2019 CCIR Compliance and Offset Workshop

Climate Implementation and Compliance Branch

Edmonton

February 19, 2019

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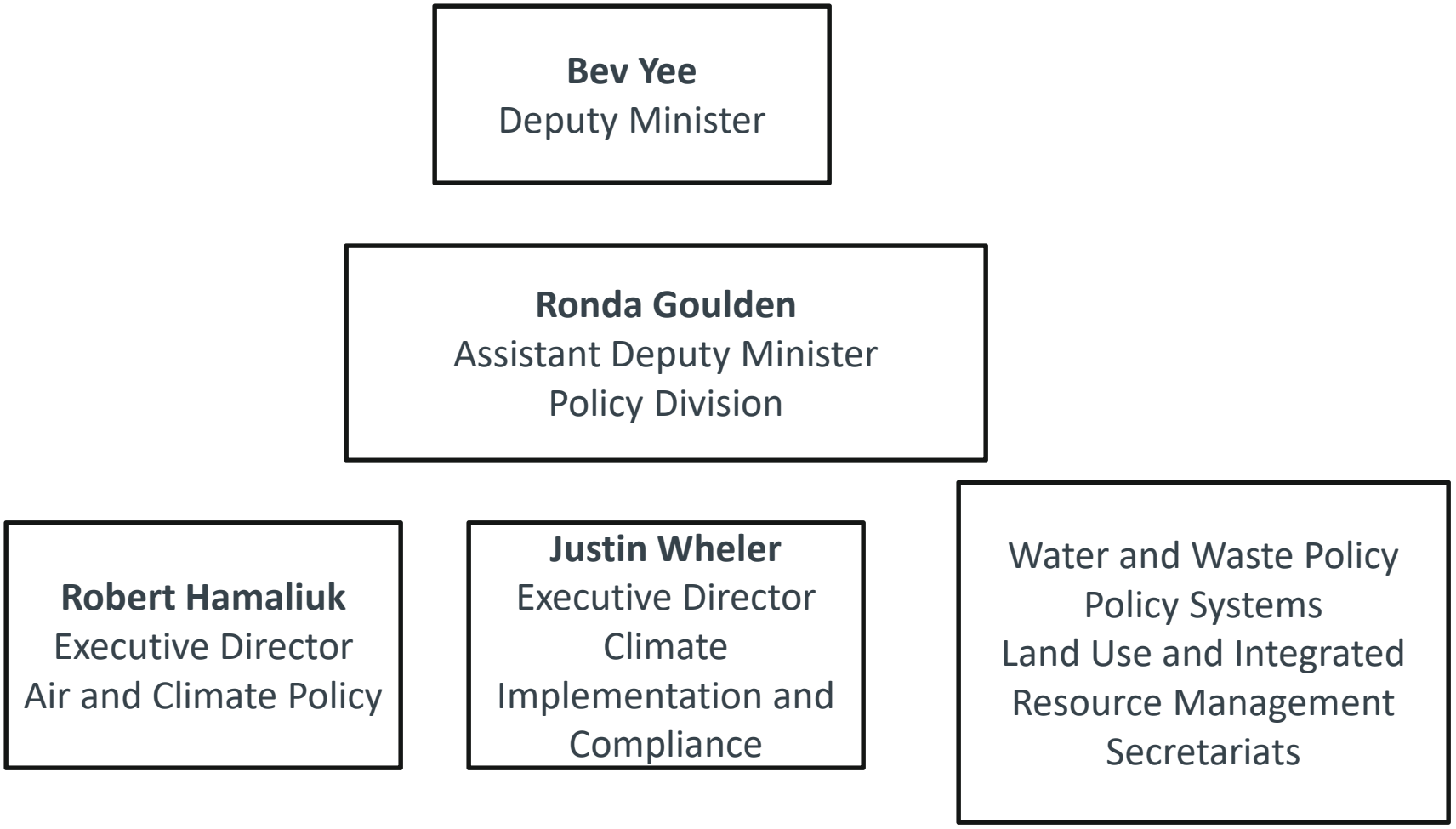
Agenda

Time	Topic
2019 Compliance	
8:40	Introductions
8:50	Context and Related Policies
9:10	2018 CCIR Results and Learnings
9:40	Overview of Compliance Submission Contents
10:00	Compliance Form Walk Through
10:35	Short Break
10:45	Obtaining Verification
11:15	Overview of Quantification Requirements
11:45	Specified Gas Reporting Regulation
12:00	Lunch break (lunch not provided)
Emission Offset System	
13:30	Introductions
13:40	Update on protocol development and revision,
13:50	Reverification results and learnings,
14:00	Offset statistics and trends,
14:15	TIER Regulation (offset focus) and Standard for Greenhouse Gas Emission Offset Project Developers version 3.0, and
14:30	Offset Verification in 2020.
14:40	Questions
15:00	Adjourn

Introductions

Organization Chart



Offsets/SGRR/CCIR/TIER team

Justin Wheler, Executive Director, Climate Implementation and Compliance

- Barry Anderson, Acting Director, Emissions Inventory and Trading
  - Offsets
    - Amanda Bambrick
    - Amanda Stuparyk
    - Michael Thiessen
    - Lindsay Mclaren
    - Nana Amponsah
  - Reporting / Inventory
    - Scott MacDougall (Seconded)
    - Shahin Manji
    - Reanna Zhang
    - Yury Potapovich
    - Steven Letourneau
- John Storey-Bishoff Director, Climate Change Compliance
    - Maggie Scott
    - Patrick Forseth
    - Yan Liu
    - Shan Pletcher
    - James Chen
    - Ana Mirandarodriguez
    - Lisa Brown
    - Gustavo Hernandez
    - Prashant Reddy (RFS)
    - Arifa Sultana (BPP)

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Context and Related Policies

Federal Context

- On June 21, 2018 federal government enacted the Greenhouse Gas Pollution Pricing Act (GGPPA).

- Two Components:
  1. An output-based pricing system to regulate greenhouse gas emissions (GHGs) from large industrial facilities (>50kt GHG)
  2. A regulatory charge on fuel (the carbon tax) applied to fuel producers and distributors.

- Federal government will apply the federal carbon pricing systems in provinces and territories where no provincial or territorial pricing system exists or where the system in place does not meet federal standards.
- Rates will increase each April due to federal carbon price increasing to $30 per tonne in 2020, $40/tonne in 2021and $50 per tonne in 2022

Federal Context

- As of January 1, the federal fuel charge now applies in Alberta
- Technology Innovation and Emissions Reduction Regulation has been accepted for 2020 so the federal output based pricing system does not apply
- Facilities subject to TIER also eligible for exemption from the federal fuel charge
- Court challenges on *Greenhouse Gas Pollution Pricing Act* ongoing
- Province still working towards equivalency on federal oil and gas methane rules
- Continued development of the Clean Fuels Standard

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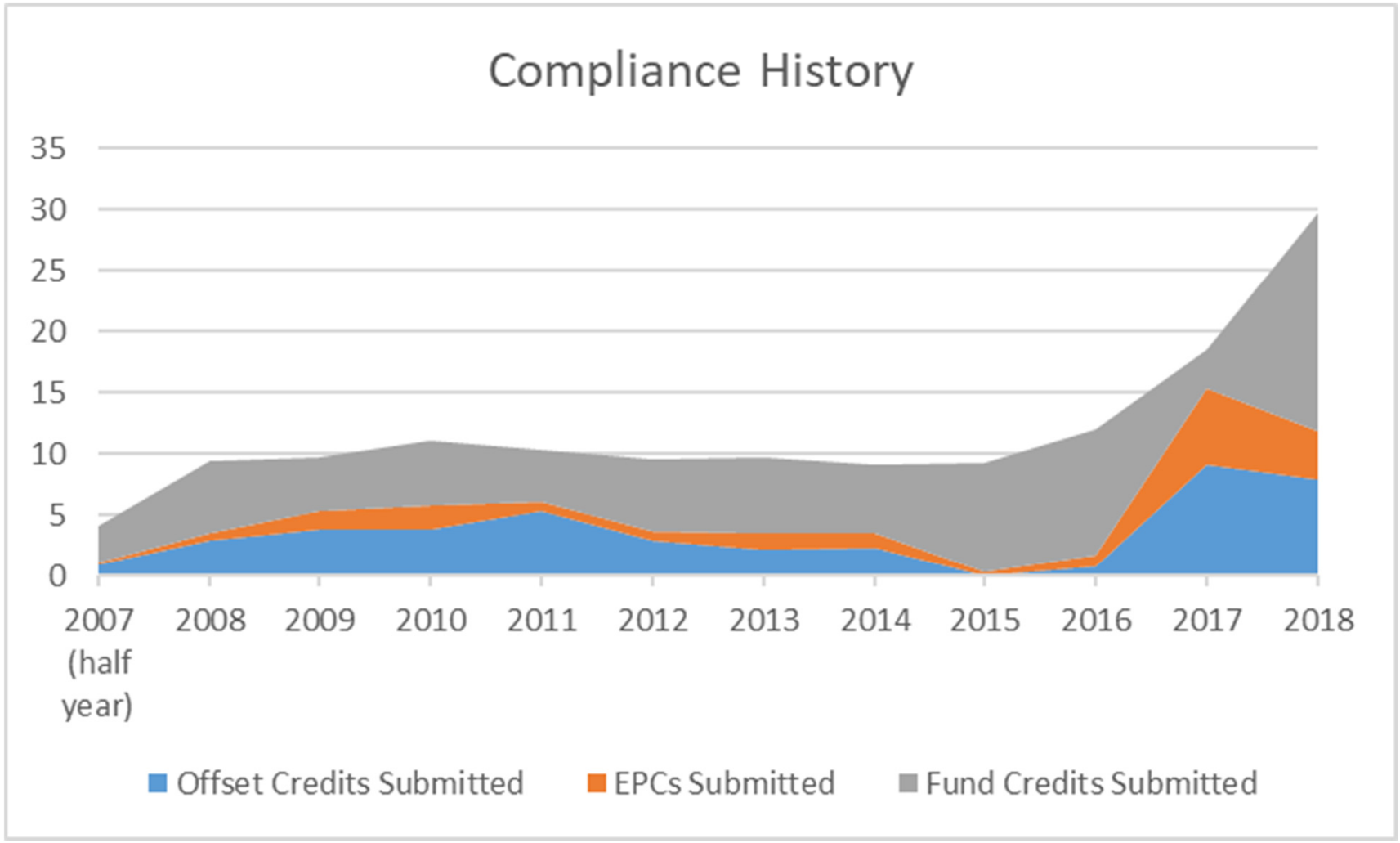
- Implementation of TIER for the 2020 compliance period.
  - Eligible exemptions with Canada Revenue Agency largely in place
- *Emissions Management and Climate Resilience Act*
- TIER Fund framework under development
- Extension of the Renewable Fuels Standard Regulation
- Alberta Carbon Trunk Line in service
- Continued engagement with ECCC on Clean Fuels Standard development.

2018 CCIR Results and Learnings

Compliance Year	Offset Credits Submitted (Mt CO2e)	EPCs Submitted (Mt CO2e)	Fund Credits Submitted (Mt CO2e)	Total Compliance (Mt CO2e)	Fund Payment ($Million)
2007 (half year)	0.9	0.2	3.0	4.1	45.2
2008	2.9	0.6	5.9	9.4	88.3
2009	3.8	1.5	4.4	9.7	66.3
2010	3.9	1.9	5.3	11.1	78.9
2011	5.4	0.8	4.2	10.4	62.9
2012	3	0.7	5.9	9.5	93.7
2013	2.2	1.3	6.3	9.8	94.4
2014	2.3	1.3	5.6	9.3	84.3
2015	0	0.3	9.0	9.3	135.7
2016	0.8*	1.0	10.3	12.2	206.5
2017	9.2*	6.2	3.1	18.5	94
2018	8.0*	3.9	17.8	29.7	533.5
Total	**42.4**	**19.8**	**80.8**	**142.9**	**1583.7**

* Includes additional credits issued under section 7(1.2) of the SGER or section 16(3) of CCIR
Figures are subject to change as a result of auditing and are rounded for presentation purposes.
Updated February, 2020

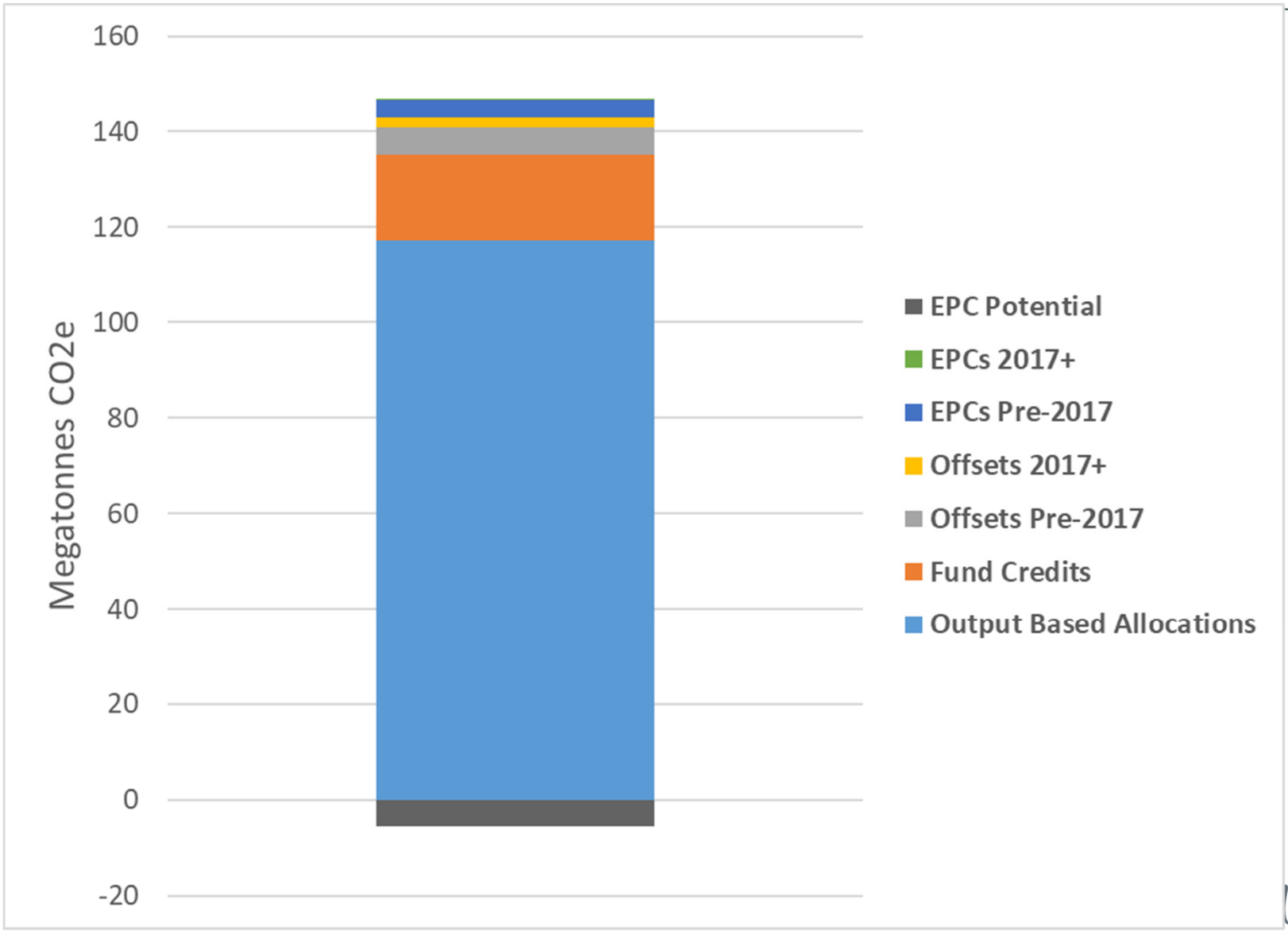
SGER/CCIR compliance results by year



Sector emissions

Sector	Facilities Reporting	Total Regulated Emissions (tonnes CO2e)
Agroindustry	5	178,070
Chemical	12	9,192,848
Coal Mines	6	469,983
Distilling	2	45,000
Fertilizer	5	5,734,560
Food Processing	1	276,417
Forest Products	4	611,186
Gas Plant	35	6,562,193
In Situ	19	36,631,699
Landfill	2	118,458
Metals	1	317,093
Mineral	4	2,056,591
Oil Sands	6	33,084,982
Pipeline	3	4,984,322
Power Coal	8	28,194,002
Power Gas	31	9,320,478
Power Renewable	20	1,241
Refining	4	3,568,968
Total	168	141,348,092

Allocations and Credits Used



2018 Learnings – Compliance Deadline

- Some confusion on timing
  - Payments and credit retirements should be made before the regulatory compliance deadline (March 31st)
  - This means payments received by our finance department on or before March 31st
  - Retirement of credits should be initiated early. Registry service commitment is 10 business days.

2018 Learnings – Usage of Credit

- Reminders
  - Max credit usage for 2019 55% of tonnes owed
  - 40% may be pre-2017 vintage
  - 2014 and older credits expire after the 2020 compliance year. (0.5Mt offsets, 0.6Mt EPC)
- To improve
  - Credits need to be held by person responsible.
  - When using EPCs, credits should be in the account of the facility using them.
  - Separate tabs in compliance report for offsets and EPCs. Make sure they are in the right place.
  - Serial ranges should match reported totals.

2018 Learnings – Quantification Methodology Document

- Facility is responsible for preparing a Quantification Methodology Document
- Quantification Methodology Documents not updated or partially updated
  - Understand there were significant timing challenges for 2018
- QMD important reference for verification and for our internal reviews
- QMD should reflect quantification requirements except where a deviation has been granted

2018 Learnings – Emissions Completeness

- “direct emissions” means all specified gases released from sources located at a facility, not including biomass CO2 emissions…
- These means all emissions inside the facility boundary (boundary files have been reviewed and shared back to facilities).
- Drilling, service rigs, contractors etc. are in this scope.
- Estimates can be used where the source meets the criteria for negligible. May also fall under clear fuel definition for the first part of the year.

2018 Learnings – Verification

- To improve
  - Review of production quantities (especially more involved throughput based products AB-CWB, AGPI)
  - Reporting consistency with quantification requirements
  - Confirmation of QMD completeness consistency with quantification requirements
  - Confirmation back to physical meter readings
  - Confirmation of correct application of benchmarks including transition benchmarks

2018 Learnings – Deviation Requests

- Reminders
  - Where you are unable to fully implement the prescribed quantification requirement a deviation request can be made.
  - Deviations do not cover cases the prescription can be applied but is not preferred.
  - Where the prescribed quantification is not followed and no deviation is in place a verification finding should result.
  - Deviations are time limited and part of the request is to outline how the prescription can be met in subsequent reporting.
  - This is also a very useful feedback for us to understand areas where the quantification is not immediately implementable and may sometimes lead to updates to the quantification requirements.

2018 Learnings – Confidentiality

- Reminders
  - When you indicate you are requesting confidentiality in the form your submission should include a request letter
  - Letter should clearly justify how the data requested meets the criteria under the regulation
  - We will reject unjustified requests. Please review our decision letter
  - Expect volume of confidentiality requests to drop with the end of quarterly reporting

2018 Learnings – Indirect Emissions Reporting Went Well

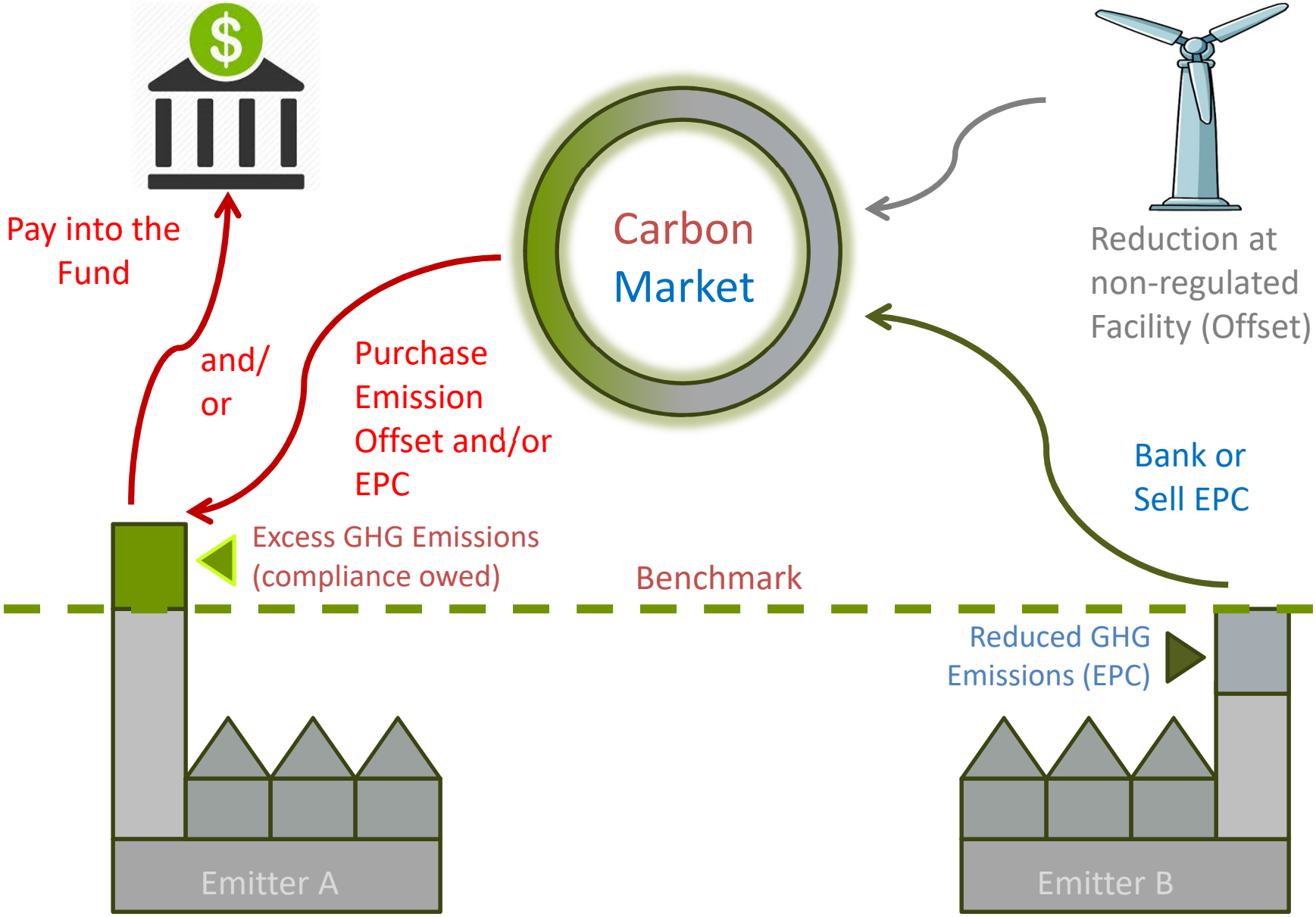
- Reporting of indirect quantities a new element of CCIR.
  - Hydrogen, Heat and Electricity imports
- In general this went well and we had good agreement between suppliers and consumers.
- We will again be confirming alignment in 2019 submissions.

2018 Reverifications

- Timing and number of reverifications affected by Alberta election.
- Work on these is ongoing and we have not yet seen results.
- Intending to get back to a more normal timing and quantity (roughly 15) for 2019.

Compliance Submission Contents

The necessary documents for a complete submission package


Pay into the Fund
and/ or
Purchase Emission Offset and/or EPC
Carbon Market
Reduction at non-regulated Facility (Offset)
Bank or Sell EPC
Excess GHG Emissions (compliance owed)
Benchmark
Reduced GHG Emissions (EPC)
Emitter A
Emitter B

CCIR Compliance Requirements
Total Regulated Emissions

Total Regulated Emissions

$$TRE = DE - ECF - ICO2 + ECO2 + UCO2$$

- ECO2 excludes any carbon dioxide removed from raw gas and disposed of, as an acid gas stream, to an underground formation through a Class III well

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CCIR Compliance Requirements
Output Based Allocation

Output Based Allocation

$$OBA = \ Product\ Allocations - Scope\ Adjustment$$

$$OBA = \sum_{i} (\text{BE}_{i-y} \text{ x } P_i) + \sum_{j} (\text{BA}_{j-y} \text{ x } P_j) - \left[(BE_{E-y}\ x\ I_E) + (BE_{H-y}\ x\ I_H) + (BE_{HE-y}\ x\ I_{HE})\right]$$

- OBAs cannot be below 0.
- Transition allocation benchmarks (BTA):
  - Based on phase in schedule and SGER 2016 floor. No phase in for electricity product.
  - Phase in schedule calculated at 50% of OBA compliance based on historic emissions and production for 2018, and 25% for 2019
- Scope Adjustment for the refining and upgrading sectors does not include hydrogen imports.
- Any exported Electricity, Heat, or Hydrogen would be accounted for as a product in the Production term
- Cost containment allocation benchmarks would be added to the transition allocation benchmarks when reporting .

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Net Emissions and True-up Obligation

Net Emissions

- The person responsible for a facility must ensure the net emissions (NE) do not exceed the OBA for the facility by truing up

$$NE = TRE - (EO + EPC + FC)$$

$$TRE - (EO + EPC + FC) = OBA$$

- EO is the quantity of emission offsets in tonnes on a CO_2e basis,
- EPC is the quantity of emission performance credits in tonnes on a CO2e basis,
- FC is the quantity of fund credits in tonnes on a CO2e basis, represented by the fund credits

True-up Obligation

$$True\ up\ Obligation = TRE - OBA$$

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Compliance Flexibility

- Policy goals:
  - Maintain functional market, enable fiscal planning and avoid recreating credit

Credit Limit on	2018	2019	2020 (TIER)	2021 (TIER)
New or old	40%	40%	40%	40%
New	10%	15%	20%	20%

- Notes:
  - New credits defined as 2017 vintage or newer
  - Credits from 2014 and older expire after 2020 compliance
  - Credits from 2015 expire after 2021 compliance
  - Credits from 2016 expire after 2021 compliance
  - New credits from 2017 and newer expire after 8 years.

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Contents of Compliance Submission Package

- Completed Compliance Form (Excel workbook)
- Signed Statement of Certification (SoC)
- Verification Report, including
  - Signed Statement of Verification (SoV)
  - Signed Statement of Qualifications (SoQ)
  - Signed Conflict Of Interest Checklist (COI)
- Updated Quantification Methodology Document
- Area Fugitives Report (as required)
- Emissions reduction plan report for facilities with cost containment designation
- Confidentiality request for specified parts of the submission (optional)

Compliance Submission

- Send to AEP.GHG@gov.ab.ca by March 31, 2020
- Payment by cheque
  - Submit a cheque payable to “Government of Alberta” along with the fund credit purchase form:

    Government of Alberta
    Finance and Administration Branch
    Alberta Environment and Parks
    6th floor, South Petroleum Plaza
    9915 108 Street NW
    Edmonton, Alberta
    T5K 2G8

Compliance Submission

- Electronic payment
  - Submit payment by electronic fund transfer and provide the fund credit purchase form at least three business days in advance of the electronic funds transfer

Account Name	Climate Change and Emissions Management
Bank Name	CIBC
Bank Address	10102 Jasper Avenue Edmonton
Institution Number	0010
Transit Number	00059
Account Number	92-74219
Ministry/Department	Alberta Environment and Parks, Finance and Administration Branch
Department Contact	Meimei Zhu
E-mail	AEP.revenue@gov.ab.ca
Phone Number	780-422-7072

- Receipt will be given

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Using Credits for Compliance

EPCs/Emission Offsets

- Credits must be in a pending retirement state on the registry prior to submission
- Action on the registry should be planned up to 10 business days in advance
  - Another 10 business days if transferring credits from one entity to another.
- EPCs must be retired to the facility that are using them to true-up

CCIR Compliance Form

BREAK

10 Minutes

Obtaining Verification

Verification Requirements

Verification Requirements

- All facilities (including opted in facilities) regulated under CCIR must hire a third party assurance provider to verify their compliance report
- Purpose of verification is to provide assurance to the department that there are no material errors in the facility's compliance report
- For the compliance submission on March 31, 2020, the facility is required to submit a verification report including:
  - Statement of Verification
  - Statement of Qualifications
  - Conflict of Interest Form
- Approx. 187 facilities require verifications for 2019 (compared with 168 in 2018)
- Verifications may take up to 6 to 8 weeks or more to complete

Verification Requirements

- Highlights of a verification process:
  - Conflict of Interest (COI) assessment (COI form)
  - Execution of contract
  - Verification plan (including risk assessment and sampling plan)
  - Data and information request
  - Site visit
  - Review and analysis of data and information gathered
  - Develop and communicate findings and issues
  - Resolve and finalize issues and findings
  - Verification report (report template)
- Regulation requires a positive opinion in the Statement of Verification
- Qualified opinions are reviewed on a case-by-case basis

Verification Requirements

- Standard for Validation, Verification, and Audit outlines the requirements for the verification process
- Verification requirements was updated to reflect reporting requirements under CCIR
- Part 1 outlines the mandatory requirements for third party assurance providers and auditors
- Use Verification Report Template
    - Objective
    - Scope
    - Criteria
    - Team Qualifications
    - Risk Assessment
    - Sampling Plan
    - Summary of Findings

Verification Requirements – Risk Areas

- Production and Imports of Indirects
- Source data
- Quantification methodologies
- Total error quantification and materiality assessment
- Working papers and documentation requirements
- Forecasting facilities

Overview of Quantification Methodology Requirements

Minor Updates

Upcoming Quantification Methodologies Work

Quantification Methodologies

- Standardized quantification methodologies developed for use under CCIR and SGRR
- Methodologies are tiered in order to address requirements under the two regulations
- Mandatory chapters under CCIR for 2019 include:
  - Chapter 1 Stationary Fuel Combustion
  - **Chapter 4 Venting (new for 2019)**
  - **Chapter 5 On-Site Transportation (new for 2019)**
  - Chapter 8 Industrial Process Emissions
  - Chapter 12 Imports
  - Chapter 13 Production
  - Chapter 17 Measurement, Sampling, Analysis and Data Management
  - Appendix C General Calculation Instructions

Quantification Methodologies

- Deviation Request
  - Available for facilities that are unable to meet methodologies that are prescribed
  - Must provide an alternative method that is conservative
  - Must provide a plan for future adoption of the prescribed method
  - Approvals are provided on a time-limited basis of up to a year
  - https://www.alberta.ca/assets/documents/cci-deviation-request-form.xlsx
- Facilities are encouraged to continue providing comments and questions

Updates and Highlights

- "Negligible Emission Sources" Definition:

  "*Negligible emission sources*" are sources with emissions that represent less than 1% of a facility's total regulated emissions (TRE) or output-based allocation and are not to exceed 5,000 tonne of CO_2e for a facility with a TRE less than 1 million tonnes of CO_2e or not to exceed 10,000 tonnes of CO_2e for a facility with TRE equal to or greater than 1 million tonnes of CO_2e under CCIR. Alternative methods may be used to assess the negligibility of these emissions.

- Facilities may use alternative method to calculate emissions from negligible emission sources
- Facilities must include these emissions in the facility's direct emissions (DE)

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Updates and Highlights

- Chapter 1 Stationary Fuel Combustion Emission Factors:
  - Updated emission factors in Tables 1-1
  - Intend to align with Environment and Climate Change Canada (ECCC) on emission factors prescribed under federal GHGRP, where appropriate

- Chapter 8 Industrial Process Emissions:
  - Lime Kilns – Kraft Pulp Mills
  - Allow for CO_2 emissions from biomass-based carbonate materials to be classified as biomass CO_2 emissions

Updates and Highlights

- Chapter 17 Measurement, Sampling, and Data Management

Type of Fuel	Tier 1	Tier 2	Tier 3
Marketable natural gas (including natural gas feed used for industrial processes)	No sampling required	Six times a year	Monthly
Non-marketable liquid or gaseous fuels such as purge gas co-produced at an oil and gas production or petrochemical facility.	No sampling required	Quarterly	Monthly
Refinery fuel gas	No sampling required	Every two weeks	Daily (online instrumentation in place) Weekly (online instrumentation not in place)
Feed gases which result in industrial process emissions.	No sampling required	Every two weeks	Daily (online instrumentation in place) Weekly (online instrumentation not in place)

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Updates and Highlights

Type of Fuel	Tier 1	Tier 2	Tier 3
Coal / Coke	No Sampling required	Monthly	Once for each new fuel shipment or delivery. As often as necessary to capture variations in carbon content and heat value to ensure a representative annual composition, but no less than weekly.
Boiler efficiency (by fuel)	Manufacturer Specification	Every five years or during boiler planned maintenance based on manufacturer specification, whichever is lower	Every five years or during boiler planned maintenance based on manufacturer specification, whichever is lower.

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Updates and Highlights

- Clarification added on fuel consumption quantification:
  - Weightometers and other types of scales may be used but must be calibrated at prescribed frequency
  - For liquid fuels, direct tank level measurements, volumetric or mass flow meters, and/or third party invoices can be used.
  - For gaseous fuels, gas flow metering and/or third party invoices or custody metering.
  - Feedstock used in industrial processes should follow sampling monitoring requirements as fuel used for combustion.
- Alberta Gas Processing Index
  - Incorporated into Quantification Methodologies for completeness
  - No updates to methodologies

Updates and Highlights

- Chapter 5 Onsite Transportation
  - Carbon levy repealed on May 30, 2019
  - Clear fuels consumption should be separated between January to May and June to December
  - Emissions from combustion of clear fuels should be excluded from the Total Regulated Emissions for period of January to May

Future Quantification Methodologies Work

- Quantification methodologies will be updated under TIER.
- New and updated chapters will be posted for 30-day stakeholder consultation period.
- Compliance and benchmark standards will be updated to reflect requirements for new quantification methodology requirements.

Specified Gas Reporting Regulation

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Specified Gas Reporting Regulation

- Alberta's mandatory GHG reporting program for facilities emitting over 10,000 tonnes of CO_2 equivalent per year
- Builds on voluntary reporting by most Alberta emitters since the mid-1990's
- This regulation and standard were passed in 2003
- One window with Environment and Climate Change Canada (ECCC) GHG Reporting Program
- Emissions reporting data is used to inform policy development and analysis, and support federal national inventory reporting (NIR)
- Annual reporting deadline is June 1

Specified Gas Reporting Regulation – 2019 Updates

- Mandatory quantification methodologies include:
  - Chapter 1 Stationary Fuel Combustion
  - **Chapter 4 Venting (new for 2019)**
  - **Chapter 5 On-Site Transportation (new for 2019)**
  - Chapter 8 Industrial Process Emissions
  - Chapter 12 Imports
  - Chapter 13 Production
  - Chapter 17 Measurement, Sampling, Analysis and Data Management
  - Appendix C General Calculation Instructions
- Tier 1 methodologies in these chapters are the minimum requirement for SGRR reporting, and are aligned with ECCC minimum requirements.

Specified Gas Reporting Regulation – 2019 Updates

- Specified Gas Reporting Standard will be updated
- Key points:
  - Reporting to SGRR is required for opted in facilities under CCIR
  - Under SWIM, Alberta reporters may choose Alberta-based quantification methodologies
  - Submit geospatial files with facility boundary coordinates in kmz or kml format
  - Production reporting
  - Marked and unmarked transportation fuels must be reported separately
  - CO_2 that is in acid gas when sent off site or received on site

Questions