Conventional Oil and Gas Fall 2026 Webinar



Technology Innovation and Emissions Reduction Regulation (TIER)

Climate Regulation and Carbon Markets Branch
Alberta Environment and Protected Areas
October 20, 2026

Alberta

Agenda

- Opening: Objectives and key dates
- 2026 Benchmarking: FSB framework, new sites, non-Petrinex emissions
- FSB Forms: application, default, and units/years
- 2026 Reporting: Low-Emitting Facility (LEF) treatment and Compliance Report (CR) template walkthrough
- Enrollment and Exit: enroll, re-enroll, removals for 2027
- Q & A

2026 Program Objectives and Key Dates

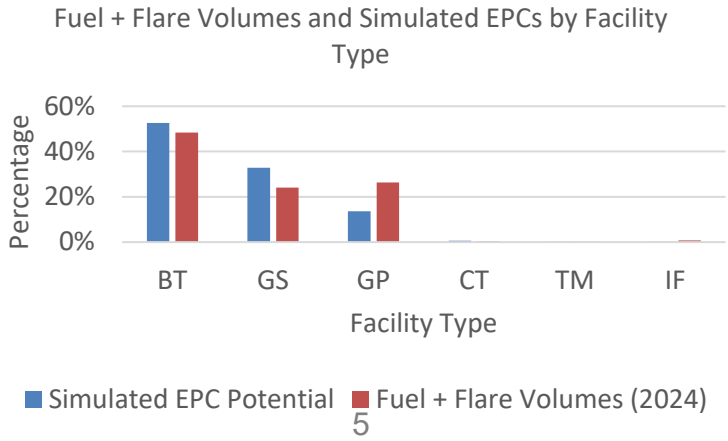
- Program objectives (2026 and onwards)
  - Voluntary enrolment in the COG aggregate program, with compliance requirements
  - Incentivize emissions reductions by enabling aggregates to earn EPCs through verifiable facility performance improvements
  - Maintain representative benchmarking while preserving full enrollment flexibility
- Key dates
  - November 15, 2026 - enrollment / re-enrollment and adding facilities for 2026 reporting
  - December 1, 2026 - 2026 FSB application, benchmark units and reference years requests
    - An FSB application is not required to receive a default benchmark. Consider a verified application where the default approach does not adequately represent your facilities
  - December 1, 2026 - removal of facilities for 2027
  - Aggregate enrollment/removal submissions: Electronic Transfer System (ETS)
  - Questions and FSB application, units/years request submissions: EPA.GHG@gov.ab.ca

2026 Benchmarking: Why LEF Treatment Is Needed

- Recap of the data analysis shared at the last webinar
  - Up to 62,000 Petrinex IDs were registered in the aggregate program in 2024
  - Zero-Emitting Facilities (ZEF) and Low-Emitting Facilities (LEF) account for ~90% of the ~20,000 facilities with Petrinex data, but only ~12% of fuel + flare volumes
  - The top ~10% of emitters (~2,000 sites) account for ~88% of program emissions
- Why treatment is needed
  - ZEF and LEF dilute an aggregate's emissions intensity without demonstrable facility improvements
  - Dilution arises from inconsistent production accounting between reference and reporting years, and uneven scaling
- Probable outcome: leaner, more focused aggregates with meaningful emissions coverage, and tangible EPC opportunities

2026 Benchmarking: Guiding Principle

- Principle: same-cohort, like-for-like comparison of emissions performance
  - Compare an aggregate against facilities of the same type, on a consistent population and unit basis
  - Benchmarking by facility type plus LEF treatment ensures fair comparison and reduces noise
  - Mitigates dilutive effects linked to ZEF, LEF and uneven scaling across facility types
- As presented in 2025, EPC opportunities remain comparable to 2024



Classification: Public

2026 Benchmarking: Key Elements of the Framework

- One FSB will be assigned to each facility type, with a minimum emissions threshold of 500 e^3m^3 fuel + flare volumes (average in the reference years), applied to each Petrinex ID (facility)
- All Petrinex emissions data will be included in both benchmarking and reporting
  - LEF (replaces the prior ZEF treatment) production accounting data (denominator volumes) will be excluded from benchmarking and reporting
- Non-Petrinex emissions are excluded from default benchmarking, with inclusion available on request depending on data availability
- A benchmark unit is selected for each facility type in an aggregate
- The pre-existing reference years will be adopted where appropriate when an aggregate retains all or a subset of its original facility population
  - Pearson's correlation coefficient (r) will continue to support the reference year selection process
- The compliance report and FSB forms have been revised accordingly

2026 Benchmarking – LEF Treatment and New Sites

- New sites are treated as LEF because they report no fuel and flare volumes in the reference years
  - They fall below the 500 e^3m^3 threshold through absence of data
  - Pathways are therefore provided to accommodate new sites
- Accommodating new sites
  - Best-in-class treatment (director approval required)
  - Adding a more recent reference year
  - Creating a new aggregate

2026 Benchmarking – Non-Petrinex Emissions

- Non-Petrinex emissions will be excluded from default benchmarking for each facility type
- Rationale
  - Segregated non-Petrinex emissions data by facility type is not available to the department
  - Non-Petrinex emissions are ~6% of the program's 2025 total regulated emissions
  - There could have been significant changes to some aggregates' drilling and completion (D&C) activities – dependent on annual capital programs
  - Excluding these emissions builds conservativeness into default benchmarking
- Enrollment flexibility
  - An operator may choose not to enroll new D&C sites in its aggregate
- Treatment in the FSB application form (full application or as a data submission to support default benchmarking)
  - Non-D&C can be included at the Petrinex ID (contact the department if there are challenges)
  - D&C: contact the department about developing a D&C benchmark

2026 FSB and Compliance Forms

- The FSB Application Form, and the Benchmark Units and Years Request Form were published in July 2026
  - Notification of the availability: 2026 Aggregate FSB Forms sent on July 23, 2026
- Main similarities and differences between the default FSB form and the FSB application form
  - Same LEF treatment
  - Almost identical Section Bs and Section E
  - Default FSBs are exclusive of non-Petrinex emissions unless verified segregated data is provided
  - FSB applications may select GHG quantification methods different from default options or prior submissions
- The 2026 aggregate facility compliance report form is now available
  - Notification of the availability sent on October 15
- Walkthrough:
  - 2026 FSB application form and default FSB form
  - 2026 Benchmark units and reference years request form
  - 2026 compliance report form

2026 FSB Forms: What's Different than the 2025 Version

- Benchmarks are now calculated by **facility type**
- **LEF determination** is built into the forms
- **Default FSBs** are generated from a pre-filled default FSB Form, sent with the FSB letter
- **Benchmark units**
  - Benchmark Unit tab removed, including the correlation analysis
  - Use the Benchmark Unit and Reference Years Request Form to request changes to units/years
- **Section B2 split** into Sections B2-1 and B2-2

2026 Reduction Targets

Category	Target
SFC	**18%**
Flaring (RTF)	**16%**

FSB Application Form – Section B: Reporting by Petrinex ID

- **Section B1** – Petrinex fuel and flaring
  - List every Petrinex ID from your most recent approved **Confirmation of Regulation letter**; layout is similar to previous forms
- **New Section B2-1** – Non-Petrinex fuel, by Petrinex ID
  - Volumes and methods chosen **per Petrinex ID** (fuel consumption, CO_2, CH_4/N_2O); allocate non-Petrinex volumes by site
  - One row for non-Petrinex fuel gas and one for non-variable fuels, per Petrinex ID
  - Drilling and completion fuel is **excluded** – contact the department for a separate benchmark for D&C as needed
- **New Section B2-2** – Fuel quantities and exported CO_2
  - Exported CO_2 (E_{CO2A}) is reported **by facility type**
  - Non-variable fuel m^3 total should match B2-1
  - Facility types are automatically displayed based on the facility types in the table at the top of Section B6.



Classification: Public

Production (Section B6)

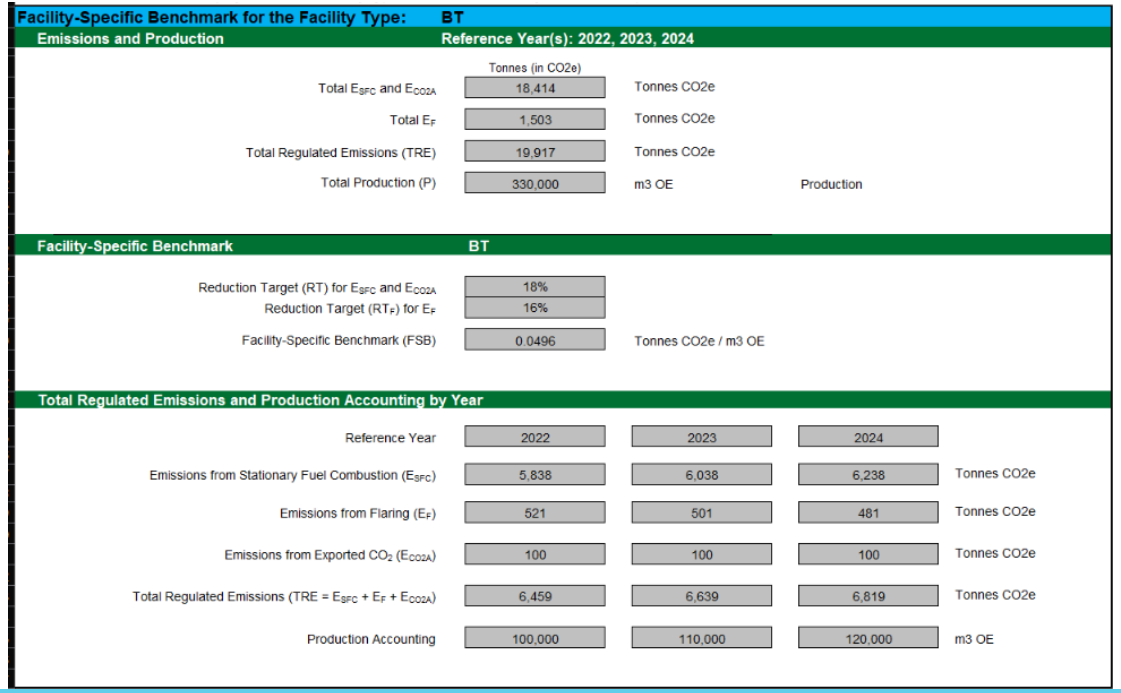
- Production totals are summed **by facility type, each with its own benchmark unit** (e.g., Production, Receipt, or Disposition in m³ OE).
- New **LEF flag** for each Petrinex ID; LEF production counts as **0** in the benchmark.
- **Petrinex IDs drive everything.** The facility type is read from characters 3–4 of the ID (AB**BT**0123345 → BT). A typo would create an extra facility type and an extra FSB table in Section E.
- **List the same IDs in B1 and B6.** Match the latest Confirmation of Regulation letter exactly.

Facility Type	Benchmark Unit (Product)	Unit of Volume	Total Benchmark Unit (Product) Volume		
			2022	2023	2024
BT	Production	m3 OE	100,000.0000	110,000.0000	120,000.0000
GS	Receipt	m3	200,000.0000	200,000.0000	200,000.0000

Production			2022	2023	2024		
TIER_FacilityName	TIER_FACILITYID	Petrinex ID	Benchmark Unit Volume	Benchmark Unit Volume	Benchmark Unit Volume	Facility Type	Is Low-Emitting Facility (LEF)
Test Battery	TF0001	ABBT0123345	100,000.0000	110,000.0000	120,000.0000	BT	FALSE
Test Gas Gathering System	TF0002	ABGS0123345	200,000.0000	200,000.0000	200,000.0000	GS	FALSE

FSB Calculation (Section E)

- **One FSB table per facility type:** Section E automatically builds a table for each facility type listed in the B6 summary, so a missing facility type means a missing benchmark
- **Formula unchanged:** FSB = ([E_{SFC} + E_{CO2A}] × (1 − RT) + E_F × (1 − RT_F)) ÷ production (P)



Facility-Specific Benchmark for the Facility Type:	BT			
Emissions and Production	**Reference Year(s): 2022, 2023, 2024**			
	Tonnes (in CO2e)			
Total E_{SFC} and E_{CO2A}	18,414	Tonnes CO2e		
Total E_F	1,503	Tonnes CO2e		
Total Regulated Emissions (TRE)	19,917	Tonnes CO2e		
Total Production (P)	330,000	m3 OE	Production	
Facility-Specific Benchmark	**BT**			
Reduction Target (RT) for E_{SFC} and E_{CO2A}	18%			
Reduction Target (RT_F) for E_F	16%			
Facility-Specific Benchmark (FSB)	0.0496	Tonnes CO2e / m3 OE		
Total Regulated Emissions and Production Accounting by Year				
Reference Year	2022	2023	2024	
Emissions from Stationary Fuel Combustion (E_{SFC})	5,838	6,038	6,238	Tonnes CO2e
Emissions from Flaring (E_F)	521	501	481	Tonnes CO2e
Emissions from Exported CO_2 (E_{CO2A})	100	100	100	Tonnes CO2e
Total Regulated Emissions (TRE = E_{SFC} + E_F + E_{CO2A})	6,459	6,639	6,819	Tonnes CO2e
Production Accounting	100,000	110,000	120,000	m3 OE

Classification: Public

Default FSB Form

- GHG quantification methods are mapped to each facility's prior FSB applications or CR reports for the reference years, where available; If not, default methods used
- Default benchmark units for 2026 follow section 9.1.2.1, as shown below

Facility type	Code	Benchmark Unit used
Well batteries	**BT**	Production (PROD, PROC, FRAC)
Gas gathering systems	**GS**	Receipts (REC)
Gas plants	**GP**	Receipts (REC)
Custom treating facilities	**CT**	Receipts (REC)
Tank terminals	**TM**	Receipts (REC)
Injection facilities	**IF**	Receipts (REC)
Pipelines	**PL**	Receipts (REC)
Metering stations	**MS**	Receipts (REC)

Benchmark Units and Reference Years Request Form

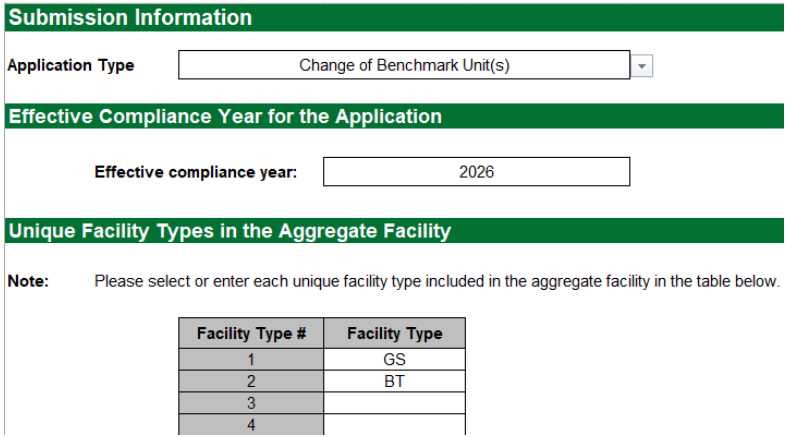
- Features:
  - Combines Benchmark Unit (BMU) and Reference Year (RY) change requests into a single form
  - Applicants may request a new or revised BMU, RY, or both using a single application form
  - The Submission tab, Section B, and the SoC have been updated to support facility type-specific benchmark units; All other tabs remain similar to the previous form
  - Correlation tables populate automatically based on the facility types selected
- Applicability:
  - **Change of Benchmark Units**: default units or previously approved units not representative of an aggregate or sub-aggregate facility; assessed on correlation with emissions (Section 9.1.2); and/or
  - **Change of Reference Years:** proposed years from the three-year reference period are more representative than those approved (Section 9.1.1);

  Note: Re-enrollment of a subset of a previous aggregate may retain its reference years by default; adding new facilities may trigger re-assessment

Walkthrough: BMUs and RYs Request Form – Submission Tab

Submission Tab:

- Select one of the three application types from the drop-down list
  - Change of benchmark units;
  - Change of reference years; or
  - Change both benchmark units and reference years
- Enter the effective compliance year for the application
- Select one of the facility types from the drop-down list



Note: For each unique facility type, Section B automatically generates and displays two correlation tables for comparison

Walkthrough: BMUs and RYs Request Form – Section B

Section B: Correlation Information by Facility Type

- For each facility type selected in the Submission tab, two correlation tables are available for comparison:
  - Existing (approved, if applicable) or default BMUs, and RYs; and
  - Proposed BMUs and/or RYs
- Manually select or directly enter the existing and requested BMUs and RYs
- The following correlations are required for each reference year and for all reference years combined:
  - Production accounting to TREs (ragg),
  - Production accounting to SFC emissions (ragg _SFC); and
  - Production accounting to Flaring emissions (ragg_F)

Walkthrough: BMUs and RYs Request Form – Section B

Example

- Requesting to change the GS facility benchmark unit from the default unit of “Receipts” to “Disposition to External Non-Operational Facilities”.
- Retaining the approved benchmark years: 2021, 2022, and 2023
- Providing flexibility to manually enter any combination of reference years

Correlation Information for the Facility Type: GS

Correlation information for the pre-existing benchmark unit and reference year(s)

Select the pre-existing approved or default benchmark unit from the dropdown list below.

Receipts

Pre-existing

If "Other benchmark unit" is selected above, enter the benchmark unit in the cell below.

Enter the correlation analysis results in the table below using the pre-existing benchmark unit and reference years for the facility type identified above.

Year	Production Accounting to TRE Correlation (r_{Agg})	Production Accounting to SFC Correlation (r_{Agg_SFC})	Production Accounting to Flaring Correlation (r_{Agg_F})
2021			
2022			
2023			
All Years Combined			

Correlation information for the requested benchmark unit and reference year(s)

Note: Use the pre-existing benchmark unit or reference year(s) if either the benchmark unit or the reference year(s) remain unchanged.

Select the requested benchmark unit from the dropdown list below.

Other benchmark unit

Requested

If "Other benchmark unit" is selected above, enter the benchmark unit in the cell below.

Disposition to external non-

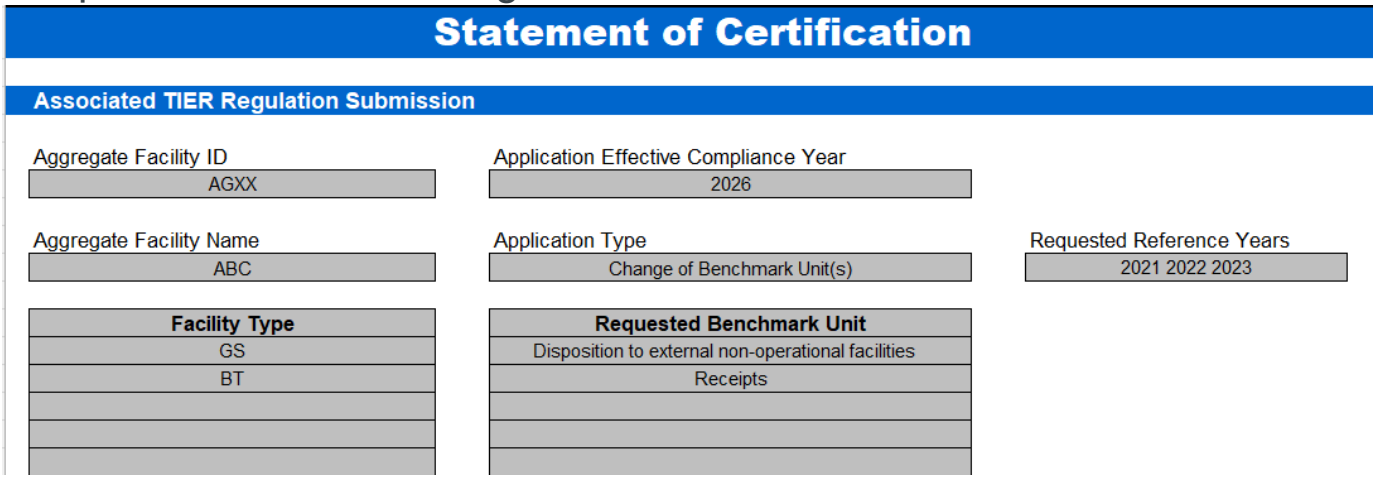
Enter the correlation analysis results in the table below using the requested benchmark unit and reference years for the facility type identified above.

Year	Production Accounting to TRE Correlation (r_{Agg})	Production Accounting to SFC Correlation (r_{Agg_SFC})	Production Accounting to Flaring Correlation (r_{Agg_F})
2021			
2022			
2023			
All Years Combined			

Walkthrough: BMUs and RYs Request Form – SoC

SoC Tab

- The SoC tab summarizes all requested benchmark unit(s) and the associated reference years for each facility type included in the request
- The completed SoC must be signed and dated before the submission



Statement of Certification

Associated TIER Regulation Submission

Aggregate Facility ID	Application Effective Compliance Year	
AGXX	2026	
Aggregate Facility Name	**Application Type**	**Requested Reference Years**
ABC	Change of Benchmark Unit(s)	2021 2022 2023

Facility Type	Requested Benchmark Unit
GS	Disposition to external non-operational facilities
BT	Receipts

Submission Deadline: December 1 of the year for which the benchmark will apply

Classification: Public

2026 Reporting: LEF Treatment

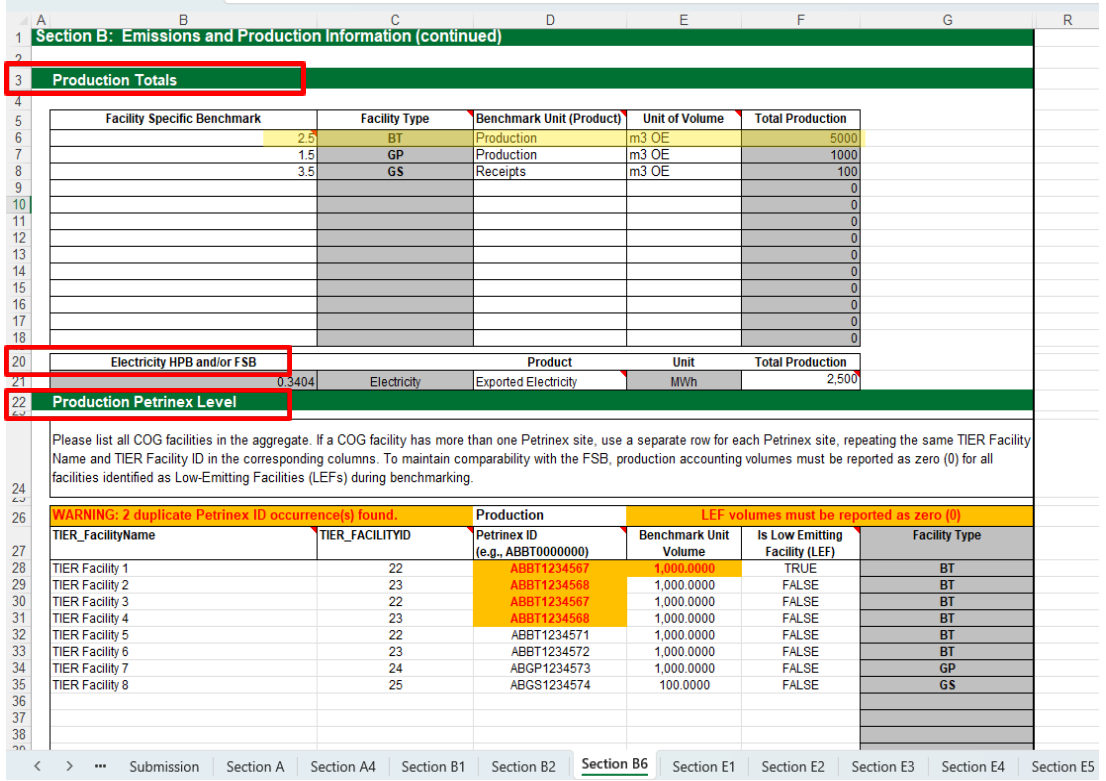
- LEF treatment - what it means for reporting
  - All Petrinex emissions, including those from LEF, must still be reported
  - Only the production accounting (denominator) volumes for LEF are excluded
  - Report production accounting volumes for LEF facilities as zero so the report matches the 2026 FSB basis
  - The 500 e^3m^3 fuel + flare threshold (average across the reference years) determines LEF status per Petrinex ID
  - LEF status is set at benchmarking and carried through to the compliance report - it is not re-determined from reporting-year volumes
- Note: Operators can remove LEF facilities from an aggregate for the next compliance year
  - Removing Facilities from Existing Aggregate Application Form
- Walkthrough: 2026 CR template

Walkthrough: 2026 CR template

- Section B1: Petrinex Fuel and Flare
  - List all Petrinex IDs, their COG Facility names and TIER IDs
  - Report the Fuel and flare volumes, emissions and the methodologies for each Petrinex ID
- Section B2: Non Petrinex Fuels
  - Fuel Gas for electricity: List Petrinex and AESO IDs with activity DISP to ABCO, ABEG
  - Report the Fuel volumes or Energy consumed in GJ
  - Report exported CO_2 amount in tonnes: Exported CO_2 – E_{CO2A}

Walkthrough: 2026 CR template

- Start by completing the “Production Petrinex Level” table in the lower half of the sheet
- Fill out the FSB for each Facility type in Production Totals table
- FSB and (or) HPB (0.3404) for electricity exported from facilities within the aggregate



Section B: Emissions and Production Information (continued)

Production Totals

Facility Specific Benchmark	Facility Type	Benchmark Unit (Product)	Unit of Volume	Total Production
2.5	BT	Production	m3 OE	5000
1.5	GP	Production	m3 OE	1000
3.5	GS	Receipts	m3 OE	100
				0
				0
				0
				0
				0
				0
				0
				0
				0

Electricity HPB and/or FSB		Product	Unit	Total Production
0.3404	Electricity	Exported Electricity	MWh	2,500

Production Petrinex Level

Please list all COG facilities in the aggregate. If a COG facility has more than one Petrinex site, use a separate row for each Petrinex site, repeating the same TIER Facility Name and TIER Facility ID in the corresponding columns. To maintain comparability with the FSB, production accounting volumes must be reported as zero (0) for all facilities identified as Low-Emitting Facilities (LEFs) during benchmarking.

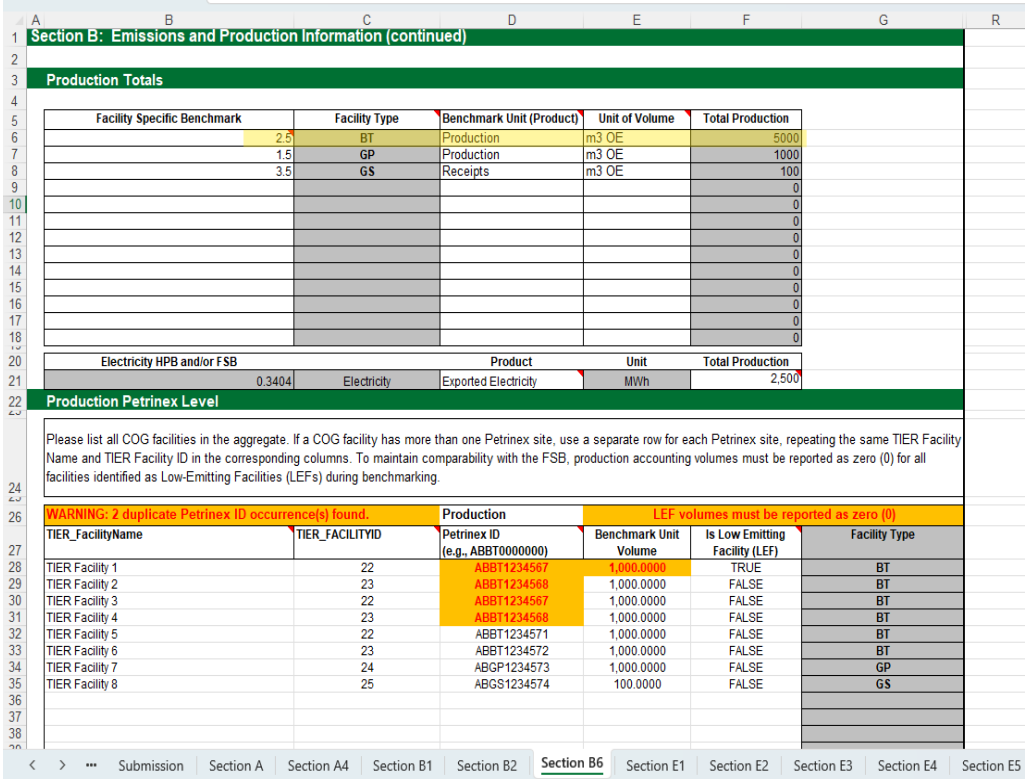
WARNING: 2 duplicate Petrinex ID occurrence(s) found.

		Production	LEF volumes must be reported as zero (0)		
TIER_FacilityName	TIER_FACILITYID	Petrinex ID (e.g., ABBT0000000)	Benchmark Unit Volume	Is Low Emitting Facility (LEF)	Facility Type
TIER Facility 1	22	ABBT1234567	1,000.0000	TRUE	BT
TIER Facility 2	23	ABBT1234568	1,000.0000	FALSE	BT
TIER Facility 3	22	ABBT1234567	1,000.0000	FALSE	BT
TIER Facility 4	23	ABBT1234568	1,000.0000	FALSE	BT
TIER Facility 5	22	ABBT1234571	1,000.0000	FALSE	BT
TIER Facility 6	23	ABBT1234572	1,000.0000	FALSE	BT
TIER Facility 7	24	ABGP1234573	1,000.0000	FALSE	GP
TIER Facility 8	25	ABGS1234574	100.0000	FALSE	GS

Submission | Section A | Section A4 | Section B1 | Section B2 | Section B6 | Section E1 | Section E2 | Section E3 | Section E4 | Section E5

Walkthrough: 2026 CR template

- Aggregate production totals exclude volumes from LEF facilities
- Obtain LEF status (TRUE/FALSE) from FSB forms
- Fuel and Flare emissions for LEF facilities are reported in Section B1, and section B2 where applicable
- Allowable Emissions in Section E1
  - Facility Type FSB * Facility Type total volume
  - MWh * HPB or FSB



Section B: Emissions and Production Information (continued)

Production Totals

Facility Specific Benchmark	Facility Type	Benchmark Unit (Product)	Unit of Volume	Total Production
2.5	BT	Production	m3 OE	5000
1.5	GP	Production	m3 OE	1000
3.5	GS	Receipts	m3 OE	100
				0
				0
				0
				0
				0
				0
				0
				0
				0
				0

Electricity HPB and/or FSB		Product	Unit	Total Production
0.3404	Electricity	Exported Electricity	MWh	2,500

Production Petrinex Level

Please list all COG facilities in the aggregate. If a COG facility has more than one Petrinex site, use a separate row for each Petrinex site, repeating the same TIER Facility Name and TIER Facility ID in the corresponding columns. To maintain comparability with the FSB, production accounting volumes must be reported as zero (0) for all facilities identified as Low-Emitting Facilities (LEFs) during benchmarking.

WARNING: 2 duplicate Petrinex ID occurrence(s) found.		Production	LEF volumes must be reported as zero (0)		
TIER_FacilityName	TIER_FACILITYID	Petrinex ID (e.g., ABBT0000000)	Benchmark Unit Volume	Is Low Emitting Facility (LEF)	Facility Type
TIER Facility 1	22	ABBT1234567	1,000.0000	TRUE	BT
TIER Facility 2	23	ABBT1234568	1,000.0000	FALSE	BT
TIER Facility 3	22	ABBT1234567	1,000.0000	FALSE	BT
TIER Facility 4	23	ABBT1234568	1,000.0000	FALSE	BT
TIER Facility 5	22	ABBT1234571	1,000.0000	FALSE	BT
TIER Facility 6	23	ABBT1234572	1,000.0000	FALSE	BT
TIER Facility 7	24	ABGP1234573	1,000.0000	FALSE	GP
TIER Facility 8	25	ABGS1234574	100.0000	FALSE	GS

Submission | Section A | Section A4 | Section B1 | Section B2 | Section B6 | Section E1 | Section E2 | Section E3 | Section E4 | Section E5

Walkthrough: 2026 CR template

- Section E1: EPC and EO use limit increases to 90% of the true-up amount
- Sections E3 and E4: Use EPCs or EOs from the 2018 vintage or later
- EPC request: Describe the activities and process changes that improved emissions intensity
- Section H – SoV tabs
  - Provide signatures in PDF format for the CoI, SoQ and SoV tabs
  - The SoC tab can be signed directly in the form

Enrollment and Exit

- Enroll or re-enroll for 2026; remove facilities for 2027
  - Enrollment, re-enrollment and facility additions for 2026 reporting: November 15, 2026
  - Removal of facilities for 2027: December 1, 2026
  - Opted-out aggregate facilities remain opted out unless they re-enroll
  - New, adding, and removing facilities **forms**: TIER Conventional Oil and Gas
- Operator decision checklist
  - Confirm the 2026 facility list, benchmark units, and reference years
  - Estimate potential EPCs or a compliance obligation using the 2026 compliance report form or an equivalent tool
  - Submit enrollment / re-enrollment application before the applicable deadline
    - Reminder: Aggregate enrollment/removal application forms and the boundary file(s) are submitted electronically through the Electronic Transfer System (ETS) under the TIERR menu item.

Key Messages and Q&A

- Key takeaways
  - One FSB per facility type, with a 500 e^3m^3 fuel + flare threshold applied to each Petrinex ID, supports same-cohort, like-for-like comparison
  - All emissions are still reported; only LEF denominator volumes are excluded
  - New sites are treated as LEF because they have zero or no volumes in the reference years - pathways are available to accommodate them
  - Non-Petrinex emissions are excluded from default benchmarking, with inclusion on request based on data availability; enrollment of new D&C sites remains optional
  - Key dates: November 15, 2026 to enroll, re-enroll or add facilities; December 1, 2026 for FSB applications, benchmark units and years requests, and 2027 removal of facilities
- Q&A
  - Teams Q&A
  - Email the department at EPA.GHG@gov.ab.ca – meetings can be requested