

2019 Compliance Workshop

Session 2: Alberta Emission Offsets

Alberta Environment and Parks

February 19, 2020



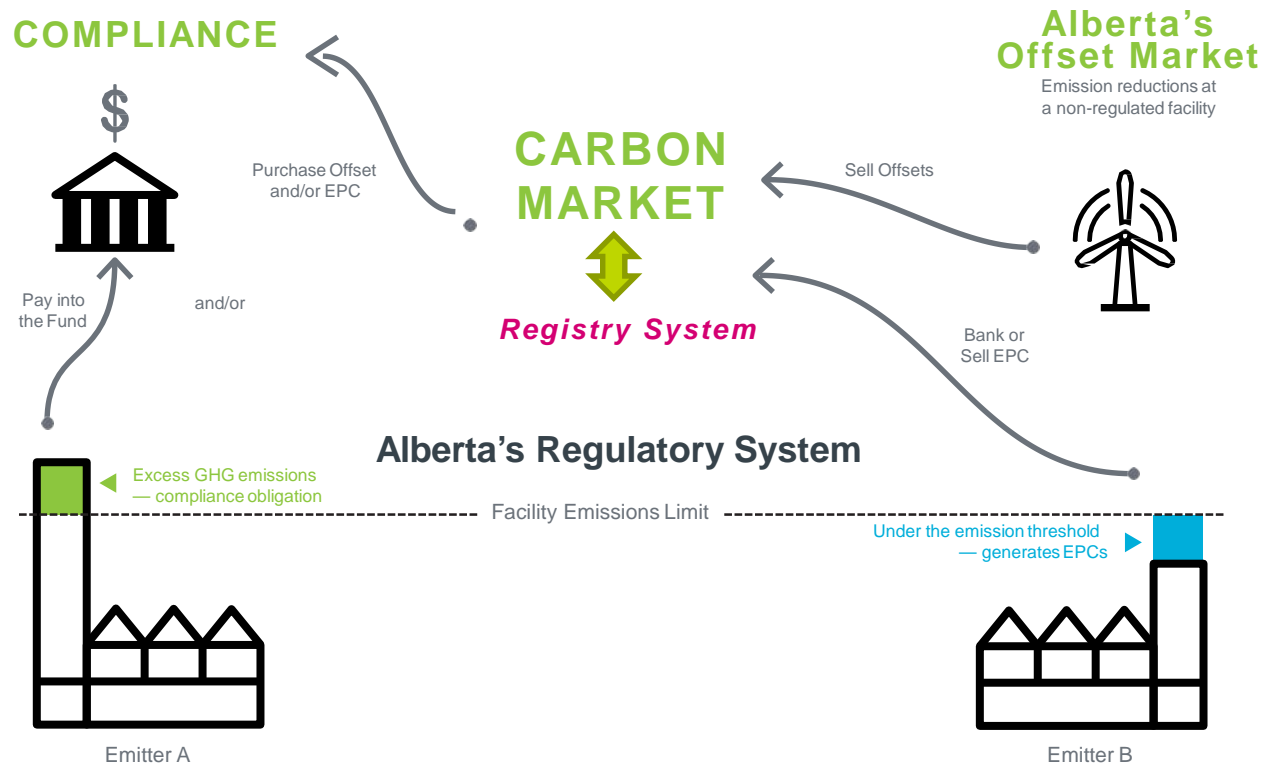
Topics



- Offsets under TIER
- Protocols
- Offset Statistics and Trends
- Alberta Carbon Registries
- Q&A

Offsets and TIER

Alberta's Carbon Market



Offsets Team

- Acting Director: Barry Anderson
- Policy Analysts
 - Amanda Bambrick
 - Amanda Stuparyk
 - Nana Amponsah
 - Michael Thiessen
 - Lindsay McLaren
- Send correspondence to AEP.GHG@gov.ab.ca (not directly to an individual)

Offset Team Responsibilities

- Internal risk-assurance processes:
 - Reverifications
 - Desktop reviews
 - Internal review processes /Registry checks on data
 - Aggregated projects
- Protocol development and revision
- Standards and guidance
- Climate policy support
- Registries management
- Stakeholder support including deviations, general Q&A

Benefits of Emission Offset System

- Primary purposes: Encourage real and immediate GHG reductions in Alberta, and provide a cost-effective compliance option for regulated facilities
- Other benefits of the offset system:
 - Expands carbon price to non-regulated facilities and industries,
 - Regulatory quality emission reductions,
 - An incentive for early action, and
 - Supports economic diversification and greening of economy.

TIER Requirements

- Reductions must occur in Alberta
- Must result from an action that is not required by law at the time the action is taken (legal additionality)
- Must be real, and demonstrable
- Must be quantifiable and measurable – Records to prove this are very important
- Actions need to have occurred after January 1, 2002
- The emission offset must not have had an effect on the determination of a regulated facility's total regulated emissions

Offset System Under TIER



- Technology Innovation and Emissions Reduction (TIER) Regulation came into effect January 1, 2020
- No major changes to offsets under TIER
 - Offsets continue to be a compliance option
 - Credit limit and expiry remains the same
- Credit Limit example: 2014 vintage (and earlier) expires in 2020 – which means you have until June 30, 2021 to use them for compliance
- Changes that are important to note
 - Rules and regulations that apply are tied to the time of serialization (not the vintage)
 - Industrial heat definition changed
 - Projects that expired after December 31, 2018 and before January 1, 2020 may apply for an extension or additional extension before March 31, 2020

Industrial Heat



- Industrial heat exported to another regulated facility, a carbon capture offset project and/or an enhanced oil recovery offset project is accounted for at the benchmark rate (0.06299 t/GJ).
- Heat exported to an emission offset project other than a carbon capture or enhanced oil recovery project is not considered industrial heat.
 - This means that the heat does not count as a product for the facility and the offset projects do not have to claim emissions associated with heat received from a regulated facility.

Industrial Heat



Aggregate Facilities



- Opportunity for conventional oil and gas to be designated as an aggregate facility under TIER
 - Stationary fuel combustion emissions subject to reduction target
 - Venting and flaring not subject to a reduction target
- Benefits: facilities can apply for an exemption from federal fuel charge
 - Continue to generate methane offsets
- Impacts: affects eligibility of engine fuel management offset projects

Engine Fuel Management

- Stationary fuel combustion is included in a facility's total regulated emissions
- No longer eligible for offsets if opted in



Pneumatics/Vent Gas Capture

- Venting is not included in an aggregate facility's total regulated emissions
- Opportunity for offsets continues if designated as an aggregate



Standard for Emission Offset Project Developers

- Version 3.0 effective January 1, 2020. No major shifts but some clarification:
 - Aggregated projects must include the project planning sheet for the project plan to be considered complete
 - Follow up for second re-verification corrective actions will have director discretion
 - Clarified what constitutes an invalid emission offset

Carbon Offset Emission Factor Handbook

- Version 2.0 effective January 1, 2020 for new projects
- Projects initiated before January 1, 2020 may continue to use the grid factors/emission factors in version 1.0
- Projects may choose to update to version 2.0 of the Handbook but may not pick and choose factors
- Main change was the grid factor:
 - 0.53 tCO₂e/MWh for projects displacing grid electricity
 - 0.57 tCO₂e/MWh for grid displacement that includes line loss

Alignment with Carbon Tax



Jan-May 29, 2019

- carbon levy in effect
- Offset Projects must:
 - report on levied emissions
 - exclude levied emissions from offset quantification
 - update project plan by Jan. 1, 2019 and use updated protocols

May 30 -Dec 31 2019

- no carbon levy or federal fuel charge
- Offset Projects may:
 - include previously levied emissions in offset quantification

Jan. 1, 2020+

- federal fuel charge in effect
- Offset projects must:
 - report on emissions with fuel charge
 - exclude emissions with fuel charge from offset quantification

Verification

Verification



- Standard for Validation, Verification and Audit version 4.0 effective January 1, 2020
- Verifiers must be accredited by June 30, 2023
- Accredited verifiers accepted beginning Jan.1, 2020 (ANSI, SCC, IAF)
- If you are not an accredited verifier you can conduct verifications until June 30, 2023 as long as you are a registered professional engineer or accountant and meet experience requirements.

Reverification

- 10 projects were re-verified for their 2017 compliance submissions. This corresponded to the audit of 868,992 tonnes of emission offsets.
- We have selected 7 projects to re-verify for 2018 compliance (210,880 tonnes). Verifications are currently underway.
- For 2018 compliance, the pneumatics and engine fuel management was an area of focus since this is the first year many emission offsets were submitted.

Protocols





Biological Methane

- Anaerobic decomposition of agri. materials*
- Anaerobic wastewater treatment*
- Dairy cattle
- Age/Fed cattle
- Composting
- Aerobic landfill bioreactor
- Landfill gas capture



Renewables

- Biofuels
- Distributed renewable energy generation
- Biomass energy
- Run-of-river hydro
- Solar
- Wind



Energy Efficiency

- Energy efficiency projects
- Waste heat recovery



Agricultural

- Conservation cropping
- Agricultural N₂O reductions (NERP)



CO₂ Sequestration

- CO₂ capture and storage in deep saline aquifers
- Enhanced oil recovery*



Oil and Gas Methane

- Pneumatic devices
- Solution gas conservation*
- Engine fuel management and vent gas capture*

*Flagged Protocol

Ongoing Protocol Work



Enhanced Oil Recovery

Biogas

Agricultural Nitrous Oxide Emissions Reduction

Landfill Biocover

Super-Utilization

Conservation Cropping

- Additionality Assessment

Protocols Under Development/Revision

- Submission of Intent to develop/revise quantification protocols by December 31st each year
- Will evaluate proposals from 2019 intake
 - 3 concrete
 - 1 soil carbon
 - 1 grasslands
- Internal risk assessment will be conducted to determine which (if any) protocols will be revised
- Upcoming protocol development/revision:
 - Landfill Biocover Oxidation (Technical review meeting in late March 2020)

Flagged Protocols



Solution Gas
Conservation

- Flagged because of Directive 084 and other known issues

Engine Fuel
Management
and Vent Gas
Capture

- Flagged because of overlap with federal fuel charge and aggregate/opt-in
- Evaluating whether to withdraw or revise
- Impact to crediting periods and extensions depends on whether protocol is withdrawn or revised
- New projects or subprojects need director approval

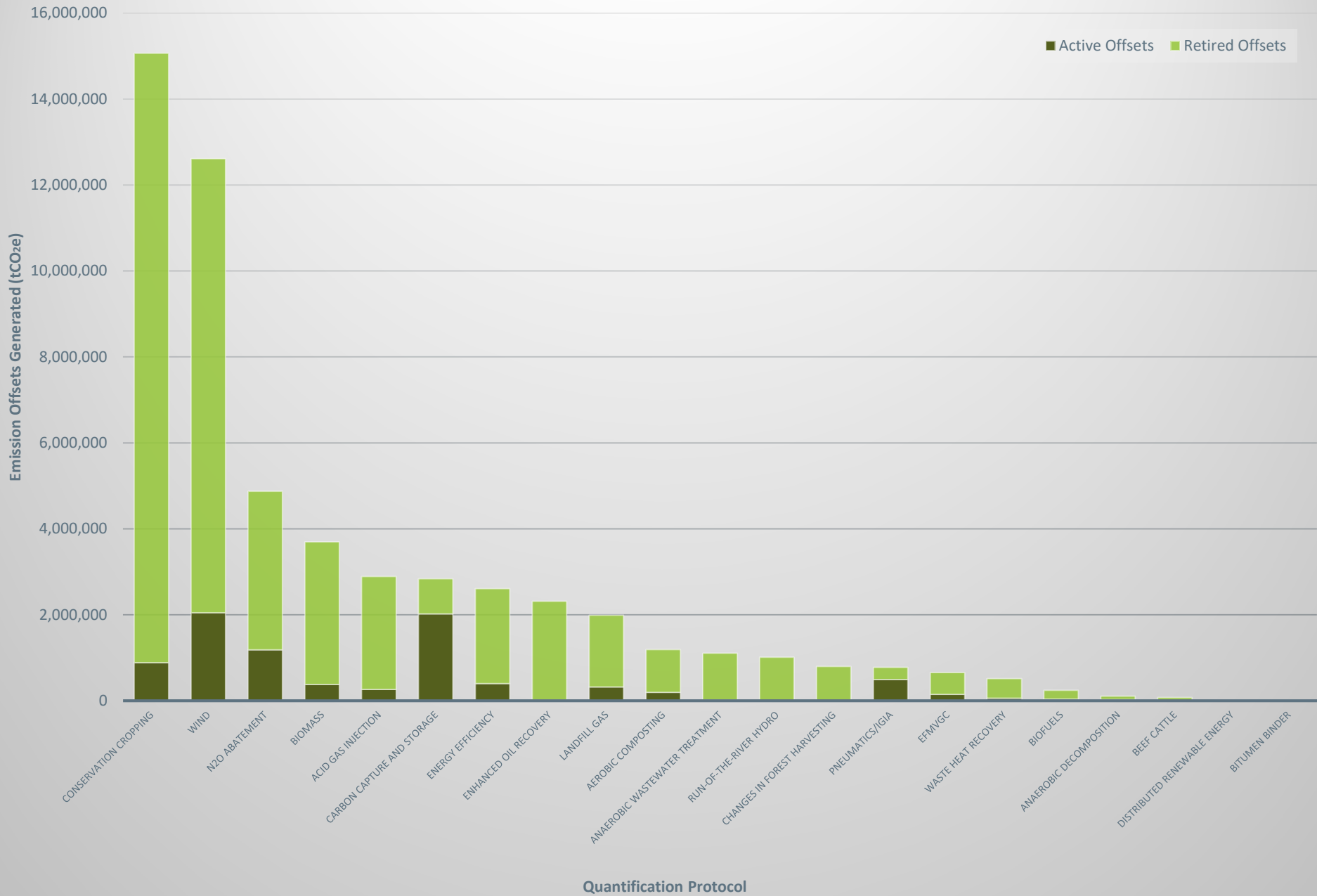
Offset Statistics and Trends



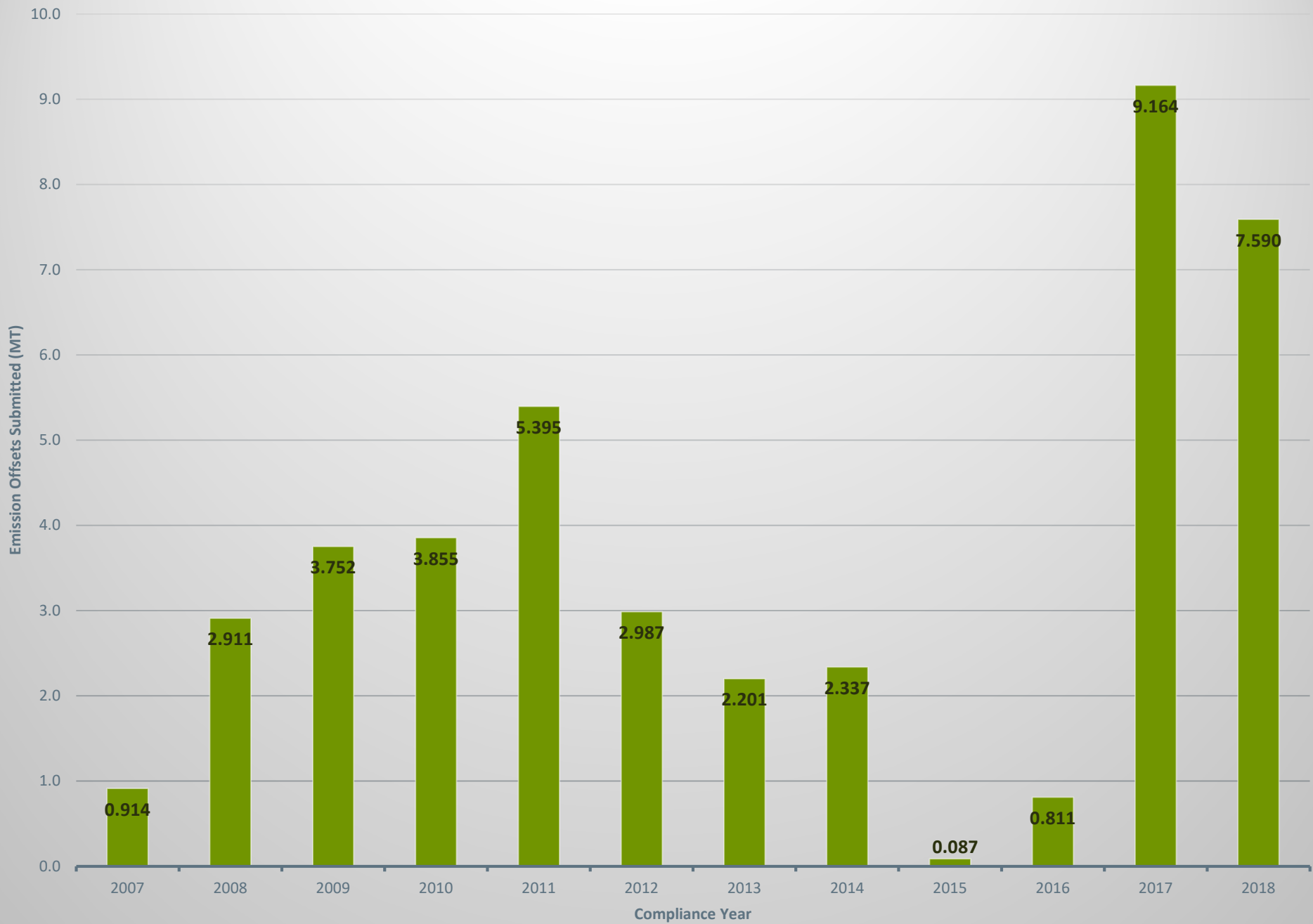
Offset System Statistics

- There are currently over 55.3 megatonnes of emission offsets serialized to date
 - ~8.5 MT Active offsets (not retired for compliance)
 - ~46.9 MT Pending Retirement or Retired offsets
- Offsets have been generated in some capacity from 28 different protocols
- There are currently 270 registered emission offset projects

Offsets Generated By Protocol as of February 12, 2020



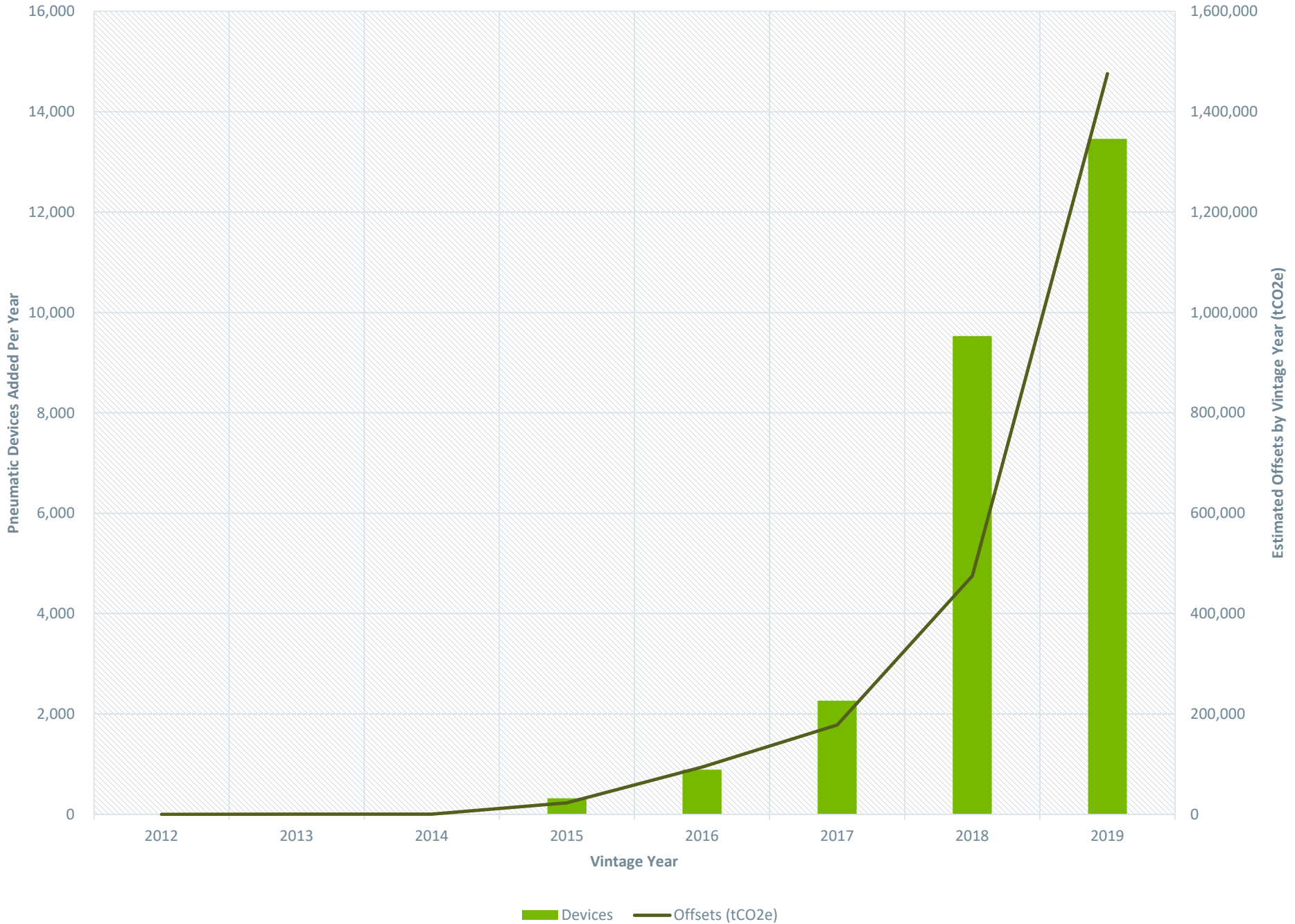
Emission Offsets Submitted for Compliance By Year



Methane Offset Projects & Statistics

- There has been significant uptake in avoided methane projects
 - 39 Projects in three methane related protocols (EFMVGC, IGIA, Pneumatics)
 - 17 of these projects were created in the last 2 years
- 13,459 pneumatic device conversions were installed in 2019
- In total over 26,000 devices have been converted or installed
- Estimated total annual emission reductions could be ~ 2 MT

Pneumatic Offsets Summary



Alberta Carbon Registries

Registry Purpose

- **Alberta Carbon Registries** contains both emission offsets (projects) and emission performance credits (facility)
 - Registry operations have always been contracted to a third-party
 - Registry displays all project documentation
 - Assigns unique serial numbers to offsets
 - Tracks ownership and use of offsets
 - Offset registry is a listing service, trades occur privately
 - Transparent public access
- Showcase Alberta offsets projects and EPC listings by facility
- Facilitate meeting of buyers and sellers
- Ensure uniqueness of verified offsets and link the data trail to the tonnes
- Enhance overall transparency and accountability of the system
- The Registry is not:
 - An exchange or a site for brokers to initiate transactions;
 - A place that shows who transacted what, transactions will still be done on a bilateral basis;
 - A place to find out about pricing

Registry Interface operated by CSA Group

https://www.csaregistries.ca/albertacarbonregistries/eor_listing.cfm

HOSTED BY:



SIGN IN TO YOUR ACCOUNT

LOGIN >

> [CLICK HERE TO CREATE A NEW ACCOUNT](#)

HOME

ALBERTA EMISSIONS OFF SET REGISTRY
(AEOR)

ALBERTA EMISSION PERFORMANCE
CREDIT (EPC) REGISTRY

CONTACT

HELP



Welcome to the Alberta Carbon Registries

Alberta was the first province in Canada to develop legislation regulating greenhouse gas emissions requiring large industrial emitters to report their emissions and take actions to make mandatory reductions. This legislation, the Specified Gas Emitters Regulation under the *Climate Change and Emissions Management Act* (The 'Act'), set requirements for facilities emitting more than 100,000 tonnes of greenhouse gases a year to reduce baseline emissions intensities by 12 per cent, as of July 1, 2007. The Carbon Competitiveness Incentive Regulation replaces the Specified Gas Emitters Regulation on January 1, 2018. Updated regulations and publications are available at:

- [Carbon Competitiveness Incentive Regulation](#)

Passed in 2003, Alberta's *Climate Change and Emissions Management Act* was the first legislation

[VIEW THE AEOR LISTING](#)

[VIEW THE EPC REGISTRY LISTING](#)

Alberta Carbon Registries – Offset/EPC

- Updates have been made to align with the TIER Regulation and updated standards / forms are linked to the AEP website
 - Registry Resources section houses links to forms, statutory declaration, aggregated project planning and reporting sheets
 - Project Developers remain responsible for using correct forms
- Updates underway for May 2020 including:
 - Password requirement clarifications
 - Updated registry reporting
 - Use of DocuSign for e signatures to be accepted on forms
 - Updated look for AEOR Project Listing information and search functionality
 - Ability for users to upload macro-enabled excel files (.xlsm)
- CSA encourages users to directly contact with questions. Contact info in “help” section of the registry (ghgregistries@csagroup.org)

Registry Processing Times

- General registry processing up to 10 business days
- Common Reasons for Registry processing delays include:
 - Not Signed and Dated
 - Incorrect Forms
 - Conflicting Contact information
 - Incomplete Statement of Verification
- If a project report needs to be updated, the registry will ensure that the Verifier reviews any changes to the GHG report. Verification reports must post-date project reports (even if updates are made).
- Registry processing deadline for new registration submissions are one month prior to compliance deadline (i.e March 1st for this years' March 31st CCIR compliance)

Questions?

