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# Canada Offshore Renewable Energy Regulations

April 2024

Canada

# *Canadian Energy Regulator Act (CER Act)*

- In 2019, the *Canadian Energy Regulator Act (CER Act)* came into force and included Part 5 - *Offshore Renewable Energy Projects and Offshore Power Lines*
- Part 5 provides the legislative framework for oversight of the full life cycle of an offshore renewable energy (ORE) project and enables the CER to review and authorize activities related to ORE projects in Canada's federal offshore areas
- Among other things, gives authority to make regulations respecting:
  - works and activities related to an ORE project for the purposes of **safety, security, and environmental protection**
  - the contents of an application for authorization to carry out a work or activity
  - any conditions that an authorization is subject to
- Gives authority to the CER to also determine other requirements of an application for authorization AND to establish any other conditions of authorization
- It **does not** address matters related to seabed licencing, which is outside the mandate of the CER



# Offshore Renewable Energy Regulations (ORER) Initiative

- The ORER Initiative was established in 2020 to develop modern safety, security, and environmental protection regulations that will apply to work and activities related to ORE projects in Canada's federal offshore areas
- Stakeholders were engaged at multiple points in the Initiative:
  - October 2020 – a discussion paper provided an overview of ORE projects and NRCan's proposed approach to regulating these activities. A summary paper of the comments received from stakeholders was published to the ORER webpage
  - December 2021 – a technical requirements paper provided the proposed requirements that would form the basis of future regulations
  - June 2022 – a workshop on the Certificate of Fitness process and the role of the Certifying Authority was held with interested parties to review the proposed approach to ensuring that project facilities are safe for the intended use
  - May 2023 – a draft version of the regulations was shared with key stakeholders who actively participated in the earlier engagement
  - February 2024 – proposed *Canada Offshore Renewable Energy Regulations* are pre-published in *Canada Gazette*, Part I, for a 30-day public comment period (ended March 25, 2024)
- Target publication in CG2 and entrance into force – Fall 2024



## Future Regulations under amended Accord Acts

- Bill C-49 proposes amendments to the *Canada-Nova Scotia Offshore Petroleum Resources Accord Implementation Act* and the *Canada-Newfoundland and Labrador Atlantic Accord Implementation Act* to expand the joint-management framework and the mandates of the CNSOPB and C-NLOPB to include the regulation of ORE in the Canada-NS and Canada-NL offshore areas
- Once in force, the CER Act would no longer apply in the Canada-NS and Canada-NL offshore areas
- The proposed CORER is expected to be used as the basis for future regulations under the amended Accord Acts
- Any proposed regulations under the future amended Accord Acts would be addressed in a separate regulatory proposal, should Bill C-49 receive Royal Assent



# Proposed *Canada Offshore Renewable Energy Regulations* (CORER)

- Establishes comprehensive requirements to guide the work and activities related to ORE projects to ensure they are undertaken in a manner that meets prevailing industry standards and best practices for safety, security, and environmental protection
- Combines elements of both outcome-based and management-based regulatory design to:
  - promote continual advancement of safety, security, and environmental protection outcomes
  - provide the necessary flexibility for the regulations to evolve with the continual change in the best available technologies and methodologies
- CORER contemplates three major phases of an ORE project:
  - Site assessment
  - Construction and Operations
  - Decommissioning and Abandonment



# General Obligations – Conduct of Work or Activity

- The operator must ensure that work is carried out in a manner that protects safety, security, and the environment, by:
  - ensuring the safe and reliable operations of all project facilities and ensuring that those facilities are tested, inspected, maintained, operated, and handled to ensure safety, security, and environmental protection
  - taking all reasonable measures to:
    - prevent debris and to minimize the introduction into the environment of any substance or form of energy that is likely to have an adverse impact on the environment
    - minimize damage to property
    - minimize any adverse impacts on other uses of the sea
  - ensuring there is adequate supervision of personnel, and that those personnel are competent and in sufficient numbers to ensure the work is executed in a manner that ensures safety, security, and environmental protection
  - ensuring ongoing compliance with all the plans and programs that are required as part of the authorization, and making sure everyone involved in the project also follows those plans and programs



# Applications for Authorization

- CORER contemplates an application for authorization for the suite of work or activities involved in each major phase of a proposed ORE project
- The application must demonstrate that the work will be carried out in a manner that:
  - is safe and secure
  - protects property and the environment
  - is in conformity with all applicable laws in respect of safety, security, and environmental protection
  - takes into account the potential future impacts of climate change
- The level of detail of the information submitted in an application and as a condition of an authorization must be proportionate to the scope, nature and complexity of the proposed work



# Application requirements – Every Application

- CORER sets out the requirements of every application, as well as requirements that are phase-specific
- Every application, regardless of the phase of the project, must provide, among other things:
  - a general description of the project as a whole and a description, execution plan, and schedule of the specific proposed work to be undertaken during the phase in question
  - a risk assessment that addresses the safety and security of persons and infrastructure at or in the vicinity of an operations site, as well as the target levels of safety and security that the operator proposes to meet
  - an environmental and socio-economic assessment in respect of the proposed work, as well as the target levels of environmental protection that the operator proposes to meet
  - the results of any relevant surveys and monitoring programs, and how the results were considered in planning the work
  - a list of the permits required and measures to be taken to ensure compliance with all applicable laws related to safety, security and environmental protection
  - a description of the vessels and support craft to be used





# Conditions of Authorization – Every Authorization

- CORER sets out the conditions of every authorization, as well as conditions of authorization that are phase-specific
- Conditions of Authorization **MUST** be satisfied/approved by the regulator **BEFORE** any work in the offshore area can commence
- Four main conditions of every authorization include:
  - Management System
  - Safety Plan
  - Environmental Protection Plan
  - Emergency Management Plan



# Management System

- Establishes the overall direction and framework for the operator in reducing risks to safety, security and the environment, including measures for emergency response and for ensuring the reliable operation of ORE facilities
- It includes overarching policies, processes, procedures and protocols related to safety, security, environmental protection, reliability of facilities and emergency response, including those related to:
  - identification and assessment of hazards and risks to safety, security and environmental protection
  - processes for continuous improvement based on hazard identification/analysis and related corrective actions
  - training, qualifications, competence and supervision of personnel
  - inspecting, monitoring, testing and maintaining all facilities
  - monitoring compliance and preventing non-compliance with the conditions of the authorization and applicable laws
  - coordination and management of work of all parties involved, and managing changes that could affect safety, security, environmental protection, reliability of facilities, or emergency response
  - internal and external communication of information, including receiving and responding to information and concerns raised by the general public related to safety, security and environmental protection



# Safety Plan

- Builds upon the preliminary risk assessment in the application and is a comprehensive document intended to guide, in detail, the safe execution of the authorized work
- Sets out the procedures, practices, and resources necessary to safely carry out the authorized work, and includes, among other things, the:
  - studies undertaken to identify and assess the safety hazards and risks associated with the work
  - identification of the safety hazards and risks and the measures to be taken to anticipate, monitor, avoid, and reduce them
  - methods for communicating with people directly affected by those hazards, informing them about the risks and mitigation measures
  - identification of the facilities, equipment, and systems that are critical to safety and the procedures/policies for their inspection, testing, and maintenance
  - training needed for those doing the work, including their required experience, qualifications, and competencies



# Environmental Protection Plan (EPP)

- Builds upon the preliminary environmental assessment that was submitted in the application and is a comprehensive document intended to guide, in detail, how the operator will protect the environment while undertaking the authorized work
- Sets out the procedures, practices, and resources that will be put in place to manage environmental hazards and protect the environment and includes, among other things:
  - studies undertaken to identify and assess the environmental hazards and risks associated with the work
  - Identification of the environmental hazards and risks and the measures that will be taken to anticipate, monitor, avoid, and reduce them
  - methods for communicating with people directly affected by those hazards, informing them about the risks and mitigation measures
  - procedures that will be followed if an archaeological site or a burial ground is discovered during the authorized work
  - identification of the facilities, equipment, and systems that are critical to the protection of the environment and the procedures/policies that will be put in place for their inspection, testing, and maintenance.



# Emergency Management Plan (EMP)

- Sets out the processes, procedures, and resources for preparing for, managing, and responding to any emergency that may arise during the authorized work and includes, among other things:
  - identification of potential types of incidents, an assessment of the associated risks, and planned responses for each
  - organizational structure and chain of command for emergency response
  - methods for real-time monitoring of facilities and activities
  - measures to inform and instruct first responders, medical personnel, organizations, agencies, and other users of the ocean about facility locations, potential emergencies, and emergency procedures
- Emergency response procedures must be developed and address the response for each type of incident, safe shutdown procedures, evacuation plans, incident notification and investigation, coordination and communication with federal, provincial, municipal authorities, or Indigenous governing bodies during emergencies



# Site Assessment

- In addition to the requirements of every application for authorization, applications for the site assessment phase would also need to provide:
  - details about the proposed surveys, analyses or assessments to be conducted
  - information about any equipment that would be installed or used for the site assessment work and how that equipment would be abandoned or removed
- No additional conditions of authorization at the site assessment phase



# Construction and Operations – additional Application requirements

- The operator must provide details on the full life of the project, including high-level plans for the eventual decommissioning and abandonment of the project
- In addition to the requirements of every application for authorization, applications for the construction and operations phase must include details related to the full life cycle of the project, including:
  - description of the proposed facilities, equipment, and systems for the project, and the industry standards and best practices proposed to be used in designing the project
  - the **quality assurance program** for the monitoring, documenting, and managing of quality during the fabrication, transportation, installation, and commissioning of project facilities
  - the proposed Certifying Authority to be used for the project, their qualifications, and the proposed general scope and timing of the activities they will perform
  - high-level description of the eventual plan for decommissioning and abandonment of the project, including the forecasted costs and how they will be financed/paid



# Construction – additional Conditions of Authorization

- In addition to the conditions of every authorization, the following documents/information must be submitted to and approved by the Regulator before any authorized construction work commences:
  - **facility design report** that provides comprehensive technical details regarding the design of the project's facilities
  - **fabrication and construction report** that provides comprehensive technical details of how those facilities would be fabricated, transported, constructed, and installed
  - **facilities reliability report** that outlines the measures that would be put in place to ensure the reliability of the power system and the impacts of the project on the bulk power system
  - preliminary version of the **integrity management plan** that is required under the proposed regulations which, once finalized, would address the testing, inspection, monitoring, and maintenance of project facilities
  - the **Certifying Authority's plan for the periodic inspection** of facilities during the construction phase
  - any navigational safety zones that are proposed to protect against collision by vessels and aircraft, or a justification as to why navigational safety zones are not needed





# Design of Facilities

- The operator must ensure that all facilities are designed to:
  - ensure safety, security, and environmental protection, taking into account their intended use, location, and any site-specific physical and environmental conditions
  - withstand or avoid any reasonably foreseeable physical or environmental conditions without compromising structural integrity or any systems or equipment that are critical to safety, security and environmental protection
- The design must conform with prevailing industry standards and best practices and use the best available technologies for minimizing adverse effects on people, infrastructure, and the environment



# Operations – additional conditions of Authorization

- In addition to the conditions of every authorization, the following documents/information must be submitted to and approved by the Regulator before any authorized operations work commences:
  - finalized **integrity management program** that meets the detailed specifications outlined in the proposed Regulations
  - preliminary version of the **decommissioning and abandonment plan** that provides an update to, and builds upon, the high-level description of that plan and forecasted costs that were previously provided at the application stage
  - the **Certifying Authority's plan for the periodic inspection** of facilities during operations
  - the **Certificate of Fitness**, issued by the Certifying Authority, confirming that the project's facilities are fit for the purposes for which they are to be used and can be operated without posing a threat to safety, security, or the environment
  - any navigational safety zones that are proposed to protect against collision by vessels and aircraft, or a justification as to why navigational safety zones are not needed



# Decommissioning and Abandonment – additional Application requirements

- In addition to the requirements of every application for authorization, applications for the decommissioning and abandonment phase must also provide, among other things:
  - details on the proposed approach to decommissioning and abandonment, including the details on the proposed methods for removal, transportation, and disposal
  - assessment of the condition of the infrastructure that will be decommissioned and/or abandoned
  - methods that will be used to restore the site to its original state
  - updated forecast of the costs associated with decommissioning and abandonment, along with details on how it will be financed/paid



# Decommissioning and Abandonment – additional Conditions of Authorization

- In addition to the conditions of every authorization, the following documents and information must be submitted to and approved by the Regulator before any authorized decommissioning and abandonment work commences:
  - finalized **decommissioning and abandonment plan**
  - any navigational safety zones proposed to protect against collision by vessels and aircraft, or a justification as to why navigational safety zones are not needed



# Protection against Collision (Navigational Safety Zones)

- The operator must take measures to protect facilities against collision with vessels, vehicles and aircraft that are operating in the vicinity, including during the construction of those facilities
- These measures include:
  - proposing to the Regulator, for approval, any safety zones that were identified, through a risk assessment, as being necessary to protect against collision
  - ensuring that information is made available to other users of the ocean and brought to the attention of the Coast Guard and Canadian Hydrographic Service
- Navigational safety zones must not interfere with established routing systems and routing measures related to navigational safety
- Consistent with Article 60 of Part V of UNCLOS, the boundaries of a safety zone must not exceed 500 m in any direction, as measured from the outer extremity of the facilities and the perimeter of the safety zone



# Certificate of Fitness (COF)

- The operator must obtain a CoF that confirms that the facilities are fit for the purposes for which they are to be used and can be operated without posing a threat to safety, security or the environment, and must ensure that the CoF remains valid for the duration of the project
- An independent Certifying Authority must be selected by the operator, and approved by the Regulator, to:
  - conduct an independent assessment of, and confirm that, the proposed design, fabrication, construction, and installation of facilities conforms with good engineering practices, the authorization, and all applicable laws
  - conduct an independent assessment of the integrity management program and confirm that the proposed measures will ensure the integrity of facilities
  - monitor and inspect the project development through fabrication, transportation, construction, installation, and commissioning.
  - issue the CoF and verify its continued validity
  - perform inspections, per an approved **Inspection Plan**, of the facilities during the operations phase
- On an annual basis, the Certifying Authority must provide a detailed report of the activities it performed during the year



# Notification, Investigation, Reporting and Record-keeping

- The operator must notify the Regulator of any reportable incidents as soon as the circumstances permit and investigate and provide to the Regulator, within 14 days, an incident report
- Periodic summary reports must be submitted to the Regulator:
  - monthly during construction and decommissioning and abandonment work or activities
  - yearly during the site assessment and operations work or activities
- A final report summarizing the work or activity and a description of the state in which the operations site is being left must be submitted to the Regulator within three months following the completion of the work
- The operator must conserve (in Canada) all documentation, information, and data resulting from the authorized activity, and to disclose that information to the Regulator, where requested



# Questions?

