Comparative Jurisdictional Research Report on the Assessment and Regulation of Offshore Wind Development

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Executive Summary

In recent years, the Government of Canada, the Government of Newfoundland and Labrador, and the Government of Nova Scotia have set in motion several initiatives that will form a new legal regime for the assessment and regulation of offshore wind developments in Canada. These initiatives include an Offshore Renewable Energy Regulations Initiative being overseen by Natural Resources Canada, the anticipated development of new *Offshore Renewable Energy Regulations* under the *Canadian Energy Regulator Act*, anticipated amendments to the "Accord Acts" that establish and empower the Canada-Newfoundland and Labrador Offshore Petroleum Board and the Canada-Nova Scotia Offshore Petroleum Board, and the commencement of two regional assessments that could either chart courses for meaningful sustainability assessment and cumulative effects assessment of offshore wind developments in Atlantic Canadian waters or be used as justifications to truncate project-specific impact assessment processes. Environmental advocates working in the renewable energy and marine protection spheres of Canadian law and policy are witnessing and participating in a remarkable period of legal transition and flux, and the future shape of Canada's offshore renewable energy regimes are not yet clear.

This comparative jurisdictional research report speaks to the legal transition that is currently underway in Canada. Recognizing that the regional assessments and law reform initiatives discussed herein will be used to establish a new legal regime for the assessment and regulation of offshore wind in Atlantic Canada, the report aims to support public-interest environmental advocacy by exploring how offshore wind developments are assessed and regulated in comparator jurisdictions and by identifying potential best practices that could be considered for the Canadian context.

The comparator jurisdictions selected for study are Germany, the United Kingdom of Great Britain and Northern Ireland, and the United States of America. Given the considerable breadth and complexity of all regimes designed to assess and regulate offshore renewable wind developments, research and analysis were scoped to focus on whether and how the comparator jurisdictions' regimes were designed to assess the sustainability of proposed developments and incorporate cumulative effects assessment into planning, assessment, and permitting processes.

Through research and analysis of primary sources, scholarship, and "grey literature", several potential best practices for consideration in the Canadian context were identified. They are:

> (i) the establishment of marine policies or strategies, maritime spatial plans, and/or sectoral marine plans to identify and reconcile competing human and ecological demands in marine spaces before considering site-specific developments;
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> (ii) the use of tiered assessment processes that enable evaluation of sustainability considerations and cumulative effects at the highest-levels of regulatory planning and

decision-making so that project-specific assessments can be informed by and contextualized within a "bigger picture" that is better understood; and,

(iii) the use of centralized site identification by government so that marine spaces opened to development are chosen not only for their economic potential but also for their conformity with marine policies and plans that aim to achieve sustainable development by appropriately balancing human and ecological needs.

All three of these potential best practices are multi-layered, and in implementation they can and do take many different forms. They are also interconnected and mutually supportive. Centralized site identification by government is most likely to achieve positive sustainability outcomes when it is guided by marine policies or strategies, maritime spatial plans, and/or sectoral marine plans that address and perhaps even prioritize competing demands in prospective development areas—but, the value of all of these instruments turns on them having been shaped by meaningful assessments of sustainability considerations and cumulative effects.

The existing legal regimes that are relevant to the assessment and regulation of offshore wind developments in Canada are not entirely well-suited to incorporate the potential best practices discussed in this report, but they have promise.

Under the current state of the law, the assessment and regulation of offshore wind developments in Canada would be carried out mainly under the federal *Impact Assessment Act* ("*IAA*") and *Canadian Energy Regulator Act*. In their current forms, these statutes do not give federal regulators clear powers and responsibilities to carry out the kinds of marine planning and centralized site identification that are used by the comparator jurisdictions studied in this report. Incorporating the combined use of maritime spatial planning, sectoral marine planning, and centralized site identification by government into the Canadian regime would require law reform and law creation to identify, empower, and assign responsibilities to the government agencies or regulatory bodies that would be best suited to carrying out this work. Further engagement and study by lawmakers and non-governmental bodies are necessary to fully assess and determine whether and to what extent such practices would contribute valuably to cumulative effects assessment and the achievement of sustainability objectives in Canada. In this regard, federal and provincial engagement with Indigenous peoples on a nation-to-nation or government-to-government basis should be priorities.

In its current form, Canada's legal regime includes some legal requirements for tiered assessment processes and also grants discretionary powers that could enable further tiering, but the use of effectively coordinated assessments from higher to lower levels is limited. The Government of Canada's *Cabinet Directive on the Environmental Assessment of Policy, Plan, and Program Proposals* requires the federal government to conduct strategic environmental assessments that take sustainability considerations and cumulative effects into account when federal policies, plans, or programs related to the assessment and regulation of offshore wind developments will require approval by a federal Minister or the federal Cabinet and

implementation of the proposal will result in “important environmental effects”. Regional assessment and impact assessment processes under the *IAA* offer potential for further tiering of assessment processes in which the sustainability of facilitating offshore wind developments in Atlantic Canadian waters, along with the cumulative effects of developments on an ambitious scale, could be assessed at a regional scale before project-specific assessments are conducted. Additionally, strategic assessment processes under the *IAA* enable sustainability considerations and cumulative effects to be taken into account when the Government of Canada is considering policies, plans, programs, or issues that are relevant to carrying out impact assessment processes of offshore wind developments.

The experience of the Regional Assessment of Offshore Oil and Gas Exploratory Drilling East of Newfoundland and Labrador demonstrated that regional assessment processes under the *IAA* will not necessarily enable effective tiering of assessments from larger to project-specific scales but may instead be used to justify the truncation of project-specific impact assessments. This possibility exists and is a matter of concern for the regional assessments of offshore wind development in Newfoundland and Labrador and Nova Scotia that are currently underway. As these regional assessments move forward, environmental advocates who wish to promote an environmentally responsible and genuinely sustainable offshore wind industry in Canada should be working to ensure that the knowledge and information generated by participants and synthesized by the Regional Assessment Committees is suited to enabling effectively tiered assessment processes in which project-specific impact assessments or other environmental reviews can shaped by sustainability assessments and cumulative effects assessments conducted at a higher level and on a larger scale.

In this moment of remarkable transition and flux, the future shape of offshore wind assessment and regulation in Canada is difficult to predict. In the midst of this uncertainty, there are opportunities to chart a good course for the years to come. The legal seascape is large and complex, but public-interest environmental advocates can navigate it by exploring ways to prioritize sustainability in decision-making from the highest levels of planning and assessment all the way down to project-specific permitting.

1.0 Introduction

In April 2022, Canada's Minister of Environment and Climate Change announced his decision to conduct a regional assessment ("RA") of offshore wind development in Newfoundland and Labrador and Nova Scotia.[1] The announcement coincided with a statement issued jointly by the Government of Canada and the Government of Newfoundland and Labrador announcing that they would expand the mandate of the Canada-Newfoundland and Labrador Offshore Petroleum Board ("C-NLOPB") to give it regulatory authority over renewable energy activities in the offshore,[2] and was followed shortly by a similar statement issued jointly by the Government of Canada and the Government of Nova Scotia announcing that they would expand the mandate of the Canada-Nova Scotia Offshore Petroleum Board ("CNSOPB") in the same way.[3]

Although the initial announcement of the ministerial decision to conduct an RA of offshore wind development in Newfoundland and Labrador and Nova Scotia implied that a single RA would cover both regions, subsequent engagement by the Impact Assessment Agency of Canada ("IAAC") led to the regional assessment being split into two separate processes: the Regional Assessment of Offshore Wind Development in Newfoundland and Labrador ("NL Offshore Wind RA") and the Regional Assessment of Offshore Wind Development in Nova Scotia ("NS Offshore Wind RA"). Both RA processes have been initiated, and it is anticipated that the RA Committees appointed to conduct the processes will complete their work in 2024.

The NL Offshore Wind RA, NS Offshore Wind RA, and the stated intentions by the Government of Canada and the respective governments of Newfoundland and Labrador and Nova Scotia to expand the mandates of the C-NLOPB and CNSOPB are distinct initiatives, but they are closely related. All three initiatives reflect federal and provincial ambitions to accelerate the development of offshore wind potential in Atlantic Canada—not only to serve Canada's own renewable energy needs but also to capitalize on export opportunities presented by intensifying global interest in green hydrogen.

Although Canada has considerable offshore wind potential, offshore wind developments have not yet been established in Canada, and there is currently little legislation in place to address the assessment and regulation of wind energy developments in Canada's offshore. The stated intentions by government to expand the mandates of the C-NLOPB and CNSOPB will require amendments to the federal and provincial statutes that establish the offshore boards and give them regulatory authority over various aspects of offshore energy development. Concurrent amendments to the federal laws that establish and empower the Canada Energy Regulator ("CER") are also expected, as the CER also has jurisdiction that is relevant to offshore energy infrastructure. These law reform initiatives could potentially be informed by information

[1] The Honourable Steven Guilbeault, PC, MP, Minister of Environment and Climate Change, "Minister's Decision to Conduct a Regional Assessment" (5 April 2022).
[2] Natural Resources Canada, "Canada and Newfoundland and Labrador Announce Intent to Expand the Mandate of Offshore Energy Regime to Support the Transition to a Clean Economy and Create Sustainable Jobs" (5 April 2022).
[3] Natural Resources Canada, "Canada and Nova Scotia Announce Intent to Expand the Mandate of Offshore Energy Regime to Support the Transition to a Clean Economy and Create Sustainable Jobs" (11 April 2022).

generated through the NL Offshore Wind RA and the NS Offshore Wind RA, but it is likely that the Government of Canada and the respective governments of Newfoundland and Labrador and Nova Scotia will set the direction for the new regulatory regime before the RAs have concluded.

The intersections between the NL Offshore Wind RA, NS Offshore Wind RA, and law reform initiatives that are on the horizon mean that public-interest environmental organizations that wish to promote an environmentally responsible and genuinely sustainable offshore wind industry in Canada will need to engage simultaneously with the RAs and the law reform processes and, where possible, draw out meaningful connections between them.

This comparative jurisdictional research report on the assessment and regulation of offshore wind development has been conducted by East Coast Environmental Law ("ECEL") on behalf of the Ecology Action Centre ("EAC"). It aims to provide an overview of how offshore wind developments are assessed and regulated in three comparator jurisdictions—Germany, the United Kingdom of Great Britain and Northern Ireland ("UK"), and the United States of America ("US")—so that potential approaches to the assessment and regulation of offshore wind developments in Canada can be put into perspective. In particular, the report seeks to identify potential best practices that appear to be reflected in the German, UK, and US regimes so that the value of such practices can be considered for the Canadian context.

1.1 *The Comparator Jurisdictions*

The three comparator jurisdictions were chosen following a preliminary scan of multiple jurisdictions that either have significant existing offshore wind industries or are preparing the way legislatively to grow such industries in the near future. Practical limitations such as language barriers and the need to set a manageable scope for the research were relevant factors as we considered which jurisdictions would be appropriate. Based on our preliminary scan and conversations with EAC staff to identify jurisdictions that were of particular interest to them, Germany, the UK, and the US were chosen as the foci for our research.

1.1.1 Germany

Germany is a federal state in which governance powers and responsibilities are shared between the federal government and sixteen states, the Länder.

Germany's marine territory is concentrated in the North Sea and the Baltic Sea. This marine territory is adjacent to, and shared with, other European nations, including Denmark, the Netherlands, Poland, and the UK. Both seas are heavily industrialized areas that are used for human activities like fishing, energy production, aggregate mining, and recreation. The region is also home to two of the world's largest ports, which leads to high volumes of international shipping traffic.

Germany's first offshore wind project was completed in 2009 and came into operation in 2010.[4] As of the end of 2022, there were over 1,500 wind turbines in Germany's offshore, with a total generating capacity of approximately 8 GW.[5] These wind energy projects currently operate in the North Sea and Baltic Sea,[6] although most of the turbines are in the North Sea where the wind yields are higher.[7]

1.1.2 United Kingdom of Great Britain and Northern Ireland

The UK is comprised of four jurisdictions: England, Northern Ireland, Scotland, and Wales. Although considerable legislative powers are exercised centrally by the UK Government, Northern Ireland, Scotland, and Wales are all governed additionally—and, in many cases, more directly—by "devolved administrations". Those devolved administrations are, respectively, the Northern Ireland Executive, the Scottish Government, and the Welsh Government. Throughout this memo, we refer to all three devolved administrations collectively as the Devolved Administrations and refer to individual devolved administrations by their specific names.

The Devolved Administrations are empowered to enact and enforce laws addressing several matters within their respective territories, and they also contribute to the UK Government's development of laws that will have general application throughout the UK.

The UK is largely surrounded by its marine territory, which includes: the North Sea and the English Channel, which it shares with continental Europe; the Irish Sea and St. George's Channel, which it shares with Ireland; and, the North-Eastern Atlantic Ocean. The majority of the UK's marine territory is heavily industrialized, especially the English Channel and the North Sea.

The UK has some of the largest offshore wind sites in the world and the most installations, largely due to its shallow coastal waters. Its first offshore wind project was completed in 2000, and the UK Government has committed to producing 50 GW of electricity by 2030. This is 40 GW more than it generated as of 2020.[8]

1.1.3 The United States of America

The US is a federal state consisting primarily of 50 states and the federal district, although it also encompasses multiple overseas territories. The US has a large marine territory, which includes the western Atlantic Ocean, the Pacific Ocean, the Arctic Ocean, and the Gulf of

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[4] Benjamin Wehrmann, "German Offshore Wind Power – Output Business and Perspectives" *Clean Energy Wire* (10 August 2022); Deutsche Windguard, "Status of offshore wind development in Germany: First Half of 2022" (2022).
[5] Benjamin Wehrmann, "German Offshore Wind Power – Output Business and Perspectives".
[6] Deutsche Windguard, "Status of offshore wind development in Germany: First Half of 2022" (2022).
[7] Benjamin Wehrmann, "German Offshore Wind Power – Output Business and Perspectives" and Deutsche Windguard, "Status of offshore wind development in Germany: First Half of 2022".
[8] SUK Department of International Trade, "Offshore Wind" (February 2023); International Trade Administration, US Department of Commerce, "United Kingdom Offshore Wind" (8 February 2022).

Mexico. Its marine territory borders multiple countries, including Canada, Mexico, Cuba, Russia, and the Bahamas. States have jurisdiction over the inner continental shelf, while the federal government has jurisdiction over the outer continental shelf.

Despite development of offshore wind projects in the US being in its infancy, with only two operating wind projects, the US has ambitious goals to develop its offshore renewable energy production, including offshore wind generation. Specifically, the US has a goal to increase offshore wind electricity generation to 30 GW by 2030.[9]

1.2 *Nature and Scope of the Analysis*

In the initial scoping for this research report, which was informed by the interests expressed by the EAC, three primary fields of analysis were selected for each of the three comparator jurisdictions:

- the role played by the international ocean governance regime in the assessment and regulation of offshore wind development;
- environmental impact assessment processes that apply to offshore wind developments; and,
- other key aspects of the legal regimes that are identified as being relevant to the analysis.

To further narrow the broad scope of those fields of analysis, we chose to focus on understanding if and how the comparator jurisdictions incorporate sustainability assessments and cumulative effects assessments into their assessment and regulation of offshore wind developments.

These focus areas were chosen because sustainability assessment is a critical component of federal assessment processes that are carried out under Canada's *Impact Assessment Act* and is a key issue of concern for the NL Offshore Wind RA, NS Offshore Wind RA, and law reform initiatives establishing a new regulatory regime for offshore wind development in Canada. Moreover, since sustainability assessment cannot be conducted meaningfully without an adequate understanding of cumulative effects, cumulative effects assessments are an essential part of assessing and regulating offshore wind developments. Given the report's objective of identifying potential best practices that appear to be reflected in the German, UK, and US regimes so that the value of such practices can be considered for the Canadian context, we determined that understanding whether and how sustainability assessments informed by cumulative effects assessments are carried out in the comparator jurisdictions would be an appropriate point of focus.

[9] White House, United States of America, "Fact Sheet: Biden-Harris Administration Announces New Actions to Expand US Offshore Wind Energy" (15 September 2022).

Our decisions in this regard were also informed by the learning derived from the scholarship we consulted to familiarize ourselves with unfamiliar regimes and explore the rationales behind the various structural frameworks and assessment types discussed throughout this report. Our identification of potential best practices that could be considered for use in Canada was shaped not only by our engagement with primary sources (such as statutes and regulations) and "grey literature" explaining how laws are implemented and experienced in the comparator jurisdictions' regimes but also by academic commentary discussing the strengths and weaknesses of various approaches. A select bibliography of scholarship that informed our understanding and conclusions is included as Appendix G.

Given the complexity of the comparator jurisdictions' legal regimes for assessing and regulating offshore wind, and given that our research was focused on the international and national levels of each jurisdiction, our analyses throughout this report are high-level. All of the models and processes for assessment, leasing, licensing, permitting, and other regulatory activities discussed throughout this report are nuanced, and understanding their strengths and weaknesses well enough to definitively recommend one approach over another would require a depth of analysis that is beyond the scope of this project. Given the breadth of methodologies and principles, the converging political, legal, and financial realities at local levels, and the many nuances that permeate possible implementation of sustainability assessments and cumulative effects assessments, we focused on identifying potential best practices that, in our view, would be valuable to consider for the Canadian context.

Our research and analysis have led us to identify three potential best practices for consideration in the Canadian context:

> (i) the establishment of marine policies or strategies, maritime spatial plans, and/or sectoral marine plans to identify and reconcile competing human and ecological demands in marine spaces before considering site-specific developments;
>
> (ii) the use of tiered assessment processes that enable evaluation of sustainability considerations and cumulative effects at the highest-levels of regulatory planning and decision-making so that project-specific assessments can be informed by and contextualized within a "bigger picture" that is clearly understood; and,
>
> (iii) the use of centralized site identification by government so that marine spaces opened to development are chosen not only for their economic potential but also for their conformity with marine policies and plans that aim to achieve sustainable development by appropriately balancing human and ecological needs.

All three of these potential best practices are multi-layered, and in implementation they can and do take many different forms.

1.3 *Assessment Processes Discussed in This Report*

Canada and each of the comparator jurisdictions employ multiple tiers and kinds of assessment processes, some of which feed into and shape the assessment and regulation of offshore wind developments. Key assessment processes discussed in this report include cumulative effects assessments, environmental impact assessments, habitats regulations assessments, impact assessments, regional assessments, strategic assessments, strategic environmental assessments, and sustainability assessments.

1.3.1 Cumulative Effects Assessment

A cumulative effects assessment assesses how a proposed human activity may interact with past, present, and reasonably foreseeable future human activities, and natural processes, to produce additive or synergistic effects that would not necessarily be caused by the proposed activity on its own. Cumulative effects assessments are not necessarily standalone processes and are typically used to inform processes such as strategic environmental assessments and environmental impact assessments. Cumulative effects assessment is particularly helpful in informing and shaping meaningful sustainability assessment.

1.3.2 Environmental Impact Assessment

An environmental impact assessment ("EIA"), sometimes also called an environmental assessment, is a project-specific process focused on assessing the potential impacts of a proposed project before that project is carried out. EIAs can take many different forms depending on the statutes that structure them, but they generally seek to identify whether a proposed project is likely to cause harmful environmental effects that cannot be avoided or mitigated. As such, they are important decision-making tools that can equip decision-makers to determine whether it would be in the public interest to allow a proposed project to go forward and whether terms or conditions should be imposed on the proponent to ensure that the project's harmful effects are controlled.

1.3.3 Habitats Regulations Assessment and Nature Conservation Assessments

As discussed in this report, habitats regulations assessments ("HRAs") and nature conservation assessments are assessment processes used in the UK and Germany, respectively, to assess whether proposed projects conform with conservation requirements imposed by European Union laws.

1.3.4 Impact Assessment

In Canada, impact assessments ("IAs") are federal EIA processes that are carried out under Canada's *Impact Assessment Act* ("*IAA*"). In general, they are designed to assess large projects that are likely to have significant environmental, social, or cultural impacts on areas within federal jurisdiction. A set of regulations under the *IAA* called the *Physical Activities Regulations*

lists the projects that will trigger the IA process. Importantly, IAs must be informed by cumulative effects assessment, and IAs must also consider how a proposed project will contribute to sustainability. If a regional assessment or strategic assessment carried out under the *IAA* is relevant to an IA, the IA must also take into account the findings of that higher-level assessment.

1.3.5 Regional Assessment

A regional assessment ("RA") is a process conducted under the Canada's *IAA* to assess the regional impacts of projects that are listed in the *Physical Activities Regulations*. An RA will focus on a "study region" and may consider many different factors within the region. Ideally, RAs should be used to conduct regional-level cumulative effects assessment and establish frameworks for undertaking sustainability assessment. RAs are meant to work within a tiered assessment approach and help inform project-level IAs. However, experience to date has indicated that RAs conducted under the *IAA* are being used primarily as information-gathering exercises, with cumulative effects assessment and sustainability assessment receiving limited attention.

1.3.6 Strategic Assessment

Strategic assessments ("SAs") are processes conducted under Canada's *IAA* to assess government plans, programs, and policies that are relevant to conducting IAs or to assess any issues that are relevant to conducting IAs of designated projects or classes of designated projects. "Designated projects", in this context, means projects that are listed in the *Physical Activities Regulations.*

1.3.7 Strategic Environmental Assessment

A strategic environmental assessment ("SEA") is an assessment processes that assesses the environmental (and potentially socioeconomic) effects of a governmental policy, plan, or program that will set a direction or framework for future decision-making at lower level, such as in project-specific EIA processes. As will be seen in the chapters that follow, SEAs are used in Germany and the UK to shape governmental plans and programs of various kinds, including national and sectoral marine plans and the selection of marine areas that will be opened to leasing and development by offshore wind developers. Because SEAs take a high-level, large-scale approach, they can be ideal processes through which to examine the cumulative effects and sustainability of fostering new development in an assessment area.

1.3.8 Sustainability Assessment

A sustainability assessment is an approach to evaluating a proposed project or group of projects to determine whether it will contribute to or hinder the achievement of sustainability objectives. The sustainability objectives that are relevant to these processes can vary depending on the priorities of the jurisdiction that has chosen them. Like cumulative effects

assessment, a sustainability assessment is not necessarily a standalone process but can instead contribute to other assessment processes by shaping the inquiry and guiding decision-making. At a basic level, sustainability assessment is considered to be a component of IAs, RAs, and SAs under Canada's *IAA* because a key purpose of the Act is to foster sustainability. As concerns IAs, however, the role of sustainability assessment is even more clear, because it is a statutory component of decision-making under the Act. Under the *IAA*, a decision-maker deciding whether or not to approve a proposed project that was assessed through the IA process must consider the extent to which the project contributes to sustainability and take that into account when deciding whether or not the proposed project is in the public interest.

1.4 Bringing It Back to the Canadian Context

The existing legal regimes that are relevant to the assessment and regulation of offshore wind developments in Canada are not entirely well-suited to incorporate the potential best practices discussed in this report, but they have promise.

Under the current state of the law, the assessment and regulation of offshore wind developments in Canada would be carried out mainly under the *IAA* and the *Canadian Energy Regulator Act*. In their current forms, these statutes do not give federal regulators clear powers and responsibilities to carry out the kinds of marine planning and centralized site identification that are used by the comparator jurisdictions studied in this report. Incorporating the combined use of maritime spatial planning, sectoral marine planning, and centralized site identification by government into the Canadian regime would require law reform and law creation to identify, empower, and assign responsibilities to the government agencies or regulatory bodies that would be best suited to carrying out this work. Further engagement and study by lawmakers and non-governmental bodies are necessary to fully assess and determine whether and to what extent such practices would contribute valuably to cumulative effects assessment and the achievement of sustainability objectives in Canada. In this regard, federal and provincial engagement with Indigenous peoples on a nation-to-nation or government-to-government basis should be priorities.

In its current form, Canada's legal regime includes some legal requirements for tiered assessment processes and also grants discretionary powers that could enable further tiering, but the use of effectively coordinated assessments from higher to lower levels is limited. The Government of Canada's *Cabinet Directive on the Environmental Assessment of Policy, Plan, and Program Proposals* requires the federal government to conduct strategic environmental assessments that take sustainability considerations and cumulative effects into account when federal policies, plans, or programs related to the assessment and regulation of offshore wind developments will require approval by a federal Minister or the federal Cabinet and implementation of the proposal will result in "important environmental effects". RA and IA processes under the *IAA* offer potential for further tiering of assessment processes in which the sustainability of facilitating offshore wind developments in Atlantic Canadian waters, along with the cumulative effects of developments on an ambitious scale, could be assessed at a regional scale before project-specific assessments are conducted. Additionally, SA processes under the

IAA enable sustainability considerations and cumulative effects to be taken into account when the Government of Canada is considering policies, plans, programs, or issues that are relevant to carrying out IAs of offshore wind developments.

The experience of the Regional Assessment of Offshore Oil and Gas Exploratory Drilling East of Newfoundland and Labrador demonstrated that RA processes under the *IAA* will not necessarily enable effective tiering of assessments from larger to project-specific scales but may instead be used to justify the truncation of project-specific IAs. This possibility exists and is a matter of concern for the NL Offshore Wind RA and NS Offshore Wind RA that are now underway. As these RAs move forward, environmental advocates who wish to promote an environmentally responsible and genuinely sustainable offshore wind industry in Canada should be working to ensure that the knowledge and information generated by participants and synthesized by the Regional Assessment Committees is suited to enabling effectively tiered assessment processes in which project-specific IAs or other environmental reviews can shaped by sustainability assessments and cumulative effects assessments conducted at a higher level and on a larger scale.

2.0 International Laws that Inform Sustainable Development of Marine Areas and Require Regulatory Coordination to Achieve Environmental Objectives

This section of the report introduces several important international laws that shape the assessment and regulation of offshore wind developments in the comparator jurisdictions. It is not a comprehensive overview of all international laws that play a role in this area but focuses instead on key examples that support better understanding of the comparator jurisdictions' regulatory regimes.

2.1 *Introduction*

The legal regimes that govern the assessment and regulation of offshore wind developments in Canada, Germany, the UK, and the US are all shaped to varying degrees by international laws that inform the use and development of marine areas and require regulatory coordination and cooperation to achieve environmental objectives.

In some cases, international laws operate in the background by expressing high-level commitments that countries have agreed to meet; in other cases, international laws impose detailed requirements for regulatory regimes.

International laws are agreed to and imposed in various ways and are implemented through a variety of legal instruments. This report focuses mainly on two forms of international law: treaties (which are sometimes called "conventions") and subsidiary instruments such as protocols, directives, and regulations, which shape how treaties are implemented.

International laws established through treaties apply primarily to the parties that enter into the treaties. Like contracts, treaties impose requirements that the parties themselves have agreed to meet. Some international treaties include all or nearly all of the world's nation states and are therefore global in scope; others are regional and designed to address matters in a certain geographical area. Treaties are also used to unify sovereign nation states while at the same time preserving national sovereignty. For example, the European Union ("EU") is a union of sovereign nations that define the terms of their unified relationship through treaties.

2.2 *Key Treaties with Global Reach*

2.2.1 The *United Nations Convention on the Law of the Sea*

The *United Nations Convention on the Law of the Sea* ("UNCLOS") is the primary source of rules for international ocean governance and management. It lays the foundation for the international law of the sea and establishes nation states' fundamental rights and responsibilities concerning their use of the ocean and its resources. UNCLOS recognizes that nation states with coastal territories have inherent interests in the marine environments that abut them, but it also recognizes broader global interests in navigating the ocean and a general

duty to conserve the marine environment. UNCLOS therefore seeks to balance the interests of coastal states and other nations.

One of the primary ways that UNCLOS balances the interests of coastal states and other nations that use the ocean and its resources is by establishing "zones" that recognize certain legal rights that coastal states enjoy while also recognizing coastal states' responsibilities to respect certain rights held by others. Two of these zones that are particularly important are the "territorial sea" and the "Exclusive Economic Zone" ("EEZ").

A coastal state's territorial sea is the marine area that extends up to 12 nautical miles ("NM") seaward from the nation's coast. Effectively, it is an extension of the nation's terrestrial coastal territory.[10] Although coastal states enjoy nearly absolute sovereign rights in their territorial seas, those sovereign rights are limited by the "right of innocent passage", which is a right held by the ships of all other nation states. The right of innocent passage allows ships worldwide to navigate through coastal states' territorial seas so long as their navigation is continuous and expeditious, and not prejudicial to the peace, good order, or security of the coastal state.[11] Coastal states have a corresponding duty not to hamper innocent passage of foreign ships through the territorial sea.[12]

A coastal state's EEZ is the marine area that extends up to 200 NM from its coast, excluding the territorial sea. Within the EEZ, coastal states have sovereign rights for the purposes of exploring, exploiting, conserving, and managing living and non-living natural resources. These sovereign rights extend to the waters above the seabed and the seabed and its subsoil. They allow a coastal state to undertake activities for economic exploitation and exploration, including the "production of energy from the water, currents and winds".[13] Within the EEZ, a coastal state also has the right to construct, authorize, and regulate construction, operation, and use of installations or structures used for activities like offshore wind projects.[14] This right applies to the continental shelf,[15] which is the seabed and subsoil of the EEZ.[16]

UNCLOS also provides express permission for all states to lay submarine cables and pipelines on the continental shelf. However, coastal states are not prevented from establishing conditions for cables and pipelines entering their territorial seas or land territories. Coastal states retain jurisdiction over cables and pipelines used as part of exploitation of resources or operations of offshore installations and structures.[17]

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[10] *United Nations Convention on the Law of the Sea*, 10 December 1982, 1833 UNTS 3 (entered into force 16 November 1994) ["UNCLOS"] at Article 2
[11] *Ibid* at Articles 17, 18(1) and 18(2), and 19.
[12] *Ibid* at Article 18(2).
[13] *Ibid* at Article 56, subsection 1(a).
[14] *Ibid* at Article 60(1).
[15] *Ibid* at Article 80.
[16] In some cases, it can extend up to 150 NM beyond the 200 NM edge of the EEZ; this is referred to as the extended continental shelf.
[17] UNCLOS at Article 79.

UNCLOS has provisions related to monitoring and assessing impacts from activities in the ocean, although they are not well defined. It requires states to assess potential effects of planned activities that may cause substantial pollution or significant and harmful changes to the marine environment.[18] There is no indication or evidence from our research that UNCLOS requires assessment of an activity like an offshore wind farm in any specific form, so a strategic environmental assessment or project-level assessment would likely suffice to meet the obligation. This means that the primary consideration under UNCLOS that is relevant to offshore wind developments is the impact of offshore wind projects on the ability of vessels to navigate freely and safely.

Canada, Germany, and the UK are all parties to UNCLOS, and they not only enjoy the rights that are recognized under the treaty but are also required to meet the obligations set out within it. UNCLOS sets the basic parameters for marine governance within coastal states' territorial seas and EEZs, and it is therefore a crucial backdrop for the regulatory regimes that address offshore wind developments more specifically. The US is not a party to UNCLOS, but it accepts and follows all of the treaty's provisions, except provisions related to deep seabed mining.

2.2.2 The *Convention on Environmental Impact Assessment in a Transboundary Context*

The *Convention on Environmental Impact Assessment in a Transboundary Context* (called the "Espoo Convention") is a multilateral treaty under which parties are obligated to carry out environmental impact assessments ("EIAs") of listed projects and consult with other nations before making further decisions about those projects. As its name implies, the Espoo Convention requires EIAs of activities that will cause "significant adverse transboundary impacts".[19] "Major installations for the harnessing of wind power for energy production" are among the activities requiring EIAs.[20]

Neither sustainability nor cumulative effects assessments are specifically required as part of the EIAs required by the Espoo Convention. However, the treaty does contain provisions dealing implicitly with sustainability assessment and cumulative effects assessment. For example, Appendix III, which offers guidance to parties for identifying criteria to determine whether an activity will be likely to have significant adverse transboundary impacts, suggests assessment of effects to determine the threat of activities to the "carrying capacity of the environment".

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[18] *Ibid* at Article 206.

[19] UNCLOS at Article 2. Note that in the *Pulp Mills on the River Uruguay (Argentina v. Uruguay)* case, which was concluded in 2010, the majority of the International Court of Justice determined that it was a general rule of international law that an EIA be conducted for any activity that can have transboundary impacts, apart from obligations set out in conventions or treaties.

[20] Wind farms are listed as an activity in Appendix A. See: *Convention on Environmental Impact Assessment in a Transboundary Context*, Adopted in Espoo, Finland, on 25 February 1991 as amended on 27 February 2001 and on 4 June 2004 ["Espoo Convention"].

Canada, Germany, and the UK are parties to the Espoo Convention and are therefore bound by its requirements. Canada's participation under the treaty is limited to projects impacting federal jurisdiction.[21] As with assessments requirements imposed by UNCLOS, parties to the Espoo Convention have considerable flexibility to implement requirements through preferred assessment processes.

Additionally, there is a subsidiary agreement under the Espoo Convention called the *Protocol on Strategic Environmental Assessment* (the "SEA Protocol") that establishes additional requirements for parties that sign onto it. It is one of the key international laws promoting the use of strategic environmental assessment ("SEA"). An SEA is a way of assessing the potential effects, including cumulative effects, of high-level plans, programs, and sometimes policies that set the stage for lower-level decision-making.[22] One of the objectives of the SEA Protocol is to provide for a high level of environmental protection by integrating environmental concerns into measures and instruments designed to further sustainable development.[23] The SEA Protocol is considered to play an important role in grounding decision-making in sustainable development principles because it requires integration of environmental assessment at the earliest stages of decision-making processes.[24] It also places special emphasis on assessing human health effects of proposed activities in addition to environmental effects.

The SEA Protocol requires parties to carry out an SEA for certain plans and programs that are likely to have significant environmental effects, including human health effects.[25] Plans and programs prepared for energy or regional development that set the framework for future development consent for listed projects will require a SEA.[26] Where a plan or program is prepared that would set the framework for future permitting of wind energy projects and the project would require a domestic EIA, an SEA will be required for that plan or program. Germany is a full party to the SEA Protocol, while the UK is a signatory.[27] This means that both nations have committed themselves to conducting SEAs of plans and programs that set frameworks for the permitting of offshore wind facilities.

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[21] Environment and Climate Change Canada, "Transboundary environmental impact assessments: Espoo Convention" (2 September 2022).

[22] Under the protocol, an SEA means the evaluation of the likely environmental effects, including health effects, which comprises the determination of the scope of an environmental report and its preparation, the carrying out of public participation and consultations, and the taking into account of the environmental report and the results of the public participation and consultations in a plan or programme.

[23] *Protocol on Strategic Environmental Assessment to the Convention on Environmental Impact Assessment in a Transboundary Context*, 21 May 2003, 2685 UNTS 140 ["SEA Protocol"] at Article 1(e).

[24] For example, see: United Nations Economic Commission for Europe, "Introduction to the SEA Protocol" (undated). This is similar to views held about the role of the EU Directive. For example, see: European Commission, "Strategic environmental assessment: Evaluating the effects of certain plans and programmes on the environment" (undated).

[25] SEA Protocol at Article 4(1).

[26] SEA Protocol at Article 4(2). Projects listed in Annex I or projects listed in Annex II that require domestic EIAs will require an SEA. Installations for the harnessing of wind power for energy production are listed in Appendix II.

[27] This means the UK is not legally bound under the SEA Protocol.

2.3 *Key Regional Treaties*

2.3.1 The *Convention for the Protection of the Marine Environment of the North-East Atlantic*

The *Convention for the Protection of the Marine Environment of the North-East Atlantic* (the "OSPAR Convention") is a regional treaty. Its objective is to guide its parties' cooperation to protect the north-east region of the Atlantic Ocean.[28] It requires parties to take all possible steps to prevent and eliminate pollution within the marine area covered by the treaty and to take necessary measures to protect that area from adverse effects caused by human activities, including offshore sources.[29] Among other things, parties must undertake and publish regular, joint assessments of the quality status of the marine environment. Assessments must evaluate the effectiveness of the measures that are being taken or planned to protect the marine environment and must identify priorities for action.

There are 16 parties to the OSPAR Convention, including the EU, Germany, and the UK. The treaty is managed by the OSPAR Commission, which is responsible for implementing collaborative monitoring and assessment related research, carrying out assessments, seeking input from other competent regional or international organizations, and cooperating with these other organizations to carry out quality status assessments.[30] The Commission works with other regional organizations and the European Commission to develop assessment tools, such as indicators of the state of the marine environment. These are used to achieve OSPAR Convention strategic goals.[31]

The *Strategy of the OSPAR Commission for the Protection of the Marine Environment of the North-East Atlantic 2030* (the "OSPAR Strategy") is how the OSPAR Convention is meant to be implemented.[32] The strategy is put into effect by an implementation plan that contains specific tasks. Its vision is "a clean, healthy and biologically diverse North-East Atlantic Ocean, which is productive, used sustainably and resilient to climate change and ocean acidification". This vision is guided by twelve strategic objectives, one of which requires consideration of sustainability and cumulative effects.[33] A set of operational objectives further guides the strategic objectives, and it requires the OSPAR Convention parties to analyze cumulative effects, taking into account spatial and temporal information, as well as new and emerging

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[28] *Convention for the protection of the marine environment of the North-East Atlantic*, 2354 UNTS 67, 32 ILM 1069 (1993) ["OSPAR Convention"].
[29] OSPAR Convention at Articles 2 and 5.
[30] OSPAR Convention at Article 10 and at Annex IV at Article 3.
[31] European Commission, "The OSPAR Convention" (undated).
[32] OSPAR Commission, *Strategy of the OSPAR Commission for the Protection of the Marine Environment of the North-East Atlantic 2030*, (undated) at page 2
[33] *Ibid* at pages 4-5. For example, refer to strategic objective 7 at pages 4 and 12.

pressures on the marine environment.[34] The OSPAR Strategy is also guided by the ecosystem approach, which takes cumulative effects into consideration.[35]

2.3.2 The *Convention on the Protection of the Marine Environment in the Baltic Sea Area*

The *Convention on the Protection of the Marine Environment in the Baltic Sea Area* (the "Helsinki Convention") is a regional treaty that aims to protect the Baltic Sea from the environmental impacts of human activities. It is administered by the Baltic Marine Environmental Protection Commission.

Among other things, parties to the Helsinki Convention are required to take all appropriate legislative and administrative measures to prevent and eliminate pollution in the Baltic Sea and preserve the ecological balance of the sea. These requirements include taking appropriate actions to conserve biodiversity within the Baltic Sea. When international law or domestic (national) law would require a Helsinki Convention party to conduct an EIA of a proposed activity that is likely to cause significant adverse impacts within the Baltic Sea, the party must notify the Baltic Marine Environmental Protection Commission and any other nation that may be affected by transboundary impacts. Germany is a party to the Helsinki Convention, and the treaty's requirements intersect with and amplify various other environmental protection responsibilities that Germany holds under other international laws.

2.4 *Legal Implications of European Union Membership*

As noted above, the EU is a union of sovereign nations that define the terms of their unified relationship through treaty. The treaties governing the functioning of the EU set out the ways in which EU governing bodies establish laws and, in doing so, impose legal requirements that all member states must meet. Although this report does not discuss the treaties that establish the EU and govern how it functions, it discusses several subsidiary legal instruments—namely, a number of EU directives—that are authorized by and rooted in the EU treaties.

Germany is a member of the EU, and the UK was a member until recently. In both Germany and the UK, legal processes governing the assessment and regulation of offshore wind developments have been shaped fundamentally by EU directives requiring member states to carry out national marine planning and maritime spatial planning, SEAs of certain plans and programs, EIAs of certain proposed activities, and assessments of potential impacts on protected wildlife habitats and avian species, among other things. EU directives have also played instrumental roles in setting EU-wide renewable energy targets and requiring government action to support ambitious adoption of renewable energy technologies.

[34] *Ibid.* See the operational objectives 1 and 5.

[35] *Ibid* at page 5. There is a breakdown of how the OSPAR ecosystem approach is implemented using a cycle of setting ecological objectives and targets, monitoring, and assessment.

EU directives are binding laws that are established through formal legislative or non-legislative processes, with procedural requirements varying depending on the nature of the directive in question. Once an EU directive has been adopted by the appropriate EU governing bodies—often both the European Council and the European Parliament—EU member states must "transpose" the directive by implementing its requirements in their domestic laws. Member states have flexibility when transposing EU directives into domestic laws: they must ensure that the intended results of directives are achieved, but they have considerable freedom to choose how they prefer to achieve those results within their legal systems. This means that EU directives may be implemented differently from member state to member state, although the ultimate results of directives should be harmonized across the EU as a whole.

Key EU directives that have shaped the assessment and regulation of offshore wind development in Germany and the UK include: Directive 2008/56/EC (the "Marine Strategy Framework Directive"); Directive 2014/89/EU (the "Maritime Spatial Planning Directive"); Directive 2001/42/EC (the "Strategic Environmental Assessment Directive"); Directive 2014/52/EU (the "Environmental Impact Assessment Directive"); Directive 92/43/EEC (the "Habitats Directive"); and, Directive 2009/147/EC (the "Birds Directive").[36] Together, these directives have contributed to the development of legal regimes in which the assessment and regulation of offshore wind developments is informed by high-level marine planning and SEAs of the plans and programs that support project-specific EIAs and approvals. Ideally, the various planning and assessment requirements imposed by the directives will be coordinated and tiered as effectively as possible, ensuring that information gathered through the higher-level planning and SEA processes will inform project-specific assessments, and, likewise, that information generated through project-specific assessments and the ongoing monitoring of approved projects will feed back up into future rounds of planning and SEA activities.

2.4.1 The Marine Strategy Framework Directive

The Marine Strategy Framework Directive established a framework through which EU member states must take measures to achieve or maintain the "good environmental status" ("GES") of the marine environments within their jurisdictions. GES, in this context, is understood through the lenses of sustainability and intergenerational equity–specifically, the need to use marine environments sustainably today so that future generations can use them as well.[37] Among other things, the directive required member states to develop marine strategies for their marine waters in the interest of achieving or maintaining GES. Development of these strategies was expected to include preparatory research and assessment to determine the existing state of the marine environment and current pressures on it to identify what measures would be

[36] Additionally, Directive (EU) 2018/2001 (the "Renewable Energy Directive") has played an important role by establishing a binding target for the share of gross EU energy consumption that must be supplied by renewable energy sources in 2030.

[37] Within the Marine Strategy Framework Directive, "good environmental status" means: "the environmental status of marine waters where these provide ecologically diverse and dynamic oceans and seas which are clean, healthy and productive within their intrinsic conditions, and the use of the marine environment is at a level that is sustainable, thus safeguarding the potential for uses and activities by current and future generations".

needed to achieve or maintain GES. Cumulative effects assessments were required as part of this analysis. The directive also required member states to implement ongoing monitoring programs, taking sustainable development considerations into account.

2.4.2 The Maritime Spatial Planning Directive

The Maritime Spatial Planning Directive requires EU member states to implement maritime spatial planning processes to support the sustainable development of marine spaces within their jurisdiction. The directive's recitals (introductory statements explaining the motivation for the directive) recognize the "high and rapidly increasing demand" for the use of marine spaces in the EU and the many different activities for which marine spaces are used, including conventional activities like navigation and shipping and the growing renewable energy industry. The recitals also recognize the EU's stated interests in supporting the sustainable development of marine and coastal areas throughout the EU, including land-sea interactions. Among other things, the directive explicitly requires EU member states to "aim to contribute to the sustainable development of energy sectors at sea" through their maritime spatial planning.[38]

2.4.3 The Strategic Environmental Assessment Directive

The Strategic Environmental Assessment Directive requires EU member states to conduct SEAs of certain plans and programs that are likely to have significant effects on the environment. The directive's stated objectives include the promotion of sustainable development. Per Article 3(5) and Annex II of the directive, sustainable development is a factor that must be used to determine the likely significance of environmental effects that could be caused by a plan or program that is undergoing assessment. Articles 5(1) and 5(3) require that cumulative effects information be taken into account as well. Various requirements to include public participation in SEA processes and provide public access to information are also imposed.

2.4.4 The Environmental Impact Assessment Directive

The Environmental Impact Assessment Directive introduced strengthened project-level assessments into the EU regime. The directive's recitals recognize the growing importance to policy-making of several environmental issues, including climate change, biodiversity loss, and sustainability, and the recitals also reflect the EU's interest in taking sustainability into account when environmental decisions are made. However, although the recitals refer to the importance of taking sustainability into account in EIA processes, the directive's operative provisions (the articles creating binding legal requirements) impose limited obligations in this regard. Per Article 5(1) and paragraph 5 of Annex IV, EIA reports must consider the "sustainable availability" of natural resources that proposed projects will use and must also take cumulative effects into account, but the directive does not require deeper sustainability assessments that consider whether a proposed project will contribute to or hinder sustainable development objectives.

[38] Directive 2014/89/EU at Article 5(2).

When EIA requirements are triggered under this directive and are also triggered under the Habitats Directive or Birds Directive (described below) or any other relevant EU directives, assessments should be carried out in coordinated and/or joint procedures. Notably, article 3 of this directive expressly requires member states to implement EIA processes that assess significant effects on biodiversity, giving particular attention to species and habitats protected under the Habitats Directive and Birds Directive.

2.4.5 The Habitats Directive and The Birds Directive

The Habitats Directive requires EU member states to implement conservation measures to protect several listed habitat types and plant and animal species. Among other things, the directive provides for the establishment of Natura 2000 conservation areas protecting listed habitat types and plant and animal species throughout the EU. Proposed activities that could have significant effects in Natura 2000 areas should trigger assessment requirements and may be restricted or prohibited entirely.

The Birds Directive requires EU member states to implement conservation measures to protect listed avian species, including measures providing for avian habitat protection. The directive has implications for offshore activities that could affect avian species that migrate through or inhabit offshore areas. Proposed activities that could impact protected avian species should trigger assessment requirements and may be restricted or prohibited entirely.

2.4.6 Implications of the UK's Withdrawal from the EU

The UK's withdrawal from the EU came into effect on February 1, 2020. Prior to "Exit Day" on January 31, 2020, the UK reviewed hundreds of domestic laws that were tied to EU laws and made amendments to ensure that the laws would continue to operate after Exit Day and no sudden legislative gaps would result. Key laws related to the assessment and regulation of offshore wind developments were amended so that their substantive requirements would remain in place while certain procedural and interpretation requirements were changed as needed to reflect the end of the UK's membership in the EU.[39] At the time, a considerable amount of EU law continued to apply within the UK as "retained EU law". The UK is now undergoing a second comprehensive law reform process designed to remove retained EU law from UK law, whether by removing it entirely or by reconstituting it as UK law that exists independently of the EU's legal system.[40] It is therefore important to keep in mind that although UK laws related to the assessment and regulation of offshore wind developments currently have many important similarities to analogous laws in Germany, significant changes are possible in 2023 and 2024. Among other things, the UK Government has signalled its interest in streamlining EIA processes and reducing the time they take to complete.[41]

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[39] See for example Marine Scotland, *EU Exit: Marine Environmental Legislation in Scotland* (23 December 2020).
[40] The current law reform initiative is described by and can be monitored through the following website: UK Government, "The Retained EU Law (Revocation and Reform) Bill 2022" (22 September 2022).
[41] Department of Business, Energy & Industrial Strategy and the Prime Minister's Office, "Policy Paper: British energy security strategy" (7 April 2022). See also Thomas B. Fischer, "Simplification and Potential Replacement of

3.0 Assessment and Regulation of Offshore Wind Developments in Germany

3.1 *Jurisdiction over Marine Activities*

Like Canada, Germany has a federalist governance system in which legislative authority is divided between the federal government and the respective governments of Germany's sixteen states, which are called Länder.

It appears from our research that the assessment and regulation of offshore wind developments in Germany are carried out primarily at the federal level, but coastal Länder—that is, Länder whose lands abut the coasts—have roles to play in assessing and regulating offshore developments that are in Germany's territorial sea. Coastal Länder and lower levels of local government (such as districts and municipalities) also have roles to play in assessing and permitting onshore components of offshore developments; however, notwithstanding the existence of responsibilities held by coastal Länder and various lower levels of local government, our analysis focuses on assessment and regulation by Germany's federal government, as we found that scholarship and legal commentary on this topic focuses on federal assessment and regulation, and state-specific analysis would be beyond the scope of this report.

Germany's primary statutes governing offshore wind developments in marine areas under federal jurisdiction are the *Wind Energy at Sea Act* ("WindSeeG") and the *Environmental Impact Assessment Act*. The WindSeeG is the primary source of the assessment, licensing, and permitting processes that are specific to offshore wind developments in Germany, but the *Environmental Impact Assessment Act* adds supporting requirements for strategic environmental assessment ("SEA") and environmental impact assessment ("EIA") at various stages.

As is discussed in the sections that follow, federal assessment and regulation of offshore wind developments in Germany include layers of maritime spatial planning, sectoral spatial planning, and centralized site identification, site investigation, and site suitability assessment. Germany's regime also integrates SEAs into various stages of governmental planning, site identification, and site suitability assessment processes, and project-specific EIAs are also required. As a result of our inability to access complete and current translations of the WindSeeG and *Environmental Impact Assessment Act*, we are unable to comment on whether sustainability assessment supported by cumulative effects assessment is required by either statute. However, as the German laws shaping federal assessment and regulation of offshore wind developments are designed to implement several EU directives whose purpose is to advance sustainable development, and because cumulative effects assessment is also required by relevant EU directives, Germany's regime is informed to some extent by sustainable development considerations and cumulative effects assessment.

EA in the UK - is it fit for purpose?" *Impact Assessment and Project Appraisal* (2023), DOI: 10.1080/14615517.2023.2166257.

3.2 *Federal Marine Strategy and Maritime Spatial Planning*

As is discussed in Chapter 2 of this report, the EU has established a Marine Strategy Framework Directive and a Maritime Spatial Planning Directive that, respectively, require member states to develop marine strategies for the use and conservation of marine areas within their jurisdiction and implement maritime spatial planning processes to coordinate their use of marine spaces for multiple different purposes.

Among other things, the Marine Strategy Framework Directive sets an objective of achieving and/or maintaining "good environmental status" of the marine environment.[42] The Maritime Spatial Planning Directive recognizes the EU's interest in supporting the sustainable development of marine and coastal areas, and it requires member states to use maritime spatial planning to contribute to the sustainable development of offshore energy industries.[43] It also requires member states to create marine strategies that require implementation of coordinated monitoring programs that take sustainable development objectives into account.[44]

Germany's federal government is responsible for maritime spatial planning in Germany's EEZ, which is the marine area extending up to 200 NM from the coast, excluding the territorial sea. The territorial sea is the marine area extending 12 NM from the coast. Germany's *Raumordnungsgesetz* (the "*Spatial Planning Act*") implements the EU Maritime Spatial Planning Directive federally, and it also implements the EU Strategic Environmental Assessment Directive by requiring SEAs of proposed maritime spatial plans. It is our understanding that coastal Länder are responsible for maritime spatial planning in the territorial sea under the *Spatial Planning Act*.[45]

The Federal Maritime and Hydrographic Agency (the Bundesamt Für Seeschifffahrt und Hydrographie, or "BSH") is the agency responsible for carrying out maritime spatial planning for the North Sea and Baltic Sea areas within federal jurisdiction. The BSH describes its role in this regard as being responsible for "planning the sustainable development of the ocean region".[46] The federal government's current maritime spatial plan came into force in 2021 (the "MSP").[47] On the whole, the MSP seeks to reconcile marine ecological needs with the many competing uses of Germany's EEZ, which include fishing, defence activities, natural resource extraction, renewable energy development, and shipping, among other things.[48] The development of the

[42] By definition "good environmental status" includes use of the marine environment at levels that are sustainable for present and future generations.
[43] Directive 2014/89/EU at article 5(2).
[44] Directive 2014/89 EU at Article 1(1) and 1(2), Article 5(2), and Article 11. Articles 1(3) and 13(3) deal with sustainability.
[45] European Commission, "Germany - Which Maritime spatial plans exist?" (18 October 2022). Schleswig-Holstein's State Development Plan, Mechklen-Vorpommern's Spatial Development Programme, and Lower Saxony's Spatial Planning Program aim to implement planning using sustainable development objectives.
[46] Bundesamt Für Seeschifffahrt und Hydrographie, "Offshore" (undated).
[47] Bundesamt Für Seeschifffahrt und Hydrographie, "Maritime Spatial Plan 2021" (undated).
[48] *Ibid.*

MSP was supported by an SEA that assessed the significant environmental effects that could be caused by designing and implementing the plan as proposed.[49]

3.3 *Assessment and Authorization by the Federal Government*

Germany's WindSeeG creates two main processes for the assessment, licensing, and permitting of offshore wind developments in Germany, based on two separate models: the "central" model and the "open-door" model. Both processes are administered primarily by the BSH.

3.3.1 The Centralized Process

Germany's centralized model for assessing, licensing, and permitting offshore wind developments begins with maritime sectoral planning by the BSH. The key outcome of maritime sectoral planning by the BSH in the offshore wind development context is the production or updating of the Site Development Plan ("SDP") that guides the centralized process under the WindSeeG.[50]

The BSH describes the SDP as the "steering planning instrument" for offshore wind development in the EEZ.[51] The first SDP under the WindSeeG was established in 2019, and it should be updated every four years unless changes to Germany's renewable energy policies or other significant developments require updates sooner.[52] The current SDP identifies areas within the North Sea and Baltic Sea where offshore wind developments may occur after 2026, and it establishes a schedule for the competitive tendering processes that will open suitable sites to bidding by prospective developers.[53]

Among other things, the SDP addresses spatial requirements for offshore platforms, cables, and interconnectors, and it identifies marine areas that merit further investigation as sites that may be suitable for offshore wind development.[54] The SDP sets binding parameters for subsequent licensing and permitting under the centralized process, and competitive tendering under this process will only be available for sites that have been identified in the SDP, investigated by the BSH, and deemed suitable for offshore wind development.[55]

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[49] Bundesamt Für Seeschifffahrt und Hydrographie, "Maritime Spatial Plan 2021" (undated).
[50] Bundesamt Für Seeschifffahrt und Hydrographie, "Maritime sectoral planning" (undated).
[51] *Ibid.*
[52] *Ibid.* The current SDP was updated in 2020 as to reflect increased ambition in Germany's offshore wind development policies.
[53] *Ibid.* Maritime sectoral planning. See also Bundesamt Für Seeschifffahrt und Hydrographie, "Offshore Site Investigations: Procedure and Current Status" (undated).
[54] Bundesamt Für Seeschifffahrt und Hydrographie, "Maritime sectoral planning" (undated).
[55] *Ibid.*

The current SDP underwent an SEA, and SEAs will inform further updates going forward.[56] SEAs are also required for the suitability assessments that the BSH carries out when conducting site investigations.[57]

After site investigations of areas included in the SDP have identified suitable sites for offshore wind development, those sites will be opened to a competitive tendering process administered by the Federal Network Agency ("BNetzA").[58] Successful bidders will be awarded development permits, but project-specific planning approval procedures—which will generally require environmental impact assessments ("EIAs") and nature conservation assessments (the latter to fulfill the EU Habitats Directive and Birds Directive and Germany's *Federal Nature Conservation Act*)—must be carried out before construction begins.[59] Notably, the BSH expects proponents to incorporate information generated during the BSH's site investigation processes into the environmental impact studies they prepare for the EIA component of the planning approval procedure.[60] The ability to build on information generated at higher-level stages of the process is of benefit to developers preparing environmental impact studies and should ideally support more thorough assessment and decision-making on the whole.

In July 2022, Germany's federal government made several amendments to the WindSeeG that streamline the planning approval procedures (i.e., the project-specific assessment and permitting procedures) within the centralized process to make the process more expeditious on the whole.[61] The amendments reflect the federal government's ambition to significantly scale up offshore wind developments in the EEZ to reach targets of at least 30 GW by 2030, 40 GW by 2035, and 70 GW by 2045.[62] Based on the research resources we identified while developing this report, we have not been able to assess the extent to which the EIA requirements of the planning approval procedure have been compromised by these amendments. Notably, the same amendments also introduced several new criteria to be considered qualitatively in competitive tendering processes going forward, including contributions to decarbonization.[63]

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[56] *Ibid*. See also Bundesamt Für Seeschifffahrt und Hydrographie, "Offshore Site Investigations: Preliminary Investigation of Sites" (undated). BSH commentary on SEAs in the context of offshore wind developments indicates that SEAs focus in particular on how plans and programs could impact ecosystem components such as benthos, birds, fish, marine mammals, other relevant species (such as bats in the Baltic Sea) and soil: see Bundesamt Für Seeschifffahrt und Hydrographie, "Environmental assessments" (undated).
and Bundesamt Für Seeschifffahrt und Hydrographie, "Environmental assessments" (undated).

[57] Bundesamt Für Seeschifffahrt und Hydrographie, "Offshore Site Investigations: Procedure and Current Status" (undated). See also Bundesamt Für Seeschifffahrt und Hydrographie, "Environmental assessments" (undated).

[58] Bundesamt Für Seeschifffahrt und Hydrographie, "Offshore Site Investigations: Preliminary Investigation of Sites" (undated).

[59] Bundesamt Für Seeschifffahrt und Hydrographie, "Wind farms" (undated).

[60] Bundesamt Für Seeschifffahrt und Hydrographie, "Offshore Site Investigations: Preliminary Investigation of Sites" (undated).

[61] Alice Boldis and Christian Lütkehaus, "Germany drops contracts for difference from amended Wind Energy at Sea Act" *Pinsent Masons Out-Law Analysis* (13 July 2022).

[62] *Ibid.*

[63] *Ibid.* See also WAB e.V., "Press Release: The amendment of Germany's Wind Energy at Sea Act is a first step in the right direction" (7 July 2022).

One industry commentator described these qualitative criteria as "sustainability criteria",[64] but we have not been able to determine if the WindSeeG itself refers to them as such.

3.3.2 The Open-Door Process

Within the open-door process, offshore wind developers choose marine areas that they wish to investigate as prospective development sites, without being limited to the areas pre-selected by the BSH through the SDP and site investigation, and suitability assessment stages of the centralized process.[65] Project-specific planning approval processes, including EIAs, remain necessary in the open-door process, but the July 2022 amendments to the WindSeeG appear to have streamlined these processes as well.[66]

3.4 *Key Conclusions for the Purposes of the Comparative Analysis*

Federal assessment and regulation of offshore wind developments in Germany include layers of maritime spatial planning, sectoral spatial planning, and centralized site identification, site investigation, and site suitability assessment. These layered processes are most pertinent to the centralized planning process. SEA is integrated into various stages of the centralized process, and project-specific EIAs are required as part of the planning approval process. German laws shaping federal assessment and regulation of offshore wind developments implement several EU directives that are either designed to advance sustainable development, require cumulative effects assessment, or both; sustainable development considerations and cumulative effects assessment therefore inform the regime to some extent at least.

[64] WAB e.V., "Press Release: The amendment of Germany's Wind Energy at Sea Act is a first step in the right direction" (7 July 2022).
[65] Rafael Monteiro de Vasconcelos, Lara Luana Cirilo Silva, Mario Orestes Aguirre González, Andressa Medeiros Santiso, and David Cassimiro de Melo, "Environmental licensing for offshore wind farms: Guidelines and policy implications for new markets" *Energy Policy* 171 (2022) at pages 6-7.
[66] Alice Boldis and Christian Lütkehaus, "Germany drops contracts for difference from amended Wind Energy at Sea Act" *Pinsent Masons Out-Law Analysis* (13 July 2022).

4.0 Assessment and Regulation of Offshore Wind Developments in the United Kingdom

4.1 *Jurisdiction over Marine Activities*

The UK is comprised of four jurisdictions: England, Northern Ireland, Scotland, and Wales. The UK Government exercises governance authority across the entire UK, but Northern Ireland, Scotland, and Wales are all served additionally by "devolved administrations" that govern specific matters within those territories. The devolved administrations are, respectively, the Northern Ireland Executive, the Scottish Government, and the Welsh Government. In this report, we refer to all three devolved administrations collectively as the Devolved Administrations and refer to individual devolved administrations by their specific names.

Within the UK's legal system, jurisdiction over marine activities is divided between the UK Government and the Devolved Administrations. Some aspects of the assessment and regulation of offshore wind developments are determined by legislation enacted by the UK Government, and other aspects are determined by legislation enacted by the Devolved Administrations. These aspects and their intersections are described in more detail in the following subsections.

Throughout the UK, local planning authorities also play a role in the assessment and authorization of offshore wind developments—specifically, by being responsible for granting planning permissions for onshore components of offshore developments, when such planning permissions are required.[67] Detailed discussion of local planning authorities' responsibilities is beyond the scope of this report, but they are addressed briefly in the sections that follow.

4.2 *Influence of European Union Laws*

Before February 1, 2020, the UK was a member state of the European Union ("EU"), and its laws were shaped considerably by EU treaties, directives and regulations. The UK's final day as a member state of the EU was January 31, 2020 ("Exit Day").

Key EU directives that have shaped the assessment and regulation of offshore wind development in the UK include: Directive 2008/56/EC (the "Marine Strategy Framework Directive"); Directive 2014/89/EU (the "Maritime Spatial Planning Directive"); Directive 2001/42/EC (the "Strategic Environmental Assessment Directive"); Directive 2014/52/EU (the "Environmental Impact Assessment Directive"); Directive 92/43/EEC (the "Habitats Directive"); and, Directive 2009/147/EC (the "Birds Directive"). Prior to the UK's withdrawal from the EU, all of these directives shaped UK law and applied to the assessment and regulation of offshore wind developments throughout the UK. As a result, the UK offshore wind regime as it exists today has been shaped significantly by EU laws, and it therefore shares many similarities with the regime in Germany.

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[67] Peter Cole, "Consenting Your Energy Project: Which Regime Applies?" *Norton Rose Fulbright* (April 2022). Planning permissions by local planning authorities are not required in all cases because some authorization procedures fold them into processes that are administered by higher-level agencies.

Following the UK's decision to withdraw from the EU, but before Exit Day, a law reform initiative was undertaken to make necessary changes to UK laws so that UK laws based on EU law would continue to apply appropriately and make sense after Exit Day. Key laws related to the assessment and regulation of offshore wind developments were amended so that their substantive requirements would remain in place while referential language and procedural requirements were altered as needed to account for the UK's withdrawal from the EU. Although substantive requirements were retained at this stage, significant changes to UK laws may be made in the near future now that the UK is carrying out a more profound process of identifying all retained EU law in order to repeal such laws or sever them from the EU's legal system.[68] With this in mind, it is important to be aware that the assessment and authorization processes described in this report may change in the years to come, as the UK is no longer obliged to follow EU practices or meet EU standards.

4.3 *Marine Planning and the Assessment and Regulation of Offshore Wind Developments by the UK Government and the Devolved Administrations*

4.3.1 Marine Planning by the UK Government

The UK's *Marine and Coastal Access Act 2009* ("*MCAA*") is a wide-ranging statute that covers several matters related to marine and coastal areas in the UK, including the establishment of marine plans and strategies. The *MCAA* divides the UK into eight marine planning regions, with the UK's Marine Management Organization and the Devolved Administrations responsible for respective marine planning regions.[69] Where a Marine Policy Statement ("MPS") governs marine planning within one of these marine planning regions, the relevant marine plan authority must ensure that a marine plan is in effect for every part of that region covered by the MPS.[70] An MPS is a general statement of a policy authority's policies for contributing to the achievement of sustainable development within the UK's marine area.[71] A marine plan states a marine plan authority's policies for and in connection with sustainable development in that area.[72] Marine plans throughout the UK are informed by the UK Marine Planning Statement, which was adopted jointly by all four governments of the UK.[73] It is noteworthy that assessment of sustainability is a central focus of both marine policy statements and marine plans. A marine plan authority preparing a marine plan must assess the sustainability of its proposal as part of the plan.[74]

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[68] The current law reform initiative is described by and can be monitored through the following website: UK Government, "The Retained EU Law (Revocation and Reform) Bill 2022" (22 September 2022).
[69] *Marine and Coastal Access Act,* 2009 Chapter 23 ["*MCAA"*] at section 49.
[70] *MCAA* at subsections 44 and 51(2). See also Schedule 6, which deals with the preparation and adoption of marine plans.
[71] *Ibid* at subsection 44(1)(a).
[72] *Ibid* at subsection 51(3).
[73] Department for Environment, Food and Rural Affairs, "UK Marine Policy Statement" (22 September 2020).
[74] *Ibid* at subsection 10(1) of Schedule 6.

The *MCAA* requires that any public authority making an authorization or enforcement decision must do so in accordance with the relevant marine policy documents.[75] Authorizations captured by this requirement include decisions or determinations on applications for offshore wind projects in the UK's marine area, except for projects requiring development consent under the *Planning Act 2008.* Practically, this means the MPS does not apply to "nationally significant infrastructure projects" (discussed below).

Further marine planning carried out by the Devolved Administrations is discussed in more detail in the subsections below.

It is worth noting that one of the reports we considered in our research indicates that stakeholders perceive a lack of effective strategic marine planning and marine spatial planning throughout the UK and see a need for improved planning to address competing uses of the marine space.[76] This suggests that even though marine planning is being carried out centrally by the UK Government and locally by the Devolved Administrations, there is room for improvement to ensure that marine planning supports government objectives to advance offshore wind development while maintaining good environmental status and sustainable use of the marine space.

4.3.2 Marine Leasing

A prerequisite to developing offshore wind facilities is a lease allowing such use of marine space.

In England, Northern Ireland, and Wales, the Crown Estate ("TCE") has the authority to lease marine sites for offshore wind developments, and leasing is conducted through competitive leasing processes administered by TCE. In Scotland, the Crown Estate Scotland (the "CES") has the authority to grant leases for offshore wind developments in marine areas that are within the jurisdiction of the Scottish Government, and the CES also uses competitive leasing processes to choose the proponents to whom leases will be granted.

The competitive leasing processes administered by TCE and the CES are the only opportunities through which offshore wind developers can acquire the marine leases they require for their projects,[77] which means that governmental influence over site selection plays an important role in offshore wind development throughout the UK.

For the competitive leasing processes administered by TCE, the UK Government Department for Business, Energy & Industrial Strategy ("DBEIS") conducts SEAs to support the Crown Estate's

[75] *Ibid* at section 58. A marine policy document means an MPS or marine plan.
[76] Offshore Renewable Energy Catapult, *Floating Offshore Wind Development and Consenting Process – Risks and Opportunities* (22 July 2021) at pages 25, 39 ["ORE Catapult Report"].
[77] ORE Catapult Report at page 19.

administration of competitive leasing rounds.[78] For the Scottish process administered by the CES, SEA is undertaken by Marine Scotland as part of a broader process of sectoral marine planning.

The Scottish process administered by the CES has been described as having advantages over the process administered by TCE because Scottish leasing rounds follow marine planning and other governmental activities that consider the "feasibility" of developing offshore wind facilities on prospective lease sites.[79] In particular, the use of sectoral marine planning for offshore wind developments along with detailed analyses of constraints and opportunities in prospective lease sites appears to be a significant difference between the Scottish regime and the regime administered by TCE throughout the rest of the UK.[80] A 2021 report reflecting research into developers' perspectives indicates that developers appreciate this aspect of the Scottish process because early assessment by the government empowers developers to see where offshore wind developments would be worthwhile, as opposed to being merely possible.[81] Whereas the Scottish regime is perceived as offering more certainty to developers, the regime administered by TCE in England, Wales, and Northern Ireland is perceived as requiring developers to accept greater risk, because developers engaging in the TCE process may bid on sites where development ultimately proves to be less feasible than imagined.[82]

It should be noted that TCE has also employed spatial analysis to assess economic, environmental and social constraints in prospective lease sites and identify sites that are more favourable than others for offshore wind developments—most recently to support site selection in its Offshore Leasing Round 4, which concluded with the signing of lease agreements in January 2023.[83] However, TCE analysis in this regard appears to have focused more narrowly on assessing the favourability of site conditions for offshore wind arrays, excluding further assessment of conditions determining favourability for cable routes and onshore

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[78] UK Government, Department for Business, Energy & Industrial Strategy, "Guidance: Offshore Energy Strategic Environmental Assessment (SEA): An overview of the SEA process" (5 January 2023). Notably, academic research published in 2015 found that SEAs conducted to inform early leasing rounds for offshore wind developments in the UK had several weaknesses, including timing; for example, the SEA for the second TCE leasing round for offshore wind developments was done after strategic sites had already been chosen, which meant that the SEA itself did not inform the selection of those sites: see J. Phylip-Jones, T.B. Fischer, "Strategic environmental assessment (SEA) for wind energy planning: Lessons from the United Kingdom and Germany" *Environmental Impact Assessment Review* 50 (2015) 203-12. The DBEIS webpage cited in this footnote indicates that the department seeks to improve its SEA process as it learns lessons from previous processes.

[79] ORE Catapult Report at pages 19-20, 26, 29, 31. This report indicates that, in Scotland, SEA, constraints and opportunities analyses, socio-economic impact assessment, habitats regulation assessment, stakeholder engagement, and public engagement are all carried out before lease sites are opened to the competitive leasing process, and that sites made available for leasing are sites where offshore wind developments are "feasible", as opposed to being merely possible.

[80] *Ibid* at pages 19-20, 26, 29.

[81] *Ibid* at pages 19, 26, 29.

[82] *Ibid* at pages 20, 26, 29.

[83] The Crown Estate, "Identifying seabed Bidding Areas" (undated). See The Crown Estate, *Resource and Constraints Assessment for Offshore Wind: Methodology Report* (September 2019) for further insight into how TCE used spatial analysis to assess constraints and identify unfavourable sites to exclude from the leasing round.

infrastructure.[84] The 2021 report discussed above indicates that Scotland's more comprehensive constraints analysis was an especially important difference that stakeholders highlighted when sharing their perspectives on development and consenting processes used throughout the UK.[85]

4.3.3 Key Laws Enacted by the UK Government that Set the Framework for Assessment and Regulation of Offshore Wind Developments throughout the UK

In broad terms, two authorization streams shape the assessment and authorization processes for offshore wind developments in the UK: (i) marine licensing for the construction of offshore wind facilities, and (ii) and "consents" required to construct and operate electricity generating facilities. In some cases, these streams are replaced by a single process through which offshore wind developments that are deemed to be "nationally significant infrastructure projects" are assessed and authorized by a single authority responsible for granting all relevant authorizations.

Governmental responsibilities for marine licensing and electricity consenting vary throughout the UK, but several key laws enacted by the UK Government set the framework for the processes used in England, Northern Ireland, Scotland, and Wales. Those key laws include: the *MCAA*; the *Planning Act 2008*; the *Electricity Act 1989*; and, the *Marine Works (EIA) Regulations 2007*.

The *MCAA* provides the framework for marine licensing throughout the UK and divides licensing jurisdiction between the UK Government, Northern Ireland Executive, Scottish Government, and Welsh Government. When the Devolved Administrations oversee marine licensing of proposed offshore wind developments, they act under the authority of the *MCAA* and must meet the requirements set out in this Act.

The *Planning Act 2008* ("*Planning Act*") establishes the regime through which Nationally Significant Infrastructure Projects ("NSIPs") are assessed and authorized. Under the Act, NSIPs require Development Consent Orders ("DCOs"), which are granted through a consenting process that is consolidated under the purview of the UK's Planning Inspectorate. Certain offshore wind developments proposed in English and Welsh waters will be NSIPs subject to the DCO process.[86] The DCO process does not apply in Scottish waters.

The *Electricity Act 1989* ("*Electricity Act*") establishes the consenting regime for electricity generation facilities in England, Scotland, and Wales. Offshore wind developments in these jurisdictions that surpass specified capacity thresholds will require "section 36 consents" under

[84] The Crown Estate, *Resource and Constraints Assessment for Offshore Wind: Methodology Report* (September 2019) at page 6. This report also indicates that some information from prior SEAs has been used to inform constraints assessment, but it appears from the descriptions in the report that this use is also limited: see pages 17-18.
[85] ORE Catapult Report at page 29.
[86] Threshold criteria are described in the subsections below.

the *Electricity Act*. When the UK's Secretary of States carries out its responsibilities under the part of the *Electricity Act* that deals with section 36 consents, it must perform its duties while having regard to "the need to contribute to the achievement of sustainable development".[87]

The *Marine Works (Environmental Impact Assessment) Regulations 2007* ("*Marine Works (EIA) Regulations*") implement the EU Environmental Impact Assessment Directive as it concerns marine works throughout the UK. As regards proposed offshore wind developments, environmental impact assessments ("EIAs") are required as part of the marine licensing process as well as the electricity consenting process and will be overseen by the authorities responsible for administering those processes in each of the UK's four jurisdictions.[88] EIAs carried out under the *Marine Works (EIA) Regulations* are designed to assess if proposed projects are likely to have significant adverse effects on the environment. Schedule 1 of the regulations, which lists the factors that are relevant to the assessment of certain listed projects (including offshore wind developments), make it clear that cumulative effects should be taken into account;[89] however, the regulations do not incorporate sustainability considerations or require that proposed developments be assessed for their potential contributions to the achievement of sustainable development.

In addition to these laws, several conservation regulations enacted by the UK Government work together to implement the EU Birds Directive and Habitats Directive, requiring additional "habitats regulation assessments" ("HRAs") of proposed projects to ensure that approved activities will not harm protected habitats and species.[90] The HRAs required by these regulations do not explicitly incorporate sustainability considerations or require cumulative effects assessment.

4.3.4 England

The key laws enacted by the UK Government that are described above in subsection 4.3.3 define the assessment and regulation of offshore wind developments in England.

Marine licenses under the *MCAA* are required for all offshore wind developments in English waters that have capacities lesser than 100 MW. These marine licenses are granted by the UK's Marine Management Organization ("MMO"), acting under the authority of the *MCAA*. Per

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[87] *Electricity Act 1989* at subsection 2(c). In Northern Ireland, consenting processes for electricity generation facilities are administered under the *Electricity (Northern Ireland) Order 1992*. The analogous consent requirement under section 39 of the *Electricity (Northern Ireland) Order 1992* does not require that consenting decisions be made having regard to the need to contribute to the achievement of sustainable development.

[88] The UK's *Electricity Works (Environmental Impact Assessment) (England and Wales) Regulations 2017* ordinarily require EIAs to be carried out for proposed projects that require "section 36 consents" under the *Electricity Act*, but section 39 of the regulations removes this requirement for proposed projects such as offshore wind developments that require marine licenses and will undergo EIAs under the *Marine Works (Environmental Impact Assessment) Regulations 2007*, so as to avoid duplication of EIA processes.

[89] *Marine Works (Environmental Impact Assessment) Regulations 2007*, Schedule 1 at subsections 1(b) and 3(g).

[90] These are the *Conservation (Natural Habitats, &c.) Regulations 1994*, the *Conservation of Offshore Marine Habitats and Species Regulations 2017*, and the *Conservation of Habitats and Species Regulations 2017*.

subsection 2(1) of the *MCAA*, the MMO must carry out its functions so as to ensure that offshore wind activities under its jurisdiction are "managed, regulated, or controlled" "with the objective of making a contribution to sustainable development". Offshore wind facilities in English waters that have capacities between 1 MW and 100 MW will also require section 36 consents under the UK's *Electricity Act*. EIA and HRA requirements are components of these processes, per the *Marine Works (EIA) Regulations* and conservation regulations described above, and will be coordinated to minimize redundancy. Additionally, planning permissions by local planning authorities will be required for the onshore components of offshore wind developments in English waters that have capacities lesser than 100 MW.[91]

Offshore wind developments in English waters that have capacities greater than 100 MW are NSIPs and are subject to the DCO process described above. Marine licensing, electricity consents, EIAs, HRAs, and planning permissions will be folded into that process and overseen by the UK's Planning Inspectorate.

4.3.5 Northern Ireland

The Northern Ireland Executive plays several roles in the assessment and regulation of offshore wind developments in Northern Ireland's territorial sea (marine waters within 12 NM of the coast).

At the planning level, marine planning is required by the UK's *MCAA* and is also required under Northern Ireland's own *Marine Act (Northern Ireland) 2013*. Section 1 of that Act requires the Department of Agriculture, Environment and Rural Affairs ("DAERA") to carry out its functions under the Act "in the way it considers best calculated to contribute to the achievement of sustainable development in Northern Ireland", except where the department considers that it is not reasonably practical to do so. DAERA is currently overseeing a marine planning process that is underway in Northern Ireland.[92]

At the SEA level, in keeping with the EU Strategic Environmental Assessment Directive and the UK's *Environmental Assessment of Plans and Programs Regulations 2004*, the Northern Ireland Executive has been expected to carry out SEAs for various plans and programs related to marine renewable energies. Northern Ireland's Department of Enterprise, Trade and Investment ("DETI") carried out an SEA of offshore wind and marine renewable energy in Northern Ireland in 2009.[93]

Marine licensing in Northern Ireland's territorial sea is carried out by DAERA's Marine and Fisheries Division, which exercises authority and follows processes established under the UK's *MCAA*. TCE administers seabed leasing. HRAs and EIAs are components of the marine licensing

[91] Peter Cole, "Consenting Your Energy Project: Which Regime Applies?" *Norton Rose Fulbright* (April 2022).
[92] Northern Ireland Executive, Department of Agriculture, Environment and Rural Affairs, "Marine licensing" (undated).
[93] *Ibid*.

process. HRAs will be overseen by the authorities that are empowered to approve specific projects, and EIAs will be overseen by DAERA. EIAs must meet the requirements set out in the UK's *Marine Works (EIA) Regulations 2007*. In Northern Ireland's offshore waters, the UK's MMO administers the marine licensing process under the *MCAA*. Per subsection 2(1) of the *MCAA*, the MMO must carry out its functions so as to ensure that offshore wind activities under its jurisdiction are "managed, regulated, or controlled" "with the objective of making a contribution to sustainable development". Projects that are NSIPs under the *Planning Act 2008* require DCOs from the UK's Planning Inspectorate.

The *Electricity (Northern Ireland) Order 1992* gives Northern Ireland's Department for the Economy ("DfE") responsibility to grant consent for the construction, extension, or operation of electricity generating stations in Northern Ireland. As concerns offshore wind developments, such consents are required for generating stations with capacities greater than 1 MW that are situated in waters within Northern Ireland or within Northern Ireland's territorial sea. Offshore generating stations that are within areas that require planning permission under the *Planning Act (Northern Ireland) 2011* are an exception to this rule and instead require planning permission under that Act. An Agreement of Lease from TCE is a prerequisite to DfE consent for the construction, extension, or operation of an offshore generating station.

Planning permissions by local planning authorities will also be required for the onshore components of offshore wind developments in Northern Irish waters.[94]

For additional information on Northern Ireland's assessment and authorization processes, guidance documents published by DAERA are useful resources, although the currency of information (i.e., before or after Exit Day) should be borne in mind.[95]

4.3.6 Scotland

The Scottish Government plays several roles in the assessment and regulation of offshore wind developments in Scotland's territorial sea (marine waters within 12 NM of the coast), in areas of a UK Renewable Energy Zone ("REZ") that have been deemed to be "Scottish parts" of the REZ, and also in any other marine areas that the UK Government has deemed by Order in Council to be marine areas in which the Scottish Ministers have functions.

At the planning level, marine planning is required by the UK's *MCAA* and is also required by the *Marine (Scotland) Act 2010*. Section 3 of that Act requires the Scottish Ministers and any public authorities exercising functions under the Act that affect the Scottish marine area to "act in the way best calculated to further the achievement of sustainable development, including the

[94] Peter Cole, "Consenting Your Energy Project: Which Regime Applies?" *Norton Rose Fulbright* (April 2022).
[95] See for example: Northern Ireland Executive, Department of Agriculture, Environment and Rural Affairs, *Northern Ireland Guidance on Marine Licensing: Overview and Process, Under Part 4 of the Marine and Coastal Access Act 2009* (May 2016); Northern Ireland Executive, Department of Agriculture, Environment and Rural Affairs, *Northern Ireland Guidance on Marine Licensing: Environmental Impact Assessment, under Part 4 of the Marine and Coastal Access Act 2009* (May 2016).

protection and, where appropriate, enhancement of the health of that area, so far as is consistent with the proper exercise of that function". The Scottish Government published Scotland's first National Marine Plan in 2015.[96] The Scottish Government has also undertaken sectoral marine planning, supported by SEA, that can be expected to guide the CES's selection of marine sites that will be opened to competitive leasing.[97] In addition to carrying out sectoral marine planning in accordance with EU and UK requirements—including requirements under the UK MPS to incorporate socio-economic impact assessment in such plans—the Scottish Government also incorporates scenario mapping to assess potential socio-economic benefits of developments, in accordance with requirements set out in the Scottish National Marine Plan.[98]

At the SEA level, in keeping with the EU Strategic Environmental Assessment Directive and the UK's *Environmental Assessment of Plans and Programs Regulations 2004*, the Scottish Government has been expected to carry out SEAs for various plans and programs related to marine renewable energies. The Scottish Government has also amplified its obligations in this regard by enacting Scotland-specific legislation, the *Environmental Assessment (Scotland) Act 2005*, that transposes the requirements of the EU's Strategic Environmental Assessment Directive in connection with plans and programs that relate to Scotland. Under Schedule 3 of that Act, cumulative effects assessment and a plan or program's relevance to the objective of promoting sustainable development are criteria to be considered as part of SEAs of proposed plans and programs. It should be noted, however, that the Act's requirements apply to Scottish plans and programs that affect Scotland's terrestrial territory and territorial sea exclusively, and they do not extend to Scottish regulation of offshore wind developments in the offshore region between 12-200 NM from the coast.[99]

Marine licensing in Scotland's territorial sea and offshore areas that are within the Scottish Government's jurisdiction is carried out primarily by Marine Scotland—specifically, by the Marine Scotland – Licensing Operations Team ("MS-LOT"), which exercises authority and follows processes established under the UK's *MCAA*. The *Marine (Scotland) Act 2010* imposes additional licensing requirements that apply within the Scottish regime. As noted above, section 3 of the *Marine (Scotland) Act 2010* requires the Scottish Ministers and any public authorities exercising functions under the Act that affect the Scottish marine area to "act in the way best calculated to further the achievement of sustainable development, including the protection and, where appropriate, enhancement of the health of that area, so far as is consistent with the proper exercise of that function".

In Scotland's territorial sea, "section 36 consents" under the UK's *Electricity Act* are required for offshore wind developments with capacities greater than 1 MW; section 36 consents are also

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[96] Scottish Government, Marine Scotland, *Scotland's National Marine Plan: A Single Framework for Managing Our Seas* (March 2015).

[97] Scottish Government, *Marine Scotland Consenting and Licensing Guidance for Offshore Wind, Wave and Tidal Energy Applications* (October 2018) at pages 9, 16, 20 ["MS-LOT Consenting and Licensing Guidance"]; see also ORE Catapult Report at page 10.

[98] MS-LOT Consenting and Licensing Guidance at pages 9, 19.

[99] *Ibid* at page 15.

required for developments with capacities greater than 50 MW that are situated in offshore waters that are within the Scottish parts of an REZ.

Within the context of the assessment and authorization of offshore wind development, MS-LOT administers marine licensing and electricity consenting processes as part of a "one stop shop" regime in which developers seek marine licenses and section 36 approvals together.[100] EIAs and HRAs are required as part of this consolidated regime.[101] EIAs for developments outside of the Scottish inshore region must meet the requirements set out in the UK's *Marine Works (EIA) Regulations*; Scotland's own *Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017* ("Scottish EIA regulations") apply to activities within the Scottish inshore region. Under Schedule 4 of the Scottish EIA regulations, EIA reports should include information about cumulative effects and the "sustainable availability" of natural resources that will be used in proposed projects.

Planning permissions by local planning authorities will also be required for the onshore components of offshore wind developments in Scottish waters, but these can also be folded into the development and consenting process administered by MS-LOT (although in such cases, consultation must be carried out with relevant planning authorities).[102]

While MS-Lot is responsible for administering all of the processes described above and may make final decisions on marine license applications, ultimate decision-making on section 36 consent applications rests with the Scottish Ministers, who make their decisions based on recommendations by MS-LOT.[103]

4.3.7 Wales

The Welsh Government plays several roles in the assessment and regulation of offshore wind developments in the Welsh territorial sea (marine waters within 12 NM of the coast) and the "Welsh zone".[104]

At the planning level, marine planning is required by the UK's *MCAA*. In 2019, the Welsh Government adopted its first *Welsh National Marine Plan* in accordance with the *MCAA*'s requirements.[105]

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[100] *Ibid* at pages 8, 14, 21.
[101] *Ibid* at pages 26-28.
[102] *Ibid* at pages 11-12, 25; see also ORE Catapult Report at page 20.
[103] MS-LOT Consenting and Licensing Guidance at page 61.
[104] The "Welsh zone" is defined in subsection 158(1) of the *Government of Wales Act 2006* as meaning the sea adjacent to Wales that is both "within British fishery limits", as those limits are set out in the *Fishery Limits Act 1976* and specified as such by a UK Government Order in Council.
[105] Welsh Government, Natural Resources Wales, "Applying for a marine license" (4 August 2022); Welsh Government, *Welsh National Marine Plan* (November 2019).

At the SEA level, in keeping with the EU Strategic Environmental Assessment Directive and the UK's *Environmental Assessment of Plans and Programs Regulations 2004*, the Welsh Government has been expected to carry out SEAs for various plans and programs related to marine renewable energies.

Marine licensing in the Welsh territorial sea is carried out primarily by Natural Resources Wales, which exercises authority and follows processes established under the UK's *MCAA*. Natural Resources Wales will oversee HRAs and EIAs that are required as components of marine licensing processes within the Welsh Government's jurisdiction. EIAs must meet the requirements set out in the UK's *Marine Works (Environmental Impact Assessment) Regulations 2007*.

In Welsh waters, "section 36 consents" under the UK's *Electricity Act 1989* are required for offshore wind developments with capacities between 1 MW and 350 MW. The Welsh Ministers are the responsible authority that can grant section 36 consents for offshore wind facilities that fall within the Welsh Government's jurisdiction—such consents must be granted in keeping with the requirements set out in the *Electricity Act 1989* and will also include HRA and EIA requirements.

Planning permissions by local planning authorities are required for the onshore components of offshore wind developments in Welsh waters, and this requirement is not overridden by or folded into the DCO process for NSIPs.[106]

Offshore wind developments with capacities greater than 350 MW are subject to the DCO process for NSIPs under the UK's *Planning Act 2008*.

4.4 *Key Conclusions for the Purposes of the Comparative Analysis*

Assessment and regulation of offshore wind developments throughout the UK take different forms, but fundamental requirements established in EU law and implemented by the UK Government and Devolved Administrations have resulted in several core elements that are currently shared in England, Northern Ireland, Scotland, and Wales. These core elements include: requirements for the development of marine strategies and the use of maritime spatial planning; requirements for SEAs of relevant governmental plans and programs (such as plans identifying marine sites that will be opened to competitive leasing); and, requirements for EIAs and HRAs. Several requirements related to cumulative effects assessment and the promotion of sustainable development are currently embedded in relevant UK laws thanks to the influence of the key EU directives discussed above; however, the UK's withdrawal from the EU and its plans to remove EU law from the statute books create uncertainty about the future state of the law.

Notably, requirements to take sustainable development into account or act in ways that are "best calculated" to advance sustainable development tend to appear at the higher levels of

[106] ORE Catapult Report at page 20.

planning and assessment throughout the UK, such as in the statutes and regulations establishing marine planning and SEA requirements. Requirements to assess how individual proposed projects could contribute to or hinder sustainable development objectives are not present in the EIA legislation that applies to offshore wind developments. This approach reflects the direction set by the EU directives, which do not explicitly require sustainability assessments in project-specific EIAs.

Additionally, the use of centralized site identification by the UK Government and Scottish Government to create frameworks for marine leasing is noteworthy, as this approach is also used in the other comparator jurisdictions discussed in this report. Our research indicates that an important difference between the UK and the other comparative jurisdictions, however, is that the UK currently grants marine leases for offshore wind projects exclusively through competitive leasing rounds in which prospective lease sites have been pre-selected by government, whereas in Germany and the United States, developers may seek to develop sites that have not been pre-selected by government.

5.0 Assessment and Regulation of Offshore Wind Developments by the United States Federal Government

5.1 *Jurisdiction over Marine Activities*

Like Canada, the US has a federalist governance system in which legislative authority is divided between the federal government ("US Federal Government") and the respective governments of the states.

Under the US *Outer Continental Shelf Lands Act* ("*OCSLA*"), the US Federal Government has jurisdiction over the Outer Continental Shelf ("OCS"), which is defined as meaning the submerged lands, subsoil, and seabed of the marine area that extends from 3 NM off the coast up to the 200 NM limit of the EEZ, excluding areas of submerged lands beneath navigable waters, as such waters are defined by federal law.[107] Generally, marine areas within 3 NM of the coast are within state jurisdiction, but state jurisdiction extends up to 9 NM in some cases.

Offshore wind developments in US federal waters are assessed and regulated by the US Federal Government, with limited involvement by state governments. Federal offshore wind resource assessments and national strategy documents developed within the past decade have determined that over 88% of the US capacity area for offshore wind developments is within federal waters and that most offshore wind development in the US will likely be carried out on the OCS, which is within federal jurisdiction.[108] This means that the federal government can be expected to play the leading role in the assessment and regulation of offshore wind developments in the US.

The two primary statutes informing federal assessment and regulation of offshore wind developments in the US are the *OCSLA* and the *National Environmental Policy Act* ("*NEPA*"). Other laws pertaining to marine and avian species protection and coordinated coastal zone management by the US Federal Government and state governments contribute peripherally to the process but are not discussed in detail here.[109]

The *OCSLA* empowers the US Federal Government to lease OCS areas and approve and manage all development activities within those areas. The US *Energy Policy Act of 2005* amended the

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[107] 43 USC 1331(a). See also Bureau of Ocean Energy Management, *A Citizen's Guide to the Bureau of Ocean Energy Management's Renewable Energy Authorization Process* (December 2016) at page 3 ["BOEM *Citizen's Guide*"] and 40 CFR 585.113.

[108] US Department of Energy, Office of Energy Efficiency & Renewable Energy, *National Offshore Wind Strategy: Facilitating the Development of the Offshore Wind Industry in the United States* (9 September 2016) at page 11.

[109] These laws include: the *Coastal Zone Management Act* ("CZMA"), which requires the establishment of coastal zone management plans and requires federally authorized activities to be consistent with such plans to the "maximum extent practical"; the *Migratory Birds Treaty Act*, which is the US analogue to Canada's *Migratory Birds Convention Act*; the *Endangered Species Act* and the *Marine Mammal Protection Act*, both of which implement protections for certain marine species; and, the *Magnuson-Stevens Fishery Conservation and Management Act*, which governs marine fisheries management and addresses the biological sustainability of the marine environment.

OCSLA to establish specific powers and responsibilities concerning the regulation of activities on the OCS that produce or support the production of energy from sources other than oil and gas. This paved the way for the establishment of an offshore renewable energy program. Accompanied by supporting rules and regulations, the *OCSLA* provides the legislative framework for the licensing, permitting, and ongoing monitoring and management of offshore wind developments in US federal waters.

The *NEPA* requires federal government agencies to pre-emptively review the environmental effects or impacts of "major federal actions". Actions that are reviewed may include the adoption of formal plans and programs and approval of specific projects. When *NEPA* reviews are conducted for high-level federal actions such as the proposed adoption of plans and programs, their function is analogous to a strategic environmental assessment ("SEA"). *NEPA* reviews are also required for lower-level decision-making such as federal approval of specific projects. When a lower-level *NEPA* review is required before a federal agency approves a specific project that has been preceded by a higher-level *NEPA* review, efficient tiering of the *NEPA* reviews at each level is expected.[110]

The US Department of the Interior ("DOI") has primary responsibility under the *OCSLA* to oversee the responsible development of energy resources on the OCS.[111] Until very recently, the DOI's Bureau of Ocean Energy Management ("BOEM" or "the Bureau") was the institution through which all primary assessment and regulation of offshore wind developments was carried out. In January 2023, the DOI reassigned responsibility for environmental compliance and enforcement activities to the Bureau of Safety and Environmental Enforcement ("BSEE"), meaning that the full spectrum of assessment and regulation responsibilities will be split between the BOEM and BSEE going forward.[112] Together, the BOEM and BSEE work to ensure that renewable energy activities on the OCS are carried out safely and in an environmentally sound way.[113]

5.2 *Assessment and Authorization by the Bureau of Ocean Energy Management*

The BOEM's assessment and authorization of offshore wind developments is organized into four phases: planning, leasing, site assessment, and construction and operations. These phases are described in regulations that govern the Bureau's renewable energy program,[114] and they

[110] 40 CFR 1501.11.
[111] Bureau of Ocean Energy Management, "BSEE/BOEM Renewable Energy Split Rule Information and Q&A" (2 February 2023) at slide 9 ["BOEM Q&A"].
[112] Federal Register, "Reorganization of Title 30 – Renewable Energy and Alternate Uses of Existing Facilities on the Outer Continental Shelf" (31 January 2023). For an accessible overview of the division of powers between the BOEM and BSEE, see: BOEM Q&A.
[113] 30 CFR 585.101(c).
[114] 30 CFR 585.

are also illustrated in BOEM guidance documents that provide helpful overviews of the BOEM's processes.[115]

As is discussed in the subsections that follow, the BOEM's assessment and authorization process is typically triggered by applications from offshore wind proponents who wish to acquire and develop OCS leases. Once proponents trigger the process, the BOEM will initiate planning activities that include centralized site identification and high-level assessment that is akin to SEA. These initial planning activities shape the second, third, and fourth phases of the process and enable tiering of multi-layered assessment processes. Sustainability assessment is not an explicit component of the regulatory regime, but cumulative effects assessment is required among the environmental review activities that must be carried out before developments are authorized to proceed.[116]

5.2.1 Planning

The planning phase of the BOEM process is closely connected to the leasing phase, as it is typically triggered by proponent applications to lease and develop sites on the OCS.[117]

Developers proposing to develop offshore wind facilities on the OCS to generate energy for sale and distribution require commercial leases from the BOEM. The *OCSLA* requires the Bureau to issue leases on a competitive basis unless there is no competitive interest in the area in question. When the Bureau receives a lease application from a prospective developer, it must begin by determining if there is competitive interest in the proposed lease area.[118]

If there is competitive interest in the area in question, the BOEM will prepare to administer a competitive leasing process. The Bureau's preparations in this regard are the primary components of the planning phase. They include releasing a Call for Information and Nominations to gather relevant information about the geological conditions and existing marine uses of the proposed lease area(s) to support centralized identification of the "Wind Energy Area(s)" that will be opened to the competitive leasing process.[119] A *NEPA* review will be

[115] See BOEM Q&A (at slides 12-17 and BOEM *Citizen's Guide.* The BOEM *Citizen's Guide* was published in 2016 and does not reflect the recent splitting of powers between the BOEM and BSEE; however, it continues to offer a useful overview of the BOEM's assessment and authorization processes.

[116] BOEM has established two frameworks that pertain to assessment of cumulative effects in the Atlantic Ocean. The "National Environmental Policy Act Documentation for Impact-Producing Factors in the Offshore Wind Cumulative Impacts Scenario on the South Atlantic Continental Shelf" (2020) and the "National Environmental Policy Act Documentation for Impact-Producing Factors in the Offshore Wind Cumulative Impacts Scenario on the North Atlantic Continental Shelf" (2019).

[117] BOEM *Citizen's Guide* at pages 6 and 8.

[118] *Ibid* at pages 6 and 8.

[119] 40 CFR 585.211(b). See also BOEM Q&A at slide 12 and BOEM *Citizen's Guide* at page 6. The US Energy Information Administration explains that "Wind Energy Areas" are sites that have been identified through stakeholder engagement and public comment as having "sufficient potential for wind development: see US Energy Information Administration, "Federal leasing for offshore wind grows as first U.S. offshore wind farm comes online" (2 December 2016).

conducted during this phase to assess the potential environmental effects or impacts of issuing leases in the proposed lease area(s) and identify potential mitigation measures. This review will play a role that is analogous to an SEA, and it will not only support the leasing phase that follows but will also support the subsequent site assessment phase.[120]

Departmental guidance on *NEPA* reviews that apply to the BOEM's assessment and regulation of offshore wind developments indicate that a full assessment process known as an environmental impact statement will typically be required before leases are sold, although a shorter process known as an environmental assessment may sometimes suffice instead.[121] These *NEPA* processes are described in more detail in section 5.3 below.

It appears from BOEM guidance that if there is no competitive interest in the area in question, the Bureau can proceed to the leasing phase without carrying out all of the planning processes described above—in particular, without carrying out a *NEPA* review to assess the potential environmental effects or impacts of the leasing decision that may subsequently be made.[122] In all circumstances, public notice and an opportunity for public comment are required for any proposed lease that the Bureau is considering.[123]

5.2.2. Leasing

In competitive and non-competitive leasing scenarios, the leasing phase is the phase in which leases (including applicable terms and conditions) are negotiated and sold. In a non-competitive leasing scenario, proponents have the option to consolidate the leasing, site assessment, and construction and operations phases to streamline the process; in such cases, lease sales are not finalized until after Site Assessment Plans, Construction and Operations Plans, and other required plans are approved by the BOEM.[124]

5.2.3 Site Assessment

In a competitive leasing scenario, once a successful applicant is chosen from the competitive leasing process, the proponent must prepare a Site Assessment Plan ("SAP"), describing the activities they intend to carry out to assess the resource potential of the lease site.[125] The BOEM is responsible for reviewing the SAP and either disapproving it or approving it (with or without modifications). An SAP approval enables the proponent to conduct the proposed site

[120] 40 CFR 585.211(b). See also BOEM *Citizen's Guide* at page 6.
[121] Department of the Interior, *Department Manual* (Environmental Quality Programs Series, Part 516: Chapter 15 – Managing the NEPA Process – Minerals Management Service) (27 May 2004) at section 15.4.
[122] BOEM *Citizen's Guide* at page 8.
[123] 40 CFR 585.102(11).
[124] BOEM *Citizen's Guide* at pages 8-9.
[125] 40 CFR 585.605(a) and 585.606. 585.610 provides a list of factors that must be included in an SAP. Neither impacts on sustainability nor cumulative effects are mentioned.

assessment and to begin working towards the construction and operations phase of the process.[126]

In a non-competitive leasing scenario, the proponent and BOEM can choose to carry out the site assessment and construction and operations phases separately, or the proponent can submit a combined SAP and Construction and Operations Plan and have them reviewed together.[127] Either way, a *NEPA* review of the SAP, possibly including public involvement, is required.[128]

BOEM regulations and the Bureau's *Guidelines for Information Requirements for a Renewable Energy Site Assessment Plan* explain what information must be included in SAPs.[129]

5.2.4 Construction and Operations

In a competitive leasing scenario, after the successful applicant has acquired an SAP approval, they can move on to submit a Construction and Operations Plan ("COP"). The BOEM must conduct a *NEPA* review at this stage, possibly including public involvement.[130] If the Bureau approves the COP, the proponent can go on to submit a Facility Design Report ("FDR") and Fabrication and Installation Report ("FIR") for BOEM review. The Bureau can raise objections concerning proposed design, fabrication, and installation plans; if and when those objections are resolved, the proponent can begin development.[131]

In a non-competitive leasing scenario, if the successful applicant seeks its SAP and COP approvals separately, the BOEM will need to conduct a separate *NEPA* review of the COP once it is submitted.[132] If the COP is approved, the proponent can proceed to submit an FDR and FIR for BOEM review, under the same process that applies to the final stage of the competitive leasing scenario described above.[133] If the successful applicant submits a combined SAP and COP for BOEM review and approval, these same steps apply but are consolidated.[134]

BOEM regulations and the Bureau's *Information Guidelines for a Renewable Energy Construction and Operations Plan* explain what information must be included in COPs.[135]

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[126] BOEM *Citizen's Guide* at page 7.
[127] *Ibid* at page 8.
[128] *Ibid* at page 8.
[129] 40 CFR 585.605-11. Bureau of Ocean Energy Management, *Guidelines for Information Requirements for a Renewable Energy Site Assessment Plan (SAP)* (June 2019).
[130] BOEM *Citizen's Guide* at page 7.
[131] *Ibid* at page 7.
[132] *Ibid* at pages 8-9.
[133] *Ibid* at pages 8-9.
[134] *Ibid* at pages 8-9.
[135] 40 CFR 585.620-27. Bureau of Ocean Energy Management, *Information Guidelines for a Renewable Energy Construction and Operations Plan (COP): Version 4.0* (27 May 2020).

5.3 *National Environmental Policy Act ("NEPA") Review*

The *NEPA* reviews that are built into the BOEM assessment and authorization process can require the Bureau to conduct environmental assessments ("EAs") or prepare environmental impact statements ("EISs"), depending on the significance of environmental effects or impacts that could occur as a result of the Bureau's actions.[136]

Neither sustainability nor sustainable development are mentioned explicitly in the *NEPA*, but *NEPA* requirements include attention to factors that are often associated with principles of sustainable development, including attention to the long-term future effects of actions taken today, as well as recognition of the need to preserve the environment for future generations.[137] The environmental effects or impacts that are relevant to the *NEPA* review process include cumulative effects.[138]

As noted above, the *NEPA* requires federal government agencies to pre-emptively review the environmental effects or impacts of "major federal actions", which may include the adoption of formal plans and programs and approval of specific projects. When *NEPA* reviews are conducted for high-level federal actions such as the proposed adoption of plans and programs, their function is analogous to an SEA. When a lower-level *NEPA* review is required before a federal agency approves a specific project that has been preceded by a higher-level *NEPA* review, efficient tiering of the *NEPA* reviews at each level is expected.[139]

An initial *NEPA* review by a federal agency may conclude that the agency's proposed action can be "categorically excluded" from requiring further *NEPA* review because such actions do not normally cause significant environmental effects.[140]

If a federal agency determines that a categorical exclusion is not warranted, it must go on to prepare an EA. This EA process is largely internal and does not necessarily require public involvement,[141] but agencies are required to involve other relevant agencies, state governments, tribal governments, local governments, the public, and project applicants "to the extent practicable".[142] If the EA leads the agency to conclude that its proposed action will not

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[136] United States Environmental Protection Agency, "National Environmental Policy Act Review Process" (5 October 2022) ["*NEPA* Review Process"].

[137] USC 40 4331(b)(1) characterizes each generation as a "trustee of the environment for succeeding generations"; the *NEPA* reviews required under USC 40 4332(C) require review of "major federal actions" to assess "the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity", as well as "any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented".

[138] 40 CFR 1508.1(g).

[139] 40 CFR 1501.11. See also 40 CFR 585.611, which describes in more detail how SAPs developed by proponents during the BOEM process can and should take into account the results of higher-level *NEPA* reviews conducted as part of the Bureau's planning phase.

[140] *NEPA* Review Process.

[141] BOEM *Citizen's Guide* at pages 16-17.

[142] 40 CFR 1501.5(e). See also *NEPA* Review Process.

have significant environmental impacts, the agency can issue a Finding of No Significant Impact ("FONSI") and proceed with its action.[143] If the EA leads the agency to conclude that its proposed action will have significant environmental impacts, it must go on to prepare an EIS.[144]

The EIS process is essentially an expansion of the EA process that requires more detailed assessment of the environmental impacts of proposed federal actions and requires planning to mitigate adverse impacts where possible. Public consultations and opportunities for public comment are legal requirements of the process, and the process is structured with formal stages and timelines designed to accommodate public involvement at various points.[145]

5.4 Key Conclusions for the Purposes of the Comparative Analysis

Assessment and regulation of offshore wind developments by the US Federal Government include elements of centralized site identification and assessment (conducted during the BOEM's planning phase) and tiered environmental review processes (including high-level review that is akin to SEA). Sustainability assessment is not an explicit component of the regulatory regime, but cumulative effects assessment is required among the environmental review activities that must be carried out before developments are authorized to proceed.

[143] *NEPA* Review Process.
[144] *Ibid.*
[145] *Ibid*. See also 40 CFR Part 1502 to review the regulatory requirements shaping the contents of EISs.

6.0 Assessment and Regulation of Offshore Wind Developments by the Federal Government in Canada

6.1 *Jurisdiction over Marine Activities*

In Canada, the federal government has authority over the marine environment from the low water mark along the coast up to the boundary of its EEZ, which is 200 NM out to sea. This includes constitutionally derived jurisdiction over maritime activities like fishing and navigation.

Provinces play a limited role in managing activities beyond the low water mark, which is largely based on wording in the *Constitution Act, 1867* that limits provinces' authority to their territorial boundaries. It is also important to note that in 1984, the Supreme Court of Canada determined that the federal government has exclusive legislative jurisdiction to exploit offshore natural resources.[146]

In Canada, there are two primary statutes dealing with the assessment and regulation of offshore wind developments: the *Canadian Energy Regulator Act* and the *Impact Assessment Act*. Other federal laws that pertain to marine and avian protection contribute to the process but are not discussed in detail here.[147] In addition, a land tenure regime is administered under the *Federal Real Properties and Federal Immovables Act*, under which authorizations to use federal seabed lands, including for offshore renewable energy developments, are issued.

Canada currently does not regulate offshore wind energy as a standalone activity. Instead, offshore renewable energy projects are regulated by the Canada Energy Regulator (the "CER"), which is created under the *Canadian Energy Regulator Act* ("*CERA*"). Under *CERA*, an authorization is required for any offshore renewable energy project or offshore power line project.[148] An authorization by the CER is provided following a review of all legislatively required considerations.[149] Natural Resources Canada ("NRCan") is currently in the process of developing regulations under *CERA* that will govern exploration, construction, operation, and decommissioning activities related to offshore renewable energy projects.[150]

Canada's *Impact Assessment Act* (the "*IAA*") deals with assessments of projects occurring in Canada's offshore. It requires an impact assessment ("IA") for any new wind power generating facility that will have 10 or more turbines, or an expansion of such a facility. Other kinds of activities or infrastructure projects related to offshore wind developments may also require an

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[146] See *Reference re Newfoundland Continental Shelf* (1984) 1 SCR 86.
[147] These laws include: the *Fisheries Act*, which requires activities harming or adversely affecting fish or fish habitat to be approved; the *Oceans Act,* the *Canada National Marine Conservation Areas Act*, and the *Canada Wildlife Act*, which deal with the creation of marine protected areas; and, the *Migratory Birds Convention Act* and the *Species at Risk Act*, which both require approval for activities impacting listed bird or species at risk species, respectively.
[148] *Canadian Energy Regulator Act*, SC 2019 c 28 s 10 ["*CERA*"] at sections 297 and 298.
[149] *Ibid* at section 298.
[150] Government of Canada, "The Offshore Reviewable Energy Regulations Initiative" (undated); Natural Resources Canada, "Forward Regulatory Plan" (31 March 2022).

IA. The I*AA* requires consideration of a project's contribution to sustainability and cumulative effects.

The CER has responsibilities under both Acts to oversee the development of offshore energy resources.

6.2 *Current Assessment and Authorization Regimes*

The assessment and authorization of offshore wind projects in Canada are closely linked because the CER has specific responsibilities under the *IAA* to take part in IAs of projects that are also regulated under *CERA*.

6.2.1 Requirements under the *Canadian Energy Regulator Act*

The Government of Canada, recognizing that offshore renewable energy technology was rapidly developing and maturing, created a new legislative framework to govern offshore renewable projects. This legislative framework was established under *CERA*, which came into force in August 2019.[151]

CERA replaced the *National Energy Board Act* ("*BEBA*"). As part of this legislative change, the CER took over responsibilities previously held by the National Energy Board under *BEBA*, which included regulatory oversight of pipelines and power lines, and advising and reporting on energy matters. Under the new legislative framework for offshore renewable energy, CER is also mandated to oversee work and activities related to offshore renewable energy projects.[152]

Before a proponent of an offshore renewable energy project can proceed with development, it must apply to the CER and receive an authorization.[153] An application must contain any information required by the CER or prescribed by regulation.[154] There are currently no regulations detailing how offshore wind developments are to be reviewed by the CER, but NRCan is developing Offshore Renewable Energy Regulations (see section 6.3 below).

When the CER decides whether to issue an authorization for an offshore renewable energy project or offshore power line, it must take into account any Indigenous knowledge that has been provided to it, scientific information, and data, as well as all considerations that appear to the CER to be relevant and directly related to the project. The CER must consider the factors that are set out in subsection 298(3) of *CERA*, which includes environmental effects and cumulative effects, the extent to which the effects of the project hinder or contribute to the Government of Canada's ability to meet its environmental obligations and its commitments in

[151] Natural Resources Canada, "Offshore Renewable Energy Regulations: Proposed Technical Requirements" (2021-2022) at page 3.
[152] *CERA* at section 11.
[153] *Ibid* at section 297.
[154] *Ibid* at section 298.

respect of climate change, and any RA or SA conducted under the *IAA*.[155] If an authorization is granted for an offshore renewable energy project or offshore power line, it is subject to any conditions imposed by the CER or by regulations created under *CERA*.[156]

6.2.2 Requirements under the *Impact Assessment Act*

Under the *IAA*, all projects that are listed in the *Physical Activities Regulations* (commonly referred to as the "Project List") trigger the IA process and will typically be required to undergo a full IA. The Project List includes projects that involve the construction, operation, decommissioning, or abandonment of a new wind power generating facility with 10 or more turbines, or the expansion of an existing wind power generating facility if the expansion would result in a production capacity of 50% or more.[157] Additionally, an IA is required for other kinds of infrastructure projects that may be relevant for offshore wind projects. For example, new electrical generating facilities or electrical transmission lines in a wildlife area, a migratory bird sanctuary or a protected marine area require an IA.[158] A project can also be designated for an IA at the discretion of the federal Minister of Environment and Climate Change (the "Minister").[159]

The *IAA* was an important milestone in the evolution of project assessments in Canada because it signalled a shift towards the evaluation of sustainability as the basis of assessments. The *IAA* commits the Government of Canada to fostering sustainability and requires the Government of Canada, the Minister, IAAC, and other relevant federal authorities (discussed below in section 6.2.4) to exercise their powers in a manner that fosters sustainability when administering the Act. [160] Under the *IAA*, "sustainability" means the ability to protect the environment, contribute to the social and economic well-being of the people of Canada, and preserve their health in a manner that benefits present and future generations.

In addition to the *IAA*'s overarching purpose of fostering sustainability, when projects undergo an IA, certain factors must be considered, including cumulative effects likely to result from the project in combination with other physical activities that have been or will be carried out, and the extent to which the project contributes to sustainability.[161] An IA must also consider an RA that has been carried out and is relevant to the project-specific assessment.[162]

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[155] *Ibid* at subsection 298(3).
[156] *Ibid* at subsection 298(9).
[157] *Physical Activities Regulations*, SOR/2019-285, at Schedule A, sections 44 and 45.
[158] Wildlife areas and protected marine areas are created under the *Canada Wildlife Act* while migratory bird sanctuaries are created under the *Migratory Birds Convention Act*. Other potentially implicated projects include new international electrical transmission lines with a voltage of 345kV or more requiring 75 or more kilometers of new right of way and new interprovincial power lines.
[159] *Impact Assessment Act*, SC 2019, c 28, s 1 ["*IAA*"] at section 9.
[160] *IAA* at sections 6(1)(a) and 6(2).
[161] *Ibid* at subsections 22(1)(a)(ii) and 22(1)(h). Other factors may also be relevant to an examination of sustainability and cumulative effects. For example, an assessment must also consider the extent to which a project will hinder or contribute to Canada's ability to meet environmental obligations and climate change commitments.

IAAC's *Framework: Implementation of the Sustainability Guidance* (the "Framework") provides guidance for assessing a project's contribution to sustainability.[163] The Framework proposes an approach to sustainability assessment that is focused on understanding sustainability in the context of environmental, health, social, and economic effects on valued components ("VCs") and the consideration of mitigation measures. The Framework considers sustainability as a "lens" through which effects on VCs are considered.

The Framework envisions the assessment of sustainability being a part of each key phase of an IA process, from planning through to decision-making. Each IA is anticipated to contextualize and value VCs differently, so identification of the VCs in studies conducted by the proponent is an important step in assessing a project's contribution to sustainability. As part of the process of identifying VCs that may be relevant to sustainability assessment, long-term effects should be considered, along with interactions with other VCs, interactions with potential effects of the project, or interactions with project activities.[164] It is noteworthy that these considerations are commonly understood to be part of cumulative effects assessment. This information will be used to guide the proponent in assessing their project's contribution to sustainability.

The Framework also outlines four sustainability principles that practitioners are recommended (but not required) to consider when assessing a project's contribution to sustainability.[165] The Framework outlines recommended methodologies for applying each of the principles.

6.2.3 Additional powers under the *Impact Assessment Act*

Under the *IAA,* the Minister has the discretion to create a regulation that can exempt certain activities listed in the *Physical Activity Regulations* from the ordinary IA requirements, including requirements for a proponent to consider a project's contribution to sustainability and assess cumulative effects. Offshore wind projects may be exempted using this power.[166]

The Minister can only create such a regulation after considering a regional assessment ("RA") or strategic assessment ("SA") that has been carried out in relation to the type of project under

[163] Impact Assessment Agency of Canada, *Guidance: Considering the Extent to which a Project Contributes to Sustainability,* (December 6, 2021).
[164] Impact Assessment Agency of Canada, *"Framework: Implementation of the Sustainability Guidance"*(6 December 2021) at Section 2.1.
[165] *Ibid* at section 3. The principles include considering the interconnectedness and interdependence of human-ecological systems, considering the well-being of present and future generations, considering the positive effects and reducing adverse effects of the project, and applying the precautionary principle and considering uncertainty and risk of irreversible harm.
[166] *IAA* at section 112(1)(a.2).

consideration.[167] Additionally, for an activity captured by the regulation to be exempted, it must first meet the conditions that are established in the regulation.[168]

The current RAs of offshore wind development in Newfoundland and Labrador and Nova Scotia could lead to offshore wind projects located within the areas covered by those RAs being exempted from the IA regime.[169] In the case of the Regional Assessment of Offshore Oil and Gas Exploratory Drilling East of Newfoundland and Labrador, part of the RA committee's work was identifying and recommending the conditions that relevant activities – in that case, offshore oil and gas exploratory drilling – would need to meet to be exempted. It is possible that a similar approach could be taken if the RAs of offshore wind development were going to be used to exempt offshore wind projects from the IA regime. In such a scenario, advocates could have opportunities during the RA processes to provide input to the RA committee about their concerns with exempting offshore wind projects from IA requirements.

6.2.4 Interaction between the *CERA* and *IAA*

The CER is considered a federal authority under the *IAA*.

Federal authorities have special responsibilities under the *IAA*. A federal authority that is in possession of specialist or expert information or knowledge that is relevant to a designated project (i.e., a project that requires an IA) must make that information or knowledge available to IAAC upon request.[170] Additionally, a federal authority must engage with the proponent of a designated project to identify for the proponent what information, if any, the authority may require from the proponent in order to exercise its powers or perform its duties.[171] In an RA or SA, if a federal authority has specialist or expert information or knowledge relevant to the process, it must make that information or knowledge available to IAAC or RA Committee (as applicable) upon request.[172] Federal authorities do not make final decisions under the *IAA* about projects that are undergoing assessments.

Additionally, under the *IAA*, an IA of any designated project that is regulated by a life-cycle regulator must be referred to a review panel.[173] "Life-cycle regulators" under the Act are the

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[167] *IAA* at subsection 112(2). SAs and RAs should not be confused with federal Strategic Environmental Assessments, which are required under the Government of Canada's *Cabinet Directive on the Environmental Assessment of Policy, Plan, and Program Proposals* for proposals that have environmental impacts, and which require ministerial or Cabinet approval. See: Government of Canada, "Department of Justice Activities and Commitments Related to Strategic Environmental Assessment" (6 July 2016).

[168] *IAA* at sections 112(1)(a.2) and 112.1

[169] It is our understanding, based on comments from IAAC during an in-person workshop in August 2022, that this is not an intended outcome of the RAs; however, the Minister is not bound by comments made by a representative of IAAC during such a process. In their final report, one or both RA committees may make recommendations to the Minister that such an exemption be created.

[170] *IAA* at subsection 13(1).

[171] *Ibid* at subsection 13(2).

[172] *Ibid* at section 100.

[173] *Ibid* at section 43.

federal authorities responsible for *CERA*, the *Nuclear Safety and Control Act* ("*NSCA*") and the Accord Acts (discussed below). Review panels established to conduct the IAs for projects regulated by life-cycle regulators are known as Integrated Review Panels ("IRPs") because they seek to integrate *IAA* requirements with requirements that exist under the life-cycle regulators' home statutes.

Review panels, including IRPs, allow projects to be assessed by a committee with special knowledge or expertise about the projects being assessed. Additionally, these panels gather evidence through public hearings and other participation opportunities that are not usually available in other IA processes. When an IA is conducted by an IRP, the relevant lifecycle regulator will be involved in establishing the IRP's terms of reference and selecting eligible members for appointment.[174] The final report from the IRP must include any recommendations or conclusions that would ultimately be necessary for the lifecycle regulator to issue approvals required under its home statute.[175]

6.2.5 Requirements under the *Cabinet Directive on the Environmental Assessment of Policy, Plan, and Program Proposals*

The Government of Canada's *Cabinet Directive on the Environmental Assessment of Policy, Plan, and Program Proposals* ("Cabinet Directive on SEAs") requires the federal government to conduct SEAs that take sustainability considerations and cumulative effects into account when federal policies, plans, or programs related to the assessment and regulation of offshore wind developments will require approval by a federal Minister or the federal Cabinet and implementation of the proposal will result in "important environmental effects".

An SEA conducted under the Cabinet Directive on SEAs begins when the appropriate department or agency conducts a preliminary assessment (called a "scan") of the proposed policy, plan, or program, preferably at the earliest stages of development. This scan is used to screen proposals for potential important environmental effects and is used to identify strategic considerations at a general or conceptual level. If important environmental effects (these can be positive or adverse effects) are identified, a detailed assessment is required.[176]

The Commissioner of the Environment and Sustainable Development ("CESD") is tasked with overseeing the government's efforts to protect the environment and promote sustainable development.[177] The CESD conducts audits to monitor the federal government's progress towards the goals set out in the *Federal Sustainable Development Act*. Audits by the CESD have found that SEAs conducted under the Cabinet Directive on SEAs are not consistently implemented and that preliminary scans were sometimes only partially completed. In some cases, there was no rationale to support conclusions about potential environmental outcomes,

[174] *Ibid* at sections 46 and 47.
[175] *Ibid* at sections 51(2) and 51(3).
[176] Public Safety Canada, "Follow-up Audit on the Implementation of the Commissioner of the Environment and Sustainable Development Recommendations on Sustainable Development Strategies" (2019) at page 4.
[177] *Ibid* at page 5.

while in other cases, full SEAs were not completed even where preliminary scans identified important environmental effects.[178]

6.3 Proposed Changes to the Assessment and Regulation of Offshore Renewable Energy Developments

NRCan is currently overseeing an Offshore Renewable Energy Regulations Initiative as part of a 2022-24 Forward Regulatory Plan that aims to develop modern safety and environmental protection regulations for exploration, construction, operation, and decommissioning activities related to offshore renewable energy projects.[179]

In connection with NRCan's regulatory initiative, the Government of Canada intends to establish *Offshore Renewable Energy Regulations* under *CERA* that will apply to offshore wind, wave, and tidal energy developments. Publication of draft regulations in the *Canada Gazette, Part I* is anticipated in 2023, and a public comment period will follow publication. Finalized regulations are currently projected to be published in the *Canada Gazette, Part II* in 2024, at which point they will enter into force.[180]

As part of the regulatory initiative, the federal government and the respective governments of Newfoundland and Labrador and Nova Scotia plan to amend the "Accord Acts", which include:

- the federal *Canada-Newfoundland and Labrador Offshore Petroleum Resources Atlantic Accord Implementation Act*, and its Newfoundland and Labrador counterpart, the *Canada-Newfoundland and Labrador Atlantic Accord Implementation Newfoundland Act*; and,

- the federal *Canada-Nova Scotia Offshore Petroleum Resources Accord Implementation Act* and its Nova Scotia counterpart, the *Canada-Nova Scotia Offshore Petroleum Resources Accord Implementation (Nova Scotia) Act*.

The Accord Acts implement the so-called "Accord Agreements", which are agreements between the federal government and the respective governments of Newfoundland and Labrador and Nova Scotia to share in the economic benefits of offshore development.[181]

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[178] *Ibid*.

[179] Government of Canada, "The Offshore Reviewable Energy Regulations Initiative" (undated); Natural Resources Canada, "Forward Regulatory Plan" (31 March 2022).

[180] During the first phase of the regulatory initiative, in the autumn of 2020, NRCan drafted a discussion paper about offshore renewable activities and its proposed approach to regulating them; see: Natural Resources Canada, "Discussion Paper: Canada's Approach to Offshore Renewable Energy Regulations", which includes a summary of public engagement. During the second phase (winter 2020/21), there was additional engagement on technical and policy aspects. NRCan released a discussion paper with proposed technical requirements and structure of the proposed regulations. See: Natural Resources Canada, "Offshore Renewable Energy Regulations: Proposed Technical Requirements" (undated).

[181] East Coast Environmental Law and Ecology Action Centre, "Impact Assessment and the Offshore Energy Boards: Submission to the House of Commons Standing Committee on Environment and Sustainable Development Concerning Bill C-69, Part 1 – Impact Assessment Act" (undated) at pages 1-2.

6.3.1 The Current Role of the Accord Acts

The Accord Acts create the Canada-Newfoundland and Labrador Offshore Petroleum Board ("C-NLOPB") and the Canada-Nova Scotia Offshore Petroleum Board ("CNSOPB") (together, the "offshore petroleum boards"). These regulatory bodies are responsible for issuing licences for offshore oil and gas exploration and development, managing and conserving offshore petroleum resources, protecting the environment, and ensuring the safety of offshore workers.

As part of their mandate, the offshore petroleum boards grant and administer offshore area interests using a call for bids process. Any person may nominate offshore lands to be included in a call for bids. The offshore petroleum boards review the nominated lands, with priority on identifying environmentally sensitive areas and fisheries.[182] In Nova Scotia, any call for bids must be evaluated using a SEA, while calls for bids are subject to one of four SEAs that have been completed by the NLOPB for areas with potential for offshore oil and gas exploration.[183] Once a call for bids has closed, bids are evaluated by the respective offshore petroleum board, with awarding of licences subject to federal and provincial approval.

The offshore petroleum boards are considered federal authorities under the *IAA* and have the same responsibilities as other federal authorities like the CER (i.e., providing expert information and engaging with proponents during an IA, as discussed above).

6.3.2 Potential Application of the Accord Act Regimes to Offshore Wind

It is notable that as part of the process of creating technical requirements for its proposed Offshore Renewable Energy Regulations, NRCan looked at comparable jurisdictions with mature offshore renewable energy industries (i.e., the UK and US) and considered the existing regulatory framework for offshore oil and gas in Canada because of the "similarities between the two industries" with a view to maintaining regulatory consistency.[184] It is possible – perhaps even likely – that the Offshore Renewable Energy Regulation will create a regulatory regime similar to that set out by the Accord Acts.

NRCan's regulatory initiative is expected to include amendments to the Accord Acts that will expand the mandates of the offshore petroleum boards. The intentions expressed by the Government of Canada and the respective Governments of Newfoundland and Labrador and Nova Scotia are to turn the offshore petroleum boards into "offshore energy boards" with

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[182] Canada-Nova Scotia Offshore Petroleum Board, "Call for Bids" (undated); Newfoundland and Labrador Industry, Energy and Technology, "Canada-Newfoundland and Labrador Offshore Petroleum Board (C-NLOPB)", (undated); for example, see the *Canada-Newfoundland and Labrador Offshore Petroleum Resources Atlantic Accord Implementation Act, SC 1987 c 3,* at section 58.

[183] *Ibid*; Canada-Newfoundland and Labrador Offshore Petroleum Board, "Strategic Environmental Assessment (SEA)", (undated).

[184] Natural Resources Canada, "Offshore Renewable Energy Regulations: Proposed Technical Requirements" at page 4.

additional responsibilities over offshore renewable energy projects to "facilitate the transition to a clean economy and create sustainable jobs".[185]

If NRCan's proposed Offshore Renewable Energy Regulations are similar to the structure of the Accord Acts, there is a possibility that the mandate of the proposed offshore energy boards will include a call for bids regime like the one used by the offshore petroleum boards. In this regime, the boards will identify areas where they will issue a call for bids, and in which those calls for bids are influenced by proponents with an interest in specific offshore areas. It is likely that the current requirement by offshore petroleum boards to conduct a SEA prior to making a call for bids for offshore oil and gas activities would be extended to calls for bids for offshore wind projects. This would mean that offshore wind projects in Canada would be subject to a system with both a centralized site identification and interest-based site identification, both of which would be, at minimum subject to high-level SEAs conducted by offshore energy boards.

It is also important to contextualize the proposed changes to the Accord Acts and government intentions to expand the roles of the offshore petroleum boards within the regulatory regime of the *IAA*.

When the *IAA* was enacted in 2019, not all its provisions were proclaimed in force, meaning that not all of the Act's provisions became legally operative at that time. Among the provisions not yet in force are provisions that recognize the offshore petroleum boards as life-cycle regulators under the *IAA*. If the federal Cabinet chooses to bring those provisions into force, the C-NLOPB and CNSOPB will be given influential new roles to play in IA processes.[186] For example, proposed activities that require IAs and are also regulated under the C-NLOPB's and CNSOPB's home statutes (i.e., the Accord Acts) would require IAs conducted by IRPs, and the offshore petroleum boards would have considerable power to influence IRP terms of reference and the appointment of review panel members.[187]

It is possible that changes to the Accord Acts and the expansion of the role of the offshore petroleum boards as part of NRCan's current regulatory initiative may be accompanied by Cabinet choosing to bring into force the *IAA* provisions that would make the C-NLOPB and CNSOPB life-cycle regulators under the Act. This would create a new regulatory scenario in which the offshore petroleum boards could displace the CER as the relevant life-cycle regulator for offshore wind developments assessed in IA processes.

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[185] Natural Resources Canada, "Canada and Nova Scotia Announce Intent to Expand the Mandate of Offshore Energy Regime to Support the Transition to a Clean Economy and Create Sustainable Jobs" (11 April 2022); Natural Resources Canada, "Canada and Newfoundland and Labrador Announce Intent to Expand the Mandate of Offshore Energy Regime to Support the Transition to a Clean Economy and Create Sustainable Jobs" (5 April 2022).

[186] *IAA*, "Amendments Not in Force" at section 5.

[187] The Minister would be required to establish an IRP's terms of reference in consultation with the chairperson of the relevant offshore petroleum board; additionally, at least two of the persons appointed to the IRP would need to be selected from a roster of candidates on the recommendation of the chairperson of the relevant board.

6.4 *Key Conclusions for the Purposes of the Comparative Analysis*

Assessment and regulation of offshore wind development in Canada is in its infancy, and there is no regime dedicated specifically to offshore wind projects. Proposed offshore wind developments involving fewer than 10 turbines would not automatically trigger the IA process. There is potential for proposed developments to be assessed within a tiered system using SEAs under the Cabinet Directive on SEAs, and using SAs, RAs, and project-specific IAs under the *IAA*, but this is not required. Sustainability assessment and cumulative effects assessment are both components of the IA process. There is a possibility that an SA or RA could be used to exempt offshore wind developments from requiring project level IAs; in that case, sustainability or cumulative effects of proposed developments would only be assessed at a high-level through SEAs conducted under the Cabinet Directive on SEAs (and only in cases where policy, plan, or program met the directive's requirements), and under the regulatory regime created by *CERA* and the proposed Offshore Renewable Energy Regulations.

7.0 Conclusions and Potential Best Practices that Have Been Identified

7.1 *Considering the Comparator Jurisdictions within the Canadian Context*

The assessment and regulation of offshore wind developments occurring in the comparator jurisdictions is shaped largely by their proximity to other nations' marine territories, differing layers of international, regional, and local legislative regimes, integration within these regimes, and varying levels of experience with the development of offshore wind projects.

In the case of Germany and the UK, close proximity to other European countries has necessitated a coordinated approach to ocean management and ocean protection generally, as well as to the development of offshore renewable energies. It is also important to recognize that EU laws and regional treaties have had a strong influence on regional and national efforts to transition to renewable energy, and subsequently, on collaborative efforts to strategically plan for the use of the marine environment, including to develop offshore wind projects. These factors have likely contributed to the more expansive development of offshore wind developments generally, and to the great degree to which a multi-layered approach to assessing and regulating offshore wind is used in the German and UK regimes. Conversely, in Canada and the US, there is effectively no regional coordination with respect to the strategic assessment or planning of the marine environment.

It also warrants mentioning that the three comparator jurisdictions all have assessment and regulatory regimes that are more integrated between national, regional, and local levels than the nascent regime for offshore renewable energy found in Canada. One of the biggest factors contributing to this reality is that in Germany and the US, a portion of the marine environment is under the jurisdiction of state governments, while regions further offshore are under the jurisdiction of the federal governments. Similarly, in the UK, the structure of the UK Government and the nature of its Devolved Administrations leads to a division of responsibilities for assessing and regulating inshore and offshore projects. In Canada, this is not the case, with the federal government being solely responsible for the development of offshore wind projects beyond the low-water mark. This does not mean that state or local authorities in Germany, the UK, or the US necessarily play enormous roles in the assessment and regulation of offshore wind, but their roles are likely more than provincial governments will play in the assessment and regulation of these projects in Canada.

7.2 *The Role of Broad Marine Assessment and Planning*

The assessment and regulation of offshore wind developments in Germany and the UK are informed by broad marine assessment and planning activities conducted by governmental authorities, in particular the establishment of strategies governing the use, exploitation, and protection of the marine environment generally, and marine (or maritime) spatial planning that is conducted by appropriate government authorities, regional bodies or agencies, or consultants.

Legal requirements for marine strategizing and maritime spatial planning exist outside of the more tailored regimes that deal specifically with the assessment and regulation of offshore wind developments, but they provide crucial foundations for those assessment and regulation processes by establishing base points from which sustainable development in marine areas and cumulative effects considerations can be considered.

7.3 *The Use of Tiered Assessment*

In Germany and the UK, EU law has heavily influenced the establishment of multi-layered and tiered assessment processes that begin at a high level with broad and often regional strategic environmental assessments. These often take sustainability and cumulative effects considerations into account. Subsequent assessment processes move towards more targeted, project-specific assessments.

This tiered structure offers advantages over assessment regimes that attempt to take all aspects of sustainability and cumulative effects into account at the project-specific assessment level, especially since there is a convergence of diverse and competing interests and objectives in areas where a tiered approach is used. Among other things, a tiered approach incorporates strategic and environmental assessment into the highest stages of governmental planning so that by the time specific projects are being considered, there is already a solid framework and a foundation of information for assessing how each specific project will contribute to broader objectives and interact with other activities.

Effective tiering can help to advance sustainability objectives and enable more meaningful cumulative effects assessment by ensuring that individual projects are not assessed in isolation from the bigger picture. Additionally, individual project assessments can feed back up into higher-level assessment processes and other strategic planning processes. This helps to shape a deeper understanding of how local and regional activities are interacting and helps to incorporate cumulative effects assessment into broader efforts to achieve sustainability objectives.

7.4 *The Role of Centralized Site Identification*

In light of the importance of broad marine planning and the use of tiered assessments, there are indications that centralized, pre-emptive efforts by government to identify sites that would be feasible or likely to support offshore wind projects has benefits for environmental stewardship efforts and for proponents seeking to development projects.

The approach taken involves government authorities identifying specific marine areas where offshore wind developments could likely occur and then assessing these sites to determine whether they are suitable locations, considering other activities and uses in that space, and whether they would allow for feasible development of offshore wind projects. Prospective developers are then able to seek the necessary leases, licenses, and other authorizations

needed to construct and operate developments in those sites. Advantages of this model include better opportunities for government to exercise control in identifying development sites and ensuring such sites align with marine strategy or planning objectives.

Appendix A: Table of Key International, Regional, and European Union Laws

International Conventions	
Conventions and Protocols	*Notes*
United Nations Convention on the Law of the Sea ("UNCLOS")	The *United Nations Convention on the Law of the Sea* creates ocean zones (i.e., the "territorial sea" and the "Exclusive Economic Zone") and dictates the rights and responsibilities of coastal nations to regulate activities in the ocean. It also requires assessment of activities that have adverse impacts on the marine environment.
Convention on Environmental Impact Assessment in a Transboundary Context (the "Espoo Convention")	The *Convention on Environmental Impact Assessment in a Transboundary Context* requires parties to assess the impacts of projects, including offshore wind installations, that may have transboundary impacts. Canada, Germany, and the UK are parties to this convention.
- and -	
Protocol on Strategic Environmental Assessment to the Convention on Environmental Impact Assessment in a Transboundary Context	The *Protocol on Strategic Environmental Assessment to the Convention on Environmental Impact Assessment in a Transboundary Context* requires parties to undertake Strategic Environmental Assessment for activities that will have transboundary impacts. Germany and the UK are parties to this convention.
Regional Treaties	
Conventions	*Notes*
Convention for the Protection of the Marine Environment of the North-East Atlantic (the "OSPAR Convention")	The *Convention for the Protection of the Marine Environment of the North-East Atlantic* is a regional treaty with the objective of protecting the north-east Atlantic Ocean. It requires parties to take all

	possible steps to prevent and eliminate pollution and to protect the North-East Atlantic area covered by the convention. Measures to be taken include regular assessments of the quality of the marine environment. Germany and the UK are parties to this convention.
Convention on the Protection of the Marine Environment in the Baltic Sea Area (the "Helsinki Convention")	The *Convention on the Protection of the Marine Environment in the Baltic Sea Area* is a regional treaty with the objective of protecting the Baltic Sea. It requires parties to take all appropriate legislative, administrative, or other measures to prevent and eliminate pollution in the Baltic Sea and to preserve the sea's ecological balance. Germany is a party to this convention.
Key EU Directives and Regulations	
Directives (current consolidations)	*Notes*
Directive 2009/147/EC (Birds Directive)	Directive 2009/147/EC requires conservation measures to be taken to protect listed avian species, including measures providing for avian habitat protection. Many of the conservation measures described in the directive are analogous to those set out in Canada's *Migratory Birds Convention Act* and species at risk legislation. The directive has implications for offshore activities that could affect avian species that migrate through or inhabit offshore areas. Proposed activities that could impact protected avian species should trigger assessment requirements and may be restricted or prohibited entirely.
Directive 2014/52/EU (Environmental Impact Assessment Directive)	Directive 2014/52/EU required strengthened project-level environmental impact assessment ("EIA") processes by member states and reflects the progressive evolution of a European Economic Council environmental impact assessment directive that was first established in 1985. Notably, the directive's recitals (introductory language setting out context for the directive) recognize the growing importance to policymaking of several environmental issues and principles, including climate change, biodiversity protection, and sustainability The direct reflects increased attention by the EU Commission to the importance of taking sustainability into account in EIA processes. Although the directive's recitals refer to the importance of taking sustainability into account in EIA

	processes, the operative provisions of this directive impose limited requirements for incorporating sustainability considerations into EIA processes: per article 5(1) and paragraph 5 of Annex IV, EIA reports must consider the "sustainable availability" of natural resources (in particular land, soil, water, and biodiversity) that assessed activities will use. Under these same provisions, cumulative effects should also be described. When EIA requirements are triggered under this directive and are also triggered under the EU Habitats Directive or Birds Directive, or any other relevant EU directives, assessments should be carried out in coordinated or joint procedures. Notably, article 3 of this directive expressly requires member states to implement EIA processes that assess significant effects on biodiversity, giving particular attention to species and habitats protected under the Habitats Directive and Birds Directive.
Directive 92/43/EEC (Habitats Directive)	Directive 92/43/EEC requires conservation measures to be taken to protect several listed habitat types and plant and animal species. Among other things, the directive provides for the establishment of Natura 2000 conservation areas protecting listed habitat types and plant and animal species throughout the EU. Proposed activities that could have significant effects in Natura 2000 areas should trigger assessment requirements and may be restricted or prohibited entirely.
Directive 2008/56/EC (Marine Strategy Framework Directive)	Directive 2008/56/EC requires member states to develop marine strategies for their marine waters. Member states must initially assess the state of their marine environments, adopt targets and associated indicators for continued monitoring, and implement monitoring programs designed for ongoing assessment of the marine environment. The objective of the directive is to achieve or maintain "good environmental status" within the marine environment. Monitoring programs require spatial protection measures, networks of marine protected areas, and conservation efforts. Sustainable development objectives must be considered when creating the programs.
Directive 2014/89/EU (Maritime Spatial Planning Directive)	Directive 2014/89/EU requires member states to implement maritime spatial planning processes. The directive's recitals recognize the "high and rapidly increasing demand" for the use of marine space for many purposes, including renewable energy development. They also recognize the EU's stated interest in supporting the sustainable development of marine and coastal areas throughout the EU, including land-sea interactions.

	As regards intersections between this directive and the EU's plans for the development of offshore renewable energy resources, Article 5(2) requires member states to "aim to contribute to the sustainable development of energy sectors at sea" through their maritime spatial planning.
Directive 2001/42/EC (Strategic Environmental Assessment Directive)	Directive 2001/42/EC requires strategic environmental assessments ("SEA") of certain plans and programs that are likely to have significant effects on the environment. The stated objective of this directive includes the promotion of sustainable development, and, per Article 3(5) and Annex II, the promotion of sustainable development is a factor in the criteria that must be used to determine the likely significance of environmental effects that could be caused by a plan or program undergoing assessment. Per Articles 5(1) and 5(3) and Annexes I and II, respectively, cumulative effects information must also be taken into account. Various requirements for public participation and public access to information in SEA processes are also set out.
Directive (EU) 2018/2001 (Renewable Energy Directive)	Directive (EU) 2018/2001 is designed to establish an EU-wide framework for the promotion of renewable energy resources required to further the renewable energy transition. Among other things, it establishes a binding EU target for the share of gross EU energy consumption to be supplied by renewable energy sources in 2030, and it sets out various rules required to address aspects of energy regimes (including rules concerning financial support for renewable energy resources, other economic matters, guarantees of origin, and sustainability and greenhouse gas savings requirements for certain fuel types). This directive is currently undergoing a law reform process, and strengthened targets and requirements are anticipated in 2023.
Regulations (current consolidations)	*Notes*
Regulation (EU) 2018/1999	This regulation requires member states to prepare integrated national energy and climate plans. These plans feed into the regime established under the EU Renewable Energy Directive described above.
Regulation (EU) No 347/2013	This regulation sets rules for identifying and developing "projects of common interest", which are energy projects that benefit EU energy networks. Particularly, its goal is to streamline permitting for major energy infrastructure projects that contribute to these energy networks.

Appendix B: Table of Key Germany Laws, Legal Processes, and Authorities

Germany's Federal Legislation	
Legislation (names provided in English, with short forms reflecting German names as commonly abbreviated in the literature)	*Notes*
Spatial Planning Act ("ROG")	Our research indicates that the *Spatial Planning Act* implements the EU Maritime Spatial Planning Directive at the federal level in Germany. It recognizes federal authority to conduct maritime spatial planning in the EEZ and requires maritime spatial planning therein. Germany's new Maritime Spatial Plan entered into force on September 1, 2021. Three German states (Lower Saxony, Schleswig-Holstein and Mecklenburg-Vorpommern) also have marine spatial plans that cover their portions of the Territorial Sea (from the coast to 12 NM seaward) in the Baltic Sea and North Sea.
Offshore Wind Energy Act ("WindSeeG")	Our research indicates that the *Offshore Wind Energy Act* is the primary piece of legislation governing offshore wind development assessment, licensing, and permitting processes in Germany today. Offshore wind energy projects predating the WindSeeG were governed under the earlier Marine Installations Ordinance ("SeeAnIG"). The WindSeeG sets out the regime under which the Federal Maritime and Hydrographic Agency ("BSH") conducts maritime spatial planning, strategic environmental assessment, and site investigations to identify marine areas in the EEZ that are suitable for offshore wind developments; it specifically connects maritime spatial planning requirements set out in the Germany's *Spatial Planning Act* and the EU Maritime Spatial Planning Directive to the assessment, licensing, and permitting of offshore wind developments and establishes corresponding procedural requirements.
Renewable Energy Act ("EEG")	Our research indicates that the *Renewable Energy Act* establishes renewable energy targets for Germany, along with financial incentive regimes designed to promote renewable energy resources.

Environmental Impact Assessment Act ("UVPG")	Our research indicates that the *Environmental Impact Assessment Act* implements the EU's Environmental Impact Assessment Directive and Strategic Environmental Assessment Directive, and establishes the requirements for environmental impact assessment and strategic environmental assessment processes at the federal level in Germany.
Federal Nature Conservation Act ("BNatSchG")	Our research indicates that the *Environmental Conservation Act* implements the EU Habitats Directive and Birds Directive. Offshore wind developers must ensure their projects comply with habitat and species requirements set out therein. Nature conservation assessments required by this Act form part of the offshore wind development planning approval process administered by the BSH and are analogous to the habitats regulations assessments conducted in the UK.
Germany's Assessment and Decision-making Authorities	
Authority (names provided in English, with short forms reflecting German names as commonly abbreviated in the literature)	*Notes*
Federal Maritime and Hydrographic Agency ("BSH")	The BSH plays the primary role in conducting maritime spatial planning for offshore wind developments in the EEZ under the federal *Spatial Planning Act* and the EU Maritime Spatial Planning Directive. The BSH also oversees project-specific environmental impact assessments and other authorization processes that developers are required to undergo.
Federal Network Agency ("BNetzA")	Within the "central" model for assessment, licencing, and permitting of offshore wind developments, in which the BSH identifies sites that will be opened to a tendering process, the tendering process is conducted by the BNetzA.
Federal Agency for Nature Conservation ("BfN")	As the authority responsible for the *Federal Nature Conservation Act*, the BfN provides input into the assessment, licensing, and permitting processes for offshore wind developments when nature conservation assessments required by the Act are carried out.

Appendix C: Table of Key United Kingdom Laws, Legal Processes, and Authorities

Key Government, Laws, Legal Processes, and Assessment and Decision-making Authorities Generally Application in the United Kingdom	
Key Statutes	*Notes*
Electricity Act 1989	The *Electricity Act, 1989* is the source of the requirement for a "section 36 consent". In specified English waters, section 36 consents are required for offshore wind developments with capacities between 1 MW and 100 MW. In specified Welsh waters, section 36 consents are required for offshore wind developments with capacities between 1 MW and 350 MW. In specified Scottish waters, section 36 consents are required for offshore wind developments with capacities greater than 1 MW that are situated up to 12 NM from shore; section 36 consents are also required for developments with capacities greater than 50 MW that are situated between the 12 NM limit and the 200 NM limit.
Energy Act 2004	The *Energy Act 2004* establishes definitions for "Renewable Energy Zone" ("REZ") and the "Scottish part" of an REZ (i.e., any part of an REZ that the Secretary of State has designated as an area in relation to which the Scottish Ministers have functions). These definitions are set out in Part 2 of the Act, which deals with "Sustainability and Renewable Energy Resources". In general, REZs are areas within the EEZs of the UK which, under UNCLOS, are areas within which the UK has rights to exploit water and wind energy sources; however, REZs can also be extended by Orders in Council to other such areas within UK jurisdiction (such as territorial waters).
Marine and Coastal Access Act 2009 (the "*MCAA*")	The *MCAA* is a wide-ranging statute that covers several matters related to the UK's marine and coastal areas, including the establishment of marine policies and plans, fisheries governance and licensing, and the licensing and permitting of energy activities in UK marine areas. As regards matters relating directly to the assessment, licensing, and permitting of offshore wind developments in the UK, the Act does several things: it establishes and empowers the Marine Management Organization ("MMO"); it intersects with the *Planning Act 2008* to establish the seabed licensing and development consent regime that applies to English, Northern Irish, and Welsh waters and to Scottish offshore waters (marine waters between the 12 NM and 200 NM limit off the Scottish coast) that do not fall under Scottish jurisdiction; and, it requires the development of marine policy statements and marine sectoral plans.

	Notably, subsection 2(1)(a) of the Act requires the MMO to carry out its functions in such a way that marine activities overseen by the MMO are managed, regulated, or controlled "with the objective of making a contribution to the achievement of sustainable development". The *MCAA* provides for the establishment of Marine Policy Statements ("MPSs") and Marine Plans. These two documents are tiered: once they are established, MPSs govern Marine Plans in areas falling under their policies, provided they meet specific requirements set out in the Act. The processes for establishing, amending, and withdrawing from MPSs are set out in sections 44-48 of the *MCAA*. Under subsection 44(1)(a), MPSs are expected to set out policies for contributing to the achievement of sustainable development in the UK marine area. The UK Secretary of State and the devolved administrations of Northern Ireland, Scotland, and Wales are all empowered to establish MPSs, though the Act sets specific requirements on how they can do so, requiring cooperation between the respective governments. Schedule 5 of the Act sets additional requirements for the establishment and amendment of MPSs. Notably, paragraph 7 of Schedule 5 requires that sustainability appraisals ("SAs") be carried out when MPSs or MPS amendments are being developed, and it states that relevant authorities can only include proposed contents in MPSs if the results of the SA "indicate that it is appropriate to do so". The processes for establishing, amending, and withdrawing from Marine Plans are set out in sections 49-54 of the *MCAA*, and further requirements are set out in Schedule 6 of the Act. Like the Schedule 5 requirement for the carrying out of SAs in the development of MPSs, Schedule 6 similarly requires that marine plan authorities preparing Marine Plans carry out SAs of what they propose to include in their plans, and it similarly states that authorities can only proceed with their proposals if they consider that the SA's results indicate that it is appropriate to do so (see paragraph 10).
Planning Act 2008	The *Planning Act 2008* sets out a regime in which Nationally Significant Infrastructure Projects ("NSIPs") will be subject to assessment, licensing, and permitting processes that are different from those applied to similar projects at a smaller scale. Under the Act, NSPIs require Development Consent Orders ("DCOs"), which are granted through assessment, licensing, and permitting processes that are consolidated under the purview of the Planning Inspectorate, which is the planning authority that is mandated to conduct them. In English waters up to the seaward limits of the territorial sea, offshore wind developments with capacities greater than 100 MW are NSIPs requiring DCOs. The same is true of offshore wind developments that are in Renewable Energy Zones, except any parts of such zones within the Welsh zone or in which the Scottish Ministers have functions. In Welsh inshore waters and the Welsh zone, offshore wind developments with capacities greater than 350 MW are NSIPs requiring DCOs. (The phrase "Welsh zone" is defined in the *Government of Wales Act 2006*.)

	Offshore wind developments in Scottish inshore waters, Scottish parts of REZs, and part of the UK's EEZ in relation to which the Scottish Ministers have functions are not subject to the *Planning Act*'s NSPI regime.
Key Regulations	*Notes*
Conservation of Offshore Marine Habitats and Species Regulations 2017	These regulations transpose aspects of the EU Habitats Directive into UK law.
Environmental Assessment of Plans and Programs Regulations 2004	These regulations transpose the EU Strategic Environmental Assessment Directive into UK law.
Marine Strategy Regulations 2010	These regulations transpose the EU Marine Strategy Framework Directive into UK law.
Marine Works (Environmental Impact Assessment) Regulations 2007	These regulations transpose the EU Environmental Assessment Directive in relation to certain marine works into UK law.
Key Policy	*Notes*
UK Marine Policy Statement	The UK Marine Policy Statement is adopted jointly by the governments of England, Northern Ireland, Scotland, and Wales. A public authority making an authorization or enforcement decision must do so in accordance with an appropriate marine policy document: in this case, the MPS. Authorizations include determinations on applications for projects that affect the UK marine area, except for projects that require a Development Consent Order under the *Planning Act 2008*. This means the MSP applies to projects that are not considered nationally significant infrastructure projects.

Assessment and Decision-making Authorities	*Notes*
The Crown Estate	The Crown Estate is responsible for leasing offshore wind development sites (seabed leases) in the waters of England, Northern Ireland, and Wales. Offshore wind developers can only apply for seabed leases when leasing rounds have been opened by The Crown Estate.
Marine Management Organization ("MMO")	The Marine Management Organization is responsible for the marine planning system, which includes licensing marine developments in English and Northern Irish waters. This includes responsibilities for decisions for offshore generating stations with a generating capacity between 1 and 100 MW. It also oversees the environmental impact assessment process for offshore wind developments in England and Northern Ireland.
Planning Inspectorate	The Planning Inspectorate is responsible for administering the Development Consent Order process for Nationally Significant Infrastructure Projects.
Key Government, Laws, Legal Processes, and Assessment and Decision-making Authorities in Northern Ireland	
Key Statutes and Regulations	*Notes*
Marine Act (Northern Ireland) 2013	The *Marine Act (Northern Ireland) 2013* requires marine planning and requires Northern Ireland's Department of Agriculture, Environment and Rural Affairs to carry out its functions under the Act "in the way it considers best calculated to contribute to the achievement of sustainable development in Northern Ireland", except where the department considers that it is not reasonably practical to do so (see section 1).
Electricity (Northern Ireland) Order 1992	The *Electricity (Northern Ireland) Order 1992* gives Northern Ireland's Department for the Economy ("DfE") responsibility to grant consent for the construction, extension, or operation of electricity generating stations in Northern Ireland. As concerns offshore wind developments, such consents are required for generating stations with capacities greater than 1 MW that are situated in waters within Northern Ireland or within Northern Ireland's

	territorial sea. Offshore generating stations that are within areas that require planning permission under the *Planning Act (Northern Ireland) 2011* are an exception to this rule and instead require planning permission under that Act.
Assessment and Decision-making Authorities	*Notes*
Department of Agriculture, Environment and Rural Affairs	The Department of Agriculture, Environment and Rural Affairs ("DAERA") is responsible for carrying out marine planning under the UK's *Marine and Coastal Access Act* and the *Marine Act (Northern Ireland) 2013.* It is also responsible for marine licensing in Northern Ireland's territorial sea, which is carried out by the Marine and Fisheries Division. DAERA will oversee environmental impact assessments carried out as part of these processes.
Department of Enterprise, Trade and Investment	The Department of Enterprise, Trade and Investment has overseen strategic environmental assessment of offshore wind and marine renewable energy in Northern Ireland.
Department for the Economy	The Department for the Economy is responsible for granting consents for the construction, extension, or operation electricity generating stations in Northern Ireland under the *Electricity (Northern Ireland) Order 1992.*
Key Government, Laws, Legal Processes, and Assessment and Decision-making Authorities in Scotland	
Key Statutes and Regulations	*Notes*
Environmental Assessment (Scotland) Act 2005	Among other things, this statute requires strategic environmental assessment by requiring that certain public plans, programmes, and strategies undergo environmental assessment. Marine sectoral planning in Scotland is undertaken in fulfillment of this requirement as well as requirements set out in the *MCAA*.
Marine (Scotland) Act 2010	The *Marine (Scotland) Act* establishes the legal framework for the conservation and development of the marine environment in Scottish inshore waters. Among other things, it provides the legislative framework for marine planning,

	marine protected areas, and licensing and enforcement of marine activities within the jurisdiction of the Scottish Ministers. Section 3 of the Act imposes a high-level requirement stating that the Scottish Ministers and other public authorities exercising functions under the Act that affect Scottish marine areas must do so in a way that is "best calculated to further the achievement of sustainable development, including the protection and, where appropriate, enhancement of the health of that area, as far as is consistent with the proper exercise of that function". Section 4 imposes a similar requirement concerning the need to act in a way that is best calculated to mitigate and adapt to climate change. The EU Maritime Spatial Planning Directive is implemented through the joint operation of the *Marine (Scotland) Act 2010* and the *MCAA*, through their requirements that the Scottish Ministers prepare and adopt a National Marine Plan for the Scottish marine area. Under section 5 of the *Marine (Scotland) Act 2010*, such plans are expected to express policies connected to sustainable development of the Scottish marine area, among other things.
Conservation (Natural Habitats, &c.) Regulations 1994 *Conservation of Habitats and Species Regulations 2017* *Conservation of Offshore Marine Habitats and Species Regulations 2017*	These three sets of regulations implement the EU Habitats and Birds Directives in areas within the jurisdiction of the Scottish Ministers.
Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017 *Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017* *Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017*	These three sets of regulations implement the EU Environmental Impact Assessment Directive in areas within the jurisdiction of the Scottish Ministers.

Assessment and Decision-making Authorities	*Notes*
Scottish Ministers	The Scottish Ministers have several responsibilities related to the assessment, licensing, and permitting of offshore wind developments within their jurisdiction, including responsibilities to engage in high-level national marine planning and the carrying out of strategic environmental assessments concerning their plans and programs, as well as decision-making authority in some areas of the assessment, licensing, and permitting regime.
Crown Estate Scotland	The Crown Estate Scotland is responsible for leasing offshore wind development sites (seabed leases) in Scottish waters. As in the regime that applies to English, Northern Irish, and Welsh offshore areas, offshore wind developers can only apply for seabed leases when leasing rounds have been opened by the responsible authority. Seabed leasing rounds in Scotland are preceded by a sectoral marine planning process in which marine planning activities have assessed various issues related to suite suitability.
Marine Scotland – in particular, the Marine Scotland-Licensing Operations Team ("MS-LOT")	Marine Scotland undertakes sectoral marine planning before leasing rounds for offshore wind developments are opened. The Sectoral Marine Plan for Offshore Wind Energy developed in 2019-2020 was subject to public consultation and included strategic environmental assessment, habitats regulation appraisal, a sustainability appraisal, and social and economic impact assessment, among other things. MS-LOT is responsible for licensing offshore wind developments in Scottish waters and also oversees the environmental impact assessment process for offshore wind developments in Scottish waters, which are part of the broader licensing process.
Key Government, Laws, Legal Processes, and Assessment and Decision-making Authorities in Wales	
Key Statutes and Regulations	*Notes*
N/A	The primary statutes and regulations related to the assessment and regulation of offshore wind developments are UK statutes and regulations discussed above that apply to both England and Wales.

Assessment and Decision-making Authorities	*Notes*
Welsh Ministers	The Welsh Ministers are the responsible authority that can grant "section 36 consents" for offshore wind facilities that fall within the Welsh Government's jurisdiction—such consents must be granted in keeping with the requirements set out in the UK's *Electricity Act 1989.*
Natural Resources Wales	Marine licensing in the Welsh territorial sea is carried out primarily by Natural Resources Wales, which exercises authority and follows processes established under the UK's *Marine and Coastal Access Act*. Natural Resources Wales will oversee habitats regulations assessments and environmental impact assessments that are required as components of marine licensing processes within the Welsh Government's jurisdiction.

Appendix D: Table of Key Federal United States Laws, Legal Processes, and Authorities

United States Federal Legislation	
Legislation	*Notes*
National Environmental Policy Act ("*NEPA*")	The *NEPA* requires the United States federal government to pre-emptively review environmental impacts of all "major federal actions", potentially including adoption of plans, programs, and approval of projects. The function of these reviews is analogous to a strategic environmental assessment. These high-level assessments can exclude a type of activity from further assessment if there are no significant environmental effects; otherwise, *NEPA* requires reviews for lower-level decisions like individual project approvals. *NEPA* requires environmental assessments or environmental impact statements (a more rigorous assessment process) depending on the significance of environmental effects or impacts. *NEPA* requires these assessments to consider factors often associated with sustainable development, like long-term future effects, and recognition of the need to preserve resources for future generations. Cumulative effects must be considered.
Outer Continental Shelf Lands Act ("*OCSLA*")	The *OCSLA* gives the United States federal government jurisdiction over the Outer Continental Shelf ("OCS"), which is the submerged lands, subsoil, and seabed beyond state jurisdiction (generally, beyond 3 NM from the coast). The *OCSLA* empowers the federal government to lease areas in the OCS and to approve and manage all development within those areas. It provides the legislative framework for licencing, permitting, and ongoing monitoring and management of offshore wind developments within federal waters. The *OCSLA* requires the Bureau of Ocean Energy Management to issue leases in the OCS on a competitive basis.

The United States' Assessment and Decision-making Authorities	
Authority	*Notes*
Bureau of Ocean Energy Management ("BOEM")	The Bureau of Ocean Energy Management ("BOEM") is a bureau within the US Department of the Interior ("DOI"), which has primary responsibility over the development of energy resources on the US Outer Continental Shelf. The BOEM is responsible for assessment and authorization of offshore wind developments. Its process is usually triggered when offshore wind proponents apply to acquire and develop Outer Continental Shelf leases. BOEM carries out planning, leasing, and site assessment processes, including centralized site identification and high-level assessment.
Bureau of Safety and Environmental Enforcement ("BSEE")	The Bureau of Safety and Environmental Enforcement ("BSEE") is another bureau within the US Department of the Interior ("DOI"), which has primary responsibility over the development of energy resources on the US Outer Continental Shelf. Through regulatory splitting of powers between the BOEM and BSEE that took effect in January 2023, the BSEE oversees environmental monitoring and enforcement of approved offshore wind development activities.

Appendix E: Table of Key Canadian Laws, Legal Processes, and Authorities

<table>
<tr><th colspan="2">Canada's Federal Legislation</th></tr>
<tr><th>Legislation</th><th>Notes</th></tr>
<tr><td>Canada-Newfoundland and Labrador Offshore Petroleum Resources Atlantic Accord Implementation Act

- and -

Canada-Newfoundland and Labrador Atlantic Accord Implementation Newfoundland Act</td><td rowspan="2">The Accord Acts create the Canada-Newfoundland and Labrador Offshore Petroleum Board and the Canada-Nova Scotia Offshore Petroleum Board (the "offshore petroleum boards"), which are responsible for issuing licences for offshore oil and gas exploration and development and otherwise regulating offshore oil and gas activities.

Currently, the offshore petroleum boards are federal authorities under the Impact Assessment Act ("IAA"). Additionally, the IAA contains provisions not currently in force that would make the offshore petroleum boards "lifecycle regulators" under the Act, which would give them more power to shape impact assessment processes.

The Government of Canada and the respective governments of Newfoundland and Labrador and Nova Scotia have announced their intention to amend the Accord Acts and expand the mandates of the offshore petroleum boards to reconstitute them as "offshore energy boards" with broader mandates to oversee renewable and non-renewable offshore energy activities. If and when this occurs, it is possible that the newly mandated boards may be given regulatory powers and oversight responsibilities connected to the assessment and regulation of offshore wind activities that would otherwise belong to the Canada Energy Regulator.</td></tr>
<tr><td>Canada-Nova Scotia Offshore Petroleum Resources Accord Implementation Act

- and -

Canada-Nova Scotia Offshore Petroleum Resources Accord Implementation (Nova Scotia) Act</td></tr>
<tr><td>Canadian Energy Regulator Act
("CERA")</td><td>The Canadian Energy Regulator Act ("CERA") requires the Canada Energy Regulator ("CER") to provide an authorization for any offshore renewable energy project or offshore power line project. When deciding whether to issue an authorization, the CER must consider certain factors, including cumulative effects, and the result of any relevant regional assessment or strategic assessment that has been conducted under the federal Impact Assessment Act.

There are currently no regulations under the CERA that dictate additional requirements related to offshore wind developments, but the federal government has signalled its intention to establish</td></tr>
</table>

	Offshore Renewable Energy Regulations under the Act. These regulations may give newly mandated offshore energy boards additional responsibilities over offshore wind developments in Atlantic Canadian waters.
Federal Real Properties and Federal Immovables Act	The *Federal Real Properties and Federal Immovables Act* grants the federal government power to authorize federal seabed lands for offshore renewable energy development using a land tenure regime.
Impact Assessment Act (“*IAA*”)	The *Impact Assessment Act* (“*IAA*”) requires certain kinds of projects, including offshore wind developments that will have 10 or more turbines, to undergo an impact assessment (“IA”) process, which is a project-level assessment of the environmental and socio-economic impacts of a project. IAs require consideration of a project’s contribution to sustainability and also require cumulative effects assessment. When an IA is required for a project that is also regulated by a “lifecycle regulator”, the IA must be conducted by an integrated review panel (“IRP”). Offshore wind developments that require IAs are also regulated by a lifecycle regulator, the Canada Energy Regulator, and so must be conducted by IRPs. The *IAA* establishes regional assessment (“RA”) and strategic assessment (“SA”) processes in addition to the IA process. An RA is a process that is used to identify and consider regional environmental and socio-economic impacts of proposed activities, while an SA is a process that is used to assess the impacts of a government policy, plan, program, or issue that is related to impact assessment processes. Both processes must consider contributions to sustainability and cumulative effects.
Canada’s Assessment and Decision-making Authorities	
Authority	*Notes*
Canada Energy Regulator (“CER”)	The Canada Energy Regulator (“CER”) is mandated to make decisions related to certain energy projects within federal jurisdiction, including offshore renewable energy projects. The CER is

	responsible for assessing proposed offshore renewable energy projects and must issue an authorization before the project can commence (in addition to other regulatory requirements). The CER has additional responsibilities under the *Impact Assessment Act* as a "federal authority" and "lifecycle regulator".
Impact Assessment Agency of Canada	The Impact Assessment Agency of Canada is responsible for administering the federal *Impact Assessment Act*. It administers impact assessment processes and conducts impact assessments that are not referred to review panels; it may also be responsible for leading regional assessments or strategic assessments.

Appendix F: Summary Table of Regimes Assessing and Regulating Offshore Wind

	High-Level Planning			Planning for Wind	Project-Level
	Marine Spatial Planning (MSP)	**Strategic Environmental Assessments (SEAs) of Plans, Policies, and Programs**	**High-Level Regional Assessment[188]**	**Centralized Site Assessment**	**Project-Level Assessments of Offshore Wind**
Canada	*Note: Canada is in the process of establishing MSP, but it does not currently inform regional marine planning for activities or offshore permitting.*	SEAs of policies, plans and programs are conducted under a federal directive, and but consider sustainability and cumulative effects. The federal government can designate a "strategic assessment" under the *IAA* to assess plans, policies, and programs.	Under the *Impact Assessment Act*, the federal government can designate a "regional assessment" to assess a marine area. Considers sustainability and cumulative effects.	*Note: It is our understanding that the Regional Assessments of Offshore Wind Developments may include a component focused on identifying areas suitable for offshore wind projects.*	All offshore wind projects with 10 or more turbines will be required to undergo an impact assessment process unless exempted by regulation after a regional or strategic assessment.
Germany Requirements are informed by EU directives.	MSP must support sustainable development. Developed marine strategies, informed by consideration of sustainability and cumulative effects assessment.	SEA required for plans and programs (including MSP) likely to have significant impacts on environment. Sustainable development goals are factored into SEAs.	Marine Strategy requires assessment and monitoring of status of marine environment. Assessment feeds into MSP.	Maritime sectoral planning used to make Site Development Plan. Areas are identified where offshore wind may occur. This informs tendering process. An open-door process exists, where proponents propose potential development sites.	Environmental Impact Assessments ("EIAs") and nature conservation assessment are required at project level. Information from SDP will inform EIAs.
United Kingdom Current requirements were informed by EU directives.	UK Marine Policy Statement governs marine planning in designated regions. Creation of marine plans is informed by assessing sustainability. Public authorities must made decisions or given authorization in accordance with marine policy documents.	SEAs are conducted to support the relevant government authority to support administration of competitive leasing for offshore wind. For example, the Scottish government requires cumulative effects and a project's relevance to sustainable development to be considered.		Scotland, in particular, uses sectoral marine planning and analysis to identify prospective lease sites. The Crown Estate (all of UK except Scotland) has used spatial analysis to assess prospective lease sites. The UK relies exclusively on competitive leasing where the government identifies sites.	EIAs are required for offshore wind projects. Cumulative effects *should* be considered. Offshore wind projects considered Nationally Significant Infrastructure Projects undergo assessment prior to receiving consents. Projects are assessed with achievement of sustainable development in mind.
United States		The federal government is required to pre-emptively review environmental effects of "major federal actions". High-level *NEPA* review conducted as part of offshore site planning phase.		When proponents apply for a lease, federal government assesses whether there is competitive interest, which includes identification of Wind Energy Areas.	Assessment of individual wind projects is also required prior to licencing (i.e., operations).

[188] Refers to high-level government assessment of environmental conditions in a defined marine area.

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