Clean Fuel Regulation: Creation and Sale of Carbon Credits

May 24, 2024

Purpose

The purpose is to provide an overview of TTC’s opportunity to participate in the Federal Government’s Clean Fuel Regulations to generate carbon credit revenue from our electric fleet.

Context

The City of Toronto and the Government of Canada have targets to reduce greenhouse gas emissions to net zero by 2040 and 2050, respectively.

TTC is committed to identifying opportunities and implementing initiatives:

- To minimize our carbon footprint
- To prioritize the adoption and investment in zero emissions green technologies such as light, medium, and heavy-duty electric vehicles and associated charging infrastructure

Background

In 2022, the Canadian Government passed the Clean Fuel Regulations (CFR) under the Canadian Environmental Protection Act to reduce emissions, accelerate the use of clean technologies and fuels, and support sustainable jobs.

The CFR establishes a credit market where liquid fuel primary suppliers must create or buy compliance credits to reduce the carbon intensity of the gasoline and diesel in Canada.

The demand for credits creates financial rewards for voluntary parties to create and sell compliance credits through supplying and adopting clean fuels and technologies.

Eligibility

TTC is anticipated to meet the eligibility requirements to participate in the credit market as a Registered Creator. Once eligibility is confirmed, the TTC would create compliance credits by supplying metered electricity to battery electric vehicles under the category option of Charging-Site Host.

Credit Calculation Methodology

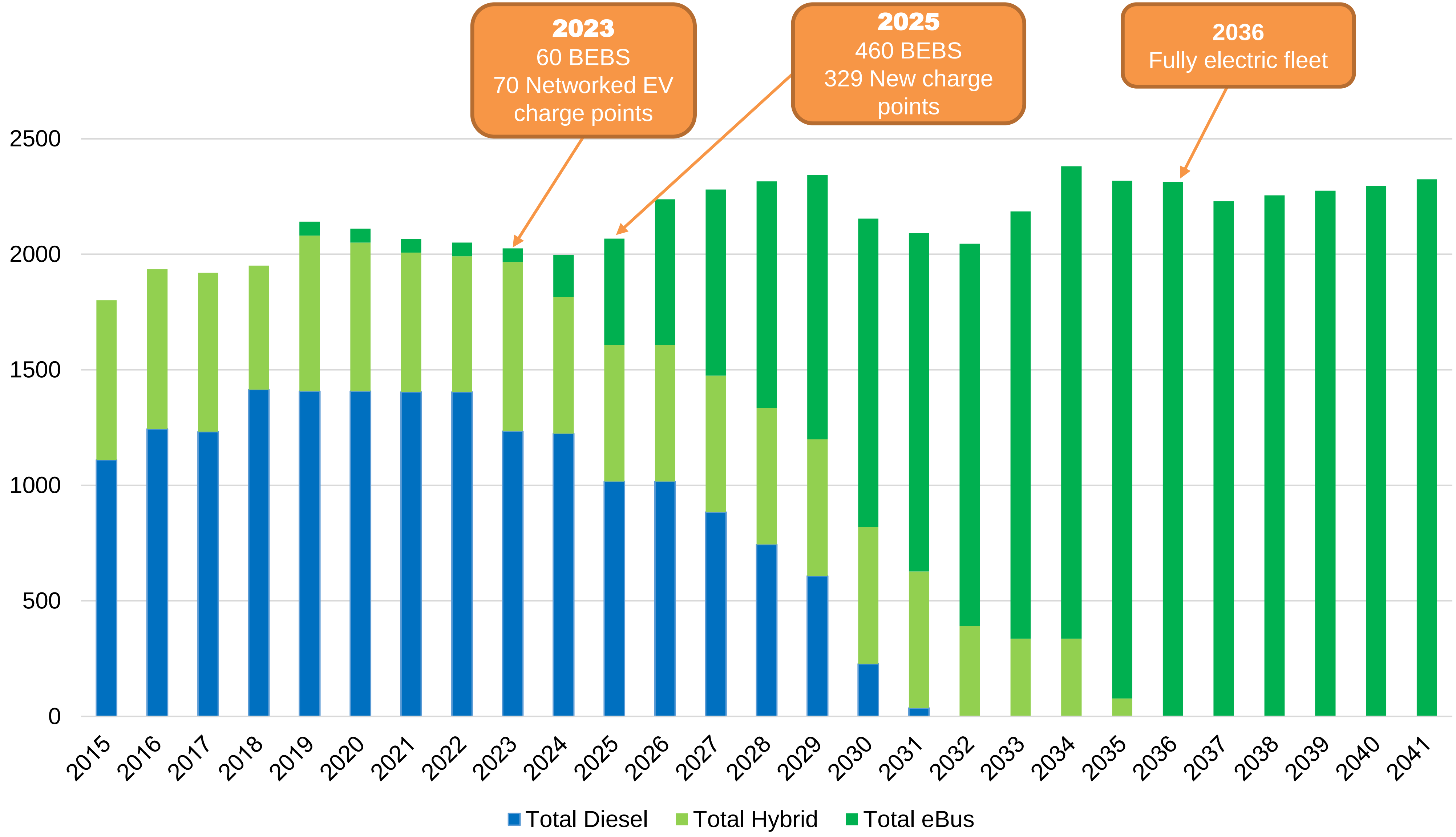
Credits for electricity used in electric vehicles will be determined based on the type of vehicle:

- Total energy supplied to the electric vehicle
- Energy efficiency ratio for the fossil fuel energy that is displaced
- Carbon intensity limit of the fossil fuel being displaced
- Carbon intensity of the alternative energy

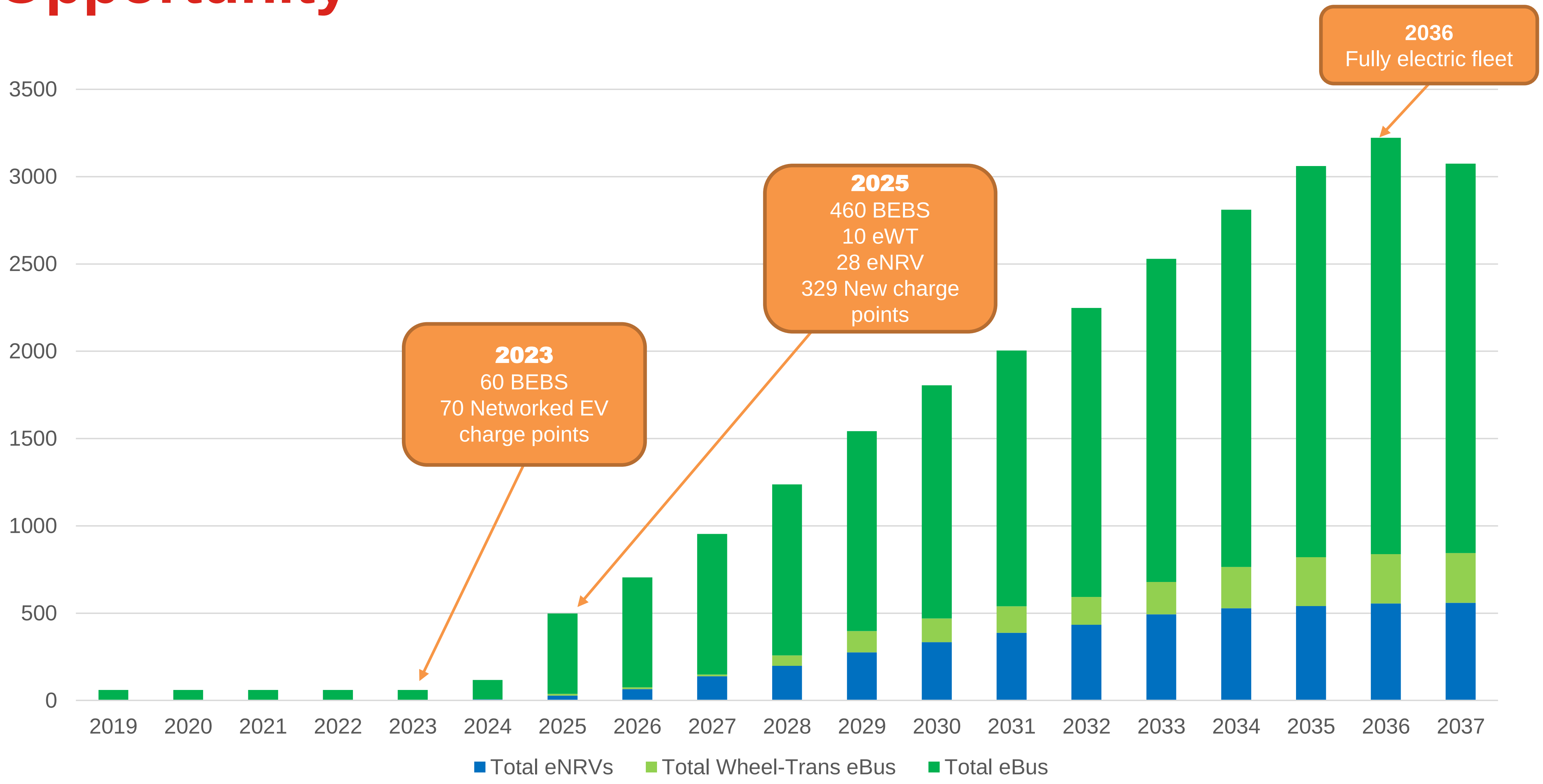
A default value will be set out for the carbon intensity of electricity. It will be representative of the provincial grid mix and have options for modification if there is input data on the source and quantity supplied.

When one year of operating data has been obtained, participants who have been using default carbon-intensity values for electricity may apply for a facility-specific carbon-intensity value.

TTC Fleet Electrification Plan

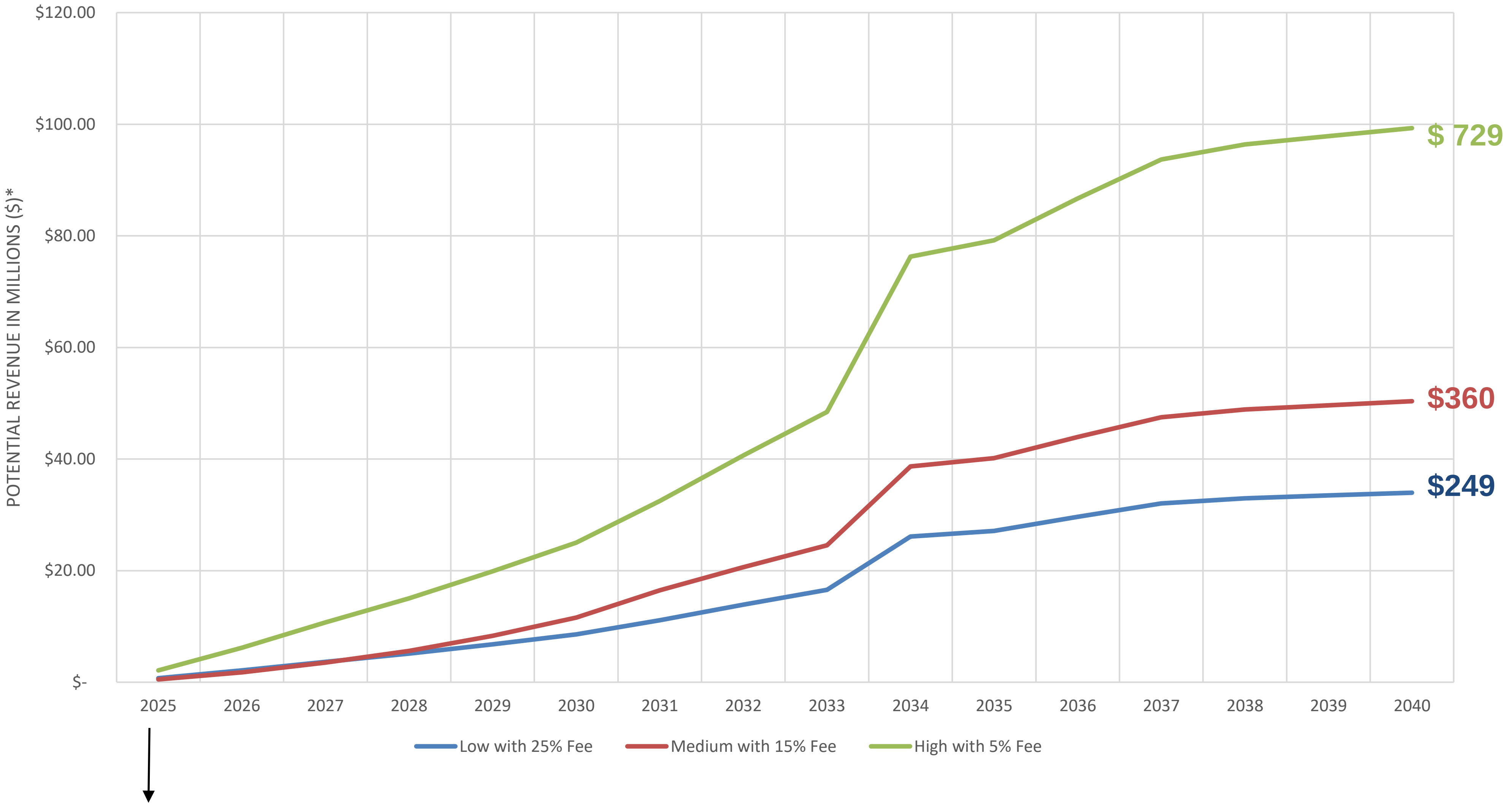


Opportunity



Revenue Projection

Cumulative net revenue potential from 2024-2040



Federal Election Year

*Cost of carbon credits will fluctuate based on market conditions

**Cost of carbon estimated at $130 for low, $170 for medium, and $300 for high (see notes)

Key Dates

In 2024, each compliance period will run from January 1 – December 31.

Credits can be generated starting on the following day after becoming a registered creator, or within 60 days of the start of the compliance period by submitting a registration report.

Dec 31
Prepare Credit Generation Report

→

April 30
Annual Credit Report Submission

→

July 31
ECCC Final Compliance Approval Date

Option Analysis

The two delivery options are as follows:

- **Option A – Procure Third Party Services Aggregator/Broker**
- **Option B – Procure PowerON Services**

Option A – Procure Third Party Aggregator/Broker

TTC is to select a vendor through the public procurement process to:

- Manage the Credit and Tracking System (CATS) account
- Develop compliance reports
- Optimize CFR credit generation and monetization

Cost

A cost share proposal would be negotiated, ranging from 5%-25% of revenue generated.

Benefit

- Maximize credit value creation through leveraging the vendor's expertise and aggregating with other credit creators to maximize selling power.
- Follow existing procurement procedures, and able to directly negotiate with potential aggregators

Option B – Procure PowerON Services

TTC is to streamline administrative tasks through PowerON.

Cost

- Aggregator fees would be negotiated, ranging from 5%-25% of revenue generated.
- Cost is based on billable hours for tasks such as onboarding and reporting only, without share of revenue

Benefit

- PowerON has access to the needed charger and electricity data
- PowerON will then procure and work with an aggregator, with no additional procurement or administrative needs from TTC staff
- As the Federal Government encourages the revenue to be reinvested in electrification, the revenue PowerON claims would be applied directly to reduce TTC's cost of work authorized under the Principal Agreement for electrification infrastructure
- PowerON supports other major clients, with the ability to aggregate for economies of scale
- Revenue generation can be captured for 2024

Frequently Asked Questions

1. **What is the purpose of the Clean Fuel Regulation?**
   The goal of the Clean Fuel Regulation is to reduce carbon intensity in the fuel industry by:
   - Incentivizing fuel producers to prioritize carbon reduction initiatives;
   - Monitoring carbon reduction progress against the national 2050 net zero target and guide the creation and sale credits accordingly.
   - Encouraging reinvestment of credit revenue into carbon reduction projects such as electrifying fleets.

2. **What types of TTC vehicles will qualify?**
   Battery electric buses (including wheel trans) and non-revenue electric vehicles.

Frequently Asked Questions

3. **What is a credit?**
   A credit represents a lifecycle emission reduction of one tonne of CO_2 equivalent. Credits are used during a compliance period by primary fuel suppliers to show compliance to their reduction requirements in the CFR.

5. **How will the TTC earn credits?**
   Credits will be earned through end-use fuel switching by moving to a fully electric fleet and installing electric charging stations.

Frequently Asked Questions

6. **What system will be used to manage and track credits?**
   The Credit and Tracking System (CATS) by Environment and Climate Change Canada.

7. **What is the process of selling credits?**
   Credits can be traded between participants in CATS through an agreement to transfer credits.

8. **Is there sufficient demand for credits?**
   Due to limited emission reduction potential in some industry sectors, it is expected that there will be demand for credits in the foreseeable future. This is supported by the success of similar programs in BC and California; however, demand is not guaranteed.

Frequently Asked Questions

9. Can the TTC and City of Toronto still declare emissions reductions after selling carbon credits?

Both ECCC and the City of Toronto's Environment and Climate Division confirm that participating in the CFR does not impact net zero calculations. The City of Toronto has also confirmed TTC's participation does not conflict with the City's Carbon Offset Policy.

Emissions reductions from the transition of TTC's bus fleet still count towards the TTC, City, Provincial, and Federal net zero calculations when creating and selling credits.

Frequently Asked Questions

10. Are credits an ethical approach to disincentivize fossil fuel production/use - or is this greenwashing?

ECCC states that the CFR is neither a penalty or a carbon offset.

Liquid fuel producers must: 1) reduce their production of fossil fuels; and/or 2) acquire compliance credits.

Liquid fuel producers cannot reduce their emission disclosure, meaning that they cannot avoid accountability for their environmental impact because they have purchased credits for compliance.