

LOW CARBON FUEL STANDARD

Electricity Supply



cleanBC
Roadmap
To 2030

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- Designed to reduce B.C.'s reliance on non-renewable fuels, reduce the environmental impact of fuels, and spur growth in the clean fuels industry in B.C.
- One of our most successful approaches to reducing greenhouse gases in B.C.
- Since 2013, over 15.7 million tonnes of GHG avoidance and over \$ 4 billion in credit value have been generated.

Agenda

- What is LCFS?
- Reporting electricity supply
- Credit market
- Representation and Aggregation



Market Barriers

Fossil fuels continue to dominate the market due to several characteristics:

- They are one of the lowest-cost sources of energy suitable for transportation use.
- They have high energy density, enabling effective transport of goods and people.
- They are easy to transport and dispense to consumers.
- They continue to be available in sufficient quantity to meet current needs.

Market impediments to the rapid adoption of low carbon fuels include:

- lack of production capacity
- insufficiently advanced technology,
- unfamiliarity with the technology or systems needed to bring low carbon fuels to market,
- poorly understood risks for new technologies
- lack of access to commercially proven technologies,
- high up-front costs.
- consumer perceptions / lack of consumer demand

B.C. Low Carbon Fuel Standard (LCFS)

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*Greenhouse Gas Reduction
(Renewable and Low Carbon Fuel Requirements) Act*

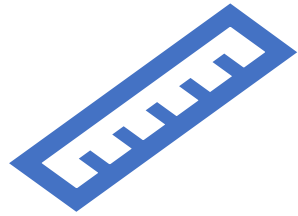
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Renewable and Low Carbon Fuel Requirements Regulation

The Act and Regulation can be viewed online at <http://bclaws.ca>

Supporting information for stakeholders is available online at <http://gov.bc.ca/lowcarbonfuels>

How the LCFS works



Design

Reduce reliance on fossil fuels

Reduce environmental impact of the transportation sector

Spur growth in the clean fuels industry



Requirements

Annual carbon intensity targets

Minimum renewable content



Implementation

Fuel suppliers earn credits for low carbon fuels

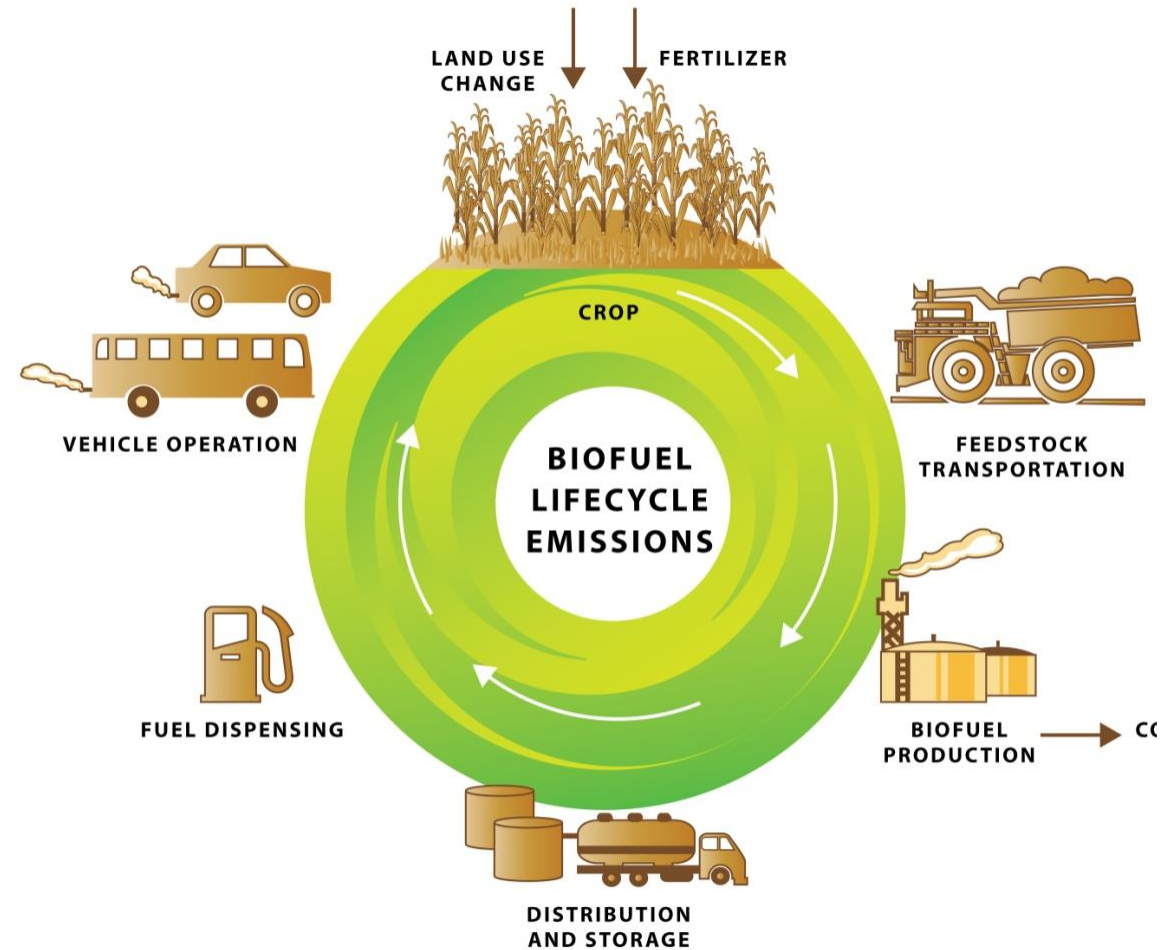
Fuel suppliers receive debits for high carbon fuels

Part 3 of the Act: Low Carbon Fuels requirements.

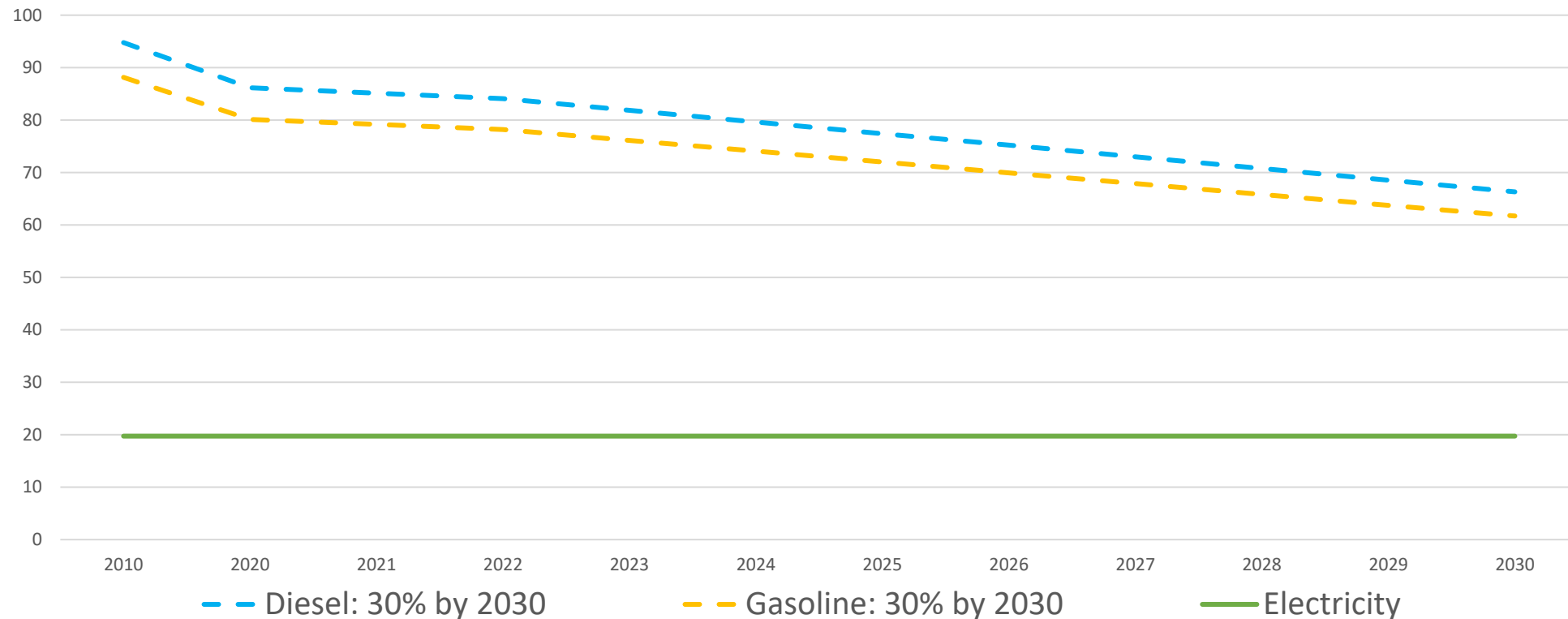
- Part 3 applies to diesel and gasoline, and their substitutes, supplied in B.C. for transportation.
- Fuel suppliers must meet carbon intensity (CI) targets set by the BC-LCFS.
- Electricity can only be identified as a Part 3 Fuel when it is supplied through a charging station or other equipment that is the Final Supply Equipment (FSE) used for transportation.
- Electricity, with a low carbon intensity, is a credit generating fuel

Low Carbon Fuel

- The carbon intensity of a fuel is determined through a lifecycle analysis of the fuel and given in terms of gCO₂e/MJ fuel.
- A "fuel lifecycle" encompasses all of the stages of a fuel product's life from raw material to final use. A lifecycle assessment considers the details of all those stages.



The carbon intensity targets (g CO₂e/MJ) reduce annually to reach 30% below 2010 levels by 2030.



Who is responsible to report electricity supply?

Up to and including Dec. 31, 2021

- For electricity supplied for transportation the Part 3 fuel supplier was generally the utility as the supplier was the person who sold the electricity for use in transportation.

As of January 1, 2022 ([Bulletin RLCF-020](#))

- The supplier who reports electricity is the person who provides the electricity through the Final Supply Equipment (FSE), with the exception that the utility is considered the supplier in the following situations:
 - Vehicle charging at a residential building that includes fewer than five (5) dwelling units,
 - TransLink trains routes that were in operation on December 31, 2020, and
 - Electric trolley bus routes that were in operation on December 31, 2020

Who is responsible to report electricity supply?

- For buildings with at least **five attached dwelling units**, the fuel supplier is the utility bill account owner
 - ✓ Condominiums
 - ✓ Townhouses
 - ✗ Single-family homes in bare land strata corporations
- For residential dwellings with fewer than five attached dwelling units, the fuel supplier is the utility (e.g., BC Hydro, FortisBC)



Eligibility to report on electricity supply

- The supplier must be able to quantify the electricity supplied for transportation to reasonable accuracy (kWh used to charge EVs).
 - Separate metering: Direct metering where electricity used to charge vehicles is metered separately from other electricity loads of the facility.
 - EVSE with built-in data management capabilities: EV chargers that track electricity consumption of vehicle charging.

Compliance Reporting

- Each compliance period is the calendar year from January 1 to December 31
- Part 3 fuel suppliers must submit compliance reports, in accordance with the regulation, by March 31 following each compliance period
- Before the credits can be traded, they must be validated by the statutory Director, which is done through the submission of a Compliance Report via the online reporting tool called “Transportation Fuels Reporting System” (TFRS)
- LCFS staff are here to support. Reach out early with questions and strive to report correctly and on time. Inaccurate, incomplete or late reporting delays processing

Reporting electricity supply

1. Identify if you are a Part 3 fuel supplier:
 - Are you paying the electricity bill associated with any final supply equipment (FSE) (i.e., EV chargers)?
2. Register with BCeID and have a Business BCeID account created for the strata, if you don't already have one.
 - When creating a BCeID business account, select 'Other' and 'Municipality' as the type of business.
3. Download and complete FSE form found on the [Electricity Page](#) of the LCFS website and email lcfs@gov.bc.ca to gain access to TFRS.

Reporting electricity supply



LCFS Final Supply Equipment Identification Form

Part 3 Fuel Supplier	Station Name	Street Address	City	Postal Code	Latitude	Longitude	Charging type	Level	Serial #	Manufacturer	Notes	Dates of Supply
Name of Strata Corporation	Visitor Parking 12	1810 Blanshard	Victoria	V8T 4J1	48.4305183	123.3653921	MURB	2	123456789	XYZ Tech		28/03/2022 - 31/12/2022
Name of Strata Corporation	Visitor Parking 14	1810 Blanshard	Victoria	V8T 4J1	48.4305183	123.3653921	MURB	2	123456789	XYZ Tech		01/05/2022 - 31/12/2022

Reporting electricity supply in TFRS

- Must enter the “Fuel Type”, “Fuel Class” and “Quantity of Fuel Supplied”
 - **Fuel Type:** “Electricity”
 - **Fuel Class:** “Gasoline” or “Diesel”
 - Select the fuel the electricity is displacing
 - If it is unknown which fuel is displaced, you must be conservative (i.e., select diesel)
 - **Quantity of Fuel Supplied:** Enter the aggregate kWh of electricity supplied from all FSE
 - Enter separate lines for gasoline and diesel
- 20,000kWh of electricity replacing gasoline generates 18 credits
 - (8-10 passenger vehicles driven of 15, 000 km/year, the energy demand of a typical EV in a year is about 2,250 kWh)

• Transportation Fuel Reporting System (TFRS)

- Only electricity usage is needed to input. Credit formula is automatically calculated for you.

FUEL IDENTIFICATION					ENERGY SUPPLI		
	Fuel Type <i>i</i>	Fuel Class <i>i</i>	Provision of the Act Relied Upon to Determine Carbon Intensity <i>i</i>	Fuel Code or Schedule D Entry (if applicable) <i>i</i>	Quantity of Fuel Supplied	Units <i>i</i>	Carbon Intensity Limit (gCO ₂ e/MJ) <i>i</i>
✓	Electricity	Gasoline	Section 6 (5) (d) (i) - Default Carbon Intensity Value		20,000	kWh	78.2
+ Add Row					Total Credit		18
					Total Debit		-
					Net Credit or (Debit)		18

Debits and Credits

- Fuel suppliers generate credits for supplying fuels with a CI below the targets and receive debits for supplying fuels with a CI above the CI targets.
- Once validated by the statutory Director, credits are issued into the Part 3 fuel supplier's TFRS account.
- At the end of each compliance period, suppliers must have a balance of zero or more credits to achieve compliance. (Those in debit will need to acquire credits to avoid penalties.)
- Credits can be traded between fuel suppliers or banked for future use.
- Credits do not expire.

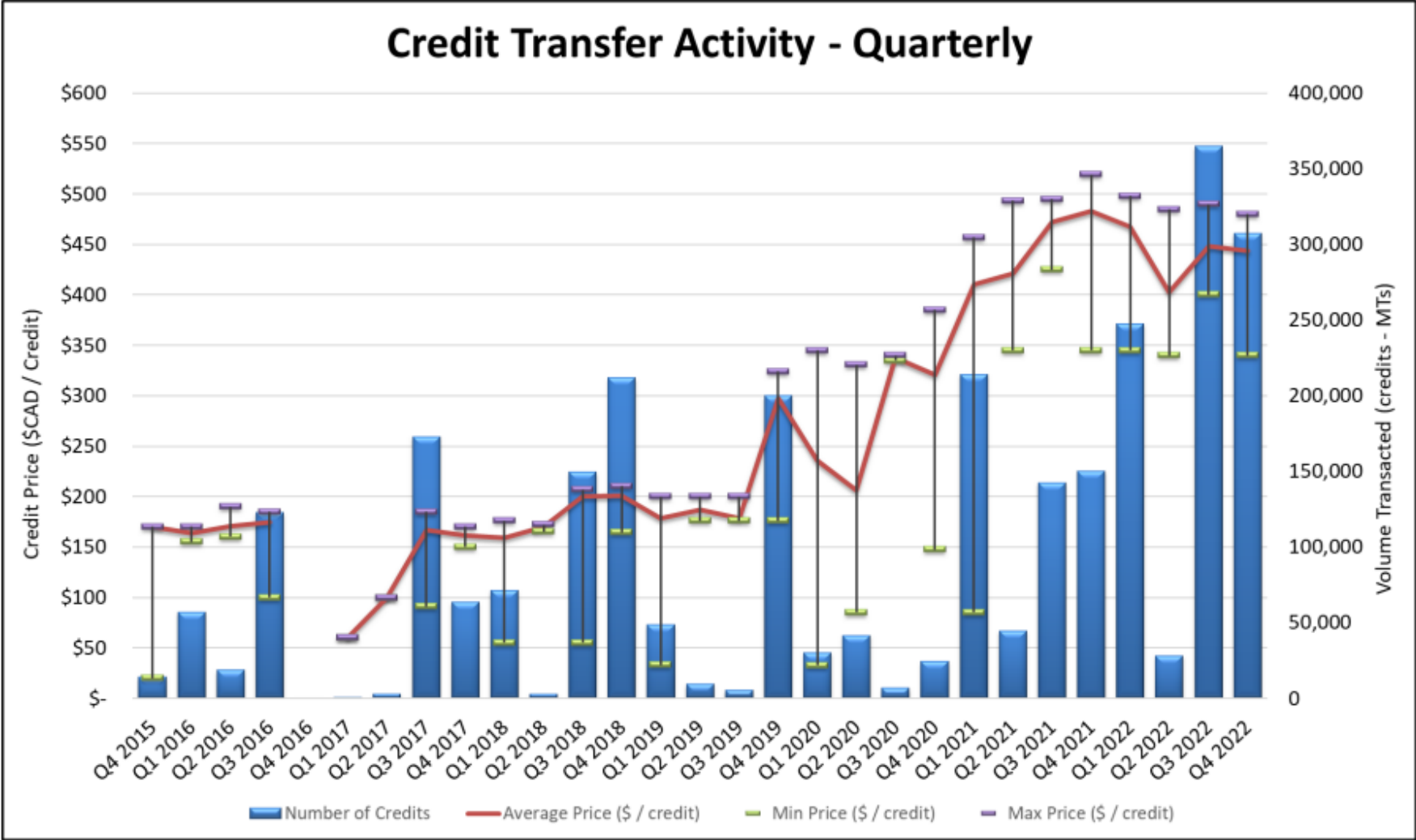
Credit Market

- The [credit market](#) allows fuel suppliers that have credits (i.e., suppliers of electricity) to sell those credits to fuel suppliers that incur debits (i.e., suppliers of fossil fuels above the CI limit).
- Information [Bulletin RLCF-013](#) on the LCFS website includes fuel suppliers' contacts information for credit transfers. (Currently being updated – stay tuned)
- Credits are traded amongst Part 3 fuels suppliers through TFRS and must be approved by the statutory Director

Credit Market

- [Credit market reports](#) are published on our website monthly and quarterly
- Credits have historically been transferred in large quantities, but we are seeing a shift to smaller transfers and are expecting a shortage of credits for some time.
- 18 credits at \$451.08/credit (March 2023) would be approximately \$8,000.

Time Period ¹	Transfers (number)	Total Volume (credits)	Average Price ² (\$ per credit)	Minimum Price (\$ per credit)	Maximum Price (\$ per credit)	A	B	C
Q4 2022	46	307,480	\$443.93	\$340.00	\$480.00	39	2	5
Q3 2022	37	364,882	\$447.97	\$400.00	\$490.00	36	1	0
Q2 2022	8	28,060	\$402.59	\$340.00	\$485.00	N/A	N/A	N/A
Q1 2022	27	247,755	\$467.32	\$345.00	\$497.77	N/A	N/A	N/A



Third-party Representation

- Suppliers may appoint an agent to act on behalf of the supplier in dealings with the Ministry
- Under the current act, a third-party representative could act on the behalf of multiple electricity fuel suppliers to negotiate a collective sale of credits with a fuel supplier in debit.
- Two pathways for third-party representation:
 - Represented by another Part 3 fuels supplier (Aggregator)
 - Represented by an agent who is not a Part 3 fuel supplier

Aggregator

- For the 2022 and 2023 compliance periods we have provided [Electricity Supply Aggregating Reporting Tools](#) on the electricity page of our website, which can allow a **Part 3 Fuel Supplier to be an Aggregator**.
 - Complete a [Representation Agreement Form](#) to inform the Ministry of the Agreement
 - The Aggregator reports on the electricity supplied for each customer by emailing lcfs@gov.bc.ca with the [Reporting Tools](#). (You do not use TFRS).
 - The “transferring” supplier’s credits are transferred into the TFRS account of the Aggregator who can then transfer the credits collectively.
 - Suppliers retain all legal responsibilities associated with its compliance with the Act and Regulation.

Agent is not a Part 3 fuel supplier

- Submit the Representation Agreement Form found on the [Credit Market page](#) of our website to lcfs@gov.bc.ca to inform the Ministry of the agreement between the agent and the supplier.
- Agent reports within the supplier's TFRS account on the supplier's behalf.
- Suppliers retain all legal responsibilities associated with its compliance with the Act and Regulation.
- Credits will need to be transferred individually from each customer's TFRS account.

Allocation Agreements

- **Beginning January 1, 2024**, a person can enter into an Allocation Agreement with another person that makes the other person responsible for the fuel
- The person that has been allocated responsibility for electricity supply:
 - Can be any person
 - Will have legal responsibilities of Part 3 reporting transferred to them
 - Can trade credits, provided they are registered in accordance with the regulations
 - Can have multiple Allocation Agreements and can aggregate credits
- Provides a streamlined process to generate and sell credits
- Applies when reporting for the 2024 compliance period (Jan – Dec 2024) in 2025

Representation Summary

Compliance Periods	2022 and 2023		2024 and beyond
Representative	Agent	Aggregator	Aggregator
Who can be a representative?	Anyone	Part 3 Fuel Supplier	Anyone
Who needs a TFRS account?	Each Part 3 Fuel Supplier	Only the Aggregator	Only the Aggregator
Reporting process	In TFRS	Via LCFS email	In TFRS
Credit transfers	Individually	Collectively	Collectively
Legal responsibility to comply with the Act	Each Part 3 Fuel Supplier	Each Part 3 Fuel Supplier	The Aggregator

Sector Cooperation

- It could benefit strata organizations to work together on reporting and navigating the credit market.
 - Collectively negotiate the sales and transfers of credits.
 - Keep more revenue in house.
- Examples:
 - A strata represents multiple strata organizations to report on their behalf. The strata organizations have separate agreements to consider costs such as administration.
 - Strata organization report themselves but work together to sell and transfer credits.

QUESTIONS?

Email: lcfs@gov.bc.ca

Website: gov.bc.ca/lowcarbonfuels