Land Policy

Conservation and Reclamation

Conservation and Reclamation Directive for Renewable Energy Operations

Background

In 2017, the Government of Alberta amended the *Environmental Protection and Enhancement Act* (*EPEA)* to include the addition of **the generating of wind and solar electrical power** to Section 2 of the Schedule of Activities. Other renewable energy sources were already included within the act.

This amendment to *EPEA* meant that wind and solar electricity generation projects became subject to regulatory requirements under *EPEA.* This included activities associated with the construction, operation or reclamation of these plants. The amendment also included the duty to conserve specified land, reclaim specified land and (unless exempted) obtain a reclamation certificate for those activities. These requirements are enabled further under the Conservation and Reclamation Regulation (C&R Regulation).

The C&R Regulation was subsequently amended in May 2018 to further clarify the conservation and reclamation (C&R) requirements for renewable energy operations. These amendments came into force on June 15, 2018.

- *Environmental Protection and Enhancement Act*
- Conservation and Reclamation Regulation

Conservation and Reclamation Regulation Amendments

The requirement to conserve and reclaim land has been in place since *EPEA* was enacted. The amendments to the C&R Regulation and the development of specific C&R requirements for renewable energy operations provides a clear and uniform approach to ensure projects are managed consistently. The amendments made to the C&R Regulation include:

- Specifically including renewable energy operations (REOs) in the definition of **specified land**;
- Exempting renewable energy operations reclaimed prior to July 1, 2018 and small REOs that produce less than five megawatts (MW) of renewable electricity and have a footprint less than one hectare from the requirement to obtain a reclamation certificate.

The following definitions were also added to the regulation:

- **Renewable Energy Operation (REO)**: means a site or plant generating renewable electricity from a renewable energy resource.
- **Renewable Energy Resource**: means an energy resource that occurs naturally and that can be replenished or renewed within a human lifespan, including, but not limited to, (i) moving water, (ii) wind, (iii) geothermal or heat from the earth, (iv) solar or sunlight and (v) sustainable biomass.

These align with definitions under the *Renewable Electricity Act*.

Specified Land

The C&R Regulation defines the term **specified land** as "***land that is being or has been used or held for or in connection with"*** various specified land activities listed in the C&R Regulation. These include activities such as oil and gas production sites (e.g, wellsites), pipelines, roads, mines and plants (inclusive of those listed under Section 2 of the Schedule of Activities under *EPEA*).

After the March 2017 *EPEA* amendments, the following renewable energy activities were covered under Section 2 of the Schedule of Activities:

- the generating of thermal electric power or steam (e.g., geothermal or heat from the ground and sustainable biomass)
- the generating of hydro-electric power (e.g., moving water)
- the generating of wind electric power
- the generating of solar electric power

Equivalent Land Capability

The objective of the conservation and reclamation of specified land is to return land to an equivalent capability. The C&R Regulation defines **equivalent land capability** as:

> ***The ability of the land to support various land uses after conservation and reclamation is similar to the ability that existed prior to a specified land activity being conducted on the land, but that the individual land uses will not necessarily be identical.***

The desired outcome is that, once C&R is complete, the land can support uses similar to what was occurring before the renewable energy operation was on the land.

Requirements for Renewable Energy Operations

EPEA states that an operator must: conserve specified land; reclaim specified land; and, unless exempted by the C&R Regulation, obtain a reclamation certificate in respect of the C&R.

Under the C&R Regulation:

- Section 3 enables the development of standards, guidelines, and criteria for specified land, including plants.
- Section 12 outlines the content of a reclamation certificate application.

The amendments to the C&R Regulation enabled the development of specific C&R requirements for renewable energy operations. (See the section on Conservation and Reclamation Directive for Renewable Energy Operations for further details.) The amendments also enabled a post-certification liability period once a reclamation certificate has been issued, and outlined conditions when a reclamation certificate is not required. The amendments:

- Set a five-year liability period following the issuance of a reclamation certificate
- Noted that a reclamation certificate is not required in the following instances:
  - Projects that were reclaimed prior to July 1, 2018 and
  - Where the renewable electricity generated or produced is less than or equal to that which is defined for large micro-generation in the Micro-generation Regulation and the total footprint boundary is no greater than one hectare (2.47 acres) in size.
- Micro-generation Regulation (AR 27/2008)

Projects that involve the disturbance or reclamation of wetlands are subject to the 2013 Alberta Wetland Policy.

Additional information can be found on the Alberta Wetland Policy Implementation page.

- 2013 Alberta Wetland Policy
- Alberta Wetland Policy Implementation

Conservation and Reclamation Directive for Renewable Energy Operations

The Conservation and Reclamation Directive for Renewable Energy Operations (the Directive) provides the base standard for conservation and reclamation of REOs. It sets out the requirements for operations that generate renewable energy from wind, solar, or geothermal sources for electrical production. Biomass and hydro sources of renewable energy are regulated under Departmental approvals, which outline construction, operation and closure requirements.

- *Conservation and Reclamation Directive for Renewable Energy Operations*

The Directive applies to all operations except those:

- Reclaimed prior to July 1, 2018;
- Where the renewable electricity generated or produced is less than five megawatts and the total footprint boundary is no greater than one hectare (2.47 acres) in size; or,
- Located within the boundary of federal lands, including Indigenous reserves, military bases and national parks.

Key components of the Directive include:

- Conservation and Reclamation Plans (REO C&R Plans)
- Desktop and Field Level Assessments
- Pre-Disturbance Site Assessments
- Interim Monitoring Site Assessments
- Reclamation Certificate Site Assessments and Application

Implementation

The Directive enables a staggered implementation. Requirements will vary depending on when the renewable energy operation is commissioned (i.e.

when construction is complete and the operation is ready to produce electricity).

Relevant dates and basic requirements for:

- REOs commissioned before September 14, 2018:
  - Will require a Conservation and Reclamation (C&R) plan; and,
  - Will be required to apply for a reclamation certificate after decommissioning.
- REOs commissioned between September 14, 2018 and June 30, 2021:
  - Will require basic soils information (topsoil depths, salvage and placement), a qualified professional overseeing soil conservation activities, and a post-construction assessment;
  - Will require a Conservation and Reclamation (C&R) plan; and,
  - Will be required to apply for a reclamation certificate after decommissioning.
- REOs commissioned on or after July 1, 2021:
  - Will require a pre- and post-construction assessment;
  - Will require a Conservation and Reclamation (C&R) plan; and,
  - Will be required to apply for a reclamation certificate after decommissioning.

The Directive contains further details on timeframes and requirements in Tables 2 and 3.

Previous Contracts

Landowner Agreements

The Directive applies to all renewable energy operations, subject to the implementation timing as noted above.

Private surface lease agreements signed by landowner(s) and the REO operator(s) prior to the release of the Directive may contain commitments relating to C&R activities. The operator ***should***[1] append any C&R commitments made in the surface lease agreement as outcomes under the C&R Plan.

Future surface lease agreements between landowners and renewable energy developers can include additional requirements beyond those outlined in the Directive; however, they would not be enforceable under the C&R Regulation. The parties signing the surface lease agreement would be responsible for ensuring any additional commitments are met.

Roles and Responsibilities

Various authorities are involved throughout the phases of a renewable energy operation's lifecycle. For the purposes of the Directive, the roles and responsibilities of different entities are described below:

Alberta Electric System Operator (AESO)

The AESO plans, manages and operates the provincial power grid, provincial energy markets and plans for future energy needs and infrastructure.

- Closure and Certification Phase: While the definition for reclamation under EPEA includes decommissioning, the notification process for decommissioning does not lie within the mandate of AEP. This process falls under AESO's mandate.

Alberta Environment and Parks (AEP)

- Approval Phase: AEP will provide support to the Alberta Utilities Commission (AUC) in the form of reviews and assessments of REO C&R plans submitted in project applications submitted on or after January 1, 2020. This role would be done concurrently and in alignment with existing wildlife reviews and, when approved, the formal disposition application on public lands.
  - AEP Wildlife Directive for Alberta Wind Energy Projects
  - AEP Wildlife Directive for Alberta Solar Energy Projects
- Construction and Operational Phase: AEP will provide support to the AUC in the form of:
  - Periodic reviews and assessments of C&R plans and amendments; and
  - Support for compliance and enforcement of matters relating to C&R activities.
- Closure and Certification Phase: AEP will receive the reclamation certificate applications and is responsible for issuing reclamation certificates to renewable energy operations.

Alberta Utilities Commission (AUC)

The AUC regulates the utilities sector, natural gas, and electricity markets. It is responsible for ensuring that the delivery of Alberta's utility service takes place in a manner that is fair, responsible and in the public interest.

[1] A recommended practice; not a mandatory requirement

- Approval Phase: the AUC is responsible for receiving applications and issuing approvals for renewable energy operations.
- Construction and Operational Phase: the AUC is the lead regulatory agency during construction and operation of a renewable energy operation.
- Closure and Certification Phase: AUC's involvement in this phase is to cancel their approval once a reclamation certificate has been issued by Alberta Environment and Parks.

Municipalities

- Approval Phase: municipal authorities may be involved (e.g. zoning, development permits)
- Construction and Operational Phase: may be involved if the operation is on municipal land and/or road use agreements are required during construction.
- Closure and Certification Phase: may be involved if there is a change in end land use requiring re-zoning or if the renewable energy operation occurs on municipal land.

Requirements

Post-Construction Monitoring

Operators of REOs are required to conduct vegetation assessments for a minimum of three (3) growing seasons following construction and/or any disturbances associated with the REO (e.g., retrofitting). The assessment ***should*** be aligned with metrics defined within the 2010 Reclamation Criteria for Wellsites and Associated Facilities that are appropriate for the desired end land use. These assessments ***must*** be completed by a qualified environmental professional or competent practioner. Results of the assessments ***must*** be included in updated C&R plans.

Decommissioning and Infrastructure Removal

For any infrastructure being left in place below the final reclaimed surface, operators are required to:

- Demonstrate remaining infrastructure will not result in an adverse effect
- Provide written confirmation of acceptance by the land manager (e.g., conditions within original surface lease agreement)
- Remove any concrete infrastructure to a minimum depth of 1.2 metres and
- Remove any other remaining infrastructure (e.g., collector lines) associated with the REO to a depth of one metre.

For any infrastructure being left in place on the surface of the final reclaimed area, operators are required to:

- Provide justification for why the infrastructure is being left in place (e.g., infrastructure ***must*** be an improvement);
- Demonstrate the remaining infrastructure is stable, non-hazardous, non-erosive, and that it will not result in an adverse effect; and,
- Provide written confirmation of acceptance by the land manager in the reclamation certificate application.

Reclamation Certificate Assessments

Operators of REOs are required to conduct reclamation certificate site assessments (RCSAs) as part of the reclamation certificate application. These assessments ***must*** be completed by a qualified environmental professional or competent practioner. They must, at a minimum, use the methodology outlined under the 2010 Reclamation Criteria for Wellsites and Associated Faciltities that are appropriate for the desired end land use.

- **Forested Lands, Native Grasslands, Peatlands and Wetlands**: the number of years to determine whether the site has been reclaimed to meet a sustainable plant community may vary. Sites assessed with less than five (5) growing seasons ***must*** be justified as to the status of the plant community.
- **Cultivated Lands**: vegetation assessments ***must*** be conducted for a minimum of four (4) growing seasons. The assessments must include:
  - One (1) assessment where the landscape, soil
  - and vegetation assessments are completed in-field;
  - One (1) assessment where, at a minimum, the vegetation assessment is completed; and,
  - Two (2) assessments where, at a minimum, the vegetation assessment is completed in-field and/or with alternative assessment methods (e.g., remote sensing).