



The Carbon Offset Application Development Competition Project for Small Businesses No. 1/2023

As a result of the current climate change situation, many sectors have increased their focus on reducing greenhouse gas emissions. One of the related activities is carbon offset. Carbon offsetting in large enterprises with significant emissions of greenhouse gases. The relevant organization have begun to act formally. However, there is no regulatory structure for carbon offset individuals or small businesses. The development of a system to support or execute a minor offset requires a cost.

Therefore, Clean Energy for Peoples Foundation started a "competition for application development for carbon offsetting in small business units" to enable young people to take part in the co-development of carbon compensation systems for small businesses. This includes encouraging young people to use their learned knowledge to develop and apply it to their benefit, in line with the development of mechanisms to reduce future greenhouse gas emissions.

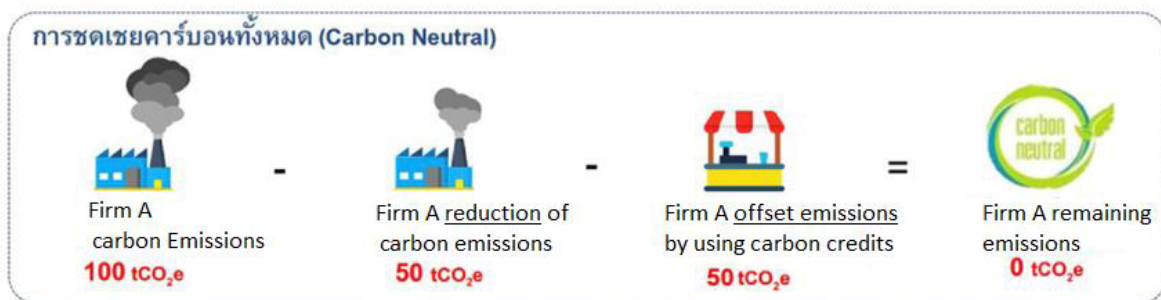
Introduction to Carbon Offsetting

Carbon credit is the amount of greenhouse gases that an enterprise can reduce through participating in activities to reduce greenhouse gas emissions compared to normal activities, such as switching from electricity purchased from fossil-fueled power plants to clean-energy electricity such as solar, wind energy, recycling of waste generated instead of dumping or destroying waste or making energy-efficient activities more efficient. The quantity of reduced greenhouse emissions will be expressed in equivalent CO₂ units and will be registered by the public greenhouse management authority once such reductions have been certified. After the approved project activities are completed, the reduced quantity of greenhouse gases will be verified, and once certified, it will be recorded in a registry known as carbon credits, which can be bought, sold, transferred, and used to offset greenhouse gas emissions.

Any organization that is unable to reduce its carbon emissions can purchase a carbon credit to offset or compensate for its own emissions. This is known as a carbon offset.



In case that an entity buys carbon credits to deduct the whole quantity of carbon emitted, which is a total carbon compensation or making its carbon emissions zero. This is called carbon neutral.



Competition prerequisites

1. Applicants must not exceed higher education or the equivalent.
2. Group members with a maximum of 5 members
3. The completed product must be a web-based application, displayable on mobile devices.

Criterion for judgement

1. Completeness of applications to function such as buying, selling, transferring and offsetting carbon credits.
2. Friendliness of User Interface
3. The format and flexibility of the application to support both mobile devices and computers
4. The decision made by the judging committee is final

Entry and Submission

Day/Month/Year	Activity
Present to 29 July 2023	Application through Google Forms (https://forms.gle/aeVwUih5FjbouY5W9) based on the time the system receives the form
31 July 2023	The participation will be confirmed by e-mail to the applicant's representative.
26 May 2023 & 10 June 2023	Orientation session to clarify the principles of work and knowledge of online carbon credit trading. For applicants applying post orientation, the retrospectives can be viewed on the website after May 12, 2023.
4 August 2023 (24.00 PM)	Deadline for submitting works in the form of Weblinks with video clips demonstrating the use of the application (before midnight) by email to korawit.re100@gmail.com and aungsna.ch@gmail.com with time of upload as a basis.
10-11 August 2023	Presentation and Judging (Dates, time and place will be provided at a later date)
11 August 2023 (13.30AM -15.00 PM)	Awards ceremony

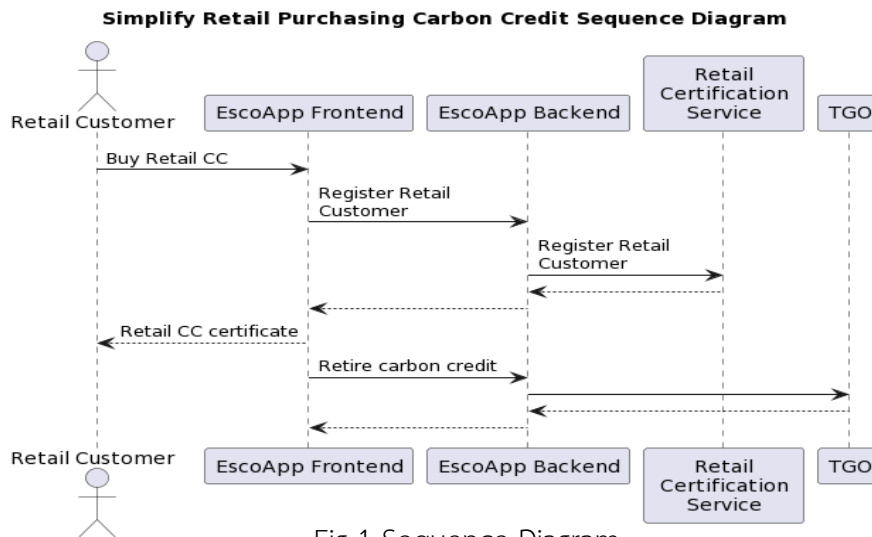
Awards

- | | | | |
|-------------------------------|-----------------------|---------|------|
| 1. First place prize | Education fund | 200,000 | Baht |
| 2. First Runner-up | Education fund | 100,000 | Baht |
| 3. Second Runner-up | Education fund | 50,000 | Baht |
| 4. Honorable Mention 2 Prizes | Education fund (each) | 20,000 | Baht |
| 5. Consolation 10 Prizes | (of each) | 10,000 | Baht |

All contestants will receive a certificate of participation in the project

Disclaimer:

1. In the event that the received income is subject to withholding tax, the scholarship recipient is responsible for the withholding tax burden as specified in the Revenue Code.
2. The copyright in all award-winning works belongs to the organizer



1. Customer purchases Carbon Credit (CC) through “EscoApp”
2. EscoApp sends an order from frontend to backend
3. EscoApp backend sends information to the Retail Certification Service to issue the certificate and returns it to the frontend for the customer to download
4. To retire the CC, EscoApp sends information to TGO (after conditions are fulfilled).

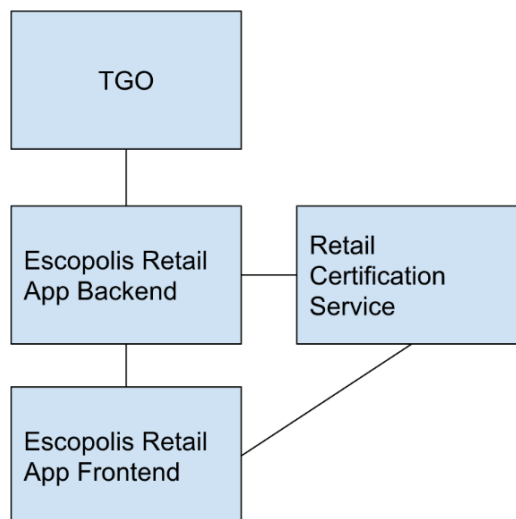


Fig 3. High level system layers

Four connecting groups

1. TGO connects with **EscoApp backend** to order retirement of CC
2. **EscoApp** backend connects with the **Retail Certification Service** to request **retail certificate**
3. **EscoApp** front and backend to receive, send orders between customers and CC information
4. **EscoApp frontend** connects with **Retail Certification Service** to bring retail certificates for customer to download **in App**

Glossary

Vocabulary	Definition
FTIX : CC/RE/REC X Platform	Carbon Credit Trading Platform by the Climate Change Institute, The Federation of Thai Industries
Thailand Greenhouse Gas Management Organization (TGO)	An agency under the supervision of the Ministry of Natural Resources and Environment that provides services, supervises, and sets standards related to measurement, reporting, verification, and certification of greenhouse gas emissions, reductions, and offsets. They are also responsible for promoting project development and trading of certified greenhouse gas emissions, acting as a center for information on the situation of greenhouse gas operations, promoting and developing potential, and giving advice to government agencies and the private sector on greenhouse gas management.
Carbon Credit Certificate	A carbon offset certificate, evidence that ensures the transparency and credibility of the established carbon offset projects. It must be reviewed under the United Nations Framework Convention on Climate Change (UNFCCC) to ensure that those projects actually reduce carbon and greenhouse gas emissions where results can be measured and verified.
CC	An abbreviation for “Carbon Credit”
Escopolis	The company acting as an agent (broker) of trading under the FTIX platform, responsible for screening and sending trading orders to the platform where traders will not be able to place orders directly on the platform.
Carbon Offset	Offsetting greenhouses gases from buying, selling or conversion of carbon credits
Cancellation of carbon credits	Cancellation of carbon credits in the TGO registration system for use in offsetting carbon
Retail Carbon Credit Certificate	Carbon credit certificates for retail buyers

Supporting Agencies



Inquiry for more information

Clean energy for people Foundation

Khun Korawit 091-804-6643 korawit.re100@gmail.com

Khun Aungsna 084-938-3057 aungsna.ch@gmail.com