Proposed Regulatory Policies for Renewable Energy Projects

October 2025

Our Role

As the **British Columbia Energy Regulator** (BCER) our role includes the regulation of natural gas, oil, hydrogen, ammonia, methanol and renewable energy sources such as geothermal, solar and wind power and prescribed transmission lines.

Our authority is established by way of the **Energy Resource Activities Act (ERAA)**, the **Renewable Energy Projects (Streamlined Permitting) Act (REPA)** and additional legislation related to heritage conservation roads, land and water use, forestry and other natural resources.

Our employees work out of seven locations to ensure our presence near energy resource activities: Fort Nelson, Fort St. John, Dawson Creek, Terrace, Prince George, Kelowna and Victoria.

We acknowledge and respect the many First Nations, each with unique cultures, languages, legal traditions and relationships to the land and water, on whose territories the BCER's work spans.

Vision

A resilient energy future where B.C.'s energy resource activities are safe, environmentally leading and socially responsible.

Mission

We regulate the life cycle of energy resource activities in B.C., from site planning to restoration, ensuring activities are undertaken in a manner that:

- Protects public safety and the environment.
- Supports reconciliation with Indigenous Peoples and the transition to low-carbon energy.
- Conserves energy resources.
- Fosters a sound economy and social well-being.

Values

Respect is our commitment to listen, accept and value diverse perspectives.

Integrity is our commitment to the principles of fairness, trust and accountability.

Transparency is our commitment to be open and provide clear information on decisions, operations and actions.

Innovation is our commitment to learn, adapt, act and grow.

Responsiveness is our commitment to listening and timely and meaningful action.

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Introduction

The British Columbia Energy Regulator (BCER) is the single window regulatory agency responsible for overseeing energy resource activities and geothermal resources in British Columbia. In 2025, the Renewable Energy Projects (Streamlined Permitting) Act (REPA) granted the BCER oversight of renewable energy projects prescribed by the provincial government.

As a result of this expanded mandate, the BCER is working to develop new regulations, permit conditions and guidance documents that govern the life cycle operations of renewable energy projects in B.C. Initially these changes will focus on requirements for wind and solar projects which are expected to take effect in spring 2026. All of the work to develop new regulatory requirements is guided by the BCER's mandate and mission of "ensuring energy resource activities in the province are undertaken in a manner that protects public safety and the environment, supports reconciliation with Indigenous peoples, conserves energy resources and fosters a sound economy and social well-being."

The regulatory development process comprises of: (1) Defining and setting policy intentions (2) Proposing and evaluating options (3) Recommending chosen policies (4) Implementing the updated regulatory framework. The BCER engaged on policy intentions in summer 2025 and is currently at the second stage of the process, seeking feedback on proposed regulatory policies which will inform the recommendation of chosen policies.

About This Paper

This discussion paper is intended to share further details about proposed regulatory policies to be applied to renewable energy projects regulated by the BCER. The BCER conducted initial engagement in summer 2025, which centred on BCER's Policy Intentions and described a range of issues to be addressed in an updated regulatory framework.

This paper and related engagements build on these policy intentions by proposing specific regulatory requirements to address a range of issues previously identified. These requirements are informed by feedback from the initial engagements, advice from independent experts and research and policy analysis conducted by subject matter experts across the BCER.

Regulatory policy proposals are organized according to the same four thematic areas from initial engagement: Environmental Protection, Supporting Reconciliation, Community and Social Well-Being and Protecting Public Safety. In this paper, you will find background discussion of the key policy goals and issues in each thematic area, as well as the specific regulatory policy proposals on which the BCER is currently seeking feedback.

The regulatory policy proposals outlined will inform the BCER Board regulations for renewable energy projects and will be supported by forthcoming guidance that will further clarify expectations for applicants and permit holders. Please note the requirements proposed in this paper are intended to be applied primarily to large, industrial-scale renewable facilities. Smaller renewable facilities, or those that remain subject to the requirements of the Environmental Assessment Act, will face different requirements, fit for the size and impact of their facility. It is anticipated BCER regulations, guidance and the regulatory framework will be brought into force in spring 2026.

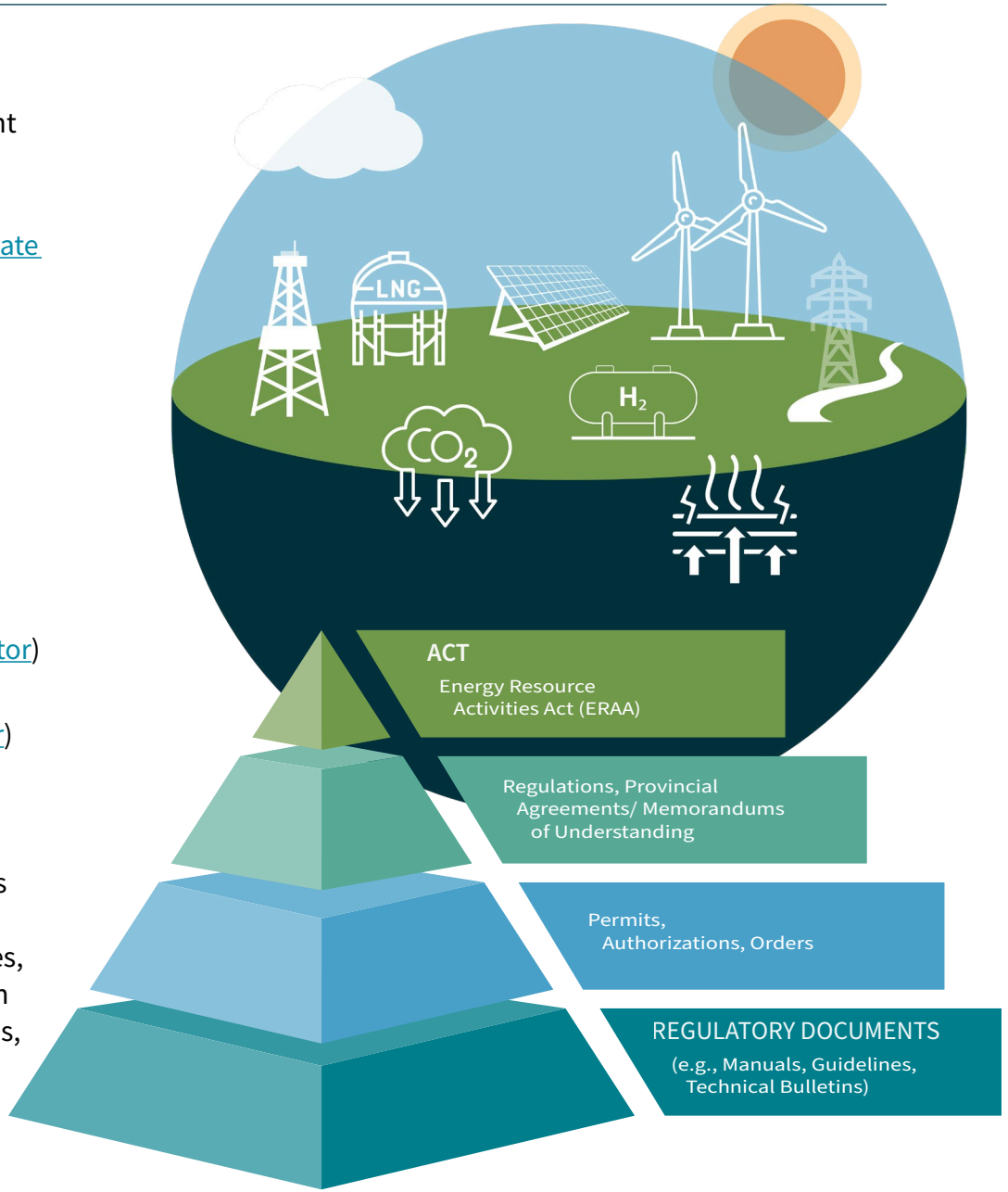
Feedback can be submitted to info@rep-spa.ca. We welcome your comments on these proposals and will consider all submissions, as we work to finalize the regulatory policy before bringing it to BCER's Board of Directors for review.

The BCER's Regulatory Framework

This section provides background information on the BCER's regulatory framework. The BCER has life cycle regulatory oversight of the following activities:

- **Oil, Gas, Carbon Storage Reservoirs and LNG** (What We Regulate | BC Energy Regulator)
  - Energy Resource Activities Act (ERAA) and associated regulations
  - Petroleum and Natural Gas Act
- **Geothermal Resources** (Geothermal | BC Energy Regulator)
  - Geothermal Resources Act and associated regulations
- **Hydrogen, Ammonia and Methanol** (Hydrogen | BC Energy Regulator)
  - ERAA and associated regulations
- **Wind and Solar** (Renewables; Renewables | BC Energy Regulator)
  - REPA and associated regulations
- **Transmission Lines** (Transmission Lines | BC Energy Regulator)
  - REPA and associated regulations

Life cycle regulatory oversight includes the design, permitting, construction, operation and decommissioning/restoration phases of projects. This includes oversight of the activities listed above and their "related activities", such as roads, temporary workspaces, water use, waste discharge, aggregate use for construction, Crown land access, non-farm use of Agricultural Land Reserve (ALR) lands, timber cutting, archaeology matters, etc.



Prior to applying to the BCER for a permit or authorization, companies seeking to carry out an energy resource activity must conduct pre-engagement with First Nations and consultation and notification with landowners and communities. As an agent of the government, the BCER is charged with adjudicating applications in accordance with legislative requirements and fulfilling the Crown's obligation to consult with First Nations in relation to the activities contemplated by those applications. The regulatory policies proposed below also outline a range of required reviews that must be completed prior to the submission of a permit application. Such reviews must be done by a qualified professional and meet all parameters required by the BCER. These parameters will be largely specified in application manuals and other policy guidance documents.

The BCER's regulatory framework is comprised of legislation and regulations and other regulatory mechanisms such as permits, authorizations, permit conditions, orders, contraventions, administrative penalties and guidance documents. Together, these mechanisms are used to provide oversight of the full life cycle of energy resource activities in B.C. The framework incorporates the use of management systems and professional reliance where appropriate. The framework considers efficiency and seeks to avoid regulatory overlap where risks are managed through existing mechanisms.

To effectively function as a single-window regulator for the full life cycle of energy resource activities in B.C., legislation provides the BCER with authority to issue approvals under the following "specified enactments":

- Forest Act,
- Heritage Conservation Act (HCA),
- Land Act,
- Environmental Management Act, and
- Water Sustainability Act.

To optimize the single-window, the BCER has been granted additional legislative authorities through delegations and designations, including in relation to certain decisions under the:

- Mines Act,
- Agricultural Land Commission Act,
- Water Sustainability Act,
- Wildlife Act,
- Natural resource enforcement functions (such as Special Conservation Officer designations).

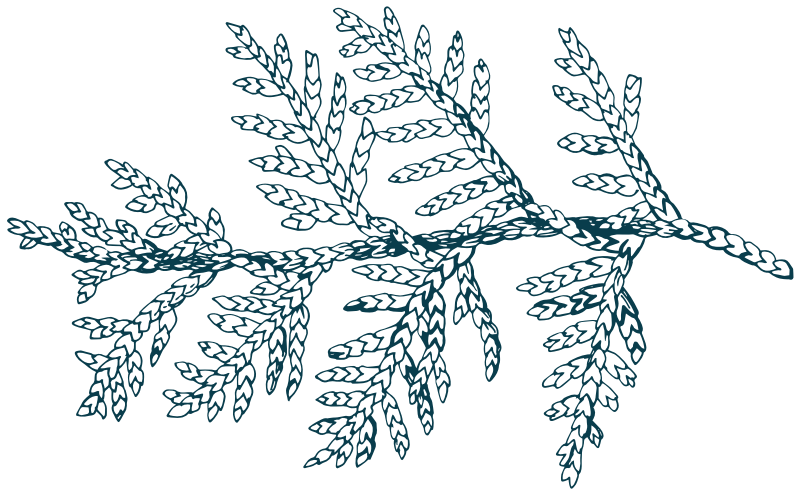
The Energy Resource Activities Act, Geothermal Resources Act and REPA also give the BCER Board of Directors the power to make regulations for certain matters relating to how an activity must be applied for and carried out. The BCER's Board has exercised that authority to enact a suite of regulations.

For other topics, government has retained regulation making authority. This authority has been utilized by the Province to pass regulations that apply to energy resource and geothermal resource activities and to direct the BCER on requirements that must be considered, including:

- Environmental Protection and Management Regulation (EPMR): Sets out government's environmental objectives for energy resource activities to enable environmental protection during the life cycle of an energy resource activity.
- Energy Resource Activities General Regulation: Regulates permit expiration, special projects, release of information, surveys, etc.
- Administrative Penalty Regulation: Establishes penalties for non-compliance with regulations.

Finally, some activities may require additional approvals from other regulators or create obligations under other statutes or regulations, such as:

- BC Building Code – Requirements for building safety are described in the BC Building Code. Facility structures may be expected to comply with design and construction standards, as applicable.
- Safety Standards Act – Some aspects of the construction and operation of a facility will need to be permitted under the Safety Standards Act, which is administered by Technical Safety BC.
- Occupational Health and Safety Regulation – While the proposed regulatory policies include several public and worker safety requirements, worker safety is also subject to the Occupational Health and Safety Regulation, which is administered by WorkSafe BC.
- Other potentially applicable acts include the Transportation Act or the federal Fisheries Act.
- Spill Reporting Regulation: Sets out reporting requirements for spills.
- Contaminated Sites Regulation: Regulates the assessment and remediation of contaminated sites.



1. Environmental Protection

Introduction & Policy Intent

While renewable energy activities (such as wind and solar projects) support B.C.'s efforts to diversify its energy sources and transition to a low-carbon economy, any large project development requires some disturbance of the environment and may pose some degree of risk to lands, waters and wildlife. As a regulator, the BCER protects the environment by ensuring energy resource projects are conducted in a manner that avoids and minimizes impacts to the lands, waterways, or diverse ecosystems of wildlife in B.C. The BCER has a robust system of policies requiring the assessment and mitigation of environmental impacts that will be adapted and expanded to address the specific risks associated with renewable activities.

Issues & Desired Outcomes

1.1 Impacts to Land, Water and Wildlife

Renewable energy projects may require several wind turbines or solar arrays, or much larger turbines and arrays, which may be spread over a wide area. Therefore, development of a renewable energy project may require extensive clearing, removal of vegetation, earthworks or redirection of streams, all of which pose a risk to the surrounding environment, including wildlife and their habitats. However, many of these risks can be avoided or minimized through appropriate project design and management. A key to effective avoidance and mitigation of impacts is early identification and evaluation of risk factors and proactive management planning.

The regulatory framework will ensure applicants complete a comprehensive environmental impact report for all potential hazards that may impact environmental values. Examples of environmental values considered include soils, surface water, ground water, riparian areas, air quality, wildlife, wildlife habitat, vegetation, forest health and agricultural capability. The required report will provide the foundation for the applicant to develop a comprehensive environmental management plan. The environmental management plan will propose the practices and processes for how identified environmental impacts will be avoided, minimized and/or mitigated in an ongoing and adaptive manner. The proposed regulations will require that all reports and management plans are based on the best available science and Indigenous Knowledge, where available. These exercises must be conducted by appropriately qualified professionals registered with a regulatory body under the Professional Governance Act. Professional reliance ensures risks to the environment are assessed by those with appropriate specialist knowledge in a robust and accountable manner. Management plans are periodically audited to ensure proper implementation and lack of compliance with an accepted plan can also be the basis of enforcement action against a permit holder.

The BCER recognizes wind turbines pose specific risks to flying animals such as birds and bats. These risks include directly striking rotating blades of turbines and trauma caused by pressure changes in proximity to a turbine. Our policy framework will provide guidance regarding inclusion of appropriate population surveys and studies to appropriately determine risks to flying species and their migration.

The proposed regulations aim to achieve the following outcomes :

- Impacts to the environment are proactively identified, risk-assessed and suitable mitigations are developed early in project development.
- Renewable energy projects are sited, designed and constructed to minimize risks from the project to environmental values such as waterways, wildlife and wildlife habitat.
- Renewable energy projects are operated to be active and responsive in management of potential risks to the environmental values across and beyond the life cycle of the project.

Pre-Application & Application Requirements - Impacts to Land, Water and Wildlife	
Proposed Regulatory Policy	**Rationale**
An applicant must submit an environmental impact report, completed by qualified professionals and consistent with parameters established by the BCER, which addresses the following: • An assessment of the current environmental conditions prior to construction and potential adverse environmental effects to land, water and wildlife across the life cycle of the project. • The best available science and Indigenous Knowledge. • For a wind energy project, the report must include a minimum of one year of bird and bat monitoring completed prior to the submission of the application.	Statutory Decision Makers (SDMs) may only approve permits for projects that can demonstrate they will not create material adverse effects to the environment. The environmental impact reports inform the design and development of the project to minimize environmental risks and support adaptive management. The initial environmental review also captures the "pre-disturbance" state of the project area to inform decommissioning and restoration plans and objectives, including observations and measurements that represent the condition of the site prior to construction. BCER guidance will provide requirements for environmental values to be assessed and where appropriate, the corresponding methodologies, while allowing sufficient flexibility to suit the unique needs of the project environment.
An applicant must submit an environmental management plan, developed by qualified professionals and consistent with parameters established by the BCER, that details the processes and procedures to monitor and minimize the adverse effect the facility could have on the environment considering the following: • The data and risk of impacts from the above environmental impact report. • All proposed activities across the life cycle of the project. • The best available science and Indigenous Knowledge. • For a wind energy project, the management plan must include plans for post-construction bird and bat surveys, fatality monitoring and reporting.	SDMs consider the environmental management plan in permitting decisions and must determine the proposed mitigation measures will achieve the desired environmental outcomes and sufficient ongoing monitoring will be in place to allow permit holders to adapt their processes to match changes in the environment across the lifetime of the project. To receive a permit, the applicants must demonstrate the risk of material adverse environmental effects can be avoided or, otherwise minimized.

Construction, Operations & Decommissioning Requirements - Impacts to Land, Water and Wildlife	
Proposed Regulatory Policy	**Rationale**
The permit holder must maintain records demonstrating implementation of the environmental management plan and ongoing monitoring of environmental values in the form and manner required by the BCER.	BCER requires consistent and up-to-date information regarding facility operations to enforce compliance with regulations and permit conditions. • Some records are required to inform specific investigations or audits. • Other information is required on a regular basis to determine compliance with specific, ongoing performance metrics (e.g. bird or bat mortality per year). • BCER guidance will describe how records are to be maintained and requirements for submission.
In the case of a significant wildlife incident, the permit holder must immediately notify the BCER. A significant wildlife incident includes: • The death or injury of an endangered species listed in Schedule 1 of the Species at Risk Act. • The death or injury of a locally significant species as identified by the BCER.	Immediate notification may be required in some cases to inform BCER's compliance and enforcement team and ongoing performance monitoring of renewable energy projects. Incidents requiring notification will be described in permit conditions and guidance (e.g. listing locally significant species).
Before making any material change to the environmental management plan, the permit holder must: • Ensure a qualified professional assesses the potential adverse effects of the proposed change and develops any required mitigation measures. • Ensure a qualified professional prepares an updated environmental management plan. • Submits to the BCER for approval, a copy of the updated environmental management plan with a statement describing the extent and rationale for the change.	After a project has been permitted, if circumstances require a change to the design, layout and/or operation of the facility as approved, the permit holder must assess the potential impacts of the proposed change, to determine if the risk of adverse environmental affects may increase. To ensure flexibility in site design and to minimize regulatory burden, the permit holder is only required to notify the BCER if a qualified professional determines the proposed change is likely to increase risk to environmental values. Notification allows BCER to determine if a permit amendment is required and to request further information regarding mitigations to the identified impacts.

1.2 Cumulative Effects Management

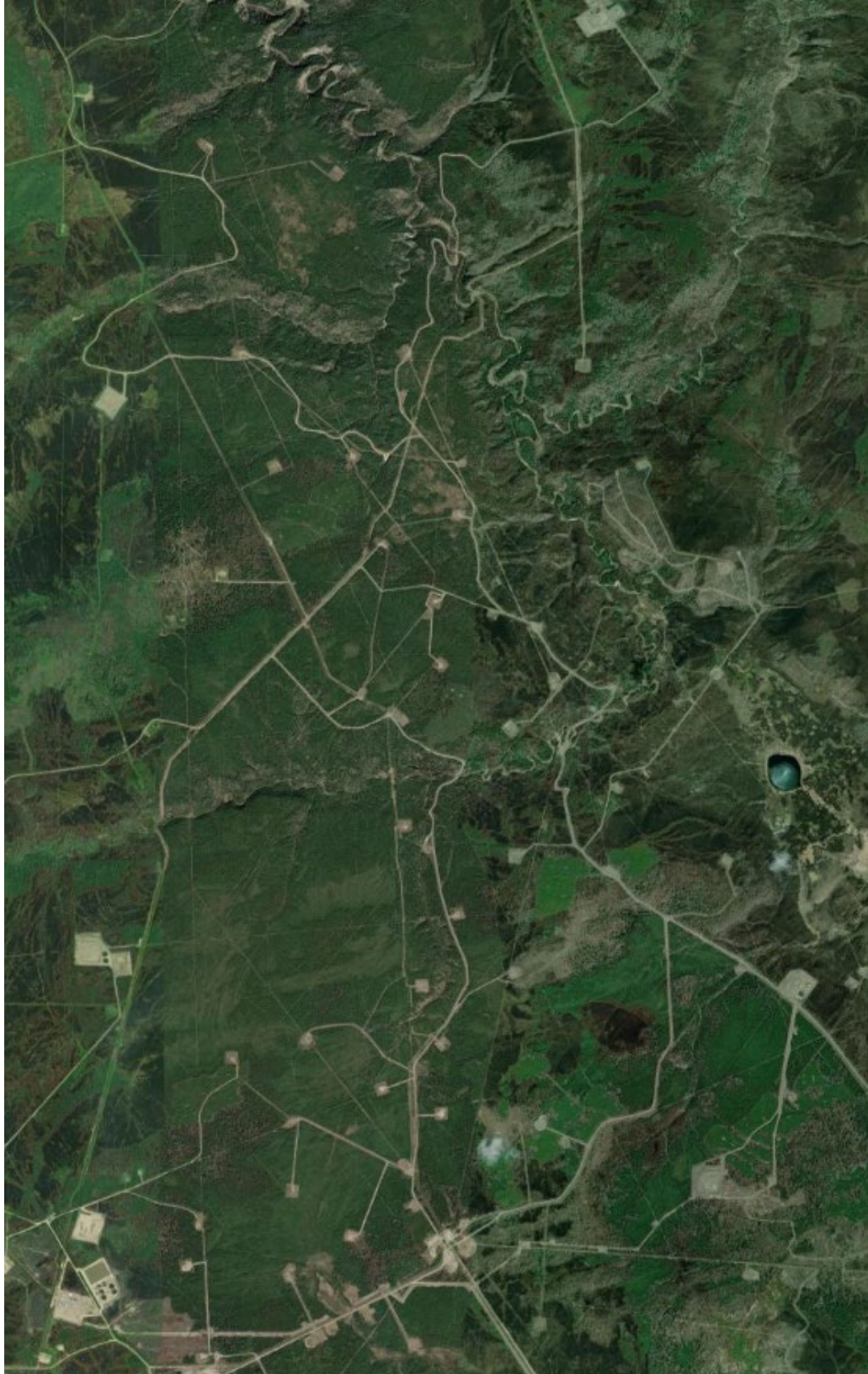
The B.C. government defines cumulative effects as changes to environmental, social, and economic values caused by the *combined* effects of past, present and potential future human activities and natural processes.

In permitting energy resource activities, the BCER works with the Province, applicants, First Nations, and local communities, to ensure the environmental impacts of an individual project are mitigated and/or reduced. Although the impacts associated with an individual project are minimized, the combined effects of several projects within the same area can build up over time. The aggregated impacts of multiple projects may eventually adversely affect the environment, communities and First Nations' rights to conduct traditional activities upon their territories.

The proposed regulations require applicants to provide an assessment of the potential contribution of an individual project to wider cumulative effects. This information will be used to inform the BCER's permitting decisions for renewable energy projects and to guide applicant development of suitable mitigation measures.

In collaboration with the Province, the BCER is developing regulations and guidelines for the management of cumulative effects in support of the following outcome:

- The potential contribution of renewable energy projects to cumulative effects are proactively assessed and mitigated.



Pre-Application & Application Requirements - Cumulative Effects Management	
Proposed Regulatory Policy	**Rationale**
Applicant must submit a cumulative effects assessment (CEA) completed by appropriate qualified professionals and consistent with parameters established by the BCER. Applicant must ensure a CEA and management plans are completed using the best available scientific and Indigenous Knowledge.	An assessment is required to provide SDMs with suitable information to evaluate the project's potential contribution to cumulative effects and consider these risks in the decision on the project. Pre-engagement with local First Nations and consultation with local communities should inform selected CEA values and management outcomes, and/or provide additional assessment or tool information to support the CEA process.
Applicants must submit a cumulative effects management plan prepared by an appropriate qualified professional and consistent with parameters established by the BCER. This management plan must outline the proposed mitigations to address identified impacts to cumulative effects and how the project is maximizing the use of already disturbed lands. If undisturbed lands are impacted by a project, the management plan must demonstrate how progressive restoration will be used to mitigate these impacts.	SDMs require accurate information on mitigation measures that specifically address the project's contributions to cumulative effects, in addition to the direct effects of the project, to ensure long-term stewardship and protection of environmental values. Where undisturbed areas are impacted by a project, requirements for applicants to restore the lands will be increased.

Construction, Operations & Decommissioning Requirements - Cumulative Effects Management	
Proposed Regulatory Policy	**Rationale**
The permit holder must maintain records demonstrating implementation of their cumulative effects management plan. These records must be: • Provided to the BCER upon request. • Submitted to the BCER in the form and manner required.	Accurate information regarding the implementation and results of mitigation measures is required to inform BCER's compliance and enforcement activities.
A permit holder must, before making a change to the renewable energy facility design, ensure qualified professionals assess potential contributions to cumulative effects that may result from the change. If the qualified professional identifies the proposed change to the renewable energy facility design may significantly increase the risk of adverse contributions to cumulative effects, the permit holder must not proceed with the intended change and submit notification to the regulator in the manner required.	In cases where circumstances require a change in the project, potential risks to cumulative effects values must be assessed and specified, in addition to any direct environmental risks, for the BCER to determine if the proposed change requires additional mitigation measures or a formal permit amendment.

1.3 Agricultural Land

The Agricultural Land Reserve (ALR) refers to land, designated by the Province, where agricultural is recognized as the priority use and non-agricultural uses are restricted. However, land that is desirable for agricultural uses is often also well-suited to renewable energy projects. REPA provides the BCER with the ability to authorize non-farm use of ALR land for use in renewable energy projects, to support the development of B.C.'s diverse energy resources.

The BCER's proposed regulatory framework will ensure when non-farm use of ALR land is considered, negative impacts to agriculturally capable lands are minimized. Applicants will be required to conduct agricultural assessment to inform land management plans, to maintain as much agricultural use as possible and minimize impacts to existing cultivation and prevent contamination and erosion of the soil. Decommissioning and restoration plans will also be required to consider the preserving or restoring the long-term agricultural capability of land.

The BCER is developing regulations and guidelines for the management of agricultural land in support of the following outcomes:

- Impacts to agricultural capability from renewable energy projects are minimized during site planning and repaired when operations cease.
- Agricultural capability of the land will be maintained.
- Following restoration of a project, reclamation will ensure agricultural activities can be fully resumed upon the land.

Pre-Application & Application Requirements - Agricultural Land	
Proposed Regulatory Policy	**Rationale**
The applicant must submit an agricultural assessment report conducted by a qualified professional and consistent with parameters established by the BCER. The assessment will include site assessment and agricultural capability assessment.	An assessment is required to provide SDMs with suitable information to evaluate the project's potential impacts to agricultural land and consider these impacts in the decision on non-farm use. The assessment captures the "pre-disturbance" state of the agricultural land and is used to inform restoration planning and objectives.
An agricultural land management plan developed by a qualified professional and consistent with parameters established by the BCER must be submitted to the regulator. Management plans will address impacts noted by the assessment and include recommendations for surface water and soil handling.	SDMs consider the agricultural land management plan in non-farm use decisions and determine if the proposed soil handling, water management and other mitigation measures will preserve agricultural capability.
Decommissioning and restoration planning for agricultural land must demonstrate how the site will be restored to the standards established in the baseline site assessment.	To receive a non-farm use permit, applicants must demonstrate their consideration of planning for restoration to maintain agricultural potential.

Construction, Operations & Decommissioning Requirements - Agricultural Land	
Proposed Regulatory Policy	**Rationale**
Agricultural management plan is implemented and monitored by the permit holder.	Accurate information regarding the implementation and results of the implementation of the agricultural management plan is required to inform BCER's compliance and enforcement activities.
Following construction, progressive restoration of land impacted by construction but not needed for operations, is completed in accordance with the decommissioning and restoration plan.	Requirement for explicit post-construction restoration ensures restoration is conducted progressively and improves agricultural use. Restoration objectives are to return to pre-disturbance conditions.
Final reclamation and restoration following decommissioning of the project returns the disturbed land to pre-construction conditions. The initial assessment sets standards for reclamation.	Ensures restoration of the Agricultural Land Reserve lands, preventing loss of agricultural land and maintaining agricultural potential for B.C.

1.4 Decommissioning and Restoration

The expected lifetime for a wind or solar facility is currently roughly 25 - 35 years after operations begin. Once operations conclude, project sites must be decommissioned, which involves the safe removal or remediation of site equipment and infrastructure. Once decommissioning is complete, the site must be restored to a natural state, or prepared for other uses such as agricultural, recreation, or First Nations traditional cultural practices. ERAA requires administrative and financial responsibility for decommissioning and restoration of projects rests with the permit holder.

The proposed regulatory framework adopts a proactive and progressive approach towards decommissioning and restoration, where decommissioning is considered and planned for in the early stages of project development and treated as a process that occurs across the life cycle of the project. The BCER expects equipment and infrastructure is removed when it is no longer necessary and not waiting to the end of operations. To ensure the decommissioning and restoration activities are performed responsibly, expediently and without disruption to the environment or local communities, applicants will we be required to submit a decommissioning and restoration plan at application. The proposed framework will also direct applicants to proactively consider how site materials can be disposed in a responsible manner that maximizes reuse or recycling and minimizes waste. The BCER will consider the potential impacts mass disposal of site materials may have on local landfills and community capacity for waste management.

BCER's proposed regulatory framework will aim to achieve the following outcomes:

- Equipment and infrastructure associated with a renewable energy activity are decommissioned in a timely and efficient manner.
- Decommissioning and restoration are proactively considered and planned for before construction of projects.
- Decommissioning and restoration are completed progressively with components removed and appropriately restored, as soon as they become unnecessary, across the project life cycle.
- Permit holder is fully liable for costs associated with decommissioning and restoration.
- Decommissioning ensures disposal of materials in landfills is minimized and opportunities to reuse or recycle materials are utilized as far as practicable.
- Decommissioning ensures disposal of materials does not adversely impact the capacity of local communities to manage and dispose of their own waste.

Pre-Application & Application Requirements - Decommissioning and Restoration	
Proposed Regulatory Policy	**Rationale**
Applicant must ensure a qualified professional prepares a decommissioning and restoration plan consistent with parameters established by the BCER and submits this plan to the BCER with their application for approval.	To receive a permit, applicants must demonstrate their acceptance of this responsibility for the decommissioning and restoration of project sites, their awareness of the practical and financial requirements of decommissioning and restoration, and their ability to complete decommissioning activities within an appropriate timescale.
The decommissioning and restoration plan must contain the following information, and any additional information as required by the BCER. • Descriptions of activities required, including decommissioning, assessment, remediation, reclamation and restoration. • Schedule and timing of progressive restoration activities to be completed post-construction. • Timeline of all decommissioning and restoration activities to be completed post-operations and following suspension of the facility. • Description of how materials and equipment will be responsibly disposed and confirmation from the proposed waste handling facility of their capacity to receive the materials. • Description of any materials to be left on site and how these will be safely managed. • Inventory of all substances that could potentially cause pollution or contaminate the site and how any contamination will be prevented and/or remediated. • Cost-estimate of all activities.	Proposed requirements for content of decommissioning and restoration plans are consistent with Environmental Management Act provisions (awaiting enactment) and provide information required for SDMs to evaluate the feasibility of the proposed activities and the permit holder's liability.

Construction, Operations & Decommissioning Requirements - Decommissioning and Restoration	
Proposed Regulatory Policy	**Rationale**
Post-construction restoration activities must be initiated within one year of commencement of operations.	Requirement for explicit post-construction and schedules ensuring restoration is conducted progressively and not reserved until the end of operations.
All decommissioning and restoration plans must be reviewed and, if necessary, updated by a qualified professional every five years.	Ensure decommissioning and restoration plans submitted with a permit application remain relevant and practicable across the lifetime of the facility (~ 30 years) and can account for changes in available technology, waste disposal options and environmental conditions.
The permit holder must submit updates to the decommissioning and restoration plan to the BCER for approval.	Decommissioning and restoration plans must be approved by the BCER. The BCER will, through guidance, identify criteria for a decommissioning and restoration plan to be approved. These may include, but are not limited to, maximum timelines for decommissioning and restoration, requirements for agricultural land, removing structures and completing certificates of restoration.
Within 12 months of the last date of operation for a renewable energy facility, a permit holder must implement a suspension plan prepared by a qualified professional and consistent with parameters established by the BCER; or return the facility to operation.	Requires permit holders to ensure inactive wind turbines and solar arrays are in a safe state that does not pose risks to the environment or public safety.
The permit holder must implement the approved post-operations decommissioning and restoration plan consistent with parameters established by the BCER within 24 months of the last date of operation.	Provides an explicit requirement that permit holders proceed with approved plans and ensures decommissioning and restoration activities are completed in a timely fashion.
The permit holder must ensure the decommissioning of a renewable energy project is carried out safely.	Decommissioning operations carry similar risks as construction and dangers to employees and the public, must be minimized.
The permit holder must keep records demonstrating implementation of the decommissioning and restoration plan and submit these records to the BCER on request.	Records are required to support and inform BCER's enforcement activities and to ensure permit holders comply with applicable regulations and the conditions of their permit.

2. Supporting Reconciliation

Introduction & Policy Intent

The BCER is committed to mutually beneficial, collaborative working relationships with First Nations and Indigenous governments and recognizes the Declaration on the Rights of Indigenous Peoples Act (Declaration Act) as the framework for reconciliation. The BCER upholds the Crown's duty to consult with impacted First Nations, Section 35 of the Canadian Constitution Act and all applicable case law.

The regulatory framework for renewable energy projects will strive to ensure the interests of First Nations are understood, respected and considered in project development plans, the BCER's decision-making and delivery of our mandate. This will require clear identification of how First Nations rights may be impacted by developments and the implementation of legally enforceable requirements to uphold and protect these interests.

The BCER adjudicates permits and regulates permit holders conducting energy resource activities. Internal policy guides our decision makers according to the values articulated in this section. The discussion below reflects our internal policy to ensure consent is considered in BCER permitting decisions.

Issues & Desired Outcomes

2.1 Early and Pre-Engagement

The BCER upholds the Crown's duty to consult. In addition to its own consultation, the BCER asks applicants to conduct pre-engagement with impacted First Nations. This proactive approach supports project planning, increased communication and collaboration between parties, and helps reduce the likelihood of impacts during both construction and operational phases of development projects. More information can be found in the BCER's pre-engagement guidance.

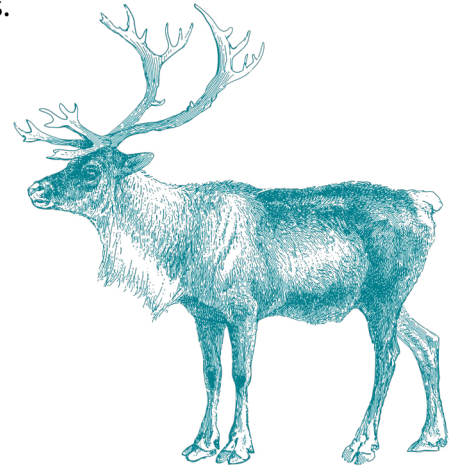
The BCER also recognizes the wisdom and value of Indigenous Knowledge in understanding and planning for impacts. In addition to considering this knowledge when it is provided, the BCER expects permit applicants to incorporate it into their project plans if it is shared by an impacted First Nation during pre-engagement.

Pre-Application & Application Requirements - Early and Pre-Engagement	
Proposed Regulatory Policy	**Rationale**
An applicant must conduct pre-engagement with impacted First Nations and submit a pre-engagement report with their application.	Pre-engagement supports incorporation of Indigenous Knowledge and First Nation interests into development plans. Pre-engagement is required across the BCER's regulated activities. Detail regarding these reporting requirements is outlined in the existing pre-engagement guidance. This report is required to demonstrate that pre-engagement has been completed and to indicate how interests identified have been incorporated into development plans.

2.2 Indigenous Knowledge and its Protection

An important aspect of the regulatory life cycle is the respectful use and protection of Indigenous Knowledge. This knowledge plays an important role in identifying and addressing potential impacts, and the BCER recognizes its value in planning and decision-making. When Indigenous Knowledge is shared by a First Nation, the BCER expects permit applicants to incorporate it into their project plans. Indigenous Knowledge can be incorporated into early planning, consultation and other touch points with the BCER. Acknowledging and protecting it is essential, both as a moral responsibility and a legal obligation.

Indigenous Knowledge should only be used with appropriate permission and in accordance with the governance, laws, policies and practices of the First Nation that shares it. Many First Nations in B.C. maintain in-house datasets, records or rely on knowledge holders with expertise in a particular subject or area. To ensure protection and confidentiality, applicants/permit holders and First Nations should work together to determine how Indigenous Knowledge is handled during engagement. This may include information-sharing agreements and adherence to community protocols.



The First Nations Principles of Ownership, Control, Access and Possession (OCAP), developed by the First Nations Information Governance Centre, provide further guidance on protecting Indigenous Knowledge. In addition, the Freedom of Information and Protection of Privacy Act (FOIPPA) provides legal mechanisms to safeguard sensitive information from disclosure, including when public disclosure could reasonably be expected to:

- Harm the Province's conduct of relations with First Nations governments (FOIPPA, Section 16). This protection is valid for 15 years from the time of disclosure.
- Result in damage to, or interfere with, the conservation of natural sites or sites of anthropological or heritage value, an endangered, threatened, or vulnerable species or subspecies, or any other rare or endangered living resource (FOIPPA, Section 18).

The BCER has established a strong and evolving framework for incorporating Indigenous Knowledge into the regulatory process. This framework reflects our commitment to meaningful collaboration with First Nations and inclusion of all available information to help inform the regulatory framework and decision-making. It is embedded in several regulations and guidance documents that guide our work, including:

- Ecological Suitable Species Guideline
- Treaty 8 Planning and Mitigation Measures
- Guidance for Pre-engaging First Nations
- Processing Facility Regulation and Guideline

Together, these processes produce stronger outcomes, including:

- Increased communication between applicants and impacted First Nations regarding interests, impacts and necessary mitigations or management strategies.
- Consideration of Indigenous Knowledge in project development plans and assessments of project impacts.
- Reduced likelihood of impacts to First Nations interests throughout the life cycle of a development project.

By respecting and protecting Indigenous Knowledge, and embedding it into the regulatory life cycle, the BCER and applicants can support more responsible and sustainable energy resource development in B.C.

Pre-Application & Application Requirements - Indigenous Knowledge and its Protection	
Proposed Regulatory Policy	**Rationale**
Environmental assessments, cumulative effects assessments, and assessments of community impacts submitted by an applicant must incorporate relevant Indigenous Knowledge when it is provided by an impacted First Nation.	This provision formalizes the expectation Indigenous Knowledge be integrated into planning, operational procedures and decision-making. High-level guidance will be developed regarding appropriate management of Indigenous Knowledge.

2.3 Heritage Conservation Act (HCA)

For renewable energy projects, the BCER intends to follow the approach outlined in the HCA and its guidance materials (as it does for energy resource activities regulated under ERAA). Any future changes to the HCA will also be implemented by the BCER.

Some specific aspects are noted below:

- Pre engagement opportunities include opportunities for First Nations to discuss interests that may include HCA regulated heritage resources or other cultural heritage resources.
- The BCER's archaeology submissions and review will be done through the BCER's application process for energy resource activities. This process enables location-specific conditions related to archaeology to be incorporated into the permit for the renewable energy resource project where appropriate.

2.4 Protecting Cultural Heritage Sites

The BCER's oversight of cultural heritage resources not regulated under the HCA is conducted pursuant to the Environmental Protection and Management Regulation (EPMR). The EPMR defines a cultural heritage resource as an object, a site or the location of traditional societal practices, that is not regulated under the HCA, and is of historical, cultural or archaeological significance to Aboriginal people. The EPMR is a government regulation and changes to the regulation are outside of the scope of this discussion paper.

All energy resource activities must be planned and undertaken in accordance with the EPMR. Applicants contemplating energy resource activities are expected to engage potentially affected First Nations early in the planning process. As part of engagement, permit holders are encouraged to work collaboratively with First Nations to identify appropriate approaches for considering cultural heritage values, including the development of datasets or management measures where First Nations wish to share that information.

Pre-Application & Application Requirements - Protecting Cultural Heritage Sites	
Proposed Regulatory Policy	**Rationale**
An applicant must prepare a mitigation plan for any cultural heritage resources identified within the operating area of the renewable energy project.	Through pre-engagement with First Nations, cultural heritage resources may be identified. Where these are identified, applicants must prepare a management plan to mitigate potential impacts to those resources. The BCER encourages applicants to work with the affected First Nations in developing the mitigation plan.

2.5 Consent & Consensus

BCER's Guidance on Seeking Consensus with First Nations through Consultation

As outlined above, the BCER, as an agent of the Crown, is responsible for fulfilling the Crown's duty to consult with First Nations before authorizing energy activities. Beyond meeting this legal duty, the BCER seeks to engage meaningfully with First Nations, aiming to build respectful relationships, share information and support participation in decisions that may affect their rights and interests. This work is rooted in reconciliation and guided by the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), the Declaration Act, and the principle of Free, Prior and Informed Consent (FPIC).

Free, Prior and Informed Consent (FPIC)

FPIC affirms Indigenous peoples' rights to be involved early and meaningfully in decisions affecting their lands, territories and resources. It requires that decisions are made free from coercion, within timelines that allow for thorough information gathering and through processes consistent with each Nation's governance. Article 32 of UNDRIP and Principle 6 of B.C.'s Draft Principles affirm that governments must seek FPIC prior to approving projects with potential impacts, while the Truth and Reconciliation Commission's Call to Action 52 reinforces the recognition of Aboriginal title and related rights.

FPIC in Practice at BCER

The BCER has long integrated FPIC into its regulatory approach. This includes respecting First Nations' self-determination, supporting decision-making through capacity funding and training, requiring early applicant engagement and maintaining transparency throughout the project life cycle. Engagement extends beyond project reviews to include co-development of regulations and standards, ensuring Indigenous Knowledge and perspectives are reflected in regulatory requirements.

Consensus-Seeking

Consensus is a central principle in the BCER's consultation process. While not a legal requirement for project approval, consensus represents respectful collaboration, shared problem-solving and trust-building. It is pursued through early engagement, mandatory pre-engagement by applicants, open dialogue and joint development of mitigation and accommodation measures. The BCER reviews applications to ensure meaningful pre-engagement has occurred and continues consultation throughout the regulatory life cycle.

If consensus is not achieved, the BCER documents reasons, provides further opportunities for discussion and takes First Nations' input seriously.

2.6 Capacity Funding Resources to Support Capacity and Participation

The BCER places a strong emphasis on supporting participation and capacity at every stage of the regulatory life cycle through three key avenues: guidance and expertise from BCER staff and subject matter experts, dedicated funding and the Partnership Program.

Support from staff and Subject Matter Experts

The BCER supports capacity and participation in the regulatory life cycle by working with First Nations to establish consultation and engagement protocols, agreements and arrangements that reflect their unique priorities and approaches. These frameworks create clarity and predictability, while also strengthening opportunities for collaboration. Beyond process, the BCER's subject matter experts are committed to working alongside First Nations to share knowledge, exchange perspectives and learn from one another. This ongoing collaboration helps to ensure regulatory decisions are more informed, culturally grounded and ultimately lead to better outcomes for the land and communities.

Capacity Funding

Capacity funding is another key way the BCER supports participation in regulatory processes. Capacity funding is designed to support meaningful participation by First Nations in their work with the BCER. It provides resources, staff and technical expertise to help First Nations review applications, attend meetings, hire advisors, conduct technical studies and develop their own policies and priorities.

Currently, the BCER does not have a specific capacity funding approach for renewable energy projects. However, work is underway to develop a clear and consistent model that supports meaningful participation in this emerging sector. The BCER will continue to communicate with First Nations as this work progresses.

Partnership Program

Beyond funding, the BCER also works to strengthen long-term relationships through the Partnership Program.

Launched in 2017, the Partnership Program supports reconciliation, the Declaration Act and the BC Energy Regulator's mandate. It advances long-term partnerships and supports First Nation-driven priorities through education, capacity building and joint initiatives.

Supporting participation and capacity is not just about funding or process, it's about building the conditions for stronger relationships and better decisions on the land. These efforts are ongoing, but together they represent a commitment to move beyond transactional consultation toward collaboration that respects rights, knowledge and community priorities.

3. Foster Social Well-Being

Introduction & Policy Intent

Fostering community and social well-being is a core component of the BCER's regulatory mandate. The Energy Resource Activities Act (ERAA) establishes that fostering a sound economy and social well-being are explicit purposes for which the BCER was established. As such, the BCER has a comprehensive framework for the assessment of social impacts and community engagement, which will be adapted for renewable energy projects.

With respect to renewable energy projects, the regulatory framework will ensure proponents consider and minimize impacts on how people and communities interact with their social, cultural and biophysical surroundings. This will require both a robust consideration of the potential impacts to communities, along with an engagement program that allows affected persons to communicate concerns directly to both applicants and the BCER.

Issues & Desired Outcomes

3.1 Assessment of Community Impacts

Renewable energy projects may pose a variety of different impacts to surrounding communities. Applicants are expected to proactively understand the nature and extent of these impacts and to implement all feasible mitigations in siting, design and operations. The BCER will consider the impacts of a proposed development on nearby communities when adjudicating a permit application.

Requirements relating to the assessment of community impacts should produce the following outcomes:

- Clear understanding of the nature and extent of impacts that could affect nearby communities. This information informs engagement with local communities and governments and informs the consideration of the BCER when reviewing permit applications.
- Identification of effective mitigation strategies that can limit negative impacts of development for local communities.

Pre-Application & Application Requirements - Assessment of Community Impacts	
Proposed Regulatory Policy	**Rationale**
Applicants must identify all receptors within 1.5 km of the proposed project boundary, which includes regularly occupied buildings and buildings used for livestock.	The presence and location of receptors influences the extent of assessment considered sufficient during permit application review. Identification of these receptors informs requirements related to community engagement; the distance used here aligns with that for public consultation.
An applicant must submit a report that identifies and evaluates the nature and extent of socio-economic impacts across the full life cycle of a project to: • Housing • Use of local resources (e.g. hospitals, landfills) • Vulnerable populations	A report on socio-economic impacts will inform the project applicant and the local community of the potential societal impacts of their project.
If receptors are identified within 1.5 km of the project, the applicant must submit a report that identifies all receptors within 1.5 km of the project and assesses the nature and extent of quality-of-life impacts to noise, light, traffic and access. In addition, wind projects must assess the impact of shadow flicker and solar projects must assess the impact of glare.	The presence and location of receptors influences the extent of assessment considered sufficient during permit application review. Identification of these receptors informs requirements related to community engagement. Projects with no receptors present will not be required to complete this assessment.
The above reports must describe the methodology used to assess impacts and detail any planned mitigations and a rationale for their adequacy.	Applicants should use the findings of these reports to inform community engagement efforts and develop appropriate mitigations. Guidance will be developed to inform methodology and scope of the required assessments. The BCER relies on an accurate understanding of anticipated impacts to quality of life and socio-economic well being to assess the adequacy of mitigations and the impact of development on local communities.
The above requirements shall not apply to an applicant completing an environmental assessment under the Environmental Assessment Act.	Applicants who are required to complete an environmental assessment under the Environmental Assessment Act will be exempted from overlapping requirements within the BCER framework.

3.2 Community Engagement

Effective and proactive communication between affected persons, local governments, project applicants and the BCER is fundamental to the management of project impacts and local communities. ERAA provides the BCER authority to implement regulations respecting public consultation (i.e. community engagement) in addition to existing ERAA legislation, which allows any person to make a submission to the BCER respecting a permit application.

Requirements respecting community engagement should produce the following outcomes:

- Consultation with persons who may experience impacts from the development.
- Consultation with rights holders or others whose socio-economic interests could be impacted by the development.
- Consultation with local authorities and federal bodies who may be impacted by the development.

Pre-Application & Application Requirements - Community Engagement	
Proposed Regulatory Policy	**Rationale**
Applicants must provide an invitation to consult the following persons: • The local authority of jurisdiction where the project is proposed to be sited. • Any federal bodies whose interests or operations may be impacted by the facility. • Rights holders whose ability to exercise those rights may be impacted by the facility. • Any registered landowner if all or part of the landowner's land is within 1.5 km of the project boundary.	Landowners identified for an invitation to consult are more likely to face direct impacts to their property because of proximity to the development. Applicants need to consult with local authorities and landowners to ensure local values are considered in project planning. Additionally, these consultations allow an opportunity for local governments to clarify any bylaws that may apply. Federal bodies who operate critical infrastructure, such as aerodromes or radar systems, also require awareness of proposed developments to mitigate impacts to their interests. Consultation provides an opportunity for them to work directly with applicants on management strategies and to ensure applicants comply with any relevant federal policy expectations.
An invitation to consult must contain the following information: • A description of the proposed project • A summary of the nature, geographic area, and timing of the potential offsite quality of life impacts • Contact information of the applicant • Address or location of the proposed facility • A statement that the recipient may make a submission to the BCER under section 22 (5) of ERAA • A statement clarifying that the recipient may respond in writing within 30 days, including requesting a meeting with the applicant • When provided to a local authority, the invitation must also include a summary of anticipated socio-economic impacts	See above rationale regarding contents of invitations to consult.

Table continued from previous page	
An applicant must make all reasonable efforts to accommodate meeting with those who receive an invitation to consult.	Applicants are expected to engage in good faith with all parties receiving an invitation to consult.
An applicant must respond to all submissions from consulted persons as follows: • Provide a summary of the meeting with the respondent, if applicable. • Provide a description of the revisions, if any, that will be made to the proposed activities based on the concerns, if any, raised by the respondent.	These requirements clarify expectations for engagement with consulted persons and demonstrate to recipients how the information gleaned during consultations will be provided to decision makers.
Invitations to consult may be provided via the following methods of service: • By written notice in accordance with a method of service set out in section 79 (1) of ERAA or section 2 of the Service Regulation.	The BCER must prescribe the methods of service for documents served under ERAA. Applying the existing Service Regulation provides coherence across the BCER regulatory framework.
Applicants must include in their application a report including: • A summary of who was consulted. • A copy of the invitation provided. • A record of all comments received and how they were considered in development planning.	This report must be required with an application package for the BCER to assess the adequacy of consultation efforts. This review includes a consideration of the extent to which concerns raised were reasonably accommodated by the applicant.

3.3 Noise

Renewable energy projects produce noise during construction, and wind projects produce noise during operations. This noise can be disruptive to nearby communities and is commonly cited as a primary concern of communities who host such developments. Noise from wind turbines can be modelled prior to construction using establishing methodologies and can be monitored during operations. While some degree of noise is inherent in the construction and operation of these projects, the impact of this noise should be limited to ensure projects are well integrated with their surrounding communities and do not become a nuisance to nearby residences. Many jurisdictions in Canada and globally have implemented noise assessment requirements and most have a limit on the maximum level of noise that is acceptable during operations. Mitigations are well established and include siting turbines at a sufficient distance from receptor buildings or implementing strategies such as curtailing turbine activity when wind conditions are likely to produce a disruptive level of noise.

Requirements respecting noise should produce the following outcomes:

- Construction noise is minimized to the extent practicable consistent with public expectations for construction noise.
- Noise during the operational phase of the project should not present a sustained nuisance to nearby residences or common public gathering areas.
- Even if not sustained, noise levels that can be disruptive to human health and wildlife should be avoided.

Pre-Application & Application Requirements - Noise	
Proposed Regulatory Policy	**Rationale**
The BCER has prepared Noise Control Best Practices Guidelines that outline best practices for the assessment and limitation of noise impacts.	The BCER plans to use project specific permit conditions to establish noise requirements where there are receptors within 1.5 km. The permit conditions will be based on the process for establishing permissible sound limits detailed in the Noise Control Best Practices Guidelines.
In assessing the nature and extent of quality-of-life impacts from noise as part of the assessment of community impacts, applicants must prepare and submit a report outlining the results of completed noise assessments including the maximum noise levels expected at receptors located within 1.5 km of the project boundary.	The predicted cumulative sound levels at the receptors from existing, approved and proposed activities can be compared with the calculated permissible sound levels. If the predicted cumulative sound levels exceed the permissible sound levels, then the applicant can identify further measures to reduce expected noise levels. The noise impact assessments inform permit condition requirements related to noise. Refer to BCER Noise Control Best Practices for more information.

Construction, Operations & Decommissioning Requirements - Noise	
Proposed Regulatory Policy	**Rationale**
Permit holders must ensure construction and turbine operations do not cause excessive noise.	Permit holders must comply with BCER Noise Control Best Practices Guideline. Operators should be equipped to carry out preventative actions to limit noise impacts. Certain wind conditions have the potential to significantly increase noise from wind turbines if turbine speeds are not adequately reduced. Insufficient maintenance of turbines also has the potential to cause excessive noise.

3.4 Crown Land Access

Many renewable energy projects are likely to be sited on Crown land in B.C., as nearly 94 per cent of the provincial land base is comprised of such land. There are several important considerations in managing this access. Access management is a nuanced public policy issue that requires balancing the principle of public access with:

- The rights of First Nations to quiet enjoyment of their lands.
- The responsibility of government to generate economic returns from the development of public resources on Crown land.
- Potential impacts to wildlife and other elements of the natural environment from increased access.
- The need to prevent the public from accessing any operational areas that could pose a hazard to their safety or the integrity of infrastructure.

Requirements respecting Crown land access should produce the following outcomes:

- Applicants and permit holders shall seek to manage access in the public interest by considering and balancing interests of various parties.
- Access must be restricted where it poses a public safety risk or a risk to project infrastructure.
- Access should be managed in cooperation with local First Nations.
- Impacts to wildlife and the natural environment from increased access due to development should be minimized.
- The public's general right to access Crown land should not otherwise be impacted, particularly for activities deemed permissible in the Provincial Crown Land Permissions Policy.

Pre-Application & Application Requirements - Crown Land Access	
Proposed Regulatory Policy	**Rationale**
Applicants must prepare and submit an access management plan summarizing access restrictions consistent with parameters established by the BCER. The management plan must outline agreements or expectations for shared/overlapping use and how this use will be managed within the context of public safety, government objectives and First Nations interests. The access management plan must prioritize the physical security of the facility during construction and operation.	This plan should be informed by pre-engagement with impacted First Nations and community engagement with overlapping tenure holders and local authorities. This requirement ensures applicants are working collaboratively with impacted persons to develop access management policies and procedures that uphold public safety, while minimizing negative impacts to other users/rights holders on the land base. The BCER will implement binding permit conditions to supplement the access management plan as deemed necessary.

Construction, Operations & Decommissioning Requirements - Crown Land Access	
Proposed Regulatory Policy	**Rationale**
Applicants must operate the facility in accordance with the access management plan and relevant permit conditions.	The BCER will conduct compliance and enforcement efforts based on the content of the access management plan and in response to complaints. If necessary, the BCER will enforce binding permit conditions regarding access-related issues.

3.5 Shadow Flicker

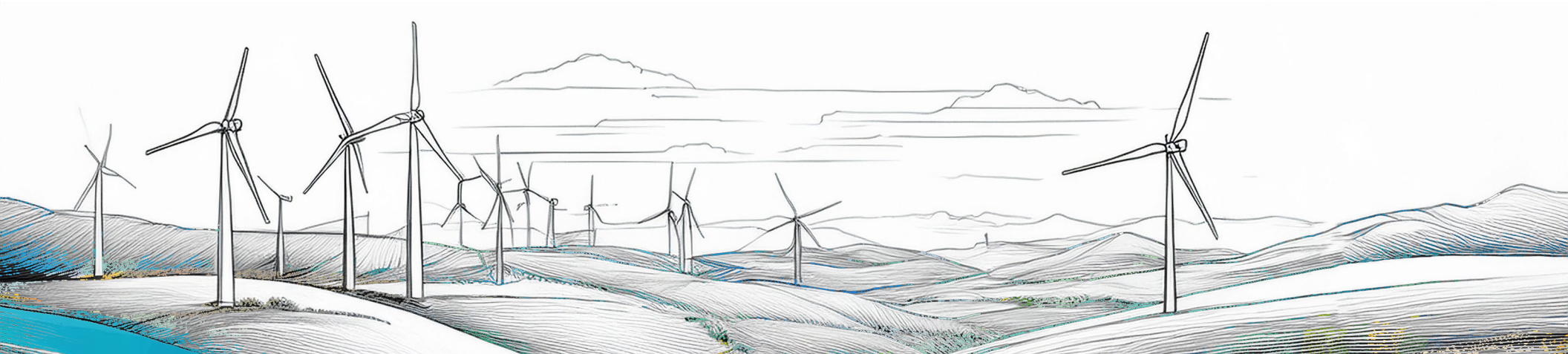
Shadow flicker is a phenomenon of pulsating light and shadow caused by the sun shining through rotating wind turbine blades. The intensity of this phenomenon diminishes with increasing distance from a wind turbine, which means it is typically most noticeable near the wind turbine. The occurrence of shadow flicker is highly dependent on the location of the turbine relative to surrounding buildings, latitude/geographic location of the facility and time of day and year. Shadow flicker is generally experienced from inside built structures and therefore poses negligible risks in terms of public safety. Shadow flicker can present a nuisance to observers inside nearby buildings and is, therefore, an important consideration regarding community impacts.

Requirements with respect to shadow flicker should produce the following outcomes:

- Applicants and the BCER have an accurate understanding of the scope of shadow flicker impacts that may be associated with a proposed development.
- Shadow flicker impacts to nearby buildings should be avoided wherever possible, and must not present a frequent, recurring impact to nearby buildings.
- Assessment of shadow flicker impacts shall only be required where there are “receptor” buildings that could face impacts.

Pre-Application & Application Requirements - Shadow Flicker	
Proposed Regulatory Policy	**Rationale**
The effects of shadow flicker must be assessed as part of the report of quality-of-life impacts if receptors are located within 1.5 km.	If receptors are identified within 1.5 km of the facility, a shadow flicker assessment must be completed. Guidance will be developed to describe the required methodology for such assessments. Predicting shadow flicker at residences surrounding a wind project is achieved through calculations of sun angles at different times of day and periods of a year at a given latitude. This is done while accounting for turbine height and intervening topography.

Construction, Operations & Decommissioning Requirements - Shadow Flicker	
Proposed Regulatory Policy	**Rationale**
Permit holders must limit the duration of shadow flicker experienced at identified receptors to 30 min/day and 30 hours/year.	These shadow flicker duration limits are aligned with those implemented elsewhere in North America and Europe. Limits will only be applied where receptors have been identified, as shadow flicker does not pose general hazards to wildlife.



3.6 Solar Panel Glare

Solar projects may cause visual disturbance due to the reflection of light from photo-voltaic panels. This effect is best described as glare, which is a short but sustained bright reflection (not a flash). Modern solar panels are designed to minimize the effects of glare, but the phenomenon may still impact nearby areas, particularly when the sun is low on the horizon (during late and early sunlight hours). For context, studies have shown less than two per cent of light is typically reflected off modern solar panels, meaning they produce less glare than a regular window or body of water.

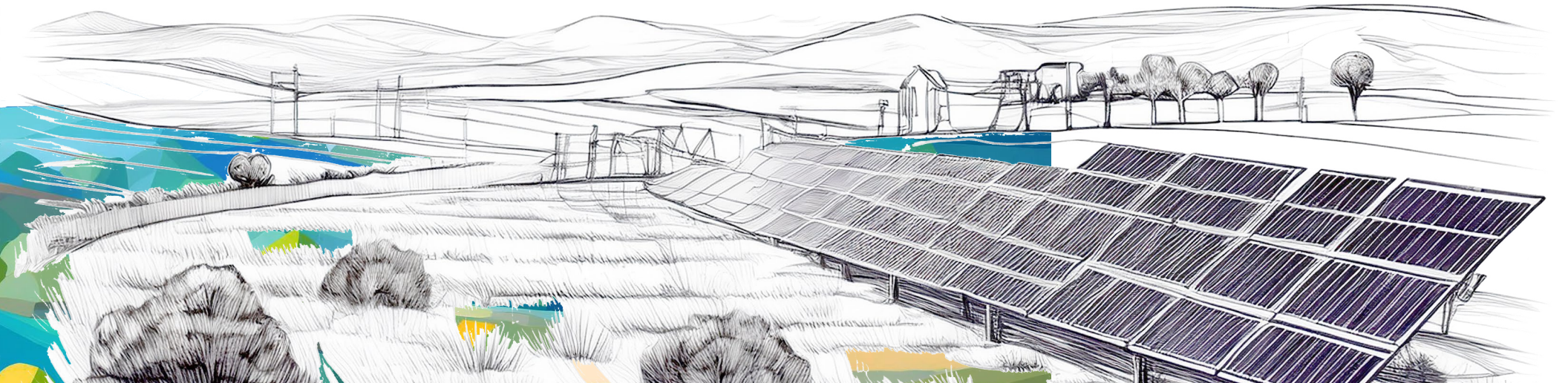
Glare can present a minor nuisance to those in the vicinity of a solar project and may pose safety concerns if it impacts transportation corridors, such as highways or aerodromes. While the glare effect from a single solar panel is objectively minor, the glare off a large array of panels may require proactive management.

Requirements with respect to solar panel glare should produce the following outcomes:

- Applicants and the BCER have an accurate understanding of the scope of glare impacts that may be associated with a proposed development.
- Glare impacts to transportation corridors and aerodromes must not occur.
- Assessment of glare impacts shall only be required where there are “receptor” buildings, transportation corridors or aerodromes that could face impacts.

Pre-Application & Application Requirements - Solar Panel Glare	
Proposed Regulatory Policy	**Rationale**
Applicants must ensure the siting of a solar project does not cause excessive glare which would impact the safe operation of air, rail or road traffic.	Glare requirements will be based on site-specific factors. Applicants will be required to identify nearby receptors in the application submissions. Guidance will establish expectations regarding the methodology to be utilized in conducting pre-construction assessments of solar panel glare. This guidance should require assessment of glare from transportation corridors and aerodromes.

Construction, Operations & Decommissioning Requirements - Solar Panel Glare	
Proposed Regulatory Policy	**Rationale**
Permit holders must ensure operation of a solar energy project does not cause excessive glare which would impact the safe operation of air, rail or road traffic.	Permit conditions will be used to define specific limitations and requirements. These conditions may require adjustments to panel orientation during certain times, or the installation of screening or other physical barriers that protect nearby structures or transportation corridors from glare impacts.



4. Protecting Public Safety

Introduction & Policy Intent

Protecting public safety is a core component of the BCER's regulatory oversight and is explicitly defined in legislation as one of the purposes for which the BCER exists. Public safety is a multifaceted topic that requires consideration of a broad range of hazards that could be associated with an energy resource activity. For instance, risks to public safety include both hazards that arise from the design, maintenance and operation of energy infrastructure itself, or from the influence of the natural environment on that infrastructure (such as the potential for seismic activity or weather to create hazards at the facility site).

The risks and hazards commonly associated with renewable energy projects are well understood. Renewable energy facilities generally pose a lower risk to public safety when compared to other energy resource activities, such as hydrocarbon production and processing. This reduced risk profile reflects both the surface-based nature of the activity, as well as the fact hazardous gases or fluids are not the primary source of energy being produced or transported.

The BCER has identified the primary hazards posed by wind and solar facilities and appropriate management strategies to minimize these hazards. We recognize while the hazards are well understood, the risk associated with a particular facility is unique to the design and larger context surrounding a particular development. To reflect this reality, the BCER is proposing a regulatory framework that will ensure operators develop, document and implement a systematic approach to managing the unique hazards that may be present at their facility. Permit holders will be expected to anticipate, manage, monitor and mitigate the effects of all potential hazards and risks throughout the life cycle of a project.

Issues & Desired Outcomes

4.1 Adoption of Codes & Standards

Standards and codes regarding infrastructure design and management systems are a common regulatory tool that provide consistency across jurisdictions and promote sound engineering practices. Government has recognized the importance of codes and standards in ERAA, providing the BCER authority to adopt codes and standards. The BCER has utilized this authority across our regulatory framework, adopting several relevant Canadian and international engineering and management standards in various BCER Board regulations.

The BCER has reviewed international and Canadian standards for the design and operation of renewable energy projects and have considered their applicability and suitability for the B.C. context. The proposed adoption of the standards below should achieve the following outcomes:

- Clear direction to permit holders regarding expectations for the design and operation of wind projects.
- Permit holder awareness of the latest industry standards respecting design and operation of renewable energy projects, as reflected in regular updates to adopted codes/standards.
- Regulatory consistency with other Canadian jurisdictions.

Construction, Operations & Decommissioning Requirements - Adoption of Codes & Standards	
Proposed Regulatory Policy	**Rationale**
Wind projects must be designed in accordance with CSA C61400-1 (as amended from time to time) unless the permit indicates otherwise.	CSA C61400-1 is the Canadian localized version of the well-established IEC 61400-1 which is widely used in the design of all major wind turbines. The CSA version includes Canadian deviations which reflect essential differences for electrical, environmental and structural safety requirements and provide additional requirements and guidance for the broader range of Canadian external conditions (such as colder climate). Deviations from the standard may be acceptable if the applicant is able to demonstrate the alternative approach provides an equivalent or greater level of safety than the referenced standard.

4.2 Setbacks

Renewable energy projects may be sited in close proximity to occupied residences or other regularly utilized structures. While these facilities pose limited hazards to nearby structures or persons, hazards such as ice throw, blade throw and turbine collapse must be considered in the siting of turbines relative to surrounding structures. Setbacks are commonly utilized in other jurisdictions to mitigate hazards to public safety. The Canadian Renewable Energy Association provides guidance on these hazards specific to the Canadian context and climate, and the BCER has reviewed this guidance in the development of the setback policy outlined below.

ERAA provides the BCER authority to make regulations establishing setbacks for the purpose of protecting public safety. This authority does not extend to the implementation of setbacks for purposes other than for protecting public safety, such as environmental buffers or wildlife setbacks. The BCER does not intend to prescribe setback distances from solar facilities, as the safety hazards posed to nearby structures from these facilities are negligible. Setback distances for solar in other jurisdictions are typically absent or extremely limited in scope (less than 100m).

Setbacks implemented with respect to wind facilities should achieve the following outcomes:

- Limit public safety impacts and damage to nearby structures in the case of potential hazardous events including ice throw, blade throw or turbine collapse.
- Minimize impacts on existing and potential future land uses of adjacent properties.

Construction, Operations & Decommissioning Requirements - Setbacks	
Proposed Regulatory Policy	**Rationale**
Wind turbines must be installed at a location which is: • A safe distance from any resource road. • 2.5 x total height from public roads, highways or railways. • 2.5 x total height from permanent buildings not associated with the facility. • 2.5 x total height from adjoining property lines not associated with the facility.	Setback requirements are based on safety considerations including tower collapse/failure, dropped blades and ice throw. The proposed setback distances provide a simplified approach for distance calculations and are informed by CANREA “Best Practices For Wind Farm Icing and Cold Climate” health and safety formula (max throwing distance = 1.5 x diameter + hub height) and Ontario Renewable Energy Approval Setbacks (blade length +10m from any public road or railway – no exceptions)
A permit holder may be exempted from the prescribed setbacks above, where consent is provided by the registered landowner whose structures or property lines are within the setback distance.	This exemption clause requires permit holders to get consent from landowners if they wish to install wind turbines within 2.5 x total height from property lines or buildings.

4.3 Ice Fall and Ice Throw

The previous section regarding setbacks highlights the risk ice throw can pose to structures in the immediate vicinity of a wind facility. Similar risks in the immediate vicinity of the wind turbine may occur due to ice fall (ice detaching and falling from the wind turbine). Ice fall may pose a risk to workers and the public when in close proximity to the turbine. Wind turbines can accumulate ice under certain atmospheric conditions, such as ambient temperatures near freezing (0°C) combined with high relative humidity, freezing rain or sleet. Since weather conditions may then cause this ice to be shed, there are safety concerns that must be considered during project development and operation.

The risks of ice fall and ice throw are easily managed with several common mitigations. Examples of such mitigations include setbacks, physical and visual warnings (signage), and condition-specific mitigations such as restricting access for site personnel or curtailing operations during conditions where ice may accumulate.

The regulatory requirement below should produce the following outcomes:

- Ice fall and ice throw does not pose a risk to nearby structures, site personnel or the public at large.

Construction, Operations & Decommissioning Requirements - Ice Fall and Ice Throw	
Proposed Regulatory Policy	**Rationale**
Permit holder must develop and implement a management plan for ice fall and ice throw.	• Necessary for protection of public safety. • Appropriate mitigations are site-specific and best assessed at the project level.

4.4 Emergency Management

The BCER prioritizes the reduction and proactive mitigation of risks to public safety, while recognizing incidents may occur, despite robust management programs being in place. Consequently, emergency response planning is an integral component of our regulatory approach to ensuring public safety and mitigating the impact of potential incidents.

Emergency preparedness requires collaboration with local authorities, first responders and local First Nations, as well as ensuring staff accountable for emergency response at a renewable energy project are adequately equipped and trained to effectively manage incidents.

The BCER has a well-established emergency management program with dedicated full-time staff to support applicants and permit holders in development and implementation of their emergency management framework. However, the responsibility for developing and implementing such processes and procedures remains with the permit holder. The BCER will integrate the regulatory policy proposals below into the regulatory framework for renewable energy projects and will develop associated guidance materials for permit holders.

The proposed policies below should achieve the following outcomes:

- Coordinated planning between permit holders, local authorities, First Nations and first responders, regarding emergency preparedness and response procedures.
- Clear, documented procedures for emergency response that inform training for facility staff.
- Clear provision of information regarding facility hazards to first responders likely to respond in case of emergency.
- Consideration of both technical and natural hazards that may contribute to an emergency, including seismic events, flooding and wildfire.

Construction, Operations & Decommissioning Requirements - Emergency Management	
Proposed Regulatory Policy	**Rationale**
Before construction, a permit holder must submit an emergency response plan including: • A description of the facility and its operational activities to be covered by the emergency response plan, emergency contact information for the facility, a description of hazards and risks, hazardous product information, emergency response roles and responsibilities and emergency response procedures. • A training program based on the results of hazard identification to ensure employees and other personnel working on behalf of the permit holder, who have a role and responsibility in an emergency, have appropriate training prior to assuming emergency response roles.	Renewable facilities are proposed in remote areas where emergency response times may be limited. As such, permit holders must be prepared to respond to and contain an emergency. Submission of a robust emergency response plan ensures permit holders are proactively prepared for emergencies at the facility, with clear procedures outlined and roles identified for staff. Because they will be required to act in the case of emergency, facility staff must be adequately trained in relevant procedures and policies.
Require a permit holder to establish and maintain a liaison with the local authority and local First Nations for emergency response activity at its facility and to consult with them in developing and updating emergency plans.	Coordination with local authorities is crucial to effective emergency response. Establishing a liaison ensures local authorities and First Nations have a clear point of contact for such collaborative planning.
Establish triggers for permit holder to review and, if necessary, update the emergency response plan in response to changes in site-specific hazards and risk or identified deficiencies in the plan, at least once a year.	Emergency management plans must be reviewed and updated at regular intervals to ensure they remain responsive to dynamic hazards and personnel changes.
Require a permit holder to immediately respond to an emergency in accordance with the permit holder's plan.	This blanket requirement clarifies the obligations of a permit holder to act in case of an emergency. Due to the remote location of many facilities, permit holders must be prepared to contain an emergency before local first responders are able to respond.
When an emergency occurs, require a permit holder to notify local First Nations and local authorities as soon as possible, after the permit holder has taken any immediate actions necessary for public safety or to minimize immediate environmental impacts.	This requirement is common across the BCER's emergency management framework and ensures timely communication with local First Nations and authorities in case an emergency occurs.
Permit holder must develop and implement a wildfire mitigation and management plan.	There are well established mitigations to reduce wildfire risk that should be implemented at all facilities, such as implementing buffers and controlling vegetation in the immediate vicinity. The plan should consider immediate response to fire at the facility site, prior to first responder arrival. The plan should also consider downed lines or other ignition sources.

4.5 Physical Security

Maintaining the physical security of facility infrastructure is an important public safety consideration at all large industrial sites. Inadequate physical security may increase the risk of vandalism, theft or other unauthorized activities. These activities may impact public safety, worker safety or the reliable operation of the facility. Access to hazardous equipment should be controlled to protect unauthorized users from injuring themselves or others. As such, the BCER will enact security management requirements for renewable energy projects in the province.

The regulatory policy proposed below adapts the requirements of BCER's security management framework to the specific dynamics of renewable energy projects.

Construction, Operations & Decommissioning Requirements - Physical Security	
Proposed Regulatory Policy	**Rationale**
Permit holder must develop and implement a management plan for physical security during construction and operation.	This discrete plan should be complementary to the access management plan. This plan should provide specifics regarding how the physical security of the facility shall be maintained, outlining security systems, fencing and procedures. The plan should address control of access to hazardous equipment (e.g. substations, turbine internals, battery storage). Unlike elsewhere in the BCER's framework, this requirement does not extend to a consideration of cybersecurity. Cybersecurity at renewable energy projects is already considered in the context of grid reliability, which is regulated by the British Columbia Utilities Commission.

4.6 Buried Infrastructure

Buried infrastructure at renewable facilities, such as underground transmission lines, can pose risks to members of the public who are unaware of their presence. Those engaged in any construction activity requiring excavation are exposed to these risks. Buried infrastructure in B.C. is managed via the BC 1 Call program.

This program registers underground infrastructure in a centralized database and requires those conducting any form of excavation to check for underground infrastructure in the proximity prior to digging. The proposed regulatory policy below should achieve the following outcomes:

- Ensure underground infrastructure at renewable energy projects is registered with BC 1 Call.
- Prevent the public from interfering with underground infrastructure and the risks inherent in disrupting such infrastructure during activities requiring excavation.

Construction, Operations & Decommissioning Requirements - Buried Infrastructure	
Proposed Regulatory Policy	**Rationale**
Permit holders must register buried power lines or other underground infrastructure with BC 1 Call.	Protects public safety by having an up-to-date record of buried infrastructure in BC 1 Call, to reduce the risk of future line strikes.

4.7 Batteries & Energy Storage Systems

The renewable energy sector is developing at a rapid pace and quickly overcoming barriers to large-scale deployment. One such development is the integration of batteries and energy storage systems (BESS) into renewable energy projects. Because wind and solar energy production relies on intermittent natural conditions, a mechanism to store energy for later deployment is beneficial for the effective integration of renewable energy into utility systems. BESS allow excess energy production during the day to be stored and used later during peak demand periods, typically late afternoon or early evening.

While BESS offers several benefits in the deployment of wind and solar energy, it does pose public safety hazards that must be accounted for in the regulatory framework. Risks associated with BESS relate to thermal runaway, a feedback loop in which increases in temperature lead to further increases in temperature and may result in fires or explosions. Battery fires are difficult to extinguish and may release harmful gases in the surrounding area. Finally, disposal of damaged or burned batteries has unique considerations to prevent environmental impacts.

There are well established mitigations to decrease the risk of thermal runaways or the impacts of BESS fires. These mitigations relate to the proper installation and maintenance of BESS, as well as appropriate emergency response planning. Permit holders may consider established standards such as National Fire Protection Association Standard 855 in their planning for on-site BESS. Permit holders may also refer to the Canadian Electrical Code which includes requirements for the use of approved equipment for battery energy storage systems, such as certification to ANSI/CAN/UL 9540 and 9540A.

The regulatory policy proposed below should achieve the following outcomes:

- Minimize the risks of battery fires at wind and solar facilities.
- Ensure BESS are appropriately sited within the facility footprint to minimize risk in the case of fire or failure.

Pre-Application & Application Requirements - Batteries & Energy Storage Systems	
Proposed Regulatory Policy	**Rationale**
If a project includes energy storage systems, then a hazard analysis and siting study must be submitted with the permit application.	Protects public safety by considering the potential risks associated with energy storage systems (e.g. battery storage). Applicants must consider the unique hazards of energy storage systems and ensure they are sited in a safe location which minimizes associated risks.

4.8 Management & Maintenance Programs

The BCER recognizes renewable facilities have unique characteristics and risk profiles that, in some cases, are not well addressed through highly prescriptive regulatory provisions. Throughout our regulatory framework, the BCER addresses this issue by requiring the development of management programs are specific to the nature of the permitted facility. This approach requires permit holders to develop and implement plans appropriate for the specific risks of their facility and the sufficiency of plans are reviewed by the BCER. Management programs and other facility-specific programs are periodically audited to ensure proper implementation and lack of compliance with an accepted plan can also be the basis of enforcement action against a permit holder.

The regulatory policy proposal outlined below should achieve the following outcomes:

- Ensure permit holders thoroughly assess the risks and hazards present at their facility.
- Ensure proper procedures, policies and training are in place to manage these risks and hazards.

Construction, Operations & Decommissioning Requirements -Management & Maintenance Programs	
Proposed Regulatory Policy	**Rationale**
Permit holder must develop and implement an operations, inspection and maintenance plan consistent with parameters established by the BCER.	Permit holders must maintain and operate facilities appropriately to ensure public safety. Maintenance and operational requirements will differ according to infrastructure present and other conditions, so a management system approach best addresses requirements for a particular facility. The plan will also include components such as training and competency requirements. Detailed requirements will be outlined in policy guidance.
Permit holder must develop and implement a management plan for the safe storage and spill prevention of hazardous materials during construction and operation consistent with parameters established by the BCER.	Ensures the public and environment is adequately protected from hazardous materials. Risks related to hazardous materials are site-specific, so a management system approach best addresses requirements for a particular facility. Detailed requirements will be outlined in policy guidance.
Permit holder must develop and implement a management of change program consistent with parameters established by the BCER.	Ensures changes which may affect safe operation are adequately reviewed and approved prior to implementation. Detailed requirements will be outlined in policy guidance.
Permit holders must develop and implement a quality management program for the project consistent with parameters established by the BCER.	Ensures installed equipment will be reviewed and verified to be constructed properly by qualified personnel and in accordance with the design and required standards. Detailed requirements will be outlined in policy guidance.

4.9 Required Notifications

The BCER prioritizes clear communication with permit holders and has technical staff available to consult with permit holders regarding concerns or questions related to the design, maintenance or operation of their facilities.

There are key milestones in the project life cycle where the BCER needs to verify site conditions, proper installation and functioning of systems or other elements of a facility that may impact public safety. To ensure these necessary reviews are conducted, the BCER regulatory framework often mandates notification to the BCER before certain activities may begin.

The regulatory policies below should ensure the following outcomes:

- The BCER is provided sufficient notice regarding key development milestone that require some form of validation, inspection or assessment by the BCER.
- Construction and operations do not proceed until the BCER has conducted all necessary validations, inspections and assessments.

At right: Sunmine Solar farm in Kimberley B.C. (Photo: Green Energy Futures, licensed under CC BY-NC-SA 2.0)

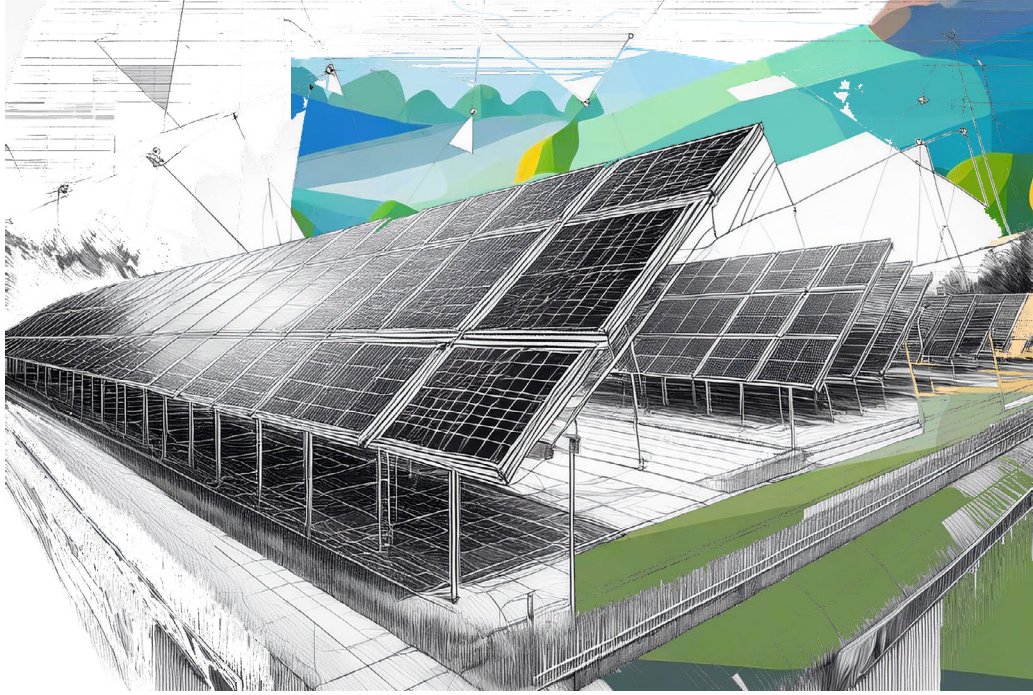
Construction, Operations & Decommissioning Requirements - Required Notifications	
Proposed Regulatory Policy	**Rationale**
Permit holders must provide notification, in the form and manner specified by the BCER. 14 days prior to commencement of: • Site Preparation • Construction	Ensures the BCER is aware of upcoming site preparation and construction activities, to ready potential inspections and emergency response. Provides a record of initial construction for future reclamation requirements. If development is constructed in multiple phases, notice will be provided prior to the commencement of each phase.
Prior to operations, a permit holder must submit to the BCER a statement by the qualified professional of record, in the form and manner required by the BCER, that: • The facility was constructed, inspected and tested in compliance with the design, codes and standards, and applicable regulations. • The facility has been verified to be safe for operation.	Ensures all required inspections and tests to ensure safe operation are conducted by a qualified professional and validated by the BCER prior to operations commencing.
A permit holder must provide notification to BCER within one hour of becoming aware of an emergency.	Required to ensure the BCER is aware of emergencies at regulated facilities and can help to coordinate response.
The regulation will include an incident classification matrix for renewable energy projects. Immediately after a permit holder becomes aware of an incident, the permit holder must classify the incident according to the event or consequence and probability of escalation or control.	Assessed against incident classification matrix, which also defines a reportable incident. Definitions of reportable incidents will be updated to include project specific incidents such as ice or blade throw.
Permit holders must notify the BCER of all reportable incidents within 24 hours of classification.	Required to ensure the BCER is aware of emergencies at regulated facilities and can help to coordinate response.

4.10 Required Reports & Records

The BCER framework generally requires permit holders to maintain and submit certain reports and records. These records may be utilized by the BCER to verify compliance with management systems and maintenance programs.

The regulatory policy proposed below should achieve the following outcomes:

- Ensure BCER has relevant information to verify compliance with management systems and other required programs.



Pre-Application & Application Requirements - Required Reports & Records	
Proposed Regulatory Policy	**Rationale**
An applicant for a renewable facility must submit the following with their application: • A project description, consistent with parameters established by the BCER, that details the design and range of siting configurations that may be constructed ("box permit" or "design envelope" approach). • A preliminary construction schedule. • Preliminary design documents.	These descriptions and schedules are necessary to assess the general nature and high-level impact of a proposed facility on the land base and potential hazards to public safety. Guidance will clarify that such descriptions will enable a "design envelope" approach, wherein applicants can propose a "most impactful" design within a project footprint area. This allows for flexibility in precise turbine siting and design after a permit has been issued, so long as it is within the thresholds of this "design envelope" submitted with an application. The project description should specify which elements of the facility design are final and what are still under consideration.

Construction, Operations & Decommissioning Requirements -Required Reports & Records	
Proposed Regulatory Policy	**Rationale**
Permit holders must submit to the BCER the record drawings (plot diagrams), signed and sealed by a qualified professional and consistent with parameters established by the BCER, within nine months after beginning operation.	These records are used for future reference by the BCER as part of review files.
Permit holder must maintain up-to-date design documentation and drawings for the renewable energy facility.	Maintaining up-to-date design documentation and drawings is important to support the safe operation and maintenance of facilities, especially when troubleshooting issues or when planning modifications to equipment. It also allows the BCER to request and review this documentation if needed, to verify compliance with regulatory requirements.
Permit holders must maintain records of all inspection and maintenance activities.	Provides verification permit holders are adhering to inspection, maintenance and operation plans.
Permit holders must maintain records regarding the management of changes consistent with their management of change plan.	Provides verification permit holders are adhering to management of change plans.
Permit holder must maintain records regarding implementation of all plans required in this section.	Ongoing records requirements allow BCER to conduct audit and verification of permit holder implementation of management plans.

5. Administrative Requirements

Introduction & Policy Intent

This section details additional administrative issues not tied directly to one of the thematic areas discussed above. Administrative issues include things such as fees, record-keeping and reporting. The BCER seeks to minimize administrative complexity while maintaining high standards for regulatory oversight.

Issues & Desired Outcomes

This section details additional administrative issues not tied directly to one of the thematic areas discussed above. Administrative issues include things such as fees, record-keeping and reporting. The BCER seeks to minimize administrative complexity while maintaining high standards for regulatory oversight.

5.1 Cost Recovery

The BCER operates as a fully cost recoverable organization, meaning the costs of our regulatory oversight are recovered directly from regulated parties through fees and levies. This cost recovery model ensures robust regulatory oversight while minimizing costs to the public. This funding model has long-standing precedence at the BCER and the Board of Directors appointed by government hold authority, subject to the approval of government, to impose fees and levies under ERAA. To ensure fees and levies accurately reflect the costs of our regulatory oversight, the BCER conducts an annual review of all fees and levies and makes required adjustments accordingly. The organization proactively engages impacted permit holders when adjustments to fees or levies are anticipated.

Implementing the cost recovery tools outlined below supports the following outcomes:

- Ensure the full costs of BCER regulatory oversight are funded.
- Ensure fee and levy amounts are appropriately calculated and fairly apportioned amongst permit holders.
- Ensure the costs of regulatory oversight are not borne by the public.

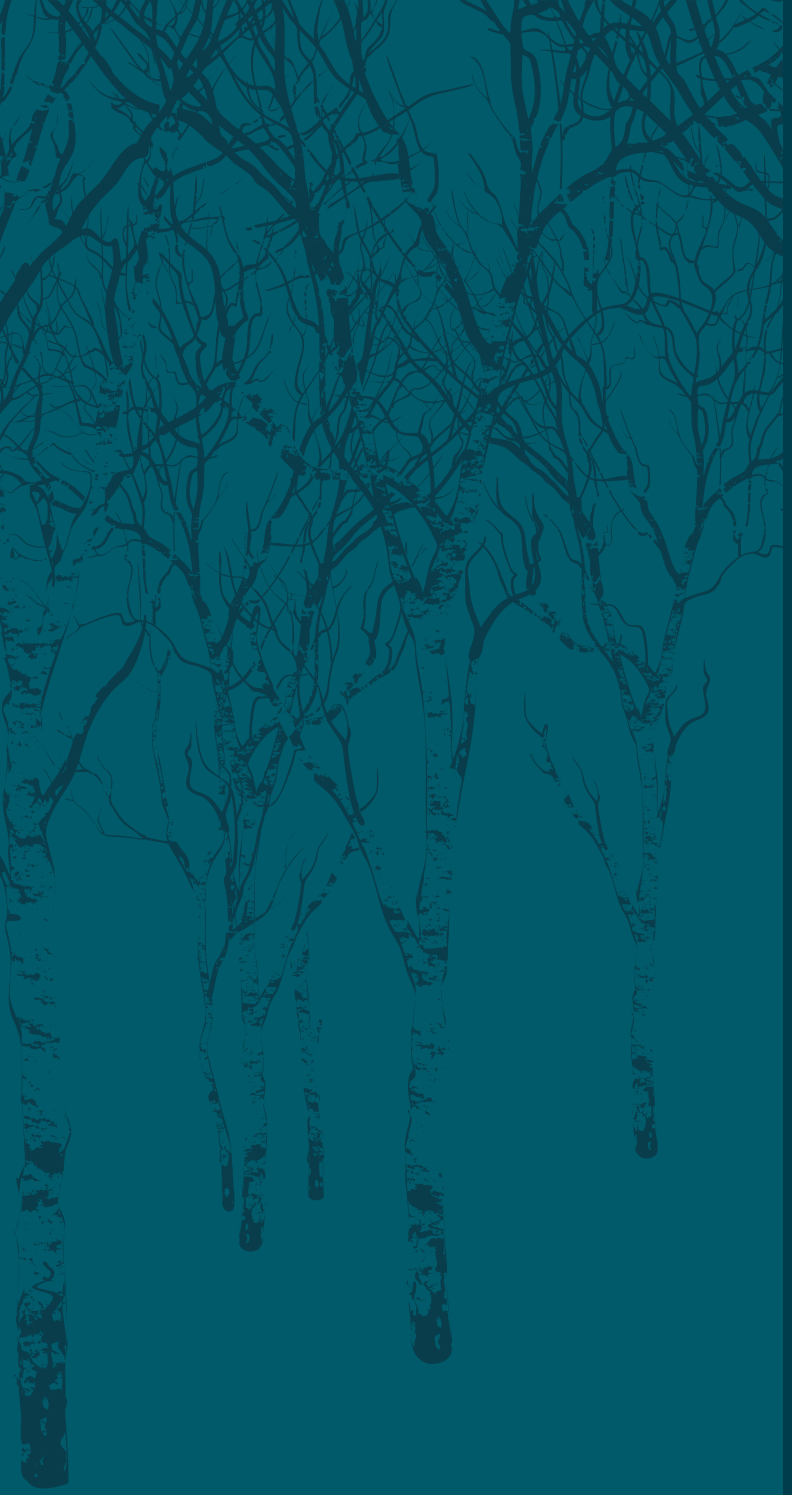
Pre-Application & Application Requirements - Cost Recovery	
Proposed Regulatory Policy	**Rationale**
An applicant must pay the application fee associated with a renewable energy project permit.	Application fees are required to recover the costs associated with reviewing and consulting on a permit application. These fees will consider staff hours, consultation costs and fees associated with provincial authorizations that are bundled under the renewable energy project permit.

Construction, Operations & Decommissioning Requirements - Cost Recovery	
Proposed Regulatory Policy	**Rationale**
A permit holder must pay operational levies associated with their permit.	Operational levies are required to recover the costs associated with ongoing regulatory oversight, including inspections, audits and compliance and enforcement. These levies will consider staff and operational costs.

How to Submit Feedback

The BCER values your feedback regarding the proposed regulatory framework for renewable energy projects.

Written submissions or requests for meetings should be directed to info@rep-spa.ca. We are accepting feedback on the regulatory proposals above until Nov., 14, 2025.



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