind energy and Natura 2000*, 2011, pp. 29 et seq and 47 et seq.

⁴¹ See Drewitt, A. L. and Langston, R. H. W., *Annals of the New York Academy of Sciences*, vol. 1134, 2008, p. 235.

⁴² *Ibid.*, p. 236.

⁴³ *Ibid.*, p. 237.

⁴⁴ *Ibid.*, pp.234–235.

⁴⁵ Bertzky, M. et al., *Impacts of climate change and selected renewable energy infrastructures on EU biodiversity and the Natura 2000 network*, 2010, pp. 18–22.

⁴⁶ However, such mitigation measures are not commonly implemented and it is not certain that they will limit the collision risks, though it is suggested that it is reasonable to assume that such measures would imply less risk; see Drewitt, A. L. and Langston, R. H. W., *Annals of the New York Academy of Sciences*, vol. 1134, 2008, p. 253.

⁴⁷ Such spacing may encourage flocks of birds to avoid the turbines by flying around them; *Ibid.*, pp. 253–254.

⁴⁸ Such minimum a lighting measure is likely to reduce the likelihood of disorientation of birds. However, scaring devices may not be suitable as it disturbs the species and may result in habitat loss; *Ibid.*, p. 254.

off turbines as birds approach.⁴⁹ Thus there are ways that wind power plants can be planned and constructed more sustainably.⁵⁰ Drewitt and Langston suggest that, even though the collision mortality at the individual wind power site may not give rise to a population decline, there may be a cumulative impact on the species from the total wind power installations in the area.⁵¹ It is important that this is acknowledged early in the process of the transition of the energy system.

1.1.2.3 Hydropower and its effect on biodiversity

Hydropower's effects on aquatic ecosystems have been known for a long time and there are a large number of studies regarding its associated effects. This presentation provides a general overview of the associated effects on biodiversity.

One of the largest environmental problems associated with hydropower is its barrier effect – bodies of water that are naturally connected are divided into separate units – which implies that movement of fauna and the transport of sediments are hindered due to the fragmentation effect of installations.⁵² The barrier effect of migratory fish is one of the most known effects. The hydropower installation hinders fish in migrating upriver to their reproduction sites. Eels, salmon and trout are common species that are affected both by the barrier effect and by the mortality risk of traveling downstream, as they may be killed in the turbines.⁵³

Fish are also affected by flow levels. If the minimum water flow regulation is not regulated correctly, it may imply that species reproduction is affected; that fish eggs are dried out or flushed away.⁵⁴ The hydropower companies compensate for the loss of fish populations by planting fish stock. However, according to some research this also gives rise to negative effects on the aquatic ecosystem.⁵⁵

Hydropower installations and associated dams also affect the hydrology, as the natural flow is changed by dams and regulated water flow, which changes the hydrological and morphological structures, which in turn changes aquatic habitats.⁵⁶ Seasonal variations in natural water flow are crucial for

⁴⁹ Such technologies need to be better tested; *Ibid.*, p. 254.

⁵⁰ See also: Hötter, H. et al., *Impacts on biodiversity of exploitation of renewable energy sources: the example of birds and bats*, 2006, p. 7.

⁵¹ The authors also point out that there are limited studies on the effects on the population from wind power. See Drewitt, A. L. and Langston, R. H. W., *Annals of the New York Academy of Sciences*, vol. 1134, 2008, pp. 238 and 250–252.

⁵² See the Swedish Agency for Marine and Water Management, Rapport 2013:10, p.25.

⁵³ *Ibid.*, p. 50 et seq.

⁵⁴ By regulated correctly I mean both with regard to the amount of water that is spilled and also with regard to seasonal flows, where the water flow should be as close to natural flows as possible. *Ibid.*, pp. 52–53.

⁵⁵ *Ibid.*, p. 54.

⁵⁶ Drained riverbeds or reduced water flow give rise to large impacts on species, both benthic species and fish; *Ibid.*, pp. 27, 43, 47 et seq. Hydropower installations may also give rise to

the various processes in a water system so it is therefore important to keep flows as close to the natural fluctuations as possible in order to protect biodiversity in the waterways.⁵⁷

In sum, hydropower gives rise to a large impact on aquatic ecosystems; both hydrological and morphological changes which affect biodiversity negatively.⁵⁸ The mitigation measures that are commonly proposed today are primarily to limit the barrier effect that installations cause and its hydrological and morphological impact. Thus fauna passages, fish ladders, lattices, and minimum water flow regulations are common mitigation measures. However, these mitigation measures may not always lead to desired results.⁵⁹

1.1.2.4 Transmission line infrastructure and its effect on biodiversity

The potential impact on biodiversity from transmission lines may not be as widely known as the associated impact from wind power and hydropower. However, depending on where the transmission line is located, such infrastructure may have a range of potential impacts.

In *Ecology Guidelines for Electricity Transmission Projects* potential impacts from grid infrastructure are presented.⁶⁰ The Report suggests that potential ecological impacts, in relation to habitats, are: habitat loss (direct through land take for structures etc.); habitat damage (during construction etc.); habitat fragmentation (of sites or corridors etc.); and change of hydrology of wetland habitats. With regard to species protection, transmission lines may give rise to: hazards to birds (collision and/or electrocution); loss of species (during construction and land takes); disturbances associated with the construction phase (pollution of watercourses and noise); disturbance during operation (increased human activity during maintenance and man-

regulated lakes, which implies that the aquatic ecology changes due to the change in water level during the season; *Ibid.*, p. 34.

⁵⁷ In some cases, stretches of the river are totally dried out, if the hydropower operator is not required to release water (minimum flow) in the natural riverbed. This is the case for some large-scale producers of hydropower in Sweden; *Ibid.*, pp. 27–32.

⁵⁸ *Ibid.*, p. 66. However, in addition to its effect on aquatic fauna, hydropower installations also hinder the transportation of sediments, which gives rise to a changed structure of the waterways and affects erosion. Some hydropower installations have to be dredged due to sediment collections. The water quality is also affected due to the reduced water flow which implies that pollutants are becoming more concentrated, which also affects biodiversity. Another aspect is that the transportation of water chemical components also is hindered by hydropower dams. This implies that, for example, silicon (kisel) is not transported out to the Baltic Sea, which, in light of the state of the Baltic, is problematic as silicon is suggested to be needed to better deal with the Eutrophication problem; *Ibid.*, p. 38–42.

⁵⁹ In *A Framework for Action on Energy*, it is suggested that the biodiversity impacts of large-scale hydropower development are more negative than positive due to many cases of devastating loss of species and ecosystems, implying that those technologies in place, to limit the impact from hydropower, do not yet ensure the protection of the ecosystems. See WEHAB Working Group, *A Framework for Action on Energy*, 2002, p. 10.

⁶⁰ See EIRGRID, *Ecology Guidelines for Electricity Transmission Projects*, 2012, p. 25 et seq.

agement); and creation of new habitats and introduction of non-native species.⁶¹

The main potential impacts of overhead transmission lines are the risks for birds, both through collision and risk of electrocution, but also through reduction in availability of staging and wintering areas.⁶² Birds that migrate at night and birds that fly often between resting and feeding areas are extra vulnerable to collision with power lines, if they cross their migration corridors.⁶³ Birds such as swans, geese and herons are a few species that are vulnerable to collision.⁶⁴

The reason why birds are electrocuted is because some are attracted to power poles as they are good look out points, perching and roosting points and sometimes even used as nesting sites.⁶⁵ Birds like storks, vultures, owls and eagles are vulnerable to electrocution.⁶⁶ In Sweden, the golden eagle is particularly affected by transmission lines; the Swedish Environmental Protection Agency considered this to be one of the main reasons behind the death of individual birds.⁶⁷ Loss of habitat also has a potential impact on certain bird species from transmission lines, as it can act as a barrier for movement.⁶⁸

The Guidelines refer to a few mitigation efforts to avoid impact on birds.⁶⁹ The first mitigation measure suggested was to *avoid* areas where there are vulnerable bird species. If it was not feasible to avoid such areas, the visibility of the transmission lines needed to be improved through bird diverters attached to the transmission lines.⁷⁰ The summary report of the Renewable Grid Initiative suggests that birds can more likely be protected if EIAs and SEAs were respected, sensitivity mapping of new power lines were undertaken and if the transmission lines were to be located underground or constructed in ways that were more bird friendly (with higher visibility etc.).⁷¹ Haas, et al., suggest that electrocution occurs almost exclusively on badly

⁶¹ See list in: EIRGRID, *Ecology Guidelines for Electricity Transmission Projects*, 2012 pp. 25–26 and 29.

⁶² See Haas, D. et al., *Protecting birds from power lines*, 2003, p. 5.

⁶³ *Ibid.*, p. 12.

⁶⁴ See EIRGRID, *Ecology Guidelines for Electricity Transmission Projects*, 2012, p. 27.

⁶⁵ See Haas, D. et al., *Protecting birds from power lines*, 2003, p. 10. The Conference of the Parties has also adopted a resolution regarding the problem of electrocution; see Conference of the Parties, *Resolution 7.4, Electrocution of Migratory Birds*, 2002. See also the adopted recommendations by the Standing Committee, *Recommendation 110 (2004) on minimizing adverse effects of above-ground power electricity transmission facilities (power lines) on birds*, 2004.

⁶⁶ See Haas, D. et al., *Protecting birds from power lines*, 2003, p. 7.

⁶⁷ See Swedish Environmental Protection Agency, Rapport 6430, May, 2011, p. 63.

⁶⁸ See EIRGRID, *Ecology Guidelines for Electricity Transmission Projects*, 2012, p. 27.

⁶⁹ See also Drewitt, A. L. and Langston, R. H. W., *Annals of the New York Academy of Sciences*, vol. 1134, 2008, pp. 255–256.

⁷⁰ See EIRGRID, *Ecology Guidelines for Electricity Transmission Projects*, 2012, pp. 31–32.

⁷¹ See Renewable Grid Initiative, *Summary report of the RGI Workshop on: Environmental Impacts of Grids*, p. 3

designed medium-voltage power poles and that the technical construction of power line poles can help mitigate this problem.⁷² To avoid collision Haas, et al., suggests that the best mitigation effort is to locate the power cables underground. However, a necessity is to include bird protection at an early planning stage, to investigate whether the planned location for power lines hosts any species that are vulnerable or whether lines cross local flight routes or migration routes, etc.⁷³ Bird Life International has in its position statement on birds and power lines, emphasised a number of mitigation efforts, some of which are mentioned above.⁷⁴

In addition to the effects on birds and their habitats, transmission lines have potential impacts on other types of habitat; where wetlands are considered to be the most sensitive.⁷⁵ In such areas it may not be suitable to lay transmission cables underground, depending on what nature values the wetland hosts. Overhead transmission lines planned with extra care as to where the poles are suited are of great importance if located in wetland areas. The Swedish environmental Protection Agency also suggests that transmission lines may have an impact on reindeer.⁷⁶

In sum, there are a number of potential negative effects that transmission lines may have on habitats and species, yet it is very seldom that concessions for transmission lines are not granted due to their environmental impact.⁷⁷

1.1.2.5 Concluding remarks

The science is clear on the fact that, in general, renewable energy has less environmental impact than fossil fuels. It seems clear that there are potential negative effects of wind power, hydropower and transmission lines on biodiversity, where hydropower is identified as the one with the largest impact. Regarding more recent renewable technologies, there is scientific uncertainty towards the actual impact on biodiversity, which gives rise to the responsibility of precaution. However, the choice of location is the most important way to avoid conflict with the protection of biodiversity in relation to wind power and transmission lines.

⁷² See Haas, D. et al., *Protecting birds from power lines*, 2003, pp. 7, 10 and 18.

⁷³ *Ibid.*, pp. 12–13.

⁷⁴ See Birdlife International, *Position Statement on Birds and Power Lines*, 2007, pp. 2–3.

⁷⁵ EIRGRID, *Ecology Guidelines for Electricity Transmission Projects*, 2012, p. 32. For a study on how different types of wetland are affected by power line constructions, see: Nickerson, N. H. et al., *Journal of Environmental Management*, vol. 13, No. 4, 1989, pp. 477–483.

⁷⁶ The report refers to studies showing both that reindeer avoid areas with transmission lines, and studies showing that reindeer do not avoid transmission lines. However, the Agency acknowledged that the studies were undertaken in different ways and the studies that showed that there was no effect were undertaken locally, while in the studies showing that there was an effect, a regional perspective was adopted. See Swedish Environmental Protection Agency, *Rapport 6499*, 2012, pp. 32–33.

⁷⁷ See chapters 8 and 9.

1.1.3 A fragmented legal system

The concept *fragmentation* may have a different meaning in different contexts. In accordance with most dictionaries it means “the process or state of breaking or being broken into fragments”.⁷⁸ This definition implies that if something is described as fragmented, the bits and pieces (fragments) are somehow related and belong together.

Fragmentation of the legal system has mainly been discussed in the context of the sphere of public international law, which is a system that has developed rapidly with many subfields of law and without much guidance on how these subfields relate to one another. This is seen as a problem, especially in light of the lack of a central legislative body that can deal with potential conflicts between different treaties.⁷⁹ This dissertation, however, is not supposed to be a contribution to the discussion of fragmentation of international law.

In this dissertation, the concept of fragmentation refers to the nature of the legal system, both regarding the substantive law applicable to renewable energy activities (at EU and national level) and the nature of the legal processes that renewable energy activities face. The main substantive law discussed is the sub-disciplines of law related to climate (renewable energy policy) and biodiversity (nature protection directives).⁸⁰ In the fragmented legal system, these bodies of law are separated and do not necessarily relate to each other in the legislative contexts. However, in practice these subfields of law may come in conflict with each other as renewable energy installations may pose a threat on the protection of biodiversity.⁸¹

I am also using the concept of fragmentation when describing the nature of the legal procedures that renewable energy activities face. In the legal system, activities (including renewable energy activities) are assessed separately against the circumstances of the individual case. There is not much room to comprehensively assess a specific activity’s relationship to related energy system activities, and/or its total impact on the environment.

⁷⁸ See, for example: Oxford dictionaries at: <http://www.oxforddictionaries.com/definition/english/fragmentation>

⁷⁹ See ILC, Fragmentation Report, 2006, p. 10.

⁸⁰ “Nature protection directives” are used interchangeably with “nature protection legislation” and “directives protecting biodiversity” and refers to: Directive 2000/60/EC of the European Parliament and of The Council of 23 October 2000 establishing a framework for Community action in the field of water policy (the Water Framework Directive); Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (the Habitats Directive); and Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds (the Birds Directive).

⁸¹ For a description of potential impacts from renewable energy activities on biodiversity, see Section 1.1.2.

1.1.4 A fragmented political landscape

1.1.4.1 Introduction

The legal landscape applicable to renewable energy activities is fragmented and that may be at the cost of reaching the energy and environmental political goals of a transition to a carbon-neutral energy system while still respecting the protection of biodiversity. However, one reason why the legal system is rather fragmented with regard to substantive law may be due to the fragmented political organisation surrounding energy and environmental policies. More recently, climate aspects have been integrated into energy policies, but it has not yet been seen in any integration of other environmental objectives – that are arguably as important to fulfil. One explanation behind this fragmented approach is how the administrative structure is built around the issues relevant for renewable energy policies. The following section describes the administrative legislative structure in the EU and Sweden, respectively.

1.1.4.2 The Directorate-Generals in the EU

At the EU level there is a division between the Directorate-General (DG) for energy, environment and climate action. Even though separate entities, the DG for environment partly shares its resources with the DG for climate action.⁸² While the DG for environment is responsible for environmental policy in general, the DG for climate action is primarily focused on the formulation and implementation of cost-effective policies to meet climate targets, especially the goals of reducing greenhouse gas emissions and policies related to the ozone layer. The DG for climate action is also responsible for ensuring that climate change is taken into account in all other EU policies.⁸³

More specifically, The DG for energy focuses on secure, sustainable, and competitive energy for Europe.⁸⁴ The DG for environment works, for example, on gathering knowledge on environmental impacts and risks of energy resources and assessing relevant policies. Most studies are external and the studies they refer to primarily concern shale gas extraction.⁸⁵

The problem of integrating environmental objectives into the EU energy policy is not a new topic. Owens and Hope wrote an article in 1989 addressing the same issue, though with a slightly different EU energy and environ-

⁸² http://ec.europa.eu/dgs/environment/index_en.htm

⁸³ http://ec.europa.eu/clima/about-us/mission/index_en.htm

⁸⁴ More specifically: contributing to setting up an energy market providing citizens and business with affordable energy, competitive prices and technologically advanced energy services; promoting sustainable energy production, transport and consumption in line with the EU 2020 targets and with a view to the 2050 decarbonisation objective; enhancing the conditions for safe and secure energy supply in a spirit of solidarity between EU countries ensuring a high degree of protection for European citizens; see <https://ec.europa.eu/energy/en/about-us>

⁸⁵ See http://ec.europa.eu/environment/integration/energy/studies_en.htm

mental context.⁸⁶ Already then the authors pointed out that an integration of environmental objectives into energy policy is doomed to fail due to the segregation of the DGs. The authors suggested:

“While “Energy” and “Environment” are dealt with by separate Directorates, with different constituencies and a different ‘world view’, we can hardly expect genuine policy integration to be achieved.”⁸⁷

As of 2016 some progress has been made in this regard as there is now a DG for “climate action”, however, other environmental objectives are not visible to the extent needed.⁸⁸ The promotion of renewable energy and other climate policies are of course indirectly leading to a better environment and will lead to benefits for the protection of biodiversity, but it is important to remember that a climate policy is not per definition in line with directives protecting biodiversity.

1.1.4.4 The political structure Sweden

In Sweden, as of January 2015, the Ministry of Energy and the Environment merged and is now called the Ministry of the Environment and Energy.⁸⁹ However, it is not the first time that Sweden has had a common ministry for environment and energy. It was first established in 1987 but has since then been divided into different ministries with different alignments.

This merger is a sign that Sweden acknowledges the importance of integrating environmental aspects into its energy policy.⁹⁰ This is also in accordance with the meaning of the environmental objective *Reduced Climate Impact*, which basically implies that the climate objective is not to be reached at the cost of biodiversity preservation.⁹¹ Hence the political structures and official objectives suggest that the climate and biodiversity objectives are to be integrated.

However, in the political debate climate change is currently a “hot” topic and the protection of biodiversity less so, which may lead to the misconcep-

⁸⁶ See Owens, S., and Hope, C. W., *Energy Policy*, Vol. 17, Issue 2, April 1989, Pages 97–102.

⁸⁷ *Ibid.*, p. 102.

⁸⁸ In the renewable energy context there are however sustainability criteria for biofuel but not for any other renewable energy sources, see Article 17 of the Renewable Energy Directive.

⁸⁹ However, it is not the first time that Sweden has had a common ministry for environment and energy. It was first established in 1987 but has since then been divided into different ministries with different alignments.

⁹⁰ This is also reflected in the Swedish energy policy which builds on *ecological sustainability* as one of its three pillars. See prop. 2008/09:162, p. 19, also emphasised in the “Energy agreement” between the Swedish political parties, can be found at: <http://www.regeringen.se/artiklar/2016/06/overenskommelse-om-den-svenska-energipolitiken/>.

⁹¹ See <http://www.miljomal.se/sv/Environmental-Objectives-Portal/Undre-meny/About-the-Environmental-Objectives/1-Reduced-Climate-Impact/>

tion that climate change objectives are more important than other environmental objectives. In Sweden, there is Swedish Government Official Report regarding a plan to compose a *climate political framework*,⁹² where as a first part of the investigation, a new climate law is proposed. In the proposal the relationship between the protection of biodiversity and climate change policies is not mentioned, even though this is clearly stated in the environmental goal *Reduced Climate Impact*.⁹³

In another Swedish Government Official Report, it is proposed that the climate question needs to be integrated in the work in all other areas of politics and sectors, and at all levels of society.⁹⁴ The report refers to the main findings of the IPCC report from 2014 when suggesting that a more integrated approach is needed.⁹⁵ The State Commission suggests that, in order to avoid conflict and to enable synergies between climate objectives and other objectives in society (for example, forestry or transportation politics), it is crucial that the objectives are coordinated. In this context, the investigation mentions that simultaneous gains from an integrated strategy where GHG emissions decrease can be, for example: lower emissions of air pollution, higher energy security, and increased protection of biodiversity etc.⁹⁶ It is to be noted that the protection of biodiversity is mentioned here as a benefit of integrating climate aspects into all other areas of politics. However, as mentioned and discussed above, climate change policies are not by definition in line with the goal of protecting biodiversity. Thus it is important to investigate whether this fragmented nature gives rise to undesired outcomes.

1.2 Objective of the study and my research questions

The starting point for this dissertation is the political context. There is a vision in the EU for a transition into a low carbon society, including a carbon-neutral energy system, containing a high share of renewable energy. This vision, however, is not isolated from other political goals, one of which is to halt the loss of biodiversity by 2020. Both these goals are accompanied with directives promoting the transition towards a carbon-neutral society and protecting biodiversity, respectively. The secondary legislation that is assessed in this dissertation is primarily the Renewable Energy Directive and the Regulation on Guidelines for trans-European Energy Infrastructure on the one hand and the Birds, Habitats and Water Framework Directive on the other. The overall objective of this dissertation is therefore to discuss wheth-

⁹² See Kommittédirektiv, *Tilläggsdirektiv till Miljömålsberedningen (M 2010:04) – förslag till klimatpolitiskt ramverk*.

⁹³ See SOU 2016:21.

⁹⁴ See SOU 2016:47, p. 147.

⁹⁵ See IPCC, *Climate Change 2014: Synthesis Report*, 2014.

⁹⁶ See SOU 2016:47, p. 151.

er the legal system enables or hinders such transition and what the legal challenges are towards increasing the share of renewable energy without neglecting the biodiversity goal.

As described above, one of the identified challenges is the very nature of the legal system – that it is rather fragmented – both regarding the substantive law applicable to renewable energy activities and the legal processes that renewable energy activities face. The more specific aim is therefore to discuss certain problems arising from the fragmented legal system applicable to renewable energy activities.

This dissertation includes three main questions (parts), all providing important examples of legal fragmentation and possible obstacles to the development of renewable energy activities (that are in line with relevant legislation protecting biodiversity). In Part I, I discuss the EU legal framework relevant for the adoption of EU policies in the field of renewable energy and how such policies relate to EU nature protection legislation. Environmental law provides a complex cluster of norms deriving from international, EU and national levels, and involves problems that are often of a cross-border nature. The starting point in this dissertation requires a basic understanding of EU law. It is important to reflect upon the relationship between EU and national law as the applicable laws relevant in the transition of the energy system are often derived from the EU level. The focus in this part is primarily on the legislative power that the EU has in the field of renewable energy. The following sub-questions are discussed:

- How is competence shared between the EU and its Member States in the field of energy and environmental law?
- What are the relevant legal bases for adopting EU legislation in the field of renewable energy policy?
- What are the possibilities/requirements to adopt a renewable energy policy that better reflects the biodiversity objective?
- What is the legal relationship between the Renewable Energy Directive and relevant nature protection directives (Habitats, Birds and Water Framework Directives) in the EU context?

In light of the fragmented nature of the legal system, these questions are important to address as a transition of the energy system requires a strict renewable energy policy in the EU. Strict in the sense that it prescribes ambitious renewable energy targets and that such policy adequately integrates environmental protection requirements, in order to better ensure that the renewable energy that the EU promotes is coherent with the legislation protecting biodiversity.

In Part II, I address problems arising from the *fragmented nature of the substantive environmental law*. Due to this fragmentation, different environmental goals are often considered to be in conflict with one another. As the main aim of this dissertation is to investigate how the climate goal of increasing the share of renewable energy can be reached while still ensuring

adequate protection of biodiversity, the conflict between the protection of biodiversity and the promotion of renewable energy is mapped and discussed in this part. The following sub-questions are discussed:

- How is the legal relationship between the Renewable Energy Directive and relevant nature protection directives (Habitats, Birds and Water Framework Directives) examined and addressed in Sweden with regard to wind power and hydropower?
- If there is a conflict between the individual installation and the nature protection directives, when can such installation be permissible due to the derogation rules?

This analysis is important in order to assess whether the renewable energy installations that Sweden counts towards its renewable energy targets are in fact consistent/coherent with the relevant directives protecting biodiversity.

In Part III I address problems arising from the *fragmented nature of legal processes*. The fragmented nature of the legal processes may give rise to uncoordinated development of the energy system, hence an inefficient transformation of the energy system. The fragmented processes may also lead to unsustainable development as there is no holistic view of the various activities' total environmental impact. The main example in this part of the dissertation is the potential to bridge the fragmented procedures of wind power installations and new transmission lines. More specifically:

- To what extent are the legal assessments of renewable energy activities coordinated, both theoretically and in practice?
- What legal instruments are available to bridge the legal assessments of renewable energy activities?
- How are these legal instruments used in practice, by the Energy Market Inspectorate and the relevant authority assessing new wind power installations in need of new transmission lines?

These questions are important to address in order to identify the weaknesses of the fragmented permit system to adequately assess renewable energy activities comprehensively, including potential impact from, for example, transmission lines. In light of the importance to ensure adequate protection of biodiversity in the transition to an energy system containing a larger share of renewable energy, it is crucial to address this problem.

Based on the outcome of Part I–III, I summarize my conclusions and discuss ways of mitigating the effects that the fragmented nature of the legal system has on the transition of the energy system to not only become carbon-neutral but also in line with relevant legislation protecting biodiversity.

1.3 Methodological framework: a systems perspective in environmental legal science

1.3.1 Introduction

In the most general sense this is a dissertation that addresses the intersection between EU energy law⁹⁷ and environmental law. Perhaps, to be more specific, it addresses the intersection between climate law⁹⁸ or renewable energy law⁹⁹ and environmental law.¹⁰⁰ Though I address the intersection between renewable energy law and environmental law, I consider myself to be an environmental legal scholar.

A dissertation in environmental legal science faces many theoretical and methodological challenges due to its specific nature. Environmental law is sometimes considered to be an incoherent field of law, as it cannot be easily interpreted and understood solely within the legal system, with purely legal sources. Instead interpretation of environmental legal concepts often requires a basic understanding of natural science to appropriately interpret the legal meaning of a concept. The environmental legal system may therefore be seen as more “open” to its surrounding systems than other fields of law.

The following section explores what environmental legal science is and more specifically, how I understand environmental legal science and how I go about writing a dissertation in environmental law. Thereafter I explain what I mean with having a systems perspective in environmental legal science, followed by a more specific explanation of my method.

1.3.2 Environmental legal science

1.3.2.1 Introduction

This is a dissertation in environmental legal science. In the Swedish context, environmental legal science has its roots in civil law, more specifically the

⁹⁷ See, for example: Johnston, A., and Block, G., *EU Energy Law*, Oxford University Press, 2012; Roggenkamp et al., *Energy Law in Europe*, 2007; and Talus, K., *EU energy law and policy: a critical account*, 2013.

⁹⁸ Climate law has evolved over the past decade and is now a recognised branch of law. See, for example: Peeters, M. et al (eds), *Climate law in EU member states: towards national legislation for climate protection*, 2012. See also the Swedish proposal for a Climate law: SOU 2016:21.

⁹⁹ Renewable energy law is a wider concept that also includes trade and procurement rules. etc. For a presentation of different issues of interest regarding renewable energy law in the EU, see Peeters, M. and Schomerus, T. (eds), *Renewable Energy Law in the EU – Legal Perspectives on Bottom-up Approaches*, 2014.

¹⁰⁰ In the EU context see, for example, Krämer, L., *EU Environmental Law*, 2012; Jans, J. and Vedder, H.B., *European Environmental Law*, 2012; and Fisher, E. et al., *Environmental Law – Text, Cases and Materials*, 2013.

branch of special real-estate law, and was initially concerned with neighbourhood disputes.¹⁰¹ Since then, Swedish environmental law, as a research field, has grown into other branches of law, and eventually into its own discipline. In 1972 the first textbook in environmental law was published,¹⁰² and in 1992 Staffan Westerlund became the first professor in the subject.¹⁰³

In the early research in environmental law the focus was basically just to clarify the content of applicable law, but the research objective has evolved and become more diverse. Between 1970–1990, the research evolved into analysing, for example: environmental law as a legal system;¹⁰⁴ legal instrumental analysis;¹⁰⁵ legal implementation of environmental political goals;¹⁰⁶ and finally the so-called “environmental law methodology”.¹⁰⁷ Michanek suggests that, since 1990, the research fields have not necessarily changed but developed as our understanding of environmental problems have increased and their effect on the current and future populations become more clear. Swedish membership in the EU and the attempt to collect the Swedish environmental legislation under one framework, The Swedish Environmental Code, has also invigorated the research fields, giving rise to the need to address complex questions of applicable law. However, much research has also been more theoretical.¹⁰⁸

¹⁰¹ See Ljungman, S., *Om skada och olägenhet från grannfastighet*, 1943.

¹⁰² Bengtsson, B., *Miljörätt*, 1972.

¹⁰³ Westerlund disputed in environmental law in 1975; see Westerlund, S., *Miljöfarlig verksamhet*, 1975. See Michanek, G., *Miljörätten i förändring – en antologi*, 2003, p. 20.

¹⁰⁴ Michanek suggests that such research was a response to the large influx of environmental law legislations after the introduction of the Environmental Protection Act (*miljöskyddslagen*) in 1969. A large number of legislative acts were produced without much consideration on their inherent relationships which made it complicated to apply the laws in practice. This type of research was given attention in early 1980. See Michanek, G., *Miljörätten i förändring – en antologi*, 2003, p. 21.

¹⁰⁵ This method represents a more critical analysis of the legal system, lifting the flaws of the legislation from an environmental point of view and suggesting how different instruments could better handle the environmental problem. *Ibid.*, pp. 21–22.

¹⁰⁶ This type of research is a development of the instrumental analysis, and is research that treats legal implementation of environmental political objectives. This type of research implies that the researcher is not focused on the specific instruments but on the whole system of implementation, which can be divided into separate paths, for example: provisions on the objectives – legal requirements – permissibility assessment – supervision – participation – sanctions. Conclusions from such studies showed that there was a risk of “leakage” at the various levels and therefore “implementation deficits” could arise. The identification of legal hindrances to the legal implementation of environmental political goals has also been part of this type of research. *Ibid.*, pp. 22–23.

¹⁰⁷ This methodology, in essence, questions the suitability of the current legal system in light of the environmental objective of sustainable development. For a more detailed description of the environmental law methodology, see Westerlund, S., *Fundamentals of Environmental Law Methodology*, 2007. For a more detailed description of the different research areas: *Ibid.*, pp. 20–25.

¹⁰⁸ *Ibid.*, pp. 26–30.

Westerlund developed what is commonly referred to in Sweden (or Scandinavia) as the “environmental law methodology”.¹⁰⁹ A significant aspect of this method is that the starting point is external to the law, based on an environmental problem, and that the legal system may enable and/or has the potential to limit or hinder it. To fully understand how the legal system has the potential to limit or hinder an environmental problem, he suggests that an external perspective is needed and that it is important to internalize natural science research within the legal system to avoid inconsistencies between the legal system and natural science, and ultimately to enhance the possibility to actually reach the environmental objectives set out in various legislations (in reality). The main aims of this method are: to develop legislation/instruments that are better suited than the ones available, to limit environmental impact and to achieve environmental objectives – ultimately the objective of sustainable development. Thus Westerlund’s method is rather proactive and goal oriented,¹¹⁰ and has also been described as “fundamental”.¹¹¹ Ultimately, Westerlund considers the traditional legal system, in itself, to be a hindrance to the efficient implementation of environmental objectives.¹¹² This methodology is often referred to in Scandinavian environmental law doctrine.¹¹³

However, Westerlund is not the only scholar who has identified the complexities of environmental law as a legal discipline. Most scholars in environmental law agree that environmental law is a rather complex field of law.¹¹⁴ One of the main challenges in environmental law is its relationship to natural science, which will be discussed below.

1.3.2.2 The relationship between environmental law and natural science

One common problem in environmental legal scholarship is the challenge of understanding the relationship between the law and the environmental problems it aims at regulating. It is commonly considered that environmental legal scholarship requires at least a basic understanding of natural science. In that sense, environmental law is often considered to be interdisciplinary by nature. Or as Heinzerling puts it: “In environmental law scholarship, inter-

¹⁰⁹ For a description of the methodology in English, see Johannesdóttir, A., *Scandinavian Studies in Law - Environmental Law*, 2014, pp. 244–258.

¹¹⁰ For a more detailed description of Westerlund’s Environmental Law Methodology, see: Westerlund, S., *Fundamentals of Environmental Law Methodology*, 2007.

¹¹¹ See Hollo, E. J., *Miljörättsliga perspektiv och tankeväндor: Vänbok till Jan Darpö & Gabriel Michanek*, 2013, p. 254.

¹¹² See Westerlund, S., *En hållbar rättsordning*, 1997, p. 125 et seq.

¹¹³ See, for example: Forsberg, M., *Skogen som livsmiljö*, 2012; Christernsson, A., *Rättens förhållande till komplexa och dynamiska ekosystem*, 2011; and Jóhannsdóttir, A., *The significance of the default*, 2009.

¹¹⁴ See, for example: Fisher, E., *Journal of Environmental Law*, 25:3, 2013, pp. 347–358; Fisher, E. et al, *Environmental Law – Text, Cases and Materials*, 2013; Gunninham, N., *Journal of Environmental Law*, 21:2, 2009, p. 212; Johannesdóttir, A., *Scandinavian Studies in Law - Environmental Law*, 2014, pp.244–258; Westerlund, S., *Fundamentals of Environmental Law Methodology*, 2007.

disciplinary is not a trend; it's a way of life."¹¹⁵ However, this necessity is contested.¹¹⁶

Fisher claims that there is a need for environmental lawyers to develop an *expertise* in issues that are relevant for the type of law that you are practising. She suggests that that expertise falls into two categories: contributory¹¹⁷ and interactional expertise.¹¹⁸ Interactional expertise refers to the interaction with other disciplines "that relate to how environmental problems are conceptualised". She suggests that there is a need to develop linguistic expertise in the other related disciplines; requiring an understanding of "the complexities, ambiguities and nuances of environmental problems and discourses".¹¹⁹ This interaction, however, cannot be undertaken blindfolded; a critical approach is necessary when integrating concepts from other disciplines. Fisher suggests that expertise for handling this interactive process is needed.¹²⁰

As described above, Westerlund also describes a need for an *interactive approach*, suggesting that it is a requirement that legal science interacts with natural science. He also points out that the legal scientist needs to be *active* in this interactivity; active in the search after, and understanding of, issues that are relevant for the research project. Westerlund stresses that questions have to be asked of different disciplines, which is in itself a difficult task and often a problem of communication.¹²¹ He considers that for the interactive process to function, it is crucial that all disciplines take their responsibility to ensure that the available data and information is adequate.¹²²

I consider that interactivity between legal science and other related sciences to the specific legal issue to be a necessity, for the purpose of understanding what the law aims to regulate or protect. Depending on the research

¹¹⁵ See Heinzerling, L., *The Oxford Handbook of Legal Studies*, 2003, p. 702–703.

¹¹⁶ See, for example, Pederson, W. O., *Journal of Environmental Law*, 2014, 26, pp. 423–441.

¹¹⁷ Contributory expertise (which will not be further discussed here), she suggests, is legal expertise; the skills, knowledge and experience that are needed to contribute to a specific discipline. See Fisher, E., *Transnational Environmental Law*, 2012, 1:1, pp. 48–49.

¹¹⁸ These concepts she takes from the science and technology studies undertaken by Collins, H. et al., *Rethinking Expertise*, 2007. As referred to in Fisher, E., *Transnational Environmental Law*, 2012, 1:1, p. 48.

¹¹⁹ To develop linguistic expertise in other related disciplines, to understand its discourse and complexity is a rather difficult task. Josefsson is, however, a legal scholar (with a background in law as well as ecology) that combined ecological and legal discourse in order to understand the legal construct of "ecological status" in the Water Framework Directive, from a legal-ecological perspective. See Josefsson, H., *Good Ecological Status*, 2015, pp. 16–27; Compare Westerlund, S., *Interaktiv rättsvetenskap – En antologi*, p. 191. Westerlund suggests that there is a need for a common scientific language, partly so that different scientists can cooperate about a common problem and partly so that one discipline can give adequate data and information to be used in and of another discipline.

¹²⁰ See Fisher, E., *Transnational Environmental Law*, 2012, 1:1, p. 50.

¹²¹ Compare Wahlberg, L., *Legal Questions and Scientific Answers*, 2010. She also stresses this communication problem between different disciplines.

¹²² This may, however, be wishful thinking. See Westerlund, S., *Interaktiv rättsvetenskap – En antologi*, pp. 191–192.

questions, however, such interactivity may be more or less in depth. However, such interactivity requires attention to the associated communication problem. It is not enough to “copy and paste”; a translation from natural science to law is required.¹²³

1.3.2.3 How sources other than legal ones are used in this dissertation

Against the background provided above, of the complexity that interactivity embeds, I consider it important to be careful when exploring different disciplines. By being careful, I mean that I aim at maintaining a critical view of the research results I have collected from other sciences. I am aware that research results are dependent on the method used; what data is available and used, how it is interpreted, and what assumptions are made, etc. Hence no science reflects the objective “truth”; there are always assumptions/boundaries/interpretations that delimit its results.¹²⁴ Having said that, I am not claiming that I have the knowledge needed to decide which research is good/bad (except from using common sense and studying the methods used). For the purpose of this dissertation, I am willing to trust research undertaken in other disciplines, as it only requires basic knowledge (not often disputed) from related disciplines. I have primarily used reports by state or EU agencies, or by scholars in natural science writing literature reviews, summarizing the relevant studies in the field.

My main habitat is in legal science and the trips I make to other related disciplines are only of an informative nature. For the purpose of this dissertation, I do not need to delve deep into the structures of how ecosystems function, or understand the complexity of the technical components of the wind turbine. It is enough that I am on the surface of these disciplines, understanding basic energy system relationships, for example: the relationship between intermittent electricity supply and balancing power, the relationship between production and distribution of electricity, and how various energy system activities potentially impact on biodiversity. I am aware that the potential impact on biodiversity from energy system activities is surrounded by much uncertainty and the studies I present may not reflect all scientists’ views on how a certain activity impacts on biodiversity. In sum, the purpose of the visit to other disciplines is primarily to provide a better picture of the environment (including surrounding systems) that the legal system regulates, to

¹²³ The communication problem can also be discussed from a systems theory perspective. According to Luhmann’s autopoiesis theory the legal system is a rather closed system and does not communicate with its environment. He suggests that the legal system is “operationally closed, but cognitively open”. By being *cognitively open* he means that the system is capable of responding to its environment. See Luhmann, N. et al., *Law as a social system*, 2004, pp. 6–8 and pp. 464–466; see also: Phihippopoulos-Michalopoulos, A., *Absent Environment – Theorizing Environmental Law and the City*, 2007.

¹²⁴ For a discussion on the definition of “science” see Fisk, D., *Journal of Environmental Law*, 1998, p. 4.

contribute to an understanding of the complexities that a transition of the energy system faces.

In this dissertation, I do not internalize this picture to the legal system but I do, with a systems perspective, ask questions of the legal system that reflect the knowledge that I have acquired in related disciplines. The analysis is based on legal materials. In this sense I may not be as interactive as other legal scholars in environmental law, as I am mainly using legal material to answer the research questions.

1.3.3 A Systems perspective in environmental legal science

1.3.3.1 Introduction

Systems theory, even though not further explored here, has inspired much of my thinking throughout the process of writing this dissertation. To view the world, or anything in the world, as a system or network, may give a greater understanding of how things work and how they are related to other systems/components/processes. I believe that a systems perspective in legal science can provide questions that are interesting to ask from a wider perspective; and also a way of understanding how the legal system relates to its surrounding environment.¹²⁵

A fundamental idea of systems theory is that “the whole is greater than the sum of its parts.”¹²⁶ Even though the ideas behind systems theory can be traced to ancient times, the science is relatively new and only in recent decades has it been acclaimed as a necessary and useful method.¹²⁷ Traditionally, science has been predominately focused on understanding ‘parts’, getting deep into the details of structures, e.g. analysing atoms and cells.¹²⁸ A systems perspective enables one to see connections/relationships that may be overlooked when looking at issues individually without much consideration of how the issue is related to its surrounding environment and other systems. The following section therefore explores how I see the systems that are part of this study.

In the widest sense I include three different systems in my study: the legal system, the energy system, and ecosystems. The legal system is a so-called human made system; it exists because humans decided that it would be a good way to resolve conflicts and control human behaviour. The energy system is also a human made system in the sense that humans decide what type of energy sources are to be included in the system.¹²⁹ Ecosystems, on

¹²⁵ Luhmann, N. et al., *Law as a social system*, 2004

¹²⁶ Aristotle 384 BC-322 BC.

¹²⁷ See: Von Bertalanffy, L., *General System Theory*, 1968, p. xvii.

¹²⁸ See for example; Ibid., p.12; Wadell, B., *Forskningsrapport nr. 42*, 1970, p. 7

¹²⁹ However, renewable energy sources, *per se*, are arguably natural in the sense that we do not create the wind, the sunshine or water currents; we only harvest the energy from them.

the other hand, are natural systems, with their own processes and functions, which do not listen to human commands and suggestions, but only react. We cannot tell fish to reproduce in different locations or suggest that birds should change their migration routes.

The energy system is often referred to as a socio-technical system, as it is acknowledged that the functioning of the energy system not only requires energy technologies, distribution networks and storage, but also the functioning of other institutions in society, of which the legal system is an important component.¹³⁰ The legal system is often a necessary route that has to be traversed before renewable energy activities become a reality. Many installations require a permit and, if not, the installations still need to fulfil certain criteria in the law that may be enforced by the supervising authorities. The functioning of the legal system is therefore a prerequisite for an efficient transition of the energy system.

Theoretically, from a systems perspective, the legal system can function as a control system – to permit energy production within the boundaries of what is considered to be (ecologically) sustainable.¹³¹ This is a rather instrumental view of law (and very simplified), as the legal system is its own system with a variety of complexities and faults that may result in both inefficiencies and unsustainable results.

The legal system is one type of system that can be viewed as either an isolated system or part of other systems; for example, the social system, a socio-ecological system, or a socio-technical system. The legal system itself can also be divided into sub-systems of law (or disciplines). Sub-systems of law can in turn be divided into sub-sub-systems, and so on. In other words, systems exist on various levels and are defined by their boundaries.¹³² Due to this systemic reality, it is interesting to study both systems *per se* and how different systems interact within a system on another level (vertically) and how systems relate to each other on the same level (horizontally). Within the legal system, this is sometimes referred to as a problem of fragmentation, as the different subfields of the legal system do not necessarily communicate with one another, which may result in inadequate application of the various legislative acts.

Due to the interrelated nature of the issues being addressed in this dissertation, it is necessary to take a broad approach when examining the legal system. There are many environmental law subsystems which are encompassed within the relationship between renewable energy and biodiversity.¹³³ In some cases this broad approach will come at the cost of deep analysis of

¹³⁰ See Ingelstam, L., *System: Att tänka över samhälle och teknik*, 2012, pp. 214–256.

¹³¹ See Declaris, M., *The law of sustainable development*, 2000.

¹³² See for example: Meadows, D. H., *Thinking in Systems – A Primer*, 2008, p. 11; Anderson, V., Johnson, L., *Systems Thinking Basics – From Concepts to Causal Loops*, 1997, p. 2.

¹³³ See chapters 2 and 3 for a description of the relevant EU legislation and Chapter 4 for a description of the main legislation addressed in the Swedish context.

particular subsystems. In this way, the work here is not exhaustive, but aims at providing an understanding of how the relationship between renewable energy and biodiversity is assessed and addressed in the EU and Swedish contexts.

In sum, it is important to widen the research perspective in order to understand the systems that the legal system aims to regulate – to be able to analyse whether the environmental legal system leads to desired results. This analysis is based on legal sources and argumentation to create a line of thought that results in a more efficient and sustainable way of applying environmental law – to create a more coherent system.¹³⁴

1.3.4 Method and materials

Even though I have approached the law from a wider systems perspective when choosing my research questions, this is a study in legal science. Thus the primary research objective is the legal system. The understanding of the legal system is primarily based on legal materials: preparatory works, legislative texts, case law and legal doctrine. Thus the foundational method is *legal dogmatics*.¹³⁵ In general, the legal material is analysed to provide an understanding of how applicable law is to be interpreted in the EU and Swedish contexts. However, a more precise description on what I am doing is still needed. Even though legal researchers are influenced by the sub-culture of law to which they belong, a legal study of traditional legal sources can take as many forms as there are legal scientists, depending on the scientist's background and pre-understanding of the law. Since a legal scientist is also part of creating the law – in the sense that it is contributing to the legal discourse on how to understand the law – it has a different role than other actors has in the legal culture.¹³⁶ By having the possibility to intervene and contribute to the understanding of applicable law it comes with a responsibility to be clear about the methodology and from what perspective the law is analysed. I consider it important to be transparent on how I have chosen my research questions and collected my material to enable a better understanding of the results in my study.

This dissertation is based to a large extent on EU law. Thus something should be said about EU law methodology.¹³⁷ The starting point in this dissertation requires a basic understanding of EU law. The supremacy of EU

¹³⁴ MacCormick suggests that law should “make sense” (be coherent) if considered as a whole. See MacCormick, N., *Legal Reasoning and Legal Theory*, 1978.

¹³⁵ For a more in depth description of legal dogmatics see, for example: Peczenik, A., *Vad är rätt?*, 1996, p. 312 et seq; and Strömholm, S., *Rätt, rättskällor och rättslämning*, 1996.

¹³⁶ Touri suggests that legal scholarship has a dual citizenship; it is both a legal and scientific practice. See Touri, K. *Ratio and Voluntas*, 2011, pp. 4 and 11.

¹³⁷ See, for example, Hettne, J., & Otken Eriksson, I., *EU-rättslig metod*, 2011; and Craig, P. and Búrca, G., *EU law: text, cases, and materials*, 2015.

law;¹³⁸ the hierarchy of EU legal sources;¹³⁹ and the value of the CJEU as the formal interpreter of EU law¹⁴⁰ etc. are areas of knowledge expected of the reader.¹⁴¹ In this dissertation these issues are not discussed in detail. The focus is primarily on EU legislative competence in the field of renewable energy and in that context, the meaning of the integration principle. However, if the EU legislative acts in the field of renewable energy policy and the legislation protecting biodiversity are implemented correctly in Sweden, is also discussed.

The analysis in this dissertation is to a large extent based on decisions by the courts and administrative bodies. It is important to distinguish between the meaning of the CJEU decisions and the decisions by the Supreme Court and the Land and Environmental Court of Appeal, which have precedential value, while the decisions by the land and environmental courts, the county administrative boards and the Energy Market Inspectorate do not. These decisions are instead discussed with the aim of providing a picture of how the law is applied in practice with regard to the application of EIA requirements. When these decisions are discussed it is because decisions of precedential value are very scarce, primarily in the context of concession decisions for transmission lines as there are not (yet) many decisions appealed to the Land and Environmental Court of Appeal.

The method undertaken in this study can be described in more detail in relation to the different parts of the dissertation. In the first part of the dissertation, the EU context is described with the aim of analysing what role EU law has and what potential a future EU policy can have in light of the transition of the energy system towards carbon-neutrality while still ensuring adequate biodiversity protection. This part reflects EU supremacy – that national law has to be in line with EU law. This hierarchy is important to reflect upon in light of the transition, as energy policy has primarily been of national concern and there are limits of the competence of the EU to legislate in the area.

¹³⁸ The principle of supremacy was developed in Case 6/64, *Costa v. ENEL*. The Principle was suggested to be stipulated in the European Constitution but was never adopted in the Lisbon Treaty; see Bergström, C.F. et al., *Lissabon Fördraget*, 2008, p. 41. However, the principle was codified in the *Declarations annexed to the Final Act of the Intergovernmental Conference which adopted the Treaty of Lisbon*, 13 December 2007, Declaration number 17.

¹³⁹ At the top of the hierarchy are the constituent Treaties, the Treaty of the European Union (TEU), the Treaty of the Functioning of the European Union (TFEU) and the Charter of Rights, as Article 6(1) of the TEU states that the Charter has the same legal value as the Treaties. Below the constituent Treaties one finds “general principles” which in essence are defined by the CJEU and thereafter the legislative acts which refer to Regulations, Directives and Decisions. Thereafter, in the hierarchy, comes “delegated acts” which are defined in Article 290 TFEU, and thereafter “implementing acts” which are defined by Article 291 TFEU. These acts will not be further discussed here. See: Craig, P. and Búrca, G., *EU law: text, cases, and materials*, 2015, p. 111 et seq.

¹⁴⁰ See Article 267 of the TFEU.

¹⁴¹ For a description of the basics of EU law, see for example: Craig, P. and Búrca, G., *EU law: text, cases, and materials*, 2015.

This part maps the relationship between EU legislative acts relevant for this dissertation.

The second part of the dissertation maps the relationship between biodiversity protection and renewable energy installations in Sweden. The method used here is primarily that of legal dogmatics as Swedish legislation, preparatory works and case law are the main sources that are analysed with the aim of determining how the relationship is assessed by the Swedish Courts, but also in relation to how the directives are implemented.

The third part of the dissertation is partly based on an analysis of what the EIA requirements are in accordance with EU law, and assessing what the applicable law is. This is later compared with Swedish practice by the Inspectorate and the county administrative boards and the land and environmental courts, to find out how the law is applied in a more general sense.

1.4 My research in context

My contribution to the environmental law discourse is to analyse what role the fragmented legal system has for the ability to reach the climate objective of increasing the share of renewable energy without neglecting the objective of protecting biodiversity. The classic problem of fragmentation is the conflict between environmental and economic objectives; for example, climate change and trade. But this dissertation moves inside the environmental sphere, looking at conflicting environmental objectives: climate change objectives (promotion of renewable energy) and the protection of biodiversity. I discuss and analyse their legal relationship in the EU and Swedish contexts.

An important aspect to consider in the transition of the energy system is that it is planned and realised in an efficient and sustainable way. Renewable energy activities are dependent on one another and the various activities may together (but maybe not individually) give rise to sometimes unnecessarily large environmental impacts. It lacks a more systemic/holistic assessment of renewable energy system activities, which arguably is needed in light of the transition of the energy system. Energy system activities are, in contrast with many other activities, dependent on one another for their functioning. This dissertation examines the potential to bridge the assessments with the legal instruments available today – primarily the role of the EIA. This possibility is examined both in theory and practice with regard to the relationship between the environmental assessment of new wind power development and transmission lines.

This dissertation builds on the earlier work in energy/environmental law primarily in Sweden (and Scandinavia). Michanek's dissertation *Energirätt* mapped the Swedish energy law at the time (1990). Thus the research is undertaken in a different political context than that of today. The political motivation behind the energy policy was at the time largely due to energy

security and the political decision to phase out nuclear power. Even though climate change was a known concept it was not part of official energy politics. Another aspect of the political context at the time is that it took place prior to Sweden becoming a member of the EU – thus no EU law is analysed in the dissertation. Michanek analyses whether the Swedish energy political goal of a more efficient energy use (energy conservation), could be achieved in accordance with the Swedish land and environmental laws at the time (which was prior to the adoption of the Environmental Code).¹⁴² Within that analysis he also examined the legal preconditions for renewable energy development. My dissertation builds on this dissertation but takes place in a different political context and time. It also similarly analyses whether the current law has the potential to fulfil the (EU) energy political goal, and the more recent one, of a transition to a carbon-neutral energy system. This analysis is limited to investigating what problems arise from the fragmented nature of energy and environmental substantive law and the fragmented nature of the legal assessments of renewable energy activities.

This dissertation is also related to Katelijn B. H. Van Hende's dissertation: *Towards an Integrated Legal Framework for Offshore Wind Farms and Grid Interconnections in the EU Marine Waters*.¹⁴³ While we are both studying the fragmented legal landscape for renewable energy activities, Van Hende focuses on the legislative framework specifically for offshore wind power installations and grid interconnections in EU marine waters. My research is primarily concerned with renewable energy activities on land and has a different perspective. I focus on the relationship between renewable energy activities and the protection of biodiversity in the EU and Swedish context.

My research with regard to wind power is also related to issues discussed in Maria Pettersson's dissertation: *Renewable Energy development and the Functioning of Law – A Comparative Study of Legal Rules Related to the Planning, Installation and Operation of Windmills*.¹⁴⁴ Pettersson and I both write about wind power but from different perspectives. Pettersson's work is a comparative study with the aim of finding alternative legal solutions to reach the Swedish wind power objective. The focus of my dissertation is primarily in the context of the relationship between the conflicting objectives of protection of biodiversity and the promotion of renewable energy while she has a more outspoken wind power perspective.

¹⁴² See Michanek, G., *Energirätt*, 1990.

¹⁴³ See Van Hende, K. B. H., *Towards an Integrated Legal Framework for Offshore Wind Farms and Grid Interconnections in the EU Marine Waters*, 2014.

¹⁴⁴ See Pettersson, M., *Renewable Energy development and the Functioning of Law*, 2008.

1.5 Delimitations

The scope of this dissertation is described in section 1.2 where the objectives of the study and my research questions are presented. However, this section aims at more clearly describing what is not included in this study and why. As mentioned above, the main aim of this dissertation is to discuss and analyse the legal relationship between legislative acts promoting renewable energy and protecting biodiversity.

That analysis takes place in an EU context with the example of Sweden, as a Member State that today has quite a high share of renewable energy. The legislative acts that are assessed are therefore on the EU level, primarily the Renewable Energy Directive (with regard to the 20 % increase in renewable energy not the transportation target) and the Regulation on Guidelines for trans-European energy infrastructure. The directives protecting biodiversity are in this study limited to the Habitats, Birds and Water Framework Directives. The EIA Directive and its role in bridging the fragmented procedures of renewable energy activities is also addressed, though not the SEA Directive as the primary focus is on the permit procedure. In the Swedish context the legislation discussed is a bit wider than the ones that only implement the relevant EU law.¹⁴⁵

The renewable energy activities that are part of the study are hydropower, wind power and transmission lines. Thus the focus is on electricity production and distribution, where hydropower contributes to the highest share. Wind power is of interest to study both because it is a relatively new development and Sweden has ambitious political targets of increasing production to 30 TWh by 2020. Transmission lines are part of the study as it is a necessary component of new renewable energy production sites, as they often require new grid infrastructure. These choices of energy system activities are also motivated by the focus on the permit procedure of those installations, as other sources of renewable energy – for example, the extraction of biomass – are seldom assessed in legal permit procedures.

There are many conflicts that may occur with renewable energy activities. However, this study focuses only on the relationship between renewable energy installations and the protection of biodiversity. Thus conflicts with local human population or other interests are not addressed. In addition, questions regarding access to justice and public participation are not discussed in this dissertation, though such issues are important to consider with regard to the enforcement of environmental law. Finally, even though this dissertation is in the sphere of energy law, it does not address market-related questions; for example, the legality of the support (incentive) systems for renewable energy and market regulation.

¹⁴⁵ See Chapter 4 for a description of the applicable Swedish legislation.

1.6 Disposition

PART I (Chapter 2-3) presents the EU background to the topic. It first examines the relationship between the EU and the national legal system, specifically regarding the competence to legislate in the field of energy and environmental law, with the ultimate aim of analysing the limits of the EU's legislative power in the field of renewable energy. Thereafter the role of the integration principle is discussed and analysed with the aim of exploring the potential for a more integrated renewable energy policy in the EU. Finally, the relationship between the renewable energy and nature protection legislation is addressed in the EU context.

PART II (Chapter 4–7) presents the legal relationship between the protection of biodiversity and promotion of renewable energy. Chapter 4 provides an introduction to the Swedish permit system and relevant Swedish legislation. Chapter 5 provides a discussion on how the relationship between wind power development and the protection of biodiversity is assessed by Swedish Courts. Chapter 6 provides a discussion on the relationship between hydropower and biodiversity both with regard to new and old installations. Chapter 7 presents a discussion on the possibility for renewable energy installations to be considered acceptable under the nature protection directives due to the derogation rules.

PART III (Chapter 8–9) Chapter 8 introduces the reader to the Swedish concession decision for transmission lines with a discussion on the requirements that need to be fulfilled in accordance with the Electricity Act and the implications of the parallel application of the Swedish Environmental Code. Chapter 9 presents the possibilities for bridging the fragmented assessments of renewable energy installations, more specifically, the role of the EIA and the meaning of the concept of *connected operations*, in this context. This is addressed both from a theoretical perspective and in an analysis of how the environmental impact from associated transmission lines are assessed in practice.

PART V (Chapter 10) summarises my conclusions from part I–III and provides a few suggestions for how the fragmented nature of the legal system – specifically with regard to the relationship between renewable energy and biodiversity – can be mitigated.

PART I: EU Legal Framework

2. Competence of the EU in the Field of Renewable Energy Activities

2.1 Introduction

A transition of the energy system to become carbon-neutral, with a higher share of renewable energy, requires a robust energy policy in Europe. Such a transition is identified by the EU as the core change required to combat climate change and to adapt to a future where fossil fuels are less common.¹⁴⁶

The common global threat of climate change requires a collective response. Rapid changes in climate affect life all over the world as natural catastrophes, such as severe heat and drought, are thought to be increasing in frequency due to climate change.¹⁴⁷ Owing to the diffuse nature of GHG emissions, it is difficult to determine which states are responsible for causing harm in other states. It is therefore a complicated problem to deal with under public international law and the rules on *state responsibility*.¹⁴⁸ A global agreement to reduce GHG emissions can be part of the solution, but there are severe challenges to adopt a common agreement on how to resolve the threat of climate change.¹⁴⁹

Considering the challenges to agreement at a global level, the development of a common climate and energy policy aimed at transforming to a green and low carbon economy in the EU context is essential. A transition of the energy system to become carbon-neutral is a large part of this transition.¹⁵⁰ Due to the nature of energy and its related climate aspect, it is important that the EU has a common energy policy that can lead to a rapid (but

¹⁴⁶ See COM(2010) 639 final, p. 2.

¹⁴⁷ See IPCC, *Climate Change 2013: The Physical Science Report*, 2013, pp. 3–29.

¹⁴⁸ See ILC, *Draft Articles on the Responsibility of States for Internationally Wrongful Acts*, 2001, p. 43.

¹⁴⁹ However, the Paris agreement shows some progress, see: Conference of the Parties, *Adoption of the Paris Agreement*, 2015.

¹⁵⁰ See COM(2010) 639 final, p. 2, where it is expressed that energy is very important for our society and that the actors of society are dependent on “safe, secure, sustainable and affordable energy”; see also the EU biodiversity strategy: COM(2011) 244 final, p. 2, which has its roots in the Convention on Biological Diversity (CBD) which adopted a global Strategic Plan for biodiversity (2011-2010), adopted at the COP 10, in Nagoya 2010. The *EU biodiversity strategy to 2020*, acknowledges that biodiversity loss together with climate change are “inextricably” interlinked and constitute the most critical environmental threat. Hence, it is crucial that the transition of the energy system is not at the cost of biodiversity.

sustainable) transition of our energy system and economy.¹⁵¹ Even though a global solution is preferable, the EU's regional response may be better than leaving action to the discretion of uncoordinated national governments. In addition, a strong EU policy could influence other regions in the world.¹⁵²

In its integrated energy and climate policy, the EU has taken important steps towards decreasing its GHG emissions by introducing the 20-20-20 targets, which refer to a 20% cut in GHG emissions and a 20% increase in both energy efficiency and renewable energy by 2020.¹⁵³ Such a transition does not come without challenges. For example, a higher share of renewable energy in the energy system comes with the problem of intermittency, where efficient and secure transmission of electricity becomes more important. One potential solution to these problems is improved energy infrastructure in the form of new and "smart" grids together with storage. "Smart" grids and smart meters are already on the market, while efficient and sustainable storage is yet to come.¹⁵⁴ In any case, it seems clear that more flexible and efficient energy infrastructure is a prerequisite for the EU's energy policy and its vision of a carbon-neutral energy system by 2050.

In the most general sense, this chapter provides a discussion on the legislative power that the EU needs to adopt the policies required to enable the transition of the energy system. This transition requires both an increase in renewable energy production and new energy infrastructure. I have focused on two pieces of EU legislation that promote the transition of the energy system: the Renewable Energy Directive (regarding the increase in renewable energy use) and the Regulation on guidelines for trans-European energy infrastructure (focusing on streamlining the legal procedures for *projects of common interest*).¹⁵⁵ The connected objectives behind the two legal acts are

¹⁵¹ See COM(2007) 1.

¹⁵² EU was prepared to commit to higher targets for GHG reductions if other countries followed. *Ibid.*

¹⁵³ The European Council, *Conclusions of the Presidency*, 2007, these goals were later adopted in: *The EU Climate and Energy Package*, including: the Emission Trading Directive (2009/29/EC), Decision 406/2009/EC, the Renewable Energy Directive (2009/28/EC) etc.

¹⁵⁴ Storage, in the form of hydropower dams, is already on the market and there are "pump storage" installations in, for example, Germany and Norway. In short, pump storage could be used to store electricity when there is an overload in the electricity system. The overload of electricity is then used to pump up the water from the dams so that the water can flow down when there is a need for electricity on the grid. However, the sustainability of pump storage and hydropower is in general contested.

¹⁵⁵ Projects of common interest are mainly projects that are large, and of cross-border nature; projects which are necessary to bridge the European electricity system. See: Regulation (EU) No 347/2013 of the European Parliament and of the Council of 17 April 2013 on guidelines for trans-European energy infrastructure and repealing Decision No 1364/2006/EC and amending Regulation (EC) No 713/2009, (EC) No 715/2009 (hereafter referred to as Regulation on Guidelines for Trans-European Energy Infrastructure).

to increase the extraction of renewable energy and to provide for efficient distribution of that energy.¹⁵⁶

The chapter begins by introducing the historical and political background to EU energy policy in general, together with a brief introduction to the general rules regarding EU competence and powers. Thereafter a discussion will follow on the legal basis and the content of renewable energy policies; both regarding the promotion of renewable energy activities and cross-border energy networks.

2.2 Historical background

Energy has played a crucial role in EU integration and cooperation policy. In the early days of European integration, one of the first significant steps towards integration was in the field of energy. Due to the *Schuman Declaration*,¹⁵⁷ the European Coal and Steel Community Treaty was set up in 1951.¹⁵⁸ The aim was to collectively keep control over the two strategic commodities, steel and coal, which were used in waging war.¹⁵⁹ This phase of integration after the Second World War was largely an attempt at keeping peace in Europe. The Euroatom Treaty was adopted in 1956, which concerned issues of nuclear energy; however, since the treaty's adoption, European energy policy has been rather fragmented and weak. As the energy mix changed, and the importance of coal diminished due to oil's increasing availability and lower price, the European energy policy lost its importance and some Member States became reluctant to give up their power in the field of energy.¹⁶⁰

Nevertheless, the EC once again proposed an internal energy market in 1988, suggesting that it would cut costs to consumers and make the European industry more competitive. An increase in security of supply was also mentioned as one of the benefits.¹⁶¹ Since 1988, the Internal Energy Market Document has played an important role in the Commission's proposals on

¹⁵⁶ However, the main objective behind the Regulation on Guidelines for Trans-European Energy Infrastructure is to enable the functioning of the internal market in electricity.

¹⁵⁷ The Schuman Declaration, 9 May 1950.

¹⁵⁸ See Craig, P. and Búrca, G., *EU Law – Text Cases, and Materials*, 2011, p. 5.

¹⁵⁹ See Langsdorf, S., *EU Energy Policy: From the ECSC to the Energy Roadmap 2050*, 2011, p. 2.

¹⁶⁰ As the energy sources changed and liquid fossil fuels became the primary source of energy, the main problem for the Community was identified as the maintenance of a regular, stable supply. The Community acknowledged the lack of production in the Community and its dependence on foreign oil. See COM(72) 1200. See also Langsdorf, S., *EU Energy Policy: From the ECSC to the Energy Roadmap 2050*, 2011, p. 2.

¹⁶¹ See COM(88) 238 final, 1988.

energy policy. However, as the climate is changing, environmental issues have also played an increasing part in energy policy.¹⁶²

Despite a fragmented and weak energy policy, many EU legislative acts have been adopted. The first directives adopted in the field of energy policy were related to security of supply. Directive 68/414/EEC obliged Member States to maintain emergency stocks of oil and petroleum products equivalent to 65 days of consumption. The “First Guidelines for a Community Energy Policy” was adopted in 1968 and set the foundation for the establishment of a common market for energy and cooperation in case of supply shortage.¹⁶³ Since its adoption, several guidelines, directives and strategies have been adopted to deal with problems related to oil and security of supply.¹⁶⁴

The first real step towards creating an internal market in energy was taken in 1986 with the adoption of the Single European Act,¹⁶⁵ followed by a White Paper on “Completing the Internal Market”.¹⁶⁶ The first serious steps towards the liberalisation of the electricity and gas markets were taken in 1995 when the Commission presented a Green Paper describing the EC’s role in the global energy sector.¹⁶⁷ This Green Paper was followed by a White Paper,¹⁶⁸ and an Action Plan, paving the way towards the market liberalisation through the first Electricity and Gas Directives in 1996 and 1998.¹⁶⁹

The functioning of the internal market is not yet ensured. Some Member States have liberalised their electricity and gas markets, while others are less willing to do so.¹⁷⁰ The Second Electricity and Gas Directives were adopted in 2003¹⁷¹ with the intention of completing the creation of the internal mar-

¹⁶² See for example the Renewable Energy Directive. For a more in depth description of the history of EU energy policy, see: McGowan, F., *Energy and Environment: Multiregulation in Europe*, 2000, pp. 1–49.

¹⁶³ COM(68) 1040 final.

¹⁶⁴ For a historical overview see: Notre Europa, *Towards a European Energy Community: A Policy Proposal*, 2010, pp. 18–22.

¹⁶⁵ The Single European Act, 1987.

¹⁶⁶ COM(85) 0310. This White Paper was later followed by the Commission Report on *The Internal Energy Market*, see: COM(1988) 238 final. The first directives in the field were then also adopted; Directive 90/547/EEC of 29 October 1990 on the transit of electricity through transmission grids, OJ:L313, 13 November, 1990, p. 30–33; and Council Directive 91/296/EEC of 31 May 1991 on the transit of natural gas through grids, OJ:L 147, 12 June 1991, p. 37–40.

¹⁶⁷ See COM(94) 659.

¹⁶⁸ COM(95) 682.

¹⁶⁹ See Directive 96/92/EC of the European Parliament and the Council of 19 December 1996 concerning common rules for the internal market in electricity. OJ:L 27, 30 January 1997, p. 20–29; and Directive 98/30/EC of the European Parliament and the Council of 22 June 1998 concerning common rules for the internal market in natural gas. OJ:L 204, 21 July, 1998, p. 1–12.

¹⁷⁰ See Notre Europa, *Towards a European Energy Community: A Policy Proposal*, 2010, p. 21.

¹⁷¹ Directive 2003/55/EC of the of the European Parliament and the Council of 26 June 2003 concerning common rules for the internal market in natural gas, L 176, 15 July, 2003, p. 57-

ket.¹⁷² However, the opening of the internal market had only reached 66 % for electricity and 57 % for gas as of 2005.¹⁷³

Energy is still one of the top priorities in the Member States and on the EU's political agenda, but the energy policy is far from efficient. In 1992, when the Maastricht Treaty was concluded, energy was first mentioned under the list of action areas in the EC Treaty, Article 3. Even though energy did not have its own provision, the EU has adopted policies in the field of energy under its general provisions, primarily under article 114 (the internal market) and article 192 (the environment). It is only recently, post-Lisbon, that energy has been recognised in Article 4, of part I of the TFEU, as an area where the EU has shared competence with its MSs, and that the EU has its own energy provision in the TFEU, Article 194.

Currently, the EU still struggles to enable the functioning of the internal market,¹⁷⁴ though it has recently taken another step towards integrating the European Energy Market by creating a framework strategy for a European Energy Union, which is suggested to be an important development to ensure the necessary transition.¹⁷⁵

The current goals of EU energy policy are: “increasing ‘security of supply’; ensuring the competitiveness of European economies and the availability of energy at affordable prices; and promoting environmental sustainability and combating climate change”.¹⁷⁶ In later years, energy policy has been integrated with EU climate policy, which has been giving rise to legislation related to renewable energy, carbon trading, eco-products, and so on.¹⁷⁷

As energy policies are successfully adopted, it is questionable whether or not the new provision in article 194 has brought some additional competence for the EU to develop policies in the field of energy. The Member States have not surrendered their competence to decide over their natural resources (choice of energy sources) and ability to adopt energy taxes.¹⁷⁸ Apart from these issues, it seems that the EU has shared competence to adopt policies in the field of energy.

In sum, the European energy policy has fallen from an arguably strong position in the 1950s to a rather weak and fragmented state in the 2010s. It is

78; and Directive 2003/54/EC of the European Parliament and the Council of 26 June 2003 concerning common rules for the internal market in electricity, L 176, 15 July, 2003, p. 37-56.

¹⁷² Now the *Electricity Directive* has been renewed again. The Directive 2003/54/EC has been replaced by Directive 2009/72/EC.

¹⁷³ See Notre Europa, *Towards a European Energy Community: A Policy Proposal*, 2010, p. 22.

¹⁷⁴ See COM(2012) 663 final, p. 2.

¹⁷⁵ This dissertation is limited to looking at the legislation in place and the 2020 goals. See COM(2015) 80 final.

¹⁷⁶ As presented in: COM(2007) 1, and later endorsed by the European Council, see the European Council, *Conclusions of the Presidency*, 2007, para. 28.

¹⁷⁷ See Directive 2009/28/EC, the Renewable Energy Directive; Directive 2009/29/EC, the Carbon Trading Directive; and Directive 2009/125/EC, Directive on eco-products, etc.

¹⁷⁸ See Article 194 (2) and (3) of the TFEU.

understandable that in the face of the aftermath of the Second World War there was a strong interest in integrating energy policy to keep the peace. However, owing to the inflexible energy policy under the Coal and Steel Treaty and the Euroatom Treaty, European energy policy has not been able to adapt to the changes in energy production that have been taking place over the years. As the years have gone by, the threat of European wars has also diminished. The more recent development occurring within the last decades shows a more environmentally integrated energy policy where climate objectives are set at the forefront and where the promotion of renewable energy is one of the main policies. The fact that energy now has its own provision in the TEFU also implies that EU energy policy is once again becoming a more important issue on the EU agenda. It is yet too early to say what a European Energy Union will imply for future energy policy. The following section presents the current energy policy in the EU.

2.3 Goals and objectives of the EU Energy Policy

The EU and the rest of the world are faced with the common threat of climate change and diminishing natural resources. The EU is one of the regions in the world that is trying to meet these challenges through its integrated climate and energy policy. It is nevertheless important to remember that despite the EU's ambitious green agenda its energy mix still contains a large share of fossil fuels. Statistics from 2013 show that 73.8 % of the energy mix in EU-28 was fossil fuels, where the share of the total energy mix of oil was 33.4 %, gas 23.2 % and solid fossil fuels 17.2 %. Nuclear energy's contribution was 13.6 % and renewable energy represented close to 11.8 % of the energy mix.¹⁷⁹ The large share of oil and gas means that the EU is an import-dependent region, where more than 50 % of its energy is imported from outside the EU.¹⁸⁰ A way of becoming less dependent on foreign sources of energy is through a larger production of renewable energy, which has been identified in various EU political documents.¹⁸¹

The EU has integrated its energy and climate policy in response to the growing awareness of climate change and rising energy prices in relation to dependency of foreign oil. Following the Commission's Green Paper on "A European Strategy for Sustainable, Competitive and Secure Energy"¹⁸² in 2006, the Commission then issued the "Energy and Climate Package" pre-

¹⁷⁹ See the European Commission, *Energy, transport and environment indicators*, Eurostat pocketbook, 2015, p. 54.

¹⁸⁰ *Ibid.*, p. 42.

¹⁸¹ See, for example: COM(2007) 1; and Green Paper of the Commission: COM(2006) 105 final.

¹⁸² See COM(2006) 105 final.

sented in 2007, in its communication on “An Energy Policy for Europe”.¹⁸³ This new energy policy package came under three headings: “increasing ‘security of supply’; ensuring the competitiveness of European economies and the availability of energy at affordable prices; and promoting environmental sustainability and combating climate change”, and was endorsed by the European Council.¹⁸⁴ However, it was only after the Third Energy and Internal Market Package, in June 2009, that the aim was to put some regulatory framework in place.¹⁸⁵

These goals are ambitious in nature and arguably hard to fulfil. One of the prerequisites is often argued to be the functioning of the internal market in energy. The Commission’s Communication on energy infrastructure priorities for 2020 and beyond, calls for “a new EU energy infrastructure policy to coordinate and optimize network development on a continental scale”.¹⁸⁶ In addition to a continental energy network, the Commission suggests that “smart grids” are also a prerequisite for reaching the renewable target and the energy efficiency target by 2020.¹⁸⁷

As mentioned earlier, there are arguably many benefits to a functional internal market in energy.¹⁸⁸ However, there are still a few challenges that the EU must overcome to enable the transition of the energy system to become sustainable, innovative, low-carbon and energy-efficient by 2020 and beyond.¹⁸⁹ The Commission points out a few issues that need to be tackled, including: the enforcement challenge,¹⁹⁰ the consumer challenge,¹⁹¹ and the

¹⁸³ See COM(2007) 1.

¹⁸⁴ The European Council, *Conclusions of the Presidency*, 2007.

¹⁸⁵ Many new directives were adopted. For the directives on the internal market see: Directive 2009/72/EC of the of the European Parliament and the Council of 13 July 2009 concerning common rules for the internal market in electricity and repealing Directive 2003/54/EC; and Directive 2009/73/EC of the European Parliament and the Council of 13 July 2009 concerning common rules for the internal market in natural gas and repealing Directive 2003/55/EC. Regulations regarding access to the network for cross border exchanges, see: Regulation (EC) No 714/2009 of the European Parliament and the Council of 13 July 2009 on conditions for access to the network for cross border exchanges in electricity and repealing Regulation (EC) No 1228/2003. Regulation (EC) No 715/2009 of the European Parliament and of the Council of 13 July 2009 on conditions for access to the natural gas transmission network and repealing Regulation (EC) No 1775/2005. See also Regulation (EC) No 713/2009 of the European Parliament and of the Council of 13 July 2009 establishing an Agency for the Cooperation of Energy regulators.

¹⁸⁶ COM(2010) 677, p. 5.

¹⁸⁷ In this context the Commission suggests that the consumer will play a more active role in using electricity more efficiently, by having smart grids and smart meters installed in their homes. To enable a fast transition to such an “intelligent” network infrastructure, the Commission suggests that a legal framework is needed. *Ibid.*, pp. 6, 11–12.

¹⁸⁸ A few of these suggested benefits include: more choice and flexibility for consumers, more competitive prices, more liquid and transparent wholesale markets, more secure supplies, and more coordination and transparency in relations with third countries. See COM(2012) 663 final, pp. 3–5.

¹⁸⁹ *Ibid.*, p. 7.

¹⁹⁰ There are currently delays in implementation of the package and the Commission is pursuing infringement procedures against those Member States that have not implemented the

transition challenge.¹⁹² The EU Emissions Trading System is identified as the instrument that will steer the energy mix to low carbon, though still considering that support for renewable energy is a necessity.¹⁹³

In sum, there is a strong will within the EU Commission to enable the functioning of the internal market,¹⁹⁴ which is argued to be a prerequisite for the fulfilment of the EU energy objectives. Nevertheless, it seems difficult to realize these plans. There are, of course, concerns as to whether the market can ensure security of electricity supply and generation adequacy.¹⁹⁵ Even though the objectives behind the transition of the energy system are much wider than the climate objectives, and the measures proposed are not only a push for renewable energy, this dissertation focuses primarily on those aspects.

2.4 EU Competence and Powers

2.4.1 Introduction

To discuss the EU's competence in the field of renewable energy, it is important to understand the basic provisions regarding EU competence, which includes understanding the meaning of shared competence and the guiding principles of subsidiarity and proportionality. The following section gives a background to these issues before the relevant provisions describing the

package or not implemented it correctly. Another aspect of the challenge is to ensure a level playing field, so that all companies in the market are treated equally. A third and important aspect is to bridge the gap between Member States. It is important that there are network connections and grid in place so that trade between the different Member States is feasible. See COM(2012) 663 final Ibid., pp. 8–9.

¹⁹¹ The consumer challenge basically means that it is important to enable the consumer (through smart technology, information and incentives) to play an active role in the energy market. The deployment of smart meters is here identified as an important aspect. Targeted assistance, to reduce energy poverty and consumer vulnerability, is also identified. Ibid., pp. 9–11.

¹⁹² The transition challenge means: how to make Europe's energy system fit for the future. Including decarbonizing and making the energy system efficient and increasing the energy of supply. The Commission thinks this transition is possible through the completion of the functioning of the internal market; however, a properly integrated and modern infrastructure is a prerequisite. See COM(2012) 663 final, p.12.

¹⁹³ Ibid., p.p. 13–14. However, the plan for 2030 does not yet include legally binding renewable energy targets for individual MS, see: SWD(2014) 259 final, p. 3; see also: COM(2014) 15. However, in this policy framework there are no legally binding targets for renewable energy.

¹⁹⁴ The Commission also proposes an Action Plan that would ensure the completion of the internal market. See COM(2012) 663 final, Annex 1.

¹⁹⁵ See: The European Commission, *Consultation Paper on generation adequacy, capacity mechanisms and the internal market in electricity*, 2012.

competence and powers relevant for policies related to renewable energy activities are discussed.

Prior to the Lisbon Treaty it was not clear what competence the EU had and where the limits of its competence should be drawn.¹⁹⁶ Since the adoption of the Lisbon Treaty, the limits to EU competence have a clearer structure, including categories of different competences which are listed in that treaty. The EU can have exclusive or shared competence, or competence to support, coordinate or supplement action.¹⁹⁷

2.4.2 EU Competence in general – relevant for renewable energy activities

The competence of the EU is stipulated in the EU treaties and is based on the principle of conferral. In Article 4 of the Treaty of the European Union (TEU), it is stated that competence not conferred to the EU remains with the Member States.¹⁹⁸ The competence for the EU to legislate in the field of environment, and to a limited extent in that of energy and energy infrastructure,¹⁹⁹ is conferred on the EU. These legal bases may all be relevant for the adoption of policies related to renewable energy activities.

The Member State has *shared competence*²⁰⁰ to adopt measures and policies in these areas.²⁰¹ This implies that if the EU has not legislated in the field, it is free for Member States to adopt legislation and measures on issues

¹⁹⁶ This was an issue identified to be explored further after the *Nice Treaty* 2000. As a result of the problem of identifying the competence of the EU, the *Laeken Declaration* specified the issues of competence that were still left open after the adoption of the Nice Treaty. The declaration mentions four issues of particular interest regarding the definition and division of competence in the EU: the need to make the division of competence more transparent and clear; the need to ensure that the EU has the power needed to perform the tasks conferred on it by its Member State; the need to ensure that EU competence did not slowly grow into areas where Member States have exclusive competence and finally, the desirability of considering whether there should be some reorganisation of competence between the union and its Member States. See: Craig, P., *The Lisbon Treaty: Law, Politics, and Treaty Reform*, 2010, pp. 155–157; and the European Council Meeting in Laeken, *Precidency Conclusions*, 2001, pp. 21–22.

¹⁹⁷ See Article 2 TFEU.

¹⁹⁸ The principle of conferral is limited by the specific competences conferred upon it in the Treaties; see Article 5(2) TEU. Another restriction for the EU to use its power to adopt policies is the rules about *national identity*, stated in article 4(2) TEU, which are to be balanced against the *loyalty principle*, stated in Article 4(3) TEU.

¹⁹⁹ See Article 192, 194 and 172 TFEU.

²⁰⁰ See Article 2(2) TEU.

²⁰¹ The categories of shared competence are the general provision and are listed in Article 4 TFEU, see list in article 4 (2) TFEU. However, the list is not to be considered exhaustive; see Craig, P., *The Lisbon Treaty: Law, Politics, and Treaty Reform*, 2010, p. 168. The EU can also have *exclusive competence* to adopt policies in certain fields. The EU has exclusive competence in a number of areas, including: the field of customs union; the establishing of the competition rules necessary for the functioning of the internal market; the conservation of marine biological resources under the common fisheries policy; and the common commercial policy, see Article 3 TFEU for the full list. However, these policy fields will not be discussed in this dissertation.

where the Member State and the EU has shared competence.²⁰² However, when the EU acts in the field, the Member State can no longer exercise its power on the same specific issue.²⁰³ Bergström, et al., suggest that when the EU has started to legislate in an area of shared competence, the EU has *de facto* exclusive competence to legislate in that specific area.²⁰⁴ This does not imply that the Member State no longer has competence to exercise its power, only that it cannot exercise it in a way that contradicts EU legislation.

When the EU has shared competence, it is not completely clear where such competence begins and ends. The principles of subsidiarity and proportionality are here helpful to guide the exercise of EU competence. The Subsidiarity Principle, stipulated in Article 5(3), implies that the EU should only act when the goals of its actions are better achieved at EU level than by individual actions by the separate Member State.²⁰⁵ If a Member State considers the EU to not have respected the principle on subsidiarity, it can bring an infringement procedure to the CJEU under Article 263 TFEU.²⁰⁶ However, though the principle of subsidiarity has been invoked before the Court, no annulment of EU legislations or measures has yet been undertaken.²⁰⁷

While the subsidiarity principle explains when the EU should use its competence, the proportionality principle, stipulated in Article 5(4) TEU, suggests that the type of measure the EU chooses must be proportional, or rather that the measure “shall not exceed what is necessary to achieve the objectives of the Treaties”.²⁰⁸ In the context of EU legislative powers, the principle of proportionality describes the quality of the EU intervention; in other words, how far reaching can an EU policy or action be without impairing too much on the Member States’ rights.

²⁰² See, for example: Van Ooik, R., *Interface between EU Law and National Law*, 2007, p. 21.

²⁰³ This is due to the principle of supremacy of EU law, which was developed in *Costa v. ENEL*. The Principle was suggested to be stipulated in the European Constitution but was never adopted in the Lisbon Treaty. Bergström et al suggest that the principle of supremacy is not set in stone, that it is instead a non-legally binding common understanding between the European Court of Justice and the supreme courts of the Member States. The relevance of the principle has to be assessed at an individual level and the EU also has to respect national sovereignty. See Case 6/64, *Costa v. ENEL*; and Bergström, C. F. et al., *Lissabon Fördraget*, 2008, pp. 41–42.

²⁰⁴ See Bergström, C. F. et al., *Lissabon Fördraget*, 2008, p. 37.

²⁰⁵ The article, in itself, is not a rule of competence, rather a principle about the exercise of competence. When the EU takes action, it needs to show that the condition of Article 5 is fulfilled, for every single measure. If not the EU has exclusive competence, see Krämer, L., *EU Environmental Law*, 2012, p. 16–17. For a more in depth discussion on the meaning of the subsidiarity principle, see Chalmers, D. et al, *European Union law: cases and materials*, 2010, p. 364.

²⁰⁶ See also Craig, P. and Búrca, G., *EU Law – Text Cases, and Materials*, 2011, p. 98.

²⁰⁷ See Chalmers, D. et al, *European Union law: cases and materials*, 2010, p. 364.

²⁰⁸ See Article 5(4) TEU. The proportionality principle is applicable not only when determining the competence of the EU and its institutions to adopt measures or legislation, it is also applicable when assessing the legitimacy of the burdens imposed on the subjects of EU law and when assessing the conduct of Member States when acting within the scope of EU law, see Usher, J.A., *General Principles of EC Law*, 1998, p. 37.

In the field of environment, the subsidiarity principle has a rather important role to play. While some countries have a high level of environmental protection, others do not. The fulfilment of the objectives may therefore be best ensured through EU action. Another argument for EU action is that the environmental objectives are more easily ensured at the Union level because of its nature. The environmental problems we are facing today are not only of local nature. The protection of biodiversity, water pollution and climate change, in addition to its local impact, often have consequences for larger regions (across national borders) and sometimes globally.²⁰⁹ In order to achieve a high level of environmental protection in the EU, it might also be better for the EU to handle environmental policies that address environmental problems of a more local character, as it would ensure a minimum environmental standard for certain issues.²¹⁰

In the field of renewable energy, which constitutionally is a more sensitive issue than pure environmental protection, the EU does not have as clear a mandate to act. Energy issues have long been of national concerns and it has been highly debated whether the EU can enforce strict energy efficiency targets on its Member States.²¹¹ The Renewable Energy Directive also imposes targets for renewable energy in the energy system, which could be seen as restricting the Member States' right to choose its own energy sources, where the power is not conferred to the EU. This directive and target for renewable energy is officially applied as an environmental policy, but the question is whether Member States would accept more strict targets for renewable energy within the boundaries of the current legal bases.

2.5 EU Competence in the Field of Energy

2.5.1 Introduction

It is only recently that energy policies have been granted their own legal basis in Article 194 of the TFEU. Since it is a rather new construction it is not certain how it is to be interpreted and what type of policies that can be adopted under the provision. The following section aims at discussing the meaning of Article 194 and to clarify what competence the EU has to adopt policies under that legal basis, both in general and specifically with regard to renewable energy activities.

²⁰⁹ See Krämer, L., *EU Environmental Law*, 2012, p. 18.

²¹⁰ See De Sadeleer, N., *Journal for European Environmental and Planning Law*, 9.1, 2012, pp. 64–65.

²¹¹ See COM(2011) 370 final.

Historically, energy issues were mainly handled outside of the EU context. The Coal and Steel Treaty²¹² and the Euroatom Treaty²¹³ have been the major treaties in the field of energy. In 2002, the Treaty on Coal and Steel became part of the EU policies, in contrast to the Euroatom Treaty, which still exists outside the EU Treaty. This is a rather odd construction and not preferable from an environmental point of view. By not handling the regulation on nuclear power under the EU Treaty, effects on environmental concerns, such as flora and fauna, are not required to be legally considered. The Euroatom Treaty mainly deals with impacts on human health.²¹⁴

An important aspect of the EU energy policy is that energy constitutes a horizontal policy issue. In other words, the EU energy policy is part of several other policy areas such as foreign policy, environmental policy and competition policy.²¹⁵ Even though the EU has adopted energy-related policies for many years, it is only recently that it has its own provision in the TFEU.²¹⁶ Article 194 was adopted after the Lisbon Treaty²¹⁷ with the aim of providing a single legal basis for energy policy. Pre-Lisbon, most provisions regarding energy measures (that were related to environmental concerns) were based on Article 192 and Article 114 TFEU (regarding the internal market) owing to the lack of provision for energy policy.

Even though energy now has its own provision in the TFEU, it does not change the fact that energy is a horizontal issue and there may be some overlaps between different competences. Hence, energy-related environmental policies may still be adopted under Article 192, if the main objective behind the policy is environmental, or in conjunction with Article 194, if the objective is shared. It is yet too early to say if this is an acceptable approach as energy now has its own provision in Article 194 and should be used in accordance with the *lex specialis* principle.²¹⁸

In the following section the Renewable Energy Directive is briefly presented. Thereafter it is discussed whether the new provision in Article 194 has in fact changed the EU's legislative power in the field of energy. The presentation is general but the analysis mainly focuses on the potential to introduce more progressive legally binding targets for renewable energy. As a legal basis for energy policy has been introduced in Article 194 TFEU,

²¹² Treaty Establishing the European Coal and Steel Community, hereafter referred to as The Coal and Steel Treaty.

²¹³ Treaty Establishing the European Atomic Energy Community, hereafter referred to as The Euroatom Treaty.

²¹⁴ See Krämer, L., *EU Environmental Law*, 2012, p. 381.

²¹⁵ See Braun, J. F., *EU Energy Policy under the Treaty of Lisbon Rules*, 2011, p. 3.

²¹⁶ See article 194 TFEU. Before Lisbon, energy had a limited legal basis, stated in Article 3 TFEU, see Krämer, L., *EU Environmental Law*, 2012, p. 380. Regarding the area of energy infrastructure it was provisions in article 154–156 (now Article 170–172), that provided for the creation of trans-European networks in the field of energy.

²¹⁷ Treaty of Lisbon Amending the Treaty on European Union and the Treaty Establishing the European Community, hereafter referred to as the Lisbon Treaty.

²¹⁸ See Case C-490/10, *Parliament v. Council*, para. 44.

after the adoption of the current Renewable Energy Directive, the discussion will partly focus on which legal basis is most likely for a future EU renewable energy policy.²¹⁹ Even though current renewable energy targets do not seem to be considered too intruding on Member States' energy rights, stricter targets might.²²⁰ The meaning of Article 13 of the Renewable Energy Directive and the implications of Article 16 regarding guaranteed or prioritised access to the grid is thereafter discussed.

2.5.2 The Renewable Energy Directive

The Renewable Energy Directive is the main legislation promoting renewable energy in the EU. The Directive was adopted in 2009, partly on environmental grounds (now Article 192(1) TFEU) and partly on the legal basis for the internal market (now Article 114 TFEU).²²¹ The Directive is part of the energy and climate package, to set out the binding individual targets for renewable energy to reach the 20 % goal by 2020 in the EU.²²² The Directive also requires Member States to ensure that at least 10 % of transport fuels come from renewable sources.²²³

The Directive does not specify in detail how each Member State shall reach the individual renewable energy targets; it is left to the individual Member State to decide. In accordance with Article 3(3)(a), Member States may adopt support schemes to reach their individual targets set out in the Directive. Many states have adopted such a support scheme and they are mainly in the form of Electricity Certificate Systems or Feed in Tariff Systems.²²⁴ How these support schemes are to be constructed is mainly up to the individual Member State, and if certain technical criteria are applied they need to be clearly defined.²²⁵ The various support schemes, and their legality, are not discussed in this dissertation.²²⁶ Instead, the Swedish support scheme

²¹⁹ The current Renewable Energy Directive was primarily adopted under Article 192, as an environmental policy.

²²⁰ This will be further discussed in Section 2.5.3.

²²¹ Directive 2009/28/EC of the European Parliament and of The Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC, hereafter referred to as the *Renewable Energy Directive*.

²²² The 20-20-20 goals, where the increase in renewable energy was one of them, was first decided in the European Council's March 2007 summit; see the European Council, *Conclusions of the Presidency*, Brussels, 9 March 2007, No 7224/07.; and has later been adopted in: *The EU Climate and Energy Package*, including: Directive 2009/29/EC, Decision 406/2009/EC, Directive 2009/28/EC etc.

²²³ This part of the renewable energy targets is not discussed in this dissertation.

²²⁴ See SWD(2013) 439 final.

²²⁵ See Article 13(2) of the Renewable Energy Directive.

²²⁶ However, the legality and meaning of the support systems has been discussed in case law; see, for example: Case C-573/12, *Ålands vindkraft AB v Energimyndigheten*.

will be discussed in light of the fulfilment of relevant nature protection legislation.²²⁷

In accordance with Article 4 of the Renewable Energy Directive, Member States were initially required to compose national renewable action plans,²²⁸ and, in accordance with Article 22, Member States are required to compose a renewable energy progress report every second year.²²⁹ The Directive also promotes cooperation with other countries, both between Member States and non-EU countries, to meet their renewable energy targets. Statistical transfers of renewable energy,²³⁰ joint support schemes for renewable energy,²³¹ and joint renewable energy projects²³² are the proposed forms that cooperation can take.²³³

To reach the individual targets for renewable energy, the EU also stipulated provisions that are supposed to enable a more efficient procedure for renewable energy activities. In accordance with Article 13 of the Directive, Member States shall ensure that any national rules concerning the administrative procedures²³⁴ of renewable energy activities²³⁵ are *proportionate* and *necessary*.²³⁶ The meaning of this provision is addressed later in this chapter.

With the aim of enabling the increase in renewable electricity, the Directive also requires Member States to ensure that transmission and distribution system operators *guarantee* the transmission and distribution of renewable electricity production.²³⁷ Member States are also entitled to provide for either *priority* or *guaranteed* access to the grid system of electricity pro-

²²⁷ See Section 6.4.

²²⁸ In the action plans it will be described how the Member States intend to reach their individual renewable energy target, including planned renewable energy technology mix, policy measures, planned statistical transfers, joint projects with other Member States etc. The plans were to be notified to the EU Commission by 30 June 2010, see Article 4 (2) of the Renewable Energy Directive. The EU Member States action plans can be found at: <https://ec.europa.eu/energy/node/71>

²²⁹ In the progress reports the Member States describe the progress towards meeting the 2020 renewable energy targets. See: <https://ec.europa.eu/energy/node/70>

²³⁰ See Article 6 of the Renewable Energy Directive.

²³¹ See Article 3(3)(b) of the Renewable Energy Directive.

²³² See Article 7 and 9 of the Renewable Energy Directive.

²³³ These instruments will not be further discussed in this dissertation.

²³⁴ The term “administrative procedures” includes “authorisation, certification and licensing procedures”, see Article 13(1) of the Renewable Energy Directive.

²³⁵ The term “renewable energy activities” refers to activities specified in Article 13(1) of the Renewable Energy Directive: “plants and associated transmission and distribution network infrastructures for the production of electricity, heating or cooling from renewable energy sources, and to the process of transformation of biomass into biofuels or other energy products.”

²³⁶ The criteria on whether the rules are proportionate and necessary have not yet directly been assessed by the CJEU but could be addressed in either an infringement procedure (Article 258 TFEU) or preliminary ruling (Article 267 TFEU). However, the criteria have been pointed out in *C 2/10, the Puglia Case*

²³⁷ See RED, Article 16 (2)(a).

duced from renewable energy sources.²³⁸ These provisions will be further discussed later in this chapter.

One of the problems identified prior to the adoption of the 2009 Directive was the absence of legally binding targets for renewable energy. The Commission emphasised in 2000 that a clear regulatory framework was needed to increase the share of electricity produced from renewable sources, as the non-legally binding approach in EU and national programmes had proved to be insufficient.²³⁹ In light of this statement, it is interesting to view the most current suggestion: to take away the legally binding requirements for renewable energy.²⁴⁰ Many have criticised the new strategy with regard to the suggested abolition of legally binding renewable energy targets.²⁴¹ The following section analyses the meaning of the provision in Article 194 in general and more specifically its potential as a legal basis for a new Renewable Energy Directive with stricter renewable energy targets.

2.5.3 EU Energy provision in Article 194 TFEU

The following section provides a discussion on the meaning of the provision stipulated in Article 194 TFEU. It discusses the type of legislation the EU can adopt under the provision, both in general and specifically with regard to EU legislation imposing targets for renewable energy.²⁴² As mentioned above, the EU has shared competence to legislate and adopt policies in the field of energy.²⁴³

In Article 194 TFEU, the mandate of the EU in the field of energy is presented. Article 194(1) states:

“In the context of the establishment and functioning of the internal market and with regard for the need to preserve and improve the environment, Union policy on energy shall aim, in a spirit of solidarity between Member States, to: (a) ensure the functioning of the energy market; (b) ensure security of energy supply in the Union; (c) promote energy efficiency and energy saving and the development of new and renewable forms of energy; and (d) promote the interconnection of energy networks.”²⁴⁴

²³⁸ See RED, Article 16 (2)(b).

²³⁹ See EU Commission Green Paper, *Towards a European Strategy for the security of energy supply*, COM(2000) 769, pp. 41-45.

²⁴⁰ See EU Commission, *A policy framework for climate and energy in the period from 2020 to 2030*, COM(2014) 15.

²⁴¹ See, for example: Climate Action Network Europe (CAN), Greenpeace and WWF, *Effective Governance for the EU 2030 Renewable Energy Target: NGO Policy Recommendations*, 2015.

²⁴² See the Renewable Energy Directive.

²⁴³ See Article 5, section 3 of the TEU.

²⁴⁴ See Article 194 (1) TFEU.

The Article further states that the European Parliament and the Council shall establish the necessary measures to achieve these objectives.²⁴⁵

The aims in article 194 are to be executed in a spirit of *solidarity*.²⁴⁶ As the new article 122(1) TFEU states:

“Without prejudice to any other procedures provided for in the Treaties, the Council, on a proposal from the Commission, may decide, in a spirit of solidarity between Member States, upon the measures appropriate to the economic situation, in particular if severe difficulties arise in the supply of certain products, notably in the area of energy.”

This implies that there is an opening for EU preventive measures with regard to energy security, though without any legal obligation for Member States. The impact of the solidarity clause is therefore argued to be not particularly strong.²⁴⁷ However, the solidarity clause still reflects the Member States’ view of energy to be not purely of national interest but also of common interest.²⁴⁸

Energy, especially the choice of energy sources, has long been a sensitive issue and considered to be of national concern. This is reflected in Article 194 (2), where it is stated:

“Without prejudice to the application of other provisions of the Treaties, the European Parliament and the Council, acting in accordance with the ordinary legislative procedure, shall establish the measures necessary to achieve the objectives in paragraph 1. Such measures shall be adopted after consultation of the Economic and Social Committee and the Committee of the Regions.

Such measures shall not affect a Member State's right to determine the conditions for exploiting its energy resources, its choice between different energy sources and the general structure of its energy supply, without prejudice to Article 192(2)(c).”

Most decisions and legislation in the field of energy are decided on “the ordinary legislative procedure”, which means that the legislation is based on a co-decision between the Council and the European Parliament.²⁴⁹ The Council decides with a qualified majority and Parliament with a simple majority rule.²⁵⁰

²⁴⁵ See Article 194 (2) TFEU.

²⁴⁶ See Article 194 (1) TFEU.

²⁴⁷ See Braun, J. F., *EU Energy Policy under the Treaty of Lisbon Rules*, 2011, p. 2.

²⁴⁸ See discussion in Calliess, C., and Hey, C., *Journal for European Environmental and Planning Law*, 10.2, 2013, pp. 87—131, at p. 102.

²⁴⁹ See Article 289 TFEU.

²⁵⁰ See Article 294 TFEU. This is in contrast to the “special legislative procedure”, represented in, for example, Article 194(3) which means that decisions are undertaken only if there is unanimity.

The scope of Article 194 has been discussed in the literature. It has been suggested that Article 194 does not include measures *promoting* renewable forms of energy, but the promotion of the *technological* development of such activities.²⁵¹ Renewable energy policies, or other environmentally motivated energy policies, are therefore suggested to be not covered by Article 194 but by Article 192 of the TFEU.²⁵² If only focusing on that sequence of the provision – “promote [...] the development of new and renewable forms of energy” – I do not interpret it to only include the development of technology for renewable energy activities, but also the development of actual renewable energy installations, for practical use. However, as will be discussed below it is likely that legislation promoting renewable energy is not best suited under the legal basis in Article 194, based on other aspects of the Article.

Vedder suggests that the Energy provision entails a restriction of the scope to issues regarding the internal market due to the wording of the first section of the article, which only allows energy policy “in the context of the establishment and functioning of the internal market”. However, even if he also acknowledges the second aim of the energy policy: “with regard for the need to preserve and improve the environment”, Vedder does not interpret that part of the objective as a restriction on internal market energy policies.²⁵³ Instead, he suggests that the environmental aim of the energy policy is a reflection of the integration principle.²⁵⁴ He suggests that the scope of Article 194 is very limited and may only be seen as the right basis as long as the policy regards export and imports of energy.²⁵⁵ This strict interpretation may also be in line with the limits of the energy policy established in Article 194 (2); namely, that energy policies cannot *affect* Member States’ *energy rights*,²⁵⁶ which leaves the EU with very little power to enact legislation under Article 194.

However, it is not certain how to interpret “affect”.²⁵⁷ It is difficult to imagine an energy policy that will not have *any* impact on Member States’

²⁵¹ See Calliess, C., and Hey, C., *Journal for European Environmental and Planning Law*, 10.2, 2013, pp. 87–131.

²⁵² *Ibid.*, p. 95.

²⁵³ See discussion in Vedder, H., *Journal of Environmental Law*, 22:2, 2010, p. 291.

²⁵⁴ *Ibid.*, p. 289.

²⁵⁵ *Ibid.*, p. 291.

²⁵⁶ With energy rights I am referring to: “Member State’s right to determine the conditions for exploiting its energy resources, its choice between different energy sources and the general structure of its energy supply.” (wording of Article 194(2) para. 2.) In addition to the limits of Article 194 due to Member States energy rights, there are also other barriers for a more progressive energy policy in Article 194 (3), which implies that energy taxes, and other fiscal measures to promote certain types of energy or prevent the use of other sources, are still the competence of the individual Member States.

²⁵⁷ In the literature it has been argued, in light of the principle of consistency of EU law and as it is an exceptional provision to the rule of shared competence, that the significance threshold in Article 192(2)(c), should in fact be interpreted as significantly affect. See Fouquet, D.,

energy rights referred to in Article 194(2)(2).²⁵⁸ Such an interpretation would result in a very useless legal basis for energy policy, as there is no possibility open to use a special legislative procedure for policies that *affect* energy rights, as such policies are simply not permitted. However, more specifically, it can be discussed if a Member State's energy rights can, in fact, be affected by renewable energy policies. Ermacorra is of the view that it is difficult to see the promotion of renewable energy as “distorting the general structure” of Member States' energy supply, as all Member States have been using renewable energy sources before the adoption of the treaty.²⁵⁹ However, I consider that a valid argument could be that such policies may indirectly impact the general structure of Member States' energy supply, depending on how far-reaching such a policy is. The targets presented in RED may not have such impacts, but if a renewable energy policy were to introduce higher targets, which most likely is required to enable a transition to a carbon neutral energy system by 2050, it may also affect the general structure of the energy supply.²⁶⁰

Johnston and van der Marel suggest that to avoid the uselessness of the article, a *minimis test* should be adopted with regard to how much energy policies could affect Member States' rights. They suggest that the wording of Article 192(2)(c): *significantly affect*, should be used when interpreting Article 194(2).²⁶¹ However, regarding the lack of the term “significantly” in the wording of Article 194(2), I find it questionable whether such interpretation is what the EU intended. The EU would probably have used the word “significantly” if the intention was to give the Union a more significant power in relation to its Member States, in the same manner as expressed in Article 192(2). I find it more likely that Article 194(2) is intentionally written in a way that limits the possibility for the EU to adopt policies in the field of energy. However, if the policy has environmental objectives, which is typical regarding renewable energy, then it is possible to adopt these policies under the environmental basis and therefore affect Member States' energy rights, as the voting procedure does not change until it *significantly* affects such rights.

Nysten, J.M., et al., *Potential areas of conflict of a harmonised RES support scheme with European Union Law*, D3.1 Report, p. 17; compare: Haraldsdóttir, K., *European Energy and Environmental Law Review*, 2014, p. 213.

²⁵⁸ For a discussion on Member States' rights, whether they are absolute or relative, see Haraldsdóttir, K., *European Energy and Environmental Law Review*, 2014, p. 212.

²⁵⁹ See Ermacorra, F., *Reflections on 30 Years of EU Environmental Law – A High Level of Protection?*, 2006.

²⁶⁰ However, this varies between different Member States. The general structure of the energy supply in a Member States with no, or very little renewable energy production, may be affected but perhaps not a Member State like Sweden, where about 50 % of the energy already derives from renewable sources.

²⁶¹ Angus, J. and Eva, van der Marel, *European Energy and Environmental Law Review*, 2013, p. 197.

The meaning of “without prejudice to Article 192(2)(c)” is also not clear. It may be interpreted to mean that if the specific policy is also adopted on environmental grounds (Article 192), then the special legislative procedure established in Article 192(2)(c) applies if the policy *significantly* affects Member States’ energy rights. This implies that if the energy policy has some environmental aspects then it may be adopted on a dual basis (by both Article 192 and 194) if the policy is to affect Member States’ energy rights. It is not certain if this is an acceptable way of adopting future energy policies as energy now has its own provision. The CJEU has pointed out that the choice of legal basis for an EU measure “must be based on objective factors amenable to judicial review, which include the aim and content of that measure...” and, if a more specific provision exists, that provision must be the basis for that measure.²⁶² If environmentally-related energy policies are to be adopted on a dual basis, the nature of the *lex specialis* of Article 194 diminishes and there is not necessarily any change to pre-Lisbon and Article 192 is still as relevant as before. However, the Court has not yet decided if renewable energy policies are to be considered energy or environmental policies, or whether a dual approach is acceptable.

Another interpretation, of its reference to Article 192(2)(c), may be that if the Directive (or measure) adopted by the EU under Article 194 affects Member States’ energy rights it can only be justified if it is based on environmental objectives. Since energy provision has an environmental objective it may be acceptable that environmentally motivated energy legislation should be able to go further than a pure energy directive when it comes to affecting Member States’ energy rights. However, even though this interpretation seems logical, it is a very generous interpretation of the provision and it may not be what the EU intended.

Even though it seems unnecessary that Article 194(2) refers to Article 192(2)(c), I find it hard to interpret it in any other way than that it is only referring to cases that are also adopted on the legal basis in Article 192. This interpretation limits the usefulness of the legal basis in Article 194. Even though one of the reasons for its adoption officially was to provide energy policies with a single legal basis, to show that the EU has competence to adopt policies in the field, it may in fact have limited the room for the EU to create energy policies. As mentioned above, the Article has been argued to have a very limited scope.²⁶³

The CJEU has not specifically interpreted the meaning of the provision in Article 194 and it is not certain how 194(2) is to be understood.²⁶⁴ However,

²⁶² See Case C-490/10, *Parliament v. Council*, para. 44.

²⁶³ See Vedder, H., *Journal of Environmental Law*, 22:2, 2010, p. 291.

²⁶⁴ For a discussion on different ways of interpreting the Article see, for example, Angus, J. and Eva, van der Marel, *European Energy and Environmental Law Review*, 2013, pp. 181–199; Haraldsdóttir, K., *European Energy and Environmental Law Review*, 2014, pp. 208–218;

in a ruling by the CJEU's General Court regarding an energy-related environmental policy,²⁶⁵ the difference between Article 194(2) and Article 192(2) TFEU was discussed – more specifically – regarding the competence of the EU in the field of energy/environment that may affect a Member State's right to choose its energy sources etc.²⁶⁶ Poland contested the Decision adopted by the Commission on 27 April 2011²⁶⁷ stipulating transitional Union-wide rules for harmonised free allocation of emission allowances pursuant to Article 10 a of Directive 2003/87.²⁶⁸ Poland claimed that the Commission infringed the second subparagraph of Article 194(2) of the TFEU (read in conjunction with the first subparagraph of Article 192(2)(c) of the TFEU) as the Commission did not take into account the specificity of each Member State in respect of fuel etc. In other words, that the decision taken by the Commission

“affects a Member State's right to determine the conditions for exploiting its energy resources, its choice between different energy sources and the general structure of its energy supply”.²⁶⁹

The Court suggested that this was not the case as the Decision was an implementing measure of Directive 2003/87, which was based on Article 10(a) of the same directive, which was based on Article 175(1) EC (now Article 192(1) TFEU). Furthermore, the Court thereafter pointed out that:

“the contested decision is therefore a measure taken in the area of environmental policy and not a measure taken in accordance with the first subparagraph of Article 194(2) TFEU”.²⁷⁰

Peeters suggests that the Decision by the CJEU's General Court proposes that EU legislation in the field of the environment can interfere with the Member States' energy rights. Peeters also points out that Article 194 TFEU only refers to Article 192(2) as an exception, and not to Article 192(1), suggesting that some clarity is needed as to whether renewable energy policies can still be adopted under Article 192(1) TFEU, if not significantly affecting Member States choice of energy sources.²⁷¹ Such interpretation thus seems

Peeters, M., *Maastricht Journal of European and Comparative Law*, 2014, pp. 39–63; Vedder, H., *Journal of Environmental Law*, 2010, pp. 285–299.

²⁶⁵ See Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community, and Decision 2011/278/EU (OJ 2011 L 130), p. 1.

²⁶⁶ Even though this case was regarding the ETS-system and not renewable energy, the discussion on the relationship of the legal bases are still relevant for this study as the directives are both concerning energy issues but adopted partly under Article 192 (1) TFEU.

²⁶⁷ Decision 2011/278/EU (OJ 2011 L 130), p. 1.

²⁶⁸ Case T-370/11, *Poland v. Commission*.

²⁶⁹ Case T-370/11, *Poland v. Commission*, para. 9 and 10.

²⁷⁰ Case T-370/11, *Poland v. Commission*, para. 13.

²⁷¹ Peeters, M., *Maastricht Journal of European and Comparative Law*, 2014, pp. 44–45.

unlikely as for Article 192(2) to apply it must be an environmental policy and adopted under Article 192, not Article 194. Hence, energy-related environmental policies can still be adopted, even if they affect a Member State's energy rights. Such policies, that significantly affect a Member State's energy rights, can also be adopted, but then the special legislative procedures apply as stipulated in Article 192(2)(c). Nevertheless, it is not certain what this means for future renewable energy policies; whether such policy can be based on Article 192, as it is motivated by climate concerns, or, if such policy is to be considered an energy policy and therefore no longer can be adopted owing to the wording of Article 194.

As mentioned above, the current legislation promoting renewable energy – the Renewable Energy Directive – was adopted prior to Article 194. The Directive was adopted partly on environmental grounds (now Article 192(1)) and partly on the legal basis for the internal market (now Article 114 TFEU). If the Directive had been adopted today, it is not certain whether Article 194(1) would have been used as the legal basis since the Directive, to some extent, affects Member States' energy rights.²⁷² The special legislative procedure did not apply for the Renewable Energy Directive as it was not considered to “significantly affect” Member States' choice between different energy sources, or at least not successfully contested.

A future Renewable Energy Directive, with stricter renewable energy targets, may likely be considered to *significantly affect* Member States' *energy rights*. If so, the special legislative procedure applies. Considering the vision of a carbon-neutral energy system, containing a high share of renewable energy, it is questionable whether the EU has enough legislative power to promote this transition, even if such energy policy were to be branded as an environmental policy due to its climate aspects. To enable the functioning of the internal market and ensure energy security and reduce GHG emissions, it has been suggested that the EU would need to receive more competence – perhaps even as a prerequisite – to fulfil these energy policy goals.²⁷³ The crosscutting nature of the energy policy makes it complicated, as the legal provision for energy policy is under Article 194, which does not always allow the action needed in the other related fields. Braun suggests that a more coordinated energy policy is needed to deliver the goals the EU has set up for its energy policy.²⁷⁴

In sum, Article 194 leaves the EU with a very limited possibility to enact climate progressive energy policies because, if interpreted in the strictest sense, the article does not give competence to the EU to adopt policies that

²⁷² It is worth noting that binding targets for energy efficiency were also proposed in the energy efficiency directive but not accepted by the Member States due to the subsidiarity principle; Member States considered the issue to be of national competence. See Krämer, L., *EU Environmental Law*, 2012, p. 383.

²⁷³ See Notre Europa, *Towards a European Energy Community: A Policy Proposal*, 2010.

²⁷⁴ See Braun, J. F., *EU Energy Policy under the Treaty of Lisbon Rules*, 2011, p. 9.

affect a Member State's energy rights. If renewable energy policies were to be classified as environmental policy, the EU has the potential to enact legislation that affect, but most likely not significantly affect, a Member State's energy rights, as such policy would require unanimity. Even though many Member States are on board on a more environmentally progressive and climate- friendly energy policy, it is far from unanimous. Considering the most recent energy policy documents coming out of the EU, where legislative approaches with binding renewable energy targets are switched to market-based instruments, the strict interpretation of Article 194 may seem likely. Maybe future energy policies primarily will implement market-based instruments, while a more hands-on energy policy, with binding renewable energy targets, is not what the EU will provide in the future. If the EU is not going to leave its high ambitions in the energy field to market forces, it will most likely require the Member States to give up some of their energy sovereignty to enable the fulfilment of the EU energy policy. The EU may perhaps take a few more significant steps without stepping outside its competence but it may require some creativity. The following section analyses the possibilities and limitations to adopting EU legislation with renewable energy targets under other provisions of the TFEU.

2.5.4 Alternative legal bases – possibilities and limitations

2.5.4.1 Introduction

Even though there is an opening for the EU to choose widely from legal bases for its policy, due to the horizontal nature of energy, there are some limitations. Most importantly, if legislation or a measure is considered to be adopted on the wrong legal basis, the legislation can be annulled.²⁷⁵ According to CJEU case law, the choice of legal basis for EU legislation (or other measures) must rely on objective factors, including the *aim* and *content* of the legislation.²⁷⁶ If the legislation has more than one objective, and one of them is identified as the main objective while other objectives are minor, the legislation shall be adopted on a single legal basis fitting for the main objective of the legislation.²⁷⁷

Hence, it is a possibility that EU energy policy may still be adopted on another legal basis in the TFEU rather than Article 194. It is nevertheless questionable how far the EU energy policy can be developed outside its own legal provision. Prior to Article 194, energy policy was often adopted partly

²⁷⁵ See Article 263 TFEU.

²⁷⁶ See, for example: Case C-411/06, *Commission v. Parliament and Council*, para. 45; Case C-130/10, *Parliament v Council*, para. 42, and; Case C-43/12, *Commission v. Parliament and Council*, para. 29.

²⁷⁷ See, for example: Case C-43/12, *Commission v. Parliament and Council*, para. 30, and Case C-137/12, *Commission v Council*, para. 53.

on Article 114 TFEU, the “harmonisation clause”.²⁷⁸ This provision basically means that the EU can adopt legislation or measures for the purpose of harmonizing divergent national laws that impede the functioning of the internal market.²⁷⁹ This dissertation focuses primarily on legislation promoting the increase of renewable energy activities, both the current Renewable Energy Directive and a potential new directive with higher renewable energy targets. As mentioned above, the current Directive was partly adopted as an environmental policy under Article 192(1) and, with regard to certain provisions, Article 114 TFEU. The following section will further describe the legal basis for environmental policy under Article 192, which is a likely option for future renewable energy policy.

2.5.4.2 Energy-related environmental policies

An energy policy that is largely motivated by environmental concerns, such as climate change, may be considered an environmental policy. This was the case prior to Article 194, when some climate motivated energy policies were adopted partly on Article 192, which is the legal basis for environmental policies.²⁸⁰ The action taken under this article is in order to achieve the environmental objectives set out in Article 191. Article 191 (1) and (2) state:

“1. Union policy on the environment shall contribute to pursuit of the following objectives:

- preserving, protecting and improving the quality of the environment,
- protecting human health,
- prudent and rational utilisation of natural resources,
- promoting measures at international level to deal with regional or worldwide environmental problems, and in particular combating climate change.

2. Union policy on the environment shall aim at a high level of protection taking into account the diversity of situations in the various regions of the Union. It shall be based on the precautionary principle and on the principles that preventive action should be taken, that environmental damage should as a priority be rectified at source and that the polluter should pay.”

The decision-making rules are stipulated in Article 192 TFEU. In general, legislation must be adopted in accordance with the ordinary legislative procedure with majority voting. In specific sensitive sectors the legislative procedure is different, requiring unanimity to adopt legislative acts.²⁸¹

²⁷⁸ See Craig, P. and Búrca, G., *EU Law – Text Cases, and Materials*, 2011, p. 92.

²⁷⁹ Energy issues concerning the internal market are, however, not part of this presentation, Article 114 TEFU will therefore not be further described here.

²⁸⁰ In addition to the Renewable Energy Directive see, for example: Directive 2003/87/EC so as to improve and extend the greenhouse gas emission allowance trading scheme of the Community (ETS Directive).

²⁸¹ See Article 192(1) and (2) TFEU.

As discussed earlier, the Renewable Energy Directive was adopted partly on Article 192(1) with the main environmental objective of mitigating climate change. An environmentally motivated energy policy, such as a new directive promoting renewable energy, may very likely be adopted on this ground due to its climate motivation as it would be difficult to adopt a more stringent renewable energy policy without *affecting* the Member States' energy rights under Article 194 TFEU. As discussed above, if a renewable energy policy is considered an environmental policy it can affect Member States' energy rights and if the policy is considered to *significantly* affect a Member State's *energy rights*, it can still be adopted after a special legislative procedure, where unanimity is a requirement.²⁸² The following section analyses if a future renewable energy directive could be adopted under the flexibility clause, if no other legal basis is suited to the new policy.

2.5.4.3 The relevance of the flexibility clause in the field of energy

The changes after Lisbon, even though better structured, are not to be considered an exhaustive list of EU competence and its limits.²⁸³ If a specific policy does not fall within a certain competence, it may be adopted under Article 352 TFEU²⁸⁴ – the EU “rest competence” – which is represented in the so-called *flexibility clause*,²⁸⁵ where the first section states:

“If action by the Union should prove necessary, within the framework of the policies defined in the Treaties, to attain one of the objectives set out in the Treaties, and the Treaties have not provided the necessary powers, the Council, acting unanimously on a proposal from the Commission and after obtaining the consent of the European Parliament, shall adopt the appropriate measures. Where the measures in question are adopted by the Council in accordance with a special legislative procedure, it shall also act unanimously on a proposal from the Commission and after obtaining the consent of the European Parliament.”

The Article grants power to take whatever measures that are *necessary* to reach the objectives of the Treaties. However, this broadly formulated provision comes with some limitations and requirements. For example, the EU Parliament has to approve the action undertaken under the article.²⁸⁶

²⁸² See Article 192(2)(c) TFEU.

²⁸³ Bergström, et al., suggest that it is necessary to study the separate legal bases in the treaties to find out a more detailed and accurate description of EU competence. See Bergström, C. F. et al., *Lissabon Fördraget*, 2008, p. 38.

²⁸⁴ Craig and Búrca suggest that the need for the provision in Article 352 should diminish since Lisbon introduced a specific legal basis for areas that earlier were based on Article 308 EC (now Article 352 TFEU), see Craig, P. and Búrca, G., *EU Law – Text Cases, and Materials*, 2011, p. 92.

²⁸⁵ *Ibid.*, p. 89.

²⁸⁶ See Bergström, C. F. et al., *Lissabon Fördraget*, 2008, p. 39.

A wide array of measures and legislation could be seen as necessary to reach the objectives stated in Article 3 of the TEU, which includes working towards sustainable development, establishing an internal market and contributing to peace and security. In addition to being necessary to reach the TEU objectives, the Treaty must not have provided the necessary powers to adopt the policy under another provision.²⁸⁷ It is suggested that the Article is to be seen as the legal basis of last resort, if sufficient powers are not found elsewhere in the Treaty.²⁸⁸ Thus if the Treaties provide the necessary powers to act under another provision, Article 352 *cannot* be used as the legal basis.²⁸⁹ The measure adopted under Article 352 must also be *appropriate*. Hartley suggests that this means that it must be reasonably suitable for achieving the objective in question and that it probably also implies that the proportionality principle must be addressed.²⁹⁰

As mentioned above, the current EU energy legislation has been adopted under different legal bases prior to Article 194 TFEU. Now when Article 194 is in place, energy policy should arguably be adopted under that legal basis as it is considered *lex specialis*, but due to its limited scope it is questionable if that will be the case. There is an opening to adopt policies under Article 352, the “flexibility clause”, if Article 194 TFEU does not give the EU the *necessary powers* to legislate in the area. Article 352 may, probably very occasionally, be relevant in the field of energy, since policies adopted under that provision requires unanimity. But if all Member States agree to have a more intruding energy policy than Article 194 allows then such policy may be adopted under Article 352, if *necessary*, to achieve the EU objectives set out in Article 3 TEU; for example, working towards sustainable development. Still, if an energy policy is motivated by environmental concerns, such policy would be adopted under Article 192(1) or (2) as an environmental policy, thus being able to affect (or significantly affect) the Member States’ energy rights.²⁹¹

²⁸⁷ This was the case in the *Massey-Ferguson Case* where the Council adopted a Regulation on the valuation of goods for custom purposes. The purpose of the regulation was, in light of the functioning of the custom union, to ensure that uniform rules were applied in all Member States. This Regulation was adopted with the legal basis in Article 235 EEC (now Article 352 TFEU). At the time, there was a legal basis, in Article 27 EC, concerning this exact same question without giving the EU power to adopt more restrictive measures than recommendations (which are not legally binding). Here the European Court accepted the argument that since Article 27 EC did not grant the necessary powers to adopt the Regulation, the legal basis in Article 352 was not faulty. See Case 8/73, *Hauptzollamt Bremerhaven v. Massey-Ferguson*, Judgment of the Court of the 12 July 1973, ECR 897.

²⁸⁸ Hartley, T.C., *The Foundations of European Union Law*, 2010, pp. 113–114.

²⁸⁹ Compare Case 45/86, *Commission v. Council*, 1987, ECR 1493, hereafter referred to as the *Tariff Preference Case*.

²⁹⁰ There are, of course, other limitations to the adoption of the legal basis under Article 352 found in other parts of the EU treaties, see Hartley, T.C., *The Foundations of European Union Law*, 2010, pp. 114–116.

²⁹¹ Another possibility is that the EU adopts energy-related policies under a legal base where it has exclusive competence. For example, the EU has exclusive competence to adopt *compe-*

2.5.5 Discussion

At first glance, the provision in Article 194 provides for a seemingly wide and environmentally integrated basis for the adoption of energy policies, with the limits of what is considered to be of Member States' energy sovereignty. However, as energy policies adopted under Article 194 cannot affect a Member State's energy rights it has a rather limited scope. To get around this limitation there is an opening for the EU to adopt energy-related policies on other legal bases, though the options are limited. Hence, there seems to be more limitations than available possibilities for the EU to adopt a more progressive energy policy. Due to the energy provision in Article 194 it may also be difficult to adopt policies on other legal bases due to the *lex specialis* principle. It is yet too early to say which legal basis is the appropriate one for future renewable energy policy. However, in my opinion, the most likely legal basis for a more environmentally progressive renewable energy policy is under Article 192(1) or (2), assuming that a renewable energy policy is considered an environmental policy and not an energy policy. If renewable energy policies are not considered environmental policies, there is a limited possibility to adopt legislative acts under Article 352, under the premises that all Member States agree.

However, even though the EU has some room to adopt a new Renewable Energy Directive with stricter targets for renewable energy, it has been suggested that the EU cannot, within its powers, propose sufficient energy policies that can achieve necessary policy objectives. Instead, it is proposed as a better solution that a European Energy Community could exist as a “fully-fledged and opt-in” treaty under the EU structure, in the same fashion as the current Monetary Union.²⁹² The EU Commission has also recently adopted a strategy for such a solution – an Energy Union – but it is too early to say whether or not that will be a reality.²⁹³

In my opinion, having a separate European Energy Community/Union could lead to a more diverse energy policy in Europe, if not all Member States decide to join. Instead, I consider that the competence of EU energy policy must come from the TFEU to ensure a stable and common energy policy in the EU. Having said this, it is nevertheless not likely that the Member States agree that the transition to a more sustainable energy system, including an increase in renewable energy, is of common interest. If all Mem-

tion policies in the field of the internal market. This implies that, if an energy-related directive was adopted solely on that ground, the Member State has no right to legislate in that area (See Article 2(1) TFEU). The EU has exclusive competence to: “...establishing of the competition rules necessary for the functioning of the internal market”, see Article 3(1)(b) TFEU. Compare with Article 4(2)(a) where it is stated that EU has shared competence in the field of the internal market.

²⁹² Notre Europa, *Towards a European Energy Community: A Policy Proposal*, 2010, p. 117–118.

²⁹³ See COM(2015) 80 final.

ber States agree, there would be no problem in adopting policies impairing on the Member State's right to choose its own energy sources, since it may be possible for the EU to adopt such policies if unanimity exists. After all, the common threat of climate change requires a common response. Therefore, it is crucial that all Member States are on board to enable the transition of the energy system.

2.5.6 EU law requirements for administrative procedures of renewable energy activities

2.5.6.1 Article 13 and Member States' Procedural Autonomy

The EU Member States are considered to still have competence to legislate regarding its legal procedural rules.²⁹⁴ However, the EU can in some cases regulate the procedural rules when adopted to complement a specific material legislation. The Renewable Energy Directive is a good example of such legislation. Hence, even though the EU shall not interfere with Member States right to self-govern – its *procedural autonomy*²⁹⁵ – the EU can still demand of the Member State's courts (or other administrative authorities)²⁹⁶ that they ensure *effet utile*: the full effectiveness of EU law.²⁹⁷ The principle basically means that EU law has to be applied in the Member States, and that it produces the intended effects.

Thus the requirement in Article 13 of the Renewable Energy Directive, which states the rules governing renewable energy activities must be *necessary* and *proportionate*, may not imply more than already is established in general EU law. As the administrative procedures are still considered to be of national competence, it may, however, be important to remind the Member State that the procedures are still required to be both necessary and proportionate, ensuring that EU legislative acts are efficiently enforced in the individual Member States.

²⁹⁴ The EU Member States have not (yet) handed over general competence to the EU to adopt legislation regarding procedural rules. See Reichel, J., *EU-rättslig metod – Teori och genomslag i Svensk rättstillämpning*, 2011, p. 194.

²⁹⁵ Procedural autonomy, or “procedural competence”, means that in case EU law does not provide any procedural or administrative rules, national courts apply their national procedural rules regarding how an EU-law right should be ensured. See, for example: Case C-33/76, *the Rewe Case*, para. 5; Case C-45/76, *the Comet case*, paragraph 13; Case C-312/93, *the Peterbroeck Case*, para. 12, and joined cases C-222/05 to C-225/05 *Van der Weerd and Others*, para.28. See also Craig, P. and Búrca, G., *EU Law – Text Cases, and Materials*, 2015, pp. 227–228; Lenaerts K., et al., *EU Procedural Law*, 2014, p. 107.

²⁹⁶ The national authorities' duty is, however, different as they are also responsible to the national government (RF 11:6). Reichel therefore suggests that there may be loyalty conflicts between national and EU interests. See Reichel, J., *Europarättslig tidsskrift*, 2009, p. 610.

²⁹⁷ See Case C-106/77, *Simmenthal*, 1978, para. 22, and; case C-213/89, *Factortame and Others*, para. 20–21.

2.5.6.2 Are the rules governing renewable energy activities necessary and proportionate?

Article 13 of the Renewable Energy Directive stipulates provisions regarding the administrative procedures for renewable energy activities.²⁹⁸ In accordance with Article 13 (1) of the Renewable Energy Directive:

“Member States shall ensure that any national rules concerning the authorisation, certification and licensing procedures that are applied to plants and associated transmission and distribution network infrastructures for the production of electricity, heating or cooling from renewable energy sources, and to the process of transformation of biomass into biofuels or other energy products, are proportionate and necessary.”

Thus Member States shall ensure that any national rules concerning the administrative procedures²⁹⁹ of renewable energy activities³⁰⁰ are *proportionate* and *necessary*.³⁰¹

Furthermore, the Article states that Member States shall take appropriate steps to ensure that: the permitting and planning procedures are “clearly coordinated and defined”;³⁰² comprehensive information on the permit processing and appropriate assistance for applicants is available;³⁰³ the administrative procedures are streamlined and undertaken at the appropriate administrative level;³⁰⁴ the rules governing the permitting processes are objective, transparent, proportionate, and non-discriminatory between different applicants, and taking into account the particularities of each individual renewa-

²⁹⁸ There is also another EU Directive Influencing Member States decision-making with regard to renewable energy activities. It is prescribed in the Electricity Market Directive, that: “For the construction of new generating capacity, Member States shall adopt an authorisation procedure, which shall be conducted in accordance with objective, transparent and non-discriminatory criteria.” The Member State shall decide upon which criteria are needed for the grant of authorisations for the construction of generating capacity and when doing that, Member State shall consider, for example: the protection of the environment; energy efficiency; and the contribution of the generating capacity to meeting the overall Community’s renewable energy target of 20% by 2020. Based on these criteria, it seems as if there is an opening in the Directive to allow criteria for authorisations of construction of generating capacity that may prioritize renewable energy installations. See Article 7(2)(c), (f) and (j) of Directive 2009/72.

²⁹⁹ The term “administrative procedures” includes “authorisation, certification and licensing procedures”, see Article 13 (1) of the Renewable Energy Directive.

³⁰⁰ The term “renewable energy activities” refers to activities specified in Article 13 (1): “plants and associated transmission and distribution network infrastructures for the production of electricity, heating or cooling from renewable energy sources, and to the process of transformation of biomass into biofuels or other energy products”.

³⁰¹ The criteria whether the rules are proportionate and necessary have not yet been assessed by the CJEU but could be addressed in either an infringement procedure (Article 258 TFEU) or preliminary ruling (Article 267 TFEU). However, the criteria have been pointed out in C 2/10, *the Puglia Case*.

³⁰² See Article 13(1)(a) of the Renewable Energy Directive.

³⁰³ See Article 13(1)(b) of the Renewable Energy Directive.

³⁰⁴ See Article 13(1)(c) of the Renewable Energy Directive.

ble energy technology;³⁰⁵ permitting-related charges are transparent and cost-related;³⁰⁶ and a simplified and less burdensome permitting procedure for smaller projects is established where appropriate.³⁰⁷

It is not clear what type of rules that are to be considered as “any national rules” concerning the permitting procedures of renewable activities. As it is not stated in Article 13 that it is any rules *applicable* to renewable energy activities, it may be hard to argue that all substantive laws are included in that context. It is more likely that it means rules of a more procedural nature as the rules are *concerning* the permitting procedures that are applied to renewable energy activities. However, it is not totally clear which rules are referred to here.³⁰⁸ Even if not strict procedural rules (e.g. regarding consultation requirements, and time limits etc.), they may still be considered rules to be *concerning* the permitting procedure of renewable energy activities (e.g. prohibitions and consideration rules etc.).

The meaning of *proportionate* and *necessary* is not further described in the Directive. It is hard to understand what the necessary requirement adds to the proportionate requirement, as the proportionality test includes a necessity test.³⁰⁹ The meaning of the provision has indirectly been discussed in *the Puglia Case*³¹⁰ with regard to a ban on wind power installations (not for self-consumption) in Natura 2000 sites. One of the questions discussed was whether that specific legislation was in line with Article 13 of the RED, specifically if the legislation was considered proportionate.³¹¹ The Court did not decide if that was the case but provided some arguments suggesting that such a ban could be seen as proportionate; more precisely:

“It is for the referring court to determine whether the national measure at issue is proportionate. That court must take account in particular of the fact that the legislation at issue in the main proceedings is confined to wind power plants and does not extend to other forms of renewable energy production, such as photovoltaic plants. Moreover, the prohibition applies solely to new wind turbines for commercial purposes, as wind power plants intended for self-consumption and having a capacity not exceeding 20 kW are excluded from the scope of that prohibition.”³¹²

³⁰⁵ See Article 13(1)(d) of the Renewable Energy Directive.

³⁰⁶ See Article 13(1)(e) of the Renewable Energy Directive.

³⁰⁷ See Article 13(1)(f) of the Renewable Energy Directive. However, it is difficult to determine what constitutes a “small” project. It is not defined in the Directive.

³⁰⁸ Peeters, M., *Maastricht Journal of European and Comparative Law*, 2014, p. 59.

³⁰⁹ This has also been acknowledged by Peeters, M, and Schomerus, T., *Renewable Energy Law in the EU*, 2014, p. 28.

³¹⁰ See Section 3.4.3 where the case is discussed in more detail.

³¹¹ The Court did not discuss whether the ban was necessary outside the proportionality assessment.

³¹² See Case C-2/10, *the Puglia Case*, para. 74.

Hence, the outcome of the case suggests that such substantive legislation also needs to fulfil the requirements under Article 13(1) in order to be proportionate and necessary.³¹³

Peeters and Schomerus suggest that due to the unclear wording of Article 13, and based on the outcome in the *Puglia Case*, it allows for considerable discretion for Member States to decide which rules it refers to.³¹⁴ The authors also suggest that Article 13 not only requires that rules, that are particular for individual Member States, comply with Article 13, it also tests how Member States have implemented other EU Directives; for example, the EIA Directive and nature conservation directives and how they are applied to renewable energy projects.³¹⁵

Furthermore, Article 13 is a rather general provision in the sense that it is not strictly prescribing that all Member States shall establish “one-stop-shops” or automatic approval for renewable energy activities. Instead, it is up to the Member State’s discretion to decide how the procedures will become more *efficient*,³¹⁶ including making sure that there are no unnecessary and disproportionate rules concerning the permitting procedures for renewable energy activities.

In the European Commissions’ Renewable Energy Progress Reports, it is expressed that one identified challenge towards increasing renewable energy is the inefficient administrative procedures for planning and permitting of renewable energy activities.³¹⁷ An analysis of the Member States’ progress reports in 2011 showed that there was not much progress mentioned regarding the improvement of the administrative procedures in line with Article 13, which they are required to provide in accordance with Article 22 (3) Renewable Energy Directive.³¹⁸ The 2013 progress reports show some progress and some Member States have introduced one-stop-shops.³¹⁹ In the progress report from 2015 it is expressed that there is still a need to improve the efficiency of the administrative procedures related to planning and authorisation of Renewable Energy Activities and considered the progress to be too slow. Most Member States also recognize the need for more progress with regard to their administrative procedures applicable to renewable energy activities.³²⁰ The Commission expressed in the 2013 report that if Member States did not speed up the development towards more efficient administrative pro-

³¹³ See C-2/10, *the Puglia Case*, para. 72–74.

³¹⁴ See Peeters, M, and Schomerus, T., *Renewable Energy Law in the EU*, 2014, pp. 23–24.

³¹⁵ *Ibid.*, p. 23.

³¹⁶ Peeters refers to the requirements in Article 13 as “efficiency requirements”. See Peeters, M., *Maastricht Journal of European and Comparative Law*, 2014, p. 58.

³¹⁷ This was acknowledged first in the 2011 report; See COM(2011) 31 final, p. 9.

³¹⁸ See COM(2013) 175 final, pp. 7–8.

³¹⁹ The Netherlands is one example where the lead times of projects have decreased significantly. See COM(2015) 293 final, p. 11.

³²⁰ *Ibid.*, p. 11–12.

cedures it would launch infringement proceedings where Member States fail to act.³²¹

However, the Commission has so far not undertaken any procedures of non-compliance with Article 13. The reason for this inaction may partly be because Member States now have made progress by decreasing the administrative barriers for renewable energy activities and also because most Member States are in line with the 20 % target.³²²

Peeters questions whether Article 13 is necessary, as the Commission can start an infringement procedure based on non-compliance with the renewable energy target.³²³ Even though Article 13 may seem unnecessary, from that perspective, I consider that Article 13 still has its own purpose. In addition to being a reminder about basic principles of EU law, it could have an impact as disproportionate and unnecessary rules concerning the permit procedures for renewable energy activities may hamper the pace of transition of the energy system. While a Member State may be on the right path for fulfilling the targets for 2020 it could have unnecessary and disproportionate rules concerning the permitting procedures for renewable energy activities. The current renewable energy targets are set quite low and a carbon neutral future requires an efficient permitting system. In light of the ambitious transition the EU envisages, it is therefore necessary that the Commission intervene if Member States are undergoing unnecessary and disproportionate permitting procedures, independent of whether or not Member States are likely to fulfil the renewable energy targets. The following section presents an example from Sweden, as yet not contested, on a possible unnecessary or disproportionate rule concerning the administrative procedures for renewable energy activities.

2.5.6.3 Example from Sweden – the municipal veto rule

The administrative procedures applicable to renewable energy activities have, in recent years, become more coordinated and simplified. In general, activities which are considered to be both environmentally hazardous and to be water activities as well, are now often considered in the same permit procedure, even though the activity requires two separate permits.³²⁴ More specifically, with regard to wind power, the dual permit/approval that was earlier required under the Plan-and Building Act and the Environmental Code disappeared in 2009 with the aim of speeding up the introduction of wind power in Sweden.³²⁵ With the same motivation, there has also been a more clear coordination between the assessment undertaken for wind power pro-

³²¹ See COM(2013) 175 final, p. 8.

³²² See COM(2015) 293 final.

³²³ See Peeters, M., *Maastricht Journal of European and Comparative Law*, 2014, p. 62.

³²⁴ See, for example; NJA 2004 s.590 (I and II); and MÖD 2007:50 (NJA 2008 s. 748)

³²⁵ The change primarily resulted in large installations now only being assessed under the Environmental Code, see prop. 2008/09:146.

jects and their associated transmission lines.³²⁶ The trend is that the administrative procedures for renewable energy activities are becoming more coordinated, including “one-stop-shop” approaches, even though not formally required under Swedish legislation.

While the trend is towards a more coordinated procedure for renewable energy activities, there are still rules that may be considered unnecessary and/or disproportionate;³²⁷ for example, the rule regarding municipal veto right for wind power installations. According to the Swedish Environmental Code, Chapter 16, section 4, the municipality’s agreement is a prerequisite for granting licenses to big and medium sized wind power installations within that specific municipality. More specifically, the provision states:

“Permit to a wind power installation may be issued only if the municipality where the installation is intended to be constructed has agreed to it”.

The question is whether this provision is necessary and proportionate. Michanek suggests that this municipal veto rule, which is exclusive for the permitting of wind power installations,³²⁸ can be questioned with regard to Article 13.³²⁹

One could argue that due to the specific governing structure in Sweden, with a strong local self-governance of municipalities, it may be considered *necessary* that the municipality has a say in the development of wind power within its municipal borders.³³⁰ It may, however, be more difficult to argue that such a veto rule is *proportionate*. The intended purpose – that the municipality should have a say in wind power development within its municipal borders – can most likely be reached with less intrusive rules. The veto rule is quite strict as the municipality is not required to provide an explanation on why it does not want to support the specific development of wind power, which I consider to be disproportionate. In addition, the rule can also be used in a discriminatory way as some developers may be “accepted” and others not.³³¹ The way the veto rule is formulated gives rise to many questions as to its legality in light of EU law. The legality of that provision has not yet been challenged, but may be examined by the CJEU if the Commission initiates

³²⁶ See preparatory work to change in the Electricity Act, Chapter 2, section 8 (a): prop. 2008/09:146, pp. 46–47. See also SOU 2008:86; and, SOU 2009:02, pp. 95–97.

³²⁷ There are also Swedish rules that may be questioned on this basis, for example, the rules regarding national interest in Chapter 4. This will not, however, be further discussed here.

³²⁸ However, certain large scale projects also require a municipal veto when the Government assesses the permissibility, see Chapter 17, section 6 of the Swedish Environmental Code.

³²⁹ See Michanek, G., *Renewable Energy Law in the EU*, 2014, p. 160.

³³⁰ The role of municipal self-governance can of course be questioned but that is too large a discussion for the purpose of this dissertation.

³³¹ Which can also be in conflict with the Swedish grundlag, RF 1:9.

an infringement procedure, or a Swedish court asks for a preliminary ruling.³³²

2.5.7 Access to the grid for renewable energy

2.5.7.1 Article 16 of the Renewable Energy Directive

The low capacity of transmission lines has been identified to be one of the largest obstacles towards the integration of electricity produced from renewable sources and the functioning of the internal market in electricity. In addition, to be a precondition for such development, the current transmission system may not be robust enough to guarantee (or prioritize) *access to the grid* for electricity produced from renewable sources (such as wind and solar) due to *system security*,³³³ which Member States are required to ensure in accordance with the Renewable Energy Directive.³³⁴

Member States are required to take *appropriate steps* to develop the needed energy infrastructure. The Renewable Energy Directive, Article 16, section 1, states:

“Member States shall take the appropriate steps to develop transmission and distribution grid infrastructure, intelligent networks, storage facilities and the electricity system, in order to allow the secure operation of the electricity system as it accommodates the further development of electricity production from renewable energy sources, including interconnection between Member States and between Member States and third countries. Member States shall also take appropriate steps to accelerate authorisation procedures for grid infrastructure and to coordinate approval of grid infrastructure with administrative and planning procedures.”

Furthermore, Article 16 states that Member States are entitled to ensure that transmission and distribution system operators *guarantee* the transmission and distribution of renewable electricity production.³³⁵ Member States are also entitled to provide for either *priority* or *guaranteed* access to the grid-system of electricity produced from renewable energy sources.³³⁶ In addition, the system operators shall give priority to renewable energy installations, if the national electricity system can uphold a secure operation. If a secure operation cannot be upheld, the Member State has to ensure that the system operator undertakes *appropriate operational measures* in order to minimize the curtailment of renewable electricity production. If renewable energy

³³² See Article 263 and Article 267 TFEU.

³³³ For the functioning of the electricity system it always has to be balanced; the electricity supply has to be the same as electricity use. See Chapter 8 for a description of how the electricity system functions.

³³⁴ See Article 16 of the Renewable Energy Directive.

³³⁵ See Article 16 (2)(a) of the Renewable Energy Directive.

³³⁶ See Article 16 (2)(b) of the Renewable Energy Directive.

sources are curtailed, in order to guarantee the security of the national electricity system and security of energy supply, the Member State shall ensure that the responsible system operators report to the competent regulatory authority on those measures and indicate which corrective measures they intend to take in order to prevent inappropriate curtailments.³³⁷

This implies that it is not an *appropriate* excuse that the grid does not have enough capacity, or that it cannot handle the intermittency of renewable electricity production. Some action is required to overcome the problem of low efficiency grids, etc. It may require the grid operators to undertake measures to enforce the existing grid and/or build new transmission lines.

The Member State, in order to ensure guaranteed or prioritised access to the grid, has to develop new grids and enforce the existing ones. Even though the EU does not necessarily have competence to force a Member State to rebuild its energy infrastructure, the EU is indirectly doing so by requiring Member States to ensure guaranteed or prioritised access to the grid, which requires a flexible and strengthened grid with higher capacity.

2.5.7.2. Access to the grid in Sweden

In Sweden, the problem of allowing access to the grid of renewable energy power production has been acknowledged by Svenska Kraftnät.³³⁸ A report on threshold effects of renewable energy production, produced by Svenska Kraftnät, later led to a preparatory work,³³⁹ and the proposed changes have now been implemented in the Electricity Act.³⁴⁰ The identified problem is the associated cost that the new electricity producer faces if the grid needs to be strengthened, or if a new grid needs to be built, in order to enable access to the grid of the new installation. Today, this cost is placed on the electricity developer itself, or in combination with other electricity producers in the area. The preparatory work described this problem as leading to inefficient planning of renewable energy production, since the associated cost of new or strengthened grids is something that new electricity production developers are not keen on paying for. The report suggests that this results in the position where new renewable electricity production is often located in places where the current grid infrastructure can handle more electricity, and not, for example, where wind power conditions are the best.³⁴¹

In Sweden, electricity producers must pay a *reasonable* connection fee.³⁴² When deciding the size of such fee, account is taken of its geographical location etc. In addition to a connection fee, the electricity producer must also

³³⁷ See Article 16 (2)(c) of the Renewable Energy Directive.

³³⁸ Svenska Kraftnät, *Tröskeleffekter och förnybar energi – En rapport till Regeringen*, 2009.

³³⁹ Prop. 2013/14:156, 2014.

³⁴⁰ Implemented through SFS 2014:391, See Chapter 4, section 9(b) and Chapter 5, section 24(a) of the Swedish Electricity Act.

³⁴¹ Prop. 2013/14:156, p. 9.

³⁴² See Chapter 4, section 9 (a) of the Swedish Electricity Act.

pay the specific cost that is associated with that production site. If there is a need to build a new transmission line, which is only for the benefit of that specific producer, it must be paid by that specific producer. Needless to say, this cost may be very high if the wind power plant is located in an area where there are no transmission lines and where it is a long distance to the regional grid. Even if the capacity of the specific transmission line is able to handle a larger electricity load, if there are no other producers in the area then the cost is only allocated to that specific producer. If more producers are later located to that area, then they only pay the connection fee (if the grid has enough capacity) and they do not need to pay the specific cost. In other words, not many developers are willing to be the first to locate in areas where there are no transmission lines in place due to the high cost. This is identified by Svenska Kraftnät to be a significant hindrance towards wind power production in Sweden. On one hand, the grid companies are not willing to invest in the transmission grid if there are no customers; on the other hand, no customers are willing to locate in those places if there is no grid.³⁴³

In the preparatory works to the change in the Electricity Act, the government pointed out that it is important for the grid to develop from a forward-looking perspective to enable a better planned and efficient energy system, instead of reinforcing and building new grids where new electricity production happens to pop up (especially with regard to the problem described above). Another associated problem is that the new grids are built with limited capacity due to the fact that there is only one wind power plant (for the moment) that needs to get access to the grid.³⁴⁴

Hence, in the current system, there is no comprehensive planning of the development of the grid infrastructure, which may be a necessity to enable access to the grid for renewable energy production. This also implies that land and water areas are not used optimally and the environment is affected more than necessary. The transition solution to this problem is that the government covers the cost of reinforcing the grid for specific production sites that are likely to connect to the grid in the future, and this is dealt with as a loan to the regional grid companies. This support is combined with a premature division of the costs for the reinforcement. When an electricity producer gets access to the grid and pays the associated fee, the regional grid company pays back the equivalent support (associated with the capacity taken up by the electricity producer) received from the Government.³⁴⁵ In the budget proposition this is also accounted for and Svenska Kraftnät has been delegated the power to decide which areas are suitable for grid enforcement and development.³⁴⁶ However, this possibility is not much different from the

³⁴³ See prop. 2013/14:156, p. 7.

³⁴⁴ See discussion in Chapter 9.

³⁴⁵ See Chapter 4, section 9 (b) and Chapter 5, section 24 (a); and Prop. 2013/14: 156, pp. 9 and 16.

³⁴⁶ See prop. 2013/14:156, pp. 54 et seq.

current state and it is still important that wind power plants or other electricity producers are planning to locate in suitable areas. However, the assumption is that the location for new production will be in areas where production is optimal instead of where the grids are in place. It is proposed that this solution may enable a more socio-economic and more environmental-friendly energy system.³⁴⁷ The suggested long-term solution, however, is that the problem will be left to the market.³⁴⁸

The lack of efficient transmission lines may hinder renewable electricity producer access to the grid. It seems that Sweden, as a Member State of the EU, is taking appropriate steps to avoid hindrances for producers to gain access to the grid, though there is still more room for improving the efficiency of the grid development in Sweden. Part III investigates how the legal procedure for new wind power installations is coordinated with the concession procedure for the transmission lines needed.

2.6 EU Competence for cross-border energy infrastructure

2.6.1 An Introduction to the Regulation on Guidelines for Trans-European Energy Infrastructure

The overarching objective of the Regulation³⁴⁹ is to ensure the infrastructure needed to enable the functioning of the internal market in electricity, which is considered to be long overdue.³⁵⁰ Energy infrastructure has been identified as one of the top priorities in the *Europe 2020 Strategy* to achieve a sustainable growth; in other words, a more resource-efficient, sustainable and competitive economy.³⁵¹ The realisation of a functional European energy market has been an issue for the EU for many years, but recently, when the energy and climate policies have been more integrated, there has been a more intense push towards this development. More precisely the Regulation is motivated by the importance of new energy infrastructure in Europe for a number of reasons. In the Preamble to the Regulation it is expressed that:

³⁴⁷ See prop. 2013/14:156, p. 12.

³⁴⁸ Prop. 2013/14:156, p. 14.

³⁴⁹ Regulation (EU) No 347/2013 of the European Parliament and of the Council of 17 April 2013 on guidelines for trans-European energy infrastructure and repealing Decision No 1364/2006/EC and amending Regulation (EC) No 713/2009, (EC) No 715/2009 (hereafter referred to as Regulation on Guidelines for Trans-European Energy Infrastructure).

³⁵⁰ The Electricity Directive and the Natural Gas Directive have not yet been able to enable the functioning of the internal market in energy due to a fragmented market where necessary infrastructure is not yet in place which is vital for a functional and competitive market in the field of energy.

³⁵¹ See, for example: COM(2010)677.

“integrated networks and deployment of smart grids are vital for ensuring a competitive and properly functioning integrated market, for achieving an optimal utilisation of energy infrastructure, for increased energy efficiency and integration of distributed renewable energy sources and for promoting growth, employment and sustainable development.”³⁵²

The main focus of the Regulation is to prioritize “project(s) of common interest”.³⁵³ To do so, the Regulation requires Member States to take action to facilitate the issuing of comprehensive decisions – a “one-stop-shop” approach – to permitting procedures of those projects.³⁵⁴ The impact assessment presented that 79 % of the respondents (of the public consultation on permit granting) were in favour of a one-stop-shop. Sweden showed a general support to such a process.³⁵⁵ During the design of the Regulation proposal, the EU transmission system operators (TSOs)³⁵⁶ pointed out the problem of lengthy and ineffective permit granting procedures³⁵⁷ together with public opposition to be the major reasons hindering the timely implementation of energy infrastructure projects,³⁵⁸ today transmission line projects take about 10 years before realisation.³⁵⁹

Article 10 of the Regulation describes the time aspects of the permit granting procedure. The process is divided into two phases,³⁶⁰ with the total

³⁵² See Preamble, para. 8 of the Regulation on Guidelines for Trans-European Energy Infrastructure.

³⁵³ See Article 4 of the Regulation on Guidelines for Trans-European Energy Infrastructure. For a description of the Regulation see, for example: Sikow-Magny, C., et al, *EU Energy Law: The Energy Infrastructure of the European Union*, 2014, pp. 153–167.

³⁵⁴ This approach can take different forms, either through an integrated scheme, coordinated European Commission, *Streamlining environmental assessment procedures for energy infrastructure Projects of Common Interest (PCIs)*, 24 July 2013, p. 6.

³⁵⁵ See SEC(2011)1233 final, p. 29.

³⁵⁶ Transmission System Operators (TSOs) are responsible for the bulk transmission of electricity on the main high voltage electric networks. In Sweden the TSO is Svenska Kraftnät.

³⁵⁷ Ineffective administrative procedures in this survey refer to: complex and fragmented processes (different processes between Member States but also within the same Member State); lack of upfront planning and coordination (in many Member States up to the promoter to plan the process and coordinate, which is not often effective); lack of time limits (the average time for a process is between four to ten years); and unclear documentation standards and lack of quality (promoters hand in application documents of poor quality, which implies that the authority needs to request more information until it has a good material, which could be a long procedure), see SEC (2011) 1233 final, pp. 10–12.

³⁵⁸ In the design of the proposal a survey was sent out to Member States and twenty-four of the TSOs answered the survey, whereof 16 identified difficulties related to the administrative permit process and 21 identified public opposition as relevant reasons for the delays in the implementation of energy infrastructure; see SEC(2011)1233 final, p. 10.

³⁵⁹ Ibid. However, with significant permitting obstacles it may take up to 20 years for a project to be completed; see, for example: Sikow-Magny, C., et al, *EU Energy Law: The Energy Infrastructure of the European Union*, 2014, p.159.

³⁶⁰ One pre-application (from the start of the permit procedure until accepted application file at the authority), and of the actual permit procedure (from the date of acceptance of the application file until the decision is taken); see European Commission, *Streamlining environmental*

time limit of three years and six months.³⁶¹ During the design of the Regulation, the result of the public consultation showed that 60 % of the respondents favoured the introduction of time limits.³⁶² However, Sweden did not. Sweden was one of the countries that opposed it and expressed concern that time limits could lead to bad preparation of assessments and permits. Denmark, which also opposed the proposal, considered it to be due to subsidiarity. NGOs also warned of the risks of introducing time limits, stating that they could lower environmental standards and jeopardize democratic principles, if procedures could not be carried out appropriately.³⁶³ These concerns were responded to by suggesting that time limits would not result in worse EIA and could in fact lead to better reports. The proposal's impact assessment refers to a study that estimates that the average time needed for an EIA procedure is one year.³⁶⁴ Time limits do not necessarily need to imply that the assessment is bad. That said, studies may be negatively influenced by the suggestion that one year is sufficient to undertake an EIA; for example, assessments may require more than one season for certain bird species.³⁶⁵

2.6.2 How procedures crossing national borders are coordinated

2.6.2.1 Streamlined environmental assessments

The Regulation requires a Member State to assess the potential measures to streamline environmental assessment procedures.³⁶⁶ The Commission, in its guidance document,³⁶⁷ has emphasised the importance of streamlined environmental assessment procedures, suggesting that such actions will improve the quality of the assessment process.³⁶⁸

The Commission suggests that “streamlining” means:

“improving and better coordinating environmental assessment procedures with a view to reducing unnecessary administrative burdens, creating synergies and hence speeding up the environmental assessment process, whilst at

assessment procedures for energy infrastructure Projects of Common Interest (PCIs), 2013, p. 5.

³⁶¹ The pre-application period can take a maximum of two years and the actual permit granting procedure shall not be longer than one year and six months. However, there is an opening for an extension of the time limit up to nine months (under certain circumstances), see Article 10(3) of Regulation on Guidelines for Trans-European Energy Infrastructure.

³⁶² See SEC(2011) 1233 final, p. 4.

³⁶³ *Ibid.*, p. 30.

³⁶⁴ *Ibid.*, p. 41.

³⁶⁵ As argued by nature protection agency in MÖD 2014:47.

³⁶⁶ See Article 7(4) of the Regulation on Trans-European Energy Infrastructure.

³⁶⁷ See European Commission, *Streamlining environmental assessment procedures for energy infrastructure Projects of Common Interest (PCIs)*, 2013.

³⁶⁸ *Ibid.*, p. 4.

the same time ensuring a maximum level of environmental protection through comprehensive environmental assessments”³⁶⁹

In accordance with Article 7(5) of the Regulation, a Member State shall assess which measures to take to streamline its environmental assessment procedures and inform the Commission of the results.³⁷⁰ As a PCI is of large scale it may imply that a number of assessments are needed in addition to an EIA, as the transmission line may cross water bodies³⁷¹ or Natura 2000 sites.³⁷² A strategic environmental impact assessment (SEA)³⁷³ may also be relevant as the implementation of a PCI would most likely require that a plan or program is composed prior to its realisation, or that an existing plan or program needs to be modified.

It seems as if a streamlined procedure is welcomed by the Member States’ TSOs. One of the major challenges pointed out during the design of the Regulation was the high standard for environmental protection. It was not the high protection, *per se*, but the lack of coordinated implementation by national authorities of the various assessments. It was expressed that a comprehensive analysis of environmental impacts may take one year or more, depending on the available data for the specific site.³⁷⁴ If the environmental impact is not assessed in one and the same process it adds valuable time to the permit granting process.

The idea to streamline (coordinate) the various applicable assessments, which are needed for one project, seems like a good idea. The various assessments, if not coordinated, may result in unnecessary (time consuming) work for the developer. An integrated process may also be of better quality as it is easier to have a wide consultation and more likely that the requirements of EU environmental law will be respected. It would enable a more comprehensive assessment.³⁷⁵

³⁶⁹ Ibid., p. 4.

³⁷⁰ See the Swedish Energy Market Inspectorate, Ei R2014:10. The Inspectorate suggests in the report that the instructions to the relevant administrative bodies shall change to enable better cooperation. See p.p. 10-18.

³⁷¹ Hence, it may require an assessment under Article 4(7) of the Water Framework Directive.

³⁷² It may therefore require an appropriate assessment under Article 6(3) of the Habitats Directive.

³⁷³ Directive 2001/42/EC of the European Parliament and of the Council of 27 June 2001 on the assessment of the effects of certain plans and programmes on the environment (hereafter referred to as the SEA Directive, Article 3).

³⁷⁴ SEC(2011)1233 final, p. 11-12.

³⁷⁵ Compare European Commission, *Streamlining environmental assessment procedures for energy infrastructure Projects of Common Interest (PCIs)*, p. 3. The guidance document specifically spells out the need to integrate environmental concerns into the policy and that various environmental targets, i.e. the biodiversity target and the fulfilment of the goals set out in the Water Framework Directive and the Marine Strategy Directive, are of particular relevance for EU energy policy.

2.6.2.2 The role of EIA in transborder contexts – The EIA Directive and the Espoo Convention

Projects of common interest, defined in the Regulation on Guidelines for Trans-European Energy Infrastructure, are often of a transborder nature. Hence, the authority handling the process (one-stop-shop) needs to coordinate the process, including the EIA-process, with the other Member States concerned.

The EU Commission has published guidelines on how to undertake the EIA for large-scale transboundary projects,³⁷⁶ where large-scale transboundary projects are defined as:

“projects which are implemented in at least two Member States or having at least two Parties of Origin, and which are likely to cause significant effects on the environment or significant adverse transboundary impact”.³⁷⁷

The EIA Directive has a provision for cases in which a project implemented in one Member State is likely to have a significant environmental impact in another Member State.³⁷⁸ The international treaty known as the Espoo Convention has a similar provision.³⁷⁹ However, the legal provisions and instruments, in the EIA Directive and the Espoo Convention, do primarily focus on the situation where an activity is located in one country and affects another. However, transboundary projects are located in both countries – for example, transmission lines that can be considered to be PCIs. This creates new challenges, as countries where the transboundary projects are to be located, often have different legal systems and EIA procedures and some states may not be part of Espoo or a Member State of the EU.³⁸⁰

Some more practical problems might arise in composing a “transboundary EIA”. Even though, in theory, such EIA has great potential, it might be hard to carry out in practice as various Member States have different legislation, and since compliance with EU law may differ in the Member States.

It seems evident that a project of common interest faces two problems. First, how to integrate the environmental assessment procedures for each individual case, and second, how this integration is to be undertaken in light of the project’s cross-border nature. Since most projects of common interest are of a cross-border nature it is crucial to find a way where the streamlined procedure is securely undertaken. A likely problem is that the assessments are not appropriately handling the total environmental impact as the EIA-

³⁷⁶ European Commission, *Guidance on the Application of the Environmental Impact Assessment Procedure for Large-scale Transboundary Projects*, 2013.

³⁷⁷ See definition provided in the Commission Guidance Report, *Ibid.*, p. 2.

³⁷⁸ See Article 7 of the EIA Directive.

³⁷⁹ See Convention on Environmental Impact Assessment in a Transboundary Context, Espoo, Finland, 25 February 1991 (the Espoo Convention), Article 2.

³⁸⁰ See European Commission, *Guidance on the Application of the Environmental Impact Assessment Procedure for Large-scale Transboundary Projects*, 2013, p. 1.

procedure in one Member State is not necessarily at the standard that EU law requires and/or leaves things out that one Member State thinks is being dealt with in the other Member State's procedure. There are issues that can fall between the cracks and not be appropriately assessed. In general, streamlining procedures should lead, if assessed appropriately, to a more holistic assessment of the total environmental impact. However, it might be difficult to undertake it in practice, especially because of its transboundary context. Even though all Member States are bound by the same EU legislation, its implementation, compliance and enforcements of the same, are not identical.

2.6.3. Legal basis for regulation on guidelines for trans-European energy networks

The legal basis for the Regulation on Guidelines for Trans-European Energy Infrastructure can be found in Articles 171 and 172 of TFEU with the main objective set out on Article 170 TFEU:

“The Union shall contribute to the establishment and development of trans-European networks in the areas of transport, telecommunication and energy infrastructures”.

Under Article 171 (1) it is stated:

“The Union shall establish a series of guidelines covering the objectives, priorities and broad lines of measures envisaged in the sphere of trans-European networks; these guidelines shall identify projects of common interest”.

Furthermore, Article 172 specifies that the guidelines and other measures referred to in Article 171(1) shall be adopted under a co-decision procedure which means that a regulation, directive or decision should be jointly adopted by the European Parliament and the Council on a proposal from the Commission.³⁸¹ This is the normal method used in the EU when adopting legislation.³⁸²

The proposal to the Regulation suggests that the formulation of broad measures to create a framework within which Member States are carrying out the permitting procedures in accordance with its national regulations, with the aim of accelerating the permit process, falls in the remit of the EU.³⁸³ Due to the cross-border nature of the objective of the Regulation -- which is to develop and ensure interoperability of trans-European energy networks and connection to such networks -- the EU considers that such an objective cannot be sufficiently achieved by the Member States, and can be

³⁸¹ See articles 289 and 294 TFEU.

³⁸² See Craig, P. and Búrca, G., *EU Law – Text Cases, and Materials*, 2011, p. 124–125.

³⁸³ COM(2011)658 final, p. 23.

better achieved at EU level. The EU therefore considers the principle of subsidiarity (Article 5 TFEU) to be fulfilled.³⁸⁴ In the proposal it was also suggested that, from an economic perspective, such energy network developments can best be achieved when planned with a European perspective.³⁸⁵ With regard to the proportionality principle, the proposal suggests that the Regulation does not go beyond what is necessary to achieve its objective. The proposal suggests that the Regulation is necessary to ensure timely implementation of the energy infrastructure priorities by 2020.³⁸⁶

It is disputed whether the EU Regulation can be justified by the competence referred to it in Articles 171 and 172 TFEU, as Article 171 authorizes the EU to compose guidelines “covering the objectives, priorities and broad lines of measures envisaged in the sphere of trans-European networks”. The question is whether the regulation goes beyond being simply guidelines in that respect. It has been questioned in Germany whether it is appropriate that the guidelines are framed in a Regulation, and if the Regulation is impairing on Member State’s administrative sovereignty.³⁸⁷ During the preparations for the Regulation, it was also questioned whether the EU was rightly handling the question of time limits. Denmark suggested, with regard to the time-limit proposal, that such matter was better handled at Member State level and therefore the principle of subsidiarity was breached.³⁸⁸ Since the EU chose to put these “guidelines” in a Regulation they are not merely guidelines in the sense that they are not legally binding, the Regulation is in itself legally binding. It is not clear what this implies legally. In light of the loyalty principle it may be argued that Member States must still follow the guidelines in order to ensure the full effectiveness of EU law, or at least “refrain from any measure which could jeopardise the attainment of the Union’s objectives.”³⁸⁹ Thus the connection of the European electricity system is argued to be a very important component in reaching the renewable energy targets and the ultimate climate goals.

I consider the Regulation to be adopted within the boundaries of the Union’s competence, as the Regulation relates only to “projects of common interests”, which are of importance for the EU as such and not necessarily at Member State level. To enable such projects, planning and coordination at EU level is required. However, it could rightly be questioned whether the EU has competence to decide how the national permit procedures and time limits are to be composed. With regard to the requirement to introduce more comprehensive assessments of projects of common interest, a so called “one-stop-shop”, the Member States are left with three options on how to adminis-

³⁸⁴ See Preamble, section 43 of the Regulation on Trans-European Energy Infrastructure.

³⁸⁵ COM(2011) 658 final, p. 8.

³⁸⁶ Ibid.

³⁸⁷ This is discussed in Appel, M. and Burghardt, A., *RELP*, 2013, p. 29.

³⁸⁸ See SEC (2011) 1233 final, p. 30.

³⁸⁹ See Article 4(3) TFEU.

ter in detail such an approach.³⁹⁰ Any of the alternatives should be easy for the Member States to adopt in its administration, independent of how the administrative system is built up.

It has been raised in the literature whether the more specific competence laid out in Article 194 (1) (d) with regard to “promote the interconnection of energy networks” is considered *lex specialis* as it specifically concerns energy networks, while Article 172 concerns *all* transboundary networks.³⁹¹ However, viewed from another perspective, Article 172 may be argued to be *lex specialis* as it relates to *transboundary networks* and Article 194 about energy (in general). Even though Article 194 is considered *lex specialis*, Article 172 is still applicable as it concerns trans-European networks. Hence, Article 194 does not in that sense give rise to any more power to the EU to legislate in the area.³⁹² However, the current Regulation on guidelines for trans-European energy infrastructure is not based on Article 194 even though adopted after its introduction.³⁹³

Putting the legal implications of the Regulation aside, the Regulation may lead to a more efficient and fast procedure of energy infrastructure development of *common interest*, such as smart grids and transmission lines. This implies that projects that are not considered to be of common interest may still be faced with long and inefficient procedures, even though most grid infrastructure (including national grids) are needed to enable the function of the EU internal market in electricity in order to enable cross-border transmission of electricity. Hence, the provisions in the Regulation may serve as an inspiration on how national legislative procedures can become more efficient. As discussed earlier, even though the Regulation does not require Member States to build national grids to ensure the functioning of the EU electricity system, the requirement under Article 16 of the Renewable Energy Directive stipulates that a Member State has to ensure prioritised or guaranteed access to the grid for renewable electricity production sites, which may indirectly require the Member State to reinforce and build new transmission lines.

³⁹⁰ The Regulation is “guidelines” but phrased in a way that sounds mandatory, see e.g. Article 8, para. 3. However, the provisions are still only recommendations as they are in the form of guidelines; hence, not legally binding.

³⁹¹ This is discussed in the literature, see Calliess, C., and Hey, C., *Journal for European Environmental and Planning Law*, 10.2, 2013, p. 98.

³⁹² See discussion in *Ibid.*, pp. 99–100.

³⁹³ See Regulation on Guidelines for Trans-European Energy Infrastructure.

3. The Relationship between EU Energy and Environmental Law

3.1 Introduction

EU legislation should be consistent with other EU law in accordance with Article 7 TFEU. In the renewable energy context, this implies that the Renewable Energy Directive should be consistent with other EU law, including the nature protection legislation. In order to ensure this consistency, the integration principle stipulated in Article 11 TFEU has the potential to direct energy policies towards reflecting relevant environmental protection requirements; hence being consistent with other EU environmental legislation.

This chapter begins by presenting the basic relationship between EU legislative acts and the meaning of *consistency*, as established in Article 7 TFEU. Thereafter the meaning of the integration principle established in Article 11 TFEU and its legal implications for energy policies, is discussed; specifically, whether the Renewable Energy Directive reflects the environmental protection requirements to the extent needed. Thereafter the relationship between the Renewable Energy Directive and relevant nature protection directives is addressed. The aim here is to analyse when renewable energy projects may come in conflict with the nature protection directives.

3.2 Background

3.2.1 Introduction

The focus in this dissertation is primarily on the *legislative acts* that the EU has adopted in the field of energy and environmental policy, even though both legal and non-legal instruments are used to reach EU objectives. Article 288 TFEU specifies: “to exercise the Union's competences, the institutions shall adopt regulations, directives, decisions, recommendations and opinions”. There is no formal hierarchy between the various instruments.³⁹⁴ In

³⁹⁴ However, regulations, directives and decisions may in addition to legislative acts also be “delegated” or “implementing” acts. These sources also form a hierarchy where the legislative acts are at the top of the hierarchy. This dissertation discusses only legislative acts so the definition of “delegated” or “implementing” acts is not further discussed here. For a descrip-

general, a regulation is not more important than a directive or a decision.³⁹⁵ However, recommendations and opinions have no binding force. When discussing the relationship between the EU legislation in the field of renewable energy activities and relevant nature protection legislation, these acts exist on the same hierarchical level, hence the acts should be consistent with each other and other EU law.

3.2.2 Consistency between EU policies and activities

One of the general provisions in the TFEU is the one of *consistency*.³⁹⁶ Article 7 of the TFEU states:

“The Union shall ensure consistency between its policies and activities, taking all of its objectives into account and in accordance with the principle of conferral of powers.”

This provision demonstrates that the EU legislative acts should be construed in a way that enables the various acts to function consistently – or at least not contradict each other.³⁹⁷ It is also established in the TEU that the EU shall have a single institutional framework that ensures consistency, effectiveness and continuity of EU policy and actions.³⁹⁸

For the purpose of this study the focus is on *horizontal* consistency:³⁹⁹ consistency between EU policies, with the focus on policy coordination and integration.⁴⁰⁰ The objective set out in Article 7 give rise to an obligation for

tion, see Article 290–291 TFEU; and Craig, P. and Búrca, G., *EU Law – Text Cases, and Materials*, 2015, pp. 114–120.

³⁹⁵ Some legislative acts (regulations, directives or decisions) may, however, be a “foundational” act which means that other legislative acts may be made pursuant to that specific act; *Ibid.*, p. 106.

³⁹⁶ However, the different language versions of the Treaty do not use the same term. Coherence is used in, for example, the French, German and Italian versions, see Article 13 TEU. The concept of consistency will primarily be used in this dissertation though it is a narrower concept than coherence. For the interested reader, the concept of coherence is discussed in: Cremona, M., *Hamburg Review of Social Science*, volume 3, 2008, pp. 11–36.

³⁹⁷ In the literature it is expressed that “consistency implies that two rules are consistent when they produce the same result on the same facts or raise similar legal issue. Moreover, the notion of consistency is concerned with symmetry of all components of a given legal system”; see Herlin-Karnell, E., and Konstadinides, T., *Cambridge Yearbook of European Legal Studies* (2012–2013), pp. 141–142.

³⁹⁸ See Article 13 TEU.

³⁹⁹ There is also a vertical dimension of consistency (often framed as synonymous with the loyalty principle (Article 4(3) TEU)) that refers to the consistency between EU law and Member States’ national law. However, for the purpose of the discussion in this chapter the horizontal dimension is what I refer to; see Herlin-Karnell, E., and Konstadinides, T., *Cambridge Yearbook of European Legal Studies* (2012–2013), p. 149. See also Cremona, M., *Hamburg Review of Social Science*, volume 3, 2008, p. 16.

⁴⁰⁰ See Cremona, M., *Hamburg Review of Social Science*, volume 3, 2008, p. 19.

EU institutions to cooperate in decision-making to ensure consistency between its policies.⁴⁰¹

The general provision of consistency is not discussed further here, but serves as a foundation for the following discussions. More specifically, with regard to the environmental aspects of EU policies, the integration principle has the potential to resolve some of the inconsistencies between non-environmental and environmental EU policies, with a view to promoting sustainable development.⁴⁰²

In this dissertation, the relationship between different legislative acts is discussed, primarily the relationship between the Renewable Energy Directive and the directives protecting biodiversity. It is specified in the Renewable Energy Directive that:

“The coherence between the objectives of this Directive and the Community’s other environmental legislation should be ensured. In particular, during the assessment, planning or licensing procedures for renewable energy installations, Member States should take account of all Community environmental legislation and the contribution made by renewable energy sources towards meeting environmental and climate change objectives, in particular when compared to non-renewable energy installations.”⁴⁰³

This statement reflects the principle of consistency, specifying that Member States “should take account of all Community environmental legislation”, which implies that the environmental directives that protect biodiversity shall be accounted for even though reaching objectives with such legislation may be at odds with attaining the goals set out in the Renewable Energy Directive.

However, notice that in this provision, *coherence* and not consistency, is spelled out. As mentioned above, some translations of the TFEU Article 7 refer to coherence instead of consistency. Even though consistency and coherence may be considered to have the same meaning in the context of Article 7, it may have a different meaning in this context. Coherence has been defined by Dworkin as “a mere agreement and compatibility between a set of rules”.⁴⁰⁴ Coherence is suggested to be a wider concept than consistency and more flexible, as a policy is either consistent with another policy or it is not, while a policy can be more or less coherent with another policy.⁴⁰⁵ Hence, it is not enough that the Renewable Energy Directive and the relevant

⁴⁰¹ See Herlin-Karnell, E., and Konstadinides, T., *Cambridge Yearbook of European Legal Studies* (2012–2013), p. 142.

⁴⁰² See Article 11 TFEU.

⁴⁰³ Preamble, para. 44 of the Renewable Energy Directive.

⁴⁰⁴ See Dworkin, R., *Taking Rights Seriously*, Harvard University Press, 1978, as quoted in Herlin-Karnell, E., and Konstadinides, T., *Cambridge Yearbook of European Legal Studies* (2012–2013) p. 142.

⁴⁰⁵ See Cremona, M., *Hamburg Review of Social Science*, volume 3, 2008, p. 14.

directives protecting biodiversity do not contradict each other; the directives must also be coherent – in agreement or compatible – with each other. Based on this understanding of the concepts of consistency and coherence, the following section examines the meaning of the integration principle and what role it has in ensuring that the renewable energy policy is consistent with the nature protection legislation.

3.3 Environmental protection requirements in renewable energy policy

3.3.1 Introduction

In general, it can be said that even if environmental concerns were not at the top of the agenda in 1957, when the Treaty of Rome was established, they have grown into one of the most important values in the EU Treaties and the EU today plays a key role in environmental law and policy. Today, there are a number of EU Treaty provisions that are dedicated to the environment. In addition to the integration principle established in Article 11 TFEU, Article 3(3) of the TEU, Article 114(3), 191, 192 and 193 of the TFEU all concern the environment.⁴⁰⁶

Due to the integration principle it may be argued that the environmental protection requirements and principles established under Article 191 are to be considered legally binding and of importance in all other policy fields, including EU energy policy.⁴⁰⁷ As discussed above, it is not certain on what legal basis a future directive promoting renewable energy would be based.⁴⁰⁸ Either way, when the EU adopts policies, it needs to integrate environmental protection requirements into the definition and implementation of the policy, in accordance with Article 11 TFEU.

⁴⁰⁶ For a discussion on EU competence in the field of environmental law, see De Sadeleer, N., *Yearbook of European Law*, Vol. 31, No. 1, 2012, pp. 373–401.

⁴⁰⁷ For example, it is argued that the precautionary principle is considered a general principle of EU environmental law due to the integration principle; see Craig, P. and Búrca, G., *EU Law – Text Cases, and Materials*, 2015, p. 575; De Sadeleer, N., *Environmental Principles – From Political Slogans to Legal Rules*, 2005, p. 110.

⁴⁰⁸ See Section 2.5.

3.3.2 The Integration Principle

The origin of the Integration Principle can be traced back to Principle 13 of the 1972 Stockholm Declaration:

“In order to achieve a more rational management of resources and thus to improve the environment, States should adopt an integrated and coordinated approach to their development planning so as to ensure that development is compatible with the need to protect and improve environment for the benefit of their population.”⁴⁰⁹

The Stockholm Declaration sets the basis for most environmental law and policy, so also for the European environmental policy. At the time, no environmental legislation was adopted at European level but after the Stockholm Declaration it was stressed at the European Council Summit that a European environmental policy was needed. The Council declared that “Economic expansion, which is not an end in itself, must as a priority help to attenuate the disparities in living conditions.”⁴¹⁰ The first EC environmental Action Programme was thereafter established in 1973, where the integration principle was first mentioned in the European law context.⁴¹¹ Since then the integration principle has been further clarified and is now presented in Article 11 of the TFEU, which states that environmental considerations must be integrated into other policies of the European Union and its activities, more precisely:

“Environmental protection requirements must be integrated into the definition and implementation of the Union’s policy and activities, in particular with a view to promoting sustainable development.”

The principle basically acknowledges that environmental concerns cannot be seen in isolation from other policies. It is quite clear that many other policies are either being affected by environmental policy or are affecting the same - for example, policies in the field of energy, transportation and agriculture. These areas are all in close relation to the environment. “Union policies and activities” are policies listed in Articles 3 and 4 of the TFEU; all activities of the EU under the TFEU Treaty. Thus one may say that the environmental integration principle broadens the objectives of the other powers laid down in the TFEU, as all other policy areas must integrate environmental protec-

⁴⁰⁹ See U.N. Conference on the Human Environment, Declaration of the United Nations Conference on the Human Environment, 1972, principle 13.

⁴¹⁰ See First Summit Conference of the Enlarged Community (Paris), Declaration, E.C. BULL., 1972, no. 10, at p. 15.

⁴¹¹ See *Programme of action of the EC on the Environment*, 1973, OJ C 112. See also Krämer, L., *Principles of European Law*, 2004, pp. 33–40; Langlet, D. and Mahmoudi, S., *EU:s miljörätt*, 2011, pp. 82–86, for a description of the origin of the integration principle.

tion requirements both into the definition and implementation of EU policies and activities.⁴¹²

The integration principle has changed wording a few times since its introduction, arguably both to be stronger and weaker. Jans suggested that the integration principle may have been weakened since the introduction of the Lisbon Treaty. He suggests that the current environmental integration principle lost its exclusivity with the introduction of the Lisbon Treaty, and could therefore instead act as a “Trojan horse” and lead to a weakening, or downgrading, of environmental standards.⁴¹³

What is to be integrated, and what “environmental protection requirements” refers to, is not totally clear.⁴¹⁴ Jans and Vedder argue that the environmental objectives of Article 191(1) should be included and likely Article 191(2), for example, the precautionary principle.⁴¹⁵ Over all, Jans and Vedder consider that the integration principle gives rise to an “obligation on the European institutions to reach an integrated and balanced assessment of all the relevant environmental aspects when adopting other policy”.⁴¹⁶

With regard to the importance of environmental objectives in relation to the objective of other policies, Jans and Vedder suggests that the integration principle does not necessarily mean that environmental policy has been given some priority over other policy areas, but that it at least needs to be shown that the protection of the environment is taken into consideration.⁴¹⁷

Krämer points out that the interpretation of the principle is wide. When a measure is taken under the TFEU (in the formulation and implementation of policies) full consideration must be given to the provisions protecting the environment.⁴¹⁸ Though he also points out that in practice the application of the integration principle is highly dependent on the political will of the EU institutions. Krämer is of the opinion that “the complete lack of even considering the environmental impact of the Regulation constitutes a breach of art. 11 TFEU and could lead to the annulment of the regulation”.⁴¹⁹ However, there is no CJEU case with that outcome; that an EU act is annulled due to not integrating environmental protection requirements.

⁴¹² See Article 11 TFEU.

⁴¹³ Since the introduction of the Lisbon Treaty there are now more integration principles stipulated in the Treaty, not only regarding the environment. See Jans, J., *Fordham International Law Journal*, 2011, p. 1547.

⁴¹⁴ See, for example, Dhondt who suggests that it is possible to argue that “environmental protection requirements” refers to the 1–3 paragraph of Article 191. See Dhondt, N., *Integration of Environmental Protection into other EC Policies*, 2003, p. 79

⁴¹⁵ See Jans, J. and Vedder, H.B., *European Environmental Law*, 2012, p. 23; see also Langlet, D. and Mahmoudi, S., *EU:s miljö rätt*, 2011, p. 84 et seq.

⁴¹⁶ See Jans, J. and Vedder, H.B., *European Environmental Law*, 2012, p. 23.

⁴¹⁷ This argument is based on the text of the treaty and the design of the principle; see more: *Ibid.*, p. 23.

⁴¹⁸ See Krämer, L., *EU Environmental Law*, 2012, p. 21.

⁴¹⁹ *Ibid.*, p. 22.

Even though the outcome has not been an annulment of EU regulations, the principle has been discussed in case law. In the *Chernobyl Case*, the integration principle was expressed in strong language. It was expressed that the principle implied that “all Community measures must satisfy the requirements of environmental protection.”⁴²⁰

This strong language has been weakened a little as of the *Safety Hi-Tech cases* where the significance of the provision in Article 191 TFEU was discussed.⁴²¹ The main discussion undertaken in these judgments was in respect of the lawfulness of an Ozone Regulation. In these cases, the company Safety Hi-Tech considered the Regulation to be illegal in light of Article 130 r (now Article 191 TFEU) as the Council had not observed its objective, the principles and criteria. The Council, however, suggested that it had a wide discretion to decide which measures to take under the article and that the Court was only entitled to review the exercise of that discretion if measures were “manifestly inappropriate having regard to the aim pursued would their legality be in issue”. The Court expressed the view that Article 130 r (now article 191 TFEU)

“... sets a series of objectives, principles and criteria which the Community legislature must respect in implementing environmental policy.”⁴²²

The Court did not specifically discuss the meaning of “must respect” or the boundaries of the Council’s discretion, but expressed that the Council still had the power to balance the relative importance of the environmental objectives and principles, keeping in mind the complexity of the implementation of those criteria. A review by the Court was therefore limited to examine whether the Council “committed a manifest error of appraisal regarding the conditions for the application of Article 130r of the Treaty”.⁴²³ This implies that the possibility to annul a directive on this ground is limited, especially in cases where some environmental protection requirements are reflected but not others, or where such requirements are only reflected to a limited extent.

Another aspect of these judgments is that the validity of the Regulation was specifically tested against the “high level of protection principle” (Article 191 (2)). The Court first states:

⁴²⁰ Case C-62/88, *EP v. Council* (1990) ECR I-1527, para. 20.

⁴²¹ See Case 284/95, *Safety Hi-Tech v. S.& T.Srl*, 14 July 1998, (*Safety Hi-Tech case*) and Case 341/95, *Bettati v. Safety Hi-Tech*, 14 July 1998, (*Bettati case*)

⁴²² See Case 284/95, *Safety Hi-Tech case*, para. 36; and Case 341/95, *Bettati case*, para. 34.

⁴²³ See Case 284/95, *Safety Hi-Tech Case*, para. 37; and Case 341/95, *Bettati case*, para. 35.

“It does not follow from those provisions that Article 130r(1) of the Treaty requires the Community legislature, whenever it adopts measures to preserve, protect and improve the environment in order to deal with a specific environmental problem, to adopt at the same time measures relating to the environment as a whole.”⁴²⁴

The statement is reasonable, as it would be impossible to adopt policies with measures for the environment as a whole. It is necessary to be able to adopt environmental policies focusing on specific environmental problems. However, in light of the multitude of EU environmental legislative acts I consider it still important to have a little wider perspective on the environmental requirements as some environmental policies may be considered to be in conflict with other environmental policies.

However, the Court decided that the Regulation under assessment did not infringe the “high level of protection principle”. More specifically the Court stated that to be compatible with the principle it was not necessary that the level of protection was the highest that was technically possible.⁴²⁵ In these cases, the aim of the Regulation was to control substances that deplete the ozone layer. The Court stated that the fact that the Regulation only referred to that aspect of the environmental protection requirements “cannot therefore be regarded as incompatible with the purpose of Article 130r(1) of the Treaty.”⁴²⁶

I consider it reasonable that it is not always crucial to integrate all environmental objectives and principles, if not relevant for the specific policy. However, even though the Court may not be able to annul an EU piece of environmental legislation due to its not reflecting all the objectives and principles set out in Article 191, it can still be argued that the legislative act should better reflect those principles in the first place.

As climate and energy policies now are interlinked, the integration principle has played a larger role in the introduction of energy policy at EU level.⁴²⁷ Mahmoudi suggests that the integration principle has become more important in recent years due to a willingness to promote renewable energy in face of climate change.⁴²⁸ Krämer suggests that prior to the adoption of the Renewable Energy Directive, the EU energy policy did not seriously try to integrate environmental concerns into its elaboration and implementation, which he considers to be in contrast to the legal requirement under Article 11

⁴²⁴ Case 341/95, *the Bettati case*, para. 42.

⁴²⁵ See Case 284/95, *Safety Hi-Tech case*, para. 49; and Case 341/95, *Bettati Case*, para. 47.

⁴²⁶ See Case 284/95, *Safety Hi-Tech case*, para. 45; and Case 341/95, *Bettati Case*, para. 43.

⁴²⁷ There has, however, been an attempt to integrate environmental objectives into other policy fields, also specifically for energy policy; see Council, *Resolution on the integration of environmental aspects and sustainable development into energy policy*, 14 May 2001, Doc. 13.773/99, as stated in Krämer, L., *ERT* 2008:02, p. 326.

⁴²⁸ Mahmoudi, S., *EU och den globala klimatfrågan*, 2008, pp. 107–135.

TFEU.⁴²⁹ One of the reasons behind this lack of integration he suggests to be the fragmented nature of the EU Commission's Directorate Generals. He points out that the administrative structures of the EU Commission are also a problem as energy policy is often handled under the Directorate General for energy and transportation, and does not necessarily communicate with the Directorate General for the Environment.⁴³⁰ Even though he refers to the structure prior to the integrated climate and energy policy (the EU now has a DG for "climate action") there is still no DG that deals with environmental and energy issues simultaneously.⁴³¹

As has been discussed previously, the Renewable Energy Directive is formally an environmental policy as it was adopted under Article 192(1) of the TFEU. This implies that the Directive, independent of the meaning of the integration principle, shall reflect and be interpreted in light of the requirements specified in Article 191 TFEU. Though the Directive primarily focuses on how to increase the share of renewable energy in the energy system, motivated by climate concerns, it does not specify how the renewable energy relates to other environmental protection requirements – for example, the protection of biodiversity. The Directive only more generally suggests that the Directive shall be coherent with other EU environmental legislation.⁴³² The Directive does not specify that the renewable energy activities themselves need to fulfil any certain environmental standards, except in the case of biofuels.⁴³³ In other words, there are no specific rules in the Renewable Energy Directive that states that the renewable energy that is to be accounted for, to reach the renewable energy targets, needs to fulfil relevant nature protection legislation. It is instead assumed that the relevant nature protection legislation will hinder such development that is not in line with the objectives set out in those directives.⁴³⁴

Even though it may be argued that the Renewable Energy Directive has not integrated environmental protection requirements to the extent needed

⁴²⁹ See Krämer, L., *ERT* 2008:02, p. 348. He also points out that the administrative structures of the EU Commission are also a problem as energy policy is often handled under the Directorate General for energy and transportation, and does not necessarily communicate with the Directorate General for the Environment. See p. 326. See also Van Hende, K. B. H., *Towards an Integrated Legal Framework for Offshore Wind Farms and Grid Interconnections in the EU Marine Waters*, p. 78. This is still a problem today even though Climate Action now has its own DG. See: http://ec.europa.eu/about/ds_en.htm

⁴³⁰ See Krämer, L., *ERT* 2008:02, p. 326.

⁴³¹ See Section 1.1.3.2 for a description of the relevant DGs.

⁴³² Preamble, para. 44 of the Renewable Energy Directive.

⁴³³ See Article 17 of the Renewable Energy Directive.

⁴³⁴ The question of sustainability is much more complex and many argue that the nature protection legislation in place is not necessarily good enough to ensure the protection of biodiversity. However, for the purpose of this dissertation – to enable me to legally discuss the relationship between biodiversity protection and the promotion of renewable energy – the nature protection legislation in place is here considered to provide appropriate protection for biodiversity and if the legislation is appropriately enforced, the renewable energy production shall be considered to be in line with the objective of protecting biodiversity.

due to renewable energy's potential impact on biodiversity,⁴³⁵ it may be more difficult to argue that the legislator has "committed a manifest error of appraisal regarding the conditions for the application" of Article 191 TFEU, when adopting the Renewable Energy Directive. However, even though a legislative act is not likely to be annulled on these grounds, it is still a legal requirement, as the EU "must" integrate environmental protection requirements into "the definition and implementation of the Union's policy and activities, in particular with a view to promoting sustainable development".⁴³⁶

In the field of energy, it is often stated that environmental integration has taken place, though it is often only climate aspects that are integrated into the energy policy.⁴³⁷ It is less frequent that environmental concerns other than climate are taken into account in this integration; issues of biodiversity are not often mentioned even though climate-friendly energy sources do not necessarily need to be eco-friendly. The reduction of GHG emissions is what has been seen as the primary goal. Nevertheless, the picture is often more complex, where other environmental concerns in fact can be seen to be in conflict with climate goals.

Owen and Hope predicted already in 1989 that such potential conflicts may arise from a substantial increase in renewable energy production. The authors suggest that:

"In abstract, reducing pollution and protecting habitats are compatible goals; when superimposed on other policies in the real world, they may come in conflict".⁴³⁸

Like the authors I have identified that it may arise conflicts between renewable energy (climate policy) objectives with other environmental objectives, for example the protection of biodiversity.⁴³⁹ Given the different time and context I do not see this as a problem of integration *per se* but rather the current energy policy as a proof that the integration principle is not utilised to the extent needed in this field. The energy policy may need to better reflect environmental objectives if the transition the EU is promoting is not only to be carbon neutral but also in line with the biodiversity objective.

⁴³⁵ Hence, the current Renewable Energy Directive is technically an environmental policy adopted under Article 192 TFEU. However, the renewable energy policies are still argued to integrate environmental concerns more than other energy-related policies; see, for example: Dhondt, N., *Integration of Environmental Protection into other EC Policies*, 2003, p. 442.

⁴³⁶ See Integration Principle, Article 11 TFEU.

⁴³⁷ See, for example, Renewable Energy Directive, Directive on Carbon Trading, Regulation of the European Parliament and of the Council on guidelines for trans-European energy infrastructure etc.

⁴³⁸ Owens, S., and Hope, C.W., *Energy Policy*, 17(2), 1989, p. 100.

⁴³⁹ *Ibid.*

3.3.3 Discussion

According to Article 11 of the TFEU the EU must integrate environmental objectives into the definition and implementation of all its policies and actions. In the field of energy, we observe that climate aspects are somewhat integrated while other environmental objectives are not. Therefore, the integration principle, together with relevant environmental objectives and principles, has the potential to some extent ensure that EU law and policy are consistent – or coherent – with nature protection legislation.

There are, however, some limits as to what extent these requirements must be integrated as “the environment as a whole” cannot be granted protection in each individual EU policy.⁴⁴⁰ With regard to renewable energy policies and the protection of biodiversity, I consider it justified to require a better integration of the requirement to protect biodiversity as well as the precautionary principle, as renewable energy projects – like many other projects – are likely to give rise to impacts on protected species and habitats. The integration principle has the potential here to better ensure the consistency of EU renewable energy law and EU nature protection law.

3.4 Relationship between the Renewable Energy Directive and relevant nature protection directives

3.4.1 Introduction

There are EU legislative acts that both protect biodiversity and promote renewable energy production respectively.⁴⁴¹ The Renewable Energy Directive serves here as the main example of a policy promoting renewable energy, as renewable energy activities may come in conflict with legislation protecting biodiversity.⁴⁴²

There are a number of EU directives protecting biodiversity, which will potentially hinder the development of renewable energy production, if it affects biodiversity in a way that is not legal under the nature protection directives.⁴⁴³ Depending on the activity, different nature protection directives are relevant. Activities in the water face different legislation from those on

⁴⁴⁰ See Case 341/95, *Bettati Case*, para. 42

⁴⁴¹ See, for example: Directive 2009/28/EC, the *Renewable Energy Directive*; Directive 2000/60/EC, the *Water Framework Directive*; Directive 92/43/EEC, the *Habitats Directive*; and Directive 2009/147/EC, the *Birds Directive*.

⁴⁴² For a discussion on the relationship between wind power and biodiversity see Chapter 6; and for the relationship between hydropower and the protection of biodiversity, see Chapter 7.

⁴⁴³ This presentation focuses on the EU legislation that protects biodiversity though biodiversity is protected by several international conventions and EU legislation; for example, The Convention on Biological Diversity and the Bern Convention.

land. For wind power development on land, the Habitats and Birds Directives become highly relevant. For wind power offshore, hydropower and wave power, the Water Framework Directive and the Marine Strategy Directive may become relevant, in addition to the legislation that also applies to activities on land.⁴⁴⁴

In this section, the relationship between the Renewable Energy Directive and relevant nature protection directives is briefly addressed. The analysis focuses on when renewable energy projects may come into conflict with the legislation on habitats and species protection under the Birds and Habitats Directives; also, whether such activities, located in water, may contribute to the non-fulfilment of the objectives set out under the Water Framework Directive, and therefore not be permissible. The aim is to provide an EU law background on the EU legislation prior to addressing the relationship between wind power and the nature protection directives; and the relationship between hydropower and the Water Framework Directive, respectively.⁴⁴⁵ In the following sub-sections the political context is first described followed by an analysis of the relationship as addressed by the CJEU.

3.4.2 The political approach to energy and the environment

The EU has an integrated climate and energy policy. Even though the relationship between climate change and loss of biodiversity is closely related, EU energy policy does not reflect much upon the relationship between them.

The EU Commission has, nevertheless, long acknowledged the relationship between biodiversity and climate change. In 2001, the Commission acknowledged that both climate change and loss of biodiversity are two of the greatest threats to sustainable development,⁴⁴⁶ and that a new approach to policy making is needed. A new more coordinated policy approach was asked for, where long-term perspectives are presented for win-win situations instead of focusing on short-term transitions and costs.⁴⁴⁷ The EU Commission has also acknowledged the importance of tackling both issues in the same context:

⁴⁴⁴ See Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008 establishing a framework for community action in the field of marine environmental policy; hereafter referred to as the Marine Strategy Framework Directive. However, this dissertation focuses primarily on wind power (on land) and hydropower, thus, that Directive is not further discussed in this dissertation.

⁴⁴⁵ See chapter 5 and 6.

⁴⁴⁶ See Commission Communication to the Council and the European Parliament, *A Sustainable Europe for a Better World: A European Union Strategy for Sustainable Development*, COM(2001) 264 final, p. 4.

⁴⁴⁷ COM(2001) 264 final, p. 5.

“We cannot halt biodiversity loss without addressing climate change, but it is equally impossible to tackle climate change without addressing biodiversity loss. It is therefore essential that climate change policy is fully complementary with biodiversity policy.”⁴⁴⁸

However, these documents do not explicitly acknowledge the potential negative effect that renewable energy may have on the protection of biodiversity. Even though the EU Commission has acknowledged that biodiversity and climate change policies are inherently interlinked, their energy politics (which officially promote climate concerns) are not very focused on potential biodiversity impacts from renewable energy production. It seems as if there is a gap between the objective of the policy – the reduction of GHG emissions from the energy system to protect biodiversity – and the policies that carry out that objective: the promotion of renewable energy.

The EU Commission has also pointed out that even though renewable energy, *per se*, is an environmentally friendly energy source compared with fossil fuels, it is not necessarily without its impact on biodiversity.⁴⁴⁹ The Commission acknowledges that large-scale renewable energy production might be hindered by other environmental regulations, more precisely:

“Renewables may still raise sustainability concerns, regarding both generation and infrastructure, in terms of direct or indirect impacts on biodiversity and the environment as a whole”.⁴⁵⁰

The Commission suggests that this problem requires “particular attention and vigilance”, since the regulation is of a cross-cutting nature.⁴⁵¹ The Water Framework Directive, Habitats and Birds Directives and more administrative directives such as the Environmental Impacts Assessment (EIA) Directive etc. need to be taken into account, in the assessment, before an activity can grant a permit. Thus, even though the policy approach is rather fragmented the legislation protecting biodiversity are in place and can potentially stop such activities that are not in line with those directives. The relationship between the Renewable Energy Directive and the Habitat Directive was indirectly discussed in the *Puglia Case*, which is discussed in the following section.

⁴⁴⁸ The European Commission, *Environment: Commission calls for a shakeup in EU biodiversity policy*, IP/09/649, 2009, p. 5.

⁴⁴⁹ COM(2012) 271 final.

⁴⁵⁰ *Ibid.*, p. 11.

⁴⁵¹ *Ibid.*

3.4.3 The relationship between biodiversity and renewable energy objectives – presented in CJEU case law

In the *Puglia Case*,⁴⁵² the legal relationship between biodiversity protection and the promotion of renewable energy was indirectly discussed. The Court was asked for a preliminary ruling concerning the interpretation of the Habitats, Birds and the Renewable Energy Directive.⁴⁵³ The referred question was whether a national provision, generally prohibiting wind power production (not for self-consumption) in a Natura 2000 site, was in conflict with EU law. The prohibition applied generally throughout the entire protected area, disregarding the various local conditions.⁴⁵⁴

In accordance with Article 6(3), authorisation of activities *likely* to have a significant effect on a Natura 2000 site, is conditional upon a prior environmental impact assessment, a so-called appropriate assessment. The specific national law that was discussed in the case was a general prohibition on wind power projects of a certain size. No prior assessment of the wind power installation, which is required under the Habitats Directive, was here necessary as all such projects were generally prohibited. This implies that the specific national legislation is more stringent than the Habitats and Birds Directives. The Court considered the more stringent national law to be in compliance with Article 193 TFEU, and therefore to be legal in that sense. This stringent approach, even though justified by Article 193 TFEU, must comply with the other provisions in the same treaty. The Court discussed (upon request from the applicant), whether this stringent approach was in conflict with Article 194 TFEU and whether the energy objectives provided in the Directive (promoting renewable energy) should take precedence over the protection of biodiversity pursued in the Habitats and Birds Directives. The Court clarified that it was sufficient to observe the wording of Article 194(1) TFEU, which states that the EU policy on energy must “have regard for the need to preserve and improve the environment”, in order to answer that question.⁴⁵⁵ The court thereafter concluded that the general provision (forbidding certain wind power production), in view of its limited scope, could not be “liable to

⁴⁵² See Case C-2/10, *the Puglia Case*.

⁴⁵³ The older version of the Renewable Energy Directive was discussed (Directive 2001/77).

⁴⁵⁴ The provision was “concerning the refusal to authorise the location of wind turbines not intended for self-consumption on land situated *within the confines of the Alta Murgia national park*, a protected area classified as a site of Community importance (‘SCI’) and special protection area (‘SPA’) forming part of the Natura 2000 European Ecological Network.”; see Case C-2/10, *the Puglia Case*, para. 2.

⁴⁵⁵ See Case C-2/10, *the Puglia Case*, para 56. The General Advocate argued more specifically in his Opinion: “in my view, contrary to the arguments of the applicant companies, the EU legislature did not seek to favour such objectives above all other (environmental) objectives but sought to promote electricity produced from renewable energy sources in order to protect the environment and comply with the Kyoto Protocol to the United Nations Framework Convention on Climate Change...” See *Opinion of Advocate General Mazák*, delivered on 14 April 2011, para 48.

jeopardize the European Union objective of developing new and renewable forms of energy”.⁴⁵⁶

It was nevertheless acknowledged that the general provision still needed to be non-discriminatory⁴⁵⁷ and to respect the principles of proportionality, as reflected both in general EU law and specific provisions in the Directives under interpretation.⁴⁵⁸ With regard to whether or not the measure was discriminatory, the Court pointed out that the referring court must assess the particular features of wind turbines and its related dangers that they presented for birds, such as the risk of collision, disturbance and displacement, and barrier effects.⁴⁵⁹ With regard to the proportionality principle, the Court stated that the referring court must

“take account in particular of the fact that the legislation at issue in the main proceedings is confined to wind power plants and does not extend to other forms of renewable energy production, such as photovoltaic plants. Moreover, the prohibition applies solely to new wind turbines for commercial purposes, as wind power plants intended for self-consumption and having a capacity not exceeding 20 kW are excluded from the scope of that prohibition”.⁴⁶⁰

Thus the CJEU presents arguments that the specific legislation – of forbidding wind power plants not for self-consumption – is both proportionate, since there is only a limited proportion of renewable energy production that it impacts; and is non-discriminatory, due to wind power’s specific nature. This outcome is not to say that any type of ban would be acceptable. For example, if the ban included all types of renewable energy production, it may be hard to argue that the provision would be proportionate. And, the general prohibition would most likely not be considered proportionate if it was applicable to all Natura 2000 sites, as the problem of collision with birds is only relevant if the site hosts any protected bird species or is a mating or migrating route for them.

Even though the Court did not explicitly assess the relationship between biodiversity and the promotion of renewable energy, it nevertheless stated that the objective of developing new and renewable forms of energy was not prioritised over the protection of biodiversity *per se*, and suggested, in addition, that the specific provision did not jeopardize the objective of developing new and renewable forms of energy due to its limited scope. In other words – the different objectives were not in conflict in this specific case but they may be considered to be in conflict if the specific provision would have jeopardised the possibility of reaching the renewable energy goal. If so, the

⁴⁵⁶ See Case C-2/10, *the Puglia Case*, para. 57.

⁴⁵⁷ Case C-2/10, *the Puglia Case*, paras. 61–66.

⁴⁵⁸ Case C-2/10, *the Puglia Case*, paras. 72–74.

⁴⁵⁹ *Ibid.*, para. 66.

⁴⁶⁰ *Ibid.*, paras. 72–74.

provision could still be acceptable as a more stringent environmental protective measure, and therefore be legal due to Article 193 TFEU.⁴⁶¹

3.4.4. Renewable energy activities and habitat protection under the Birds and Habitats Directives

3.4.4.1 Introduction

Renewable Energy Activities located in the natural environment may come in conflict with the provisions on habitat protection. In the following section the criteria that are relevant to assess when determining if a renewable energy project is in conflict with the provisions on habitat protection are described and discussed.

The Habitats Directive regulates the conservation of natural habitats and wild flora and fauna.⁴⁶² The Directive is general in the sense that it applies to many different species and different biotopes. The Birds Directive specifically regulates the conservation of wild birds.⁴⁶³ Both directives become relevant during the exploitation of land for energy production, where some energy forms are more harmful to species and habitats than others. If development of renewable energy activities is likely to significantly affect a Natura 2000 site, the Habitats and Birds Directives regulate when, and under what conditions, a developer can grant a permit for its activity.⁴⁶⁴

Both the Birds and the Habitats Directives provide protection for areas of special importance, so-called special areas of protection (SPA)⁴⁶⁵ and special areas of conservation (SCA).⁴⁶⁶ Such sites compose a European ecological network called Natura 2000.⁴⁶⁷ In Sweden, there are about 4100 Natura 2000 sites.⁴⁶⁸

With the introduction of the Habitats Directive, the obligations arising from Article 4(4) of the Birds Directive was replaced by Article 6(2), (3) and (4) of the Habitats Directive, for areas classified under the Birds Directive

⁴⁶¹ As discussed in the *Puglia Case*: *Ibid.*, para. 39.

⁴⁶² Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (hereafter the Habitats Directive).

⁴⁶³ Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds (hereafter referred to as the Birds Directive).

⁴⁶⁴ The directives also regulate situations where the renewable energy activity is to be located in a place where there is no formal protection of the area, but where a protected species have a mating ground, or where it is a migration route for birds etc., then the provisions regarding strict species protection come into play, as discussed in Section 3.4.5.

⁴⁶⁵ See Article 3 and 4 of the Birds Directive.

⁴⁶⁶ See Article 3 and 6 of the Habitats Directive.

⁴⁶⁷ See Article 3 of the Habitats Directive.

⁴⁶⁸ See Swedish Government, *Draft prioritised action framework (PAF) for Natura 2000 in Sweden*, 2013, p. 4.

(SPAs).⁴⁶⁹ The following section therefore moves on to discuss the provisions in the Habitats Directive, which are relevant for Natura 2000 sites protected under both directives.

3.4.4.2 The aim of the Habitats Directive

The Habitats Directive was first introduced in 1992 and it broadens the scope of the Birds Directive to include all flora and fauna and habitats worthy of protection. Another general difference is that the Birds Directive covers all bird species while the Habitats Directive only covers the habitats and species mentioned in the directive.⁴⁷⁰ The main aim of the Directive is to

“contribute towards ensuring biodiversity through the conservation of natural habitats and of wild fauna and flora in the European territory of the Member States to which the Treaty applies.”⁴⁷¹

One of the aims of the Directive is that natural habitats and species of Community interests (both flora and fauna)⁴⁷² shall be maintained or restored so that they have *favourable conservation status*.⁴⁷³ Member states are required to take necessary measures to fulfil that goal.⁴⁷⁴ When taking measures pursuant to the Directive, member states have to take account of “economic, social and cultural requirements and regional and local characteristics”.⁴⁷⁵ To reach these aims a coherent European network of ecological special areas of conservation shall be set up, so called Natura 2000 sites.⁴⁷⁶ The member states are required to designate such areas in their territories.⁴⁷⁷

In Article 6 of the Habitats Directive, it is further stated that member states should establish necessary conservation measures and, if needed, appropriate management plans, specific for each site.⁴⁷⁸ Deterioration or disturbance of both natural and species' habitats is not permitted.⁴⁷⁹ The following section looks into when an appropriate assessment is required under the Habitats Directive – when a project is likely to have significant effect on a Natura 2000 site.

⁴⁶⁹ See Article 7 of the Habitats Directive. A site that should have been designated as an SPA, but is not yet designated, is not covered by this provision. See discussion in Section 7.2.

⁴⁷⁰ This is a simple conclusion but see, for example, De Sadeleer, N., *Yearbook of European Environmental Law*, 2005, p. 219.

⁴⁷¹ See Article 2(1) of the Habitats Directive.

⁴⁷² This dissertation only concerns the protection of animal species even though certain flora may be affected by renewable energy activities. The provisions regarding its protection, however, are similar.

⁴⁷³ For definition of favourable conservation status, see: Article 1(e) and Article 1(i) of the Habitats Directive.

⁴⁷⁴ See Article 2 (2) of the Habitats Directive.

⁴⁷⁵ See Article 2 (3) of the Habitats Directive.

⁴⁷⁶ See Article 3 (1) of the Habitats Directive.

⁴⁷⁷ See Article 4 (1) of the Habitats Directive.

⁴⁷⁸ See Article 6 (1) of the Habitats Directive.

⁴⁷⁹ See Article 6 (2) of the Habitats Directive.

3.4.4.3. Projects “likely” to have significant effect on a Natura 2000 site

In article 6(3) it is stated that plans and projects not directly connected to the site but *likely* to have a significant effect thereon (not linked to the management of the area) “shall be subject to appropriate assessment of its implications for the site in view of the site’s conservation objectives”.

There is no definition in the Habitats Directive of what constitutes a plan or project but from the reading of the Article – that *any plan or project* that is likely to have significant effect on the site – it seems that a generous interpretation was intended.⁴⁸⁰ This wide interpretation was confirmed by the CJEU in the *Waddenzee Case* where the Court referred to the meaning of “project” under the EIA Directive, when suggesting that mechanical cockle fishing (with renewed licences every year) was considered a plan or project in accordance with the Habitats Directive.⁴⁸¹

Thus, if a project is likely to have significant effect on the specific site, as discussed above, then an appropriate assessment must be undertaken. Such an assessment is not to be confused with an environmental impact assessment under the EIA Directive. In certain cases, both assessments are required.

An appropriate assessment is applicable to *all* projects and plans while the EIA is only applicable to a certain type of project and the SEA to a certain type of plan.⁴⁸² In the context of renewable energy activities (for example, hydropower and wind power installations) this implies that both an EIA and an appropriate assessment are needed, as an EIA is always needed if the activity requires a permit under the Environmental Code. This may, however, often be the case since the criteria for undertaking an EIA is the same as for undertaking an appropriate assessment – if the activity is likely to *significantly affect* the environment (or the conservation objective of the site).

Another difference is that the appropriate assessment under the Habitats Directive is site specific and not as general as an EIA. Although like the EIA, the appropriate assessment should also include the cumulative effects of the activity.⁴⁸³ For the assessment to be appropriate the Commission suggests that it needs to fulfil the form requirements under the EIA Directive though the content does not need to be as wide in scope, as it is focused on the effect on the Natura 2000 site in view of the site’s conservation objectives.⁴⁸⁴ The Commission suggests that the methods in the EIA can be used

⁴⁸⁰ This is also in line with the definition provided in Article 1 of the EIA Directive. The Commission also confirms that a very broad interpretation was intended; see; the EU Commission, *Managing Natura 2000 sites*, para. 4.3. For a discussion on the meaning of “any plan or project”, see Tromsans QC, S., *The Habitats Directive – A Developer’s Obstacle Course?*, 2012, pp. 91–101.

⁴⁸¹ See Case C-127/02, *the Waddenzee Case*, paras. 21–29.

⁴⁸² The SEA Directive will not be further discussed here.

⁴⁸³ See Article 6 (3) of the Habitats Directive; see also the Commission, *Guidance Document on Article 6(4) of the Habitats Directive*, January 2007, p. 13.

⁴⁸⁴ See European Commission, *Managing Natura 2000 Sites*, 2000, pp. 36–37.

and it is recommended that an examination of alternative solutions and potential mitigation measures are explored as it may help in deciding whether or not the activity, if such solutions or mitigation measures are undertaken, will adversely affect the site.⁴⁸⁵

3.4.4.4 When can projects be permitted under Article 6(3) of the Habitats Directive?

Projects can only be permitted if it is ascertained that the project will not “adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public”.⁴⁸⁶ The interpretation of that sequence has in case law been given a quite strict interpretation reflecting the precautionary principle. In the *Waddenzee Case*, it was established that the applicant had to show that it was certain that no “reasonable scientific doubts” remained as to whether the activity would adversely affect the integrity of the site.⁴⁸⁷ The criteria to be applied when assessing the likelihood that such a plan or project will adversely affect the integrity of the site has also been further established in the *Sweetman Case*.⁴⁸⁸ The Court here partly reinforced its judgment in the *Waddenzee Case* but also clarified that when assessing whether a plan or project would adversely affect the characteristics of the site it was of importance to consider the objective behind the status of its protection. In the *Sweetman Case* it was suggested that the proposed road development would lead to a lasting and irreparable loss of part of the priority natural habitat (limestone pavement) which was the conservation objective of the site. Based on that reasoning, the Court concluded that Article 6(3) must be interpreted as meaning that

“a plan or project not directly connected with or necessary to the management of a site will adversely affect the integrity of that site if it is liable to prevent the lasting preservation of the constitutive characteristics of the site that are connected to the presence of a priority natural habitat whose conservation was the objective justifying the designation of the site in the list of SCIs, in accordance with the directive. The precautionary principle should be applied for the purposes of appraisal.”⁴⁸⁹

Regarding what could be considered to adversely affect the integrity of the site the CJEU stated in Case C-244/05:

⁴⁸⁵ Ibid., p. 38.

⁴⁸⁶ Article 6(3) of the Habitats Directive. See Case C-127/02, *the Waddenzee Case*.

⁴⁸⁷ See Case C-127/02, *the Waddenzee Case*, para 61.

⁴⁸⁸ See Case C-258/11, *the Sweetman Case*.

⁴⁸⁹ Ibid., para. 48.

“Member States cannot authorize interventions which may pose the risk of seriously compromising the ecological characteristics of a site, as defined by those criteria. This is particularly the case when an intervention poses the risk either of significantly reducing the area of a site, or of leading to the disappearance of priority species present on the site, or, finally, of having as an outcome the destruction of the site or the destruction of its representative characteristics.”⁴⁹⁰

Thus, it is important to assess if the *specific* activity is likely to affect the *specific* site. Depending on what reasons are behind the protection of the site, some activities may be permissible but others not. As specified above, if there is a risk that a project may reduce the area of the specific site, or may result in that priority species are disappearing from the site, or the “representative characteristics” of the site are destroyed, such project shall not be permissible.

If a renewable energy activity is likely to affect a Natura 2000 site, and the applicant has not shown that it is certain that no “reasonable scientific doubts” remain as to whether the activity will adversely affect the integrity of the site,⁴⁹¹ the activity cannot be granted a permit. However, depending on the reason behind the protection, certain renewable energy activities may not be considered to adversely affect the integrity of the site, and would therefore be permissible. For example, if the conservation value of the site is due to a certain species that is not affected by wind power installations, it may be permissible. But, if the site is a priority natural habitat for a threatened bird species, that is particular vulnerable to collision with wind turbines, the wind power park may be denied permit.

Hence, some renewable energy activities, e.g. wind power, may not be in conflict with the conservation values of the Natura 2000 site and therefore be permissible. If the activity is not permissible due to its impact on the Natura 2000 site, the activity can still be permissible if the derogation rules in Article 6(4) are considered applicable. This will further be explored in Chapter 7.

3.4.5 Renewable energy activities and strict species protection

3.4.5.1 Introduction

The Habitats and Birds Directive both have provisions on strict species protection. Species protection regulations can be seen as a safety net, providing protection for species in areas that are not protected habitats. As some species are migratory, or at least hunt for food outside the main habitat, species protection becomes crucial. Also in cases where an area has not yet been

⁴⁹⁰ Case C-244/05, *Bund Naturschutz in Bayern eV and Others v. Freistaat Bayern*.

⁴⁹¹ See Case C-127/02, *the Waddenzee Case*, para 61.

designated a Natura 2000 site, but hosts protected species, the species protection regulations can hinder development in that area. The species protection provisions are therefore important. Renewable energy activities may come in conflict with the species protection legislation if an installation is to be located close to a migration route, breeding or nesting ground for endangered bird species or bats, for example. The following section describes the provisions that are relevant for renewable energy activities.

3.4.5.2 Species protection under the Birds and Habitats Directives

In contrast to the protection of habitats, which is mainly dealt with under the Habitats Directive, the Birds Directive provides its own provision regarding strict species protection and derogation rules. Article 5 states:

“Without prejudice to Articles 7 and 9, Member States shall take the requisite measures to establish a general system of protection for all species of birds referred to in Article 1, prohibiting in particular:

- (a) deliberate killing or capture by any method;
- (b) deliberate destruction of, or damage to, their nests and eggs or removal of their nests;
- (c) taking their eggs in the wild and keeping these eggs even if empty;
- (d) deliberate disturbance of these birds particularly during the period of breeding and rearing, in so far as disturbance would be significant having regard to the objectives of this Directive;
- (e) keeping birds of species the hunting and capture of which is prohibited.”

The provisions on strict species protection, in Article 12 of the Habitats Directive, are similar and stipulate that Member States shall take the requisite measures to establish a system of strict species protection for animal species listed in Annex IV. Member States shall prohibit *deliberate* capture or killing and disturbance of the protected species. It shall also prohibit destroying or deteriorating breeding sites or resting places, and taking eggs from the wild.⁴⁹² As noted above, the Birds Directive provides similar protection under Article 5 but is not as wide as the Habitats Directive. In the Birds Directive it is forbidden to *deliberately* destroy or cause deterioration to a bird’s nest; such action does not need to be deliberate under the Habitats Directive, where breeding and resting places are also protected.⁴⁹³ Another difference is that in the Birds Directive it is (“in so far as disturbance would be significant having regard to the objectives of this Directive”) prohibited to deliberately disturb protected birds especially during breeding and rearing.⁴⁹⁴ In other words, if deliberate disturbance does not in fact affect the protected

⁴⁹² See Article 12(1) of the Habitats Directive. The Birds Directive has a similar provision in Article 5.

⁴⁹³ It can be questioned which activities the provisions on species protection aims at regulating. See discussion in Michanek, G., *Bertil Bengtsson 90 år*, 2016, pp. 375–389.

⁴⁹⁴ See Article 5 (d) of the Birds Directive.

species population, it is not forbidden. Hence, the Birds Directive is not as broad as the Habitats Directive and not as strict, but it protects *all* birds; however, arguably not every single bird is protected, as it is the specific *population* that is protected. This may imply that it is all right for a limited number of birds to be disturbed so long as the species is not placed under great threat.

Species protection regulations sometimes obstruct renewable energy projects due to their impact on protected species.⁴⁹⁵ Wind power installations may have an impact on protected bird species or bats, if located in an area where the species has its migration routes, breeding or feeding grounds. The implementation of the Habitats and Birds Directives in Sweden has not drawn a distinction between birds and other species, which means that birds are entitled to a wider protection than EU law requires.⁴⁹⁶

For an act to be considered illegal under Article 12 of the Habitats Directive it needs (in most cases) to be “deliberate”. The meaning of deliberate, and its scope, has been discussed in general terms by the CJEU.⁴⁹⁷ More specifically, with regard to wind power, the concept has been discussed in Swedish case law.⁴⁹⁸ With regard to renewable energy activities, it is not the subjective intent of the developer that is of importance, as the operator is required by law to have sufficient knowledge to assess the associated risk with the activity. If there is a notable risk that the activity will affect a certain species in a way that is illegal under Article 12, then the activity is considered to be illegal. This implies, for example, that in areas where there is a notable risk that certain bird species are likely to collide with wind turbines the activity is not permissible. Hence, it is common that wind power activities are prohibited due to the potential impact on protected species.⁴⁹⁹

Not all actions need to be deliberate to be illegal under the provisions on strict species protection. Article 12(1)(d) states that Member States shall take the requisite measures to establish a system of strict species protection (for Annex IV(a) species), in their natural range, prohibiting “deterioration or destruction of breeding sites or resting places”. Hence, independent of intent it is not legal to deteriorate or destroy breeding and/or resting places for pro-

⁴⁹⁵ For a discussion on the relevant case law regarding the meaning of deliberate, see also Schoukens, H., and Bastmeijer, K., *The Habitats Directive in its Environmental Law Context – European Nature’s Best Hope?*, 2015, p. 138.

⁴⁹⁶ This distinction between the level of protection in the Habitats and Birds Directives will not be elaborated on further. As Sweden has not made a distinction between birds and other species in its implementation, Swedish case law will reflect the provisions in the Habitats Directive and not the Birds Directive.

⁴⁹⁷ See, for example: Case C-412/85, *Commission v. Federal Republic of Germany*; Case C-6/04, *Commission v. United Kingdom*; Case C-103/00, *Caretta caretta Case*; Case C-221/04, *the Otter Case*. These cases are discussed in Section 5.3.3.

⁴⁹⁸ See: MÖD 2014:47 and MÖD 2014:48, as discussed in Section 5.3.3.

⁴⁹⁹ This will be further discussed in the Swedish context in Chapter 5.

tected species. In the *European Hamster Case*⁵⁰⁰ France had failed to establish a programme of measures to ensure protection of a protected species (the European hamster) and therefore did not meet its obligation under Article 12(1)(d). Thus, renewable energy installations, in areas where the activity would destroy or deteriorate a breeding site or resting place are therefore illegal, independent of intent.

It may be more likely that wind power installations are in conflict with provisions providing species protection than habitats protection, as it is easier for the developer to identify where Natura 2000 sites are located than if the specific area hosts endangered species (without formal protection). The provisions on habitats protection have a steering function by giving the developer a motivation (easier permit procedure) to locate in an area that is not protected. As it may be after the application process has started that the developer first becomes aware of protected species, it is a larger cost to change the location than if this knowledge was available to the developer beforehand. It has been suggested that a more clear integration of species protection in the EIA process can bring the practical effect of the species protection regulation closer to the one for site/habitat protection.⁵⁰¹ A better mapping of the landscape would provide the developer with the knowledge needed to locate a wind farm in a location that would avoid conflict with species protection. However, even though a renewable energy activity is considered illegal under Article 12 of the Habitats Directive, such activity may still be acceptable if the conditions specified in Article 16(1) are fulfilled – if the derogation rules are applicable.⁵⁰²

3.4.6 Renewable energy activities in water – the Water Framework Directive

3.4.6.1 Introduction

Renewable energy activities located in water areas face additional legal provisions than activities on land. The EU legislation that is most relevant for renewable energy activities in water is the Water Framework Directive,⁵⁰³ which aims to protect almost all waters.⁵⁰⁴ The objectives of the directive are

⁵⁰⁰ See Case C-383/09, *European Commission v. French Republic*, 9 June 2011 (hereafter referred to as the *European Hamster Case*).

⁵⁰¹ See Sobotta, C., *The Habitats directive in its Environmental Law Context – European Nature's Best Hope?*, 2015, p. 159.

⁵⁰² The derogation rules are discussed in Chapter 7.

⁵⁰³ Directive 2000/60/EC of the European Parliament and of The Council of 23 October 2000 establishing a framework for Community action in the field of water policy (hereafter referred to as the Water Framework Directive).

⁵⁰⁴ Except when considered marine water, where the Water Framework Directive does not apply. The Water Framework Directive also protects coastal marine waters (one nautical mile out into the sea); see: the Marine Strategy Framework Directive.

stated in Article 1, where the non-deterioration principle is reflected, as well as promotion of sustainable water use, based on long-term protection of available water resources.

The Water Framework Directive becomes relevant when assessing renewable energy activities that is located in water – that is, hydropower, wave power and offshore wind power. Hydropower is the largest source of renewable electricity in Sweden and the operation of large hydropower installations is a very efficient way of producing renewable electricity. The use of hydropower has a very long tradition in Sweden, and many of the plants have been constructed without facing any, or only relatively lenient, legal environmental requirements. However, as will be further explained here, much stricter requirements affect the operation of those plants today, and also new installations, not least due to the Water Framework Directive.

3.4.6.2 Requirements under the Water Framework Directive relevant for hydropower installations

The Water Framework Directive requires that heavily modified water bodies, such as an exploited river, should have a “good ecological potential”, which is a less strict objective than “good ecological status”.⁵⁰⁵ The less strict target can be achieved by physical measures that counteract the effects of the historical hydro-morphological interventions, especially negative effects on migratory fauna.⁵⁰⁶ A water body may be considered to be heavily modified in rivers where large-scale hydropower installations are located.⁵⁰⁷

The development of new hydropower installations is primarily of small-scale. Such installations are often located in waterways where the objective of “good ecological status” applies to the water body. These objectives – good ecological status (and potential) – should have been reached in 2015, but the time limit has been postponed to 2027 for many water bodies, in accordance with Article 4(4) of the Water Framework Directive. One of the challenges for Sweden to reach those objectives is the large number of hydropower plants that need to be reassessed in order to fulfil the environmental law requirements necessary to reach those objectives.⁵⁰⁸

More recent EU case law implies that Article 4(1)(a)(i) to (iii) of the Water Framework Directive is to be more strictly interpreted than previously thought in the Member States. The Court decision in the *Weser Case*⁵⁰⁹ has

⁵⁰⁵ See Article 4, p.1 (a)(ii) and (iii) of the Water Framework Directive. The quality objective of “good ecological status” has been critically analysed by Josefsson, see for example; Josefsson, H. and Baaner, L., *Journal of environmental law*, vol 23(3), 2011, pp. 463–486.

⁵⁰⁶ Such measures are also part of the environmental objective *Flourishing Lakes and Streams*. See: prop. 2000/01: 130.

⁵⁰⁷ The meaning of heavily modified water bodies and the objective of “good ecological potential” is discussed in Section 6.5.4.

⁵⁰⁸ This is further discussed in Chapter 6.

⁵⁰⁹ Case C-461/13, *the Weser Case*. For a discussion on the case, see for example; Paloniitty, T., *Journal of Environmental Law*, vol. 28(1), 2016, pp. 151–158; Michanek, *JP Infonet*, 23

clarified the legal situation, that management plan objectives are not merely planning objectives, they have legally binding effect.⁵¹⁰ The Court states that the obligations set out in Article 4(1)(a)(i) to (iii) – the obligation to prevent deterioration and to enhance the status of water bodies to attain “good” status – shall be considered in a national permit assessment of an individual project. Hence, Member States are required to refuse authorisation for an individual project where it may cause a deterioration of the water status or where it may endanger the chances of attaining a good ecological status (or potential).⁵¹¹ Michanek suggests that the outcome of the *Weser Case* implies that Member States are obliged to not only ensure that the legal obligations – to prevent deterioration and to enhance the status of water bodies to attain “good” status – are applied in a national permit assessment of an individual project, but should also be coupled with supervision of activities, planning procedures and consultation, so that the relevant authorities are actively enforcing the specific Water Framework Directive provisions.⁵¹²

The outcome of the *Weser Case* may have a large impact on hydropower installations in Sweden. Even though it is not likely that we will see many new installations; many of the existing ones are in need of modernizing, which may require that such installations have to be legally reassessed. In such reassessment the activity needs to fulfil relevant EU law provisions, including Article 4(1)(a)(i) to (iii) of the Water Framework Directive.

The question of what is considered to be a *deterioration* was also discussed in the *Weser Case*, where the Court stated that the concept must be interpreted as meaning

“[...]that there is deterioration as soon as the status of at least one of the quality elements, within the meaning of Annex V to the directive, falls by one class, even if that fall does not result in a fall in classification of the body of surface water as a whole.”⁵¹³

This is a fairly clear explanation on what constitutes a deterioration. Michanek suggests in his analysis of the case that the specific provision regarding the non-deterioration principle ought to have *direct effect* in the Member States of the EU.⁵¹⁴ However, as is evident in a case from the Land

November 2015; and Josefsson, H., *Journal for European Environmental and Planning Law* 13, 2016, pp. 167–189.

⁵¹⁰ See Case C-461/13, *the Weser Case*, para. 43.

⁵¹¹ See Case C-461/13, *the Weser Case*, paras. 50–51.

⁵¹² This may also be relevant when reassessing hydropower activities; see Michanek, *JP Infonet*, 23 November 2015, p. 6.

⁵¹³ See Case C-461/13, *the Weser Case*, para. 69.

⁵¹⁴ However, not regarding the possibility to derogate, which is addressed to the Member State and not the potential developers. See Michanek, *JP Infonet*, 23 November 2015, p. 5.

and Environmental Court of Appeal, the outcome of the *Weser Case* has given rise to a *conforming interpretation*.⁵¹⁵

In sum, the Water Framework Directive is relevant to hydropower activities in the EU. It is now since the *Weser Case* harder to grant a permit to a new hydropower installation as a deterioration of the water status presumably can occur rather often, if not permissible due to the derogation rules in Article 4(7), which will be discussed in Chapter 7 of this dissertation.

3.4.7 Concluding remarks

There is no formal conflict between the renewable energy legislation and the legislation protecting biodiversity in the EU context. It is stated in the Renewable Energy Directive that it shall be coherent with the EU environmental legislation. This implies that renewable energy installations need to fulfil the legal requirements that stem from such legislation, including the nature protection directives that were introduced in this chapter. Focus has been on the provisions that are relevant to discuss in this context; those provisions which are likely to come in conflict with renewable energy activities. This chapter provided a basis for the analysis of how the relationship between renewable energy and biodiversity is assessed in Sweden. This will be explored in Part II of this dissertation with regard to wind power and hydropower installations and finally the possibility for renewable energy activities to be permissible based on the derogation rules are discussed in chapter 7.

⁵¹⁵ See Judgment by the Land and Environmental Court of Appeal of 15 September 2016 in case M 6574-15.

Part II: The legal relationship between biodiversity and renewable energy

4. Introduction to the Swedish Legal Framework for Renewable Energy Activities

4.1 Introduction

Sweden has a large share of renewable energy and has already reached its renewable energy target of 50%.⁵¹⁶ Hydropower is the largest source of electricity deriving from renewable sources, and wind power has a small but steadily growing share. Therefore, these activities will provide the main examples, in this part of the dissertation. These renewable energy activities serve as good examples to identify when renewable energy activities may come in conflict with biodiversity protection; for example, wind power activities may come in conflict with species and habitats protection outlined by the Habitats and Birds Directives, and hydro power activities may be considered in conflict with the requirements that stem from the Water Framework Directive (in addition to the Habitats and Birds Directives). The overarching question for this part of the dissertation is whether renewable energy activities promoted by the Renewable Energy Directive do in fact fulfil the legal requirement established under the nature protection directives.

In this chapter the relevant Swedish legislation applicable to renewable energy activities are briefly presented. The relevant provisions in the Swedish Environmental Code are mentioned first and then followed by a number of legislative acts that are applicable in parallel to the Environmental Code. The aim of this chapter is to facilitate the understanding of the subsequent chapters, primarily for readers not familiar with Swedish environmental law.

⁵¹⁶ The target set out in the Renewable energy directive is 49 % but the Swedish government decided in 2009 to increase its target to 50 %, see prop. 2008/08:163. Sweden had a 52 % share of renewable energy in 2013, see: Swedish Energy Agency, ET2015:08, p. 80.

4.2 The Swedish Environmental Code

4.2.1 The objective of the Environmental Code and relevant environmental objectives established by the Swedish Parliament

The Swedish Environmental Code is the main environmental legislation in Sweden. It was adopted in 1998 (and entered into force 1 January 1999) in an attempt to collect the relevant environmental legislation into one legislative act, with the aim of having a more coherent legislation in the field of the environmental law.⁵¹⁷

The purpose of the Environmental Code is stipulated in Chapter 1, section 1, stating that:

“The purpose of this Code is to promote sustainable development which will assure a healthy and sound environment for present and future generations. Such development will be based on recognition of the fact that nature is worthy of protection and that our right to modify and exploit nature carries with it a responsibility for wise management of natural resources.”

This purpose – to promote sustainable development – is clearly focused on the environmental aspect of the concept; that human interventions need to be bound by a responsibility to wisely manage natural resources. Sustainable development can be understood by different sub-goals, which are important objectives to fulfil to achieve the ultimate goal of sustainable development. However, the individual sub-goals can also be seen in conflict. As discussed in this dissertation, renewable energy installations and the protection of biodiversity may be considered in conflict.⁵¹⁸

According to the Governmental Bill performed for the Environmental Code, environmental objectives established by the Parliament (in a non-legal document) should be seen as a further description of what is needed to achieve sustainable development in accordance with Chapter 1, section 1 of the Environmental Code.⁵¹⁹ The environmental objectives shall therefore be considered in the application of the Environmental Code in the interpretation of the concept of sustainable development and the specified sub-goals.

⁵¹⁷ Another reason was to modernize the environmental legislation to better reflect the EU environmental obligations etc. However, the outcome – the Environmental Code – has been criticised for not being modern enough or having integrated relevant legislation to the extent needed, see Michanek, G. and Zetterberg, C., *Den Svenska miljörätten*, 2012, p. 89.

⁵¹⁸ Renewable energy is not specifically mentioned in the sub-goals but it could fall into *conservation of energy* which is mentioned in Chapter 1 Section 1(5). Protection of biodiversity is mentioned in sub-goal mentioned in Section 1(3).

⁵¹⁹ See prop. 1997/98:45, part II, p. 8; Prop. 1997/98:45, part I, p. 166 et seq; and Michanek, G. and Zetterberg, C., *Den Svenska miljörätten*, 2012, p. 94.

The Swedish Parliament has established 16 environmental objectives.⁵²⁰ The aim of these goals, together with the “generational goal” is, by 2020, to have established a society in which the major environmental problems facing the country are solved.⁵²¹ Meeting the environmental objectives is a difficult task and requires a massive effort by everyone, including public agencies, companies and organisations.⁵²² While some objectives are likely to be fulfilled by 2020, the majority of them are not.⁵²³ For the purpose of this dissertation there are a number of environmental objectives that are relevant, primarily: *Reduced Climate Impact*; *Flourishing Lakes and Streams*; and *A Rich Diversity of Plant and Animal Life*.

First, *Reduced Climate Impact* is an environmental objective that is highly relevant for renewable energy installations as the promotion of renewable energy is one of the policies adopted to combat climate change. The objective *Reduced Climate Impact* refers to the UN Framework Convention on Climate Change and suggests that concentrations of GHG in the atmosphere must be stabilised at a level that prevents dangerous interference with the climate system. However, it is stated that:

“This goal must be achieved in such a way and at such a pace that biological diversity is preserved, food production is assured and other goals of sustainable development are not jeopardised”.⁵²⁴

This environmental objective has been discussed by the Swedish Courts when assessing renewable energy activities with potential negative impact on biodiversity.⁵²⁵

The environmental objective *Flourishing Lakes and Streams* is defined as:

“Lakes and watercourses must be ecologically sustainable and their variety of habitats must be preserved. Natural productive capacity, biological diversity, cultural heritage assets and the ecological and water-conserving function of the landscape must be preserved, at the same time as recreational assets are safeguarded”.⁵²⁶

⁵²⁰ See <http://www.miljomal.se/Environmental-Objectives-Portal/>

⁵²¹ See Swedish Nature Protection Agency, *Sweden's Environmental Objectives – An introduction*, 2016, p. 1.

⁵²² *Ibid.*, p. 1.

⁵²³ See Swedish Environmental Protection Agency, Rapport 6707, 2016.

⁵²⁴ See <http://www.miljomal.se/sv/Environmental-Objectives-Portal/Undre-meny/About-the-Environmental-Objectives/1-Reduced-Climate-Impact/>

⁵²⁵ For a more detailed description of the goal, see the Swedish Environmental Protection Agency, *Sweden's Environmental Objectives – An introduction*, 2016, p. 9. See also MÖD 2009:48 where the goal was discussed in relation to off shore wind power.

⁵²⁶ For a more detailed description of the goal, see the Swedish Nature Protection Agency, *Sweden's Environmental Objectives – An introduction*, 2016, p.16.

This environmental objective is primarily relevant for hydro power activities that may hinder the ecological sustainability in the water ways due to its impact.

The environmental objective *A Rich Diversity of Plant and Animal Life* is defined as:

“Biological diversity must be preserved and used sustainably for the benefit of present and future generations. Species habitats and ecosystems and their functions and processes must be safeguarded. Species must be able to survive in long-term viable populations with sufficient genetic variation. Finally, people must have access to a good natural and cultural environment rich in biological diversity, as a basis for health, quality of life and well-being.”

This environmental objective becomes relevant when renewable energy activities may impact, for example, important habitats for endangered species, mating or nesting grounds, or migration routes. This environmental objective is supported by the previous goal, *Reduced Climate Impact*, which stipulates that the production of renewable energy (as a climate policy) shall not endanger the protection of biodiversity.⁵²⁷

While these environmental objectives are not legally binding, they are still important both politically and legally in Sweden.

4.2.2 Legal assessment and control of renewable energy activities

Renewable energy activities may require a permit under the Environmental Code. Wind power is legally considered an environmentally hazardous activity and, depending on its size, it may require a permit in accordance with Chapter 9, section 6 of the Environmental Code.⁵²⁸ Wind power installations that do not require a permit are, if not very small, entitled to notify the supervising authority prior to its installation.⁵²⁹ Hydropower is considered a water activity and requires a permit in accordance with Chapter 11, section 9.⁵³⁰ Transmission lines may require a permit under the Environmental Code; for example, if they are located in water they are considered a water activity.⁵³¹

A permit is an instrument that can control where an activity is to be located, what form the activity will take, and it can hinder certain activities that

⁵²⁷ Ibid., p. 24.

⁵²⁸ See Chapter 21, section 10-11 of the Miljöprövningsförordningen (2013:251). For a description on how permit process works for environmental hazardous activities, see Michanek, G. and Zetterberg, C., *Den Svenska miljörätten*, 2012, p. 256 et seq.

⁵²⁹ See Chapter 21, section 12 of the Miljöprövningsförordningen (2013:251).

⁵³⁰ Wind power may also be considered a water activity if located in water, for example off shore installations. For a description of the permit assessment for water activities, see Michanek, G. and Zetterberg, C., *Den Svenska miljörätten*, 2012, pp. 293 et seq.

⁵³¹ For potential permits needed under the Environmental Code, see Section 8.4.3.

are not considered permissible under the Environmental Code. In the permit process the material law provided in other chapters of the Code shall be addressed, for example; the general rules of considerations in Chapter 2; the resource management provisions in Chapter 3 and 4,⁵³² and in some cases the rules on environmental quality standards (EQS) in Chapter 5.⁵³³

Another important aspect of the permit procedure is that the developer needs to compose an environmental impact assessment (EIA) that describes the potential environmental impact of the activity. The permit authority is responsible to ensure that the EIA is undertaken correctly and includes the material needed to undertake an assessment of the activity.⁵³⁴

In addition to the permitting system, there is another control function in the Environmental Code: a supervising control system.⁵³⁵ This implies that the supervising authority can control that the general rules of considerations are adhered to by those conducting activities where permits are not required, and to ensure that those conducting activities with a permit adhere to permit conditions. The supervising authority can also order an operator to apply for permit “where the activity involves the risk of significant pollution or other significant detriment to human health or the environment.”⁵³⁶

If a permit or notification is not needed under the Environmental Code, a consultation may still be required if the activity may “substantially change the natural environment.” For example, consultation may be appropriate for the construction of transmission lines, if those lines do not require a permit under the Environmental Code.⁵³⁷

The municipality can request that Government assess the permissibility of a certain renewable energy activities; for example, wind power installation that requires a permit under the Environmental Code⁵³⁸ or hydropower installations with installed capacity of more than 20 Mw.⁵³⁹

Another specific rule that should be mentioned is that the municipality has a veto right when it comes to wind power development, which implies that if the municipality does not state a positive opinion of the wind power development then the operation cannot acquire a permit.⁵⁴⁰

⁵³² The specific provisions for the permit procedure and the material law applicable in the processes are further discussed in chapters 5 and 6.

⁵³³ Chapter 5 will briefly be discussed in the context of the ecological quality requirements under the Water Framework Directive, see Section 6.5.2.

⁵³⁴ See Chapter 6, section 3 and 7 of the Environmental Code. The EIA requirements are discussed in Chapter 9, but primarily based in the provisions stipulated in the EIA Directive. See also sections 5.3.2 and 6.5.3.

⁵³⁵ See Chapter 26 of the Environmental Code. See Nilsson, A.K., 2011, pp. 146 et seq.

⁵³⁶ See Chapter 26, section 9 and Chapter 9, section 6, para. 2 of the Environmental Code.

⁵³⁷ See Chapter 12, section 6 of the Environmental Code. As mentioned in Section 8.4.2.

⁵³⁸ See Chapter 17, section 4(a)(7) of the Environmental Code. This provision is discussed in Section 5.4.2.

⁵³⁹ See Chapter 17, section 4(a)(12) of the Environmental Code.

⁵⁴⁰ See Chapter 16, section 4 of the Environmental Code, as discussed in Section 2.5.6.

4.2.3 The material environmental law requirements

Renewable energy activities – like all other activities and measures – have to be in line with the general rules of consideration presented in Chapter 2 of the Environmental Code.⁵⁴¹ The operator is the one that has to show that these rules are fulfilled⁵⁴² and is required to acquire the necessary information needed to mitigate any environmental impacts from the activity.⁵⁴³ For example, the principles codified in this chapter are: the precautionary principle (including the requirement to use “best available technology”)⁵⁴⁴ and the product choice principle.⁵⁴⁵ There is also a provision that is related to energy, which states that the developer has to “conserve raw material and energy and reuse and recycle them where possible,” and that “preference shall be given to renewable energy sources”.⁵⁴⁶

The most discussed provision in relation to wind power installations is Section 6. It stipulates that a suitable site should be chosen that makes it possible to achieve the purpose of the activity with a minimum of damage or detriment to human health and the environment.⁵⁴⁷ This provision is often applied in conjunction with the Section 3. For example, if there is a risk of bird collision in an area important for bird protection then the location may not be seen as suitable. If the applicant has not showed that it is the most suitable location, the Court or authority assessing the activity can deny the applicant permit. The limitation to this requirement can be found in Chapter 2, section 7 which states that the application of the consideration rules still needs to be reasonable:

“The rules of consideration laid down in sections 2 to 5 and section 6 first paragraph shall be applicable where compliance cannot be deemed unreasonable. Particular importance shall be attached in this connection to the benefits of protective measures and other precautions in relation to their cost.”⁵⁴⁸

The second paragraph of Chapter 2, section 7 stipulates that if a risk exists that an environmental quality standard (EQS) is not followed, requirements shall still be demanded even if they are not considered reasonable in accordance with the first paragraph. As it is written today, this paragraph refers only to EQS with threshold values (Chapter 5, section 2, para. 1), which is

⁵⁴¹ See Michanek, G. and Zetterberg, C., *Den Svenska miljöretten*, 2012, pp. 98–135.

⁵⁴² Chapter 2, section 1 of the Environmental Code.

⁵⁴³ Chapter 2, section 2 of the Environmental Code.

⁵⁴⁴ Chapter 2, section 3 of the Environmental Code.

⁵⁴⁵ Chapter 2, section 4 of the Environmental Code.

⁵⁴⁶ Chapter 2, section 5 of the Environmental Code.

⁵⁴⁷ See English translation in DO 2000:61, section 4.

⁵⁴⁸ Mitigation measures or the requirement to choose different location or form may be stopped here if not considered reasonable, this provision is discussed in primarily chapters 5 and 6.

something that has been criticised by the Commission as it does not specifically relate to EQS with ecological quality objectives.⁵⁴⁹

At Section 9, it is stipulated that an activity can be stopped even if that activity has adhered to the previous sections of the chapter. The event required to stop an activity depends on whether “significant deterioration in the living conditions of a large number of people or substantial detriment to the environment” has occurred.⁵⁵⁰ Thus, the general rules of consideration are preventive in nature, and indicate that responsibility resides with the developer to gather the sufficient knowledge of the potential environmental impact from its activity and to prove that the activity aligns with the consideration rules. These rules are often the basis for decisions by the relevant authority or court when assessing permit decisions for activities, but they are also used when the authorities undertake supervision of activities.

The provisions on the use and management of land and water areas are also relevant for renewable energy activities.⁵⁵¹ These provisions guide the permit and planning authorities on how land and water areas should be used and provides rules on how to balance the various interests specified under the various provisions.⁵⁵² Chapter 3 provides the basic rules that specify the use of land and water areas in relation to a number of interests, whereof one is energy production. Chapter 4 provides the special rules that provide protection for specific geographical areas due to their natural or cultural value.⁵⁵³ These basic resource management provisions are applicable to new use of land or when a land use change is under way. These provisions will be discussed in more detail in Chapter 5 of this dissertation and will not be further described here.

4.2.4 Instruments to protect biodiversity

There are a number of provisions with the aim of protecting biodiversity,⁵⁵⁴ both with regards to different types of area protection and to specific rules on species protection.⁵⁵⁵ There are provisions protecting certain type of habitats; for example, shore land protection and protection of designated areas due to their importance as a habitat.⁵⁵⁶ The main provisions discussed in this disser-

⁵⁴⁹ This is discussed in Chapter 6.5.2.

⁵⁵⁰ In accordance with Chapter 2, section 10 such activities that are not considered illegal under Section 9, can still be permissible if considered to be of “overriding public interest”.

⁵⁵¹ See Chapter 3 and 4 of the Environmental Code. These provisions are further discussed in Section 5.2.

⁵⁵² See Michanek, G., and Zetterberg, C., *Den Svenska miljöretten*, 2012, pp. 136–155.

⁵⁵³ The protection under Chapter 4, section 6 is discussed in Section 6.3.2.

⁵⁵⁴ See Michanek, G., and Zetterberg, C., *Den Svenska miljöretten*, 2012, pp. 199–241.

⁵⁵⁵ Focus in this dissertation is primarily on the instruments and provisions that stems from the Birds and Habitats Directive.

⁵⁵⁶ For example: nature reserves and habitat area protection. See Chapter 7 of the Environmental Code.

tation, with regards to area protection, are the ones that stems from the EU Birds and Habitats Directives with regards to Natura 2000 sites.⁵⁵⁷

In addition to area protection there are also provisions on species protection stipulated primarily in the Regulation on Species Protection (after delegation provided in Chapter 8).⁵⁵⁸ These provisions are primarily an implementation of the provisions that stem from the Habitat Directive.⁵⁵⁹ The provisions on species protection, which are relevant for this dissertation, can primarily be found in Section 4 and 14 of the Regulation on Species Protection.⁵⁶⁰

4.3 Legislative acts applicable in parallel to the Environmental Code

4.3.1 Introduction

There are a number of legislative acts that are applicable in parallel with the Environmental Code. The ones that are further discussed in this dissertation are primarily the Electricity Act and to some extent the Plan and Building Act. I will also mention the Electricity Certificate Act, which is the legislative act that is the basis for the Swedish support system for renewable energy.

4.3.2 The Electricity Act

The Electricity Act provides the legislation applicable to the electricity system operators. It regulates the electricity operations, such as transmission lines, and to some extent the trade in electricity.⁵⁶¹ The Electricity Act is primarily discussed in Chapter 8 and 9 of this dissertation where the concession process for transmission lines (needed for new wind power development) is discussed.⁵⁶²

⁵⁵⁷ The relevant provisions are stipulated in Chapter 7, Sections 27–29(b) of the Environmental Code and also Förordning (1998:1252) om områdesskydd enligt miljöbalken m.m. (the Regulation on area protection), Sections 15–20 (a). However, when discussing these provisions, it is primarily in the EU context, see Section 3.4.4 and Section 7.2.

⁵⁵⁸ See Artskyddsförordningen (2007:845) (Regulation on Species Protection).

⁵⁵⁹ Sweden has not made a difference between birds and other species even though the provisions are not identical. With regards to the derogation rules, see discussion in Section 7.3.

⁵⁶⁰ Article 4 will be discussed in more detail in Section 5.3. The derogation rules stipulated in Section 14 will primarily be discussed in the EU context, see sections 7.2–7.4

⁵⁶¹ See Section 1 of Ellag(1997:857) (the Electricity Act).

⁵⁶² What the parallel applications entails is also discussed in Chapter 8.

4.3.3 The Plan and Building Act

The Plan and Building Act regulates the Swedish planning and building permits.⁵⁶³ The main aim of the Act is to promote long-term sustainable living environment for humans.⁵⁶⁴ The municipality has a planning monopoly in Sweden.⁵⁶⁵ When the municipality undertakes physical planning or assessing permits under the Plan and Building Act, Chapter 3 and 4 of the Environmental Code has to be observed.⁵⁶⁶ The Act has its own consideration rules and therefore does not reference the ones provided by the Environmental Code.⁵⁶⁷

There are a number of different municipal plans.⁵⁶⁸ The ones most commonly used for planning of wind power are the overview plans.⁵⁶⁹ It is also possible, though rare, that wind power development can take place in detail plans.⁵⁷⁰ There are also regional plans that may be influential on the location of renewable energy installations.⁵⁷¹ While the detail plans are legally binding, the overview and regional plans are not. The overview plans are however influential in the permit process of wind power.⁵⁷²

This dissertation primarily focuses on the permit/concession processes of wind power, hydropower and transmission lines, respectively. This implies that the Plan and Building Act will not be discussed in the body of this dissertation.⁵⁷³ However, the final chapter of this dissertation will briefly present the relevant planning instruments for renewable energy.⁵⁷⁴

⁵⁶³ For a more in depth description of the Plan and Building Act, see Michanek, G., and Zetterberg, C., *Den Svenska miljörätten*, 2012, pp. 454–474.

⁵⁶⁴ Thus, it has an anthropogenic view on the development, see Chapter 1, section 1 of the Plan and Building Act.

⁵⁶⁵ The plans are however under some governmental control which implies that under certain conditions the government can (through the County Administrative Board) intervene. See for example Chapter 11, section 10 and 11 of the Plan and Building Act.

⁵⁶⁶ See Chapter 2, section 2 of the Plan and Building Act.

⁵⁶⁷ See Chapter 2 of the Plan and Building Act.

⁵⁶⁸ See a general description on the various plans in Michanek, G., and Zetterberg, C., 2012, pp. 454–474.

⁵⁶⁹ See Chapter 3 of the Plan and Building Act.

⁵⁷⁰ See Chapter 4 of the Plan and Building Act.

⁵⁷¹ See Chapter 7 of the Plan and Building Act.

⁵⁷² As discussed in Chapter 5.

⁵⁷³ If a wind power installation does not require a permit it may need a building permit. See chapter 9 of the Plan and Building Act and Chapter 6 of plan- och byggförordningen (2011:338) (Regulation on Plan and Building).

⁵⁷⁴ See Section 10.4.2.

4.3.4 The Electricity Certificate Act

The Electricity Certificate Act regulates the Swedish certificate system for renewable energy production.⁵⁷⁵ This regulation, with the main aim of transforming the energy system into a more ecologically sustainable one, will be further explored, specifically in relation to small-scale hydropower production.⁵⁷⁶

⁵⁷⁵ See Lag (2011:1200) om elcertifikat (the Electricity Certificate Act).

⁵⁷⁶ See Section 9.5.

5. Wind Power Activities and the Protection of Biodiversity in Sweden

5.1 Introduction

Converting wind into energy is not new. Windmills have been used to grind grain and pump water for many centuries, and the harnessing of wind to generate electricity dates back to the end of the 1800s.⁵⁷⁷ While the technology is old it is in more recent decades that wind power has started to take off as a viable alternative for electricity production. Wind power development in Sweden has historically been slow, but due to ambitious wind power targets set by the Swedish government,⁵⁷⁸ together with the Electricity Certificate System,⁵⁷⁹ it has rapidly increased. Between 2010 and 2011 production increased by 74%,⁵⁸⁰ and from 2011 to 2013 wind power production increased by more than threefold.⁵⁸¹ In 2014 wind power production was 11, 2 TWh, an increase of 14 % from 2013.⁵⁸² The increased number of wind power installations in Sweden has also shown up in Swedish case law, as such installations often conflict with other interests – for example, biodiversity protection.⁵⁸³

The Swedish Land and Environmental Court of Appeal has heard a number of cases assessing the relationship between the production of electricity from wind power and other interests. The following section presents how the Swedish Land and Environmental Court of Appeal assesses the relationship between wind power and the other interests that are regulated under Chapter 3 and 4 of the Environmental Code, in addition to how the general rules on

⁵⁷⁷ Wind energy has arguably an even older history as simpler devices to harness energy from the wind can be traced back thousands of years. Around 200 BC vertical axis windmills were found at the Persian-Afghan borders and in Europe around 1300-1875 AD horizontal-axis windmills of the Netherlands and the Mediterranean followed. For a historical overview, see Kaldellis, J.K., and Zafirakis, D., *Renewable Energy*, 36(7), 2011, pp. 1887–1901.

⁵⁷⁸ The Swedish wind power target for 2020 is 30 TWh, see prop. 2008/09:163.

⁵⁷⁹ The Swedish support system for renewable energy production, see Lag (2011:1200) om elcertifikat (the Electricity Certificate Act).

⁵⁸⁰ See Swedish Energy Agency, ET 2012:34, p. 47.

⁵⁸¹ Swedish Energy Agency, ET2015:08, p. 8.

⁵⁸² The total number of wind power turbines was 2,961 by the end of 2014 with the total effect of 5097 MW; see Swedish Energy Agency, ET2015:08, p. 35.

⁵⁸³ The focus in this presentation is primarily on wind power activities that require a permit for operation. See Chapter 9, section 6 of the Environmental Code; and Chapter 21, sections 10–11 of the Miljöprövningsförordning (2013:251), wind power activities specified under Section 12 do not require a permit.

consideration come into play in the permit assessment. Thereafter provisions derived from the Habitats and Birds Directives are discussed in relationship to wind power, both with regard to the protection of habitats and strict species protection

5.2 The relevance of provisions concerning the management of land and water areas

5.2.1 Introduction

The Environmental Code provides protection for both general types of land and water areas, and specific geographic areas that are of national interest.⁵⁸⁴ The national Parliament has specified in Chapter 4 of the Environmental Code which areas of Sweden that are considered to be of national interest. Chapter 3 of the Environmental Code describes a number of interests that shall be protected *as far as possible*. It only grants higher protection if considered to be of national interest,⁵⁸⁵ and then the interest *shall be protected*.⁵⁸⁶ Energy production, the landscape picture, reindeer husbandry and nature protection are some examples of specific interests mentioned under Chapter 3 of the Environmental Code.

Geographical areas often host more than one of these types of interest. The same area can be of importance for reindeer husbandry, have important geological formations, in addition to being of interest for wind power development. Sometimes these interests can function simultaneously but in some cases they are considered to be in conflict with one another. When there are several interests in the same area, and cannot be ensured protection simultaneously, the interest that better promotes good management from the point of view of public interest shall be prioritised.⁵⁸⁷ The conflict should also be assessed in line with the main purpose of the Environmental Code: to promote sustainable development.⁵⁸⁸

If specific sites are considered to be of national interest, for example, for wind power and reindeer husbandry, a conflict may occur. According to

⁵⁸⁴ See the Environmental code, Chapter 3 regarding general provisions and Chapter 4 regarding specific geographical areas.

⁵⁸⁵ In practice the various interests are pointed out by the relevant state authority. The Swedish Energy Agency is the one that points out areas of interest for wind power. However, such an identified area of interest is not legally binding. It is the Court that assesses, in each individual case, whether the interest is of national interest. Although the identification is, of course, relevant when the Court assesses whether the area is of such interest. See Michanek, G. and Zetterberg, C., *Den Svenska miljörätten*, 2012, pp. 144–145.

⁵⁸⁶ See Chapter 3 and 4 of the Environmental Code.

⁵⁸⁷ See Chapter 3, section 1 of the Environmental Code.

⁵⁸⁸ See Chapter 1, section 1 of the Environmental Code.

Chapter 3, section 10 of the Environmental Code, the interest that in the most suitable way promotes a sustainable use of land, water and the physical environment, shall receive precedence.⁵⁸⁹

However, even where a site is considered to be of national interest, it is not totally protected. It is only *significant* damage and detriment that can be guarded against. There is, however, no clear definition of what this means. In the preparatory works, it is mentioned that protection does not cover “trivial” impact and that the measure must have a consistent negative impact, or a temporary very large impact, on the interest.⁵⁹⁰ This implies that an opposing interest to wind power may not necessarily stop the development if it is not considered to significantly impair the protected interest.

If a wind power park is to be located in an area that is specified to be of national interest in Chapter 4, then the activity can only be located in such area if not in conflict with the relevant provision in Chapter 4, section 2–8, and if the park does not give rise to *significant damage* to the protected values of the site. When assessing whether an activity is likely to cause significant damage, it is the total values (both natural and cultural) in the whole protected area that are to be considered.⁵⁹¹

If a wind power park is planned to be located in a mountain area (specified in Chapter 4, section 5), a wind power park can only be accepted if the “building or structure” is:

“[...] necessary for the purposes of reindeer husbandry, the resident population, scientific research or outdoor recreational exercise. Other measures may only be taken in these areas if they do not affect their character.”

Hence, this implies that wind power can only be acceptable in the area if necessary for the resident population in the mountain area.⁵⁹² There are, however, exceptions from the provision. Chapter 4, section 1, para. 2 states:

“The provisions of the first paragraph and sections 2 to 6 shall not be an obstacle to the development of existing urban areas or local industry or the construction of installations that are needed for the purposes of the total defence. Where special circumstances exist, these provisions shall not prevent the

⁵⁸⁹ See Chapter 3, section 10 of the Environmental Code. The types of conflict that may arise are many, for a more in depth description of the meaning of the national interest provisions and how to resolve various conflicts, see Michanek, G. and Zetterberg, C., *Den Svenska miljörätten*, 2012, p.136 et seq.

⁵⁹⁰ See prop. 1997/98:45, part II, p. 30.

⁵⁹¹ See prop. 1985/86:3, p. 172. The meaning of “significant damage” was also discussed in the *Vedabron Case* where the Government suggested that while the installation would indeed seriously affect parts of the area, the overall assessment indicated that the area as a whole would not be significantly damaged by the development, see RÅ 1993 not 550.

⁵⁹² However, the Governmental Bill to this provision suggest that hydropower installations are seen as “other measures” and therefore may be acceptable if the character of the mountain areas is not affected. See prop. 1997/98:45, p. 39.

erection of structures for the extraction of deposits of substances or materials referred to in chapter 3, section 7 second paragraph.”

Thus the possibility to derogate is quite wide as the development of urban areas or local industry can be almost anything. Pettersson suggests that the development of wind power could be considered development of local industry as it creates jobs both during the installation and operating phases.⁵⁹³ This specific case, however, has never been assessed by the court.⁵⁹⁴

Leaving aside further discussion of the provisions in Chapter 4, I turn to the relevant case law where wind power development has been discussed in relation to interests presented in Chapter 3 of the Environmental Code.

5.2.2 Wind power and the protection of landscape and recreation

Wind power development has a physical impact on the surrounding environment. The expression: “not in my back yard” (NIMBY) is often used in the wind power debate and suggests that, in general, people are very positive to wind power but they do not want to have it close to their homes.⁵⁹⁵ The concept of NIMBY will not be further discussed here but it has been suggested that it is more complicated than it sounds.⁵⁹⁶ In this section it is discussed how the Swedish Land and Environmental Court of Appeal assesses the relationship between wind power installations and its impact on the landscape picture and the interests of recreation, which are interests specified under Chapter 3 of the Environmental Code.

Case law from the Land and Environmental Court of Appeal suggests that wind power is not seldom considered to function in harmony with other interests or is considered more important in light of the meaning of sustainable development.⁵⁹⁷ One example of such reasoning can be found in the *Sotenäs Case*, where the applicant was granted a permit for a wind power park in an area that was also of interest for the landscape picture and for historical cultural reasons.⁵⁹⁸ The Court noted that the area was beautiful and therefore of

⁵⁹³ Pettersson, M., *Renewable Energy development and the Functioning of Law*, 2008, p. 44.

⁵⁹⁴ The provisions in Chapter 4 will not be further discussed here though they may hinder the development of renewable energy activities in specific areas of Sweden.

⁵⁹⁵ See, for example, Dan van der Horst, *Energy Policy* 35 (2007), p. 2705.

⁵⁹⁶ The Swedish Environmental Protection Agency (SEPA) has composed a few reports looking beyond NIMBY and trying to explain why the local perception of wind power is much more complicated than NIMBY suggests. See: Swedish Environmental Protection Agency, *Vindkraftens påverkan på människors intressen*, Report 6497, May 2012, p. 12. For an economic perspective see, for example: Ek, K. & Matti, S., *Journal of Environmental Planning and Management*, 2015, 58(8), pp. 1327–1345.

⁵⁹⁷ However, Pettersson who has discussed case law prior to 2008, suggests that the landscape picture was given a rather strong protection in relation to the wind power interest and that it was only rarely that the wind power interest outweighed the interest of protecting the landscape, see: Pettersson, M., *Renewable Energy development and the Functioning of Law*, 2008, p. 49.

⁵⁹⁸ See MÖD 2005:66.

interest due to the landscape picture and that it was of interest from a cultural historical point of view. But, since the interests were not of *national interest*, and even though the Court suggested that the wind power installation was going to *significantly affect* the area, the protection of the aesthetic and cultural values were not strong enough to hinder the development of the wind power park.⁵⁹⁹ The political interests in increasing the number of wind power installations in Sweden, as a means of promoting sustainable development, outweighed the opposing interests.

The effect of wind power on untouched areas of conservation value has been discussed in a few cases.⁶⁰⁰ In MÖD 2009:32 the area was not formally pointed out to be of national interest but hosted high nature values, both ornithological and forest values. The Court suggested that the wind power interest should take precedence over the other interests as it best corresponded with the interests of good management from the point of view of public interest and sustainable development. The nature values were considered to be maintained even after the installation of the wind power park.⁶⁰¹

Where a particular landscape has already been exploited the Court has in some cases suggested that it is acceptable for further development.⁶⁰² In the *Rönne Å Case* a wind power park was planned in close vicinity to an area that was pointed out to be of national interest for recreation and nature conservation. However, the area was already exploited as it was cross cut by a motor way and a transmission line. The Court considered that the wind power installation would affect the landscape picture, but since it was already affected it was not a hindrance. The interest for both recreation and nature conservation were not considered a hindrance and the installation (that did not require a permit) could be erected.⁶⁰³

In more recent case law, the Court suggested that the landscape picture and the interest of recreation may in some cases be significantly affected by wind power development and therefore not be accepted. In the *Svartnäs Case*, the Court suggested that the applicant's first claim, to install a maxi-

⁵⁹⁹ Thus the protection of the national interest is not that strong.

⁶⁰⁰ See, for example, Judgment by the Land and Environmental Court of Appeal of 29 July 2008 in case M 8489-07. Here the area was not pointed out to be of national interest but was an untouched area. The landscape was considered to change but the wind power installation was granted a permit.

⁶⁰¹ See MÖD 2009:32.

⁶⁰² See, for example: MÖD 2007:47 where a wind power park was to be located on the Swedish island Öland, which is protected under Chapter 4, section 2 of the Environmental Code. The specific location was also pointed out to be of interest under Chapter 3, section 6 of the Environmental Code, because of the cultural environment the area hosted. The Court noted that the area was already affected by transmission lines, modern economic buildings, dams and wind power etc., and that the national interest did not hinder the wind power installation or the value of recreation and tourism in the area. The Court concluded that since the landscape picture was already affected, the wind power installation could be approved.

⁶⁰³ See Judgment by the Land and Environmental Court of Appeal of 3 June 2008 in case M 244-07.

imum of 83 turbines in five different areas, would result in a significant negative impact on the landscape picture in the Svartnäs Bruk area, and therefore could not be acceptable. The spread of the turbines was problematic as one village, Ryssjön, would be nearly surrounded by them. Instead the Court accepted the second claim of 53 turbines to be located in two areas.⁶⁰⁴ This case, however, is not suggesting that the landscape picture is now considered to be a more important interest than the wind power interest. Instead, the case suggests that wind power does not always outweigh the interest of a preserved landscape picture and that the location of an installation, including the individual turbines, need to be planned in a way that has as little an impact as possible on other interests.

In another case – *the Lilla Edet Case* – the interest of recreation was considered stronger than the interest of producing wind power. The specific area had in an overview plan been pointed out to be of interest for recreation but also been pointed out by the Swedish Energy Agency to be of national interest for wind power production (which was not mentioned in the overview plan).⁶⁰⁵ The important factors considered in this case were first, that the proposed location was of interest due to the need for recreation close to the city. The relatively unexploited nature area under consideration was in close proximity to Lilla Edet and Gothenburg. The area also hosted a regional hiking route – Bohusleden – which was located only 400 meters from the proposed location. Based on these circumstances the Land and Environmental Court decided that the interest of producing wind power was not stronger than the interest of recreation, in this specific area.⁶⁰⁶ The Land and Environmental Court of Appeal also pointed out that the overview plan was not legally binding but that nevertheless it provided information about the planned land use from the municipality and the County Administrative Board (which can influence the plan through its inspection opinion). The County Administrative Board had not commented on the fact that the plan did not include the national interest for wind power but instead accentuated the public interest of recreation in the area. The Court therefore suggested that the interest stated in the overview plan should be seen as the main interest that should be balanced against the interest of producing wind power. Thus, the Land and Environmental Court of Appeal did not come to a differ-

⁶⁰⁴ See Judgment by the Land and Environmental Court of Appeal of 24 of January 2014 in case M 9650-12, pp. 41–42.

⁶⁰⁵ The interest for recreation, however, was not considered a national interest. This case suggests that the averting effect of the provision in Chapter 3, section 6, is rather strong as it in this case stopped a wind power activity. However, the provision specifies that green spaces close to cities require special respect. The interest of recreation in an area that is not close to a city may therefore not acquire the same protection.

⁶⁰⁶ See Judgment of the Land and Environmental Court in Vänersborg of 29 January 2015 in case P 2142-14.

ent conclusion from the lower court, and the wind power installation was denied a permit.⁶⁰⁷

5.2.3 Wind power and the protection of biodiversity

The Environmental Court of Appeal assessed a wind power park that was located in area that was both of national interest for reindeer husbandry and wind power.⁶⁰⁸ The Court considered that the interests were not in conflict but that the wind power park was likely to give rise to significant impact on biodiversity. The proposed location was a forest area which in some parts was over 400 years old, but had not yet been pointed out as a Natura 2000 site or protected as a nature reserve. Instead, the forest was protected under a voluntary scheme, as an “eco park”, by the owner.⁶⁰⁹ The County Administrative Board stated that if it had known about the valuable nature in these areas when they performed the inventory for the Natura 2000 sites, it should have been protected.⁶¹⁰ The County Administrative Board suggested that the area was of key importance for many threatened flora and fauna and that the habitat was of crucial importance for the protection of biodiversity.

The Court expressed the view that even though renewable energy production is an important step towards sustainable development, it is not to be promoted at any cost, as the Swedish environmental objective *Reduced Climate Impact* implies.⁶¹¹ In this specific case, the Court suggested that “a real” loss of the habitat was not solely of such importance that it would affect the permissibility of the wind power plant, but that the fragmentation that the roads and electricity transmission lines that it gave rise to could.⁶¹² The Court concluded that the wind power development was permissible in three of the four areas. The fourth, and the most controversial one, was not permitted due to its large impact on the protected site, which was an important *core-site*.⁶¹³ The Court decision had a dissenting opinion which did not accept the application due to its large impact on the site, suggesting that two of the proposed four areas were of such importance that the applicant could not get permission for half of the turbines it applied for.⁶¹⁴

Wind power has mainly been produced on land, but in order to rapidly increase the share of renewable energy, large wind power plants offshore are

⁶⁰⁷ See MÖD 2015:15, p. 3.

⁶⁰⁸ See Judgment by Land and Environmental Court of Appeal of 19 November 2008 in case M 2210-08.

⁶⁰⁹ *Ibid.*, p. 11

⁶¹⁰ *Ibid.*, p. 4

⁶¹¹ See the Courts reasoning, *Ibid.*, p. 11.

⁶¹² See discussion of the case with regards to assessing potential impact from associated transmission lines in Section 9.3.5.

⁶¹³ See Judgment by Land and Environmental Court of Appeal of 19 November 2008 in case M 2210-08, p. 12.

⁶¹⁴ *Ibid.*, p. 14. This wind power park was never realised.

presented as a part of the future of wind power. In a case from the Land and Environmental Court of Appeal, the conflict between offshore wind power and biodiversity was discussed.⁶¹⁵ In this case, the applicant had not shown that the proposed location for a wind power installation was the place where the intended purpose could be reached with the least impact on the environment and on human health.⁶¹⁶ The application was therefore denied. The location under assessment was also an important spawning place for cod. The court therefore considered the location to be especially sensitive from an ecological point of view.⁶¹⁷ Such an area needs to be protected as far as possible against measures that can hurt the environment.⁶¹⁸ In this case, it was of significance that the whole cod population in Europe was at the time threatened and that this specific area (Kattegatt) was an important place to protect for the recovery of the species. The Court argued that if the proposed wind power production were to affect the spawning and the survival of the cod population, it could lead to devastating consequences for the entire cod population. Because of this risk, the court argued that it was not acceptable to limit the considered areas for location to within the same municipality; the applicant had therefore not fulfilled the obligation to find the best location from an environmental point of view.⁶¹⁹ The court also added an interesting statement, suggesting that when choosing a suitable location, it was more important to prevent risks of an impact on the spawning places for cod (in relation to promoting the production of renewable energy) than avoiding a certain impact on the landscape picture.⁶²⁰ This case suggests that spawning places for threatened species should be protected and if there is a chance that such areas are affected by an activity, then it should not be allowed in that area. The court's argument is well grounded in the precautionary principle. However, if scientific studies were to show that offshore wind farms would not hurt the fish population, or that certain mitigation measures would limit its impact, the court might have reached a different conclusion. The science is not certain about the effect on aquatic life from off shore wind farms, and the court therefore had to act with precaution.⁶²¹ Another important statement

⁶¹⁵ See MÖD 2009:48.

⁶¹⁶ See Chapter 2, section 6, of the Environmental Code. Note that the English version on the Swedish Government's homepage is an old version and the same provision is stated in Chapter 2, section 4. See *The Swedish Environmental Code*, DO 2000:61.

⁶¹⁷ See Chapter 3, section 3 of the Environmental Code.

⁶¹⁸ See MÖD 2009:48, p. 11.

⁶¹⁹ In another case from the Land and Environmental Court of Appeal, where the specific area was not protected by Chapter 3, 4 or 7 of the Environmental Code, but nevertheless was an untouched and beautiful area, the location obligation was not as strictly enforced. In this case it was enough to limit the location options to inside the municipality. See Judgment of the Land and Environmental Court of Appeal of 16 June 2009 in case M 7051-07, p. 9.

⁶²⁰ MÖD 2009:48, p. 13. Compare MÖD 2005:66.

⁶²¹ See, for example: Inger, R., et al., *Journal of Applied Ecology*, 2009, 46, 1145–1153; and Bertzky, M. et al., *Impacts of climate change and selected renewable energy infrastructures on EU biodiversity and the Natura 2000 network*, 2010, pp. 18–22.

in this case is that the Court emphasised the meaning of the environmental objective, established by the Swedish Parliament, *Reduced Climate Impact*:

“The promotion of renewable energy production aims towards the objective of sustainable development, presented in Chapter 1, section 1 of the Environmental Code. Renewable energy is also important due to the need for Sweden to meet the requirements of the EU's climate change commitments and the planning target for wind energy adopted by the Swedish Parliament. According to the environmental quality objectives adopted by the Parliament the achievement of the environmental objective *Reduced Climate Impact* should be achieved in such a way and at such a pace that biological diversity is preserved. This means that renewable energy production needs to be adapted so that the ecosystems are preserved long-term (cf. the environmental objective "A balanced marine and flourishing coastal areas and archipelagos").”⁶²²

This statement of the court shows that it was aware that the energy system needs to be developed within the boundaries of the ecosystem's capacity.

However, in the *Falkenberg Case*, the same developer was recently granted a permit for a wind power park in the Kattegatt area.⁶²³ In this case, the permit was combined with permit conditions aimed to mitigate the effect on the cod and the porpoise populations, in order not to affect the protected species in a significant way.⁶²⁴

5.2.4 Conflicts of national interests

If more than one interest is considered to be of national interest in an area, guidance on how such conflict is to be resolved can be found in Chapter 3, section 10 of the Environmental Code. In the *Glötesvålen Case*, wind power and reindeer husbandry had been pointed out to be of national interest for energy production and reindeer husbandry, respectively.⁶²⁵ The Court assessed that the wind power plant would only have limited impact on reindeer husbandry and that the national interest of wind power production better promoted good management from the public interest point of view. Especially with regard to the political wind power goal, the national interest of producing wind power was considered to be stronger in accordance with Chapter 3, section 10 of the Environmental Code. The other interests were considered to be ensured in parallel with wind power development, with only a

⁶²² My translation, compare MÖD 2009:48.

⁶²³ See Judgment by the Land and Environmental Court of Appeal of 8 December 2015 in Case M 6960-14.

⁶²⁴ For a more detailed description of the case, see Section 5.3.5

⁶²⁵ The areas were also of interest for the landscape picture and hosted important geological formations, though those interests were not considered to be of national interest or ensured any other formal protection.

limited negative impact.⁶²⁶ In this case, the national energy policy of increasing renewable energy and the established goal of wind power production was argued to be in line with the goal of sustainable development and therefore of greater importance than reindeer husbandry. However, it has become more common that wind power permits are combined with certain permit conditions with the aim of limiting the impact on the protected interest. With regard to reindeer husbandry, some cases of wind power installations are permitted with a few conditions providing mitigating requirements, i.e. regarding distance from reindeer areas (5 km).⁶²⁷

5.2.5 Discussion

The rules on management of land and water areas in Chapter 3 are often discussed in Swedish case law with regard to wind power and its proposed location. No general conclusions can be drawn from the available case law as each and every case is assessed separately under its own merits. However, this chapter shows that these rules do not give rise to a very strong guidance on how the various interests are to be balanced. In some cases, wind power is considered more important, or at least not contradicting other interests in the area, for example in relation to the landscape picture or reindeer husbandry. However, as more recent case law indicates, wind power is not to be seen, in general, to be more important than such interests.⁶²⁸

5.3 Wind power and species protection

5.3.1 Introduction

Both the Habitats and Birds Directive provides rules on strict species protection. These rules have been implemented in Swedish law, primarily Chapter 8 of the Environmental Code and the Regulation on Species Protection. The following section will not analyse in detail the Swedish legislation on species protection, but rather focus on Swedish case law with regard to strict species protection in general and in relation to the requirement in the EIA and the general rules of consideration in Chapter 2 of the Environmental Code. Relevant EU case law with regard to species protection is also analysed and discussed.

⁶²⁶ See MÖD 2010:38.

⁶²⁷ See Judgment by the Land and Environmental Court of Appeal of 23 November 2011 in case M 847-11; case M 825-11; and M 824-11.

⁶²⁸ See Judgment by the Land and Environmental Court of Appeal of 24 of January 2014 in case M 9650-12; and MÖD 2015:15.

5.3.2 EIA Requirements, the Location Principle and the Regulation on Species Protection

The Swedish Regulation on Species Protection may hinder the development of wind power due to its potential impact on protected species. In the permit assessment of wind power activities, the Regulation on Species Protection becomes relevant first when assessing whether the activity fulfils the general rules of consideration in Chapter 2 of the Environmental Code. This relationship was first established in MÖD 2013:13 where the Court stated that the Regulation on Species Protection was to be seen as a specification of what could follow from the general rules of consideration, when it comes to species protection. One part of the legal examination is to then apply relevant species protection rules from the Regulation and assess how the protected species are affected by the planned activity, and to prescribe permit conditions regarding precautionary and protective measures to avoid damage.⁶²⁹

The Swedish Land and Environmental Court of Appeal has discussed the environmental impact assessment (EIA) requirements with regard to species protection. There are a number of cases that have pointed out that when there is a potential conflict with species protection, the investigations undertaken and the material presented in the EIA, must provide sufficient information to enable an assessment of the activity's impact in accordance with the Regulation on Species Protection.⁶³⁰ This was suggested in the *Gullberget Case*,⁶³¹ where the Land and Environmental Court of Appeal considered the provided information to be insufficient with regard to both the assessment of alternative locations and the activity's potential impact on identified bird species. The provided information was not sufficient to ensure that the rules in the Regulation on Species Protection were fulfilled. Based on these circumstances, the Court concluded that the EIA had flaws with regard to the location investigation and that it was not unlikely that there was a place where the activity could be undertaken with less damage or detriment to human health and the environment.⁶³²

In MÖD 2013:13,⁶³³ the Court also stated that in cases where there was a risk of protected species being affected by the activity, it needed to be investigated as to whether there was a “notable risk” that the activity would hurt

⁶²⁹ See MÖD 2013:13, p. 4. This reasoning has later been mentioned in MÖD 2014:47, p. 4 and MÖD 2014:48, p. 5.

⁶³⁰ In addition to the cases presented below, see also the *Lönnhult Case*, where the investigation was considered too general and did not provide enough knowledge to assess whether the criteria in Chapter 2, section 6, of the Environmental Code were fulfilled, see Judgment of the Land and Environmental Court of Appeal of 16 April 2013 in case M 7168-13, pp. 4–5.

⁶³¹ Judgment by the Land and Environmental Court of Appeal of 29 May 2012 in case M 7639-11

⁶³² *Ibid.*, pp. 10–13.

⁶³³ MÖD 2013:13

the species in a way not acceptable by the Regulation on Species Protection.⁶³⁴ If there was a notable risk, it needed to be established what type of preventive measures needed to be undertaken to avoid potential damage. To be able to do such a valuation, it was emphasised that the applicant needed to provide sufficient material to enable an assessment of the risk. In this case the investigation undertaken was considered sufficient as it was acknowledging the potential risk the activity caused for bats and birds. Though the investigation showed that the environment was not suitable for bats (in general) and that it was not likely that the golden eagle, or its habitat, would be affected, as the closest nesting place was more than 3 km from the site. The Court considered, against this background, that the investigation was sufficient to assess whether it was a notable risk that the wind power park would affect the protected species and came to the conclusion that the risk was not considered *notable* in this case.⁶³⁵

In another case – *the Mästermyr Case* – an application for wind power was denied owing to the importance of the location for bird migration, as it constituted a resting place for birds, for example, the golden eagle. The Land and Environmental Court of Appeal therefore did not grant permission due to its impact on the protected species and considered the location not to be suitable in accordance with Chapter 2 section 6 of the Environmental Code.⁶³⁶ A similar reasoning, though a more nuanced assessment, was undertaken in the *Sällstorp Case* where the Court pointed out that when assessing the location it was not only important that buffer zones were provided for, it also needed to be a *comprehensive* assessment regarding the impact of the wind power plant on the area as a bird habitat. In this case the proposed activity would fragment the area in a way that would divert the birds from their nests and feeding areas and the wind power development was therefore not permitted.⁶³⁷ Thus it is not only important to assess how close any wind pow-

⁶³⁴ See Artskyddsförordningen (2007:845), (Regulation on Species Protection).

⁶³⁵ See MÖD 2013:13, p.4. The judgment was nevertheless questioned. The opposing parties did not consider the investigation to be satisfactory and argued that a better investigation was needed. The Swedish Environmental Protection Agency, however, was positive in respect of the wind power park.

⁶³⁶ See Judgment by the Land and Environmental Court of Appeal of 4 July 2012 in case M 8344-11, pp. 6–8.

⁶³⁷ See Judgment by the Land and Environmental Court of Appeal of 23 August 2013 in case M 10072-12, p. 7. There are a number of cases where a permit has not been granted due to unsuitable location. In one case, the wind power park operator was denied a permit due to the location not being suitable from the bird protection point of view; see Judgment by the Land and Environmental Court of Appeal of 3 April 2014 in case M 2504-13. In another case the location was an important bird location where the golden eagle, among other predator birds, were spotted. The Court referred to The Swedish Nature Protection Agency's report on the effect of wind power on birds and bats (rapport 6467) where it is stated that the easiest way to minimize the effects is to avoid wind power close to bird nests or locations where birds are regularly seen. Based on this reason and what has transpired about the locations importance for birds, especially the golden eagle, the Court suggested that the developer had not shown

er activity is to nesting, migrating or breeding sites, but also to assess whether the location of individual turbines might give rise to fragmentation of the area, which ultimately disrupts protected species.

In sum, the decisions by the Land and Environmental Court of Appeal suggest that the EIA needs to be of a high standard, including a sufficient material basis with thorough investigations, to assess whether the activity fulfils the relevant provisions in the Regulation on Species Protection.

If the developer does not show that there is no notable risk that the wind power activity will negatively affect a protected bird species, the application is denied. When conflicts occur with species protection, the application is often denied due to the provision in Chapter 2, section 6; as it is not shown that proposed location is the one that can reach the intended purpose with least impact on the environment. The legal construction implies that wind power production, like other activities considered harmful, should take place in areas where the impacts on opposing environmental interests are minimised (without unreasonable costs).⁶³⁸

5.3.3 The concept “deliberate” in Swedish case law

5.3.3.1 Introduction

There are a few interesting cases of the Land and Environmental Court of Appeal regarding species protection and wind power where the meaning of “deliberate” has been discussed.⁶³⁹ The Land and Environmental Court of Appeal discussed the meaning of deliberate with regard to wind power installations in two of its judgments from 2014.⁶⁴⁰ In both decisions, which were delivered the same day, the Court suggested, simply put, that wind power developers were not considered to have the intent to kill birds with the wind power activity and thus wind power activities were not deliberate acts. This outcome has been interpreted to mean that wind power activities (in general) are not considered to be *deliberate* acts in accordance with the Regulation on Species Protection.⁶⁴¹ This interpretation, however, has been criticised.⁶⁴²

that the location was the most suitable; see Judgment of the Land and Environmental Court of Appeal of 3 April, 2014 in case M 2504-13, p. 10.

⁶³⁸ See Chapter 2, sections 6 and 7 of the Environmental Code. See Section 4.2.3 for a description of the general rules of consideration.

⁶³⁹ The cases have been giving rise to an interesting discussion in Sweden; see Fröberg, M., and Ekdahl, H., *JP Miljönet*, 23 January 2015; Darpö, J. and Lindahl, H., *JP Miljönet*, 8 October 2015; Fröberg, M., *JP Miljönet*, 9 November 2015; and Michanek, G., *Bertil Bengtsson 90 år*, 2016, pp. 375–389.

⁶⁴⁰ See MÖD 2014:47 och 2014:48. (mål nummer M4937-14 and M 2920-14)

⁶⁴¹ See Fröberg, M., and Ekdahl, H., *JP Miljönet*, 23 January 2015. Such interpretation is not in line with EU law; compare outcome in C-412/85, *Commission v. Federal Republic of Germany*, para 19. See also reasoning in Case C-6/04, *Commission v. United Kingdom*, para. 113.

⁶⁴² See Darpö, J. and Lindahl, H., *JP Miljönet*, 8 October 2015.

It is important to read the statement in light of the reasoning behind the Court's decisions. It is not as simple as it sounds. The Court referred to two EU cases analysing the meaning of "deliberate",⁶⁴³ and to the EU Commission's Guidance Documents regarding strict species protection, where the meaning of "deliberate" is discussed.⁶⁴⁴ However, how the Court interprets these cases and the Guideline, and thereafter applies it to the wind power cases, is not totally clear. The following sections discuss the outcome of the Swedish cases and the referred EU case law, together with other case law, which is of interest when discussing the scope and meaning of Section 4 of the Regulation on Species Protection.

5.3.3.2 Who is the intended subject of the prohibition in section 4 of the Regulation on Species Protection?

One aspect that transpires through the discussions about the meaning of "deliberate" is *who* the intended subject of the prohibition in section 4 of the Regulation on Species Protection actually is. The meaning of deliberate and intentional acts becomes rather difficult to apply to legal entities, such as wind power companies, while it may be easier to discuss regarding individual behaviour in nature.

From a historical perspective it may be understandable that it has been interpreted that, for example, wind power is to be excluded from its application. In Sweden, the prohibition on disturbing or killing protected species was primarily addressed to the individual outdoorsman while activities such as logging and "appropriate use of land" were exempted from the prohibition.⁶⁴⁵ This implied that a logging company would be allowed to cut down a tree with a bird's nest, while the regular outdoorsman was not allowed to approach this same tree at the risk of disturbing the species. This exemption disappeared from the legal text in 1974 but was not totally gone until 2007, with the introduction of the Regulation on Species Protection (2007:845).⁶⁴⁶ However, since the implementation of the Habitats and Birds Directives, such exclusion – of certain activities or land use – has not been acceptable. This is also emphasised in EU case law where the scope of the prohibition rules has been discussed.

With regards to the Birds Directive, the scope of "deliberate acts" was discussed indirectly in Case C-412/85.⁶⁴⁷ The Commission questioned the

⁶⁴³ See C-103/00, *Caretta caretta Case*; and C-221/04, *the Otter Case*.

⁶⁴⁴ See EU Commission, *Guidance Document on the strict species protection of animal species of Community interest under the Habitats Directive 92/43/EEC*, 2007.

⁶⁴⁵ See Section 14, third paragraph, Naturvårdslagen. As discussed in Michanek, G., *Bertil Bengtsson 90 år*, 2016, p. 278.

⁶⁴⁶ It was still left in the Regulation (naturvårdsförordningen (1976:484)) until 2001. With the introduction of the Birds- and Habitats Directives, the exemption only covered certain species (that was not covered by the directives) and finally in 2007 with the introduction of the Regulation on Species Protection the exemption disappeared, *Ibid.*, p. 278.

⁶⁴⁷ As discussed in sections 5.3.3 and 7.3.2.

legality of an exemption rule to the prohibition provisions in Article 5. Germany suggested that the provision was not considered a derogation, but simply that such activities specified in the exemption rule are simply not covered by the prohibition, as they cannot be considered “deliberate”. The German government suggested more precisely:

“[...] such as the normal use of land, can never be regarded as constituting a deliberate failure to protect birds, because actions performed with the intention of killing, capturing, disturbing, keeping or selling wild birds cannot be described as forming part of normal agricultural, forestry or fishing activities.”⁶⁴⁸

The Court, however, did not accept this argument as the scope of “normal use of land” was not defined, and it did not “provide a precise indication of the extent to which damage to the environment is permitted”. The Court therefore did not accept the German argument – that the concepts of “normal use of land” and “unintentional infringements” are equitable.⁶⁴⁹ Michanek suggests, even though the Court was not explicitly stating so, that the Court was interpreting the concept of “deliberate” wider than that of only including measures with the direct intention to damage or kill.⁶⁵⁰ I find it difficult to infer anything directly about the meaning of deliberate, as the Court’s reasoning is rather technical when analysing the provision under assessment. However, in line with Michanek’s interpretation, I agree that by rejecting the notion that: “the normal use of the land for agriculture, forestry or fishing purposes” is the same as “unintentional infringements”, the Court indirectly suggested that deliberate acts can occur within the scope of “normal use of land”. In other words, it is not acceptable to generally exempt certain types of activities from the species protection provision set out in Article 5 of the Birds Directive. This was also emphasised in Case C-6/04, where “lawful operations” were not considered an acceptable exemption from the species protection requirements of the Habitats Directive. The Court suggested that:

“[...] such a derogation, founded on the legality of the act, is contrary both to the spirit and purpose of the Habitats Directive and to the wording of Article 16 thereof.”⁶⁵¹

The above mentioned case law did not directly discuss the meaning of deliberate; however, this suggests that it is not acceptable to generally exempt certain types of activities from the prohibition rules in Article 5 of the Birds Directive and Article 12 of the Habitats Directive, respectively.

⁶⁴⁸ See Case C-412/85, *Commission v. Federal Republic of Germany*, para 11.

⁶⁴⁹ *Ibid.*, paras 14–16.

⁶⁵⁰ See Michanek, G., *Bertil Bengtsson 90 år*, 2016, p. 379.

⁶⁵¹ See Case C-6/04, *Commission v. United Kingdom*, para. 113.

5.3.3.3 The meaning of “deliberate” in EU case law

The meaning of deliberate has been specifically discussed in EU case law. In *the Caretta caretta Case* it was established that it is to “deliberately disturb” to drive a moped on a beach (where signs were put up forbidding the activity) and to use small boats in the sea close to the beach, on which the protected species had built nests.⁶⁵² With regard to the interpretation of the outcome of the *Caretta caretta Case*, the EU Commission refers to the Advocate General’s statement in case C-6/04, which suggests that the Court “seems to interpret the term ‘deliberate’ in the sense of “*conscious acceptance of consequences*” (my emphasis added).⁶⁵³ The Court considered that the government had failed to fulfil its obligations under Article 12(1) (b) and (d) as the system for species protection did not manage to “avoid any disturbance of the species during its breeding period and any activity which might bring about deterioration or destruction of its breeding sites.”⁶⁵⁴

In the *Otter Case* the circumstances were quite different and here the meaning of deliberate was discussed in relation to the Spanish authorities, which had approved a fox-hunting permit in an area where the protected species – the Spanish otter – lived. The Court stated:

“For the condition as to ‘deliberate’ action in Article 12(1)(a) of the directive to be met, it must be proven that the author of the act intended the capture or killing of a specimen belonging to a protected animal species or, at the very least, accepted the possibility of such capture or killing.”⁶⁵⁵

The fox-hunting permit was not meant to capture otters and it was not formally proved that there was a presence of otters in the area. In addition, it was not established that the Spanish authorities *knew* that otters were at risk by issuing the permit for fox-hunting. With this reasoning, the Court decided that the condition of the action being “deliberate” was not fulfilled.⁶⁵⁶ It can be questioned how this reasoning holds up. How well informed should authorities be? Should they have known?

The EU Commission has in its guidance documents regarding strict species protection discussed the meaning of “deliberate”.⁶⁵⁷ Primarily based on the *Caretta caretta Case* and the *Spanish Otter Case*, the Commission provides the following definition:

⁶⁵² See C-103/00, *Caretta caretta Case*, para. 36.

⁶⁵³ See EU Commission, *Guidance document on the strict species protection of animal species of Community interest under the Habitats Directive 92/43/EEC*, 2007, p. 36. The Guidance document refers to paragraph 118 of the Advocate General’s Opinion in Case C-6/04.

⁶⁵⁴ See C-103/00, *Caretta caretta Case*, para. 40.

⁶⁵⁵ See C-221/04, *the Otter Case*, para. 71.

⁶⁵⁶ See C-221/04, *the Otter Case*, paras. 72–74.

⁶⁵⁷ See EU Commission, *Guidance document on the strict species protection of animal species of Community interest under the Habitats Directive 92/43/EEC*, 2007.

““Deliberate” actions are to be understood as actions by a person who knows, in light of the relevant legislation that applies to the species involved, and the general information delivered to the public, that his action will most likely lead to an offence against a species, but intends this offence or, if not, consciously accepts the foreseeable results of his action. In other words, not only a person who fully intends to capture or kill a specimen of an animal commits an offence: an offence is also committed by a person who might not intend to capture or kill a specimen but is sufficiently informed and aware of the consequences his action will most likely have and nevertheless performs the action, leading to the capturing or killing of specimens (e.g. as an unwanted but accepted side-effect), with reckless disregard of the known prohibitions (conditional intent). It goes without saying that negligence is not included in the meaning of “deliberate”.”

This definition implies that a deliberate act is not confined to the primary intent to kill or disturb a species, but also encompasses acts by a person with knowledge of a likely risk that a species might be killed/disturbed by the act, and still performs it.

It is important to keep in mind that the wording of the Commission’s definition derives from the *Caretta caretta Case* where people drove mopeds on the beach despite the signs put up forbidding the activity. That situation is not comparable to the situation where a company applies for a permit for a wind power installation. A company applying for a permit to produce wind power has to gather enough knowledge to prove in the EIA that protected species will not be significantly affected by the activity. It is the developer’s responsibility to be sufficiently informed about the legal requirements and to investigate whether there are any protected species in the area that may be affected.

5.3.3.4 An analysis of the Court’s reasoning in light of EU case law

In MÖD 2014:47 the Court expressed the view that there was only a limited risk of bird collisions, based on the *available* material. The question is whether the Court referred to the reasoning in the *Otter Case*, where it is expressed that there was *no formal knowledge* about the otters in the area. In other words, it was not possible to establish whether there was a risk based on the available material. However, an important difference between the *Otter Case* and MÖD 2014:47 is that with regard to wind power development, it is the developer of the wind power park that must prove that there is

no notable risk.⁶⁵⁸ It has to compose an EIA of good enough standard that enables a risk assessment of, for example, potential bird collisions.⁶⁵⁹

When the Swedish court stated that it assessed the risk to be limited based on the *available material*, the question arises whether the court should have required better material by the applicant. Both the Swedish Environmental Protection Agency and the Swedish Ornithological Organisation pointed out the flaws of the bird report and stated that the method they used to calculate the risk of bird collisions was not appropriate as it was dependent on so many variables and the result depended on which variables were accounted for. In addition, it was pointed out that the data they used in the model was only collected during one season; two seasons is the minimum according to the Swedish Environmental Protection Agency. The Ornithological Organisation also pointed out that the area is rich in birds in most seasons and that a number of birds (the sea eagle, the red kite and the rough legged buzzard) that migrate through this route are seen frequently and in such concentration that this represented a notable risk of collision.

The Court, however, did not discuss the quality of the report, simply stating that the risk was considered limited in accordance with the available material. The question is how this outcome is in line with the precautionary principle and earlier case law from the Land and Environmental Court of Appeal on the EIA requirement with regard to species protection.⁶⁶⁰

The other case, MÖD 2014:48, provides a similar reasoning as in MÖD 2014:47 but the question here is whether dispensation from the Regulation on Species Protection can be granted. The Court suggested that the permit question should be handled first, and thereafter the question of dispensation and therefore remitted the case to the County Administrative Board for a permit assessment, which decided that the activity was not allowed due to the prohibition in the Species Protection Regulation and the location principle in the Environmental Code 2:6.⁶⁶¹

The statement by the Swedish Court in MÖD 2014:48 and MÖD 2014:47 is, however, a bit confusing when it states that it is *totally clear* that the developer's *intent* is not to kill or disturb birds and that the developer does not aim to erect wind power turbines with *reckless disregard* to the prohibitions

⁶⁵⁸ In Swedish law, the burden of proof lies on the wind power developer and he/she is responsible in addition to investigate and collect relevant material and prove that the activity is in line with the general consideration rules in the Environmental Code and that the activity will not have any significant impact on the protected habitat or species; see Swedish Environmental Code, Chapter 2, section 1 and 2. See also EIA requirements in the Environmental Code, Chapter 6.

⁶⁵⁹ See, for example: Judgment by the Land and Environmental Court of Appeal of 29 May 2012 in case M 7639-11.

⁶⁶⁰ *Ibid.*; Judgment of the Land and Environmental Court of Appeal of 16 April 2013 in case M 7168-13; Judgment by the Land and Environmental Court of Appeal of 23 August 2013 in case M 10072-12. See Section 5.3.2.

⁶⁶¹ See Decision by County Administrative Board in Stockholm of 18 September 2015.

in the Species Protection Regulation.⁶⁶² This statement, taken out of context, can give rise to a misunderstanding on what “deliberate” means in the species protection/wind power context. In accordance with the referred EU case law and Guidance Document the activity always has to be assessed in relation to the *risk* of affecting the protected species and in light of the precautionary principle.

It is not clear why the Court states that the action was undertaken with “reckless disregard” of the prohibition in the Regulation on Species Protection. It is not a comparable situation to the one referred to in the *Caretta caretta* Case – driving a moped on a beach with “reckless disregard” of the known prohibition. Erecting wind power turbines with reckless disregard of the prohibition in the Regulation on Species Protection would be the case if the developer erected a wind power park in a sensitive bird habitat, even though the developer knows that there is a notable risk that birds may collide with the wind power turbines, and that such action is illegal. However, the applicant required a permit in this case, prior to erecting the turbines, which makes this a weak comparison.

In addition, another difference with wind power cases and the referred EU case law relates to the burden of proof and the knowledge obligation. Even though the direct intent of a wind power activity is not to kill birds, an offence can still take place if the developer is “sufficiently informed and aware of the consequences his action will most likely have and nevertheless performs the action”. In contrast to the moped driver and the Spanish authority, a wind power developer is required to gather enough knowledge of its activity’s effect on the environment and is presumed to follow the law. It is the developer that has to show that there is no notable risk that the Species Protection Regulation will be violated.⁶⁶³ As the developer of wind power knows about the associated risk that wind turbines may impose on birds, it is always necessary to assess if there is a notable risk in each specific case. In the wind power case it is not the developer’s subjective intent that is of importance, since he is *assumed* to have sufficient knowledge about the activity and its effect on birds etc. So if there are protected birds in the area and the assessment suggests that there is a notable risk, then that is considered to be within the developer’s knowledge, independent of whether or not he actually has that knowledge. The subjective intent becomes irrelevant.

However, as the prohibition provision is formulated today, it is difficult to interpret. At first glance it may look like unintentional acts (i.e. acts with no direct intent to kill/disturb) are not covered. However, as discussed above, the assessment is more complex and, with regard to activities that require a

⁶⁶² See MÖD 2014:48 and MÖD 2014:47.

⁶⁶³ In addition to the knowledge requirement in Chapter 2 of the Environmental Code, most cases of wind power require an EIA which has to assess the possible effect on protected species.

permit and an EIA, it is the associated risk with the activity that becomes important to assess. If a notable risk is apparent, then the activity cannot be permitted if mitigation measures are not able to avoid the activity to come in conflict with the prohibition stipulated in Section 4 of the Regulation on Species Protection. A legislative change may overcome this problem. Michanek suggests that a solution could be to undertake an objective risk assessment, instead of a subjective one, when assessing whether or not the specific act is deliberate. He suggests that the subjective intent should be irrelevant if the species protection provisions are able to actually ensure adequate species protection.⁶⁶⁴

From more recent case law from the Land and Environmental Court of Appeal it has now become more clear as to how the Court interprets the concept of “deliberate”. In MÖD 2015:3 the Court referred to the same EU case law and the interpretation by the EU Commission in its Guidance Document, before stating that it would be extremely likely that the activity would disturb the eagle in a way that is not acceptable under the Regulation on Species Protection. Further on, it is also clear that the developer has realised this risk. As the developer still planned to undertake the activity it must be seen as a *deliberate action* in accordance with the relevant provision in the Regulation. In this case the ski resort would be located in an eagle territory with three inhabited eagle nests in direct connection to the planned activity. The fact that this was not a wind power activity, but the building of a ski resort, should not be of importance, *per se*, for the interpretation of the term “deliberate”. It seems as if the associated risk is what is of importance. The intent behind a ski resort is to provide recreational activities and not primarily to kill birds. Hence, if a risk is apparent, and the developer still intends to undertake the activity, then that action is deliberate.⁶⁶⁵ Also, as discussed earlier, a general exemption of certain activities from the species protection legislation is not acceptable in accordance with EU law.⁶⁶⁶ Thus, the argument that wind power activities are not covered by the prohibitions set out in the Regulation on Species Protection is therefore not valid.

⁶⁶⁴ As discussed in Michanek, G., *Bertil Bengtsson 90 år*, 2016, p. 380.

⁶⁶⁵ Compare the Swedish Nature Protection Agency’s handbook for the Regulation on Species Protection, part I, 2009:2, where deliberate is defined as: a situation where someone, based on available information, understand the predictable consequences of its action. In relation to wind power SEPA has clarified what deliberate means in situations when the direct intent is not to kill birds; the act is a prohibition in Article 4 if there is a *risk* that the action would affect the birds’ conservation status in the area (and the developer knew that a species could be affected and accepted that risk); as referred to in Darpö, J. and Lindahl, H, *JP Miljönet*, 8 October 2015, p. 8.

⁶⁶⁶ See discussion in Section 3.3.5

5.3.4 Is every single member of a species protected?

In light of the strict derogation rules to species protection the discussion in the literature has moved on to also discuss what is actually included under the provisions that strictly protect species. It has been asserted in the literature that it is not reasonable that every single member of a species is protected, if it is not necessary in light of its population status.⁶⁶⁷ For certain bird species it may be acceptable that a number of individuals are killed while for other species one individual is one too many. With regard to bird species this interpretation is in line with the aim of the Birds Directive, which protects *all* wild birds⁶⁶⁸ but with a requirement on the Member States to

“take the requisite measures to maintain the population of the species referred to in Article 1 at a level which corresponds in particular to ecological, scientific and cultural requirements, while taking account of economic and recreational requirements, or to adapt the population of these species to that level.”⁶⁶⁹

This implies that it is reasonable that the provision in Section 4 of the Regulation on Species Protection is not aimed at protecting every single bird if its population is not under great threat. The focus on population levels and not individual members of species is also visible in the Guidance document on species protection where it is spelled out that the prohibition in Article 12(1) of the Habitats Directive

“[...] is important as it is linked with the population of a species (its size, dynamics, etc.), which constitutes one of the criteria under Article 1(i) for assessing the conservation status of a species”⁶⁷⁰

It has also been suggested that it may not be scientifically grounded to protect *all* wild birds, and that such interpretation of the Regulation on Species Protection may lead to unwanted consequences, specifically for wind power developers.⁶⁷¹

The focus on population level impact has also been discussed in more recent case law. The Land and Environmental Court of Appeal suggested that the provision was not aimed at protecting every single individual member of a protected species, but that it is the effect of the population status, in the

⁶⁶⁷ See discussion Darpö, J. and Lindahl, H, *JP Miljönet*, 8 October 2015, pp. 19–21; Michanek, G., *Bertil Bengtsson 90 år*, 2016, p. 381.

⁶⁶⁸ See Article 1 of the Birds Directive.

⁶⁶⁹ See Article 2 of the Birds Directive.

⁶⁷⁰ See EU Commission, *Guidance document on the strict species protection of animal species of Community interest under the Habitats Directive 92/43/EEC*, 2007.

⁶⁷¹ See Michanek, G., *Bertil Bengtsson 90 år*, 2016, p. 381.

region or in the country, that is what matters.⁶⁷² However, in certain cases, i.e. if a certain species that is likely to become affected is rare, each individual of the species may be crucial for the population. Even though the Court has opened up for this wider interpretation it would be preferable, in light of the principle of legal certainty, if this was spelled out in the Regulation on Species Protection.⁶⁷³

5.3.5 Mitigation measures to avoid impact on species

The possibility of requiring the operator to undertake mitigation measures in order to avoid the activity coming in conflict with the Regulation on Species Protection is quite common. In some cases, where it is identified that a protected species exists in a specific area, it can be assessed if certain permit conditions can ensure that the species is not becoming affected in a way that is illegal. With regard to bats, science suggests that if wind power turbines are shut off during the period when wind conditions are weak and bats are feeding, collisions can be avoided. In a recent case from the Land and Environmental Court of Appeal it was assessed whether a permit for a wind power plant could be accompanied with a final condition requiring turbines to be shut at during certain times, basically when the wind is weak and during the hours of darkness.⁶⁷⁴ This permit condition was in the lower court only provisional; under test and not final. The Land and Environmental Court of Appeal, however, suggested that there was nothing to hinder the condition becoming final, as the wind power was located in an area where a protected species existed and that there was a risk that the species would be affected by the wind power activity. The Court also stated that as no technical barriers to such a condition existed – the wind power turbines could be turned off – the condition was acceptable.⁶⁷⁵

⁶⁷² See Judgment of Land and Environmental Court of Appeal of 25 January in case M 11317-14, p. 17; and of 3 February 2016 in case M 2114-15, p. 15, where the total impact from the planned measures could not be considered to affect the meta population of the species around Norrvikens trädgårdar, and therefore did not affect the favourable conservation status of the species in its natural range (which was considered to be a notably larger area than the Norrvikens trädgårdar). This implies that it is important to assess the population status at the appropriate scale, which differs between different species; see discussion in Epstein, Y., *Journal of Environmental Law*, 2016, vol. 28, p. 240 et seq.

⁶⁷³ This also suggested in the literature, see for example: Michanek, G., *Bertil Bengtsson 90 år*, 2016, p. 381. This line of thought has also been spelled out by Fröberg, who suggests that Article 4 of the Regulation on Species Protection does not allow for such wide interpretation, see Fröberg, M., *JP Miljönet*, November 2015, p. 2.

⁶⁷⁴ See reasoning in Judgment by the Land and Environmental Court of Appeal of 10 December 2015 in Case M 11073-14, p. 4.

⁶⁷⁵ See *Ibid.*, p. 4. It was the same outcome in a very similar case, decided the same day, see Judgment by the Land and Environmental Court of Appeal of 10 December 2015 in Case M 11101-14.

Provisions for wind power turbines offshore have also resulted in a permit for a wind power park outside Falkenberg in Sweden. The same developer was denied a permit in 2009 due to its effect on the threatened cod population.⁶⁷⁶ In 2009 the Court considered that the location was especially sensitive from the ecological point of view,⁶⁷⁷ which needed to be protected as far as possible against activities that could hurt the marine ecology.⁶⁷⁸ Due to this risk for the threatened cod species, the court argued that the applicant had therefore not fulfilled its obligation to find the most suitable location from the environmental point of view.⁶⁷⁹ The 2015 case differs a little from the earlier case. The wind power plant park was granted a permit for a wind power park that was larger (50 turbines instead of 30) and the permit was in this case combined with provisions to protect the cod and porpoise populations.⁶⁸⁰

In the case from 2015, the Court assessed whether the activity would “disturb” the protected species, which is forbidden in accordance with the Swedish Species Protection Regulation and Article 12 of the Habitats Directive. There is no definition of *disturbance* either in the Swedish regulation or in the Habitats directive but the Commission, in its guidance document on strict species protection,⁶⁸¹ suggests that a disturbance does not necessarily need to affect the species physically but to have an indirect effect on the species – for instance, if the species needs to exert a lot of energy on fleeing. For example, bats that are disturbed during their winter hibernation might imply that they will not survive the winter. The intensity, frequency and duration of the disturbance are important aspects when deciding whether or not a species is affected. When deciding on an appropriate protection system it is important to keep in mind that some species are more sensitive than others and that particular species are more sensitive during certain periods of the year and in their life cycles.⁶⁸² For example, periods when a species is migrating, mating, nesting, or is in hibernation, are particularly sensitive, which are also specified in Article 12(1)(b) of the Habitats Directive. In other words, whether or not a certain activity or measure is to be considered a disturbance depends on the particular species threatened in an area, as well as other circumstances in the particular case. A disturbance should also be connected to the species conservation status, both at local and national levels. If a disturb-

⁶⁷⁶ The Court considered that the location was not the most suitable, in accordance with the Swedish Environmental Code, Chapter 2, section 6; See MÖD 2009:48.

⁶⁷⁷ In accordance with Chapter 3, section 3 of the Environmental Code.

⁶⁷⁸ See MÖD 2009:48, p. 11.

⁶⁷⁹ *Ibid.*

⁶⁸⁰ See Judgment by the Land and Environmental Court of Appeal of 8 December 2015 in Case M 6960-14.

⁶⁸¹ See EU Commission, *Guidance Document on the strict protection of animal species of Community interest under the Habitats Directive 92/43/EEC*, 2007.

⁶⁸² See Section 1.1.2.2 for some scientific background on wind powers’ effect on biodiversity and potential mitigation measures.

ance affects the species' chances of survival, reproduction or spreading, it is illegal.⁶⁸³

Bats and birds are the primary species that are likely to be affected by wind power activities on land. When located in water, certain fish populations may be affected by noise and vibration, especially during the period when the wind power park is being built. It seems possible to avoid unnecessary impacts on bats and to some extent fish populations by combining the permit with conditions that mitigate the impact from the activity – for example, a requirement to use the best available technology. It is nevertheless still hard to combine appropriate permit conditions with regard to bird species protection in areas where sensitive species have their nests, mating grounds or migration routes, except from changing the location of the wind power park.⁶⁸⁴

5.3.6. Discussion

The Species protection legislation can be seen as a general safety net for the protection of biodiversity, which functions alongside the protection of habitats. This safety net may be seen as an obstacle from the perspective of the developer of wind power (or other forms of renewable energy) as it may be difficult to know beforehand if the specific area, where the activity is planned to be located, hosts any protected species. However, when undertaking an assessment of an activity and its potential impact on protected species, it is important to assess the impact on the *population* status of the protected species.

The discussed case law shows that species protection has, with regard to some aspects, indirectly gained more strength. It seems evident that the Court requires a better material basis for its decision-making in the EIA, if it is likely that a species might be affected.⁶⁸⁵ If the developer has not shown in the EIA that there is no notable risk, the location is not considered suitable in accordance with Chapter 2, section 6, of the Environmental Code, and the application may therefore be rejected. However, some of the recent case law has been somewhat confusing regarding the concept of “deliberate”, but this has been arguably settled since MÖD 2015:3. In the case of wind power development, the subjective intent of the developer is irrelevant, as he is

⁶⁸³ See Swedish Environmental Protection Agency, *Handbook 2009:2*, p. 22.

⁶⁸⁴ In some cases, it has been suggested that warning systems may be implemented to limit the collision risk with birds. However, such systems may be considered to “disturb” the bird species and therefore not be a valid mitigation measure; see reasoning in MÖD 2014:48 where the applicant was obliged to assess whether the activity could be seen as a legal derogation to the Regulation on Species Protection. See Section 1.1.2.2 for some more examples of potential mitigation measures to avoid impact on birds.

⁶⁸⁵ See, for example, Judgment by the Land and Environmental Court of Appeal of 29 May 2012 in case M 7639-11.

required by law to have sufficient knowledge and to investigate whether the activity is likely (if there is a notable risk) to affect protected species.⁶⁸⁶

5.4 Habitat protection and the National Government's involvement in decision-making

5.4.1 Introduction

Wind power activities are sometimes planned to be located in a Natura 2000 site or in close vicinity to one. If the activity is likely to have a significant effect on a Natura 2000 site a permit is required under Chapter 7, section 28(a) of the Environmental Code.⁶⁸⁷ Such a permit can only be granted if the activity alone, or together with other activities, does not damage the value that forms the reason for its protection; the habitat or habitats that the Natura 2000 site aims to protect; or implies that the species, that the site aims to protect, are exposed to a disturbance that in a significant way aggravates the conservation of the species in the particular area.⁶⁸⁸ Hence, this is a more clear link to species population status than is currently formulated in Section 4 of the Regulation on Species Protection.⁶⁸⁹ However, as discussed above, recent case law from the Land and Environmental Court of Appeal shows that population status is also relevant when discussing the prohibition under the Regulation on Species Protection.⁶⁹⁰

We have not yet seen many cases from the Land and Environmental Court of Appeal where a wind power developer is applying for a permit that is likely to affect the protected value of a Natura 2000 site, naturally, since it is harder to grant a permit in such cases, than is the case if the location is not formally protected. However, in some cases, if the protected value of the site is not affected by wind power activities it may be likely that such installations are located in, or in close proximity to, such sites. In the following section the *Sjisjka Case* is discussed, where the outcome of the case is not

⁶⁸⁶ This is also emphasised in Marklund A. Å. and Schultz, M., *Artskydd: grunder och tillämpning*, 2016, p. 79.

⁶⁸⁷ The relevant provisions regarding habitats protection is implemented into Chapter 7, Sections 27–29 (b) of the Environmental Code and Sections 15–20 (a) of the Förordning (1998:1252) om områdesskydd enligt miljöbalken m.m. (Regulation on area protection). For the relevant EU law provisions, see Section 3.4.4 and Section 7.2.

⁶⁸⁸ See Chapter 7, section 28 (b). See also Swedish Environmental Protection Agency, Rapport 6473, 2011; and European Commission, *Wind energy developments and Natura 2000*, 2011.

⁶⁸⁹ As discussed in section 5.3.4.

⁶⁹⁰ See, for example: Judgment of the Land and Environmental Court of Appeal of 25 January in case M 11317-14, p. 17; and of 3 February 2016 in case M 2114-15, p. 15, as discussed in section 5.3.4.

necessarily due to the specific legislation regarding habitats protection but because of energy political argumentation and the procedural order.

5.4.2 Swedish case law and Government involvement in decision-making

In a rather controversial case – *the Sjisjka Case* – a wind power park was permitted despite affecting an important habitat.⁶⁹¹ In addition to being a Natura 2000 site (because of its old-growth mountain forest) it was also a nature reserve and was partly protected due to the landscape picture (according to previous law). This heavily protected area is located in the Northern part of Sweden, on the low mountain Sjisjka. At the request of the Municipal Council in Gällivare, the Swedish Government assessed whether or not wind power was allowed on that specific location.⁶⁹² The Government acknowledged that the planned wind power park was located within a Natura 2000 site but did not consider it to be a hindrance to the wind power activity. The Land and Environmental Court of Appeal later gave permission to the activity despite many opposing parties expressing the importance of the habitats and protected bird species in the area, and how the proposed wind power plant would affect the Natura 2000 site negatively.⁶⁹³ The outcome of this case is very controversial as there was no comprehensive assessment undertaken by either the Government or the Environmental Court of Appeal. In other words, it was not assessed in detail whether the activity would affect the Natura 2000 site in such a way that it would have been illegal. The Land and Environmental Court of Appeal considered it was obliged to follow the decision made by the Government and did not do its own assessment required by EU law.⁶⁹⁴ The Government's decision was appealed and legally examined by the Supreme Administrative Court in a judicial review, but was not changed.⁶⁹⁵ This outcome is arguably not in line with EU law, as a comprehensive assessment of the activity was not undertaken, which is a requirement under the Habitats Directive.⁶⁹⁶

⁶⁹¹ See Judgment by Land and Environmental Court of Appeal of 25 August 2009 in case M 5256-08.

⁶⁹² The municipality is able to request that the Government assesses the permissibility of wind power installations that require a permit in accordance with Chapter 9, section 6, of the Environmental Code. See Chapter 17, section 4 (a)(7) of the Environmental Code.

⁶⁹³ The Swedish Nature Protection Agency pointed out that the area contained different kinds of protected biotopes/habitats (fjällbjörkskog, fjällhedar and aapamyrrar) and also a number of prioritised bird species (grönbena and smalnäbbad simsnäppa, for ex.). According to the Swedish Ornithological Organisation, the area contains 21 bird species that are listed in the EU bird directive, list 1 and 17 species that are “red listed” in Sweden. See MÖD 2009:38.

⁶⁹⁴ See MÖD 2009:38.

⁶⁹⁵ See Judgment by the Supreme Administrative Court of 27 May 2010 in case 1989-08.

⁶⁹⁶ See Article 6, para 3 of the Habitats Directive.

In addition, in *The Sjisjka Case*, it seems evident that energy politics had a large influence on the decision-making. In the Government's decision, it is stated that Swedish energy politics shall create conditions for efficient and sustainable energy use; cost-effective energy conservation that should derive from renewable energy, as far as possible, with low impact on health, environment and the climate; and enable transition to an ecologically sustainable society.⁶⁹⁷ However, the government did not refer to the environmental objectives set by Parliament, where it is stated that reaching the goal *Reduced Climate Impact* must "be achieved in such a way and at such a pace that biological diversity is preserved".⁶⁹⁸ The outcome of the Government's decision, in this specific case, shows that energy objectives were prioritised over biodiversity ones.

It seems clear that the outcome of this case is largely due to the procedural order in Sweden, where the assessment can be divided into two steps. The Court or the Government can in certain cases decide upon the permissibility of the activity and then the permit question is heard in the lower court.⁶⁹⁹ However, the effect of the division of the assessment was addressed in a Supreme Court Verdict, the *Bunge Case*,⁷⁰⁰ which suggests that a Government or High Court Decision on permissibility is *in principle* binding in subsequent permitting of the activity. However, a Land and Environmental Court (for example) must, when assessing the activity in detail (including the possible effects of precautionary measures), ask if the activity and the risks it causes, are in accordance with EU law. If not, a permit cannot be granted, notwithstanding the previous positive permissibility decision. Prior to the *Bunge Case*, the lower court did not consider itself to be allowed to examine questions that were already assessed in the permissibility decision.⁷⁰¹ However, this practice was never codified in the Environmental Code. It was simply an understanding of the procedural order principle: that lower courts follow the higher ones. Hence if an activity was considered permissible, it

⁶⁹⁷ See the Government Decision by Department of Environment (Miljödepartementet) of 19 December 2007, 19, M2007/1617/F/M, p. 5.

⁶⁹⁸ See Section 4.2.1.

⁶⁹⁹ Compare Chapter 20, section 26, and Chapter 17, section 1, 3 or 4 of the Environmental Code.

⁷⁰⁰ See NJA 2013 s 613 (nr 14) (the *Bunge Case*). This case was highly noted by the public and many protests were undertaken at Gotland, a Swedish Island with a limestone quarry. The case concerned large-scale extraction of limestone in close proximity to a Natura 2000 site. The activity was associated with risk of contaminating one of the major fresh water sources at Gotland. The activity would likely affect the water quality of the lake since the ground water that would leak into the quarry had to be pumped out leading through wet land that finally would lead to the protected lake. The Environmental Court of Appeal deciding the permissibility was here criticised to not assess the impact the activity could have on the protected site appropriately.

⁷⁰¹ For a more thorough discussion on the *Bunge case*, see Darpö, J., *Nordic Environmental Law Journal*, 2012:2, p.3.

should receive a permit in the lower court.⁷⁰² Even though the *Bunge Case* regards a decision taken by the Land and Environmental Court of Appeal, it is the same legal situation for Government decisions, primarily considered here, because of its relevance for permissibility decisions for wind power.

This discussion also took place in the *Botnia Case*, where the Land and Environmental Court of Appeal suggested that the lower courts were bound by the Government's permissibility decision.⁷⁰³ In the preparatory works to the Environmental Code, it is spelled out that, when the Government has decided on the permissibility of an activity, the assessment is not to be undertaken again in the permit process. Rather, the permit process is limited to questions that have not yet been assessed by the Government.⁷⁰⁴ However, as mentioned above, in cases where the Government has not undertaken a comprehensive assessment of the activity as required under the Habitats Directive, the lower court needs to undertake such comprehensive assessment to decide whether the activity is acceptable in accordance with EU law.

In accordance with Chapter 17, section 4(a)(7), the municipality can request that the Government assesses the permissibility of a wind power installation that requires a permit under the Environmental Code. As mentioned above, this was done in the *Sjiskja Case*. It could, however, be questioned whether permissibility decisions for wind power developments are of such a character that they need to be assessed by the Government. Recently, the issue was discussed, when a few changes were made in the Electricity Act. The preparatory works for the new change in the Electricity Act refer to an earlier preparatory work (prop. 1982/84:120) which suggests that decisions that do not require a standpoint from the Government as a political organ should be handled in the courts instead of at Government level. The Government should only be involved in decisions concerning, for example, national defence or national security.⁷⁰⁵ Based on this reasoning, it is questionable whether permissibility decisions regarding wind power plants require a standpoint from the Government as a political organ.

As the development of wind power is increasing, it might start moving closer to areas where it may significantly have an impact on the protected values of Natura 2000 sites, if places with good wind conditions without formal protection are getting less accessible. More recent case law shows that mitigation measures (such as formal requirements for wind power installations to mitigate their effects on protected species) are common and perhaps could be used to mitigate the effects that installations would have on the protected value in a Natura 2000 site. It is also possible that certain large

⁷⁰² However, if the Government's permissibility decision was in regard to a water activity, Chapter 11, section 23 states that the lower courts had to grant a permit to the activity if not hindered by Chapter 2, section 9, of the Environmental Code.

⁷⁰³ See MÖD 2006:44.

⁷⁰⁴ See prop. 1997/98:45, part I, p. 443.

⁷⁰⁵ See discussion in prop. 2012/13:70, pp. 28–31.

wind power projects can be permissible due to the application of the derogation rules from the habitat protection, but this is not likely to occur in light of the stringent requirements for such derogation.⁷⁰⁶ As discussed earlier, it is important to distinguish between mitigation and compensatory measures as compensatory measures are to be discussed only after the individual project has fulfilled the prior requirements in Chapter 7, section 29 of the Environmental Code.⁷⁰⁷

As mentioned above, the outcome of the *Sjisjka Case* was very controversial in Sweden and many argued that a comprehensive assessment of the potential impact was never undertaken. The outcome of the *Sjisjka* case is therefore not so much of interest for the interpretation of the meaning of relevant provisions in the Habitats Directive (Chapter 7, section 27-29 of the Environmental Code). However, it is interesting in the sense that it shows how a wind power developer can get around the legal requirements by having the case referred to the Government for assessment instead of the Environmental Courts. However, the outcome in the *Bunge Case* suggests that that road is now to some extent closed. If the EU legal requirements are not appropriately assessed, the Court (or permit authority) assessing the permit question can deny the wind power installation permit.

5.5 Concluding remarks

Due to the assessments of wind power activities on a case-by-case basis and the vaguely formulated provisions applicable in the permit processes, there are no general conclusions that can be drawn from the discussed case law. There are, however, some trends or tendencies that transpire from the cases. Common for most cases with regard to wind power is that the localisation provision established in Chapter 2, section 6, of the Environmental Code plays a crucial role. If a wind power plant may affect the environment negatively and the developer cannot show that the chosen location is the most suitable location from an environmental perspective, then the applicant may be denied a permit for the wind power plant, if an alternative location would not result in unreasonable costs for the developer.⁷⁰⁸

Another tendency is that permit conditions are now more commonly implemented in cases where, earlier, permits would not have been granted due to the impact on certain interests or species.⁷⁰⁹ However, while certain per-

⁷⁰⁶ See Article 6(4) of the Habitats Directive. As discussed in Section 7.2.

⁷⁰⁷ Regarding the difference between mitigation measures and compensation measures, see Case C-521/12, *T.C. Briels and Others v. minister van Infrastructuur en Milieu*, as discussed in Section 7.2.3.

⁷⁰⁸ See Chapter 2, section 7 of the Environmental Code.

⁷⁰⁹ Compare outcome in MÖD 2009:48 and Judgment by the Land and Environmental Court of Appeal of 8 December 2015 in Case M 6960-14. As discussed in Section 5.2.3 and 5.3.5.

mit conditions are considered to have the potential to limit the negative impact on bats, reindeer, cod and porpoise populations, it is more difficult to compose permit conditions that limit the negative impact on certain sensitive bird species. If the location is an important habitat for certain protected bird species, its mating or nesting ground, or migration route, the best mitigation possible seems to be to move the wind power park to a place that is at a safe distance from the protected species.⁷¹⁰ However, as wind power technology and natural science advances it might be possible in future to avoid negative impacts on bird species, without changing location. As the focus on species protection has moved to a more nuanced approach, it may be acceptable that a limited number of a species are killed/disturbed if the species conservation status is not under great threat. However, in light of the principle of legal certainty, such focus would be preferable be explicit in the legal text.

Thus the legal relationship between wind power and the protection of biodiversity seems to be changing. More recent case law suggests that strong protection, in light of the precautionary principle, was accorded a much higher value in the past. Now the Courts are taking a much more proactive approach, mitigating the effects on biodiversity with permit conditions aiming at limiting the negative impact of wind power installations. Perhaps this is simply a sign that the science is not as uncertain anymore, and that technology has advanced, to be able to limit negative impacts. In regards to birds, however, the problem is one of site location and no permit conditions are generally understood to successfully limit wind power's impact on bird species.⁷¹¹

Regarding the scope of the prohibition in section 4 of the regulation on Species Protection, the misconception that wind power activities should not be covered, due to the lack of direct intent to kill/disturb birds, must now be considered settled as of MÖD 2015:3. As the wind power developer is required by law to be "sufficiently informed", the risk of an offence is what is of importance when deciding whether the action is deliberate. Also, in accordance with EU law, it is not acceptable to exempt certain activities from the scope; an assessment needs to be undertaken in each individual case. The discussion in the literature implies that also this needs to be more explicitly formulated in the legal text; to avoid the misconception that certain activi-

See also: Judgment by the Land and Environmental Court of Appeal of 10 December 2015 in Case M 11073-14, p. 4. It was the same outcome in a very similar case, decided the same day; see Judgment by the Land and Environmental Court of Appeal of 10 December 2015 in Case M 11101-14.

⁷¹⁰ See, for example: Drewitt, A. L. and Langston, R. H.W., *Annals of the New York Academy of Sciences*, Volume 1134, 2008, pp. 253–254.

⁷¹¹ However, there are a number of mitigation measures that are discussed in the literature; see, for example: *Ibid*, pp. 253–254. Mitigation measures have in some cases been permit conditions in wind power cases. For example, DDT Bird, which is a device with blinking lights etc. in order to scare birds away. However, such devices have also been suggested to disturb birds, which is not legal under the species protection regulation; see MÖD 2014:48.

ties, which lacks the direct intent to kill or disturb protected species, are not covered.

In sum, the protection of biodiversity in the context of wind power development seems so far to be adequately assessed by the Swedish Courts. It is a tendency that there is a more nuanced approach on when the prohibition kicks in and restricts wind power development. Mitigation measures are more common and the impact is to be assessed in relation to the *population status*, which may imply that wind power installations may be permitted despite the risk that a few individual members of a bird species may be killed, if the species is not under great threat.

6. Hydropower and the Protection of Biodiversity in Sweden

6.1 Introduction

Sweden's main expansion of hydroelectric power supply started more than one hundred years ago when the Swedish industrial sector's rapidly increasing demand for electricity had to be met. The Swedish Government responded to this demand by changing the water law in order to enable a fast expansion of hydropower.⁷¹² This resulted in a new water law, adopted in 1918, which stood (with few alterations) until 1983.⁷¹³ Due to nature protection laws, the expansion of hydropower was basically halted in 1970.⁷¹⁴ By this point, Sweden had exploited most of the rivers worth doing so, with the exception of a few rivers (and many parts of rivers) that had been granted legal protection.⁷¹⁵

The majority of hydropower installations in Sweden have old permits. In accordance with an investigation made by the Swedish Government, there are 3 727 permitted hydropower plants and dams in Sweden and only 73 of them have permits under the Environmental Code.⁷¹⁶ As of 2009, only 78 of the plants with old permits had been reassessed in accordance with the Environmental Code.⁷¹⁷ This implies that there are a large number of hydropower plants that still need to be reassessed to comply with modern environmental law requirements and meet Sweden's obligations under EU law, primarily with respect to the Water Framework Directive.⁷¹⁸

The primary purpose of this chapter is to address the relationship between hydropower and the protection for biodiversity, which is a rather complex

⁷¹² See Vedung, E. and Brandel, M., *Vattenkraften, staten och de politiska partierna*, 2001, p. 43.

⁷¹³ 1918 års vattenlag.

⁷¹⁴ For a historical overview of the hydropower development and its permit regime, see Darpö, J., *Nordic Environmental Law Journal*, 2014:2, pp. 101–119, at p. 102.

⁷¹⁵ See Chapter 4, section 6 of the Environmental Code.

⁷¹⁶ The other hydropower permits were assessed under older water laws; 3 266 of them under the 1918 water law, 127 of them by even older laws, and 261 of them by the Water Law from 1983. See SOU 2009:42, table 3.6, p. 95. As referred to in SOU 2014:35, p. 270.

⁷¹⁷ See SOU 2014:35, p. 270.

⁷¹⁸ See Directive 2000/60/EC of the European Parliament and of The Council of 23 October 2000 establishing a framework for Community action in the field of water policy, (hereafter referred to as Water Framework Directive).

problem in Sweden. It is difficult to enforce modern environmental law requirements on established hydropower plants. In addition, due to a lack of resources, reassessing all hydropower plants, which do not fulfil the legal requirements protecting biodiversity, including the objectives of the Water Framework Directive, will be extremely time consuming. At the current pace, estimates predict that it would take 800 years to review all permits and permit conditions in need of reassessment.⁷¹⁹ Clearly, it will be difficult for Sweden to reach the objectives set out in the Water Framework Directive, even though the goals have been pushed until 2021 or 2027.⁷²⁰ This problem is acknowledged by the Swedish Government, and a number of state led investigations have taken place, but currently no solutions have been implemented in Swedish law.⁷²¹

This chapter begins by presenting the role of hydropower in the Swedish electricity system, and is followed by a discussion on the possibilities available today for ensuring that Swedish hydropower production, both new and old installations, fulfils the relevant legal requirements protecting biodiversity. Thereafter, the role of the Swedish electricity certificate system is examined, where small-scale hydropower plants serve as an example to illuminate how the relationship between biodiversity and renewable energy is assessed in the electricity certificate context. Finally, a discussion will follow on whether the Swedish implementation of the Water Framework Directive with regard to “heavily modified water bodies” ensures adequate protection of biodiversity in those waterways.

6.2 The role of hydropower in the Swedish energy system

Hydropower production has a relatively long history in Sweden and has been of great importance in the Swedish energy system.⁷²² Today, hydropower is the largest source of renewable electricity in Sweden. In 2013, it contributed with 41 % of the total electricity generated in Sweden.⁷²³ It also constitutes a

⁷¹⁹ See SOU 2014:35, p. 271.

⁷²⁰ The goals were originally to be met by 2015.

⁷²¹ See SOU 2009:42; SOU 2013:69; and SOU 2014:35.

⁷²² Due to the long tradition of hydropower in Sweden and the life-long permits, there is an interesting legal discussion on the meaning of prescription from time immemorial (*urminnes hävd*) and muniments (*privilegiebrev*) that are invoked in the Courts as “permits”, even though the muniments are more than 100 years old. See discussion in Lindqvist, I., *Nordic Environmental Law Journal*, 2013:1, p. 39.

⁷²³ However, in 2013 the hydropower production was considered low. The low levels of hydropower can be compared with the level in 2012 when it produced 78 TWh compared with 61 TWh in 2013. Hydropower contributed with 41 % of the total share of the installed capacity in December 2014. See Swedish Energy Agency, ET2015:08, pp. 34–35

great part of Sweden's total share of renewable energy, which is ultimately needed to reach the renewable energy targets by 2020.⁷²⁴

However, there are different kinds of hydropower installations, which give rise to different environmental impacts and roles in the energy system. For example, run-off river plants arguably make the least impact, while hydro plants with storage reservoirs (dams) or pumped hydro create, in addition to obstacles for migrating fauna (that also run-off river plants may give rise to), other dam-associated problems.⁷²⁵ However, run-off river plants are not able to store water in dams for use when needed (as balancing power), which is an important aspect of hydropower that will be needed in a future where other intermittent renewable power production becomes more common. Hence, the large and medium-sized installations are most valuable from an energy system perspective due to their high installed capacity and power regulation potential.

In Sweden, there are a great number of hydropower installations, but only a small percentage of the installations give rise to high electricity production, and are able to regulate the power on the grid. It has been suggested that roughly 200 of Sweden's hydropower plants produce 94 % of all hydropower⁷²⁶ and at the other end, 1550 small-scale installations (max 1 MW installed effect) together produce 2 % of production.⁷²⁷ This implies that, from an environmental point of view, and from an energy system point of view, the small installations are not so important to keep.⁷²⁸ However, there may be social and cultural reasons why those plants are important to maintain. In many cases, it is likely to be too expensive for the small scale producers to undertake measures to mitigate their effect on the waterways, which suggests that these plants may be closed upon a possible reassessment.⁷²⁹

⁷²⁴ Hydropower contributed with 32,9 % of the share in 2014. Biomass contributed with 61,2 %, wind power 5,8 % and solar 0,1 % of the total share of renewable energy, see Eurostat, *Statistics explained*, Table 1 of Renewable Energy Statistics.

⁷²⁵ Dams change the natural water level as the dam (upstream of the river bank) is filled with water while the downstream is dry (or hopefully required to let out a minimum flow). This change in the environment, of course, affects habitats and species located in the river. These types of problems are not further discussed here.

⁷²⁶ These numbers are referred to by, for example: Vattenfall, *Konsekvensanalys*: 10 March 2014, p. 2; see also Älvräddarna who states on their homepage that there are 2100 hydropower installations in Sweden and only 10 % of them contribute to 90 % of the electricity production from hydro. See <http://www.alvraddarna.se/om/vattenkraft>

⁷²⁷ See Lindqvist, I., *Uppsala Faculty of Law Working Paper*, 2013:01, p. 6.

⁷²⁸ This argument has been advanced by Älvräddarna, see: <http://www.nyteknik.se/opinion/ingen-forlust-skrota-sma-vattenkraftverk-6400618>

⁷²⁹ As discussed in Section 6.3.6.

6.3 How to ensure that hydropower installations are in line with environmental law requirements protecting biodiversity

6.3.1 Introduction

Hydropower installations are considered to be “water activities”⁷³⁰ and always require a permit for operation.⁷³¹ A first requirement, in order to be able to grant a permit for the activity, is that the developer needs to show that it has disposition over the property where the hydropower is to be installed.⁷³² Assuming that the developer has disposition over the property where the hydropower installation is to be built (or is located, if an already established one) this section provides a discussion on the specific permit requirements that need to be fulfilled under the Environmental Code.⁷³³

The main focus of this section is to discuss the available options of enforcing requirements with the aim of protecting biodiversity, more specifically measures to ensure connectivity in the water system to enable fish migration. It is commonly suggested that minimum flow regulations and fauna passages⁷³⁴ or fish ladders⁷³⁵ may mitigate the effects that hydropower plants

⁷³⁰ Hydropower installations are considered a water activity in accordance with Chapter 11, section 3(1) of the Environmental Code.

⁷³¹ See Chapter 11 Section 9 of the Environmental Code.

⁷³² See Chapter 2, section 1 in Lag (1998:812) med särskilda bestämmelser om vattenverksamhet.

⁷³³ A discussion, that is left outside the scope of this study, though a very interesting one, concerns the question whether disposition of property can be acquired by “immemorial prescription” (urminneshävd) and whether such an old right can be considered a legal permit in accordance with the Environmental Code. This question has been discussed in the literature and assessed by the Courts. Recent case law suggests that immemorial prescriptions are not equivalent to a permit; see: Judgment by Land and Environmental Court of Appeal of 1 April 2016 in case M 7542-15, p.8; see also MÖD 2012:26–28. This interpretation is also presented in the literature; see, for example: Olsen-Lundh, C., *Nordic Environmental Law Journal*, 2013:2, pp. 85–108; and Darpö, J., *Nordic Environmental Law Journal*, 2014:2, pp. 101–119. However, it is also suggested in the literature that in accordance with the current law, such old rights may be equivalent to a permit; see, for example: Lindqvist, I, *Nordic Environmental Law Journal*, 2013:1, pp. 39–50; Strömberg, R., *Nordic Environmental Law Journal*, 2014:2, pp. 95–99.

⁷³⁴ Fauna passages are considered the most suitable alternative for migratory fauna, as they provide a separate passage for fish to migrate on the side of the hydropower dam. However, they are more costly than fish ladders and require more space.

⁷³⁵ Fish ladders are, as it sounds, ladders where certain fish can jump (primarily salmon and trout), up the river where the hydropower plant is located. Such construction is not suitable for species other than salmon and trout and therefore not as efficient as a fauna passage. But, these constructions are in general cheaper than fauna passages. The fish ladder does not solve the problem of fish migration downstream as they may be killed when passing through the turbines.

have on the aquatic ecology in water bodies.⁷³⁶ For new or expanded (after an operator's application) hydropower installations, such requirements may most likely be included in a permit condition. It is more difficult to ensure that operators of already established hydropower plants introduce such mitigation measures, as such measures will most likely not be installed voluntarily, and the lack of time and resources required to initiate a reassessment procedure is currently lacking.

6.3.2. Legally protected rivers

Most of the rivers in Sweden are already exploited by large- and small-scale hydropower installations and dams. There are, however, a few rivers and stretches of rivers that are protected from future developments.⁷³⁷ This implies that the legal assessment that hydropower operators face, are most likely due to reassessment for not fulfilling the requirements under the Environmental Code, or due to the operator's intent to rebuild/modernize an old hydropower installation.

In accordance with Chapter 4, section 6, of the Environmental Code some rivers are protected from further hydropower development as far as such development is not considered to only give rise to "insignificant environmental impact".⁷³⁸ This was discussed in a case from the Land and Environmental Court of Appeal where a hydropower operator applied for a permit to perform a few changes to the hydropower installation, including some maintenance.⁷³⁹ The question here was whether the alterations were hindered due to the provision in Chapter 4, section 6, or whether the change only gave rise to "insignificant environmental impact". If so, the activity could be permitted according to the statute. The Court suggested that the possible impacts of the alterations could not be considered to be *insignificant*, due to the reasoning in earlier Court cases where it was stated that the concept of "insignificant environmental impact" should be based on a very restrictive assessment of the impact of the activity.⁷⁴⁰ Thus the protection under this pro-

⁷³⁶ However, such mitigation measures have been criticised. The best option is argued to be to take away the obstacle (the hydropower installation) in the river to restore the waterway, at least regarding very small installations with limited power production; see, for example: Älvråddarnas homepage: <http://www.alvraddarna.se/om/vattenkraft>

⁷³⁷ See Chapter 4, section 6, of the Environmental Code.

⁷³⁸ See Chapter 4, section 6, para. 3 of the Environmental Code. In the Governmental Bill it is suggested that e.g. replacement buildings in an already established hydropower plant or efficiency improvements, given that the impact on the environment does not increase notably, may be considered to only give rise to "insignificant environmental impact"; see prop. 1997/98:45, part II, p. 41.

⁷³⁹ In accordance with the Environmental Code, Chapter 11, section 17, hydropower operators are responsible for maintenance of the water activity.

⁷⁴⁰ The Court referred to the outcome in RÅ 1993 ref. 44; RÅ 2004 ref. 14; and MÖD 2013:40. See Judgment by Land and Environmental Court of Appeal of 26 June in case M 9073-14, pp. 14–15.

vision seems rather strong, though the exemption rule under Chapter 4, section 1, is generous and, viewed from that perspective, the rivers are not strongly protected. It is expressed that:

“The provisions of the first paragraph and sections 2 to 6 shall not be an obstacle to the development of existing urban areas or local industry or the construction of installations that are needed for the purposes of the total defence.”

The exemption is generously formulated and may imply that, if a local industry wants to develop hydropower production, it may not be hindered by the provision in Chapter 4, section 6. However, it may be very difficult to get a new permit for a hydropower installation due to other legal provisions. There are other requirements in the Environmental Code that need to be fulfilled – for example, the permit requirements under Chapter 11 and the general rules on consideration in Chapter 2. In addition, the Water Framework Directive requirements of reaching “good ecological status” or “potential” also need to be fulfilled. After the clarification in the *Weser Case* these requirements proved to be substantive and strong, implying that even a small deterioration of the water status may hinder hydropower development.⁷⁴¹

6.3.3 Socio-economic evaluation

In accordance with Chapter 11, section 6, of the Environmental Code, a socio-economic assessment of the activity needs to be undertaken. The provision states:

“Water operations may only be undertaken if the benefits from the point of view of public and private interests are greater than the costs and damage associated with them.”

The aim of this provision is to stop water activities that are not socio-economically motivated. In accordance with the preparatory works, this comparison shall be based on a rough economic analysis.⁷⁴² The economic benefit of the activity (for the individual operator) is accounted for on the benefit side for “society”, which arguably may not always be in the interests of the society as a whole.⁷⁴³ It is established in case law that negative impacts on the environment shall be accounted for on the cost side.⁷⁴⁴

Whether protective measures, such as fish passages and the insertion of minimum water flow, should be considered in the evaluation in Chapter 11,

⁷⁴¹ See *Weser Case*, as discussed in Section 3.4.6.2.

⁷⁴² Prop. 1997/98:45, part II, p. 129.

⁷⁴³ This provision and how the socio-economic evaluation may be skewed by the electricity certificate system will be further discussed in Section 6.4.

⁷⁴⁴ See for example MÖD 2000:37; and MÖD 2001:1.

section 6, has been discussed in case law with seemingly different outcomes. In a Judgment by the Land and Environmental Court of Appeal of 18 October in case M 9756-10,⁷⁴⁵ the Court evaluated the fact that fish migration routes and the insertion of minimum water flow were going to be undertaken if a permit was granted, and placed it on the benefit side of the evaluation under 11:6 of the Environmental Code. The Court stated that since the dam (which was already located there) was a definitive hindrance for migrating species and there was currently no requirement for minimum water flow, the environmental impact on the water system would actually improve by permitting the hydropower plant. However, a more recent judgment, of the 30 May 2012, in case M 5795-11 discusses whether fish migration routes should be considered as a benefit in the socio-economic evaluation. The Environmental Court of Appeal stated here, in contrast to the lower environmental court (and the court case discussed above), that building fish migration routes is a protective measure that the applicant shall undertake in order to minimize the environmental effect of the activity under assessment, and should not be considered in the evaluation under Chapter 11, section 6, of the Environmental Code.⁷⁴⁶

With the aim of making the legal requirements more similar between environmentally hazardous activities and water activities, it has been suggested that this provision should be taken away for water activities as the provisions in Chapter 2–4 are likely to stop such activities that are not considered socio-economically admissible.⁷⁴⁷ However, it has been suggested in the literature that the provision has an important role to play since an activity that may not be stopped under Chapter 2, section 9, of the Environmental Code, due to not giving rise to significant detriment to the environment, can still be stopped under this provision due to its disproportionately large impact compared with its benefits.⁷⁴⁸ This provision has the possibility of hindering the continuation of very small hydropower installations (with very low capacity) that may not individually cause a substantial impact on the water system, but combined with many other installations give rise to a large impact on the biodiversity in waterways. From an environmental perspective, it is important that such inefficient installations are stopped. Thus, I consider the provision to still have an important role to play.

⁷⁴⁵ See Judgment by Land and Environmental Court of Appeal of 18 October 2011 in case M 9756-10.

⁷⁴⁶ See Judgment by Land and Environmental Court of Appeal of 30 May 2012 in case M 5795-11, p. 5. It is interesting that both these cases had seemingly similar circumstances. However, it could be argued that the cost for protective measures should be located on the cost side as it is a financial cost for the developer. However, in light of such mitigation measures of positive consequences for biodiversity, the benefit side may increase by as much as its cost.

⁷⁴⁷ See SOU 2014:35, p. 209.

⁷⁴⁸ See Michanek, G. and Zetterberg, C., *Den Svenska miljöretten*, 2012, p. 303.

6.3.4 Requirements to undertake mitigation measures in order to protect biodiversity

6.3.4.1 Requirements derived from Chapter 2 of the Environmental Code

When a hydropower developer applies for a permit to construct a new installation, or to alter an existing one, it has to fulfil certain requirements in the Environmental Code. In addition to the specific requirements in Chapter 11, the developer also needs to show that the provisions in Chapter 2–4 are fulfilled.⁷⁴⁹

In order to make the permit conditional upon certain mitigation measures, the general rules of consideration in Chapter 2 become relevant. A hydropower operator has to comply with the provisions in Chapter 2 of the Environmental Code, which implies that it has to, e.g., undertake precautionary measures in accordance with Section 3. This provision suggests that, as soon as there is cause to assume that the activity may cause damage or detriment to the environment or human health,⁷⁵⁰ the operator has to undertake measures to prevent, hinder and combat such impact. For hydropower operators this implies that the best possible technology shall be used.⁷⁵¹ This may imply that the best possible technology to enable fish migration need to be undertaken to avoid hydropower installations becoming barriers for migratory fish.⁷⁵²

However, in accordance with Section 7, the mitigation measures undertaken to fulfil the provisions in Chapter 2 needs to be considered *reasonable*.⁷⁵³ When assessing whether the precautionary measures are reasonable, the assessment is based on the specific circumstances in the individual case.⁷⁵⁴ With regard to the requirement to build fish passages or fish ladders in order to avoid its impact on certain species, the benefit for the fish popula-

⁷⁴⁹ The focus here is on the mitigation measures that may follow the provision in Chapter 2. See Section 6.3.2 regarding the role of Chapter 4, section 6, of the Environmental Code.

⁷⁵⁰ In accordance with the Governmental Bill: “damage and detriment” to the environment refers to, for example, impoverishment of biological diversity. See prop. 1997/98:45, part II, p. 15.

⁷⁵¹ As a hydropower installation is considered a “professional activity”. When assessing what is the best possible technology the preparatory works suggests that the technology shall be practically possible (available on the world market) and financially feasible for a typical company in the industry; in other words: an objective assessment of what is financially feasible. See prop. 1997/98:45, part II, p. 17, see also Michanek, G. and Zetterberg, C., *Den Svenska miljörätten*, 2012, pp. 113–114.

⁷⁵² This is also given as an example in the Governmental Bill, see: prop. 1997/98:45, part II, p. 18.

⁷⁵³ When assessing if the measure is reasonable, it is the operator that has to show that the requirements derived from Chapter 2, sections 2–6, are unreasonable.

⁷⁵⁴ See prop. 1997/98:45, part II, p. 24. For a discussion on the meaning of this provision see Michanek, G. and Zetterberg, C., *Den Svenska miljörätten*, 2012, p. 127

tion must be greater than the cost of building such structures.⁷⁵⁵ As will be discussed below, such mitigation measures are commonly required by new installations of hydropower. These types of mitigation measures are also often referred to in programmes of measures for waterbodies, as measures needed to reach “good ecological status” in accordance with the Water Framework Directive. Thus, such mitigation measures may be a necessity to fulfil the objective of the Water Framework Directive.

6.3.4.2 Mitigation or compensation measures to protect fishing

Historically, migratory fish have required some protection due to the economic interest associated with a healthy fish population. The fishing industry has been influential in protecting fish. In addition to the general provisions in Chapter 2, the hydropower operator is also required, in accordance with Chapter 11, section 8, to mitigate hydropower’s effect on migratory fish with the main aim to protect *fishing*, not primarily fish. The provision states:

“Persons who intend to carry on water operations that may be detrimental to fishing must, at their own expense, make and in future maintain any arrangements that are necessary for the passage of fish or the sustainability of fishing, supply water for this purpose and comply with any other conditions that may be necessary in the context of the operations to protect fishing in the water in which the water operations are carried on or in adjacent water areas. If the benefit of a disputed installation or a condition cannot reasonably be considered to justify the expense incurred by the operator for compliance, the operator may be discharged from such an obligation.

The provisions of this section relating to fish shall also apply to aquatic molluscs and crustaceans.

Provisions under which fishing fees may be charged instead of the imposition of conditions pursuant to subsection (1) are contained in chapter 6, section 5 of the Act (1998:812) Containing Special Provisions concerning Water Operations.”

This provision may seem unnecessary as the same measures may be required to be undertaken in accordance with Chapter 2, section 3, of the Environmental Code. However, it is expressed in the preparatory works to the Environmental Code that the reason why this specific requirement was considered to be still necessary was that the general rules in Chapter 2 were not considered to go far enough to protect the fishing interest.⁷⁵⁶ This provision can also give rise to permit conditions that require the operator to create spawning places or fish farms, or plant fish, to *compensate* for its impact.⁷⁵⁷ Such compensating measures are not the same as the mitigation measures

⁷⁵⁵ Such requirements that are based on Chapter 2 of the Environmental Code may be the basis for permit provisions in accordance with Chapter 16, section 2, paragraph 1 of the Environmental Code.

⁷⁵⁶ See prop. 1997/98:45, part II, pp. 130–131.

⁷⁵⁷ See prop. 1997/98:45, part II, p. 130.

that may be required under Chapter 2, section 3. The provisions for the protective measures in the general rules in Chapter 2 are also motivated by the protection of biodiversity and not to protect the fishing interest. Even though the requirement in Chapter 11, section 8, indirectly protects fish (which is part of the biodiversity in the water system) the main aim is to protect the economic interest of fishing, which is highlighted by the possibility to plant fish/breed fish, to compensate for the loss associated with the hydropower installation. Also here, an assessment is made if the benefit of the measure is in proportion to the associated cost.

6.3.4.3 The challenge of enforcing mitigation measures in the face of multiple hindrances to fauna migration

Another related problem arises when there are several hydroelectric dams in different locations on the same river. Passageways need to be built for all of the dams in order for fish to migrate up the river. However, it is complicated to enforce such requirements, as there are no efficient legal instruments that are able to comprehensively assess the total impact from the various hydro power plants in the same river. Instead, the different permits are examined separately; meanwhile the issue of fish migration concerns the river in its entirety. A "Catch 22" argument from the operator is that it makes no sense to require passage at his or her particular dam because the fish are still hampered at the other dams in the river (not included in the trial). However, this argument has not always been accepted by the Court and sometimes a pending requirement to build fish passages has been formulated in the permit conditions.⁷⁵⁸ The Court suggested in a Judgment of 21 January in case M 9402-07 that the reason why a pending requirement was prescribed, and not an exemption from the requirement in Chapter 11, section 8, of the Environmental Code, was partly due to the national environmental objectives established by the Swedish Riksdag (which often have an EU law connection). The Court suggested that, in accordance with Chapter 1, section 1, of the Environmental Code, it is possible to take the intentions behind those objectives into account when applying the provisions in the Environmental Code.⁷⁵⁹ By doing so, the Court suggested that an exemption from Chapter 11, section 8, could not be made.⁷⁶⁰ Such pending requirements are supposed to be realised when the supervising authority considers it necessary. Hence, the river is still not assessed comprehensively with regard to the possibility

⁷⁵⁸ See Judgment by the Land and Environmental Court of Appeal of 21 January 2010 in case M 9402-07.

⁷⁵⁹ Ibid. See also prop. 1997/98:45, part II, p. 8.

⁷⁶⁰ The Court also referred to the reasons presented by the Land and Environmental Court, which suggested that an exemption was not acceptable due to the univocal investigation regarding the current fish population and that in the future it may be reasons why a fauna passage should be installed. See Judgment of the Land and Environmental Court in Vänersborg of 19 November 2007 in case M 2630-06.

for the fish to migrate up the river. Currently, there are no efficient instruments that could enable such an assessment.

However, in accordance with Chapter 21, section 3, of the Environmental Code, it is possible to cumulate cases “if the applicant is the same and the cases or matters relate to the same activity or related activities”.⁷⁶¹ There is not much support in the preparatory works for an interpretation that would allow a cumulation of cases with different owners due to affecting the same environmental area. However, in the case of reassessment of hydropower installations’ permits or permit conditions, the applicant is Kammarkollegiet. As the lone applicant, they may argue for a cumulation due to the various hydropower installations that they are applying to reassess are related as they are located on the same river, dependent on the same flow, and thus intrinsically linked.⁷⁶² However, this possibility will require great resources and time on the part of Kammarkollegiet. Thus there is only a limited possibility to enable a more comprehensive assessment of the impact of hydropower on the same water system.

6.3.4.4 The requirement for fauna passages arising from reasons other than migratory fish

Fauna passages are not only of importance for migratory fish, there may also be other reasons why such passages may be required. This was established in *the Brevens Bruk Case* where the operator argued that it would not be reasonable to build a fish passage because of the high cost and since the migratory fish were still hampered further downriver.⁷⁶³ However, the Court considered the hydropower installation to cause harmful damage to the waterbody’s ecological status and fishing and made the permit conditional upon undertaking mitigation measures. The Court stated:

“Fish passages or equivalent structures for migration can, together with water flow regulations, be expected to have significant benefit for the environment, the water related life and fishing in affected or neighbouring water bodies and contribute to the fulfilment of good ecological status within prescribed time.”⁷⁶⁴

The Court furthermore did not accept the operator’s suggested cost for the building of the fish passage. Instead, the Court stated that the building of the

⁷⁶¹ This rule complements the general rules in Chapter 14, section 1–7 of “Rättegångsbalken”, but is wider in its scope as it allows for cumulation of cases not having the same procedural form; see prop. 1997/98:45, p. 233.

⁷⁶² If cases are assessed in the same procedure and are dependent on the same natural resource, the activities can be adjusted in order to function simultaneously. If not possible, the one that best corresponds with the provisions in Chapter 3 of the Environmental Code takes precedence. See Chapter 16, section 11, of the Environmental Code.

⁷⁶³ See MÖD 2014:15.

⁷⁶⁴ My translation, see MÖD 2014:15, p. 12.

fish passage should be a permit condition as the cost of building such a passage would not be unreasonable.⁷⁶⁵ The permit also stipulated a requirement of water flow (600l/s as an annual average value), and the water flow through the fish passages should vary throughout the year and be similar to natural fluctuations.⁷⁶⁶

This case is particularly interesting as it examines additional reasons for fauna passages, beyond the primary reason of enabling migratory fish to migrate upriver. The Court referred to the management plan for the area where it was specified that the lack of connectivity in the water system (due to hydropower) affected the transportation of nutrients, sediment and organic material which affected the ecosystem both up and downstream. In the programme of measures for the area, it was suggested that fish passages and minimum flow regulations were measures that could overcome this problem.⁷⁶⁷ It was also pointed out in the case that the upstream lake Sottern is partly a Natura 2000 site because of its habitat type and because of a number of fish and bird species. The conservation plan for the area does not specify the barrier effect of the hydropower plant to be the largest threat, but the Court's decision referred to a statement by the Swedish Agency for Marine and Water Management where it is specified that the bird species that are protected in the Natura 2000 site require an abundance of fish. It is also specified that downstream of the hydropower plant, the fish fauna is affected, whereas river-based species are few and dominated by lake-based species.⁷⁶⁸ Thus in this case, the fish passages were not primarily motivated by migratory fish, but largely due to other biodiversity and ecosystem objectives.

It is now quite common that hydropower operators, in rebuilding and modernizing their plants, are required to build fish passages (or fish ladders), install lattices to avoid fish being sucked into turbines and to have adequate minimum flows.⁷⁶⁹

6.3.5 Natura 2000 sites and hydropower

Hydropower operators also need to fulfil relevant provisions with regard to species and habitats protection.⁷⁷⁰ If a Natura 2000 site is considered to be

⁷⁶⁵ See MÖD 2014:15, p. 12.

⁷⁶⁶ *Ibid.*, p. 13.

⁷⁶⁷ *Ibid.*, p. 11. This was also pointed out in reports referred to by Kammarkollegiet and the County Administrative Board.

⁷⁶⁸ See MÖD 2014:15, p. 11.

⁷⁶⁹ See, for example: Judgment by the Land and Environmental Court of Appeal of 29 February 2016 in case M 3779-15.

⁷⁷⁰ These provisions derive from the Birds and Habitats Directive and are implemented into Swedish law through Chapter 7, section 27–29 (b) and Chapter 8 of the Environmental Code; *Förordning (1998:1252) om områdesskydd enligt miljöbalken m.m.* (the Regulation on Area Protection); and *Artskyddsförordning (2007:845)* (the Regulation on Species Protection).

adversely affected by a hydropower activity, it may not be permissible, unless the derogation rules apply.⁷⁷¹ There are, however, a few cases where Natura 2000 permits have been discussed in relation to hydropower production.

In MÖD 2004:68 the assessment was regarding a hydropower plant located in a water body located close to a Natura 2000 site. The applicant was therefore faced with a more stringent assessment (see Chapter 7, section 28 a, of the Environmental Code), due to the risk that the hydropower plant would significantly impact on the protected area. In this assessment, the Court considered that the planned activity did not entail a significant obstruction to the conservation of the protected species in the area. Instead, the Court suggested that the compensatory measures, fish migration routes, spawning places etc., that the applicant was going to construct, would in fact lead to an improvement of the fish population in the area as a whole. It is not clear from the reasoning of the Court whether it included the effect of the compensatory measures when assessing whether the activity would affect the conservation status of the species, which is not acceptable under EU law.⁷⁷² The Court concluded that only a limited area of the current habitat would be affected.⁷⁷³ The project was granted permission with these conditions.⁷⁷⁴

In another hydropower case, the *Untra Case*, where the activity was considered to adversely affect the integrity of a Natura 2000 site, the Government assessed whether the derogation rules were applicable. The Government did not consider the activity to be of such a nature that the derogation rules could be applicable. However, the Court still had to determine whether the activity could be permissible in the first place. As the planned activity was located in a protected river in accordance with Chapter 4, section 6, of the Environmental Code, it was denied a permit due to the impact from the building measures involved, which implied more than an “insignificant” environmental impact.⁷⁷⁵

As there are not many new hydropower installations under development in Sweden, the Natura 2000 provisions are not too intrusive on the operation of hydropower. It is also difficult to ensure that established hydropower in-

⁷⁷¹ This will not be discussed in detail here. For a discussion on the derogation rules, see Chapter 7.

⁷⁷² See Case C-521/12, *T.C. Briels and Others v. minister van Infrastructuur en Milieu*. See also Section 7.2.3, where the meaning of compensation measures is discussed in the context of the Habitats Directive.

⁷⁷³ The Natura 2000 site was protected due to three different types of habitat. The one being affected by the hydropower activity was because of the nature type: a river with floating leaf vegetation or aquatic mosses. See MÖD 2004:68.

⁷⁷⁴ *Ibid.*

⁷⁷⁵ See Judgment by Land and Environmental Court of Appeal of 5 June 2013 in case M 6229-12, p. 9.

stallations are not adversely affecting the integrity of Natura 2000 sites as operations established prior to 2001 are exempted.⁷⁷⁶

6.3.6 How to ensure that hydropower with old permits fulfils modern environmental law requirements

6.3.6.1 Introduction

Permits under Chapter 11 of the Environmental Code are not limited in time. This implies that most of Sweden's hydropower installations, which have old permits, have very few environmental mitigation requirements as conditions of its permits.⁷⁷⁷ There are possible ways to change the conditions for permits, or to revoke permits, if certain conditions are fulfilled.⁷⁷⁸ An operator can also voluntarily apply for a new permit for a modification or extension of the plant, where the permit may be made conditional on mitigation measures. However, the boundaries of such permit assessments are limited and may not necessarily give rise to any new environmental law requirements.⁷⁷⁹ Thus the most likely way to ensure that the old hydropower installations fulfil relevant environmental law requirements is through reassessment of old permits and their conditions. Such procedures are normally initiated by the relevant state agency: Kammarkollegiet.⁷⁸⁰

6.3.6.2 The possibility of reassessing permits

Permits can be reassessed under a number of circumstances in accordance with Chapter 24, section 5, of the Environmental Code. If a permit is more than 10 years old a reassessment can take place in accordance with the first paragraph. This basis for reassessment is applicable as most hydropower installations that do not fulfil modern environmental requirements are more than 10 years old. There are also other paragraphs that may form a basis for the reassessment. For example, hydropower installations can be reassessed under the provision in paragraph 2, if it is likely that the activity is contributing to not fulfilling an EQS.⁷⁸¹

⁷⁷⁶ See transitional rules: See SFS 2001:437, para. 2.

⁷⁷⁷ See SOU 2014:35, p. 270.

⁷⁷⁸ See Chapter 24, section 3 and 5 of the Environmental Code.

⁷⁷⁹ The permit process of an application for a modification of a hydropower installation may, however, be limited to examine the modification and not the whole activity. Even though the operator is required to include the effects of the whole hydropower plant in the EIA it is not certain that the Court can make the permit conditional on new requirements. Compare MÖD 2010:52; Judgment by the Land and Environmental Court of Appeal of 20 June 2013 in case M 5737-12; and Judgment of 24 June 2013 in case M 10242-12, where in the latter case it was suggested that mitigation requirements were not reasonable to demand.

⁷⁸⁰ See Chapter 24, section 7 of the Environmental Code. Kammarkollegiet has initiated such procedures in a number of cases; see, for example: Judgment of the Land and Environmental Court of Appeal of 12 February 2014 in case M 1423-13 (as will be discussed below).

⁷⁸¹ See Chapter 24, section 5(2) of the Environmental Code.

Kammarkollegiet applied for reassessment of a hydropower installation in Alsterån where the Court established that the applicant (Kammarkollegiet) needed to present a thorough environmental assessment which showed that the new provisions were necessary, and which risks might be associated with such new provisions for the surrounding environment. A technical description is also necessary to show that it is possible to construct a fish passage, and if so, what the expected cost would be for the construction and future maintenance. However, the Court also stressed that the operator had to contribute to the investigation as it was familiar with the local conditions. The Court stated that the operator could not simply refer to the flaws of the investigation undertaken by Kammarkollegiet. The Court suggests that, in principal, the operator is responsible for the detailed projection of the measures.⁷⁸²

In this case, Kammarkollegiet was considered to fulfil these obligations and the Court therefore referred the case back to the lower court for the actual reassessment.⁷⁸³ The lower court imposed a requirement regarding the construction and maintenance of a fish passage and constructions that would help fish migrate downriver without getting trapped in the turbines and minimum flow requirements etc.⁷⁸⁴

The *Alsterån Case* is an illuminating example of the challenges the legal instrument of reassessment faces. Even though the operator is required to be helpful in the investigation, the main responsibility remains with Kammarkollegiet. This was identified as a problem by the State Commission, which proposed that the permit holder should be responsible for providing the necessary investigation for the reassessment procedure, instead of Kammarkollegiet.⁷⁸⁵

Another associated problem is that mitigation measures, required upon reassessment of the permit, may result in production loss for the installation, for which the operator may be entitled to compensation.⁷⁸⁶ This problem was also identified by the State Commission, which proposed that the right to compensation (for production loss) in reassessment procedures should dis-

⁷⁸² See Judgment of the Land and Environmental Court of Appeal of 12 February 2014 in case M 1423-13, p. 12.

⁷⁸³ *Ibid.*, p. 12. However, Kammarkollegiet had initiated a reassessment process in 2003, which was rejected by the Land and Environmental Court of Appeal due to the application not being precise enough regarding the form of the fish passage, which made it impossible for the Court to determine the condition regarding such construction; see MÖD 2006:25. In the end, this reassessment initiative took 11 years before the Land and Environmental Court of Appeal accepted the application (though referring the reassessment back to the lower court, which finally added the mitigation measures as a condition to the permit in 2015).

⁷⁸⁴ See Judgment of Land and Environmental Court in Växjö of 5 June 2015 in case M 673-14.

⁷⁸⁵ It is suggested that such order would be more efficient and cheaper as the operator has the best knowledge about its operation. See SOU 2014:35, p. 291. Also discussed in: Darpö, J., *Nordic Environmental Law Journal*, 2014:2, pp. 101 – 119, at p. 105.

⁷⁸⁶ See Chapter 31, section 22 of the Environmental Code.

appear. However, due to concern for the operator's interest, it was proposed that compensation may be paid for the first five years.⁷⁸⁷ Compensation can in some cases be very high, which implies that it may become very expensive to ensure that hydropower installations in Sweden fulfil the relevant environmental law requirements.⁷⁸⁸ It may be questioned if the compensation rule is acceptable under EU law. Darpö suggests that it is not acceptable under EU state aid rules to systematically compensate operators, in the permit and reassessment procedures, in order to implement measures to fulfil relevant EU nature protection requirements.⁷⁸⁹ However, as mentioned above, these proposed changes have not yet led to any legislative changes.

Another limitation to the applicability of the reassessment provisions is stipulated in Chapter 24, section 5, of the Environmental Code. This provision states that the permit authority must not impose conditions, or other rules, implying that the activity can no longer be pursued, or that it is significantly hampered. This indicates that even though new, more stringent conditions are needed to meet modern environmental law requirements, such conditions may not be acceptable if the hydropower activity has to shut down, or if the mitigation measures imply that the activity is significantly hampered. In cases of small scale hydro this may be a valid argument as the cost of undertaking mitigation measures may be too large for the individual operator.⁷⁹⁰ However, it is expressed in the Government Official Report that this exemption is not applicable when it comes in conflict with EU law, and in such cases the exemption should not be referenced.⁷⁹¹ This is also pointed out by the Commission in a formal letter of notice, where it is expressed that this provision is not in line with EU law in light of the limited possibility to reassess and enforce mitigation measures required to reach the ecological quality objectives set out under the Water Framework Directive.⁷⁹² Thus, even though the Swedish Courts may not reference this exemption rule, it is preferable that it be clearly spelled out in the legislative text, in light of the principle of legal certainty.

6.3.6.3 Possibility of revoking permits

Another more intrusive procedure is to revoke a permit in accordance with Chapter 24, section 3, of the Environmental Code. This option has not been used very often. However, Kammarkollegiet initiated a procedure to revoke

⁷⁸⁷ This is argued to be important as it could be very expensive to issue compensation; see SOU 2014:35, pp. 273 and 302.

⁷⁸⁸ This was the case in MÖD 2011:16, where the reassessment of a small-scale hydropower resulted in 21 % loss in production, which implied 2 million SEK in compensation.

⁷⁸⁹ See Darpö, J., *Nordic Environmental Law Journal*, 2014:2, pp. 101–119, at p. 117.

⁷⁹⁰ See Lindqvist, I, Uppsala University, *Working Paper* 2013:1, pp. 52 et seq.

⁷⁹¹ See SOU 2014:35, p. 284.

⁷⁹² See European Commission, C(2016) 6208 final, p. 18.

a permit for a hydropower installation in Långforsen.⁷⁹³ The Court rejected Kammarkollegiet's application based on the reasoning that none of the claims were considered valid. Kammarkollegiet had claimed that a number of the paragraphs in Chapter 24, section 3, were applicable. One of the claims was based on paragraph 7 with regard to not meeting the relevant EU law requirements. Kammarkollegiet argued that the permit constituted a hindrance towards reaching favourable conservation status (in accordance with the Habitats Directive) and reaching the environmental quality objective of "good ecological status" (in accordance with the Water Framework Directive).⁷⁹⁴

The Court stated that in accordance with the transitional provisions related to the protection of Natura 2000 sites⁷⁹⁵, operations that acquired a permit earlier than 2001 were exempted from the permit requirement in Chapter 7, section 28 a. Thus that argument of Kammarkollegiet was turned down by the Court.⁷⁹⁶ With regard to the Water Framework Directive requirements, the Court acknowledged that no such transitional provisions existed and that the operator therefore was not exempted from the Water Framework Directive requirements. The Court referred to the problems of reaching good ecological status by 2021, identified in the programme of measures for the water body, where flow regulation, morphological changes and lack of connectivity were mentioned. The suggested measures to overcome this problem were, for example, demolition of migration obstacles or construction of fish passages and an adaptation of the minimum water flow to reflect more environmentally acceptable flows. Based on these facts the Court suggested that it was not clear that the EU law requirements (that followed from the Water Framework Directive) required that the operation had to be shut down. Instead, it was suggested that the impact from the hydropower activity could be mitigated in a way that implied that the activity was still in line with the requirements under the Water Framework Directive. In this case, the operator had applied for a permit to restore the hydropower activity and in that procedure the operator had accepted that fauna passages (and other mitigation measures aimed at protecting fish) and minimum flow regulations were put in place as conditions for the operation.⁷⁹⁷

⁷⁹³ See Judgment by the Land and Environmental Court of Appeal of 12 June 2015 in case M 6028-14.

⁷⁹⁴ *Ibid.*, p. 10.

⁷⁹⁵ See SFS 2001:437, item 2.

⁷⁹⁶ See Judgment by the Land and Environmental Court of Appeal of 12 June 2015 in case M 6028-14, p. 10.

⁷⁹⁷ See Judgment by the Land and Environmental Court of Appeal of 12 June 2015 in case M 6028-14, pp. 11–12. See also Case M 8255-14 regarding the permit decision.

6.3.6.4 Discussion

These cases show that it is both time consuming and burdensome for Kammarkollegiet to initiate reassessment procedures and it seems even more difficult to revoke permits. However, it is questionable whether the *Långforsen Case*⁷⁹⁸ would have had the same outcome now after the clarification of the legal implications of the non-deterioration requirement in the *Weser Case*.⁷⁹⁹ As has been discussed in the Government Official Report, the reassessment of hydropower installations in Sweden has been very slow and will most likely continue to be so due to limited resources and time.⁸⁰⁰ As mentioned above, if the current rate prevails, the reassessment of permits and permit conditions for hydropower installations with old permits is estimated to take 800 years.⁸⁰¹ Thus the current structure for reassessing old permits is not a valid option to ensure that Sweden's hydropower production complies with the Water Framework Directive. Instead, the State Commission suggests that operators of old hydropower installations shall be required to apply for a new permit under the Environmental Code.⁸⁰² The State Commission has also proposed to introduce general provisions applicable to hydropower installations that prescribe that all hydropower installations need to have adequate fauna passages and minimum flow regulations.⁸⁰³

However, these suggestions have been criticised with the argument that those modern environmental requirements would result in a great loss of hydropower production.⁸⁰⁴ Viewed from an energy-political perspective such critique may seem valid. Hydropower's importance in the electricity system is clear due to its large share of power production and its possibility for carrying load when variable sources are weak. Such balancing power is crucial in an electricity system which has a growing share of intermittent sources of power production, such as wind and solar. As it is today, we have no great alternatives to hydropower that can contribute with the same benefits in the form of balancing power (or storage). The idea behind the proposed legislative changes is not to stop the production of hydropower, only to impose certain mitigation measures to limit its impact on waterways. Such mitigation measures may come with a production loss, but they may nevertheless

⁷⁹⁸ See Judgment by the Land and Environmental Court of Appeal of 12 June 2015 in case M 6028-14, pp. 11–12, as discussed above in Section 6.3.6.3.

⁷⁹⁹ See outcome in Case C-461/13, *The Weser Case*. As discussed in Section 3.4.6.2.

⁸⁰⁰ It is estimated that Kammarkollegiet will reassess about 4,5 permits/year. See SOU 2014:35, p. 270.

⁸⁰¹ See SOU 2014:35, p. 271.

⁸⁰² This was first identified in SOU 2013:69. The idea is that the assessment for environmentally hazardous activities and water activities should become more similar, if there is not a good reason why the assessments should be different; see SOU 2014:35, p. 217.

⁸⁰³ See SOU 2013:69, pp. 308–312.

⁸⁰⁴ It has also been suggested that such order is not in line with international law. This critique will not be further discussed or elaborated on here. For a presentation and analysis of the critique see Darpö, J, *Nordic Environmental Law Journal*, 2014:2, pp. 101–119, at p. 106.

be necessary to fulfil relevant requirements under the Water Framework Directive.⁸⁰⁵ After all, the Swedish energy-political goal is an energy system that combines ecological sustainability, competitiveness and security of supply.⁸⁰⁶ Thus since hydropower constitutes a significant share of our renewable energy production, it is crucial that it fulfils relevant environmental law requirements in order to ensure that Sweden's contribution towards meeting the 2020 goals are not in fact in conflict with other EU law requirements, for example, the Water Framework Directive, and thus not sustainable from a biodiversity perspective.

6.4 New hydropower production and the electricity certificate system

6.4.1 Introduction

The Swedish legislation that has the aim of promoting electricity extracted from renewable energy sources is the Electricity Certificate Act.⁸⁰⁷ This section investigates the role of the electricity certificate system with regard to ensuring that the renewable energy that is promoted is also in accordance with relevant nature protection legislation. Small-scale hydropower will serve as an example of how the relationship between the protection of biodiversity and the promotion of renewable energy is handled in the context of the electricity certificate system in Sweden.

6.4.2 The Swedish electricity certificate system

Since 2012, the electricity certificate market has encompassed Norway. The Swedish electricity certificate market, which has been in place since 2003, is the basis for the market. The common goal for Norway and Sweden is to develop 28.4 TWh new power production based on renewable energy sources by the end of 2020.⁸⁰⁸ The Swedish Energy Agency states that this

⁸⁰⁵ It is also possible for hydropower installations to be permitted despite not being in line with Article 4 (1) if the conditions are fulfilled in Article 4(7) of the Water Framework Directive. For a discussion on the possibility for hydropower to be acceptable under the derogation rules, see Section 7.4.

⁸⁰⁶ See prop. 2008/09:162, p. 19.

⁸⁰⁷ See: Lag (2011:1200) om elcertifikat (the Electricity Certificate Act).

⁸⁰⁸ For more information on the Swedish and Norwegian Electricity certificate system, see: Swedish Energy Agency, *The Norwegian-Swedish Electricity Certificate Market*, Annual Report 2013, See also Swedish energy Agency: <http://www.energimyndigheten.se/fornybart/elcertifikatsystemet/>

increase is supposed to contribute to the ecological sustainability of Sweden's energy system.⁸⁰⁹

This section does not delve into the details of the electricity certificate system. In short, it is an incentive system for renewable electricity production. Approved plants, that produce electricity from renewable energy, are allocated one certificate unit for each MWh of electricity production.⁸¹⁰ These certificates are entitled to promote new renewable energy installations and therefore there is a time limit for how long an activity is eligible to receive certificates.⁸¹¹ In addition, electricity suppliers are required to purchase electricity certificates corresponding to a certain proportion of the electricity that they sell, known as their quota obligation.⁸¹² Electricity Certificates are therefore traded on the Swedish and Norwegian markets to fulfil those quotas. The price is later added to the consumer's electricity bill. This incentive system implies that the renewable electricity producers are receiving an extra income by selling the certificates, in addition to the electricity price.⁸¹³

As a result of the electricity certificate system, which was introduced in 2003,⁸¹⁴ renewable electricity production has increased (at least the sources qualified for certificates).⁸¹⁵ In 2010, the 1164 hydropower plants, qualifying for certificates, produced 2,6 TWh. Some 1027 of these were commissioned before 1 May 2003, producing 1983 GWh with the installed capacity of 485 MW. The number of plants installed after 1 May 2003 was 137, producing 628 GWh with the installed capacity of 134 MW.⁸¹⁶ Of the hydropower installations that qualified for certificates in 2010, 76 % were small-scale hydropower plants, with its 1027 plants.⁸¹⁷

Due to the fifteen-year time limit in the certificate system,⁸¹⁸ most of the capacity introduced before 2003 is now no longer able to receive the certificates. During 2012, the Swedish Energy Agency phased out 487 MW of the installed capacity from the electricity certificate system. In addition, according to the statistics on the Swedish Energy Agency's homepage, only three

⁸⁰⁹ The Swedish Energy Agency, ET 2011:32, p. 7.

⁸¹⁰ The Swedish Energy Agency, ET 2012:31, p. 7.

⁸¹¹ The time limit is 15 years or until 2035, whichever is the shortest; *Ibid.*, p. 8.

⁸¹² *Ibid.*

⁸¹³ *Ibid.*, p. 12.

⁸¹⁴ See Lag (2003:113) om Elcertifikat.

⁸¹⁵ In 2003, the total production within the system was 5,6 TWh and in 2010 it had increased to about 18,1 TWh. The largest share of the production then derived from biofuels with ca 11,2 TWh. Wind power contributed with, ca 3,5 TWh, and small-scale hydropower with ca 2,6 TWh. Peat is not considered a renewable energy source by the Renewable Energy Directive but it nevertheless qualifies for electricity certificates in Sweden. See The Swedish Energy Agency, ET 2011:43, p. 29-30

⁸¹⁶ See The Swedish Energy Agency, ET2011:52, pp. 37-39.

⁸¹⁷ Restored operation plants received 0,6 % of the certificates with 28 plants, new hydro: 10,9 % of the certificates with 65 plants, Plants with a production increase received 9,6 % of the certificates with 40 plants, and the four plants, due to concessionary compensation, received 2,9 % of the certificates. See the Swedish Energy Agency, ET2011:52, p. 38.

⁸¹⁸ See Chapter 2, section 7, of the Electricity Certificate Act.

new hydropower plants were approved for certificates in 2012.⁸¹⁹ More recently, many installations have been phased out and there are not many hydropower plants receiving certificates. However, in Norway the majority of plants that received certificates were hydropower plants.⁸²⁰

6.4.3 Small-scale hydropower promoted by the Electricity Certificate System

The promotion of small-scale hydropower plants is an illuminating example of an energy source that qualifies for certificates despite imposing a disproportionate impact on the water system and its ecosystems. Hence, in some cases, small-scale hydropower contradicts the environmental objectives established by the Swedish Riksdag - *Flourishing Lakes and Streams* and *A Rich Diversity of Plant and Animal Life*. In particular, the environmental objective *Reduced Climate Impact* “must be achieved in such a way and at such a pace that biological diversity is preserved”.⁸²¹ Thus it is crucial that renewable energy installations, promoted by climate concerns, are not permitted at the cost of biodiversity.

Since the introduction of the electricity certificate system, small-scale hydropower installations are considered more economically viable than when they did not receive economic compensation.⁸²² This is due to the fact that the certificates in fact skew the socio-economic evaluation stipulated in Chapter 11, section 6.⁸²³ As mentioned above, this provision indicates that there is an evaluation as to whether the benefit associated with the hydropower plant is greater than the cost and damage it is associated with. In NJA 2008 s. 3, the Supreme Court established that electricity certificates should be calculated in favour of the hydropower plant when assessing its socio-economic permissibility.⁸²⁴ This means that a hydropower plant that would not be considered to be socio-economically permissible, due to its impact on the water system’s biodiversity, can be seen as permissible if it qualifies for receiving electricity certificates. This is very controversial, as the electricity certificate system is supposed to lead to a more ecologically sustainable energy system.⁸²⁵ Thus, the current Swedish legislation applicable to hydropower installations, specifically the provision in Chapter 11, section 6, are in

⁸¹⁹ See: http://www.energimyndigheten.se/sv/Foretag/Elcertifikat/Marknadsstatistik/Energimyndighetens_Statistik/

⁸²⁰ See the Swedish Energy Agency, *The Norwegian-Swedish Electricity Certificate Market*, 2013, p. 36.

⁸²¹ For a description of the environmental quality objectives, see: <http://www.sweden.gov.se/sb/d/5775>

⁸²² Hydropower installations are eligible to certificates in accordance with Chapter 2, section 5, of the Electricity Certificate Act.

⁸²³ See discussion about the provision in Section 6.4.3.

⁸²⁴ See NJA 2008 s. 3.

⁸²⁵ See The Swedish Energy Agency, ET 2011:32, p. 7.

combination with the electricity certificate system, in fact giving small-scale installations of hydropower priority over the protection of biodiversity.⁸²⁶

The associated problems with small-scale hydropower were acknowledged by the Swedish Parliament in 2006 when it suggested that small-scale hydropower should be excluded from the certificate system, as it posed a risk to the growing conflict between different environmental quality objectives.⁸²⁷ However, the change was never realised as a new Government took office in the autumn of 2006 and expressed the view that Swedish hydropower had a central role in Sweden's electricity production and that the certificate system would support small-scale hydropower even beyond 2012.⁸²⁸

Hence, the problem of small-scale hydropower still remains even though many of the hydropower plants are no longer supported by the electricity certificate system. However, new small-scale hydropower plants can still receive certificates even though they have a disproportionate impact on waterways and their ecosystems. This is one example, though quite illuminating, of the problems associated with the electricity certificate system of ensuring its own goal: a more ecologically sustainable energy system.

6.5 The role of the Water Framework Directive for hydropower installations

6.5.1 Introduction

The protection of waterways is crucial. Clean water is a prerequisite for life on earth and it provides a habitat for many important species. However, the waterways in the EU have degraded and some are heavily polluted. In response to this environmental problem, the EU has composed important legislation protecting waterways in the EU. One important Directive providing a framework for such protection is the Water Framework Directive, which was introduced in 2000.⁸²⁹ The main aim of the Directive is to improve, and hinder further deterioration, of the water status in the EU.⁸³⁰ Due to hydropow-

⁸²⁶ In addition, if an appropriate cost-benefit analysis is to be undertaken here, the associated cost for the consumers (who in fact are the ones paying for the certificates), should be put on the opposite side of the income for the operator. The role of the certificates should therefore be zero, since it is merely a transfer of resources.

⁸²⁷ Regeringskansliet, Promemoria Miljö- och samhällsbyggnadsdepartementet, 22 December 2005.

⁸²⁸ See Allians för Sverige, *Energipolitik för jobb, välfärd och miljö*, June 2006, p. 9.

⁸²⁹ The Water Framework Directive is implemented through "Förordningen om förvaltning av kvaliteten på vattenmiljön" (SFS 2004:660) and in the Environmental Code, Chapter 5. Also Regulations by the The Swedish Agency for Marine and Water Management are of importance; see: <https://www.havochvatten.se/hav/vagledning--lagar/foreskrifter.html>

⁸³⁰ Including the inland surface waters, transitional waters, coastal waters and ground water.

er's hydro morphological impact, it may likely be in conflict with the Water Framework Directive as it aims at conserving (or even improving) the waterways. However, hydropower may still be permissible if appropriate measures are undertaken to mitigate its impact. Such mitigation measures include minimum flow levels, fauna passages or fish ladders.⁸³¹ Even though mitigation measures are undertaken, hydropower installations may still give rise to negative impacts on the water body's status, which is not allowed to deteriorate. Thus it may be hard for new hydropower developers to comply with the requirements in the Water Framework Directive.⁸³²

In Sweden hydropower is produced by both large and small-scale installations. Most electricity derives from large-scale production, from plants located in waterways that are legally considered (under the Water Framework Directive) to be "heavily modified" water bodies. The Water Framework Directive requires that these water bodies, such as parts of an exploited river, should have "good ecological potential", which is a less strict objective than "good ecological status", that is required for all other water bodies.⁸³³

6.5.2 The enforcement of environmental quality standards under the Environmental Code

Chapter 5, section 2(4), of the Environmental Code states that environmental quality standards (EQS) shall indicate other environmental quality requirements that follow from Sweden's membership of the EU, which includes environmental quality standards for surface- and ground water. Further on, the Regulation on management of environmental quality states that the water agencies shall determine environmental quality standards for water bodies in the form of qualification requirements, which shall be determined so that the status in the water bodies does not deteriorate, so that a good ecological status will be reached in 2015 (now delayed for most water bodies to 2021 or 2027).⁸³⁴

The objectives of "good ecological status" and "good ecological potential" are considered EQS, but have not been considered to have the same legal effect as EQS that have threshold values.⁸³⁵ The EQS that follow from

⁸³¹ Such measures are also part of the environmental objective *Flourishing Lakes and Streams*. See prop. 2000/01:130, p. 90 et seq.

⁸³² Especially after the outcome in the *Weser Case*, see discussion in Section 3.4.6.2.

⁸³³ See Article 4, p.1 (a)(iii) of the Water Framework Directive.

⁸³⁴ See Chapter 4, sections 1, 2, 4 of Förordning (2004:660) om förvaltning av kvaliteten på vattenmiljön (here referred to as Swedish Regulation on Management of Water Quality). This provision is basically identical to Article 4(3) of the Water Framework Directive.

⁸³⁵ Chapter 2, section 7, paras. 2 and 3 of the Environmental Code have specific rules for certain types of environmental quality standards that specify threshold values. If an activity is likely to significantly contribute to breaching such an Environmental Quality Standard, it can only grant a permit under certain conditions – for example, if the permit is accompanied by a

the Water Framework Directive, regarding the ecological status, have only been regarded as part of the general rules of consideration in Chapter 2.⁸³⁶ However, with the outcome in the *Weser Case*, it is now more clearly established that these objectives are legally binding and that no deterioration of the water body is permitted. The ecological objectives, at least the non-deterioration requirement, should have the same legal effect as EQS with threshold values.⁸³⁷ As mentioned earlier, there is a Judgment of the Land and Environmental Court of Appeal where the outcome of the *Weser Case* has given rise to a *conforming interpretation*.⁸³⁸ Thus, the non-deterioration principle was seen as legally binding.

However, the current Swedish legislation does not allow for this interpretation, which has been pointed out by the Commission in the recent letter of formal notice; Sweden has not implemented the Water Framework Directive correctly with regards to, for example, Article 4(1) and 4(7).⁸³⁹ The Commission suggests that Article 4(1) is not implemented correctly as that the Swedish legislation excludes all control of the fulfilment of the environmental requirements set out in Article 4(1) (that the CJEU refers to in C-461/13), as the Swedish legislation does not allow that those requirements have legal force in the permit procedure.⁸⁴⁰ The Commission further states that a correct implementation of Article 4(1) requires that the environmental quality objectives specified therein must be treated the same as threshold values in the Swedish legislation.⁸⁴¹ In light of the principle of legal certainty this should be clarified in the Swedish legislation.

6.5.3 The role of the EIA in reaching objectives set out in Water Framework Directive

When a hydropower developer applies for a permit there is a requirement to compose an EIA, which must include a description of the planned measures to avoid, reduce or eliminate adverse effects.⁸⁴² In addition, the EIA should show which measures the developer shall undertake in order to avoid the activity's contribution to a breach of an EQS; or specifically in the case of

requirement to undertake or pay for compensating measures that increase the possibility to follow the norm.

⁸³⁶ See prop. 2009/10:184, p. 48; and Michanek, G. and Zetterberg, C., *Den Svenska miljörätten*, 2012, p. 182.

⁸³⁷ Michanek suggests that the non-deterioration principle ought to have direct effect in the Member States. See Michanek, *JP Infontet*, 23 November 2015, p. 5. See Section 3.4.6.2.

⁸³⁸ See Judgment by the Land and Environmental Court of Appeal of 15 September 2016 in case M 6574-15.

⁸³⁹ See European Commission, C(2016)6208 final. For the reasoning with regards to the implementation of Article 4(7), see Section 7.4.

⁸⁴⁰ See European Commission, C(2016)6208 final, p. 17

⁸⁴¹ *Ibid.*, p. 18.

⁸⁴² See Chapter 6, section 7 of the Environmental Code.

hydropower, to show how to avoid contribution to the non-fulfilment of good ecological “status” or “potential” and how to fulfil the criteria of non-deterioration.⁸⁴³

The EIA is the key instrument providing the information needed to assess an activity’s environmental impact. The Land and Environmental Court of Appeal has addressed what the EIA needs to include with regard to hydropower in a few cases, though not in a consistent way. In one case, the EIA was considered acceptable even though it did not specifically show how the change of the plant would affect the EQS in the stream. However, the available information regarding the possible impact on the ecological status of the stream, in combination with the investigation undertaken by the Court, was considered enough to assess the impact of the activity on the EQS of the watercourse.⁸⁴⁴ The Court had a dissenting opinion, which expressed concern that the material basis the applicant had provided was not enough to assess the complex assessment that the application gave rise to.⁸⁴⁵ However, in a later case, the Land and Environmental Court of Appeal was more stringent in its requirement of the EIA. In this case, the Court denied a permit to a hydropower plant due to the incompleteness of the EIA. The decision was based on the reasoning that the assessment did not show how the new hydropower plant would affect the ecological status and EQS in the stream.⁸⁴⁶ Thus this case implies that the EIA has an important role to play in ensuring that hydropower under assessment is in accordance with the objectives set out in the Water Framework Directive.

6.5.4 Is biodiversity protection ensured in heavily modified water bodies?

Another dimension to the problem of reaching the objectives set out in the Water Framework Directive is that of its implementation with regard to heavily modified water bodies. If a water body is considered to be heavily modified, it is exempted from fulfilling the objective of “good ecological status” and instead is required to meet the objective of “good ecological potential”. A body of water can be classified as “heavily modified” if the hydro morphological changes needed to fulfil the goal of “good ecological status”

⁸⁴³ An application was denied in the *Ladåvatten Case* due to the flaws of the EIA. In this case the EIA did not show how the hydropower plant would affect the ecological status and EQS in the stream; see MÖD 2012:19, pp. 5–6.

⁸⁴⁴ This outcome implies that the Court can complement an incomplete EIA with its own investigation, which may not be acceptable in light of the obligation for the operator to show that it fulfils relevant requirements. See Judgment of Land and Environmental Court of Appeal of 13 September 2012 in case M 10108-11, p. 13.

⁸⁴⁵ See the dissident opinion in case M 10108-11, p. 17.

⁸⁴⁶ See MÖD 2012:19, pp. 5–6.

were to have “significant adverse effects” on, for example, power production.⁸⁴⁷

When assessing what is considered to have “significant adverse effects” it is crucial to identify what values such activity entails in order to be able to assess whether those values are affected. The Swedish Agency for Marine and Water Management has developed a guidance document on how to identify water bodies that are considered to be heavily modified. In that document, the values of hydropower production are identified to be, not only power production, but also its ability to balance the power in the grid;⁸⁴⁸ its ability to be used as balancing power (when electricity is needed); and its ability to create stability on the grid. In the guidance document it is also mentioned that the impact on the activity’s profitability is not included in the assessment, only the possible socio-economic effects.⁸⁴⁹

It is expressed in the guidance document that measures that decrease the power production with more than 1,5 TWh and measures that together lead to a deterioration of the balancing power, implies that there is a large risk that the measures result in “significant adverse effects”.⁸⁵⁰ This suggests that if the mitigation measures needed for the water body to reach “good ecological status”, are too intrusive on the hydropower activity – if it gives rise to “significant adverse effects” – the water body may be considered heavily modified.

However, another requirement for the water body to be considered heavily modified is that the benefit from the activity, with technological feasibility and reasonable cost, cannot be met in a way that is better for the environment.⁸⁵¹ Based on those criteria, it may be reasonable that a water body hosting a large hydropower plant, which contributes not only to renewable energy power production, but also provides power balancing, could be considered to be a heavily modified water body. But it may be more difficult to argue that a small-scale hydropower installation, which produces little and does not contribute to balancing power gives rise to such benefit that the water body would be considered of that nature. Such small contributions to electricity production should most likely be technologically feasible to produce it at a reasonable cost in a more environmentally friendly way.

⁸⁴⁷ See Chapter 4, section 3 (4) of the Swedish Regulation on Management of Water Quality, see also Article 4(3) of the Water Framework Directive.

⁸⁴⁸ The reason why balancing power is needed is because the electricity production and use has to happen at the same time to ensure the balance of the grid; the frequency of the grid always has to be 50 Hz. It is therefore important to have access to stable electricity production that can kick in when needed; for example, if the wind is weak or when there is an unexpected peak in electricity consumption. Some hydropower installations, can in such cases be used as regulating power to ensure balance of the grid, but not all installations, primarily the big ones; the small ones have limited capacity to regulate power. See the Swedish Agency for Marine and Water Management, *Vägledning för kraftigt modifierat vatten*, 2016, p. 33.

⁸⁴⁹ See *Ibid.*, pp. 31–35.

⁸⁵⁰ See *Ibid.*, pp. 36–37.

⁸⁵¹ Chapter 4, section 3, para. 2 of the Swedish Regulation on Management of Water Quality

The Swedish guidance document does not clearly define how to assess this sequence of the provision, but suggests that the purpose of the provision is to identify whether it is better to move the activity to another water body, or whether there are other ways of reaching the same benefits with the activity. The Agency suggests that it is difficult to implement the current legislation into the Guidance Document, and that in many cases it may be easy to determine that the benefits of the hydropower installation cannot be reached in another way. It is also pointed out that there could be cases where it is better to close down the hydropower installation and instead produce the electricity through wind power or undertake measures to increase the production in other hydropower installations, assuming that such measures would be better for the environment. However, it is suggested that in the future the question regarding what is considered to be other suitable ways of reaching the same benefits, needs to be addressed, as there may be other types of balancing power that can replace hydropower, such as large-scale battery storage.⁸⁵² Thus future technological development may lead to another assessment of which bodies are considered to be heavily modified than is the case today.

For the bodies of water that are considered heavily modified the objective “good ecological potential” has to be fulfilled within a certain time line. This objective has not until recently been given much attention. Josefsson suggests that the objective is not necessarily implemented correctly in the EU Member States.⁸⁵³ He suggests that a common approach to implement the objective is the “mitigation-measure approach” which implies that the Water Framework Directive reference approach⁸⁵⁴ is not used and the objective is considered to be fulfilled after certain measures are implemented (even though the measures do not necessarily improve the quality of the water body).⁸⁵⁵ This means that there may not be any measurable reference points available to determine whether or not the status is deteriorating, since the water body is not classified in accordance with the Directive in the first place.⁸⁵⁶ This approach may most likely not be in line with the Water Framework Directive.

⁸⁵² See The Swedish Agency for Marine and Water Management, *Vägledning för kraftigt modifierat vatten*, 2016, p. 39.

⁸⁵³ See Josefsson, H., *Journal for European Environmental and Planning Law* 13, 2016, pp. 167–189.

⁸⁵⁴ See Annex V 1.2.5 of the Water Framework Directive. When defining the ecological potential (maximum, good or moderate) the Annex refers to three different quality elements: biological, hydromorphological, and physio-chemical, which must all be considered when determining the ecological potential of the water body. For a description on the Water Framework Directive reference approach, see European Commission, *CIS Guidance Document No. 13*, pp. 2–6.

⁸⁵⁵ See Josefsson, H., *Journal for European Environmental and Planning Law* 13, 2016, pp. 186–187.

⁸⁵⁶ Since the water body is not classified it is not possible to determine whether its status has deteriorated. Josefsson points out that this may not be in line with the outcome of the *Weser*

Another aspect of this implementation method is that since there are no adequate classifications of the heavily modified bodies, the mitigation-measure approach may lead to the construction of ineffective mitigation measures. In many heavily exploited rivers, which have been exploited for about a hundred years, it may be questionable whether mitigation measures, like fauna passages, fish ladders and minimum flow regulation, will be able to substantially improve the ecosystems in the waterways.⁸⁵⁷

Yet another dimension to the problem of assuring adequate protection of biodiversity in heavily modified water bodies is due to its potential effect on the management of Natura 2000 sites. The Swedish Agency for Marine and Water Management indicates there may be a problem in fulfilling relevant nature protection legislation for water bodies that are considered heavily modified.⁸⁵⁸ For example, water bodies that are declared to be heavily modified would imply a risk that the Natura 2000 site would not reach favourable conservation status, if the mitigation measures needed for the Natura 2000 site are not acceptable due to its “significant adverse effects” on the hydropower installation.

Thus, based on the discussion above, it may be questioned whether biodiversity is being appropriately protected in relation to the associated impact that hydropower activities give rise to. The mitigation measures approach is problematic as it is decoupled from the reference points specified in the Water Framework Directive and there is no guarantee that the mitigation measures are actually helpful; that the quality of the water body is at its *maximum ecological potential*⁸⁵⁹ when the mitigation measures are implemented. This indicates that it is impossible to enforce the non-deterioration principle on activities in water bodies that are defined as heavily modified, as there is no classification done of the water body in the first place. Thus Sweden’s implementation does not, in fact, meet the EU law requirements. Also, from an energy system perspective, it can be questioned whether the mitigation measure approach is cost-effective. If no substantial improvements of the ecological quality of the water body can be achieved, such measures may not be cost-effective.

Case where the meaning of deterioration is expressed. See Section 3.4.6.2 and Josefsson, H., *Journal for European Environmental and Planning Law* 13, 2016, p. 189.

⁸⁵⁷ However, it also depends on which type of construction is undertaken; fauna passages that are constructed more naturally are the preferred option to technical solutions such as fish ladders, which are not considered to be very efficient and only of benefit to a small number of species. See Mats Jonsson (WWF, etc.), *Rikedomar runt rinnande vatten, De ekonomiska värdena av en miljöanpassad vattenkraft*, 2015, pp. 14–15.

⁸⁵⁸ See The Swedish Agency for Marine and Water Management, *Vägledning för kraftigt modifierat vatten*, 2016, p. 41.

⁸⁵⁹ On how to determine “maximum ecological potential”, see European Commission, “CIS Guidance Document No. 13”, 2005, pp. 20–21 et seq.

6.6 Concluding remarks

The relationship between the protection of biodiversity and promotion of hydropower (as a source of renewable energy) is a complicated one. The complexity primarily arises from the fact that the great majority of the hydropower installations in Sweden are very old with few or no environmental law requirements imposed as conditions for their operation. As most permits contain no time limits, the installations need to be reassessed, which may be impossible under the current regime due to the large number of hydropower plants that are in need of reassessment. There are simply not enough resources allocated to Kammarkollegiet to fulfil this mission. It has been suggested that operators of hydropower with old permits should be obliged to apply for new permits, but this proposal has not yet been implemented in the Swedish legislation.

For new installations, enforcing mitigation measures to limit the impact on the waterway does not seem to pose a great problem. However, after the outcome of the *Weser Case*, it may now be difficult for new installations of hydropower to receive a permit at all due to the binding objectives of the Water Framework Directive, where good ecological status is to be reached in 2021 or 2027, and where no deterioration of the water status is accepted.

In the water bodies that are considered “heavily modified” and are to fulfil the objective of “good ecological potential”, biodiversity may not be adequately protected. This is due to the disconnect between the Water Framework Directive requirements and reference points needed when determining the quality objective and the actual method that is used in many Member States, including Sweden, which is based on mitigation measures. Such an approach does not ensure that biodiversity is adequately protected, or that the proposed mitigation measures are effective. This approach is not in line with the Water Framework Directive requirements and it may also be crucial, from both biodiversity and energy system perspectives, that the reference point method is used in accordance with Annex V 1.2.5 of the Water Framework Directive.

The electricity certificate system may also lead to inadequate protection of biodiversity as it skews the socio-economic assessment in favour of the benefit of allowing the operation, due to the accounting for such certificates. Arguably, these certificates should not be included as a benefit in the socio-economic assessment without the associated cost to consumers.

In sum, the status quo in Sweden is that biodiversity is not appropriately protected in relation to Sweden’s hydropower production. This is not primarily because of inadequate implementation of the Water Framework Directive, but because Sweden has not yet decided how to ensure that hydropower installations with old permits fulfil relevant environmental law requirements. As of today, Sweden does not meet its obligations under the Water Framework Directive partly because of hydropower’s large impact on

waterways. As hydropower contributes to a large component of Sweden's total share of renewable energy, the renewable energy that Sweden counts towards its renewable energy target is in fact not in line with relevant nature protection legislation, especially not the Water Framework Directive.

It may be important to widen the perspective. As in the case of species protection, it is not every individual member of a species that is important to protect, but the population of that species as a whole. The same goes for hydropower. It is not important to protect every single installation, but hydropower production is vital to the functioning of the electricity system. Due to the many installations in need of reassessment, it may be important to focus on restoring water ways that still have a chance to recover, or at least improve. Here, the programmes of measures for the different waterways have a great potential to identify where mitigation measures would give the best results.⁸⁶⁰ As mentioned above, not many small-scale installations can afford to implement adequate mitigation measures and this may imply that these installations (upon a reassessment of the activity) may have to close down. However, the administrative and financial problems of reassessing these plants are still the largest obstacle towards Sweden's fulfilment of the objectives set out in the Water Framework Directive.

In order to fulfil the requirements by the Water Framework Directive, the derogation rules may need further exploration, as it is unlikely that water bodies located in heavily exploited rivers are going to reach "good ecological status". In the following chapter the derogation rules from the nature protection directives are discussed. Derogations from the Water Framework Directive are discussed both with regards to the possibility for new hydropower installations to be permissible, despite its impact on the water body, in accordance with Article 4(7); and the possibility to lower the quality objective in accordance with 4(5), for water bodies with already established hydropower installations.⁸⁶¹

⁸⁶⁰ However, the programme of measures is not considered to function appropriately in Sweden today; see Michanek, G., et al, *Genomförande av det Svenska systemet för miljö kvalitetsnormer: Lärdomar från forskningsprogrammet SPEQS*, 2016, pp. 39 et seq.

⁸⁶¹ See Section 7.4.

7. The Derogation Rules under the Nature Protection Directives

7.1 Introduction

This chapter builds on the findings in chapters 5 and 6 and discusses the possibility for renewable energy activities to be permissible due to the derogation rules under the nature protection directives. As seen in chapters 5 and 6, there are conflicts between wind power and hydropower and the nature protection legislation, respectively. Currently, there has not been a successful derogation from the nature protection directives for renewable energy activities in Sweden. This section will therefore primarily refer to EU legislation, case law from the CJEU and the EU Commission Opinions, to analyse the conditions under which a renewable energy activity may fulfil the criteria for such derogations.

7.2 The derogation rules under Article 6(4) of the Habitats Directive

There are cases where an activity, even though it has a negative impact on the protected site, can be permissible due to the derogation rules of the Habitats Directive.⁸⁶² With regard to renewable energy activities there has not yet been any EU case law with that outcome. But as renewable energy activities are increasing and available land diminishes, such case law may be more likely in the future. This section will therefore examine how the derogation rules are understood today and thereafter to analyse whether renewable energy activities, theoretically, can be permissible due to the derogation rules.

As mentioned above, the derogation rules in the Habitats Directive are applicable to Natura 2000 sites classified under the Birds Directive. However, if a member state has failed to classify a site as an SPA site, which should have been protected due to its values, the derogation rules are not applicable. This derives from the reasoning that a member state “cannot derive an advantage from its failure to comply with its Community obligations”.⁸⁶³ Thus

⁸⁶² See Article 6(4) of the Habitats Directive.

⁸⁶³ See Case C-374/98, *Commission v. France*, paras. 45 and 50–57.

if a wind power activity is to be located in an area, which arguably should have been classified as an SPA site, but is not classified, then the wind power activity cannot be considered under Article 6(4).⁸⁶⁴

Article 6(4) of the Habitats Directive implies that an activity can be permissible, even though adversely affecting the integrity of the site concerned, if no alternative solutions exist, and if the renewable energy project is considered to be of “imperative reasons of overriding public interest”. Furthermore, if the above criteria are met, all necessary compensatory measures must be taken to ensure that the overall coherence of Natura 2000 is protected.

Even though the Article is pedagogically constructed, specifying the different steps in order, case law shows that there is confusion on the order in which these criteria apply. The discussion on imperative reasons of overriding public interest is sometimes discussed before considering alternative solutions,⁸⁶⁵ and compensatory measures have been suggested to be taken into account in the assessment under Article 6(3).⁸⁶⁶ This section presents the various stages and how they have been interpreted in EU case law, the EU Commission’s guidance documents and in the EU Commission’s Opinions. There are not many CJEU cases but there are a number of Opinions by the EU Commission. Even though Opinions by the Commission are not legally binding,⁸⁶⁷ they may still give some guidance on how EU law is interpreted and applied in the EU Member States.

7.2.1 Alternative solutions

A first requirement for the derogation rules to be applicable is that no alternative solutions shall exist. This requirement has not often been interpreted strictly by either national courts or the Commission in its Opinions, and the CJEU has not yet provided an interpretation.⁸⁶⁸ In the Guidance Document the Commission suggests that all alternative solutions must be analysed, including both location and form of the activity. In other words, different routes, scales or designs of the activity, or alternative processes must be con-

⁸⁶⁴ This implies that a project cannot be permissible due to being considered of “imperative reasons of overriding public interest”, which is not an alternative under Article 9 of the Birds Directive.

⁸⁶⁵ See Case C-239/04, *Commission of the European Communities v. Portuguese Republic*, as discussed below.

⁸⁶⁶ Regarding compensatory measures; see Case C-521/12, *T.C. Briels and Others v. Minister van Infrastructuur en Milieu*. This case is discussed in more detail below.

⁸⁶⁷ See Article 249 TFEU.

⁸⁶⁸ The CJEU has, however, stated that showing the absence of alternative solutions is a prerequisite for assessing whether the project has to be undertaken due to “imperative reasons of overriding public interest”; see case C-239/04, *Commission of the European Communities v. Portuguese Republic*, para. 24.

sidered.⁸⁶⁹ The Commission further states that, when the national authorities are assessing alternative solutions:

“It should be stressed that the reference parameters for such comparisons deal with aspects concerning the conservation and the maintenance of the integrity of the site and of its ecological functions. In this phase, therefore, other assessment criteria, such as economic criteria, cannot be seen as overruling ecological criteria.”⁸⁷⁰

One Swedish Case – *The Botnia Case* – entailed an Opinion from the Commission, which regarded a route of a train track in the northern part of Sweden.⁸⁷¹ When the developer examined alternative routes of the track, the developer showed two alternative routes which would have little or no impact on the Natura 2000 site. Those sites were, however, not chosen due to seemingly economic reasons. The argument was not that the building of the route would be more costly if it was not built through the Natura 2000 site but that the operation of the train route would be problematic and would result in lower profit. The alternative routes would take 10–20 per cent longer in time and imply that Umeå would continue to be a dead end station and not a through route station as the proposed alternative. The Swedish authorities suggested that because of these reasons the proposed alternative, that affected the Natura 2000 site, was the only viable alternative.⁸⁷² The Commission accepted this reasoning in its Opinion.⁸⁷³

As mentioned above, the guidance document states, when assessing alternative locations, that economic criteria cannot be seen as overruling ecological criteria, as the comparison shall only “deal with aspects concerning the conservation and the maintenance of the integrity of the site and of its ecological functions”.⁸⁷⁴ Economic criteria cannot only refer to the cost of developing the project, there are also economic considerations regarding the

⁸⁶⁹ See EU Commission, *Guidance Document on Article 6(4) of the Habitats Directive*, 2007, p. 6.

⁸⁷⁰ See *Ibid.*, p. 7. Even though guidance documents do not have any legal force, they still have an impact on the interpretation of EU legislation and are often used by national authorities and courts in their legal reasoning in their judgments and decisions, at least in Sweden.

⁸⁷¹ The Botnia Case was highly debated in Sweden and gave rise to a number of decisions by the Government and the Swedish Courts, and a number of appeals; see, for example: RÅ 2004 ref 108, RÅ 2008 ref 89 and MÖD 2006:44.

⁸⁷² At the time the lower Courts considered themselves bound by the Government’s decision and the appeal regarding the Natura 2000 permit was only a judicial review and did not result in any change of the Natura 2000 decision due to it not being considered a point of law (rättsfråga), though the Supreme Administrative Court had a dissenting opinion with a different view, see RÅ 2008 ref 89.

⁸⁷³ See the Commission, Opinion: K(2003) 1309 of 24 April 2003. See also discussion on the Botnia case in Krämer, L., *Journal of Environmental Law* 21:1, 2009, pp. 72–73.

⁸⁷⁴ Compare EU Commission, *Guidance Document on Article 6(4) of the ‘Habitats Directive’ 92/43/EEC*, 2007, p. 7. See also Michanek, G. and Zetterberg, C., *Den svenska miljörätten*, 2012, p. 228.

operation of the activity. It is interesting to note how the Commission accepted this line of argument. Even though the prerequisite of showing the absence of alternative solutions was not handled appropriately, the project was considered to be of “imperative reasons of overriding public interest”.⁸⁷⁵ In addition, the quality of the reasoning in the Opinion can be questioned due to the acceptance of the project even though no compensatory measures were provided by the Swedish authorities.⁸⁷⁶

Another Opinion, which is energy-related, was in respect of an extension of a coal mine in Haniel, Germany. In this case it can be questioned whether the Commission adequately assessed whether the criteria for alternatives was fulfilled. Germany argued that there were no alternative solutions to the extension of the coal mine. However, this is questionable as alternative forms and processes are to be considered in accordance with the Guidance Document.⁸⁷⁷ The Commission accepted the argument that there were no alternative solutions without discussing whether the objective of the activity (energy production) could be satisfied with a different process. This is arguably not in accordance with the Guidance Document.⁸⁷⁸ Alternative solutions, however, have not stretched to alternative forms in any other Opinions.⁸⁷⁹ This outcome is especially interesting in the renewable energy context where a transition to more renewable energy sources is a priority in the EU Member States. The meaning of what is required by alternative solutions could therefore also include alternative forms of production (in accordance with the Guidance Document) to better reflect the EU environmental and energy policy objectives.

7.2.2. Imperative reasons of overriding public interest

A prerequisite, to be able to consider whether an activity is one of imperative reasons of overriding public interest, is to show that no alternative solutions exist. This is pointed out in Case C-239/04, where the court clarified that a Member State fails to fulfil its obligations under article 6(4) of the Habitats Directive if it implements a project despite a negative environmental impact

⁸⁷⁵ Michanek and Zetterberg point out that the Opinion by the Commission is not in line with the Guidance Document or the Habitats Directive, emphasizing that economic interest cannot be prioritised over ecological interests; see Michanek, G. and Zetterberg, C., *Den svenska miljörätten*, 2012, pp. 227–228.

⁸⁷⁶ See discussion in Krämer, L., *Journal of Environmental Law* 21:1, 2009, p. 73.

⁸⁷⁷ Compare EU Commission, *Guidance Document on Article 6(4) of the ‘Habitats Directive’ 92/43/EEC*, 2007, p. 6. See also the reasoning in TGV Est Case and the La Brena II and Granadilla Port Cases, as discussed in the EU Commission, *Guidance Document on Article 6(4) of the ‘Habitats Directive’ 92/43/EEC*, 2007, pp. 8–9.

⁸⁷⁸ The Commission suggests that alternative solutions could involve: “alternative locations or routes, different scales or designs of development, or alternative processes”; see EU Commission, *Guidance Document on Article 6(4) of the ‘Habitats Directive’ 92/43/EEC*, 2007, p. 6.

⁸⁷⁹ See discussion on alternative solutions in Krämer, L., *Journal of Environmental Law* 21:1, 2009, p. 80.

assessment in accordance with Article 6(3), and without having demonstrated the absence of alternative solutions.⁸⁸⁰ In C-304/05 it was also emphasised that Article 6(4) can only be applied after the implications of the project have been studied in accordance with Article 6(3) of the directive as

“Knowledge of those implications in the light of the conservation objectives relating to the site in question is a necessary prerequisite for the application of Article 6(4), since, in the absence of those elements, no condition for the application of that derogating provision can be assessed. The assessment of any imperative reasons of overriding public interest and that of the existence of less harmful alternatives require a weighing up against the damage caused to the site by the plan or project under consideration. In addition, in order to determine the nature of any compensatory measures, the damage to the site must be precisely identified”⁸⁸¹

In C-304/05 it was also emphasised that Article 6(4) must be interpreted strictly, as it constituted a derogation from Article 6(3).⁸⁸² In C-182/10 the CJEU further spells out the requirements under Article 6(4). The Court suggested:

“An interest capable of justifying, within the meaning of Article 6(4) of the Habitats Directive, the implementation of a plan or project must be both ‘public’ and ‘overriding’, which means that it must be of such an importance that it can be weighed up against that directive’s objective of the conservation of natural habitats and wild fauna and flora.”⁸⁸³

The Court thereafter suggested that projects should satisfy the above mentioned conditions only in exceptional circumstances,⁸⁸⁴ and more specifically that the project under assessment – the construction of infrastructure designed to accommodate a management centre – could not constitute an imperative reason of overriding public interest within the meaning of Article 6(4) of the Directive.⁸⁸⁵

⁸⁸⁰ The court here also mentioned that any reasonable scientific doubt as to the absence of any adverse effect on the integrity of the site must be removed before the project is authorised; see Case C-239/04, *Commission of the European Communities vs. Portuguese Republic*, para. 24.

⁸⁸¹ See Case C-304/05, *Commission v Italian Republic*, para. 83; see also: Case C-182/10, *Solvay and Others*, para. 74.

⁸⁸² See Case C-304/05, *Commission v Italian Republic*, para. 82. This case concerned improvement of a Ski resort in order to facilitate an accommodation of the 2005 World Alpine Ski Championship. In this case the socio-economic interests of the site were discussed without having undertaken an appropriate assessment in accordance with Article 6(3). The Court concluded that an appropriate assessment was a prerequisite to be able to discuss whether the project was considered to be one of imperative reasons of overriding the public interest. The strict interpretation was also emphasised in C-182/10, *Solvay and Others*, para. 73.

⁸⁸³ See Case C-182/10, *Solvay and Others*, para. 75.

⁸⁸⁴ *Ibid.*, para. 76.

⁸⁸⁵ *Ibid.*, para. 77.

Apart from the discussion in C-182/10, there is no case law from the CJEU that defines what *is* and what *is not* of “imperative reasons of overriding public interest”. Some guidance, however, can be found in the EU Commission Guidance Document, where it is spelled out that:

“It is reasonable to consider that the "imperative reasons of overriding public interest, including those of social and economic nature" refer to situations where plans or projects envisaged prove to be indispensable:
-within the framework of actions or policies aiming to protect fundamental values for the citizens' life (health, safety, environment);
-within the framework of fundamental policies for the State and the Society;
-within the framework of carrying out activities of economic or social nature, fulfilling specific obligations of public service.”⁸⁸⁶

A few cases are also presented that are suggested to be considered to be of that nature.⁸⁸⁷ Infrastructure such as motorways,⁸⁸⁸ high speed lines,⁸⁸⁹ and the building of ports,⁸⁹⁰ are examples of projects that are considered to be of “imperative reasons of overriding public interests”. The Commission also emphasizes that projects of that kind should have a long-term interest and that short-term interests should not be considered to be of such importance that they can outweigh the conservation interest of the Directive.⁸⁹¹

If a site is particularly important from a biological point of view, if it hosts a priority natural habitat and/or priority species, the interpretation of *overriding public interests* becomes stricter. Then it is basically only those interests concerning human health, public safety or overriding beneficial consequences for the environment that can be considered, or due to “other reasons of imperatives reasons of overriding public interest”. In these cases the Commission needs to formulate an Opinion.⁸⁹²

The Commission of the European Union has in its Opinions suggested when certain projects are acceptable due to the application of the derogation rules in the Habitats Directive. In *The Botnia Case*, the Commission suggested that the Botnia project was an infrastructure project of “imperative reasons of overriding public interest” due to a number of reasons. One of

⁸⁸⁶ See The EU Commission, *Guidance Document on Article 6(4) of the 'Habitats Directive' 92/43/EEC*, 2007, p. 8.

⁸⁸⁷ *Ibid.*, p. 8–9.

⁸⁸⁸ The development of an intersection of the *Peene Valley* in Germany in order to link a small region (with exceptionally high unemployment) with the central regions, see *Ibid.*, p. 8.

⁸⁸⁹ High speed line in France – the TGV East, due to lack of options for linking the existing lines, see *Ibid.*, p. 9.

⁸⁹⁰ Project Mainport Rotterdam in the Netherlands. Due to increased demand for space in the harbour if the competitive position of the harbour was to be maintained. It was also justified by the fact that by enabling more transportation of goods to go by boat instead of by road, the development was in fact reducing greenhouse gas emissions and congestion, see *Ibid.*, p. 9.

⁸⁹¹ *Ibid.*, p. 8; compare the EU Commission Opinion regarding the extension of a coal mine; see: European Commission, C(2003) 1304 of 24 April 2003.

⁸⁹² See Article 6(4), para. 2 of the Habitats Directive.

which was that the project was an environmental form of transportation in the region; another reason was that the project would create better conditions for cooperation among northern cities.⁸⁹³

In the Opinion, regarding the extension of a coal mine in Haniel, Germany, the Commission pointed out that the extension of the mine was not important due to security of supply as the mine only contributed one per cent of Germany's energy needs and enough coal was available on the world market. And as coal mining was not competitive in Europe, the workers would lose their jobs anyway. Despite these arguments by the Commission it accepted the short-term negative effects of not expanding the mine (due to social and economic effects of the region) to constitute "imperative reasons of overriding public interest".⁸⁹⁴ This outcome is arguably not satisfactory and not in line with the Guidance Document, where it is clearly stated that a public interest can only be considered *overriding* if it is a long-term interest.⁸⁹⁵

In the A20 motorway case, in Germany, the Commission adopted two Opinions that to some extent clarified the meaning of the derogation clause in Article 6(4), suggesting that the two sections of the motorway were projects that could be acceptable due to the derogation rules in the Habitats Directive.⁸⁹⁶ The Commission suggested in its Opinions that no (less damaging) alternatives existed,⁸⁹⁷ and that considering the socio-economic impacts, in light of the high unemployment in the Region, the project could be considered to be of "imperative reasons of overriding public interest" and therefore justify the negative impact on the Natura 2000 sites. The highway was also necessary to link the Mecklenburg-Western Pomerania with the central regions of the Community.⁸⁹⁸

As mentioned above, an Opinion by the Commission is not legally binding but still has an impact on how EU law is interpreted and applied in the EU Member States.⁸⁹⁹ However, if the Member State does not act in accord-

⁸⁹³ European Commission, Opinion: K(2003) 1309 of 24 April 2003; see also discussion on the Botnia case in Krämer, L., *Journal of Environmental Law* 21:1, 2009, pp. 72–73

⁸⁹⁴ See Commission, C(2003) 1304 of 24 April 2003; see also Krämer, L., *Journal of Environmental Law* 21:1, 2009, p. 71.

⁸⁹⁵ See the EU Commission, *Guidance Document on Article 6(4) of the 'Habitats Directive' 92/43/EEC*, 2007, p. 8.

⁸⁹⁶ See Opinion on the planned A20 motorway in Germany, which will intersect the Trebel and Recknitz Valley pursuant to Article 6(4) of Directive 92/43/EEC on the conservation of natural habitats and of wild flora and fauna, OJ EC 1995, C 178/3 (hereafter referred to as: Opinion on the Trebel and Recknitz Valley); Opinion on the intersection of the Peene Valley by the planned A20 motorway pursuant to Article 6(4) of Directive 92/43/EEC on the conservation of natural habitats and of wild flora and fauna, OJ 1996, L6/14. (Hereafter referred to as: Opinion on the River Peene Valley).

⁸⁹⁷ See Opinion on the Trebel and Recknitz Valley, para 4.5; Opinion on the River Peene Valley, para 4.1.

⁸⁹⁸ See Opinion on the Trebel and Recknitz Valley, para 4.2–4.6; Opinion on the River Peene Valley, para 4.2.

⁸⁹⁹ See Article 249 of the EC Treaty.

ance with the Opinion, the Commission can decide to take the case to the CJEU.⁹⁰⁰ A negative Opinion could also help a person to bring the case to national courts if it was not followed up by the Member State. There are therefore incentives for the Member State to prepare the case accordingly to get the informal permission from the Commission to derogate from the Habitats Directive. It is, however, questionable whether socio-economic reasons can be valid arguments for considering a project to be of overriding public interest when located in priority natural habitats.⁹⁰¹ It has been argued that social-economic interests could never be a valid ground to justify such a project.⁹⁰²

The quality of the Opinions has also been questioned and criticised in the literature.⁹⁰³ Krämer suggests that hardly any of the Opinions would pass the CJEU and neither live up to the requirements of Article 6(4) or to the Guidance Document that the Commission itself has composed. His hardest critique of the Opinions is on lack of transparency, as the Opinions are not all published online with easy access for the public.⁹⁰⁴

7.2.3. Compensatory measures

If there are no alternative solutions and the project must be carried out for imperative reasons of overriding public interest, the Member State shall “take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected”.⁹⁰⁵ The Guidance Document begins by acknowledging that compensatory measures are to be distinguished from mitigation measures, where compensatory measures are independent of the project and intended to offset the negative effects of the plan/project. Mitigation measures are instead aimed at minimizing the negative impacts on the specific site.⁹⁰⁶ Even though this distinction is clear in the Guidance Document, compensatory measures have nevertheless been suggested to be considered mitigation measures by national courts. This was the case in *T.C. Briels and Others v. minister van Infrastructuur en Milieu*.⁹⁰⁷ In this case the

⁹⁰⁰ See Article 226 EC Treaty.

⁹⁰¹ See Chapter 6 (4), para. 2 of the Habitats Directive.

⁹⁰² See Chris B., *Implementatie van de Habitat-Richtlijn in het Nederlandse natuurbeheersingsrecht*, as referred to in Nollkaemper, A., *Journal of Environmental Law*, Vol. 9, No.2, 1997, p. 279.

⁹⁰³ See, for example, McGillivray, D., *Journal of Environmental Law*, 24:3, 2012, pp. 417–450; and Krämer, L., *Journal of Environmental Law*, 21:1, 2009, pp. 59–85.

⁹⁰⁴ See Krämer, L., *Journal of Environmental Law*, 21:1, 2009, pp. 60–61 and p. 84.

⁹⁰⁵ Even though it is stated that the Member State “shall” take all appropriate compensatory measures it is not required by the EU Commission to ensure that such measures are undertaken and it is never enforced by the EU Commission. As noted by, for example, Tafur, I., and Clutton R., *The Habitats Directive – A Developer’s Obstacle Course?*, 2012, p. 181.

⁹⁰⁶ See the EU Commission, *Guidance Document on Article 6(4) of the ‘Habitats Directive’* 92/43/EEC, 2007, 2007, p. 10.

⁹⁰⁷ See Case C-521/12, *T.C. Briels and Others v. minister van Infrastructuur en Milieu*.

project concerned a widening of a motorway, which was identified as affecting a Natura 2000 site. The referring court asked, in essence, whether measures provided for the creation of an area of equal or greater size of the same natural habitat type within the same site could be considered as mitigation measures or compensatory measures. Thus, such measures should be considered under the Habitats Directive Article 6(3) when assessing whether the project “will not adversely affect the integrity of the site”, or instead as compensatory measures, within the meaning of Article 6(4) of the Habitats Directive.⁹⁰⁸ The Court pointed out that, even though protective measures forming part of a project could be taken into account when assessing whether the project has adverse effects on the integrity of the site, that is different from protective measures that are aimed at compensating for the negative effect of the project on a Natura 2000 site, which is not to be included in the assessment under Chapter 6(3).⁹⁰⁹ The Court continued to state that in this specific case it was clear that the measures were aimed at compensating the negative effects of the motorway.⁹¹⁰ The Court further noted that it was hard to predict whether compensating measures had any positive effect. Such potential effect would be visible only in the future, which was also a reason why such measures could not already be considered under Article 6(3).⁹¹¹ The Court stated:

“It is only if, in spite of a negative assessment carried out in accordance with the first sentence of Article 6(3) of the Habitats Directive, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, and there are no alternative solutions, that Article 6(4) of the Habitats Directive provides that the Member State is to take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected.”⁹¹²

The Court thereafter concluded that even though compensatory measures were undertaken prior to assessing whether the project would have any effect on the integrity of the site, such measures were not to be considered as mitigation measures under Article 6(3) of the Habitats Directive and that such measures were to be considered as “compensatory measures” within the meaning of Article 6(4), if the prerequisite in that article was to be fulfilled.⁹¹³

In cases where compensatory measures are needed, it is nevertheless interesting to look at their quality, as it is difficult to know whether or not compensatory measures will have a positive effect. The idea behind emission

⁹⁰⁸ Ibid., para. 17.

⁹⁰⁹ Ibid., paras. 28–29.

⁹¹⁰ Ibid., para. 31.

⁹¹¹ Ibid., para. 32.

⁹¹² Ibid., para. 34.

⁹¹³ Ibid., para. 39.

trading, that emissions in one place can be compensated with a reduction of emissions elsewhere, does not function so well when it comes to habitats as they are of local character and cannot easily be reproduced elsewhere.⁹¹⁴

On turning to the legal requirement, it is not always the case that compensatory measures are properly assessed. This has not been discussed much in case law, but the Opinions presented by the EU Commission suggest that the enforcement of the compensatory requirement is lacking.⁹¹⁵ As mentioned above, in the *Botnia Case*, the Commission gave a positive Opinion despite the lack of presentation of compensatory measures.⁹¹⁶ The EU Commission does not provide any clear guidance on what type of compensatory measures are appropriate or not, or what level of compensatory measures are required.⁹¹⁷

The last criterion in the provision under Chapter 6(4) further states: "...the Member State shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected." The aim of the compensatory measures therefore has a comprehensive approach, suggesting that the compensatory measures need to be undertaken in view of the Natura 2000 network as a whole. The EU Commission Guidance Document suggests a few criteria on the nature of the compensatory measures to be able to protect the coherence of the site.⁹¹⁸ As mentioned above, even though the idea behind compensatory measures is well intended, it is difficult to ensure that such measures actually make certain that the overall coherence of the Natura 2000 network is protected.

7.2.4 Discussion

In light of the CJEU case law and the Opinions by the Commission, it transpires that the implementation and application of the provision set out in Article 6 is not always satisfactory. It is only the parts that have been interpreted by the CJEU that have resulted in a more adequate interpretation of the provision. The EU Commission Guidance Document suggests a rather

⁹¹⁴ For a further discussion on compensation measures, see McGillivray, D., *Journal of Environmental Law*, 24:3, 2012, pp. 417–450.

⁹¹⁵ The Commission's approach to compensation measures is discussed in McGillivray, D., *Journal of Environmental Law*, 24:3, 2012, pp. 417–450.

⁹¹⁶ See the Commission, Opinion K(2003) 1309 of 24 April 2003; see also discussion on the Botnia case in; Darpö, J., *JP infonet*, 19 December 2008; and Krämer, L., *Journal of Environmental Law* 21:1, 2009, pp. 72–73. However, the Commission gave a positive opinion with the requirement that the Swedish authority had to send in a report describing the compensatory measures undertaken.

⁹¹⁷ See McGillivray, D., *Journal of Environmental Law*, 24:3, 2012, pp. 417–450. For the criteria set up by the Commission regarding compensatory measures, see the European Commission *Guidance Document on Article 6(4) of the 'Habitats Directive'* 92/43/EEC, 2007, pp. 10–23.

⁹¹⁸ See European Commission, *Guidance Document on Article 6(4) of the 'Habitats Directive'* 92/43/EEC, 2007, p. 13.

strict interpretation of the provisions but the Commission does not itself follow it in its Opinions to the Member States.

The CJEU has set it straight that it is a low level of risk – no “reasonable scientific doubt” – that is required when considering whether an activity will adversely affect the integrity of the site,⁹¹⁹ and that measures aimed at compensating the loss, are *compensatory measures*, and not mitigation measures, and cannot therefore already be taken into account in the appropriate assessment under Article 6(3).⁹²⁰ However, it is still not established in case law to what extent alternative solutions need to be presented (both regarding location and form) and what can actually be considered “imperative reasons of overriding public interest”. The current interpretation by the EU Commission and the Member States seems to be rather wide, and also not in line with the interpretation suggested in the EU Commission Guidelines. Even though the EU Commission Guidelines and the EU Commission Opinions are not legally binding, their mixed interpretations give rise to confusion on how to interpret the meaning of “imperative reasons of overriding public interest”. It is not until the CJEU more closely has settled how to interpret the concept that it can give rise to a more coherent interpretation in EU Member States.

In the context of renewable energy projects habitat protection has become one of the barriers towards development, primarily for new wind power production. Depending on the ecological interest protected in the site, wind power projects may be likely to adversely affect the integrity of the site. If so, such projects can only be permitted if there are no alternative solutions and if the project in question is to be considered of overriding public interest.

There is no established EU case law stating that certain types of projects are, in general, considered to be of overriding public interest. However, the *Regulation on guidelines for trans-European energy infrastructure* suggests that transmission line projects might in some cases be of that nature.⁹²¹ The EU Regulation suggests that “projects of common interest” should be given priority status and be considered to be of overriding public interest.⁹²² The Regulation does not suggest that energy infrastructure projects of common interest take precedence over the EU nature protection directives, but solely that projects of common interest could be considered to be of overriding public interest if the provisions are fulfilled in the respective directives.

Article 7(8) of the Regulation states that if a project is considered to be of overriding public interest it can only be undertaken if there are *no alternative*

⁹¹⁹ See Case C-127/02, the Wadenzee Case, para. 61.

⁹²⁰ See Case C-521/12, *T.C. Briels and Others v. minister van Infrastructuur en Milieu*, para. 32.

⁹²¹ See Regulation on Guidelines for Trans-European Energy Infrastructure, as presented and discussed in Section 2.6.

⁹²² See Preamble, para. 28; and Article 7(8) of the Regulation on Guidelines for Trans-European Energy Infrastructure.

solutions (i.e. no other formations or locations are feasible). In addition, necessary compensatory measures need to be undertaken, which can be very costly and possibly stop the activity. This being said, if the transmission line is to be built (e.g. through a sensitive bird migration area) an underground cable would be a better option and a transmission line located above ground should not be allowed. It could also be possible sometimes to change the location of the grid infrastructure to a different route. There is no opening in the Habitats Directive to evaluate whether or not the different route is cost-effective.⁹²³ In sum, if the nature protection directives are to be fulfilled, the location of transmission lines can rarely be located in sensitive areas, only if no alternative solutions are available and appropriate compensatory measures are undertaken.

The possibility for renewable energy projects, such as wind, solar or hydropower to be permissible if in conflict with the provision in Article 6(3) may not be very likely. For example, a small wind power park or cultivating land for intensive biomass production cannot, in my opinion, be regarded as such a project. It is important to remember that the possibility to derogate is coupled with the specific activity under assessment and not the interest it is promoting. Hence, even though renewable energy is promoted with the aim of combating climate change (which is arguably of overriding public interest), the specific activity that helps promote that objective is not necessarily of that nature. However, large-scale installations of renewable energy, for example, a wind power park with 1000 wind turbines, or a development of a new hydropower installation in a large river, could be considered to be of that magnitude. If such a large project was initiated in a Member State where the national electricity production is low and it is highly dependent on imported electricity, such a project may be considered to be of overriding public interest. This is especially true in a region that may face regular black-outs, due to a lack of stable electricity production. It may, however, be harder to argue that a large-scale project is of such importance in a Member State where there is already a high production of electricity. Even though some renewable energy projects may be considered to be of overriding public interest, it is only relevant if there are no other solutions available, which, with regard to wind power development, should in most cases be possible.

⁹²³ See Michanek, G. and Zetterberg, C., *Den Svenska miljörätten*, 2012, p. 228; and discussion in Section 7.2.1.

7.3 The derogation rules for species protection

7.3.1 Derogation rules under Article 16(1) of the Habitats Directive

The derogation rules under the Habitats Directive differ from the ones specified in the Birds Directive. As mentioned above it seems impossible to find any criterion under the derogation rules of the Birds Directive to be applicable to renewable energy projects. The possibility for a renewable energy project to be permissible, despite being prohibited in accordance with Article 12, is also limited. Article 16(1) of the Habitats Directive states:

“Provided that there is no satisfactory alternative and the derogation is not detrimental to the maintenance of the populations of the species concerned at a favourable conservation status in their natural range, Member States may derogate from the provisions of Articles 12, 13, 14 and 15 (a) and (b):

(a) in the interest of protecting wild fauna and flora and conserving natural habitats;

(b) to prevent serious damage, in particular to crops, livestock, forests, fisheries and water and other types of property;

(c) in the interests of public health and public safety, or for other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment;

(d) for the purpose of research and education, of repopulating and re-introducing these species and for the breedings operations necessary for these purposes, including the artificial propagation of plants;

(e) to allow, under strictly supervised conditions, on a selective basis and to a limited extent, the taking or keeping of certain specimens of the species listed in Annex IV in limited numbers specified by the competent national authorities.”

In addition to the requirement that there are *no satisfactory alternative*,⁹²⁴ the derogation cannot be “detrimental to the maintenance of the populations of the species concerned at a favourable conservation status in their natural range”. In other words, derogation is not allowed if it results in a negative impact on a species population status; though it may allow that a few individuals of a species are killed as long as it does not affect the status of the species.

Article 16 has never been discussed in relation to renewable energy activities in EU case law.⁹²⁵ If a renewable energy activity was to be discussed

⁹²⁴ In Article 6(4) formulated as *absence of alternative solutions*, implying that the alternatives specified in Article 16 are not just any solutions, they must also be satisfactory.

⁹²⁵ Article 16 of the Habitats Directive is most often applicable for specific hunting licences, see for example, Case C-342/05, *The Finnish Wolf Case*.

in relation to the derogation rules it would most likely be the provision in section 16(1)(c) that would be applicable; if the project was considered to be of “overriding public interest”. As discussed above, it is questionable whether a small production site for renewable energy can be considered being of that nature, while a large one may, depending on the local condition for electricity production in the area.⁹²⁶ However, as renewable energy installations are often not site specific, it may be located in another place where conflict with biodiversity concerns does not exist.

7.3.2 Derogation rules under the Birds Directive

The Birds Directive has its own derogation rules stipulated in Article 9(1), which states:

- “1. Member States may derogate from the provisions of Articles 5 to 8, where there is no other satisfactory solution, for the following reasons:
- (a) — in the interests of public health and safety,
 - in the interests of air safety,
 - to prevent serious damage to crops, livestock, forests, fisheries and water,
 - for the protection of flora and fauna;
 - (b) for the purposes of research and teaching, of re-population, of re-introduction and for the breeding necessary for these purposes;
 - (c) to permit, under strictly supervised conditions and on a selective basis, the capture, keeping or other judicious use of certain birds in small numbers.”

When member state authorities exercise their powers concerning the granting of derogations, they must take account of a number of criteria relating to geographic, climatic, environmental and biological factors and, especially, to the situation regarding the specific species’ reproduction and total annual mortality rate (owing to natural causes).⁹²⁷ The derogation rules are to be interpreted restrictively, and the national legislation providing rules for derogations “must specify the criteria for the derogation in a clear and precise manner”.⁹²⁸

The possibility to derogate from the Birds Directive was examined in Case C-412/85 where it was stated that it was not possible to exempt certain activities – “the normal use of the land for agricultural, forestry or fishing purposes” – from the prohibition laid down in Article 5, if not fulfilling the requirements for derogations laid down in Article 9 of the Birds Directive. As the normal use of land for the specified activities cannot be attributed to

⁹²⁶ See discussion on the concept in Section 3.4.3.

⁹²⁷ See Case C-60/05, *WWF Italia and others*, para. 25.

⁹²⁸ *Ibid.*, para 34.

any of the reasons set out in Article 9 the exemption for those activities were not accepted by the Court.⁹²⁹

Most cases where the derogation rules from strict species protection are used are concerned with hunting permits. Based on the wording of Article 9 of the Birds Directive, it seems impossible that a renewable energy project will ever be considered permissible based on those derogation rules. In contrast to the Habitats Directive it is not possible to derogate if the activity is considered to be of “imperative reasons of overriding public interest”.⁹³⁰ However, Sweden has not implemented separate derogation rules for protection of bird species. This is especially interesting with regard to the possibility of dispensation for wind power activities as such activities often come in conflict with the protection of certain bird species. This implies that the dispensation possibility in Sweden is in fact more generous than the Birds Directive requires.⁹³¹ However, there are no cases from the Land and Environmental Court of Appeal of successful dispensation from the Species Protection Regulation (for any species) with regard to wind power in Sweden.

7.4 Derogation rules under the Water Framework Directive

7.4.1 Introduction

As discussed earlier in this dissertation,⁹³² due to the implications of the *Weiser Case*, it may be difficult for operators of new hydropower installations to grant a permit as such installations will most likely lead to a deterioration of the water body’s status. Although, new hydropower installations may be considered permissible due to the derogation rules under the Water Framework Directive (Article 4(7)). However, this provision is not implemented correctly into the Swedish law as an operator cannot rely on the derogation rules in the permit procedure.⁹³³ There are also other derogation rules in the Water Framework Directive which are not yet discussed much in the literature. While the derogation rules with regards to the deadline to reach the objectives set out in the Water Framework Directive (Article 4(4)) has been

⁹²⁹ See Case C-412/85, *Commission v. Federal Republic of Germany*, para 19. See also reasoning in Case C-6/04, *Commission v. United Kingdom*, para. 113.

⁹³⁰ Compare 6(4) of the Habitats Directive. See also Case C-192/11, *Commission v. Poland*, para. 39.

⁹³¹ Compare Section 14 of Swedish Regulation on Species Protection.

⁹³² See chapters 3 and 6.

⁹³³ This is pointed out by the European Commission in a letter of formal notice, see: C(2016)6208 final, pp. 19–20. Today, it is only the water agencies that have the authority to use the derogation rules in accordance with Chapter 4, section 11 of the Regulation on Water Quality.

used in Sweden (as many other Member States), the possibility to set lower objectives in line with Article 4(5) are not yet explored with regards to the quality objectives of “good ecological status” or “good ecological potential”. In this section, the legal requirements for such derogations are analysed and discussed.⁹³⁴

7.4.2 The Possibility to lower the objectives in accordance with Article 4(5) of the Water Framework Directive

If a body of water is so affected by human activity that it would be infeasible⁹³⁵ or disproportionately expensive to reach the objectives of “good ecological status” or “good ecological potential”, Member States may aim to achieve less stringent environmental objectives in accordance with Article 4(5) of the Water Framework Directive.⁹³⁶ This is possible if a number of conditions are met. One condition suggests that there can be no alternative solutions:

“the environmental and socioeconomic needs served by such human activity cannot be achieved by other means, which are a significantly better environmental option not entailing disproportionate costs;”⁹³⁷

The Member State must ensure that the highest ecological (and chemical) status possible is achieved “given impacts that could not reasonably have been avoided due to the nature of the human activity”.⁹³⁸ In addition, no further deterioration is allowed,⁹³⁹ and the reasons for the establishment of the less stringent objectives shall be mentioned in the river basin management plans.⁹⁴⁰

⁹³⁴ If a hydropower installation is to be permissible based on the derogation rules in the Habitats Directive (if adversely affecting a Natura 2000 site) the criteria specified in Article 6(4) needs to be fulfilled. However, this section focuses only on the derogation rules under the Water Framework Directive. For a discussion on the derogation rules under the Habitats Directive, see Section 7.2.

⁹³⁵ The Commission suggests that the term “infeasible” is broader than the term “technical feasibility” used in Article 4(4) Water Framework Directive. See the European Commission, *CIS Guidance Document No. 20*, 2009, p.22.

⁹³⁶ In accordance with the Guidance Document such less stringent objective should “represent the condition expected in the water body once all measures that are feasible and not disproportionately expensive have been taken.” *Ibid.*, p. 21.

⁹³⁷ See Article 4(5)(a) of the Water Framework Directive.

⁹³⁸ See Article 4(5)(b) of the Water Framework Directive. However, it could be questioned if not hydropower’s impact could partly have been avoided, if mitigation measures were implemented when such operations were installed.

⁹³⁹ See Article 4(5)(c) of the Water Framework Directive. The Commission points out that a less stringent objective does not imply that “the other quality elements are permitted to deteriorate to the status dictated by the worst affected quality element” or that “the potential for improvement in the condition of other quality elements can be ignored.” See the European Commission, *CIS Guidance Document No. 20*, 2009, pp. 21–22.

⁹⁴⁰ See Article 4(5)(d) of the Water Framework Directive.

Thus, in some cases the objective of the water body may be set even lower in accordance with Article 4(5). For example, in an already (heavily) exploited water way, where there is no reasonable expectation that the water system can be satisfactorily improved, due to the many bodies of water that are affected by hydropower (or other activities), it may be considered infeasible or disproportionately expensive to undertake the measures required to reach “good ecological potential”. This implies that if the proposed mitigation measures are expected to improve the status, but only marginally, the objective may be lowered due to the disproportionate cost such mitigation measures imply.

Another example when Article 4(5) may be used is for water bodies that are surrounded by bodies of water that are considered heavily modified, but is not itself of that nature. In such cases it may be *infeasible* to reach the objective of “good ecological status”. If so, lower objectives may be set for those water bodies in accordance with Article 4(5). Thus, this provision may be explored further, as there may be many water bodies that have infeasible targets, or targets that are disproportionately costly to meet due to the status of the river as a whole.⁹⁴¹

7.4.3 The possibility for hydropower installations to be permissible in accordance with Article 4(7)

As any intervention in a water body, such as a new hydropower installation, is likely to give rise to some impact, possibly a deterioration of the status of the water body, the derogation rules may become more important now after the clarification of the meaning of “deterioration” by the CJEU.⁹⁴²

The derogation rules from the Water Framework Directive can be found in Article 4(7) which states:

“Member States will not be in breach of this Directive when:

- failure to achieve good groundwater status, good ecological status or, where relevant, good ecological potential or to prevent deterioration in the status of a body of surface water or groundwater is the result of new modifications to the physical characteristics of a surface water body or alterations to the level of bodies of groundwater, or
- failure to prevent deterioration from high status to good status of a body of surface water is the result of new sustainable human development activities and all the following conditions are met:
 - (a) all practicable steps are taken to mitigate the adverse impact on the status of the body of water;

⁹⁴¹ Although the application of the derogation rules also has limits. See: Article 4(8) and (9) of the Water Framework Directive, as discussed in Section 7.4.3.

⁹⁴² See Section 3.4.6.2.

(b) the reasons for those modifications or alterations are specifically set out and explained in the river basin management plan required under Article 13 and the objectives are reviewed every six years;

(c) the reasons for those modifications or alterations are of overriding public interest and/or the benefits to the environment and to society of achieving the objectives set out in paragraph 1 are outweighed by the benefits of the new modifications or alterations to human health, to the maintenance of human safety or to sustainable development, and

(d) the beneficial objectives served by those modifications or alterations of the water body cannot for reasons of technical feasibility or disproportionate cost be achieved by other means which are a significantly better environmental option.”

Hydropower plants are considered to be covered by the provision in Article 4(7) as hydropower gives rise to modifications to water bodies’ hydro-morphological characteristics.⁹⁴³ First, all practical steps must be taken to mitigate the adverse impact. Here it is important to keep in mind that it is *mitigation* measures and not *compensatory* measures that are required.⁹⁴⁴ Hence planting fish or creating new spawning places for fish are not covered.

The possibility for hydropower projects to be considered of “overriding public interest”,⁹⁴⁵ and therefore permissible under the derogation rules of the Water Framework Directive, has been discussed indirectly in C-346/14. The case was initiated by the European Commission, which considered that the decision of granting a hydropower plant a permit, despite its impact on the water system, was not acceptable under the Water Framework Directive. The Court dismissed the Commission’s action as it had failed to establish the infringement as alleged. The Commission had not shown that the report that the derogation decision was based on was incomplete or incorrect.⁹⁴⁶

However, even though the outcome of the case is rather technical and does not give much guidance on how to interpret the concept of “overriding public interest”, the Court expressed the view that

“it should be noted that the construction of a hydropower plant, such as the one envisaged through the contested project, may in fact be an overriding public interest.”⁹⁴⁷

⁹⁴³ See the European Commission, *CIS Guidance Document No. 20*, 2009, p. 24.

⁹⁴⁴ *Ibid.*, p. 27. Furthermore, the reasons for the modifications need to be specified in management plans in accordance with Article 4(7)(b) of the Water Framework Directive.

⁹⁴⁵ The Guidance Document refers to the Habitats Directive, which has a similar provision; suggesting that overriding public interest may “refer to situations where plans or projects envisaged prove to be indispensable within the framework of: Actions or policies aiming to protect fundamental value for citizens’ lives (health, safety, environment); Fundamental policies for the state and the society; Carrying out activities of an economic or social nature, fulfilling specific obligations of public services”. *Ibid.*, p. 27.

⁹⁴⁶ See Case C-346/14, *Commission v Austria*, para. 82.

⁹⁴⁷ *Ibid.*, para. 69.

Though the Court stated that a hydropower project *may* be considered to be of overriding public interest it did not state that hydropower projects were always considered to be of that nature. Instead, the Court states that Member States “must be allowed a certain margin of discretion for determining whether a specific project is of such interest”.⁹⁴⁸

Given the information provided in the case of the specific hydropower installation it is questionable how such a project can be considered to be of overriding public interest, especially in light of the size of the plant. The specific project was a small hydropower plant, producing only a small fraction of the total electricity in the region.⁹⁴⁹ It is, of course, important to produce renewable electricity in light of the pressing climate threat. However, such a small hydropower project would not give rise to much reduction in GHG emissions and may most likely not be considered to be more important than reaching the objective set out in accordance with the Water Framework Directive.

It is important to keep in mind that the Court referred to the Member States’ discretion when it comes to assessing whether or not a certain project is of overriding public interest.⁹⁵⁰ The Court never assessed whether Austria’s derogation decision was undertaken correctly. In other words, a project that is considered to be of overriding public interest in Austria may not be considered to have such a status in Sweden, or in any other Member State. I find it more likely that a developer of a large hydropower plant could be successful with such an argument as it would give rise to a large production (greater contribution to the reduction of GHG emissions). Furthermore, if the plant was to be located in a waterbody that was already of low quality and where its ecological values was already destroyed and/or difficult to restore, then a derogation may be more likely.

However, another interesting aspect of the derogation rules in the Water Framework Directive is how to interpret the meaning of “and/or” in Article 4(7)(c), where it is stated:

“the reasons for those modifications or alterations are of overriding public interest and/or the benefits to the environment and to society of achieving the objectives set out in paragraph 1 are outweighed by the benefits of the new modifications or alterations to human health, to the maintenance of human safety or to sustainable development,”

⁹⁴⁸ Ibid., para. 70.

⁹⁴⁹ The hydropower plant contributed to 2/1000 of the regional production and 0.4/1000 of the national production of the hydropower generation, see Case C-346/14, *Commission v Austria*, para. 79.

⁹⁵⁰ Ibid., para. 70.

It is not completely clear how to interpret the wording “and/or” in this context.⁹⁵¹ In the Commission Guidance Document it is stated in a footnote that: “[...] the consideration of ‘overriding public interest’ only applies to the first part of Article 4.7 (c), not to the second part.”⁹⁵² This interpretation of the provision suggests that a project that is not considered to be of overriding public interest may still be permissible if the assessment in the second part of the sentence suggests that a derogation is acceptable. If the alternatives were simply alternative, the phrasing “or” would have been sufficient. If there is a reason why “and” is spelled out, it must imply that the wording of “and” may add the second alternative to the first alternative, but not the other way around as such projects do not necessarily need to be of such a nature. In other words, a project that is considered to be of overriding public interest may also (likely) be a project where the benefit (to human health, for maintenance of human safety or to sustainable development) from the particular project *overrides* the negative effects on the environment and on society of not reaching the goals set out in the WDF. This is arguably a similar evaluation to what is needed when deciding whether a project is of overriding public interest, as “overriding public interest” implies that the interest needs to be *overriding* the interest with the directive, to be of such nature.⁹⁵³ However, a project, independent on its status, may still be permissible under the second tier of the sentence.

This is especially true in cases where the specific water body, where the hydropower installation is planned to be located, is of poor quality and the ecological objective set out in the water body is considerably low. Thus, the negative consequences of not reaching that objective are not significant from environmental perspective. If so, the benefit of the hydropower installation from climate perspective may be considered greater than not fulfilling the specific objective for the water body. This may also imply that smaller hydropower installations may, in some cases, be permissible due to the derogations rules, even though not necessarily considered to be of “overriding public interest”. Thus, it may not only be dependent on the specific hydropower plant, but also depending on the actual status of the waterbody that is of relevance in the assessment. However, in bodies of water that have the potential to reach “good ecological status”, such an argument is most likely not acceptable, as it may be difficult to argue that a small hydropower installation, with limited benefit in form of GHG reductions, is more important than reaching the objective of “good ecological status”.

⁹⁵¹ Olsen-Lundh, C., is referring to them as alternatives; however, she suggests that the difference between them is that even though both alternatives require a comparison (overriding), the second alternative is providing guidance on how the comparison is to be undertaken. See Olsen-Lundh, C., *Panta Rei*, 2015, p. 234.

⁹⁵² See European Commission, *Guidance Document number 20*, p. 27, footnote 23.

⁹⁵³ Compare discussion of the concept in the context of the Habitats Directive; see Case C-182/10, *Solvay and Others*, para.75, as discussed in Section 7.3.

It is important to keep in mind that the specific negative effects of the specific project are not what is weighed against its potential benefits, it is the negative impact of not reaching the goal set out in the Directive (for that specific water body) that weighs against the benefit the project would have to human health, for maintenance of human safety, or sustainable development. Hence it is a very diffuse assessment to be made.

For a hydropower installation to be considered of “overriding public interest”, it may arguably have to be of greater importance than the benefit that a small-scale installation has the potential to provide. It may, however, be possible to argue that a new large-scale hydropower installation is of “imperative reasons of overriding public interest” due to its benefit for the environment (in form of GHG reductions) or due to its ability to produce electricity at a large-scale, which may be needed due to the lack of efficient production in the specific region or Member State.

However, the last step presented in the derogation provision – Article 4(7)(d) – may likely stop derogations if significantly better environmental options are technically feasible or proportionate; more precisely

“the beneficial objectives served by those modifications or alterations of the water body cannot for reasons of technical feasibility or disproportionate cost be achieved by other means which are a significantly better environmental option”.

In the EU Commission Guidance Document a step-by-step approach is presented in a flow chart, where 4(7)(c) and 4(7)(d) have changed place.⁹⁵⁴ Hence, if there are any other technically feasible solutions that may be significantly better for the environment, there is no need to address whether the activity is considered to be of overriding public interest. I consider this order to be more natural, as alternative solutions, which are better from an environmental point of view, should be explored prior to determining if the project is over overriding public interest.⁹⁵⁵

As argued in C-346/14, the main objective of the project was to produce renewable electricity in order to reduce GHG emissions. It is questionable whether the specific production could not technically be produced at a proportionate cost and be significantly better from an environmental point of view. Such a small production may very likely be produced by a small PV-installation or a small wind power park in an area with less impact.

Based on the wording in Article 4(7) it may be likely that we will see a number of derogations for hydropower production installations, if the CJEU does not clarify how the assessment is to be interpreted under subsection (c) of that Article. As it is worded today it seems very open to argue widely that

⁹⁵⁴ See the European Commission, *CIS Guidance Document No. 20*, 2009, p. 26.

⁹⁵⁵ This is also how the derogation rules are constructed under the Birds and Habitats Directives, as discussed above in Section 7.2 and 7.3.

the reason behind a project is motivated by (ultimately) sustainable development, assuming that the goals set out in the Water Framework Directive are interpreted to not be as important from such perspective. Needless to say, this is a very open ended derogation clause.

Another interesting aspect of this case is to what extent political issues are brought up by the Court. The Court mentions the importance of the Paris agreement, which shows that politics are in fact prioritizing climate change objectives, as it is the *hot* topic, over water quality protection. This outcome emphasizes how important it is to be more precautionary in this transition towards a carbon-neutral society.

Although, the derogation rules are not applicable without limitations. If the derogation rules are considered applicable Article 4(8) implies that Member States still have to ensure that such application

“[...] does not permanently exclude or compromise the achievement of the objectives of this Directive in other bodies of water within the same river basin district and is consistent with the implementation of other Community environmental legislation.”

This provision suggests that a wider view is required, as it is not acceptable to use the derogation rules for a specific water body, if this implies that other water bodies in the river basin are permanently excluded from achieving the objectives of the Directive, or if such achievement is compromised. Such derogation must also be consistent with other EU legislation. For example, if a large-scale hydropower installation is located in a river basin district, which is considerably unexploited and most water bodies within this district have to fulfil “good ecological status”, then it is not certain that a derogation would be acceptable if such derogation would imply that the achievement of the objectives set out in the other water bodies in the river basin district are compromised. Also, steps must be taken to guarantee “[...] at least the same level of protection as the existing Community legislation”.⁹⁵⁶ Thus, the derogation rules are also limited.

In sum, the meaning of “overriding public interest” is not established by EU case law. Case C-346/14 suggests that it is up to the Member States to decide whether a certain project is of that nature. However, in accordance with the Guidance Document on Article 6(4) of the Habitats Directive, it is often very large projects that may be considered to be of that nature.⁹⁵⁷ The concept implies by the wording that the interest (promoted by the project) must override the interest (objective) of the specific directive that the derogation is to be granted from. Projects may therefore be of overriding interest in relation to the Water Framework Directive but not in relation to the Habitats Directive.

⁹⁵⁶ See Chapter 4(9) of the Water Framework Directive.

⁹⁵⁷ See EU Commission, *Guidance Document on Article 6(4) of the ‘Habitats Directive’ 92/43/EEC*, 2007, p. 8, as discussed in Section 7.2.

If it is suggested that climate objectives are more important than water quality objectives; it may still not be a valid derogation if there are other ways of reaching that goal. Every single hydropower installation cannot, in general, give rise to a valid derogation from the Water Framework Directive. It is most definitely technically possible, at least with regards to small-scale installations, to reach the same level of the “beneficial objectives” of producing hydropower (limiting GHG emissions) with other forms of electricity production and at a proportionate cost, which ultimately has less impact on the environment.

7.5 Concluding remarks

If a conflict occurs with a renewable energy activity due to its potential impact on Natura 2000 sites, species protection, or its effect on the water status, the project may still be permissible if the conditions under the derogation rules are fulfilled. As discussed above, one requirement is that there are no alternative solutions, which, with regards to wind power, is hard to argue, as most conflicts can be avoided if the location changes. However, there may be cases where there are no alternative solutions, but it is still very unlikely that such projects would be considered to be of “imperative reasons of overriding public interest” in relation to the Habitats Directive. Even though the climate objective behind the promotion of renewable energy is of great importance – arguably of “overriding public interest” – each individual renewable energy activity is not likely of that nature. However, with regards to large-scale projects, such arguments may be valid.

To decide if a certain project is of “overriding public interest” is left to the discretion of individual Member States. However, as discussed above it is established in EU case law⁹⁵⁸ that the concept implies that the benefit of the project has to be both “public” and “overriding”: the project must be of a public interest that is considered more important than the objective of the directive from which derogations are considered. This may imply that large-scale hydropower installations, large-scale transmission line projects (even if not of *common interest*) and very big wind power parks may arguably be of that nature; either due to their considerably large contribution to reduction of GHG emissions, or because of their importance as a large electricity producer (or distributor), if there is limited capacity available in the region or Member State.

In light of the common conflict between birds and wind power, it is also important to remember that the Birds Directive does not allow derogations from Article 5 due to being of “imperative reasons of overriding public interest”. No such criterion is mentioned in the derogation rules in Article 9 of

⁹⁵⁸ See Case C-182/10, *Solvay and Others*, para. 75.

the Birds Directive. This is especially important to remember in the Swedish context, as this difference has not been implemented into the Swedish law, where the derogation rules covering all species are copied from Article 16 of the Habitats Directive. Hence, birds have a rather strong protection, as *all* birds are protected under the Birds Directive, and the route to use the derogation rules seem closed for renewable energy activities. This implies that Natura 2000 areas, that may be protected due to their importance for certain bird species, are not provided as strong protection; as such derogation is possible if the project is considered to be of “overriding public interest” in accordance with Article 6(4) of the Habitats Directive.

The possibility for hydropower installations to be considered permissible due to the derogation rules under Article 4(7) of the Water Framework Directive seems more likely than under the Habitats Directive. The regulation under the Water Framework Directive is general in the sense that all water is covered, not only areas that are of specific interest (with a certain quality), while the Habitats Directive provides protection for designated areas (Natura 2000 sites) and specific species listed in the Directive. Hence, the value of protecting a specific habitat or species may arguably be more important than protecting every body of water from deteriorating (and not reaching the objectives set out for the water body). Also, it is not necessary that the project be of overriding public interest, as projects that are considered to provide greater benefits in comparison to not fulfilling the objective set out under the Water Framework Directive, can also be permissible under Article 4(7). This may be the case in water bodies that have low quality objectives, implying that reaching the objective for that specific water body is not necessarily of great benefit for aquatic ecosystems.

Another aspect of the Water Framework Directive, that may require some more attention in the literature, is the limits of the “water body approach”. This approach may prove to be misleading, as there are water bodies that are considered to be “heavily modified”, but located in a water system that has water bodies with the potential to reach “good ecological status”. Thus, for a reasonable assessment as to whether the derogation rules are applicable, it may be important to look beyond the specific water body to see the status of the specific river and its potential to reach a certain status in a wider context. Article 4(8) enables a wider perspective, as Member States have to ensure that the application of the derogation rules does not “permanently exclude or compromise” the achievement of the objectives set out in other water bodies within the same river basin district. However, the possibility to have a wider perspective in the other direction seems more limited. Article 4(5) gives rise to some flexibility, as if it is not feasible or is disproportionately expensive to reach the objective set out in the water body, the objective may be relaxed. Thus, for water bodies that are located in heavily exploited rivers, where many water bodies are considered heavily modified, but not itself, then the objective of “good ecological status” may be lowered.

PART III: Fragmented Legal Procedures –
Permit procedures for renewable energy
installations and concession procedures for
transmission lines

8. Development of energy infrastructure in Sweden

8.1 Introduction

The number of renewable energy installations is steadily increasing in Sweden; primarily wind power plants, but also small-scale photovoltaic (PV) installations.⁹⁵⁹ Producers of electricity are dependent on transmission lines to distribute and sell electricity. However, it is not certain that the required grid infrastructure is located in places where new production sites are established. This is especially true for new wind power installations, as there are not always transmission lines in areas which provide good wind conditions. In light of the legal requirement of prioritised or guaranteed access to the grid, it is important that Sweden, as a member state of the EU, enables such development.⁹⁶⁰

One of the key relationships in the transition of the energy system to include a larger share of renewable electricity sources is the one between intermittent sources of renewable electricity and balancing power and/or storage.⁹⁶¹ When integrating wind power and other intermittent sources of electricity into the energy system, the issue of *system balance* becomes important to discuss. In Sweden today this is not a significant issue as there exists a large share of hydropower production in the energy system.⁹⁶² In addition to the role of hydropower in the electricity system, a strengthened and interconnected grid in Europe can be a solution to the intermittency problem of renewable electricity production. Different countries' conditions

⁹⁵⁹ A typical photovoltaic installation is composed of solar panels, which each has solar cells that convert light into electricity (using semiconducting materials that exhibit the photovoltaic effect). See Swedish Energy Agency, ET2015:08, p. 8.

⁹⁶⁰ The Renewable Energy Directive requires Member States to ensure prioritised or guaranteed access to the grid. Sweden has guaranteed access for all electricity producers; see Chapter 3, Sections 6–7 and 9 of the Electricity Act; compare Article 16 Renewable Energy Directive. See also Section 2.5.7.

⁹⁶¹ Today there are no efficient options for storage except pump hydro. But the research is advancing and there should be other options in the future that can store the energy for when needed, when the wind is weak or the sun is not shining.

⁹⁶² However, the Swedish Energy Agency projects that the need for regulating power will increase in future; see Swedish Energy Agency, ER 2014:12, p. 41; compare: Söder, L. who suggests that an increase to 55 TWH of wind and solar does not need much more regulating power than today; see Söder, L., *På väg mot en elförsörjning baserad på enbart förnybar el i Sverige*, 2013.

to produce renewable electricity vary over time and can be uncorrelated. For example, when the wind weakens in Denmark, the sun may shine in Spain, or the hydropower dams may be full in Norway. Hence the electricity in the system may be better utilised than if it were only to be transmitted within national borders. The EU Commission has identified the lack of efficient transmission lines to be one of the main obstacles towards an integration of more renewable electricity into the electricity system.⁹⁶³ Especially large-scale transmission line projects are identified to be of importance for the integration of new renewable sources of electricity. The Swedish grid operator has also identified the need for more efficient and stable national grids to cope with a future of more renewable electricity production.⁹⁶⁴

The development of transmission lines requires a concession decision in accordance with the Electricity Act,⁹⁶⁵ and if necessary, an environmental permit under the Environmental Code.⁹⁶⁶ The grid developer also needs to have the right to use the land where the transmission line is to be drawn.⁹⁶⁷ Thus it may be that a number of permits/decisions are needed prior to the building of transmission lines. Concession decisions are assessed by the Energy Market Inspectorate (the Inspectorate) and are now appealed to the land and environmental courts, a relatively recent change, which implies that there are not many cases yet assessed by those courts or the Land- and Environmental Court of Appeal.⁹⁶⁸ Prior to the change, concession decisions were appealed to the Government.⁹⁶⁹ Thus it was a very limited possibility to successfully appeal the concession decision, as the only possibility to question the Government's decision was through judicial review; which is only an assessment of the legality of the decision rather than the material question.⁹⁷⁰ The change in procedural order may therefore lead to a better enforcement of the environmental law provisions.⁹⁷¹

⁹⁶³ See COM(2010) 677, p.6.

⁹⁶⁴ See Svenska Kraftnät, *Anpassning av elsystemet med en stor mängd förnybar elproduktion*, 2015.

⁹⁶⁵ See Chapter 2, section 1 of the Electricity Act.

⁹⁶⁶ For example, if located in the water, it requires a permit under Chapter 11, section 9, of the Environmental Code.

⁹⁶⁷ See Section 1 of *Ledningsrättslag* (1973:1144).

⁹⁶⁸ Some cases are also appealed to the Supreme Administrative Court; see Chapter 13, section 6 and 7, the Electricity Act.

⁹⁶⁹ However, the procedural order is not changed for certain cases, e.g. with regard to decisions concerning the national grid infrastructure these are still appealed to the Government, as it is considered to be of central importance for the economy. See Chapter 13, section 5 of the Electricity Act; and prop. 2012/13: 70, p. 30.

⁹⁷⁰ See, for example, Judgment of the Supreme Administrative Court of 13 September 2013 in case 1964-11; and Judgment of 22 November 2013 in case 7154-12. However, the involvement in the process is in most cases in written form. The Supreme Administrative Court does not often have a main hearing.

⁹⁷¹ In addition to the parties concerned there is a special regulation on environmental organisations having the possibility to appeal, which is new in the Electricity Act, though it was earlier located in Section 16 paragraph 2 of the Electricity Regulation. The rule suggests that

Since the legislative change, the courts have assessed a number of cases and a few have also been appealed and assessed by the Land and Environmental Court of Appeal. Due to the limited case law in this area, I have also studied a number of the Inspectorate's concession decisions that are needed due to new wind power development.⁹⁷² The purpose of this study is therefore not to determine valid law, as the decisions by the lower courts and the Inspectorate do not have precedential value. Instead, the aim is to provide a picture on how the application of the laws is undertaken in practice.

The main aim of this part of the dissertation is to discuss the possibilities for bridging the fragmented procedures of renewable energy activities. This chapter starts with a background view of the Swedish electricity market and thereafter the various decisions and permits needed for the building of transmission lines are described and discussed and how the different applicable legislations relate to one another.

8.2 Background

The Swedish electricity system has been deregulated since 1996. With deregulation there came a few changes in Swedish law. Even though the market is not regulated, the separate energy activities are. The electricity system is composed of a number of actors with different responsibilities. Svenska Kraftnät is the national grid system operator in Sweden.⁹⁷³ Svenska Kraftnät owns the national electricity grid system and is responsible for transmitting electricity from the major power stations to regional electrical grids and Sweden.⁹⁷⁴ Regional and local grid operators are responsible for the operation and maintenance of their grids, and if needed, the extension of the grid and connection to other grids. The regional or local operators are also responsible for the safety, reliability and efficiency of the grid, and must show

environmental organisations can only appeal decisions concerning larger transmission lines (of at least 220 kilovolts and at least 15 km long), see prop. 2012/13:70, p. 38. However, this may not be in line with the development on organisations' right to appeal in accordance with the Århus Convention.

⁹⁷² I have looked into 45 cases; decisions from 2008 to March 2014. I searched at the Energy Market Inspectorate's search engine for "vindkraft" (wind power) and "koncession för linje" (concession for line). 77 cases came up; 17 of them were either dismissed or still in progress. Out of the 60 closed cases I looked into about 45, which to some extent discussed/mentioned other environmental interests or needed an environmental permit or dispensation. My search method implies that I might have missed cases that did not have wind power spelt out in the decision. The result of the study, however, is not to show any statistic of the outcome of the decisions but to gain an insight into how the Inspectorate assesses concession decisions.

⁹⁷³ In accordance with Chapter 8, section 1, of the Electricity Act, it is the Government that decides which agency has the national responsibility for the grid. In Section 1 of the Regulation (1994:1806) about electricity system responsibility, Svenska Kraftnät is identified as the responsible operator.

⁹⁷⁴ See Svenska kraftnäts homepage: <http://www.svk.se/Start/English/About-us/>

they can fulfil reasonable requirements for the long-term transmission of electricity. A grid operator cannot be an owner of an electricity production operation.⁹⁷⁵

One important task for the Svenska Kraftnät is to ensure that the grid is balanced,⁹⁷⁶ which means that it has to make certain that the frequency of the grid is always between 49.9 and 50.1 Hz.⁹⁷⁷ If the frequency is too high more electricity cannot be admitted to the system.⁹⁷⁸ This balancing exercise may become harder with the introduction of more intermittent sources, such as wind and solar, as there is no guarantee that the wind is blowing and the sun is shining, thus it is hard to predict for the traders how much electricity such production will entail.⁹⁷⁹ As opposed to wind and solar, electricity production from hydro is easier to predict as it is possible to control its production, as many of the large plants can be turned on when needed – used as balancing power. In Sweden hydropower is the primary regulation power in the Swedish electricity system, and the secondary regulation is done by trading.⁹⁸⁰

Under such precondition an application to submit new or increased electricity to the grid, for example, from a renewable energy resource, may be denied due to safety concerns. In light of the requirement (stipulated in Article 16 of the Renewable Energy Directive) that EU Member States have to ensure prioritised or guaranteed access to the grid for electricity produced from renewable sources, such denial may not be acceptable as *appropriate operational measures* need to be undertaken to deal with such security problems.⁹⁸¹

Due to energy politics and a steady increase of renewable electricity capacity, the Swedish national grid operator has responded to the need for enforcing the current grid and to extending the same.⁹⁸² It is identified today that inefficient grids may be a hindrance to enabling the transition of the

⁹⁷⁵ See Chapter 3, section 1(a) of the Electricity Act. However, it is common that the company in charge of the grid and the wind power park, respectively, are part of the same group of companies; this is acceptable under certain conditions; see Chapter 3, section 1(b)–(k) of the Electricity Act.

⁹⁷⁶ For a more detailed description, see Svenska Kraftnät, *Anpassning av elsystemet med en stor mängd förnybar elproduktion*, 2015, p. 31 et seq.

⁹⁷⁷ See Energy Market Inspectorate, EI R2009:10, p. 18.

⁹⁷⁸ If the frequency is not balanced, blackouts can occur. In short, blackouts are an intentional or unintentional loss of electricity power, which results in a power outage.

⁹⁷⁹ In Sweden electricity is bought and sold on the electricity market, often one day in advance, though there is certain trade that is made with shorter timeframes. For a description on how the market works, see: Inspectorate's homepage: <http://www.energimarknadsinspektionen.se/sv/el/elmarknader-och-elhandel/handel-med-el/>

⁹⁸⁰ see Svenska Kraftnät, *Anpassning av elsystemet med en stor mängd förnybar elproduktion*, 2015, p. 31 et seq.

⁹⁸¹ See Article 16, section 2 (c) of the Renewable Energy Directive, as discussed in Section 2.5.6.

⁹⁸² The integrated energy and climate policies are a great contributor to the large investments in grid infrastructure; see Svenska Kraftnät, *Perspektivplan 2025*, 2013, p. 19.

energy systems to contain more renewable electricity.⁹⁸³ Svenska Kraftnät has developed a “perspective plan”, in which it is described where investments in the grid will be prioritised for the coming years. In 2013 investments in the national grid system were increased tenfold in relation to earlier investments needed.⁹⁸⁴

Svenska Kraftnät points out that the location of renewable energy production is very important from a grid system perspective. Wind power development in Sweden is seen as problematic for the grid planning undertaken by Svenska Kraftnät, due to its intermittency and placement.⁹⁸⁵ Svenska Kraftnät acknowledges the importance of transmission lines crossing national borders. If transmission lines, connecting the Nordic countries with other European countries, are not built there is a risk that the Nordic capacity will not be used to its full potential. New cross-border transmission lines also imply an increased transmission in the national grids, which needs to be strengthened and rebuilt to handle a higher transmission capacity.⁹⁸⁶

More recently Svenska Kraftnät has published a report about the challenges the Swedish grid faces in light of the increase in intermittent renewable electricity production. One identified solution is investment in new grid infrastructure, as areas that are optimal for wind power installations are seldom in places where the grid infrastructure is well established. If wind power and solar power capacity increases, the electricity system becomes more reliable on other stable sources of electricity – for example, hydropower.⁹⁸⁷ The idea is that an extension and enforcement of the grid would also help in diverting the associated risk of allowing more intermittent sources of electricity.⁹⁸⁸ Hence building new transmission lines is becoming increasingly important as more intermittent renewable electricity is produced and production is becoming more decentralised.

⁹⁸³ However, the Inspectorate suggests that Swedish law does not need to change to ensure the fulfilment of the EU law criteria set out in Article 16 of the Renewable Energy Directive. In Sweden, all electricity producers have guaranteed access to the grid under certain objective and non-discriminatory conditions; see: See Energy Market Inspectorate, EI R2009:10, p.18, Compare Chapter 3, sections 6–7 and 9 of the Electricity Act. For a discussion on the requirements stipulated in Article 16 of the Renewable Energy Directive, see Section 2.5.6.

⁹⁸⁴ See Svenska Kraftnät, *Perspektivplan 2025*, 2013, p. 7.

⁹⁸⁵ *Ibid.*, p. 19.

⁹⁸⁶ *Ibid.*, p. 20 et seq.

⁹⁸⁷ Hydropower is a more stable source of renewable electricity production, which has the potential to be better utilised in order to ensure the stability of the grid when other more intermittent sources are not available. Some plants are so-called “pump-hydro”, which means that water can be pumped up into the dams and stored until needed; it functions like a battery. See Svenska Kraftnät, *Anpassning av elsystemet med en stor mängd förnybar elproduktion*, 2015.

⁹⁸⁸ *Ibid.*, p. 11.

8.4 Permits needed for transmission lines

8.4.1 Introduction

It is suggested that the Swedish grid is not as flexible and strong as is required to enable a transition to an energy system with a much larger share of renewable electricity.⁹⁸⁹ Hence many new grid infrastructure projects are currently needed. Transmission lines require a concession decision under the Electricity Act and the grid operator also needs to have the right to use the land where the transmission line is to be drawn, which is assessed under the Transmission Right Act.⁹⁹⁰ The Environmental Code is also applicable in parallel to the Electricity Act.⁹⁹¹ In the following section I discuss how the provisions under the Electricity Act are assessed by the Inspectorate and the courts, primarily with regard to the concept of *suitable from public point of view* and how the environmental assessment is undertaken by the Inspectorate under the Electricity Act. Thereafter the relationship to the Environmental Code is discussed in light of the question of whether an exclusivity rule is needed in the Electricity Act.

8.4.2 Concession decision under the Electricity Act

8.4.2.1 The concession requirements in general

To build and use transmission lines requires a permit under the Electricity Act – a concession.⁹⁹² The Inspectorate is the authority that assesses concession decisions, if not specifically regulated that it does not, in which case the government assesses the concession.⁹⁹³

Concession for “line” or “area” can be granted, under certain conditions.⁹⁹⁴ A concession for “line” concerns a certain determined route, and a concession for “area” is for transmission lines with no determined route, but within a certain area. With regard to transmission lines needed to connect wind power installations to the grid, a concession for “line” is needed, which will be the focus in this presentation.⁹⁹⁵

⁹⁸⁹ Ibid. The major Swedish political parties have recently decided that by 2040, Sweden should have 100 % renewables in the electricity system, see the Swedish Energy Agreement (Energioverenskommelsen) of 10 June 2016.

⁹⁹⁰ See Section 1 of the Ledningsrättslag (1973:1144) (the Transmission Right Act)

⁹⁹¹ As discussed in Section 8.4.3 of this chapter.

⁹⁹² See Chapter 2, section 1 of the Electricity Act.

⁹⁹³ See Chapter 2, section 1(a) and 1(b) of the Electricity Act. The government can decide (and regulate it in Regulations) which projects are exempted from the concession requirement, see Chapter 2, section 4 of the Electricity Act.

⁹⁹⁴ See Chapter 2, section 2 of the Electricity Act.

⁹⁹⁵ The grid infrastructure needed within the wind power park, in between the turbines, is exempted from the concession requirement; see Section 22 (a) in Förordning (2007:215) om

8.4.2.2 Suitable from public point of view

A concession can only be granted if the applicant is *suitable* to operate the grid,⁹⁹⁶ and if the transmission line is *suitable from public point of view* – it must be necessary and appropriately located.⁹⁹⁷ For example, it may not be suitable if a transmission line already exists with enough capacity or there are conflicting interests with the proposed location.⁹⁹⁸ It is also assessed whether the transmission line is in conflict with detailed plans or area regulations.⁹⁹⁹

There is one case from the Nacka Land and Environmental Court which touches upon the concept of what is suitable from the public point of view. In this case the grid operator wanted to build two parallel lines with limited capacity (10 kV).¹⁰⁰⁰ The Inspectorate did not consider it suitable from the public point of view, in the long term, to keep two parallel lines with such low capacity. On that basis the Inspectorate suggested that the concession decision should be limited in time to give the grid operator the opportunity to plan for a change of the operation.¹⁰⁰¹ The Inspectorate's decision was appealed by the grid operator. The Court suggested that the Inspectorate could not limit the time of the concession decision as such action would require *specific reasons*, which in accordance with the preparatory works, should be used restrictively by the Inspectorate. Such reason could be if the transmission line was only needed for a short time.¹⁰⁰² Based on that reasoning, the Court did not consider that the reasons the Inspectorate had shown could be considered to be of that nature. Thus the grid owner was granted a concession with no time limit.¹⁰⁰³ If the Inspectorate had denied the operator a concession due to its not being *suitable from public point of view*, the Court

undantag från kravet på nätkoncession enligt ellagen (1997:857) (Regulation on exemption from the concession requirement).

⁹⁹⁶ When assessing whether a person is suitable to operate the grid, the general competence and the form of organisation is examined, see Chapter 2, section 10 of the Electricity Act, and prop. 1996/97:136, p. 119.

⁹⁹⁷ See Chapter 2, section 6 of the Electricity Act. The meaning of what “suitable from public point of view” means is not totally clear. In the preparatory works it is expressed that it is not possible beforehand to decide how such an assessment is to be undertaken; it has to be assessed in each individual case. However, it is stated that the main aim of the provision is to avoid the building of socio-economically unnecessary transmission lines, giving rise to unnecessary infringement on third parties, see: prop. 1993/94:162, p. 62.

⁹⁹⁸ In the Governmental Bill it is expressed that if there are already transmission lines in place, with enough capacity, it is not socio-economically motivated to build new transmission lines, even though that may be economically motivated by the grid company. See prop 1993/94:162, p. 62.

⁹⁹⁹ See Chapter 2, section 8 of the Electricity Act.

¹⁰⁰⁰ Which were assessed in two separate cases, see Judgment by the Land and Environmental Court in Nacka of 30 June 2016 in case M 6791-15; and case M 6796-15.

¹⁰⁰¹ See Ei decision of 10 November 2015, 2008-102790, p. 7.

¹⁰⁰² See prop. 2012/13:70, p. 85.

¹⁰⁰³ Judgment by the Land and Environmental Court in Nacka of 30 June 2016 in case M 6791-15; and case M 6796-15, p. 4.

should have been required to assess whether the transmission line was of that nature. However, instead, the legal issue became a different one: the possibility for the Inspectorate to grant concession decisions with time limits.

There are more examples of developments of grid infrastructure that may arguably not be suitable from the public point of view, even though that concept is not explicitly discussed by the Inspectorate. The way the Swedish transmission system is built, and being built today, is not very efficient. One observation from my study of the Inspectorate's concession decisions is that it is common that transmission lines, which are built in order to transmit electricity from a wind power park, have a small capacity and are built in parallel with existing low capacity grids. This practice is often due to economic concerns, since it is more costly to build transmission lines with a higher capacity and where the grid developer is only getting paid for the capacity that the specific wind power park requires. Hence, from environmental perspective a transmission line with higher capacity may also give rise to more environmental impact. But, in comparison with the inefficiency of expanding the existing power line corridor to build new parallel airborne transmission lines, or dig up the ground to put down a parallel cable, the environmental impact can be unnecessarily large and arguably not suitable from the public point of view. In the following presentation, a number of decisions by the Inspectorate are presented and discussed in light of the requirement of suitability from the public point of view.

In the *Hjuleberg Case*, two different grid companies wanted to build a transmission line to connect two separate wind power parks to the regional grid. YS Nät AB (subsidiary company of Vattenfall) applied for a concession permit for a connection line for a wind power park developed by Vattenfall.¹⁰⁰⁴ It concerned a connection line with a capacity of 145kV built as an underground cable between the substation close to the Hjuleberg wind power park and the regional grid network. The Inspectorate decided that the project would receive the concession permit on condition that the wind power park received its permit. The Inspectorate's decision, however, was appealed by E.ON Elnät Sverige AB (E.ON), which also wanted to build a transmission line on the same route, though with higher capacity. E.ON suggested that the Inspectorate's decision to grant YS Nät AB concession for the 145 kV transmission line was not optimal and it would lead to the building of parallel transmission lines (which was not in line with the requirement of "suitable from public point of view"). E.ON suggested that there was no hindrance to building a transmission line with higher capacity in order to enable access to the grid for more planned wind power plants in the area. E.ON argued that by approving concession for YS Nät AB, the Inspectorate was opening the way for a praxis that could lead to a lot of parallel development of grids that

¹⁰⁰⁴ See Ei decision of 20 November 2009, 2009-100421 (Hjuleberg).

only served one or two producers.¹⁰⁰⁵ This decision has been appealed to the Government, which has yet to decide on the outcome.

The practice today is that transmission lines are built with just enough capacity for the individual wind power park and it is not infrequently that transmission lines are built in parallel with already existing ones. In some cases, it may be necessary to build parallel lines due to system security. This was the case in the *Stor-Rotliden Case* where the transmission line was located next to a 400 kV transmission line and a direct connection of the wind power plant was not acceptable by Svenska Kraftnät due to grid safety concerns.¹⁰⁰⁶ In the *Svartnäs* and *Hofors* cases the transmission lines with the capacity of 130 kV were also located in parallel with an existing transmission line with the capacity of 220 kV. In this case it was not transparent why the wind power park could not be connected to the existing grid instead of drawing on the transmission line in parallel to it, having to widen the transmission line path by 8–13 meters.¹⁰⁰⁷ However, the outcome in this case may also be due to safety concerns.

Another reason why parallel lines are built is due to the limited capacity of the transmission line in place. This is a common reason. Sometimes the new transmission line is another low capacity grid,¹⁰⁰⁸ but in others the new transmission line has a higher capacity,¹⁰⁰⁹ which is at least a more efficient development and may avoid the building of yet another low capacity transmission line, if needed in the future. However, even in cases where there is a transmission line which not necessarily has a low capacity, a new parallel line may be built. This was the case in the *Haslösa Case* where the transmission line was built as an underground cable with the capacity of 24 kV, and was located with existing 130 kV cable.¹⁰¹⁰ In some cases it may also be

¹⁰⁰⁵ See appeal of Ei decision 2009-100421 (Hjuleberg) of the 28 January 2010, pp. 5–6. Compare preparatory works to the Electricity Act: prop. 1996/97:136 (commentary to Chapter 2, section 6 of the Electricity Act); and prop. 1993/94:162, p. 62, where they discussed “suitable from public point of view.” See Chapter 2, section 6 of the Electricity Act.

¹⁰⁰⁶ See Ei decision of 7 May 2012, 2008-105817 (*Stor-Rotliden*) and its EIA of the 6 November 2008.

¹⁰⁰⁷ See Ei decision of 9 January 2013, 2010-102512 (*Svartnäs*) and Ei decision of 3 March 2011, 2010-102513 (*Jädraås/Hofors*).

¹⁰⁰⁸ See Ei decision of 28 October 2010, 2009-102167 (*Lainejaure 36 kV*). In this case it was an airborne transmission line of 3 and 5.5 km respectively, which would be placed in parallel with an existing 10–12 kV transmission line with a power line corridor of 8–10 meters. The power line corridor had to be widened to 30 meters and the height of the 36 kV transmission line, under assessment, needed higher poles.

¹⁰⁰⁹ See Ei decision of 23 August 2010, 2009-102166 (*Lainejaure 145 kV*). The continuation of the connection grid from the *Lainjeur* wind power park was also located in parallel with the existing grid where a 145 kV transmission line was to be located in parallel with an existing 30 kV transmission line.

¹⁰¹⁰ See Ei decision of 21 July 2011, 2011-101881 (*Haslösa*)

necessary that parallel lines are built – for example, if the lines connect the individual turbines to the substation.¹⁰¹¹

An illuminating example of the inefficient development is illustrated in the *Årjäng Case* where the initial concession was changed after an expansion of the wind power park, which implied that four parallel transmission lines were built, with low capacity.¹⁰¹² Due to this parallel development the power line corridor needed to be expanded by 9 meters, which could have been avoided if the transmission line was built with higher capacity.¹⁰¹³

In addition to the cases mentioned above, many of the concession decisions regarding connection lines for wind power plants have a small capacity, suggesting that this efficiency and sustainability problem will only increase in the future as more wind power plants are developed. Even with a better application of the requirement – that the transmission line needs to be *suitable from public point of view* – this problem cannot be solved by the Inspectorate. This is because the requirement only hinders the building of parallel transmission lines when there is already one with enough capacity. As discussed above, the problem is that the transmission lines in place and the ones that are currently being built only have enough capacity to transmit the electricity produced from an individual wind power installation. Thus in order to overcome this inefficient development of transmission lines and wind power, a wider perspective is needed. The individual assessment approach that is currently practised cannot change this development. As mentioned above, the new financing structure for the development of transmission lines in Sweden may help overcome parts of this problem. However, a better planning of the development of wind power and its associated transmission lines may be necessary to fully deal with this problem.

8.4.2.2 Environmental Assessment under the Electricity Act

According to Chapter 2, section 8 (a), of the Electricity Act, the provisions in Chapter 2–4 and Chapter 5, section 3, of the Environmental Code shall be applied and an EIA must be composed in accordance with the rules set out in Chapter 6 of the Environmental Code.¹⁰¹⁴ However, questions that already have been examined in an environmental permit case do not need to be re-examined in the concession process. And if an EIA already exists due to the permit assessment under the Environmental Code, which describes the direct and indirect effects on human health and the environment that the transmis-

¹⁰¹¹ See Ei decision of 24 April 2012, 2012-100434 (Fredriksdal I) and Ei decision of 9 January 2013, 2012-102269 (Fredriksdal II).

¹⁰¹² See Ei decision of 21 June 2011, 2010-102049 (Årjäng I) and Ei decision of 16 July 2012, 2012-101432 (Årjäng II).

¹⁰¹³ See EIA for Ei decision of 16 July 2012, 2012-101432 (Årjäng II)

¹⁰¹⁴ See Chapter 2, section 8 (a) of the Electricity Act. However, in some cases exemptions to the EIA can be addressed in regulations; see Chapter 2, section 8 (b) of the Electricity Act.

sion line may give rise to, there is no need to compose a new EIA in the concession process.

Due to the limited case law in this area, I have examined the concession decisions of the Inspectorate. The quality of decisions varies, and the Inspectorate has not always given a detailed motivation on how these provisions are fulfilled. In many decisions it is simply stated that the provisions in the Environmental Code are fulfilled, without further motivation.¹⁰¹⁵ However, there are also a few good examples where the Inspectorate motivates why the location of the transmission line is suitable from an environmental point of view.¹⁰¹⁶

In certain cases, the concession decision is accompanied with provisions with the aim of mitigating its environmental impact. A common requirement for a concession decision, when the grid is to be located in wetland areas, is that machines cannot be driven in such sensitive areas if the ground is not frozen and covered in snow etc.¹⁰¹⁷ Other requirements may be that it is not permitted to drive in water areas that are Natura 2000 sites,¹⁰¹⁸ or where necessary permits are ensured.¹⁰¹⁹ It also happens that a provision for the concession decision is that the applicant has to consult the County Administrative Board, and other suitable state agencies, regarding specific precautionary measures for the activity.¹⁰²⁰ Another provision presented in the decisions is that the transmission line needs to be marked so that birds can avoid colliding with the transmission line.¹⁰²¹ However, such device may be seen as “disturbing” the birds and therefore illegal.¹⁰²²

There has been a shift with regard to the Inspectorate’s requirement for the EIA process and material. In earlier cases, the Inspectorate accepted EIA processes that arguably did not fulfil the legal requirements.¹⁰²³ In one case, the Inspectorate accepted an EIA procedure despite the fact that the consulta-

¹⁰¹⁵ See, for example: Ei decision of 11 March 2011, 2010-102807; Ei decision of 16 December 2009, 2009-101473; Ei decision of 20 December 2011, 2011-102810; Ei decision of 13 January 2012, 2011-103186; Ei decision of 10 February 2010, 2008-105745; Ei decision of 10 January 2012, 2011-102551; Ei decision of 11 June 2009, 2009-101364; and Ei decision of 14 May 2012, 2011-102962.

¹⁰¹⁶ See Ei decision of 9 January 2013, 2012-102269; and Ei decision of 19 September 2013, 2013-100435.

¹⁰¹⁷ See, for example: Ei decision of 4 May 2011, 2010-102725; Ei decision of 14 July 2010, 2009-102168; Ei decision of 9 January 2013, 2008-105817; and Ei decision of 9 December 2009, 2009-102063.

¹⁰¹⁸ See Ei decision of 9 January 2013, 2008-105817.

¹⁰¹⁹ See, for example: Ei decision of 21 June 2011, 2010-102049, where it was stipulated that if a water permit was required, it was a prerequisite for the validity of the concession decision.

¹⁰²⁰ See Ei decision of 16 July 2012, 2012-101432.

¹⁰²¹ See Ei decision of 23 August 2010, 2009-102166.

¹⁰²² See Section 4(2) of the Regulation on Species Protection.

¹⁰²³ Even in some cases where the parties had pointed out that the EIA was inadequate, it was accepted by the Inspectorate without any clear motivation; see, for example: Ei decision of 3 March 2011, 2010-102513; Ei decision of 1 July 2013, 2012-102077; and Ei decision of 19 April 2011, 2010-102257.

tion was not undertaken, suggesting that the actions the applicant undertook after submitting the application would put right the fact that the EIA process was not correctly undertaken.¹⁰²⁴ However, in more recent decisions the Inspectorate has been more strict and in some cases rejected the application due to flaws in the EIA process.¹⁰²⁵ The following section provides a discussion on the cases that have developed since this shift.

8.4.2.2 The Inspectorate's enforcement of EIA requirements

A recent trend from the Inspectorate is to deny applications that do not fulfil the legal requirements for the EIA process or the content of the EIA. This trend may be a result of the changed procedural order where the land and environmental courts now deal with some of the appeals.¹⁰²⁶

The Inspectorate has in a few cases denied the application on the ground that the EIA did not present alternative locations or forms. Two of these decisions concerned a renewal of a concession for transmission lines.¹⁰²⁷ In these cases, the Inspectorate denied the application due to flaws in the EIA, specifically: the EIA did not show any alternative locations even though alternatives were pointed out during the consultation. The fact that the location was decided prior to the consultation, and that it was not possible to discuss alternatives, were considered not to fulfil the EIA requirements.¹⁰²⁸ The application was therefore denied.¹⁰²⁹ A similar decision by the Inspectorate was appealed to the Nacka Land and Environmental Court.¹⁰³⁰ The Court did not accept the appeal and stated that the fact that the location and form was decided prior to the consultation was such a flaw that it implied that the application could not be assessed. Based on that reasoning the appeal was rejected.

The Inspectorate's rejection of applications, due to flaws in the content of the EIA and the associated process, has not always been accepted by the Court. In a more recent decision the Nacka Land and Environmental Court suggested that the Inspectorate had not fulfilled its obligation to undertake *material direction of proceedings* – in this case no specific request to complement the flaws in the EIA had been asked for – which the Inspectorate, as

¹⁰²⁴ See Ei decision of 3 June 2010, 2009-101365. Compare outcome in: NJA 2009 s. 321.

¹⁰²⁵ See discussion in Section 8.4.2.2 below.

¹⁰²⁶ Some decisions are appealed to the Supreme Administrative Court, and some are still appealed to the Government, see Chapter 13, sections 5–7 of the Electricity Act.

¹⁰²⁷ See Ei decision of 15 December 2015, 2008-103469; and Ei decision of 15 December 2015, 2008-102867.

¹⁰²⁸ Compare with decision by the Swedish Supreme Court where the application was rejected due to not investigating an alternative that was brought up in the public hearing, see NJA 2009 s. 321.

¹⁰²⁹ See Ei decision of 15 December 2015, 2008-103469, and Ei decision of 15 December 2015, 2008-102867. These decisions were not appealed.

¹⁰³⁰ See Judgment of the Land and Environmental Court in Nacka of 13 May 2015 in case M 1861-14.

a state authority, was obliged to do.¹⁰³¹ The Land and Environmental Court of Appeal has also in a couple of decisions accepted the EIA process, even though the consultation arguably was limited. The Land and Environmental Court of Appeal did not agree with the Inspectorate and the Land and Environmental Court, which considered the flaws of the consultation to be so grave that the application had to be denied. Instead, the Land and Environmental Court of Appeal suggested that in the current case, where people who lived 15 meters from the cable were informed directly and the consultation material was published in the local newspaper, was sufficient to fulfil the consultation requirement. Based on that reasoning the Court decided that the consultation was acceptable and referred the case back to the Inspectorate for the concession assessment.¹⁰³²

8.4.2.3 Exemptions from EIA requirements

The requirement to compose an “EIA light”¹⁰³³ is in general obligatory but there is a possibility of exempting transmission line operators from undertaking an EIA if the environmental impact can be expected to be less important.¹⁰³⁴ The Energy Network Investigation proposed that transmission lines with limited capacity (under 50 kV for overhead transmission lines and under 130 kV for underground cables) should not be required to undertake an EIA in general, but may be required, after consultation in accordance with Chapter 6, section 4, of the Environmental Code, by the County Administrative Board. However, the Government did not consider it acceptable to exempt transmission lines of certain size but still considered it important to have an opening to exempt projects that were not likely to give rise to significant environmental impact.¹⁰³⁵ In the preparatory work, where the possibility to make exemptions was discussed, small transmission lines requiring concession for “line” was compared with transmission lines requiring concession for “area”, where the latter did not require an EIA,¹⁰³⁶ while concession

¹⁰³¹ See Judgment of the Land and Environmental Court in Nacka of 4 July 2016 in case M 2256-16.

¹⁰³² See Judgment of Land and Environmental Court of Appeal of 9 November 2015 in case M 2763-15. See also another case decided the same day, where the Court, based on the same reasoning, accepted a consultation with similar method; MÖD 2015:35.

¹⁰³³ An “EIA light” refers to a less detailed EIA than the EIA Directive requires, see Chapter 6, section 3 and 7, para.1 of the Environmental Code. The EIA requirement for transmission lines are discussed in Sections 9.3.2.2 and 9.3.2.3.

¹⁰³⁴ See Chapter 2, section 8 (b) of the Electricity Act; and prop. 2012/13:70, p. 43 et seq.

¹⁰³⁵ See prop. 2012/13, pp. 43–45.

¹⁰³⁶ See the Electricity Regulation (2013:208), section 7. However, if consultation is needed in accordance with Chapter 12, section 6 of the Environmental Code, the County Administrative Board can require the developer to compose an EIA if considered necessary. Such consultation is required if the building of transmission lines is considered to *substantially change the natural environment*, which in accordance with the preparatory work for the provision, is suggested to be, e.g. the land use needed for power line corridors. This may imply that such consultation is needed if the transmission line is to be located in a forest or if it is an under-

for line did. It was suggested that such a differentiation was not necessarily suitable as some transmission lines for “line” may not give rise to more impact than certain ones for “area”.¹⁰³⁷ The type of concession and its voltage may not be the best way to differentiate which projects are likely to have significant impacts on the environment, as it was the physical impact on the environment and the possible impact on human health from non-ionizing radiation that mattered, not necessarily how high the voltage was.¹⁰³⁸ The Government found the financial burden to undertake an EIA, if not environmentally motivated, to be the main reason why it should be possible to exempt projects. Thus a provision was introduced in the Electricity Act stating that the Government can issue regulations exempting certain activities that are likely to have limited environmental impact.¹⁰³⁹ The Government has not yet issued such regulation.

8.4.2.4 Possibility of reassessing a concession decision

A concession permit is valid for an unlimited time but with the possibility to reassess the permit after 40 years if seen to be necessary.¹⁰⁴⁰ This is a recent change in the Electricity Act. Prior to the change, the different types of concessions had time limits.¹⁰⁴¹ The reassessment can be initiated by the grid concession owner, a municipality or County Administrative Board or on the operator’s own initiative.¹⁰⁴² There are certain preconditions for a reassessment; it must either be motivated with regard to the interests indicated in Chapter 2–4 of the Environmental Code or with regard to some other urgent public interest.¹⁰⁴³ In the preparatory works it is suggested that such interest may be expressed in the municipality’s overview plan; for example, that the land needs to be used for a new building development.¹⁰⁴⁴

8.4.3 Relationship to the Environmental Code

8.4.3.1 Introduction

As mentioned above, the Electricity Act has a cross reference to the Environmental Code in Chapter 2, section 8(a), which stipulates that certain chapters and provisions of the Environmental Code are to be fulfilled when

ground cable, or in other cases where a wiring street needs to be cleared. See prop. 1997/98:45, part II, p.150.

¹⁰³⁷ See prop. 2012/13:70, p. 44

¹⁰³⁸ Higher voltage transmission lines, however, tend to be bigger and require a larger area.

¹⁰³⁹ See Chapter 2, section 8 (b) of the Electricity Act.

¹⁰⁴⁰ See Chapter 2, section 13 of the Electricity Act; compare Sections 15 (b)–(i) of the Electricity Act; see also prop. 2012/13:70, p. 52 et seq.

¹⁰⁴¹ Concession for line has a 25-year time limit; see prop. 2012/13:70, p. 47.

¹⁰⁴² Chapter 2, section 15(c) of the Electricity Act.

¹⁰⁴³ See Chapter 2, section 15(d) of the Electricity Act.

¹⁰⁴⁴ See prop. 2012/13:70, p. 87.

assessing a concession decision. However, since the Environmental Code is applicable in parallel to the Electricity Act,¹⁰⁴⁵ a transmission line may be subject to permitting and control according to the Code itself.

Depending on where the transmission line is planned to be located, one or several permits or dispensations under the Environmental Code may be necessary.¹⁰⁴⁶ For example, if the transmission line is likely to adversely affect the integrity of a Natura 2000 site (even though it is located outside the borders of such a site), a Natura 2000 permit is required.¹⁰⁴⁷ In cases when it is a notable risk that a protected species would be affected in a way that is illegal under the Regulation on Species Protection, dispensation is needed.¹⁰⁴⁸ Cables that are drawn in the water require a permit as it is then considered a “water activity”.¹⁰⁴⁹

Though a formal Environmental Code permit is not always required for a transmission line, the general rules of consideration (Chapter 2) always apply, notwithstanding a previous concession examination according to the Electricity Act, where these provisions were applied. As the concession does not protect the operator from subsequent requirements according to the Code, a supervising authority (a municipal board) may serve an order on the transmission line operator, requiring the operator to undertake protective measures or change location due to its environmental impact.¹⁰⁵⁰ In an Environmental Court of Appeal case, grid operator Svenska Kraftnät was ordered to relocate its transmission line (that had a concession for more than 40

¹⁰⁴⁵ See Chapter 1, section 3 of the Environmental Code.

¹⁰⁴⁶ In addition to the ones mentioned below, dispensation is required in accordance with Chapter 7 of the Environmental Code from: shore land protection (Sections 16–18(h)); habitat area protection (Sections 11–11(b)); and nature reserves (Section 7). Permit may also be needed due to older landscape protection legislation that is still valid due to transitional provisions.

¹⁰⁴⁷ If the transmission line is considered to affect that Natura 2000 site in an unacceptable way, it may be considered a legal derogation, if such requirements are fulfilled; see Chapter 7, Sections 28(a)–29 of the Environmental Cod. For a discussion on the EU legislation with regards to habitat protection, see Sections 3.4.4 and 7.2.

¹⁰⁴⁸ Though there are very strict requirements for dispensation; see Section 14 of the Regulation on Species Protection. Compare Article 12 of the Habitats Directive and Article 9 of the Birds Directive. For a discussion on the derogation rules from strict species protection, see Section 7.3. A dispensation may also be necessary for other type of protection; for example, if the grid infrastructure is to be partly located in a biotope protection area; see Chapter 7, section 26, of the Environmental Code. Such dispensation was discussed (but not granted) in Judgment by Land and Environmental Court in Växjö of 5 June 2015 in case M 3007-14.

¹⁰⁴⁹ See Chapter 11, section 3, para 1 or 4; and Section 6 of the Environmental Code.

¹⁰⁵⁰ See Chapter 26, section 9 of the Environmental Code. This is also emphasised in the preparatory works, see prop. 1997/98:45 part II, p. 273. Since transmission lines are considered to be an environmentally hazardous activity in accordance with Chapter 9, section 1 of the Environmental Code, it is also possible for individual concerned parties to bring a civil procedure in accordance with Chapter 32, section 12 of the Environmental Code (if the transmission lines do not have a permit under the Environmental Code) in order to prohibit the activity or require the operator to undertake precautionary measures.

years).¹⁰⁵¹ This was due to the risk associated with the electromagnetic field of the grid and its potential impact on human health.¹⁰⁵² This is a very unusual case, but it is interesting as it highlights the meaning of the parallel application of the Environmental Code. A concession decision is simply a right to build and use a transmission lines in a specific route (or area). The Inspectorate considered this to be problematic as the building of transmission lines is a big project and not easily removed or moved. The following section presents the Inspectorate's proposal for an exclusivity rule in the Electricity Act and a discussion on whether such a rule is necessary.

10.4.3.2 A need for an exclusivity rule in the Electricity Act?

In a report assessing the relationship between the Electricity Act and the Environmental Code, the Inspectorate acknowledged the insecurity that grid operators faced due to the parallel application of the Environmental Code.¹⁰⁵³ The Inspectorate made a comparison with the Natural Gas Act where Chapter 2, section 4, states that if the Government has granted a concession for a natural gas pipeline, a prohibition under the Environmental Code cannot be undertaken for the construction or use of the pipeline.¹⁰⁵⁴ The Inspectorate suggested that the Electricity Act should have the same provision.¹⁰⁵⁵ This is motivated by the fact that the grid operator has an obligation to have the grid running and to guarantee access to the grid for electricity producers.¹⁰⁵⁶

An interesting aspect of the "exclusivity rule" in the Natural Gas Act is that, in the Governmental Bill, it was suggested that when a concession decision is taken, the necessary environmental considerations should already have been addressed under the Environmental Code (in potential environmental permit procedures), and it was therefore unnecessary to assess the environmental impact again in the concession decision.¹⁰⁵⁷ The exclusivity rule suggests that a concession decision implies that prohibitions (to construct or use a pipeline) cannot be issued pursuant to the Environmental

¹⁰⁵¹ Svenska Kraftnät did apply for a change of the route of the transmission line, which was approved by the Inspectorate and also confirmed by the Government after an appeal by another concerned property owner, who was not considered to be affected in such a way that the transmission line could not be drawn in the new proposed location. See: Government Decision of 22 June 2016, 11:6, M2015/02856/Ee.

¹⁰⁵² The health risk was primarily concerned to be due to high electromagnetic emissions. The current research (at the time) suggested that there was no risk for magnetic fields under 0,4 microtesla. The magnetic fields measured on the property was between 2,5 and 8 microtesla, which implies that the electromagnetic emissions were much greater than the threshold at 0,4 microtesla. See Judgment by the Land and Environmental Court of Appeal of 26 August 2011 in case M 4127-10.

¹⁰⁵³ See Energy Market Inspectorate, Ei R2013:15. See also Heldesten, G., 2011.

¹⁰⁵⁴ See Chapter 2, section 4 of the Natural Gas Act (Naturgaslagen 2005:403).

¹⁰⁵⁵ See Energy Market Inspectorate, Ei R2013:15, 2013, p. 7.

¹⁰⁵⁶ See Chapter 2, section 17; and Chapter 3, sections 1, 6 and 9 of the Electricity Act.

¹⁰⁵⁷ Prop.1999/2000:72, p. 34.

Code, after the concession decision is taken.¹⁰⁵⁸ The Inspectorate suggested that this implies that prohibitions that are already specified in the Environmental Code are still applicable.¹⁰⁵⁹ Thus the Natura 2000 provisions and the habitat protection requirements are still applicable and could potentially prohibit the activity. The Inspectorate, however, pointed out that with regard to water activities it was different as the concession decision works as a permissibility decision – in other words, the authority assessing the water activity under the Environmental Code was only assessing the specific requirement for that activity, not its permissibility.¹⁰⁶⁰ However, the natural gas pipe may still be forbidden in accordance with Chapter 2, section 9, if it is considered to cause significant damage or is detrimental to human health or the environment.¹⁰⁶¹

As mentioned above, after the concession is granted the exclusivity rule implies that the activity cannot be forbidden due to prohibitions issued pursuant to the Environmental Code.¹⁰⁶² But the concession decision does not hinder the supervising authority from undertaking supervision of the activity and requiring the owner of the pipelines to undertake some protective measures in accordance with Chapter 2 of the Environmental Code. However, the Inspectorate suggested that certain measures that were comparable with a prohibition on the pipeline were not allowed; for example, the municipality cannot decide that the location must change, as it is the same as forbidding the activity.¹⁰⁶³ However, it is not certain that the Inspectorate's interpretation in this regard is acceptable, as changing location of an activity is not technically the same as forbidding it, since the activity may be accepted if the location changes.¹⁰⁶⁴ Another aspect of the reach of the exclusivity rule is that EU law requirements still need to be fulfilled. In other words, even though such exclusivity rule would be introduced for concession decisions for transmission lines it is not certain that it is as far-reaching as the Inspectorate suggested. This change, however, has not been adopted in the Electricity Act.

¹⁰⁵⁸ See Chapter 2, section 4 of the Natural Gas Act.

¹⁰⁵⁹ See Energy Market Inspectorate, Ei R2013:15, p. 18.

¹⁰⁶⁰ See Chapter 11, section 23(5) of the Environmental Code. However, if not Chapter 2, section 9 is applicable. See also discussion in Energy Market Inspectorate, Ei R2013:15, pp. 18–19.

¹⁰⁶¹ Under such circumstances the activity can only be undertaken if under special circumstances, see Chapter 2, section 9 of the Environmental Code.

¹⁰⁶² However, with regard to transmission lines in water, the provision in Chapter 11, section 23 of the Environmental Code, refers explicitly to Chapter 2, section 9, which implies that the activity can be prohibited.

¹⁰⁶³ The Inspectorate suggested that since the concession concerned a specific location, it was not possible to decide that a different location should be chosen, so a new application was needed for that specific route. See Energy Market Inspectorate, Ei R2013:15, p. 19.

¹⁰⁶⁴ The provision regarding the most suitable location is stipulated in Chapter 2, section 6, and the prohibition of an activity is expressed in Chapter 2, section 9 of the Environmental Code.

8.4.4 The Transmission Right Act

To be able to build transmission lines the grid operator must have the right to use the land where the transmission line is to be drawn.¹⁰⁶⁵ This process is separated from the concession process under the Electricity Act, and is in most cases initiated after the concession decision is taken. The right to use land for the drawing of transmission lines is assessed by the Swedish Mapping, Cadastral and Land Registration Authority.¹⁰⁶⁶ The grid owner and the land owner have in most cases already agreed upon the conditions for the land use, but in some cases the Agency organizes a meeting with the parties to get the necessary information. The Agency has the responsibility for investigating the conditions for a “transmission right”.¹⁰⁶⁷

When assessing whether the land is to be used for drawing of transmission lines, it is evaluated if the benefits from the activity outweigh the drawbacks in accordance with section 6 of the Transmission Right Act.¹⁰⁶⁸ The location chosen should be the one that has the least negative impact. The preparatory works to the Transmission Right Act¹⁰⁶⁹ do not provide any guidance on how to interpret Section 6. However, the preparatory work states that the provision is based on a similar rule in the Expropriation Act (1979:719), Chapter 2, section 12. The preparatory work, to that section, states that the evaluation should take into account all relevant interests and that consideration is to be taken with regard to not only economic but also non-profit values.¹⁰⁷⁰

The Swedish Supreme Court assessed whether a power line corridor of 30 meters was suitable in accordance with Section 6 of the Transmission Right Act.¹⁰⁷¹ Vattenfall, the applicant, suggested that the power line corridor needed to be widened for safety reasons.¹⁰⁷² However, the Supreme Court suggested that the wide power line corridor would impact on the living environment in such a way that it outweighed the interest of the assessed “transmission right”.¹⁰⁷³ In this case Vattenfall had to relocate the transmission line.

¹⁰⁶⁵ See Section 1 of the Ledningsrättslag (1973:1144) (Transmission Right Act)

¹⁰⁶⁶ See Section 5 of the Transmission Right Act.

¹⁰⁶⁷ See Section 19 of the Transmission Right Act.

¹⁰⁶⁸ See Section 6 of the Transmission Right Act.

¹⁰⁶⁹ See Prop. 1973:157 pp. 100 et seq.; and p. 131 et seq.

¹⁰⁷⁰ See Prop 1972:109, p. 219.

¹⁰⁷¹ See NJA 2013 s. 441.

¹⁰⁷² See Chapter 3, section 9 of the Electricity Act.

¹⁰⁷³ See NJA 2013 s. 441, pp. 8–9.

8.5 Concluding remarks

The Environmental Code is applicable in parallel with the Electricity Act. This implies that there are additional environmental law provisions applicable to transmission lines than the ones specified under the Electricity Act.¹⁰⁷⁴ Transmission lines may also require an environmental permit under the Environmental Code and the supervising authority may force the grid operator to undertake certain mitigation measures, or in the worst case, to relocate the transmission line if it is deemed to conflict with the consideration rules in Chapter 2 of the Environmental Code.¹⁰⁷⁵ The introduction of an exclusivity rule may be a worrying development from an environmental perspective. However, with the recent change in procedural order and the more recent practice at the Inspectorate to reject applications due to flaws in the EIA, such an exclusivity rule may not be so disruptive. In fact, the exclusivity rule may not be as far-reaching as the Inspectorate suggests.

Transmission lines are crucial for the transition of the energy system to become more sustainable, yet the grid is not always developed in the most efficient way. Often the grid is expanded in places where new renewable electricity production units are installed, rather than where wind conditions are good.¹⁰⁷⁶ Therefore the development of wind power and transmission lines could be planned in a much better way. One major issue leading to an inefficient development of transmission lines is the erection of them in parallel. The decisions from the Inspectorate show that low capacity transmission lines are often built in order to distribute electricity from only the specific wind power park, even though a grid with higher capacity could be built (with not much more environmental impact) to enable a future wind power park access to the grid. This problem may be difficult to solve with the legal tools available today. It is a question of planning and financing, where the latter, to some extent, has been solved.¹⁰⁷⁷

¹⁰⁷⁴ See Chapter 2, section 8 (a) of the Electricity Act, which states that: chapters 2, 3; Chapter 5, section 3, and Chapter 6 with regard to the formal requirement of the EIA procedure are to be addressed in the concession decision.

¹⁰⁷⁵ See Judgment of Land and Environmental Court of Appeal of 26 August 2011 in case M 4127-10.

¹⁰⁷⁶ Svenska Kraftnät argues that this is often in places in close proximity to a grid infrastructure, as the wind power developer is responsible for the cost of building a transmission line connecting the plant to the existing grid; see Svenska Kraftnät, *Anpassning av elsystemet med en stor mängd förnybar elproduktion*, 2015.

¹⁰⁷⁷ Svenska Kraftnät has identified that the short-term solution to this problem is that the Government lends money to the regional grid companies, covering the cost to reinforce the grid for production sites (likely to connect to the grid in the future). When an electricity producer gains access to the grid and pays the associated fee, the regional grid company pays back the equivalent support (associated with the capacity taken up by the electricity producer) received from the Government. See prop. 2013/14:156, pp. 9 and 16; see also Section 2.5.7.2.

9. Possibilities for bridging fragmented legal procedures

9.1 Introduction

The legal permit procedures for renewable energy activities are often separately assessed by different authorities and under different legislation.¹⁰⁷⁸ In addition, in the individual assessment of a renewable energy activity there is not much consideration for that specific activity's role in the energy system; its connection to other activities in the energy system; and/or its potential, indirect or cumulative environmental impact.¹⁰⁷⁹ Thus the legal procedures are somewhat fragmented.

In light of the current energy politics and the legal requirement under the Renewable Energy Directive to reach certain targets of renewable energy before 2020,¹⁰⁸⁰ together with the requirements under Article 13 and 16 of that Directive, it is problematic that the legal assessments are fragmented. Hence both Article 13 and Article 16 require a coordinated permitting system and the grid needs to be planned and developed in an efficient way to enable access to it for renewable energy activities.

Article 13 of the Renewable Energy Directive states that: Member States shall ensure that any rules concerning the administrative procedures of renewable energy activities are *proportionate* and *necessary*.¹⁰⁸¹ Furthermore, the Article states that Member States shall take *appropriate steps* to ensure that: the permitting and planning procedures are, for example, “clearly coordinated and defined”;¹⁰⁸² and the administrative procedures are streamlined and undertaken at the appropriate administrative level.¹⁰⁸³ The primary focus

¹⁰⁷⁸ Permits are not required for all renewable energy activities; for example, not for small solar cell installations, extraction of biomass, or certain wind power installations. This section is primarily focused on development of new wind power production that requires permit.

¹⁰⁷⁹ Although, the EIA provides a basis for a wider assessment of the activity's environmental impact (including cumulative effects), as discussed in Section 9.3.

¹⁰⁸⁰ Sweden has already reached its quota but in light of the (current) political target of having 100 % renewable electricity by 2040, a much larger increase in renewables is needed, see; The Swedish Energy Agreement of 10 June 2016.

¹⁰⁸¹ The criteria on whether the rules are proportionate and necessary could be addressed in either an infringement procedure (Article 258 TFEU) or preliminary ruling (Article 267 TFEU). However, the criteria have been discussed in CJEU case: C 2/10, *the Puglia Case*. For a discussion on the provision, see Section 2.5.6 in this dissertation.

¹⁰⁸² See Article 13(1)(a) of the Renewable Energy Directive.

¹⁰⁸³ See Article 13(1)(c) of the Renewable Energy Directive.

here is whether the permit procedures for renewable energy activities are “clearly coordinated”.

Some developments have led to a more coordinated approach in Sweden. For example, the Land and Environmental Court of Appeal established that activities that are considered to be both a water activity and an environmentally hazardous activity shall be assessed in the same process, due to the importance of a comprehensive assessment.¹⁰⁸⁴ More specifically, with regard to wind power, the legal process has been simplified in order to speed up the development of wind power.¹⁰⁸⁵ There has also been a more clear coordination between the assessment undertaken for wind power projects and transmission lines needed for its distribution.¹⁰⁸⁶ Hence, the legal procedures of renewable energy activities are moving towards more coordination, even though the fragmented nature prevails.

There are a number of important relationships in the energy system that are not necessarily reflected upon in the legal assessments of renewable energy activities. From an environmental perspective, the locations of energy system activities need to be addressed in a way that reflects on its total impact on the environment. One illuminating example is the total impact from various hydropower plants in the same river (water system). The different activities are assessed separately and the total impact on the water system is difficult to assess.¹⁰⁸⁷ The main example in this Chapter is the relationship between the legal assessment of wind power installations and transmission lines. The aim is to examine whether these procedures are “clearly coordinated” and whether there is a possibility of bridging the legal assessments of these activities with the legal instruments and provisions available today. Even though a new wind power installation is in need of transmission lines to distribute the electricity, their legal assessments are undertaken in separate processes.

In the following section, the instruments and provisions available today – with the possibility of widening the perspective and to better coordinate the legal assessment of renewable energy activities – is discussed.

¹⁰⁸⁴ See MÖD 2007:50. However, compare earlier Judgment by Land and Environmental Court of Appeal of 21 November 2002 in case M 7202-01; see also Michanek, G. and Zetterberg, C., *Den Svenska miljörätten*, 2012, p. 365.

¹⁰⁸⁵ Prior to this change, a building permit was also required in addition to necessary environmental permits. In many cases it was also required that wind power was planned in detail plans. See Prop. 2008/09:146 and SFS 2009:652. For a description of how the system looked prior to the change, see Michanek, G. and Söderholm, P., *Medvind i uppförbacke: En studie av den svenska vindkraftspolitiken*, 2006:1, pp. 79–145.

¹⁰⁸⁶ See preparatory work to change in the Electricity Act of Chapter 2, section 8 (a): prop. 2008/09:146, pp. 46–47; SOU 2008:86; SOU 2009:02, pp. 95–97; and SFS 2010:893.

¹⁰⁸⁷ In theory, the EIA for the hydropower installation under assessment should describe and assess the cumulative impact; which should include the impact from other hydropower installations in the same river. However, it is not evident from available case law that such impact is discussed by the Courts. Thus, this example is not discussed further here.

9.2 Boundaries of the permit process and its associated assessment

9.2.1 In general

It is important to draw a distinction between the boundaries of the legal permit process and the boundaries of the assessment. One aspect, specific to environmental law, is that the environmental assessment undertaken (if an EIA is required) shall be of a comprehensive nature and include the direct, indirect and cumulative effects of the specific activity under assessment. The permit decision, even though based on the wider EIA assessment, is bound to examine whether or not the specific activity that the application was based on is permissible.¹⁰⁸⁸ For example, if the permit application concerns a wind power park,¹⁰⁸⁹ the EIA has to include the potential impact from the required grid infrastructure (but the permitting as such does not include a consideration of the transmission line). The transmission line is instead considered under the concession process under the Electricity Act. Even though the Court can only assess activities that are specified in the application, it can decide that the application (and the EIA) is not sufficient to comprehensively assess the activities' impact, and on that ground dismiss the application.¹⁰⁹⁰ However, the possibility to assess the concession of transmission lines and the wind power permit in the same process is not possible, as it is not the same applicant.¹⁰⁹¹ The division of these processes is natural, since the different energy activities have different owners, concern different activities, and are assessed under different legislative acts.

9.2.2 “Connected operations”

There is also a requirement under the Environmental Code that implies that the assessment of an activity that is under assessment still needs to include

¹⁰⁸⁸ The authority cannot decide whether or not a certain activity (that is not part of the application) is permissible.

¹⁰⁸⁹ Wind power installations of certain size are required to have a permit for their operation. See Chapter 9, section 6 of the Environmental Code and Chapter 21, section 10–11 of the Miljöprövningsföreläggningen (2013:251). Wind power that requires a permit requires an EIA; see Section 3 of the Regulation on EIA (Förordning (1998:905) om miljökonsekvensbeskrivningar).

¹⁰⁹⁰ See for example: MÖD 2007: 50 where the application was denied because the application for a permit (for a water activity) and the EIA did not include the noise, vibrations, air pollution, etc. that the transport vehicles and digging gave rise to, which, in accordance with Chapter 9, is considered an environmental hazardous activity. The Case was appealed, but only changed with regards to which legal basis the denial was made, see NJA 2008 s. 748. For a deeper discussion on the EIA requirements, see Section 9.3.

¹⁰⁹¹ See the Environmental Code, Chapter 21, section 3. However, with regard to wind power and transmission lines the applicant is not allowed to be the same party; see Chapter 3, section 1(a) of the Electricity Act.

activities or structures that are necessary for the operation of that activity due to its being a *connected operation* (följdföretag).¹⁰⁹² Grid infrastructure is suggested to be an activity that is of that nature, and needs to be assessed in the application for a permit for new wind power plants (in need of new transmission lines).¹⁰⁹³ The Supreme Court in a judgment in 2004 assessed what a *connected operation* is and the boundaries of that concept.¹⁰⁹⁴ The Court suggested that an activity needs to have an “immediate connection” with the activity under assessment, to be considered to be of such nature, and that effects close to the activity – in the “nearby area” – are considered to be effects that should be included in the assessment.¹⁰⁹⁵ However, as transmission lines are connected (literally) to the wind power turbines, such assessment is not relevant, but if, for example, transportation is required, such operations may be included in the assessment. Even though wind power activities that require a permit also require an EIA, the provision on *connected operations* is still important, as it points out that the cumulative effects from, for example, transmission lines need to be assessed in the permit procedure (even though the permit procedure does not decide upon the permissibility of the transmission line). The following section presents the role of the EIA – the important decision basis – in bridging the environmental assessment of renewable energy activities.

9.3 Environmental Impact Assessment – role in bridging the fragmented legal processes

9.3.1 Introduction

An Environmental Impact Assessment (EIA) is an important tool for assessing the risk associated with a planned activity’s impact on the environment.¹⁰⁹⁶ It is an instrument that aims at providing a better basis for decision making and has been suggested to be an important tool in securing sustainable development.¹⁰⁹⁷ It is a procedural instrument that reflects the precautionary principle, as the EIA has to assess the risk of activities before they are

¹⁰⁹²See Chapter 16, section 7, of the Environmental Code and also prop. 2008/09:146, p. 46.

¹⁰⁹³See prop. 1997/98:45, part II, p. 208; and prop. 2008/09:146, p. 46.

¹⁰⁹⁴See NJA 2004 s. 421.

¹⁰⁹⁵For a discussion on what is considered to be in the ‘nearby area’, see discussion in NJA 2004 s. 421; MÖD 2005:52; and MÖD 2004:35.

¹⁰⁹⁶Environmental Impact Assessment was first introduced in the US in the National Environmental Policy Act of 1969. In Europe the Commission introduced the concept in 1980 but it was in 1985 that the EIA Directive was first adopted. See Directive 85/337/EEC on the assessment of the effects on certain public and private projects on the environment.

¹⁰⁹⁷The World Commission on Environment and Development, *Our Common Future*, 1987, pp. 62–65.

undertaken.¹⁰⁹⁸ For some large-scale projects such as large refineries, larger airports or large thermal power stations, an EIA is always required.¹⁰⁹⁹ For other projects, not mentioned in Annex I of the EIA Directive, an EIA is required if the project is likely “to have significant effects on the environment by virtue, in particular, of its nature, size or location”.¹¹⁰⁰

Developers of renewable energy activities are not always required to submit an EIA but in many cases it is a prerequisite.¹¹⁰¹ In Sweden, hydro power activities,¹¹⁰² wind power installations that require a permit under the Environmental Code,¹¹⁰³ and transmission lines that are of a certain size always require an EIA.¹¹⁰⁴ Thus if a wind power developer applies for a permit for a wind power park, an EIA is required. If the specific wind power park is in need of a new transmission line, the EIA has the potential to also show what impact such infrastructure will have on the environment. The transmission line is legally assessed under the Electricity Act, where it is stated that if an EIA already exists (that describes the indirect and direct effects of the transmission line) because of an assessment under the Environmental Code, there is no need to develop a new EIA for the concession permit under the Electricity Act.¹¹⁰⁵ Even though the EIA shall include the possible grid connection in the assessment under the Environmental Code, the concession decision is still taken by the Inspectorate in accordance with the Electricity Act.¹¹⁰⁶

Hence the possible link between the different processes (of production and distribution) is the EIA, which should present direct, indirect and cumu-

¹⁰⁹⁸ The Precautionary Principle is an established environmental law principle; see Article 191 of the TFEU.

¹⁰⁹⁹ See Annex I of Directive 2014/92/EU of the European Parliament and of the Council of 16 April 2014 amending Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment (the EIA Directive).

¹¹⁰⁰ See Article 2 of the EIA Directive. See Article 4 of the EIA Directive for the definition of such projects.

¹¹⁰¹ Harvesting of biomass to produce energy does not require an EIA. However, if such harvest is planned in an overview plan, an SEA may be required.

¹¹⁰² See Chapter 6, section 1; and Chapter 11, section 9, of the Environmental Code.

¹¹⁰³ See Chapter 6, section 1; Chapter 9, sections 1 and 6(1) of the Environmental Code and Chapter 21, section 10–11 of the Miljöprövningsförfordningen (2013:251). Installations of wind power that does not require a permit under the Environmental Code does not require an EIA but if planned in a detailed plan an SEA may include such activity if located close to settlements.

¹¹⁰⁴ Certain large transmission lines require an EIA in accordance with Section 3(6) of the Regulation (1998:905) on EIA. An EIA “light” is always required for concession decisions under Chapter 2, section 8 (a) of the Electricity Act. If the County Administrative Board considers the activity to be likely to have significant environmental impact an EIA in accordance with Chapter 6, section 7, para. 2 of the Environmental Code is required.

¹¹⁰⁵ See Chapter 2, section 8(a) of the Electricity Act.

¹¹⁰⁶ An exemption to compose an EIA (in cases where one was already composed in the Environmental permit process) was introduced in the Electricity Act in 2010. This change was argued to speed up the concession process. However, the exemption only applies for cases where the EIA includes the direct and indirect effects from drawing the power line.

lative effects on the environment from the wind power plant. The overarching aim of the EIA is to enable a *comprehensive* assessment of all these effects on human health and the environment.¹¹⁰⁷ The EIA requires the developer to investigate what risks are associated with the activity alone and in connection to other necessary activities for its functioning, and also in relation to other activities in the area.

9.3.2 When is an Environmental Impact Assessment needed?

9.3.2.1 Introduction

The EIA Directive was first introduced in 1985 but has since then changed a few times.¹¹⁰⁸ The newest version of the Directive was adopted in 2014.¹¹⁰⁹ Article 1 in the EIA Directive states that it shall apply to the assessment of the environmental effects of “projects which are likely to have significant effects on the environment.”¹¹¹⁰

When assessing whether the project is likely to give rise to such impact, it is established in case law that the objective of the EIA is not considered fulfilled if projects are divided up into part-projects, where the separate part under assessment is not in itself considered to need an EIA but if assessed together is likely to have significant effects on the environment.¹¹¹¹

In *Ecologistas en Acción-CODA*, the developer had divided a large road project, “Madrid calle 30”, into 15 independent sub-projects, where only one of the projects reached the regional threshold for when an EIA was necessary. It was argued that since “urban roads” was not mentioned in the EIA Directive Annex I or II, the developer did not need to undertake an EIA.¹¹¹² The Court, however, did not accept that argument referring to the wide scope of the Directive.¹¹¹³ Due to the nature of the urban road, as expressed by the NGO (CODA) and not contradicted in the case, the urban ring road was intended exclusively for motor traffic and therefore was argued to fall within

¹¹⁰⁷ See Chapter 6, section 3 of the Environmental Code. Although, in the case of wind power installations that requires a permit, the criteria in Chapter 6, section 7, para 2 must be fulfilled.

¹¹⁰⁸ See Directive 85/337/EEC, later amended by Directive 97/11/EC, which in turn was amended after the Proposal for a Directive: COM (2012) 628 final.

¹¹⁰⁹ Directive 2014/92/EU of the European Parliament and of the Council of 16 April 2014 amending Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment (The EIA Directive).

¹¹¹⁰ Formally, it is also necessary that the activity requires a permit for the EIA legislation to be applicable.

¹¹¹¹ This was the case in Case C-392/96, *Commission v. Ireland*, para. 76, 82; Case C-2/07, *Abraham and Others*, para. 27; Case C-142/07, *Ecologistas en Acción-CODA*, para. 44; and Case C-275/09, *Brussels Hoofdstedelijk Gewest and Others*, para. 36. In the Swedish context, see MÖD 2007:50 where the Court did a conformational interpretation of the EIA Directive. The Court denied the application partly because the EIA did not describe and assess the whole tunnel project, only the specific part that the application was based on.

¹¹¹² See Case C-142/07, *Ecologistas en Acción-CODA*, para. 27.

¹¹¹³ *Ibid.*, para. 28.

the scope of the Directive.¹¹¹⁴ The fact that this case concerned *refurbishment* of a road and not construction of a new road, did not lead to a different outcome.¹¹¹⁵ The Court did not accept the splitting of the project and considered this practice to be unacceptable.¹¹¹⁶

The construction of overhead electrical power lines with a voltage of 220 kV or more and a length of more than 15 km are subject to the EIA procedure in accordance with Annex I, point 20, of the EIA Directive. In *Umweltanwalt von Kärnten*, the power line stretched over national borders where the length in Austria was less than 15 km and the grid company therefore did not consider that an EIA was necessary. However, the Court pointed out that these circumstances did not mean that an EIA was not required. More specifically, the CJEU stated:

“It must be stated that the fact that the section located in Austria has a length of less than 15 km cannot, in itself, cause the project to be exempt from the assessment procedure laid down in Directive 85/337. The Member State concerned must carry out an environmental impact assessment of the project in its own territory which takes account of the specific effects of that project.”¹¹¹⁷

This outcome seems reasonable as the project was not only the part located in Austria, it stretched over its border. Hence when deciding whether an EIA is necessary it is not only the part of the project under assessment that is relevant but the whole project – and the effects thereof – that is to be described and assessed. This is yet another example showing that it is not acceptable to split up projects into smaller parts in order to avoid the EIA requirement.

9.3.2.2 The EIA requirement in the Swedish context

Member States shall adopt all measures necessary to ensure that projects that are likely to have “significant effects on the environment,” are not enacted prior to an assessment of the potential environmental impact.¹¹¹⁸ When Member States determine whether a project is of such a nature it can be undertaken as a case-by-case examination and/or by thresholds/criteria set by the Member State.¹¹¹⁹

¹¹¹⁴ As expressed by the CJEU: “[...] either where they are projects covered by point 7(b) or (c) of Annex I to the directive, or where they are projects covered by point 10 (e) of Annex II or the first indent of point 13 thereof, which are likely, by virtue of their nature, size or location and, if appropriate, having regard to their interaction with other projects, to have significant effect on the environment”, *Ibid.*, para. 46.

¹¹¹⁵ *Ibid.*, para. 36

¹¹¹⁶ *Ibid.*, para. 44.

¹¹¹⁷ See Case C-205/08, *Umweltanwalt von Kärnten*, para. 57.

¹¹¹⁸ See Article 2(1) of the EIA Directive. Those projects are further defined in Article 4.

¹¹¹⁹ See Article 4(2) of the EIA Directive.

Sweden has chosen both legal methods. In addition to a list on projects that are always considered to have significant environmental impact, it is also an opening for examining projects on a case-by-case basis.¹¹²⁰ Sweden also has a lighter version of an EIA that is required, for example, for all projects that require an environmental permit.¹¹²¹ So even though a project is not considered to have “significant environmental impact”, the developer is in most cases required to adopt an “EIA light” according to the Swedish Environmental Code. However, the difference from the requirement for a “normal” EIA is that the public hearing is not as extended and the formal requirement of the content of the EIA is not as detailed.¹¹²² While wind power installations that require a permit are always required to compose an EIA in accordance with Chapter 6, section 7, para.2 of the Environmental Code, it is not certain that such an EIA is required for transmission line projects. This will be discussed in the next section.

9.3.2.3 Which transmission line projects are considered to have significant environmental impact?

In the EIA-directive it is mentioned in Annex 1, paragraph 20, that “construction of overhead electrical power lines with a voltage of 220 kV or more and a length of more than 15 km”, always require an EIA in accordance with Article 4(1) of the EIA Directive. In accordance with Article 4 (2) projects listed in Annex II shall be subject to an EIA if the Member States determine that such projects are subject to such an assessment. In Annex II, paragraph 3(b), industrial installations for transmission of electricity by overhead cables (not included in Annex I) are mentioned.

Swedish legislation has just recently introduced the same provision as in the EIA Directive that “construction of overhead electrical power lines with a voltage of 220 kV or more and a length of more than 15 km”, is always considered to have significant environmental impact, hence requiring an EIA.¹¹²³ There is, however, no requirement for smaller transmission line projects to always compose an EIA in accordance with the EIA Directive.

In accordance with the Electricity Act, Chapter 2, section 8(a), an EIA “light” is always required when applying for a concession for transmission lines (for line). It is up to the County Administrative Board to assess whether a specific grid infrastructure project is considered to potentially have significant environmental impact, and therefore is required to fulfil the requirement

¹¹²⁰See Chapter 6, section 4(a) and 5 of the Environmental Code, and Section 3 of the MKB-förordningen (the EIA Regulation).

¹¹²¹ See Chapter 6, section 1, of the Environmental Code. The requirement can also be prescribed in other Regulations. The County Administrative Board can also require an EIA during a consultation under Chapter 12, section 6 (in accordance with Chapter 6, section 5) of the Environmental Code.

¹¹²² Compare Chapter 6, sections 3, 4 and 7 of the Environmental Code.

¹¹²³ See Section 3(6) of the Swedish EIA Regulation. This change was due to a proposal from the Energy Market Inspectorate, Ei R2014:10, p. 10.

of the EIA Directive.¹¹²⁴ It is uncertain how grids of lower capacity are assessed and what criteria matters when assessing whether a certain grid has significant environmental impact. Of the concession decisions I have looked at it is only in a few cases where the grid has been considered to have such impact. Some of these cases are presented below.¹¹²⁵

In cases where cables are located in water, and considered a water activity, it is always considered to have such impact.¹¹²⁶ This was the case in Kriegers Flak.¹¹²⁷ If the grid is likely to significantly affect a Natura 2000 site an appropriate assessment is required under the Habitats Directive Article 6(3). In such cases an EIA will most likely also be required, since the precondition for undertaking such an assessment is similar to the one for an EIA – that the activity is likely to give rise to “significant” impact.¹¹²⁸ *In the Fäboliden Case* the transmission line was airborne, with a capacity of 130 kV and with a total length of 15 km. In this case the transmission line crossed both wetland areas and Natura 2000 sites and was considered to have impact on reindeer husbandry. Thus despite its short length and low capacity, the transmission line was considered to give rise to significant environmental impact.¹¹²⁹

The assessment is made in each individual case, which means that it is not possible to generally decide that a certain capacity or length of a transmission line will give rise to such impact. In *the Åmliden Case*,¹¹³⁰ the transmission lines were airborne with a capacity of 145kV and a length of 47 km. The County Administrative Board considered this project to have significant environmental impact due to the scope of the project and its need for large land areas, in addition to its effect on a number of national and public interests.

One illuminating example of the difficulty of knowing beforehand when transmission lines are considered likely to give rise to significant environmental impact, is the project from the *Svartnäs Case* and *Hofors Case*, where one common EIA was composed for two stretches of a transmission line that were applied for in two separate applications. The transmission line crossed county borders which resulted in both Gävleborg and Dalarna County Administrative Boards deciding upon whether the project was likely to

¹¹²⁴ Compare Chapter 6, section 5 of the Swedish Environmental Code.

¹¹²⁵ See for example: Ei decision of 13 January 2012, 2011-103186 (Glötesvålen); Ei decision of 14 July 2010, 2009-102168 (Nåda/Åmliden); Ei decision of 9 January 2013, 2010-102512 (Svartnäs); Ei decision of 3 March 2011, 2010-102513 (Jädraås/Hofors); Ei decision of 14 June 2013, 2012-102207 (Fäboliden); Ei Decision of 15 March 2010, 2008-103140 (Kriegers Flak); Ei decision of 9 November 2010, 2008-105206 (Sjjsjka); and Ei decision of 20 November 2009, 2009-100421 (Hjuleberg).

¹¹²⁶ See Section 3 of the Swedish EIA Regulation.

¹¹²⁷ See Ei decision of 15 March 2010, 2008-103140 (Kriegers Flak).

¹¹²⁸ The Swedish provision stipulating the requirement for an appropriate assessment can be found in Chapter 6, section 7, para. 4 of the Environmental Code.

¹¹²⁹ See Ei decision of 14 June 2013, 2012-102207 (Fäboliden).

¹¹³⁰ Ei decision of 14 July 2010, 2009-102168 (Nåda/Åmliden)

have significant environmental impact. The County Administrative Board of Gävleborg considered the activity to have such impact, while the Board in Dalarna did not. However, the Inspectorate's concessions decisions here concerned the total impact of the planned transmission lines between Svartnäs-Hofors, Jädraås-Hofors and the planned reconstruction in Hofors. These decisions have a more systemic approach, probably because the developer wanted to assess it all in one EIA to speed up the process. The capacity of one of the grids was 130kV and the length was 47,5 km. It was to be located parallel to an existing transmission line of 220 kV.¹¹³¹ In the *Hofors Case* the capacity of the grid was 130 kV and the length of the transmission line was 38,5 km, also located in parallel with an existing transmission line.¹¹³² Thus the different outcomes in these cases show that seemingly same conditions may give rise to different results, which implies that it is a more certain method to implement threshold values.

In sum, it seems as if there are a number of aspects that are relevant when deciding whether a specific transmission line is likely to give rise to significant environmental impact and no general guidance on when a transmission line will be considered to give rise to such impact, can be determined. In some cases, it may depend on the size and voltage and in other cases because of its location, which if located in water or on a Natura 2000 site, may imply that the activity is considered to be of such nature. Sometimes a transmission line is so closely connected to the wind power park that it is considered the same project, thus suggesting it would give rise to significant environmental impact. The following section provides a discussion on what constitutes a "project" under the EIA Directive.

9.3.2.4 What is a project?

The energy system is composed of various energy system activities, which are more or less dependent on one another's functioning. Even though many components of the system are dependent on others, it is not considered one "project" in the legal context. The following section assesses the definition of "project" and analyses which associated projects can be assessed under the same EIA. Article 1 of the EIA Directive defines project as:

"the execution of construction works or of other installations or schemes" or "other interventions in the natural surroundings and landscape including those involving the extraction of mineral resources"¹¹³³

The term "project" has been discussed in CJEU case law. In *Abraham and Others* it is expressed that: "It is apparent from the very wording of Article 1(2) of Directive 85/337 that the term 'project' refers to works or physi-

¹¹³¹ See Ei decision of 9 January 2013, 2010-102512 (Svartnäs)

¹¹³² See Ei decision of 3 March 2011, 2010-102513 (Jädraås/Hofors).

¹¹³³ See Article 1, para. 2 (a) of the EIA Directive.

cal interventions,” and not an “agreement” *per se*, as was one of the questions in the case.¹¹³⁴ A renewal of an existing permit to operate an airport was not considered to be classified as a “project” as there was no physical intervention or works involved in the renewal.¹¹³⁵ Hence it is a requirement that it needs to be some physical intervention or work, for it to be considered a project.

The CJEU has given the concept “construction” a broad interpretation, to also include refurbishment of an existing urban ring road, as the associated impact was comparable to the building of a new road;¹¹³⁶ and works to alter infrastructure of an existing airport, even though no extension of the runway was undertaken, the alterations were comparable to a modification of the airport itself.¹¹³⁷

The building of transmission lines for new wind power parks, which is the main example in this part of the dissertation, is therefore clearly considered to be projects in this sense, since the activities are both physical interventions and constructions. But the activities, the building of transmission lines and wind power parks, are not necessarily seen as the same project. It could be argued that necessary transmission line development, and separate parts of a connection line (to enable access to the grid for new electricity production) could be seen as one project, though this is not established in either statutes or case law from the CJEU or from the Land and Environmental Court of Appeal.

There are, however, a few decisions by the Inspectorate that show that in some cases the transmission line is considered to be the same project as the wind power park. In the *Glötesvålen Case*, the County Administrative Board referred to the decision on the wind power plant where the environmental impact had been assessed up until the substation, that part of the transmission line that was considered likely to have significant environmental impact. In this case the transmission cables had a capacity of 36 kV, and were directly connected between the individual turbines and the substation.¹¹³⁸ This argumentation, that the transmission lines were considered to be the same project, was also presented in the *Sjisjka Case* where the applicant referred to the decision taken in the Environmental Court.¹¹³⁹ The applicant suggested that the environmental assessment was already undertaken and the transmission line was considered part of the wind power project, which was considered to have significant environmental impact by the Swedish EIA

¹¹³⁴ See Case C-2/07, *Abraham and Others*, para. 23. Also reinforced in Case C-275/09, *Brussels Hoofdstedelijk Gewest and Others*, para. 20. However, the agreement can be seen as a permit and therefore an EIA was required, see para. 25.

¹¹³⁵ See Case C-275/09, *Brussels Hoofdstedelijk Gewest and Others*, para. 24.

¹¹³⁶ See Case C-142/07, *Ecologistas en Acción-CODA*, para. 36.

¹¹³⁷ See Case C-2/07, *Abraham and Others*, para. 40.

¹¹³⁸ See Ei decision of 13 January 2012, 2011-103186 (Glötesvålen).

¹¹³⁹ See Ei decision of 9 November 2010, 2008-105206 (Sjisjka).

Regulation.¹¹⁴⁰ The reason why the activities are considered to be the same project, in these cases, is either because the grid is needed in between the wind power turbines or that the grid also requires another environmental permit. Hence there is no indication that a connection line for wind power is to be considered the same project as the wind power park, even though the wind power park is not able to distribute electricity unless the necessary transmission lines are in place.

Another aspect relevant for the definition of “project” is if the necessary connection line is considered to be one project or whether the transmission line project can be divided into separate parts. There is no Swedish case law available specific to transmission lines, but in general it is not acceptable to divide a project (and the EIA) into separate parts due to the requirement of a comprehensive assessment.¹¹⁴¹ However, the concession decisions from the Inspectorate show a different practice, where separate parts of transmission lines are divided into separate sections. The main reason why the different sections are assessed separately by the Inspectorate is due to the different capacity and size of the transmission line. However, in accordance with the EIA requirements the assessment must include, in addition to direct impact, also indirect and cumulative effects.¹¹⁴² In the case of various sections of the connection line this may imply that even though the concession processes are separated for the different sections, the EIA shall still include the impact of the parts of the connection line that are needed for the connection to the existing grid.

The decisions I have looked at from the Inspectorate do not reveal any comprehensive assessments of the different sections of the connecting transmission line. In my search there was only one case¹¹⁴³ – *the Lainejaur Case* – that contained two decisions for the connection line, and in those decisions there was no reference to the impact from the other section of the transmission line.¹¹⁴⁴ One of the decisions concerned a new 145 kV transmission line between Lainejaur and Rackejaour in order to connect a planned wind power plant in Lainejaur.¹¹⁴⁵ In the other decision, concession was applied for a new 36 kV transmission line to connect the individual wind tur-

¹¹⁴⁰ See Section 3 of the EIA Regulation.

¹¹⁴¹ See, for example: Case C-392/96, *Commission v. Ireland*, para. 76. In the Swedish context, see MÖD 2007:50.

¹¹⁴² See Section 9.3.4.

¹¹⁴³ The reason why this is the only case (in my study) with two concession decisions may be because the owner of the wind park and the grid developer were not the same legal entity, which implies that the grid within the wind park did not need a concession permit. This is often the case, which means that this part of the transmission line does not have a concession decision. Another reason why this was the only case with two decisions could be that the transmission line needed from the substation did not mention “wind power” in its decision and so was not revealed in my search.

¹¹⁴⁴ See Ei decision of 28 October 2010, 2009-102167 and Ei decision of 23 August 2010, 2009-102166 (*the Lainejaur case*)

¹¹⁴⁵ See Ei decision of 23 August 2010, 2009-102166.

bines to the substation (that is connected to the 145 kV transmission line).¹¹⁴⁶ Even though these different sections were applied for at the same point in time, the applications were divided into two separate ones, with separate EIAs. In this specific case, both sections of the connection line were considered to have an impact on sensitive bird species, but none of the sections were considered to have a significant environmental impact. However, if the separate sections had been considered in the same EIA – and a comprehensive assessment was undertaken – the potential environmental effects may have been considered significant and an EIA in accordance with Chapter 6, section 7, necessary. Even though it is only one decision, providing only one sample, it shows that a comprehensive assessment of the whole connection line was not undertaken, rather an assessment of the separate sections *per se*. In addition, none of the decisions I looked at dealt with more than one section of the transmission line, implying it is very rare, if ever occurring, that separate sections of a transmission lines are in the same application. In light of the EIA requirements, the Inspectorate's practice may be questioned.¹¹⁴⁷

The division of transmission line projects may, nevertheless, in some cases be reasonable, if it concerns very large projects. The *Sydvästlänken Case* concerns a very large infrastructure project, originally with the aim of building a strong connection line with Norway and also connecting the northern grid with the south, to even out prices on the electricity market. In the end it was only the northern and southern sections that granted concession while the section connecting to Norway was not realised due to other reasons.¹¹⁴⁸ In this case, the project was divided into three separate sections, with different applications, EIAs and concession decisions. However, Svenska Kraftnät, the grid developer, had composed a strategic environmental assessment describing potential environmental impacts from the whole project.¹¹⁴⁹ As this project concerned a 400kV transmission line the question was handled by the Government. This case is extraordinary because of its size; smaller projects are more likely to escape the threshold for an EIA requirement. Even though the project was divided into three separate processes and decisions, the parts of the projects were still considered to have significant environmental impact individually. The consultation process therefore involved a large number of parties, including environmental organisations. This division of a project and the effects thereof in the EIA may therefore not be in conflict with the EIA requirements, as the reason for its division in this case is not to avoid the

¹¹⁴⁶ See Ei decision of 28 October 2010, 2009-102167.

¹¹⁴⁷ See for example: Case C-392/96, *Commission v. Ireland*, para. 76; Case C-2/07, *Abraham and Others*, para. 27; Case C-142/07, *Ecologistas en Acción-CODA*, para. 44; and Case C-275/09, *Brussels Hoofdstedelijk Gewest and Others*, para. 36; and MÖD 2006:50.

¹¹⁴⁸ See Svenska Kraftnäts homepage about the project and relevant documents at: <http://www.svk.se/natutveckling/utbyggnadsprojekt/sydvastlanken/dokument/>

¹¹⁴⁹ Svenska Kraftnät, *Strategisk miljöbedömning>Sydvästlänken*, 2010.

EIA requirements, but to enable an assessment of a reasonable size of the project.

In sum, the definition of “project” does not further explore the limits of what constitutes a project, except that the division of a project (and the EIA) is not acceptable in accordance with EU law. However, the EIA has to address both direct and indirect effects of the project in accordance with Article 3 of the EIA Directive. It also needs to address cumulative effects, including the effects from other projects.¹¹⁵⁰ This may imply that projects that are a prerequisite for the functioning of the project under assessment must be addressed in the EIA by the developer. Also, the permit authority must assess potential impact from “connected operations” in the assessment of the activity under assessment. Hence the definition of the project’s boundaries becomes less important to determine as its environmental impact still needs to be assessed comprehensively.

9.3.3 Content of the EIA

9.3.3.1 Introduction

The EIA shall “identify, describe and assess” the direct and indirect, and cumulative effects of a specific project with regard to the factors specified in Article 3 and in accordance with Article 4 to 12 of the EIA Directive. Article 5 and Annex IV specifies the type of information to be reported to the responsible authority. In the EIA Directive it is now specified that *biological diversity* is one of the interests that is to be identified, described and assessed.¹¹⁵¹ Additionally, an activity’s effect on the climate is to be assessed; especially a project’s contribution of GHG emissions.¹¹⁵² Even though the EIA does not specifically suggest that a project’s energy use or energy conservation measures shall be examined under the EIA, such measures may imply that the project emits less GHGs, and thus ultimately has less environmental impact. Hence a project’s energy use and energy conservation measures may now become more important to describe and assess in the EIA, as it has become more clear that not only local environmental impacts are to be assessed, but also more global effects, such as on climate. However, from an environmental perspective a clearer requirement to assess the project’s energy use and conservation measures may give rise to better results. One of the important aspects of the EIA, from the energy system perspective, is that the EIA shall show alternative locations and forms of the

¹¹⁵⁰ See Section 9.3.4.

¹¹⁵¹ See Article 3(1)(b) of the EIA Directive. It is further specified that particular attention should be paid to “species and habitats protected under Directive 92/43/EEC and Directive 2009/147/EC”.

¹¹⁵² See Preamble, para. 13 and Article 3(1)(c) of the EIA Directive.

activity. In the following section, what that requirement may imply in the renewable energy context, is discussed.

9.3.3.2 Alternative location or form

The need to show alternatives to the proposed activity is not always considered legally binding in the EU context. In the earlier versions of the EIA Directive, the requirement to present alternative solutions was vaguely formulated. With regard to alternatives, Article 5 stated that the information that the developer needed to provide was at least:

“an outline of the main alternatives studied by the developer and an indication of the main reasons for his choice, taking into account the environmental effects;”¹¹⁵³

Krämer suggests that if the developer had not studied any alternatives such information was not required.¹¹⁵⁴ In the most recent version of the EIA Directive this requirement has been reworded but it is questionable as to whether the interpretation has changed. According to Article 5(1)(d) the EIA needs to provide:

“a description of the reasonable alternatives studied by the developer, which are relevant to the project and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the project on the environment;”

Even though this requirement is written vaguely, whether it is a requirement to present alternatives to the location or form, the Swedish implementation of the EU EIA legislation has always been formulated more firmly.¹¹⁵⁵ The Swedish Environmental Code states that for projects likely to have significant impact, the EIA *always* needs to include a presentation on alternative locations (if possible) and alternative forms of the activity, together with a motivation as to why a certain alternative is chosen and a description of the consequences if the activity were not to be realised (no-action alternative).¹¹⁵⁶ The preparatory works suggest that it should in most cases be possible to present other locations. However, it suggests that an alternative location is not needed if the activity’s specific characteristics imply that there is no other suitable location - for example, a specific river where the applicant wants to build a hydropower installation.¹¹⁵⁷ This statement could be challenged.

¹¹⁵³ See old version of Directive: Article 5(3)(d) of Directive 2011/92/EU.

¹¹⁵⁴ See Krämer, L., *EU Environmental Law*, 2012, p. 157.

¹¹⁵⁵ Even though it is no requirement it may be in the interest of the developer to do so. Showing alternative forms and locations should be in the interest of the developer as if the main alternative is not acceptable, another form or location of the activity may be.

¹¹⁵⁶ Chapter 6, section 7, second paragraph, item 4 of the Environmental Code.

¹¹⁵⁷ See prop. 1997/98:48, Part II, p. 63.

Why should a hydropower developer be excused from investigating other locations? Arguably, there may not be many suitable locations remaining, as many rivers (or stretches thereof) are protected from future development. However, it is not certain that such protection will prevail in the future and there may be more hydropower development in Sweden. If so, it would be important that alternative locations are investigated in order to enable hydropower production with the least environmental impact. However, as will be discussed below, the developer is still required to show “comparable ways of reaching the same objective”. Similar requirement is established in the Esbo Convention where reasonable alternatives and the no-action alternative needs to be presented.¹¹⁵⁸

In addition, it is also specified that in cases where the EIA shall present alternative forms, the County Administrative Board can, within the boundaries of the public hearing, also require that other comparable ways of reaching the same objective shall be presented.¹¹⁵⁹ According to the preparatory works this requirement is especially needed for large activities that are to be assessed by the Government in accordance with Chapter 17 of the Environmental Code but can also be required in other cases where the activity is likely to give rise to significant environmental impact. The Government suggests that “comparable ways of reaching the same objective” refers to other possible alternatives to the planned activity, for example: other ways of extracting energy or other type of public transportation (high speed trains instead of an airport).¹¹⁶⁰

Michanek and Zetterberg suggest that a developer of a small-scale hydro power installation (which arguably is dependent on a specific river) may still need to present alternative forms of the activity.¹¹⁶¹ The authors suggest that the objective (to produce electricity) could be reached by, for example, wind power production, if such an alternative would be considered a reasonable requirement, due to its related cost.¹¹⁶² Even though I agree with the authors’ example in this case – that the electricity produced from a small-scale hydropower installation could be produced by wind power with less environmental impact – I do not see this as a valid argument for a large-scale hydropower installation, as it is not simply an electricity production unit, it may also have the potential to be used as *balancing power*. Thus such installation is not comparable to wind power production. Though, in the future, alternatives such as efficient storage facilities, combined with wind power, may be considered a viable alternative; but efficient storage (at a reasonable cost) is not yet available.

¹¹⁵⁸ See Article 4 and Annex II, Section b of the Espoo Convention.

¹¹⁵⁹ See Chapter 6, section 7, para.3 of the Environmental Code.

¹¹⁶⁰ See prop. 1997/98:48, Part II, p. 64.

¹¹⁶¹ Michanek, G. and Zetterberg, C., *Den Svenska miljörätten*, 2012, pp. 192–193.

¹¹⁶² *Ibid.*, 126 et seq.

Other energy-related examples, concern the alternative (location or form) of where and how to build transmission lines. The Inspectorate has in a number of cases rejected the application due to flaws in the EIA, specifically with regard to the lack of investigating alternative locations for the transmission line.¹¹⁶³

With regard to the requirement of showing alternative forms, an EIA for a transmission line may in most cases have to show the potential impact from an overhead transmission line compared with one located underground. If the application involves an overhead transmission line, it would almost always (if possible) be of interest to see how the impact would change if the transmission line was to be located underground. Depending on local conditions the chosen form may give rise to more or less impact than the other. For example, if the location is an important wetland and a habitat for rare orchids, an overhead transmission line is preferable, but if the location is an important migration route for birds, an underground cable would be the better option. It is, however, often argued that even though an underground cable would be preferable from an environmental point of view it is, due to economic aspects, not the preferred option because it is not considered *reasonable*.¹¹⁶⁴

Currently, only a few cases from the land and environmental courts have assessed the environmental provisions referred to in the Electricity Act. In one case, the Inspectorate's decision was appealed by the municipality (among others) partly due to the formation of the activity.¹¹⁶⁵ The municipality argued that the transmission line should be in the form of an underground cable due to its large impact on many different properties, as a new power line corridor of 40 meters was needed which would give rise to a strong effect on the human environment and on nature values.¹¹⁶⁶ The Court considered that both options (underground and overhead) were suitable in this case, but after an assessment in accordance with Chapter 2, section 3 and 7, of the Environmental Code the Court considered the underground option not *reasonable* as the operator had presented figures suggesting that the underground option would be much more expensive: 225 instead of 40 million SEK.¹¹⁶⁷

There is one decision by the Inspectorate (appealed to the Government) which also provides a discussion on the alternative form and location of

¹¹⁶³ See, for example: Ei decision of 27 February 2014, 2011-103318, later appealed to the Nacka Land and Environmental Court, which did not accept the appeal and confirmed the Ei:s decision; see Judgment of the Land and Environmental Court in Nacka of 13 May 2015 in case M 1861-14. See also Ei decision of 15 December 2015, 2008-103469, and Ei decision of 15 December 2015, 2008-102867. Compare: NJA 2009 s. 321.

¹¹⁶⁴ See Chapter 2, section 7, of the Environmental Code.

¹¹⁶⁵ See See Judgment of Land and Environmental Court in Nacka of 22 April 2015 in case M 5242-14.

¹¹⁶⁶ Ibid., p. 2.

¹¹⁶⁷ Ibid., pp. 6–7.

transmission lines, this time with regard to its potential impact on birds. A bird expert, with a specific focus on eagles suggested that a transmission line higher than the one in place at the time, would increase the collision risk with birds, implying that the transmission line would be a threat to the eagles in the area. The bird expert suggested that the transmission line would be complemented with so called “Fire Fly”, a warning tool for birds.¹¹⁶⁸ It was also acknowledged that the transmission line would give rise to fragmentation of the landscape which would affect reindeer grazing.¹¹⁶⁹ Even though it was evident that both birds and reindeer were likely to be affected it was not investigated whether the transmission line could be drawn as a cable underground.¹¹⁷⁰ The Inspectorate’s decision was appealed, based on the reasoning that the applicant had not used the best available technology and chosen the most suitable location, in accordance with the provisions under the Environmental Code.¹¹⁷¹ The plaintiff pointed out that it was not investigated as to whether the grid could be in the form of an underground cable and whether a different route could be more suitable.¹¹⁷² The Government rejected the appeal on the ground that the best location from bird and settlement perspectives was already chosen. The Government did not, however, question that an underground cable was not suggested.¹¹⁷³ The Inspectorate did, nevertheless, in its statement of opinion to the Government, suggest that the associated cost of laying an underground cable was not motivated with regard to the benefit it would provide; the requirement was not considered reasonable.¹¹⁷⁴

Thus even though it is a requirement to show alternatives, both form and location, these requirements are not always ensured. It is important to note that even though it is a requirement to show alternatives in the EIA it is not certain that the most environmentally friendly alternative will be chosen, if that alternative is not reasonable in accordance with the provision in Chapter 2, section 7, of the Environmental Code. Hence the requirement of showing alternative ways of producing electricity and moving already established transmission lines may not always be seen as reasonable, but a different location or form of a new transmission line may be.

¹¹⁶⁸ See EIA in Ei decision of 28 October 2010, 2009-102167, p. 3.

¹¹⁶⁹ *Ibid.*, pp. 11–12.

¹¹⁷⁰ Compare requirement of presenting alternative locations and forms; see Chapter 6, section 7, of the Environmental Code.

¹¹⁷¹ Compare Chapter 2, sections 3, 6 and 7, of the Environmental Code.

¹¹⁷² See Appeal of Ei decision of 28 October 2010, 2009-102167, p. 1.

¹¹⁷³ Government Decision by Department of Enterprise and Innovation (Näringsdepartementet) of 30 June 2011, I 2, N2010/7440/E

¹¹⁷⁴ See the Inspectorate’s statement of opinion to the Government; see Ei decision of 28 October 2010, 2009-102167.

9.3.4 What do “cumulative effects” imply?

Case law of the CJEU has established that the EIA Directive has a wide scope and broad objective,¹¹⁷⁵ also including a requirement to assess cumulative effects. This was first established in *Commission v. Ireland* and has since then been reinforced in a number of cases.¹¹⁷⁶ The requirement of describing cumulative effects is also specified in the EIA Directive.¹¹⁷⁷

In *Abrahams and Others*, which concerned the refurbishment of an airport in order to increase traffic, the Court expressed the view that when taking cumulative effects into account, the *global effects* should be accounted for.¹¹⁷⁸ It is not clear from the Court’s decision what it meant by global effects, but due to the nature of air traffic, it is likely that the emissions from such traffic have global consequences. With regard to a project’s effect on the climate, through GHG emissions, it is now also stated in the EIA Directive, where it is specified that such impact should be described and assessed in the EIA.¹¹⁷⁹

In *Commission v. Spain*, the developer did not take account of already established activities in the area (in this case open-cast mines). One of the questions assessed by the Court was whether it was a requirement to do an assessment of the cumulative effects of the activity. The Court argued, given the extended scope and broad objective of the EIA, that Article 3 should be given a broad interpretation. The Court stated more precisely:

“Therefore, that provision should be taken as meaning that, where the assessment of the environmental impacts must, in particular, identify, describe and assess in an appropriate manner the indirect effects of a project, that assessment must also include an analysis of the cumulative effects on the environment which that project may produce if considered jointly with other projects, in so far as such an analysis is necessary in order to ensure that the assessment covers examination of all the notable impacts on the environment of the project in question.¹¹⁸⁰

¹¹⁷⁵ First established in: Case C-72/95, *Kraaijeveld and Others*, para. 30 and 31; and later reinforced by, for example: Case C-435/97, *WWF and Others*, para. 40; C-2/07, *Abraham and Others*, para. 32, Case C-142/07, *Ecologistas en Acción-CODA*, para. 28; C-275/09, *Brussels Hoofdstedelijk Gewest and Others*, para. 29.

¹¹⁷⁶ See Case C-392/96, *Commission v. Ireland*, para 76; C-72/95, *Kraaijeveld and Others*, para. 39; Case C-2/07, *Abraham and Others*, para 27; Case C-142/07, *Ecologistas en Acción-CODA*, para. 44; and Case C-404/09, *Commission v. Spain*, para. 80. With regard to a project of trans-boundary nature, see Case C-205/08 *Umweltanwalt von Kärnten*, paras. 51–55.

¹¹⁷⁷ See Article 3(1) and 5(1)(f) which refers to Annex IV; para. 5(e) and (g) of Annex IV (Part A) of the EIA Directive. Regarding selection criteria referred to in Article 4(3); cumulation with other projects are mentioned, see Annex III, para. 1(b) of the EIA Directive. This is, however, not specified in Swedish legislation; compare Chapter 6, section 3 and 7 of the Environmental Code.

¹¹⁷⁸ Case C-2/07, *Abraham and Others*, para 28.

¹¹⁷⁹ See Article 3(1)(c) of the EIA Directive.

¹¹⁸⁰ Case C-404/09, *Commission v. Spain*, para. 80.

The Kingdom of Spain argued that it was not necessary to undertake a cumulative assessment as the mines concerned were authorised in different periods and were distant from one another.¹¹⁸¹ The Court did not accept this argument as the projects were situated in proximity to each other and the authorizing procedures were undertaken in parallel.¹¹⁸² In addition, the EIA for the earlier projects did not properly assess the environmental impact, especially not with regard to its effect on the brown bear and the capercaillie.¹¹⁸³

In another CJEU case it was established that an exploratory drilling was comparable to a *deep drilling*.¹¹⁸⁴ Hence an exploratory drilling may give rise to an obligation to conduct an environmental impact assessment in accordance with Article 4(2), read in conjunction with Annex II, No 2(d), to that Directive. Thus the competent national authorities must in accordance with criteria set out in Annex III carry out a specific evaluation as to whether an environmental impact assessment must be carried out. When undertaking this assessment, cumulative aspects must be considered.¹¹⁸⁵ In the context of this dissertation this implies that, for example, when determining if a transmission line project (needed for a new wind power installation) is likely to give rise to *significant environmental impact*, cumulative aspects shall be accounted for. This may also imply that potential effects of the wind power installation should be taken into account, in addition to effects from other activities in the area.¹¹⁸⁶

The referring court in the case also asked whether the requirement to assess cumulative effects of the activity only included activities of the same kind: in this case all drilling operations carried out within the territory of the municipality. The Court in its answer said that the project must be assessed in relation to its cumulative effects, also with other projects;¹¹⁸⁷ more precisely:

¹¹⁸¹ Ibid., para. 81.

¹¹⁸² Ibid., para. 82.

¹¹⁸³ Ibid., para. 84–85.

¹¹⁸⁴ The CJEU did not consider the project to be obliged to undertake an EIA in accordance with Annex I, no 14; an exploratory drilling did not meet the quantity threshold; see Case C-531/13, *Marktgemeinde Straßwalchen and Others*, paras. 23–25.

¹¹⁸⁵ See Annex III, 1(b) and 3(g) of the EIA Directive.

¹¹⁸⁶ As discussed in Section 9.3.2.3, it is seldom that transmission lines are considered to give rise to significant environmental impact and it is not evident from the County Administrative Boards' decisions if cumulative aspects were accounted for when they decided if the project was of that nature.

¹¹⁸⁷ Case C-531/13, *Marktgemeinde Straßwalchen and Others*, para. 43.

“It follows that a national authority, in ascertaining whether a project must be made subject to an environmental impact assessment, must examine its potential impact jointly with other projects. Moreover, where nothing is specified, that obligation is not restricted only to projects of the same kind. As observed by the Advocate General in point 71 of her Opinion, the preliminary assessment must also consider whether, on account of the effects of other projects, the environmental effects of the exploratory drillings may be greater than they would be in their absence.”¹¹⁸⁸

The Court also suggested that the assessment of the impact of other projects could not be limited to municipal boundaries, as it was not limited to national borders.¹¹⁸⁹ Thus CJEU case law suggests that the meaning of cumulative effects is to be interpreted quite widely; where activities (independent of their geographical location) shall be included in the assessment if they affect the same *receptor* (source/area), as the activity under assessment.¹¹⁹⁰ This may imply that, when describing a hydropower installation’s cumulative effects, it is also important to describe the effects from other activities (not only other hydropower installations) that affect the same receptor – in the case of hydro, the same river.¹¹⁹¹ The same argument goes for an application for a new wind power development. For example, if the conflicting interest is the protection of a certain bird species, which is also disturbed by other activities in the area, the effect from those activities needs to be assessed in the EIA, independent of where that activity is located.

In sum, the case law from the CJEU is fairly clear. This implies in the context of renewable energy activities that there is a basis for a wider assessment of such activities with regards to their impact together with other activities, which could be activities of the same kind or other activities that affect the same receptor. Also, related activities that are necessary for an activity to function shall be included in such assessment. For example, potential impact from transmission lines needs to be described and assessed in

¹¹⁸⁸ *Ibid.*, para. 45.

¹¹⁸⁹ *Ibid.*, paras. 46–47. The CJEU here refers to the outcome in C-205/08, *Umweltanwalt von Kärnten*, para. 55, where it was established that effects in other countries were to be accounted for, implying that municipal borders are not relevant when addressing potential effects of an activity.

¹¹⁹⁰ In accordance with Article 3(e) of the EIA Directive the interaction between the factors referred to in points (a) to (d) shall also be described in the EIA. This implies, for example, how the effect of the activity on biodiversity interacts with climate, etc. The meaning of this provision, however, is not discussed in case law.

¹¹⁹¹ The requirement of showing cumulative effects together with other projects seems not to be commonly practised in Sweden. However, it is established in Swedish case law that in the case of a new permit for part of a hydropower installation (*ändringstillstånd*), the EIA still needed to show the total potential impact from the whole installation, not only from the parts that were under assessment. If the EIA does not include the potential impact from the whole installation the application should be dismissed; see, for example: Judgment by the Land and Environmental Court of Appeal of 20 June 2013 in case M 5737-12.

the EIA for a new wind power installation. Even though this requirement stems from the EIA Directive itself and is enforced in a number of cases, the implementation in the different Member States has not always specified this requirement in national legislation.¹¹⁹²

Therivel and Ross suggest that cumulative effects assessment (CEA) should be integrated into the EIA procedure as it helps in linking the scales of different assessments in that it focuses on the given receptor that is also affected by other projects and plans.¹¹⁹³ Since it is the effect on the environment (the receptor) that is to be assessed it is crucial that cumulative effects are assessed. The authors explore the scale issues: spatial extent, level of detail and temporal issues and conclude that the scale issues are poorly considered both at project and strategic level. The focus is largely on the specific project/plan at the specific time and there are no good methods to appropriately assess the cumulative effects.¹¹⁹⁴

The need to consider cumulative effects in the EIA in Sweden has been explored by Wärbäck and Hilding-Rydevik.¹¹⁹⁵ The authors suggest that the EIAs undertaken in Sweden do not often assess cumulative effects and that the legal requirement for doing so is rather vague.¹¹⁹⁶ The authors have interviewed actors related to EIA and came to the conclusion that the actors do not recognize that they are obliged to take cumulative effects into account; the actors find it difficult to assess cumulative effects and they are not aware of existing methods for such assessment.¹¹⁹⁷ It seems evident that the lack of specific legislation stating that cumulative effects need to be assessed creates insecurity from all parties as to whether this is actually needed. Even though it is clear from both EU and Swedish case law that cumulative effects are to be assessed in the EIA,¹¹⁹⁸ I consider that a clarification in Swedish law may be necessary to ensure an appropriate application of the EIA in Sweden.

¹¹⁹² This is not specified in Swedish legislation; compare wording of Chapter 6, section 3, of the Environmental Code.

¹¹⁹³ See Therivel, R. And Ross, B., *Environmental Impact Assessment Review* 27, 2007, pp. 365–385.

¹¹⁹⁴ See Therivel, R., and Ross, B., *Environmental Impact Assessment Review* 27, 2007, p. 384.

¹¹⁹⁵ Wärbäck, A., and Hilding-Rydevik, T, *Environmental Impact Assessment Review* 29, 2009, pp. 107–115.

¹¹⁹⁶ *Ibid.*, p. 107.

¹¹⁹⁷ *Ibid.*, pp. 113–115.

¹¹⁹⁸ It is established in Swedish case law that cumulative effects are to be accounted for when calculating the noise from wind power activities in the area, see Judgment by the Land and Environmental Court of Appeal of the 21 September 2016 in case M 10647-15.

9.3.5 Environmental assessment of transmission lines needed for new wind power development

9.3.5.1 Introduction

Wind power developers may face long and complicated legal processes in order to obtain the necessary permits for its production, with many different and often conflicting interests involved in the assessment. In addition, even if the wind power plant receives a permit it has not yet been determined whether the electricity the plant will produce can be distributed. Wind power plants face many conflicting interests as more and more plants are planned for offshore, or in places where the human population is sparse. This requires new grid infrastructure.¹¹⁹⁹

The concession process for grid infrastructure is undertaken under the Electricity Act and assessed by the Inspectorate, while the permit process for wind power is undertaken under the Environmental Code and assessed by the land- and environmental courts or county administrative boards.¹²⁰⁰ I have looked into a number of cases where the Inspectorate has approved concession for transmission lines that are needed for new wind power production.¹²⁰¹ The analyses focus on these cases and its related decisions regarding the wind power plants. The main aim of this section is to present a picture of how (and if) the environmental assessment of wind power includes potential environmental impact from associated transmission lines, in practice. The study is based on decisions from various administrative levels. More specifically, I investigate whether the environmental courts or the county administrative boards are assessing the potential environmental impact from the grid infrastructure when considering a permit for the wind power plant. This is required by the Environmental Code, as the grid infrastructure is a so-called “connected operation”. The following section looks into the connection between the concession process for transmission lines and the permit process for wind power, or more specifically, what role the EIA has in this context.

9.3.5.2 The EIA and its role in bridging the wind power and transmission line processes

With the aim of simplifying and speeding up the development of wind power in Sweden, in order to obtain the political goal of 30 TWh wind power by

¹¹⁹⁹ In the Northern part of Sweden, a large wind power plant with over 1000 turbines is under construction. The development is currently being realised in phases, the first phase was approved in Judgment of the Land and Environmental Court in Umeå of 25 September 2012 in case M 116-12.

¹²⁰⁰ See Chapter 2 of the Electricity Act and Chapter 9 of the Environmental Code. If offshore wind power, it is also in need of a permit under Chapter 11 of the Environmental Code.

¹²⁰¹ For the premises of the study of the Inspectorates’ decisions, see Section 8.1.

2020,¹²⁰² a few legislative changes were implemented. One of these changes was introduced in Chapter 2, section 8(a), of the Electricity Act with the aim of making the EIA procedure more coordinated. The relevant sequence of the provision basically states that questions that have already been assessed in a permit case or matter under the Environmental Code do not need to be assessed again in the concession assessment. And if there is an EIA in the case assessed under the Environmental Code that describes the direct and indirect effects of the transmission line on human health and the environment, there is no need for a new EIA in the concession process.

This provision was stipulated in response to making the process more efficient and to facilitate the procedure for the operator applying for concession for transmission lines.¹²⁰³ The idea was that the coordination would speed up the concession process to enable a faster development of grid infrastructure, as new wind power production requires a transmission line to be connected to the grid.¹²⁰⁴

In a Swedish Government Official Report it was suggested that the environmental assessment of the transmission line was better assessed in the environmental process procedure for the wind power plant, where it was suggested that the location of the transmission lines should be decided.¹²⁰⁵ However, in the subsequent Governmental Bill it was suggested that the EIA for the wind power plant did not need to include the *exact* location of the associated transmission line but suggested that the assessment undertaken by the Land and Environmental Court of Appeal on 19 November 2008, in case M 2210-08, should in most cases be enough.¹²⁰⁶ In this case the Court assessed the effects of transmission lines and roads needed for a new wind power park. The Court suggested that solely “a real” loss of the habitat was not of such importance that it would affect the permissibility of the wind power plant, but the fragmentation, as a result of the roads and electricity transmission lines, could. The court further stated that it was important that such infrastructure was appropriately located in places where it did not hurt important habitats. In this case, one of four parts of the wind power park was not permitted due to its large impact on the protected site that the wind power activity and its associated infrastructure would give rise to. The transmission line would cut through an important biological core site. The Court assessed that the impact on this area was too significant to be permissible.¹²⁰⁷ Even though this decision discussed the impact from the transmission lines,

¹²⁰² See prop. 2008/09:163.

¹²⁰³ See prop. 2008/09:146, pp. 46–47; see also SOU 2008:86; and SOU 2009:02, pp. 95–97.

¹²⁰⁴ See SOU 2008:86, p. 273.

¹²⁰⁵ See SOU 2009:02, pp. 95–97; and SOU 2008:86, p. 272–273.

¹²⁰⁶ See Judgment of Land and Environmental Court of Appeal of 19 November in case M 2210-08. As referred to in prop. 2008/09:146, p. 47.

¹²⁰⁷ See Judgment of Land and Environmental Court of Appeal of 19 November in case M 2210-08, p. 12.

it is important to note that it is an extraordinary case as the location was highly sensitive from an environmental point. In this particular case the transmission lines gave rise to impact that was clearly not acceptable.

Hence, the Governmental Bill, with the proposal for the legislative change did not go as far as the initial investigation proposed as it did not suggest that the EIA needed to provide the exact location of the transmission line. Since the concession decision is undertaken after the wind power decision it is hard in practice to assess the impact from the transmission line, as that location is decided in the concession decision. This was also acknowledged by many of the bodies considering the proposed legislation.¹²⁰⁸ Thus even though it is a requirement for the wind power developer to describe and assess the potential impact from the transmission line it may be difficult to undertake in practice. However, it should be in the interest of both the grid developer and the wind power developer to discuss the proposed location (including alternative routes and formations) prior to the wind power permit process, which may enable a more precise assessment of the transmission line in the wind power permit process.

Thus, the purpose of the new provision in Chapter 2, section 8(a), of the Electricity Act was to enable a more efficient concession procedure for transmission lines needed for new wind power installations.¹²⁰⁹ This provision opens up the *possibility* for the concession developer to utilize the EIA composed for the wind power park, if it assesses the potential environmental impact from the transmission line. However, this is simply not a possibility for the wind power developer, as it is required to describe and assess the wind power's cumulative effects, including potential impact from associated transmission lines, in accordance with the EIA requirements. In addition, the permit authority is required to assess potential impact from the transmission line due to being a "connected operation" to the wind power park. The following section examines whether the requirement to assess the environmental impact of the transmission line in the wind power permit process is practised by the county administrative boards and the land and environmental courts, in cases where wind power installations are in need of new transmission lines. Is the permit authority ensuring that the EIA is fulfilling the EIA requirement of showing cumulative effects in this context?

9.3.5.3 Is necessary grid infrastructure assessed in the wind power permit process?

Of the cases I have looked at there are only a few where the grid infrastructure is described and assessed in the wind power permit. In those cases, the environmental impact was often assessed due to the fact that the grid infrastructure also required an environmental permit under the Environmental

¹²⁰⁸ See prop. 2008/09:146, p. 46.

¹²⁰⁹ See prop. 2008/09:146, pp. 46–47.

Code. This section presents the cases where the grid infrastructure has been assessed (more or less) by the permit authority.¹²¹⁰

There are also a few cases from the Land and Environmental Court of Appeal where the impact from the transmission line has been assessed. In MÖD 2003:96 the Court assessed the potential environmental impact that the grid connection to an offshore wind power park would give rise to. The application in this case only concerned the part of the transmission line that was located in the water (as that part was considered a water activity and thus in need of an environmental permit) and not the location of the grid on land. Nevertheless, the Court pointed out that the potential impact from the drawing on land needed to be included in the assessment when deciding the location of the grid. The wind power developer presented different alternatives for the location of the transmission line. The Court suggested, after a comprehensive assessment of the alternatives, that the chosen location was acceptable. However, the Court specifically pointed out that the other suggested alternative would be much more costly, implying it would not be *reasonable* that the alternative location was chosen.¹²¹¹ One of the appeals concerned the location on land where the claimant wanted to introduce limitations to the electric magnetic radiation from the power line. The Court suggested, however, that it could not address this question as the application only concerned the power line offshore. In light of the requirement to assess the environmental impact of “connected operation” of the wind power activity – for example, the impact from associated transmission lines – it is questionable whether the court, in this case, could have required in the wind power decision that the grid needed to fulfil certain requirements. Even though the Court rightly stated that it could not stipulate permit conditions for the concession decision, the Court may stipulate permit conditions for the wind power park, which decide how and when transmission lines can be built.

In the *Gabrielsberget Case* the Environmental Court did not consider it suitable to assess the location of the transmission line since this issue is assessed under the Electricity Act where a special EIA is composed.¹²¹² However, despite an EIA excluding the transmission line, the Court did not consider that the possible environmental impact from the transmission line could hinder wind power development in the area. This decision was appealed and the plaintiff pointed out the lack of coordination between the different pro-

¹²¹⁰ In some cases, part of my study, there are no permit requirements for the wind power park, those cases are not discussed here; see, for example: Ei decision of 20 December 2012, 12-101852; Ei decision of 1 July 2013, 12-102077; and Ei decision of 9 December 2009, 2009-102063. In these cases, the wind power plant required a building permit.

¹²¹¹ See MÖD 2003:96, p.4. Compare Chapter 2, sections 6 and 7 of the Environmental Code. The cost of rebuilding the switch gear for the alternative location would be 5 500 000 SEK instead of 13 500 SEK at the chosen location.

¹²¹² See Judgment of the Land and Environmental Court in Umeå of 8 December 2006 in case M 208-06.

cesses (wind power and transmission lines), suggesting that the impact from the grid infrastructure should be dealt with in the wind power process.¹²¹³ The plaintiff also suggested that in addition to the assessment of the grid infrastructure, the necessary road infrastructure should be included in the assessment due to both being considered a so-called “connected operation” to the wind power park.¹²¹⁴ Despite these complaints the Land and Environmental Court of Appeal considered the EIA to fulfil the legal requirements and the wind power installation was granted permission.¹²¹⁵

The *Glötesvålen Case* is one of the few cases where the applicant did not compose a new EIA for the concession process.¹²¹⁶ The applicant sent the one composed for the wind power park to the Inspectorate when applying for concession for the transmission line. In this case, the EIA composed for the wind power park did assess the grid infrastructure that was in direct connection with the wind power turbines, but not the transmission line needed to connect to the national grid. Potential impact from that part of the transmission line was not mentioned in the wind power case.¹²¹⁷ The Inspectorate accepted the EIA and simply stated that the application was compatible with relevant provisions, without expressing how.¹²¹⁸ The location of the wind power installation, however, was questioned in the Environmental Code permitting process, due to the proximity of three eagle areas (revir). Both the Environmental Court and the County Administrative Board had dissenting opinions but the Land and Environmental Court of Appeal did not assess that specific question.¹²¹⁹

When the grid is located in water it is always included in the environmental assessment of the wind power park, as it is a “water activity”. In such cases the Inspectorate may not undertake its own EIA, for the reason that the environmental impact from the transmission line is already assessed by the Environmental Court.¹²²⁰ In the *Kårehamnssporten case*, the Inspectorate did not undertake an environmental assessment, but instead referred to the outcome in the wind power case. This case concerned cables to an offshore wind power park.¹²²¹ In this case the Land and Environmental Court of Ap-

¹²¹³ See Judgment by the Land and Environmental Court of Appeal of 25 October 2007 in case M 300-07, pp. 4–8. A similar argumentation was also undertaken in a concession case; see statement of opinion by plaintive in Ei decision of 8 April 2011, 2010-102193

¹²¹⁴ Compare Chapter 16, section 7 of the Environmental Code. See Judgment by the Land and Environmental Court of Appeal of 25 October 2007 in case M 300-07, p. 7.

¹²¹⁵ *Ibid.*, p. 16.

¹²¹⁶ See Ei decision of 13 January 2012, 2011-103186. See also Ei decision of 8 April 2011, 2011-101886.

¹²¹⁷ See MÖD 2010:38

¹²¹⁸ See Ei decision of 13 January 2012, 2011-103186, p. 2.

¹²¹⁹ MÖD 2010:38.

¹²²⁰ Which is a correct interpretation of the provision in Chapter 2, section 8 (a) of the Electricity Act; if a question is already assessed under the Environmental Code, it does not need to be assessed again in the concession process, and there is no need to compose a new EIA.

¹²²¹ See Ei decision of 21 March 2011, 2011-101866.

peal only assessed the grid infrastructure located in the water, and the part of the transmission line (located on land) that was to connect to the regional grid was not included in the assessment.¹²²² This implies that in cases such as this there is no comprehensive assessment of the whole stretch of the transmission line needed for the connection of new wind power installations to the grid. It is only the part that requires an environmental permit that is included in the assessment.

Many of the wind power decisions that are part of my study do not properly assess potential impact from the grid infrastructure, even in cases where it is evident that the areas concerned are important habitats and protected areas.¹²²³ In some cases the location of the grid infrastructure is mentioned without assessing its potential environmental impact.¹²²⁴ In other cases the wind power permit contains a few requirements regarding the grid infrastructure; for example, that the grid operator needs to consult the County Administrative Board, the municipality and/or the local Sami village, when proposing location and form of the transmission lines and roads.¹²²⁵ These types of provisions are also commonly combined with a delegation to the County Administrative Board to decide closer provisions for the activity.¹²²⁶

In the *Svartnäs Case* the Inspectorate's concession decision was undertaken prior to the wind power permit. This order is not common but it happens, and if so the concession decision includes the condition that the concession decision is only valid if a permit is issued for the wind power park.¹²²⁷ In these cases it should be easier to assess the impact from the transmission line in the wind power permit as the location of the transmission line is already decided in the concession decision.¹²²⁸ However, in this case the potential impact from the grid infrastructure was not investigated in

¹²²² See for example; Judgment of the Land and Environmental Court in Växjö of 10 July 2008 in case M 1568-07; and MÖD 2003:96.

¹²²³ See, for example: Decision by County Administrative Board in Västerbotten of 9 May 2008 (compare Ei decision of 7 May 2012, 2008-105817); Judgment of Environmental Court in Växjö of 29 April 2011 in case M 2404-10 (compare Ei decision of 24 April 2012, 2012-100434).

¹²²⁴ See, for example, the Hjuleberg Case: Decision of the County Administrative Board in Halland of 21 September 2010 (compare Ei decision 20 November 2009, 2009-100421).

¹²²⁵ See, for example: Judgment of the Land and Environmental Court in Umeå of 15 September 2006 in case M 121-01, p. 3 (compare Ei decision of 3 June 2010, 2009-101365); and Decision of County Administrative Board in Gävleborg of 28 May 2010, p. 2 (compare Ei decision of 3 March 2011, 2010-102513); Decision of County Administrative Board in Västra Götaland of decision 27 April 2012 (compare Ei decision of 16 July 2012, 2012-101432).

¹²²⁶ See Judgment of the Land and Environmental Court in Umeå of 15 September 2006 in case M 121-01, p. 3 (compare Ei decision of 3 June 2010, 2009-101365); Decision of the County Administrative Board in Gävleborg of 28 May 2010, p. 2 (compare Ei decision of 3 March 2011, 2010-102513).

¹²²⁷ See, for example, Ei decision of 9 January 2013, 2010-102512; and Ei decision of 21 July 2011, 2011-101881.

¹²²⁸ It is sometimes argued that the potential environmental impacts from the grid connection cannot be assessed due to the location not yet being decided.

detail.¹²²⁹ In the Land and Environmental Court it was acknowledged that the grid infrastructure may have some impact. This resulted in a provision for the wind power activity specifying that the building of transmission lines and the laying of cables etc. is placed in a way that minimizes the impact on nature and culture values so that negative environmental impact on the area's hydrology and wetlands etc. is avoided as far as possible.¹²³⁰ This decision was later appealed but the appeal did not further discuss potential impact from the grid infrastructure.¹²³¹ In the *Sjjsjka* case, the wind power permit decision mentions that the grid infrastructure had been assessed but it is not transparent what the outcome of that environmental assessment was – whether the grid infrastructure was likely to give rise to any impact on the environment.¹²³²

However, the potential impact from the grid infrastructure is assessed in more detail in some cases. In one case, the County Administrative Board stated that certain requirements should apply to the transmission line.¹²³³ The Board specified in the permit conditions for the wind power park a number of requirements regarding the transmission line, for example, that the grid infrastructure should be constructed in a way that minimised the risk of bird collisions and the electrocution of birds¹²³⁴ and that the transmission lines should be put in pipes in between the wind power turbines or as a cable located by the road, instead of located in the air.¹²³⁵ In this case, the County Administrative Board considered the environmental impact not to be of such

¹²²⁹ And initially, the locations of the individual wind turbines were not decided. In some cases, wind power applications are so-called *box models*: that the company applies for a permit within a specific area without specifying where the turbines will be located or where the local grid is to be drawn. In such cases it may be hard to assess potential impact. This model has in some cases been accepted but in others not. This box model was acceptable in the Decision of the County Administrative Board in Västerbotten of the 19 of August 2011; however, not accepted in *the Svartnäs Case*: see Judgment by the Land and Environmental Court of Appeal of 24 of January 2014 in case M 9650-12; and Judgment of the Land and Environmental Court 11 October 2012 in case M 4212-11.

¹²³⁰ See Judgment of the Land and Environmental Court 11 October 2012 in case M 4212-11 (compare Ei decision of 9 January 2013, 2010-102512). These precautionary measures are often mentioned in the wind power cases; see also Decision of the County Administrative Board in Gävleborg of 28 May 2010, pp. 7 and 15 (compare Ei decision of 3 March 2011, 2010-102513).

¹²³¹ The decision by the Court was appealed and the applicant changed its application and complemented its EIA in a way that was considered acceptable by the Land and Environmental Court of Appeal, which permitted parts of the wind turbines; see Judgment by the Land and Environmental Court of Appeal of 24 of January 2014 in case M 9650-12 (compare Ei decision of 9 January 2013, 2010-102512). The case is also discussed in Section 5.2.2.

¹²³² See Judgment by Land and Environmental Court of Appeal of 25 August 2009 in case M 5256-08, and Ei decision of 9 November 2010, 2008-105206.

¹²³³ See Decision of the County Administrative Board in Västernorrland of 28 August 2012.

¹²³⁴ *Ibid.*, p. 4.

¹²³⁵ *Ibid.*, p. 5.

nature that the activity was not permissible, if the proposed mitigation measures were undertaken.¹²³⁶

As discussed above, it is important to note that there is a difference in deciding certain permit conditions for the concession decision and composing permit conditions in the wind power decision (regarding the building of transmission lines). Hence, the authority assessing the wind power installation is not hindered in composing such permit conditions for the operation of the wind power park; it may even be required to do so, in order to avoid unnecessary environmental impact from the wind power installation. The question is what happens if the Inspectorate does not consider that the proposed permit conditions are possible to realize, due to other requirements under the Electricity Act. However, such conflicts may not occur often. If a conflict arises, it may imply that the wind power project could not be undertaken in that location, should the transmission line not be granted concession in accordance with the permit conditions for the wind power park.

9.3.5.4 How is the grid developer utilizing the exemption from the EIA requirement under the Electricity Act?

The possibility for the grid developer to rely upon the EIA from the permit process of the wind power park, requires that the environmental impact of the transmission line is assessed in that EIA. If that is not the case, the grid developer still has to compose a separate EIA before the concession process. In some cases, this requirement implies that the transmission line is not assessed comprehensively. This is especially true in cases where part of the transmission line requires an environmental permit for its operation, due to its location.

For example, in cases where the transmission line is needed for offshore wind power installations, and part of the connection line needs to be located in the water, a permit is required.¹²³⁷ This was the case in *Kriegers Flak* where the Inspectorate did not specify precautionary measures for the building of the transmission cables, instead referring the questions to the Environmental Code permitting, which should assess the environmental impact of the transmission lines since the grid is considered a water activity when located in the water.¹²³⁸ This decision by the Inspectorate was appealed by the Svedala municipality claiming that it was illegal for the Inspectorate to not assess the environmental impact. The municipality considered that the Inspectorate still needed to assess the environmental provisions applicable for concession permits.¹²³⁹ However, the Government rejected the appeal

¹²³⁶ Ibid., p. 26 et seq.

¹²³⁷ See Chapter 11, section 9 of the Environmental Code.

¹²³⁸ See Ei decision of 15 March 2010, 2008-103140.

¹²³⁹ See Appeal by the Svedala municipality of Ei decision of 15 March 2010, 2008-103140.

with the motivation that Svedala municipality had not stated anything that required a change of the Inspectorate's decision.¹²⁴⁰

In another case, the Inspectorate did not assess the environmental impact at all and only referred to the specific assessment already undertaken in connection with the Land and Environmental Court permitting of the water activity.¹²⁴¹ Even though this is what the legislative change intended, the environmental impact from the transmission line was only assessed for the part being built in the water, not on land; that part of the transmission line was never assessed. This practice is not in line with the Chapter 2, section 8(a), since the exemption only applies to questions that are already assessed, that are not to be assessed again. The Inspectorate should therefore have assessed the potential environmental impact from the transmission line on land. Thus the possibility to use the EIA from the environmental permit may lead to an inadequate assessment of the environmental impact of the transmission line, as the whole stretch of the transmission line is not assessed comprehensively, only parts thereof (that require a permit under the Environmental Code). This practice, of splitting up projects, is not in line with the EIA requirements as established in EU case law.¹²⁴²

9.4 Concluding remarks

There are possibilities to bridge the permit procedures of renewable energy activities with the available legal instruments and provisions. The Swedish provision regarding *connected operations* and the EIA requirements have the potential to enable a more comprehensive assessment of renewable energy activities; and the possibility for the transmission line operator to use such EIA from the process under the Environmental Code, has potential to lead to a more coordinated development of wind power and transmission lines.

Thus, the legal assessment of renewable energy activities has the potential to be comprehensive in nature, though bound by the boundaries of the permit application. This means that even though the application only concerns a wind power plant, the material basis for the decision making (the EIA) still needs to describe the activity's indirect and cumulative effects, including *connected operations*. EU and Swedish case law suggests that this is how the EIA Directive is to be interpreted. Even though it is clear in theory, how the EIA requirements are to be interpreted, the wind power decisions that I have assessed show a different outcome in practice.

¹²⁴⁰ See Government Decision by Ministry of the Environment and Energy (Miljö- och energidepartementet) of 1 September 2016, II:2, M2015/00021/Ee, pp. 4–5; see also Ei decision of 21 March 2011, 2011-101866, as discussed in Section 9.3.5.3.

¹²⁴¹ See Ei decision of 29 August, 2011, 2011-101886.

¹²⁴² As discussed in Section 9.3.2.4.

Thus, it seems like the permit authorities are not ensuring that the EIA include a description and assessment of the cumulative effects with regards to potential impact from associated transmission lines. Also, the permit authority does not always assess the impact from such infrastructure, which they are required to do by the provision on “connected operations”. The change in the Electricity Act to enable a more coordinated procedure of wind power and transmission lines does not seem to have led to any great improvement of the coordination problem, as it is seldom that the EIA is used from the wind power process, and if so, it seems evident that the transmission lines’ environmental impact is not assessed comprehensively, as the part assessed under the permit procedure under the Environmental Code often only includes the part that requires an environmental permit. This practice is not in line with the EIA requirements.

As mentioned above, there is a practical problem when undertaking an environmental assessment of the grid infrastructure in the wind power permit, as the exact location of the grid is normally decided later, in the concession decision. However, in the cases where a transmission line is needed to connect the wind power to the grid, it should theoretically be possible to decide the location of the grid infrastructure based on the application for wind power. Even though the grid and the wind power are not owned by the same company, it should be possible to plan and coordinate the applications beforehand. This would best be undertaken in the consultation process for the wind power installation, before the permit application and the EIA are conducted. The public should have a chance to participate in the consultation process to discuss the location, scale, form, the environmental impact from the activity, and the content and form of the EIA. This consultation should take place in sufficient time before the application is composed and the EIA conducted.¹²⁴³ However, *if* the initial EIA is not conducted appropriately, including the direct, indirect and cumulative effects of the grid infrastructure, it is hard for the public to understand how the grid infrastructure could affect them. This implies that a permit can be granted for a wind power installation without assessing the possibilities to distribute the electricity from the plant. A way to overcome this problem is to compose a more holistic EIA to resolve the impacts from the grid infrastructure at the earliest stage possible. As a result, the EIA assessing the wind power installation must also have an appropriate consultation with people affected by the grid, as well as those affected by the production site.

Under the current formulation in the Swedish EIA Regulation there is only a requirement for transmission lines of a certain size to compose an EIA

¹²⁴³ If the activity is considered to have significant environmental impact, the public hearing is extended to include more parties. If the wind power plant requires a permit, it is always considered to have such impact; see Chapter 6, section 4 of the Environmental Code; and Section 3 of the EIA Regulation.

in accordance with the EIA Directive (Chapter 6, section 7, of the Environmental Code). The County Administrative Board decides in each individual case whether a transmission line, not specified in the Regulation, is considered to potentially give rise to *significant environmental impact* and therefore require an EIA. From the study of the Inspectorate's decisions it becomes apparent that there are no general guidelines on when a transmission line is considered to be of that nature; it may depend on the proposed location, size and length of the transmission line. As the building of transmission lines requires a relatively large impact on the physical environment, independent of the voltage and size, it may be questioned why such infrastructure projects seldom are considered likely to have such an impact.

The definition of project could be interpreted much wider than is practised today and therefore also include grid infrastructure in the wind power project. This wider definition of project (to also include necessary grid infrastructure) may also be used when deciding whether or not a project has significant environmental impact. If this was clarified, it would be more natural to include grid infrastructure in the assessment, if it was considered to be the same project. But even if this wider definition of "project" is not practised, a more stringent application of the EIA requirements has the potential to enable a more comprehensive assessment of the wind power activity, independent of the scope of the project.

In sum, there are instruments and provisions available that have the potential to enable a more comprehensive assessment and coordinated procedure of renewable energy activities. However, even though the EIA requirements were better enforced, such potential is limited in the case of wind power and transmission lines as the operators are different legal entities and the activities – even though clearly dependent on each other – are not considered the same project under the EIA Directive. In light of the transition of the energy system, where Sweden strives towards having 100 % renewables in the electricity system by 2040, this two-step permit procedure for wind power and transmission lines may not be the most adequate way of enabling the increase in wind power that such electricity system requires.

Part IV- Conclusions

10. Conclusion and Plan for the Future

10.1 Introduction

The strong political push for a swift transition to a carbon-neutral energy system serves as the motivation for the themes explored in this study. While addressing the issue of climate change is a key component of a sustainable future, a single-minded approach to expanding the capacity of renewables in the energy mix can come at the cost of other environmental goals, namely biodiversity. The main questions discussed in this dissertation stem from the fragmented nature of the legal system. The relationship between renewable energy and biodiversity legislation is addressed, as well as the relationship between the various legal procedures of renewable energy activities.

The relationship between renewable energy and nature protection legislation has been explored at both the EU and Swedish level, where it seems evident that in theory there is no legal conflict, *per se*, between the directives. Rather, it is in the application of these laws that conflicts may occur between renewable energy installations (promoted by the Renewable Energy Directive) and the nature protection directives. As discussed in Chapter 7, the possibility for renewable energy activities to be permissible despite being in conflict with the directives, due to the derogation rules, seems very limited in respect to the Habitats Directive (both for habitats and species protection); and impossible from the provision on species protection under the Birds Directive. However, the possibility to use the derogation rules in the Water Framework Directive seems more likely, even though if their application has not been fully explored in Sweden.

As seen in chapters 8 and 9, the fragmented nature of the legal processes gives rise to a coordination problem. Even though the legislator attempted to bridge the legal procedures between wind power and transmission lines, to simplify the procedure under the Electricity Act for the transmission line operator, this study shows that seldom are the potential environmental impacts of transmission lines assessed in more detail in wind power decisions. Thus, the requirement of assessing potential impact from *connected operations* seems to be not often appropriately addressed by the permit authorities for wind power.

The following sections within this chapter discuss the main findings of the dissertation, and are followed by a plan for the future to address potential future research and discuss how problems arising from the current permit

system may be mitigated. In addition, I will explore an instrument that has the potential to have a forward looking perspective and could solve potential conflicts between biodiversity and renewable energy at an earlier stage - prior to (or in place of) the current permit process.

10.2 The relationship between renewable energy and biodiversity

10.2.1 The Swedish context

As seen in Chapter 5 and 6 of this dissertation conflicts do occur between renewable energy activities and the protection of biodiversity. This is evident in the permit assessment of wind power where wind power is sometimes considered in conflict with the Regulation on Species Protection. Some conflicts are considered possible to avoid if permit conditions specify mitigation measures to limit the impact on the protected species. Thus, if conflict arises in this context, the interest of protecting the species in that specific location is considered more important than the wind power interest. This implies that it is possible to avoid conflicts with species protection if the location of the wind power is chosen more carefully with respect to other interests than wind power. For example, avoiding conflicts with the nature protection directives are possible if wind power is located within an appropriate distance from protected habitats and species.

In the case of hydropower, the problem is primarily with regards to old installations, which do not align with requirements determined by the Water Framework Directive. Thus, there are different types of conflicts. While the conflicts between wind power and bird protection can be avoided by changing the location of the wind power installation, the hydropower installations are already built and therefore more difficult to align with Water Framework Directive requirements.

As discussed in Chapter 6 of this dissertation, most hydropower installations in Sweden do not fulfil modern environmental law requirements and are not in line with the requirements that stem from the Water Framework Directive. Hence, Sweden, as a member state of the EU, is not able to reach the objectives of “good ecological status” (or “potential”) within any reasonable timeline. To reassess all hydropower installations and dams in need of reassessment requires over 800 years at the current pace.¹²⁴⁴ In addition to being time intensive, reassessment is also very expensive. Large sums are required for investigations prior to initiating reassessment procedures and, if

¹²⁴⁴ See SOU 2014:35, p. 271.

mitigation measures are enforced, to pay compensation for the hydropower operators' production loss.

There are a number of suggestions proposed in a few official governmental reports, including the introduction of general provisions applicable to hydropower installations which impose mitigation requirements like fauna passages and minimum flow regulations.¹²⁴⁵ Introducing such general provisions would be a more efficient way (both with regards to time and money) to ensure that the hydropower installations undertake appropriate mitigation measures, than if the installations were reassessed separately. However, the problem associated with general provisions is that mitigation requirements are not adjusted to the circumstances of an individual case. This implies that in some cases the requirements may not be adequate to improve the water status. Also, though the general provisions would require operators to build fauna passages and allow minimum flow regulations, such mitigation measures may not give rise to any (or very limited) improvement of the ecological status of the water body. This implies that a general provision with certain environmental requirements may not be a cost-effective way to mitigate water body impacts, especially if the requirement implies large costs and the water status does not improve substantially. However, the general rules could be combined with derogation rules to avoid such situations, which exempt installations where it is considered disproportionately expensive to undertake such measures. In cases where the general provisions are not strict enough, it is still possible to reassess such installation and impose more strict mitigation measures. Thus, general provisions may be, under such premises, a promising solution to ensure that the old hydropower installations in Sweden fulfil modern environmental law requirements. As discussed in Chapter 7 of this dissertation, it may also be worth exploring the potential to derogate from the Water Framework Directive to a larger extent than is practiced today, in order to ensure that Swedish hydropower installations are not (legally) considered in conflict with the Water Framework Directive.

Another aspect worth mentioning in this context, as shown in Chapter 6 of this dissertation, is that awarding electricity certificates for renewable energy production (within water) may give rise to a skewed assessment under Chapter 11, section 6 of the Environmental Code. This practice implies that hydropower installations, which should not have been permissible due to their large impact on the aquatic ecosystems, are allowed after accounting for the financial gain from the certificates. The social benefit attributed to the certificates in the socio-economic assessment could be criticised as double counting, but the Supreme Court has established that such practice is acceptable. The certificates are financed by an increase in the price that electricity consumers pay. This implies that the certificates are merely a transfer

¹²⁴⁵ See SOU 2013:69, p. 308 et seq.

from consumers to operators, and thus should not influence the evaluation. Even though there are not many new small-scale installations under assessment today, there may be in the future. In such a case, it is crucial that this practice is changed as the certificates may give rise to a skewed socio-economic assessment.

Thus, the fragmented nature of the legal system gives rise to conflicts in the application of the nature protection legislation on renewable energy activities. Conflicts may be impossible to completely avoid in the legal documents in an adequate way (such system would not be very flexible) but it is still important to address how and where these conflicts could be mitigated. These conflicts in the Swedish legal system may be an indication that the EU legislator has not clearly established how these interests should be balanced. The following section provides a discussion on how the EU could construct a renewable energy policy within the Union that has the potential to limit conflicts arising between renewable energy and biodiversity protection.

10.2.2 The EU context

As discussed in Chapter 3 of this dissertation, in accordance with Article 7 of the TFEU the EU shall ensure consistency between its policies; therefore, the EU renewable energy legislation should be consistent with other EU law. This is also specified in the Renewable Energy Directive where it is spelled out that “the coherence between the objectives of this Directive and the Community’s other environmental legislation should be ensured”.¹²⁴⁶

Based on the findings of this dissertation, where it is evident that conflicts do occur in practice, especially with regards to old hydropower installations that do not necessarily face modern environmental law requirements, it may be necessary for legislation promoting renewable energy to more clearly specify that installations (promoted by the directive) must be in line with relevant natural protection directives.

In the current Renewable Energy Directive there are sustainability criteria for biofuel, which implies that biofuel not fulfilling sustainability criteria cannot be accounted for in the Member States renewable energy targets. However, even though natural science suggests that other sources of renewable energy may have potential impact on land-use and biodiversity, no such criteria exists for other sources. For example, biomass (not for biofuel production) is exempt from similar requirements. Thus, sustainability criteria could be introduced for all sources of renewable energy to better ensure that renewable energy activities, which are accounted for in the Directive, align with relevant nature protection directives. An all-encompassing set of criteria for renewable energy could be formulated in a way that ensures that installations fulfil certain minimum requirements with regards to, for example,

¹²⁴⁶ See Preamble, para. 44 of the Renewable Energy Directive.

“best available technology”, in order to be accounted for in the Renewable Energy Directive. However, new installations are not permitted if they do not align with the nature protection directives, as seen in this study with respect to wind power. The inconsistency problem is primarily with old hydropower installations. Thus, another idea with respect to hydropower, if hydropower installations are to be accounted for, then sustainability criteria could imply that these installations must have undertaken the identified measures needed to fulfil good ecological status or potential. It should be feasible to control that such measures are undertaken based on the programmes of measures.

Sustainability criteria, explicitly stated within the EU renewable energy legislation, could contribute towards mitigating the fragmented nature of the renewable energy and biodiversity legislation. These criteria should then also be implemented in the Certificate Act to ensure that the installations receiving certificates are also in line with relevant nature protection requirements.

As it is today, the legal system does not ensure that the promoted renewable energy is in line with the objective of biodiversity protection. This is especially true when it comes to hydropower, as the majority of the Swedish hydropower production is not in line with the requirement in the Water Framework Directive. Based on these results I find it justifiable to argue for an integration of sustainability criteria for all renewable energy that is promoted by the directive, as a pre-condition to be counted in the renewable energy targets. Such provision would better ensure that the promoted renewable energy is consistent with relevant nature protection legislation.

10.3 The coordination problem

10.3.1 Introduction

As is shown in Chapter 8 and 9, it is rather common that transmission lines needed for new wind power development are built in parallel with already existing transmission lines, due to the limited capacity of the ones in place. This problem has been identified by Svenska Kraftnät and a financial solution has been implemented into the Electricity Act, which implies that the grid owners could build transmission lines with higher capacity to avoid the building of parallel transmission lines and the wind power operator only has to pay for the part that it utilizes.¹²⁴⁷ However, this solution does not solve the “planning problem” as wind power activities will not necessarily be located where such a grid will be built. Thus, the current permit regime of

¹²⁴⁷ As discussed in Section 2.5.7.

separate decisions for wind power and transmission lines may not be the best way to handle the development of wind power and its associated transmission lines. This two-step development of wind power and transmission lines gives rise to an uncoordinated and inefficient development of the electricity system.

The separate decisions for wind power and transmission lines also hinders a comprehensive assessment of the total environmental impact from such a project, as these separate activities are not seen as one project under the definition of the EIA. The following section explores aspects of the EIA that could either be interpreted differently and/or enforced by the Swedish authorities more frequently. I will also indicate where legislative changes may be needed to enable an application of the EIA provisions that are in line with EU law.

10.3.2 The Role of the EIA in the permit process

10.3.2.1 Introduction

As discussed in Chapter 9, the EIA has the potential to bridge the fragmented legal procedure to some extent by enabling a more comprehensive assessment where direct, indirect and cumulative effects are described and assessed. The EIA also has the potential to show that alternative locations or formations are more suitable from environmental point of view. Thus there are important aspects of the EIA that could be better enforced and assessed than today. The following sections address the potential and limitations of the EIA.

10.3.2.2 Alternative solutions

The need to investigate whether there are alternative solutions is a recurrent theme in this dissertation. The EIA requires that the developer investigates whether there are any alternative locations and/or forms of the activity and if there are alternative solutions.¹²⁴⁸ The idea is that the location or form of the activity that has the least impact on the environment shall be chosen. In addition to the EIA requirement, it is also a prerequisite of the derogation rules under the Birds, Habitats and Water Framework Directives, that there are no *alternative solutions*.¹²⁴⁹ The Directives have their own formulations but in essence it implies that alternative solutions are available if it could provide the same benefits as the activity under assessment, but with less environmental impact (and at a reasonable cost).

It is clearly established in case law that alternative locations need to be investigated. In the Swedish context the requirement to investigate alterna-

¹²⁴⁸ See discussion in Chapter 9.3.3.2.

¹²⁴⁹ See discussion in Chapter 7.

tive locations in accordance with Chapter 2, section 6 seems to be relied on frequently by the Courts. However, it is not common that the lack of describing *alternative forms* of the activity in the EIA gives rise to denial of applications; and it is unheard of that an operator of an electricity production installation has been denied a permit due to the possibility to produce the electricity in another way that would be better for the environment. However, from an energy system and environmental perspective, better enforcement of this requirement has the potential to ensure that the most suitable form of electricity production is chosen in each individual case, which would lead to a more sustainable electricity system.

However, this “form” requirement does not necessarily have to be a different form of production; it could also be with regards to different *technological formations* of the activity. For example, a different technological formation may be wind power turbines with either vertical and horizontal blades, where a horizontal orientation may reduce risk of collision with some bird species. In areas where bird collisions are at risk, this technological form of turbines may imply that the wind power installation does not come in conflict with the Regulation on Species Protection.

Regarding transmission lines, the criteria of alternative locations and formations have been discussed by the Inspectorate and the courts. However, in cases where the transmission line is built due to new wind power installations, the available alternative locations are limited due to the need to connect the wind power park, established within a determined location, to the regional grid.

Alternative formations of transmission lines may be underground cables or overhead transmission lines. If the proposed location is a wetland, overhead transmission lines are often preferred while an underground cable is better when there is risk of bird collisions. The most common case is that the opposing parties argue for an underground cable due to its impact on their property or due to the risk of bird collisions. However, such change is often not required due to the associated cost of locating the cable underground, which is not often considered reasonable under Chapter 2, section 7 of the Environmental Code. Thus, when it comes to transmission lines that are needed for new wind power installations, the examination of alternative locations becomes limited. However, if the location was planned in a comprehensive way for both wind power and transmission lines, then it may be possible to avoid unnecessary impacts on biodiversity.

As discussed in Chapter 9, it is not clear why hydropower developers should be exempt from the requirement to investigate alternative locations.¹²⁵⁰ Investigating alternative locations may be especially important as a new hydropower installation is likely to have a greater impact on a water body with high ecological status compared to a heavily modified water body

¹²⁵⁰ As suggested in prop. 1997/98:48, Part II, p. 63. See Section 9.3.3.2.

with low potential of improving. Thus, if there is a new push for development of hydropower in Sweden, this provision has the potential to steer the development away from locations with good ecological status and instead direct the location of new hydropower developments to water ways that have already been exploited and therefore may not have the potential to reach good ecological status. Also, as discussed in Chapter 9, alternative forms of production are also important to address, especially with regards to small-scale installations of hydropower, which arguably could be produced by a small wind power installation or by a PV-installation, which ultimately may be a better option from an environmental perspective.

In summary, due to the EIA requirements, it is necessary to describe and assess alternative locations and forms of the renewable energy activity. The EIA has the potential to steer the development towards a more sustainable energy system, if alternative locations and forms of production were better investigated – and enforced – to determine whether one alternative may be better from environmental perspective.

10.3.2.3 Effect on climate

As discussed in Chapter 9, in accordance with the EIA requirements, an activity's effect on the climate shall be included in the assessment of the project's environmental impact. The statement indicates that the project's contribution of GHG emissions needs to be described and assessed.¹²⁵¹ This also implies that a project's energy use and energy conservation measures are important to describe and assess within the EIA.¹²⁵² However, the EIA does not explicitly suggest that a project's energy use or energy conservation measures should be examined in the EIA. Such clarification in the legal text may be necessary to ensure that the requirement of showing the project's effect on the climate is appropriately assessed. A clearer requirement to assess the project's energy use and conservation measures may give rise to better assessments of the projects total environmental impact.

10.3.2.4 Cumulative effects

As discussed in Chapter 9 of this dissertation, the EIA has an opportunity to bridge the fragmented procedures of renewable energy activities, especially regarding the requirement to describe and assess cumulative effects of the activity, including effects from other related activities in the area, such as transmission lines. The description and assessment of cumulative effects are important; not only are they important from a coordination perspective, but also from a biodiversity protection perspective, as species are affected by the

¹²⁵¹ See Article 3(1)(c) of the EIA Directive, also mentioned in the Preamble, para. 13 of the EIA Directive.

¹²⁵² In the Swedish context, operators have to undertake energy conservation measures and primarily use renewable energy in accordance with Chapter 2, section 5 of the Environmental Code.

total amount of activities in the area and not solely from an individual activity under assessment. However, the cumulative requirement is not specified in the Swedish EIA legislation, and practice shows that this requirement is not often assessed carefully by the wind power developers when applying for permit for wind power needing new transmission lines. On that basis, this requirement may need clarification in the Swedish legislative text in Chapter 6, section 3 or 7 of the Environmental Code.

10.3.2.5 Limits of the EIA and the permit procedure

However, the EIA requirements are still a limited instrument even if they were better adhered to. First, the assessment is conducted by the wind power developer, who has the primary interest to produce wind power and who may not have acquired enough knowledge on interests within the area that possibly conflict with their own. And, as noted in Chapter 9, it is seldom that the potential impact from associated transmission lines is assessed in the wind power decision. The permit authority can require that the operator completes the EIA, if the permit authority does not consider the assessment to indicate the potential impacts of associated transmission lines. However, my study indicates that such action is not common. This implies that the location of transmission lines is, in principle, decided in the wind power case as it has to connect the wind power to the regional grid.

This two-step development also implies that transmission lines are often built in parallel with existing transmission lines, due to the limited capacity of the ones already in place. This is a question of financing, which has been addressed, and there is now a solution available that implies that grid owners can build transmission lines with higher capacities where the connecting wind power developer only pays for the capacity used. However, it is hard to predict where wind power developers are planning to develop wind power installations, and if such installations will receive a permit for that specific location. Therefore, there may be need for a more forward looking instrument to plan and address this coordination problem before the permit process starts. If the site location was decided prior to the permit process in a more comprehensive way, prior to the involvement of the specific wind power developer, potential conflicts may be avoided, and therefore not waste the developer's time and money on long permit procedures.

10.4 Plan for the future

10.4.1 Introduction

One promising solution to some of the issues discussed in this dissertation is the introduction of a more holistic planning approach to renewable energy development. Important components of such a system may be that it is both *vertically* and *horizontally* integrated. Vertically integrated plans imply use of a top-down approach; in this context, that targets or objectives defined in national planning documents are legally binding at the lower planning level.¹²⁵³ With horizontally integrated plans, I refer to plans that integrate the renewable energy target and relevant environmental objectives in order to mitigate potential conflicts between those objectives already at the planning level. Vertically integrated planning has been discussed as an alternative or complement to legal permits with regards to implementation of energy political targets and protection of biodiversity.¹²⁵⁴ Similarly to these examples, the current state of planning in Sweden, which is mainly located at the municipal level, is probably not sufficient to be a complete planning solution to the issues that have been raised in this dissertation. However, there are important characteristics of a planning approach that lead me to believe this a worthwhile approach in light of the identified challenges. I do not aim to propose definite and precise solutions, but rather provide discussion on important considerations if such a planning system was to be constructed.

10.4.2 The Current planning system in Sweden

In Sweden the municipality has a planning monopoly. This implies that the planning of Swedish land is primarily undertaken at the municipal level.¹²⁵⁵ There are a number of different municipal plans, most without any legal force.¹²⁵⁶ With regards to energy related activities, these developments often take place in *overview plans*;¹²⁵⁷ for example, wind power developments. It is also possible that wind power development can take place in *detail plans*.¹²⁵⁸ Such planning requirements arise under certain conditions, primarily if there

¹²⁵³ This model is found in Denmark. See Pettersson, M., *Renewable Energy development and the Functioning of Law*, 2008, pp. 94–97.

¹²⁵⁴ See Ibid.; Christiernsson, A., *Rättens förhållande till komplexa och dynamiska ekosystem*, 2011; and Forsberg, M., *Skogen som livsmiljö*, 2012.

¹²⁵⁵ However, such plans are conducted in a way that allows for public participation and it is also a theoretical possibility that the Government can intervene if national interests were not accounted for. See Chapter 11, section 15 of the Swedish Plan and Building Act.

¹²⁵⁶ See a general description on the various plans in Michanek, G. and Zetterberg, C., *Den Svenska miljörätten*, 2012, pp. 454–474.

¹²⁵⁷ Overview plans are not legally binding. See Chapter 3, section 3 of the Plan and Building Act.

¹²⁵⁸ See Chapter 4 of the Plan and Building Act.

is a significant demand for building activities in the area where the wind power installation is to be located.¹²⁵⁹ Such plans are legally binding.

However, it is common for development to be described in overview plans, which later influence the permit authorities when deciding whether a specific wind power park is placed in a suitable location in accordance with the Environmental Code.¹²⁶⁰ In overview plans the stated *national interests* in chapters 3 and 4 of the Environmental Code shall be reflected.¹²⁶¹ However, there is no clear coordination between these national interests; some sites may represent many interests, which sometimes are conflicting.¹²⁶² Such conflicts are assessed in the individual permit assessment.¹²⁶³ Even though energy development, primarily wind power, is planned in the overview plans today, there are studies undertaken on how energy issues can be better integrated into the overview plans in Sweden.¹²⁶⁴

There are also specific municipal energy plans, which are plans addressing how the municipality shall promote energy conservation and strive towards a secure and sufficient energy supply.¹²⁶⁵ There is, however, no clear connection to how renewable energy can be promoted in those plans. These energy plans shall – in addition to provide information on supply, distribution and use of energy in the municipality –also include an analysis of the impact the proposed activity has on the environment, health and the conservation of land and water and other resources.¹²⁶⁶ If the specific energy plan is likely to have significant impact on the environment, a strategic environmental impact assessment (SEA) is required.¹²⁶⁷ However, these plans have not yet shown to be of any significant importance to implement energy political

¹²⁵⁹ There is also the possibility to adopt regional plans, even though not legally binding, such plans have a possibility to plan over municipal borders and a potential to have a more comprehensive approach to energy system planning but is not today used as such instrument. See Chapter 7 of the Plan and Building Act.

¹²⁶⁰ For example, see MÖD 2005:66; MÖD 2007:47; and MÖD 2009:4.

¹²⁶¹ The plans should specify if the specific area is of interest for wind power, the landscape, or the protection of biodiversity, etc. See Chapter 3, section 4 of the Plan and Building Act.

¹²⁶² The national interests are appointed (recommended) by separate “interest groups”, for example; Sametinget points out the areas that are of importance for reindeer husbandry and the Swedish Energy Agency points out areas that are of importance for wind power.

¹²⁶³ This is discussed in more detail in Chapter 5.

¹²⁶⁴ Such development may be interesting to explore in future research; for example: Swedish Energy Agency, *Energifrågor i fysisk planering - Förutsättningar och scenarier för energitillförsel och energihushållning*, 2008; Ranheden, U., *Fyra stora och tjugo små steg -Idéskrift om fysisk planering Eskilstuna: Statens energimyndighet*, 2011; and County Administrative Boards, *Planera för hållbarhet: Energiaspekter i fysisk planering – översiktsplaner*, 2015.

¹²⁶⁵ See Section 1 of Lag (1977:439) om kommunal energiplanering.

¹²⁶⁶ See Section 3 of Lag (1977:439) om kommunal energiplanering.

¹²⁶⁷ See Section 8 of Lag (1977:439) om kommunal energiplanering. The County Administrative Boards has since the change been analysing the municipal plans to see if they are fulfilling the SEA criteria. For example, see the County Administrative Board of Jönköping, Rapport 2006:3, 2006.

targets and have no legally binding force.¹²⁶⁸ The plans have, at least on a political regional level, been given some more attention. In 2008, the Swedish County Administrative Boards were given the strategic responsibility to develop regional climate and energy strategies together with stakeholders with the aim to: mitigate climate change, promote a transition of the energy system and increase the share of renewable energy.¹²⁶⁹ As a result of this development, it has been suggested that the municipal energy plans have an important role to play in the transition of the energy system to become more ecologically sustainable.¹²⁷⁰

In summary, there are municipal plans (primarily overview plans and municipal energy plans) that have the potential to influence the development of the energy system, but the plans are not legally binding and do not have a particularly strong steering function. Another aspect of the plans are that they are local and do not have a larger geographical perspective.¹²⁷¹ As the energy system is not only regional but also a national and European system, it is important that the plans cover large geographical areas to be efficient from an energy and environmental perspective.

10.4.3 Planning as an instrument to handle energy and biodiversity issues

Based on the limits of the current planning system in Sweden, changes of the planning system have been discussed in the literature. In environmental legal science, plans have been proposed as an instrument that can help overcome problems with regards to adequately protecting biodiversity¹²⁷² and to implement energy political goals.¹²⁷³

¹²⁶⁸ Michanek suggested in his dissertation that the municipal plans could be accompanied with a government control of the municipal energy plans, in order to ensure that the national energy policy was better integrated at the local level. See Michanek, *Energirätt*, 1990, p. 595.

¹²⁶⁹ Such strategies can be found at the County Administrative Boards homepage: <http://extra.lansstyrelsen.se/energi/Sv/klimat-och-energistrategier/Pages/default.aspx>

¹²⁷⁰ As part of the Boards regional work on the environmental goals of “a good built environment” and *Reduced Climate Impact* it has analysed if the municipal plans in Jönköping are implementing the national energy politics and if they are correctly applying the legislation on SEA. The Report concludes that the tool of municipal energy planning must further be developed to be an important tool in implementing the national energy policy goals to better ensure a transition to a more ecologically sustainable energy system. See County Administrative Board of Jönköping, 2006, p. 3.

¹²⁷¹ However, when the municipality constructs the overview plans it shall coordinate with neighbouring municipalities. See Chapter 3, section 9 of the Plan and Building Act.

¹²⁷² See Forsberg, M., *Skogen som livsmiljö*, 2012, pp. 279–291; and Christiernsson, A., *Rätterns förhållande till komplexa och dynamiska ekosystem*, 2011.

¹²⁷³ See Pettersson, M., *Renewable Energy development and the Functioning of Law*, 2008, pp. 221–224. However, Michanek proposed, already in 1990, a system where national energy objectives should be adopted in legislation and operationalised in a similar top-down approach. An important part of that system was that the local plans needed to be assessed and

Pettersson proposed, in her dissertation, a planning model for Sweden with regards to implementing energy political goals.¹²⁷⁴ In essence, she proposes a three level system where national plans should implement the planning objectives (the targets for wind power), from a national to local level, where the targets are finally carried out in the municipal detail plan.¹²⁷⁵ In order to ensure that the planning system will adhere to the national plans – to be vertically integrated – she suggests that “rigorous control functions” may be required.¹²⁷⁶

There are also suggestions in the literature that plans would be adequate instruments to implement environmental objectives. Christiernsson suggests that plans can “form a bridge between environmental objectives and rules of conduct and consequently be a suitable approach for legal operationalisation of complex and dynamic environmental objectives, such as the protection of biodiversity”.¹²⁷⁷ Forsberg has also proposed that planning instruments – dynamic landscape planning – may be a suitable way of protecting biodiversity in the forest.¹²⁷⁸

Based on this research and the findings in my study, I suggest that such plans may be integrated to better ensure that both the energy political goals and the environmental objectives (e.g. the protection of biodiversity) are comprehensively addressed already at the planning level (preferably at the national level). Also, from an efficiency perspective, it is important to not only address wind power installations but also the development of transmission lines in the same planning system to enable a more coordinated approach to the development of renewable energy activities. Hence, a planning system may be of benefit for both the protection of biodiversity and from an energy system perspective.

“accepted” by a national authority before undertaken. See Michanek, G., *Energirätt*, 1990, pp. 594–596.

¹²⁷⁴ Pettersson proposes a planning model for Sweden in her dissertation. Based on a comparative study of planning, installation and operation of windmills (including Denmark, Norway and England) she outlines some characteristics that she considers correspond with the requirements of an efficient and environmentally considerate production of wind power. See Pettersson, M., *Renewable Energy development and the Functioning of Law*, 2008, p. 209.

¹²⁷⁵ She suggests that the link between the detail plan and the national plan would be the overview plan, where the more specific land-use is determined based on the substantial rules for the planning and location of windmills (incl. potential EIA). She considers that the detail plan, which is the final stage, is the best suited instrument to control local development, if well designed. However, she points out that the law has to change to allow for such planning. See Pettersson, M., *Renewable Energy development and the Functioning of Law*, 2008, p. 223.

¹²⁷⁶ Such control function should oblige an authority representing the state to supervise the planning at the local level, in order to ensure that the national planning objectives are implemented at the local level. See Pettersson, M., *Renewable Energy development and the Functioning of Law*, 2008, p. 224.

¹²⁷⁷ See Christiernsson, A., *Rättens förhållande till komplexa och dynamiska ekosystem*, 2011, p. 88.

¹²⁷⁸ See Forsberg, M., *Skogen som livsmiljö*, 2012, pp. 279–291.

10.4.4 How could planning be beneficial for the problems identified in this study?

This study has identified that even though the renewable energy and biodiversity legislation is not theoretically in conflict at the EU level, conflicts occur between renewable energy installations and biodiversity protection in practice. In many cases, conflicts could be avoided if the location was more comprehensively investigated and assessed. Thus, if the location assessment was done prior to the permit process, time and money spent in the courts might be avoided. Such location could potentially be determined already in a planning document.

In addition, the lack of coordination between the legal processes of renewable energy activities may be better handled in a planning document. For example, a planning document could avoid the construction of parallel transmission lines and allow for a site location assessment to comprehensively review wind power installations and transmission line infrastructure. As discussed in chapters 8 and 9, the fragmented nature of the permit/concession processes allows for inefficient development of transmission lines, which also lacks a more comprehensive view of the project's total impact, from both the wind power installation and the associated transmission lines, which may give rise to unnecessary environmental impact.

However, the conflicts arising from the fragmented legal system can only be mitigated and not *solved*; such conflicts will never cease occurring. Conflicts can be mitigated if assessments were conducted at an earlier stage in the development process, which would determine potential conflicts if development proceeded. The same logic applies for the fragmented nature of the legal procedures. It is not possible to solve this problem, as the legal permit procedures are separated for a reason. However, it may be possible for certain activities to be legally addressed in a different way, or for site location issues to be decided earlier, thereby avoiding conflicts with the permit process and allowing for that process to be further simplified. Thus, the features of planning that are particularly useful as a way of addressing the issues that I have discussed in this dissertation, include solving conflicts prior to the individual assessment in the courts, and therefore enabling a more efficient transition of the energy system than the current fragmented permit regime enables. The following section explores which features may be included in a planning system.

10.4.3 Important aspects of a future planning system

Specific features of a planning system can address the problems identified in this dissertation, and they relate to the *level* and *type* of planning. The current level of planning, which is municipal, may not be adequate from energy system or biodiversity perspective. A municipal plan is limited geographical-

ly, and the electricity system stretches over municipal, regional, and even national borders. If a planning process does not include a wide perspective, then development may occur in locations not suitable from a regional or national perspective even though the location may seem suitable from the municipal perspective. Due to the different population density and geographical characteristics of Sweden's 290 municipalities, one municipality may have potential for a large increase of wind power and others may not.

Another aspect that makes the municipal overview plans limited is that they are not legally binding and, even though these plans need to incorporate the recommended national interests, conflicts between such interests are not necessarily assessed in the planning document.¹²⁷⁹ Instead, a balancing act is performed by the permit authorities, where the overview plans are influencing the decision-making but are not legally binding. There is no legal operationalisation of the energy political goals or the environmental quality objectives that implies that the municipality must adhere to those aspects. These objectives are not implemented in a way that can be enforced legally, even though they may influence the decision making.¹²⁸⁰

Therefore, I suggest that a plan of a higher level, may be better suited to ensure a functioning energy system, particularly if the location of energy system activities is already discussed at this level. I do not think it is essential to decide the exact location of such developments, but a first "screening" at the national level may assist the discussion of more exact location at the municipal level. Screening at a higher level may discover that some municipalities are not suitable for wind power development but may be better suited for other renewable energy activities, like wave or solar power technologies. The Ministry of Energy and Environment may conduct the screening activities for implementation in a national planning document.

A way of undertaking such "screening" at the national level could be through better utilising the resource management provisions stipulated in chapters 3 and 4 of the Environmental Code; these provisions are the only form of national guidance on the use of land in Sweden. As seen in Chapter 5 of this dissertation, these resource management provisions are rather vague and do not provide clear balancing rules to apply when conflicts occur due to differing interests.¹²⁸¹ In some cases, these provisions may be strongly influential, depending on the specific geographic area; the type of conflict; and the relevant provisions. Although, in general, they do not provide a strong

¹²⁷⁹ However, the municipality has to show how it satisfies the recommended national interests in accordance with Chapter 3, section 5(3) of the Plan and Building Act.

¹²⁸⁰ The municipality shall also show how the plan considers, and coordinates with, relevant national and regional objectives. See Chapter 3, Section 5(4). Thus there is some opening to have a more integrated approach at the municipal level but as it is not legally binding potential conflicts will still be balanced and determined in the individual assessment.

¹²⁸¹ Pettersson suggests that if the balancing rules were more clear and explicit it may benefit both wind power interests and the preservation interest. See Pettersson, M., *Renewable Energy development and the Functioning of Law*, 2008, p. 211.

steering function for land use in Sweden. Either way, if these resource management provisions were identified simultaneously, and the balancing act was performed at the national level, it could enable a more coordinated and comprehensive application of these provisions.

The responsibility for preparation of national plans could reside with the Government, which must decide how various national interests and environmental objectives should be balanced. Within this process, the authorities, which today are involved in recommending the areas of national interests, should be included to map the various interests. After that mapping is completed, the Government could consider the environmental objectives and the renewable energy targets, and then assess potential conflicts and propose how the energy system should be planned to ensure it is efficient and sustainable. Thus, the Government is, at the national level, *horizontally* integrating the renewable energy targets and the environmental objectives.

This type of planning could lay the ground work for the overview plans, which should include an SEA where site location would be more closely investigated. At this stage, the public has a better chance to participate in the procedure through the SEA process, which is important to avoid conflicts later in the process. At this level, it may be discovered that the location for wind power proposed in the national plan conflicts with local interests that were not previously considered. Thus, it is an important planning step to discover and solve conflicts that are not addressed at the national level. In that sense, the national plan can be changed at this level, if proven inadequate.

Adaptability is an important aspect of this planning system. Even though it is not strictly legally binding in the sense that it cannot be modified, it points out areas that have at least gone through a first screening. There is of course a danger in doing such assessments at the national level as politics may influence the process. But, since a national plan can be changed at the local level, this issue may not be so significant. If the overview plans did look closer into the more exact location of wind power and transmission lines, for example, it may imply that the development will be planned and developed more efficiently and sustainable than what occurs today. An overview plan that addresses potential conflicts would perhaps avoid conflicts in the Courts and therefore lead to a faster transition. Or, as Pettersson proposes, the final stage could take place in the detail plans instead of the permit procedure.¹²⁸² Either way, the conflicts should be solved as early in the process as possible to avoid dealing with such conflicts for the individual developer of renewable energy activities.

A planning instrument could either complement the current permit system (with the aim of dealing with potential conflicts prior to the permit applica-

¹²⁸² Pettersson proposes that the permit procedure therefore would not be necessary. See Pettersson, M., *Renewable Energy development and the Functioning of Law*, 2008, p. 223.

tion) or substitute it. If the planning instrument substitutes the current permit regime, then it may require that general provisions are formulated in a way to avoid conflict with protected species.¹²⁸³ Most of these conflicts could arguably be addressed in the form of general requirements applicable to wind power activities and transmission lines; for example, locating installations at certain distances from bird nests and feeding grounds, or determining how to place turbines and transmission lines in relation to migration routes and in between areas where birds traverse (e.g. feeding grounds and nesting sites).

In summary, important components of planning include implementing and operationalising energy political targets and environmental objectives that are important for biodiversity. Thus, it may be necessary that such plans are both *vertically* and *horizontally* integrated. As mentioned earlier there have been suggestions in the literature that vertically integrated plans may be useful to operationalise energy political goals¹²⁸⁴ and biodiversity objectives respectively.¹²⁸⁵ However, it hasn't been discussed whether or how such plans could be integrated in the context of renewable energy development in Sweden.¹²⁸⁶ Thus, national plans that are legally binding at the lower planning levels, constructed in a way that both operationalise the Swedish environmental objectives related to the protection of biodiversity and the renewable energy targets, may be a planning system to explore further.

¹²⁸³ Pettersson proposes that certain standards should be introduced that could prescribe technical standards, acceptable noise levels and distances from certain areas, etc. See Pettersson, M., *Renewable Energy development and the Functioning of Law*, 2008, p. 219.

¹²⁸⁴ In Denmark, there are plans that are vertically integrated, which is what Pettersson suggests should be implemented in Sweden with regards to development of wind power. See Pettersson, M., *Renewable Energy development and the Functioning of Law*, 2008, pp. 223–224.

¹²⁸⁵ See Christiernsson, A., *Rättens förhållande till komplexa och dynamiska ekosystem*, 2011, p. 88.

¹²⁸⁶ However, with regards to development of energy activities in marine waters, the Framework Directive on Maritime Spatial Planning addresses such issues. The objective of this directive is to contribute to the sustainable development of maritime activities, which proposes an ecosystem-based approach and promotes the coexistence of relevant activities. See Directive 2014/89/EU of the European Parliament and of the Council of 23 July 2014 establishing a framework for maritime spatial planning, 28 August 2014, Official Journal of the European Union, L 257/135.

11. Svensk sammanfattning

Det finns en vision inom EU att ställa om till ett koldioxidneutralt samhälle, där ett energisystem med en stor andel förnybar energi är en viktig komponent. I en annan EU-politisk kontext är det uttalat att förlusten av biologisk mångfald ska stoppas till 2020. Dessa två skilda politiska målsättningar ackompanjeras av EU-lagstiftningen med syfte att såväl främja förnybar energi som skydda biodiversitet. Relationen mellan förnybarhetsdirektivet och naturskyddsdirektiven (habitatdirektivet, fågeldirektivet och ramvattendirektivet) diskuteras i denna avhandling med syfte att undersöka hur de nämnda direktiven förhåller sig till varandra i både den EU-rättsliga och i den svenska kontexten.

I den första delen av avhandlingen undersöker jag EU:s kompetens att lagstifta på energiområdet, närmare bestämt, vad EU har för möjlighet att utforma ett nytt direktiv, med högre målsättningar för förnybar energi. Där utöver undersöks vilken betydelse integrationsprincipen har i detta sammanhang och om en följsamhet till principen kan leda till att EU:s lagstiftning inom förnybar energi kan bli mer koherent med naturskyddsdirektiven.

I den andra delen av avhandlingen diskuteras förhållandet mellan förnybar energi och skyddet av biodiversitet i den svenska kontexten. I denna del används vindkraft och vattenkraft som exempel på hur relationen hanteras i tillståndsprocessen. Dessutom undersöks i denna del av avhandlingen hur de EU-rättsliga naturskyddsdirektiven implementerats i svensk rätt. Därefter undersöker jag möjligheten till dispens från naturskyddsdirektiven för förnybara energiverksamheter. Studien av vindkraftsdomarna visar att det uppstår konflikter mellan vindkraftsetableringar och artskyddet. Många konflikter är möjliga att undvika med hjälp av försiktighetsmått, men det är färre generellt accepterade skyddsåtgärder som kan minska påverkan på vissa känsliga fågelarter, förutom att ändra lokaliseringen av vindkraftverken.

Möjligheten till dispens från artskyddet är begränsad rent generellt, eftersom det krävs att projektet i fråga är av ett överordnat samhällsintresse, vilket inte är ett alternativ om den skyddade arten är en fågel. Detta beror på att fågeldirektivet inte innefattar en sådan grund för undantag. Det nämnda är en skillnad som inte reflekteras i den svenska lagstiftningen.

När det gäller vattenkraften i Sverige ger den primärt upphov till andra typer av problem än vindkraften. Det största problemet med vattenkraften är att det finns ett stort antal anläggningar med gamla tillstånd som inte uppfyller moderna miljökrav, vilket innebär att Sverige inte uppfyller kraven i

ramvattendirektivet. I avhandlingen diskuteras vidare vilka rättsliga möjligheter det finns att ställa krav på redan befintliga anläggningar och vad det finns för alternativa rättsliga möjligheter att undvika konflikt med ramvattendirektivet, där undantagsreglerna i ramvattendirektivet diskuteras.

I den tredje delen av avhandlingen undersöks vilken roll MKB-instrumentet och kravet om att i prövningen ta hänsyn till följdföretag har för att överbygga den fragmenterade prövningen av energiverksamheter. I den här delen diskuteras relationen mellan prövningen av vindkraft och elledningar. Studien baseras på energimarknadsinspektionens koncessionsbeslut för ledningar som behövs för att ansluta vindkraft, respektive vindkraftsbesluten. Syftet med studien är att undersöka om ledningarnas miljöpåverkan bedöms i vindkraftsärendet, med hänsyn till att ledningar är en följdverksamhet till vindkraftsinstallationen. Studien visar på att det fragmenterade systemet ger upphov till ett koordinationsproblem till följd av den uppdelade prövningen av vindkraft och ledningar. Det tycks endast i begränsad omfattning finnas utrymme för en mer övergripande miljöbedömning. Studien av koncessionsbesluten och vindkraftsbesluten visar också att en tillämpning av MKB-reglerna och kravet på att bedöma följdföretag tillämpas på ett bristfälligt sätt.

Sammanfattningsvis visar den undersökning som företagits i avhandlingen att det inte finns någon formell konflikt mellan den nu gällande lagstiftning som främjar förnybar energi och den som skyddar biodiversitet, men att det i praktiken uppstår konflikter mellan vindkraft, vattenkraft och naturskyddslagstiftningen. Det finns även ett samordningsproblem mellan de rättsliga prövningarna av energiverksamheter. Dessa samordningsproblem leder dels till en ineffektiv utveckling av vindkraft och elledningar, dels till en eventuell onödig miljöpåverkan. Dessa slutsatser pekar mot ett behov av ett bredare perspektiv på hur omställningen av energisystemet bör hanteras rättsligt. Ett sådant perspektiv kan omfatta en närmare undersökning angående möjligheterna att använda undantagsreglerna i ramvattendirektivet samt att undersöka förutsättningarna för ett mer integrerat planeringssystem för den fortsatta utvecklingen av förnybar energi.

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