



Renewable Electricity Fact Sheet

If information in this document conflicts with the *Emissions Management and Climate Resilience Act* (the Act), the Technology Innovation and Emissions Reduction Regulation (the Regulation), or the Standards published under the Regulation, then the act, regulation and/or standard prevail over this document.

Background

The Technology Innovation and Emissions Reduction (TIER) regulation is designed to help industrial facilities find innovative ways to reduce emissions and invest in clean technology. The Regulation provides regulated facilities with the following compliance options:

1. On-site emissions reductions
2. Use of emissions performance credits (EPCs)
3. Use of Alberta-based emission offsets
4. Use of Alberta-based sequestration credits and/or
5. Payment into the TIER compliance fund.

Emission offsets, EPCs and sequestration credits are listed on the [Alberta Carbon Registries](#).

Renewable electricity facilities

Renewable electricity facilities have two options to participate in the TIER regulation:

1. Create an emission offset project or
2. Apply to become and opted-in facility.

Alberta emission offset projects

Renewable electricity projects started in 2002 or after, and that meet all the Regulation requirements and offset system rules, may create an emission offset project using government approved quantification protocols. These projects could include wind-powered electricity generation, distributed renewable electricity and solar electricity generation. To generate emission offsets, emission offset projects cannot be a large emitter or opt-in facility under the TIER regulation. Emission offset projects are not eligible to generate emission offsets if they are getting recognition for

their electricity production in any other offset system or recognition scheme. Smaller projects (called subprojects) may be aggregated to minimize administrative burden. All projects and subprojects must meet all system requirements.

Beginning January 1, 2023, emission offset projects have a standard 10-year crediting period. Emission offset project developers may apply to the director for a five-year extension period if they are able to demonstrate financial need. If approved, extension periods begin immediately after the end of the crediting period. The maximum reporting period length is two years, and emission offset project developers have six months after the end of a reporting period to submit an emission offset project report and verification report to the registry.

The Carbon Offset Emission Factors Handbook (handbook) is applicable for all emission offset projects and provides the electricity grid displacement factor (EDGF) used by emission offset projects for displacing grid-electricity with renewable generation. The EDGF for emission offset projects initiated in 2023 is 0.52 t CO₂e/MWh for a 10-year crediting period unless subprojects are added.

If sub-projects are added on or after January 1, 2024, the entire project will use the EDGF that corresponds to the vintage year as set out in the handbook.

Emission offset projects initiated in 2024 or later must use the EDGF that corresponds to the vintage year as set out in the handbook.

Year	EDGF (tCO ₂ e/MWh)	Electricity HPB (tCO ₂ e/MWh)
2023	0.5200	0.3626
2024	0.4901	0.3552
2025	0.4602	0.3478
2026	0.4303	0.3404
2027	0.4005	0.3330
2028	0.3706	0.3256
2029	0.3407	0.3182

2030	Matches HPB Onward	0.3108
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Please visit the [Alberta Emission Offset System](#) for more information and applicable documentation.

Opted-in regulated facilities

Please refer to section four of the TIER regulation for further details on eligibility criteria. Electricity facilities, including renewable electricity facilities, can opt-in under the direct competition pathway.

Renewable electricity facilities are defined in the TIER regulation. Renewable electricity facilities are eligible to opt-in unless any of the following criteria applies to the facility:

- The facility has a total nominal capacity of less than five megawatts.
- The facility has entered into a renewable electricity support agreement under section 7(4) of the *Renewable Electricity Act*.
- An economic benefit is being provided under a program or other scheme that is attributable to the electricity produced at the facility having been produced from a renewable energy resource.

Renewable electricity facilities cannot be grouped or aggregated to meet the five megawatt threshold.

All electricity facilities are subject to the high-performance benchmark published in Schedule 2 of the TIER regulation. The electricity high performance benchmark was 0.37 t CO₂e/MWh in 2022, declining by two per cent per year starting in 2023.

Regulated facilities can create EPCs when the facility's total regulated emissions are less than the allowable emissions calculated using the electricity benchmark, as described in Section 9 of the TIER regulation. The compliance year coincides with the calendar year; the compliance deadline is June 30 of the year following the compliance year.

EPCs are typically issued after facility submissions have been reviewed, usually before the end of the calendar year. Renewable electricity generators may submit a verified compliance report by March 31, covering the prior compliance year. The department will aim to review and serialize the requested EPCs by June 1 of the year the compliance report is submitted.

Application to opt-in to the TIER regulation must be received by the director in the prescribed format on or before September 1 of the year preceding the compliance year. A facility cannot generate emission offsets for any year that it

is an opted-in facility. There is no time limit on how long a facility can remain opted-in and generate EPCs.

Renewable electricity facilities subject to TIER must register generating units and have production reported on the [Western Renewable Energy Generation Information System](#) for all electricity that will be claimed as production under the regulation.

Renewable electricity certificates associated with claimed production for the year must be retired according to instructions provided separately. Please refer to Part 2, Section 6.1 of the Standard for Completing Greenhouse Gas Compliance and Forecasting Reports for more information regarding the retirement of renewable attributes.

Any production claimed in any other system or scheme cannot be claimed under the TIER regulation to generate EPCs.

Direct and indirect emissions

Emissions that occur at the facility, including service vehicles and back-up generators, and indirect emissions, such as electricity imported from the grid, must be accounted for in both emission offset projects and compliance reporting. Offset project emissions are monitored and quantified according to the applicable quantification protocol. Regulated facilities must quantify emissions according to the Alberta greenhouse gas quantification methodologies.

Third-party verification

Both emission offset project reports and regulated facility compliance reports require independent third-party verification. The project developer or person responsible for the renewable electricity facility is responsible for the contract and costs of third-party verification. The Standard for Validation, Verification and Audit provides the regulatory requirements and more details for the verification process.