



Freight Decarbonisation

Workstream A: Low-carbon Freight Transformation via Renewable Freight Certificates (RFCs)

Background

Workstream A: Low Carbon Freight Transformation via Renewable Freight Certificates (RFCs) project continues to build on previous work delivered by the Sustainable Business Council (SBC) as part of its Freight Group collaboration, which aimed to look at how members could come together in a whole-of-sector of approach to decarbonise heavy transport.

A key outcome of that work was the delivery of the [Low Carbon Freight Pathway](#). Since delivery of that pathway, SBC has had subsequent discussions with organisations on what they see as the key challenges and opportunities for decarbonising freight in their business.

The culmination of this work has resulted in a range of common desires, including:

- A variety of freight enablers seeking the ability to be able to offer a 'low carbon freight' solution to customers, allowing them to select the option to have their product delivered via a low carbon method and charging them a premium for that service.
- Commercial and industrial organisations who are undertaking carbon reduction programmes and are searching for ways to reduce their Scope 3 (and/or category 4, upstream transportation & distribution) freight emissions. In essence, being able to select a 'low carbon freight' option would allow reductions in an organisation's scope 3 emissions to be recognised through a carbon reporting framework.

Currently there are limited options in terms of low carbon freight delivery (which is primarily achieved through mode shift), and in order to provide a low carbon freight offering, an entire end-to-end freight solution is required.

We believe this is unfeasible in today's market because:

- There are too many freight routes to fully decarbonise all of them.
- The cost of implementation is very high.



- The increased costs of operating a low carbon system will not be paid by users who do not value lower carbon emissions options.

To circumvent the above issues and create a system to enable the rapid deployment of targeted low carbon freight, SBC, along with DETA (our technical delivery partner), recommend developing a system of *Renewable Freight Certificates*¹.

This will allow the rollout of low carbon freight technology on specific routes and assign the carbon reduction to clients willing to pay a premium for it, no matter where the products are coming from, or being delivered to.

The concept idea is similar to the *Renewable Electricity Certificate* system currently operating via the New Zealand Energy Certificate System (NZECS) and the *Renewable Gas Certificate* system which is in the final stages of being developed.

Developing Workstream A: Renewable Freight Certificates

This workstream would:

- Facilitate the creation of a *Renewable Freight Certificate* (RFC) (analogous to the *Renewable Electricity Certificate* (REC)).
- Enable a purchaser to select the option of choosing a low carbon delivery option for their purchased goods (from a participating company) within New Zealand.
- Enable a seller (participating company) to pre-emptively offer a low carbon option for delivery of their product.

We see the system operating as follows:

1. The nominated freight provider purchases a low carbon freight method (e.g. an EV) and identifies the movement of freight and the corresponding amount of tonne/km.
2. The tonne/km moved, and the energy use of that asset, would be verified and a *Renewable Freight Certificate* created and added to the organisation's total RFC pool.
3. Freight purchasers would be able to select a low carbon delivery option, which would then remove the attributed amount of tonne/km from the RFC pool. This would reduce the Scope 3 freight emissions of the recipient company.

This offering is unique in that it will provide an incremental and targeted low carbon transport option, which can have a premium paid by the client. This will help overcome first mover disadvantage and the increased costs of lower carbon freight offerings.

¹ Using the term certificate will be reviewed for applicability as we learn more.

How the system will operate: It is expected that the purchasers of the RFC would pay a premium for low carbon delivery, thus helping to enhance the business case for freight providers to invest in low carbon options. Like RECs, we envision that RFCs will ringfence the proceeds to invest in further low carbon delivery options, increasing the potential pool of RFC. As part of the determining concept feasibility, we will look at whether mode shifted freight could be included in this system. Consideration will need to be given to existing capacity already in use on their networks and if/how this would be applied.



Delivering Workstream A

Phase One: Project Inception – Concept Feasibility

This project has a wide number of factors and aspects which need to be confirmed as appropriate and achievable, with a comprehensive methodology formulated. SBC and the Ministry of Transport (MoT) will work together on the delivery of this phase.

Key output	Confirmation that the project is feasible, what low emission technology or fuel will be included, and confirmation of the methodology required to enable implementation.
Delivery time (from commencement to output)	Estimated two months.
Cost	\$19,800 exc gst
Funding confirmation	Given that this is largely a common good project, with the final output being shared beyond the SBC membership base, funding for this first phase will come from MoT.
Participating information partners	<ul style="list-style-type: none"> • MoT • Toitū Envirocare (technical guidance for reporting) • NZECS (system set up) • Ministry for the Environment (MfE) (emission factors) • Waka Kotahi NZ Transport Agency • SBC members (and others where appropriate)
Member time commitment	Estimated 1-2 hours (including phone interview and other potential information gathering opportunities)

Phase Two: Renewable Freight Certificate system creation

The primary aim of the project ultimately would be to facilitate the creation of a *Renewable Freight Certificate (RFC)*. Phase 2 will determine what low emission freight fuel/technology RFC's can be applied across the sector, i.e. renewable diesel, EV, fuel cell electric vehicles (FCEV) and mode shifted freight (e.g. rail and shipping).

Key output	The creation of the RFC system to allow RFCs to be generated by one organisation and sold to another in order to reduce Scope 3 carbon emissions.
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Delivery time (from commencement to output)	Estimated 12 months.
Cost	Estimated \$82,500. A clearer estimate will be given after the delivery of Phase 1.
Funding confirmation	TBC - anticipated funding would be a mix of private and public investment.
Participating information partners	<p>TBC – likely to be:</p> <ul style="list-style-type: none"> • SBC and select members • DETA • MoT • Toitū Envirocare • NZECS • MfE • Waka Kotahi NZ Transport Agency • MBIE <p>SBC members likely to be interested:</p> <ul style="list-style-type: none"> • Retailers/sellers who wish to offer the service to their clients. • Logistics providers (e.g. trucking contractors). • Potential providers of other mode logistics (e.g. rail, coastal shipping) • NZ onsellors of low carbon fuel, e.g. bio/renewable diesel, hydrogen. • Specific low carbon fuel/equipment suppliers (e.g. hydrogen suppliers, EV suppliers etc).
Member time commitment	Estimated 3 hours a month. 1 hour for working group call and up to 2 hours to feedback relevant information and be available for questions.

Phase Three: Low Carbon Service Offering creation.

Following the creation of the RFC system, an organisation(s) would be required to be selected to roll out a system which enables purchasers to utilise the RFCs, in order to enable them to select a low carbon delivery option. Key tasks for this phase would include:

- Liaison with freight company and retailer to facilitate basis of RFC creation and how these are applied.
- Calculation of freight cost premium required for applying RFCs.
- Liaison with the organisation’s IT providers to create online options for the low carbon option selection.
- Roll out of low carbon freight offering based on the RFC methodology.



Key output	Functioning low carbon service offering for an online retailer (or similar), including a website and system that will enable the organisation to offer RFCs directly to a freight purchaser.
Delivery time (from commencement to output)	Estimated four months.
Cost	Estimated \$35,000. A clearer estimate will be given after the delivery of phase 1.
Funding confirmation	TBC, anticipated funding would be a mix of private and public investment.
Participating information partners	(Same as Phase 2)
Member time commitment	Yet to be determined

Proposed costs

There is significant uncertainty regarding the actual time that would be required for the completion of Workstream A, both in terms of the amount of time required, and how long it could take to develop a functioning system. DETA will have significantly more clarity around requirements and costs following the completion of Phase 1 – concept feasibility.

DETA reserves the right to adjust the hours/budget allocations once additional information is sourced. We propose that the budget for each phase is confirmed following completion of the previous stage.

Why collaborate on Low Carbon Freight Transformation via Renewable Freight Certificates (RFCs)

Engagement with this project presents a range of opportunities for your business, including:

- Showcasing your organisation’s ongoing leadership in transitioning the freight sector.
- Collaborating across public/private sectors ensures multiple perspectives are brought to the analysis and solution approach.
- Participating as part of a group of businesses across the transport sector (supplier and consumer), along with strategic partnership from relevant government departments, to deliver a transformative market-led systemic freight decarbonisation solution.
- Working in partnership to demonstrate alignment with SDG 17.
- Supporting the delivery of your organisation’s net zero 2050 objectives.

