

An aerial photograph of a modern, multi-story building with a green roof. The roof is covered in lush green plants and trees. A section of the roof is covered with solar panels. The building has a modern design with large windows and balconies. The surrounding area is also green with trees and a paved walkway.

Sustainable Finance

Opportunities from Carbon Reductions



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Introduction (1)



Real Estate and Building Sectors

- Reduce GHG emissions
- Agro-forestry



Energy Industry

- Renewable Energy
- Energy Efficiency



Transportation Industry

- EV Infrastructure
- Hydrogen



Agriculture

- Reduce GHG emissions through carbon sequestration



Enable Malaysia to meet NDCs by 2030 and beyond

Expand on socio-economic sustainability opportunities for its people and economy

Introduction (2)

CRX - Who we are

CRX is the oldest and premier carbon services consultancy in Singapore with >20 years experience in the international carbon markets, developing origination projects, methodologies and new initiatives. Other services we provide include carbon profiling and carbon asset management services.

Carbon Services Managed:

- Monitoring & Reporting
- Scientific services including methodology development
- Origination
- Consultancy and Advisory
- Financial / Investment
- Blockchain and IoT
- **> 50million tCO2e originated since 2003**

Projects managed:

- Nature-based solutions
- Renewable Energy
- Electric Vehicles
- Marine Solutions
- Development of carbon profiles for companies in the Building and Construction Industry & Beyond
- Clients include blue-chip companies in Malaysia and Singapore who are both internationally and locally domiciled

Whole Life-Cycle Assessment (1)

Whole Life Carbon Assessment Whole Life Carbon (WLC) emissions encompass carbon emissions resulting from sourcing through construction and the use of a building over its entire life, including its demolition and disposal (cradle to grave).

Capture a building's operational carbon emissions from energy use and its embodied carbon emissions:

- Raw material extraction & manufacture
- Transportation of building materials
- Construction
- Maintenance, repair and replacement
- Dismantling & demolition
- Material disposal



Assess potential carbon emissions 'benefits' from the reuse or recycling of components after the end of a building's useful life.

Whole Life-Cycle Assessment (2)

Opportunities from emission reductions



- Materials that have a reduced embodied carbon composition as compared to the baseline such as recycled steel, or aluminium
- Reducing emissions from construction practices:
 - Switching to biofuels instead of fossil fuels.
 - Establishing a substation at the construction site earlier rather than to avoid open combustion of fossil fuels.
- More efficient planning during the conceptual design
 - Building façade, cooling systems, lighting systems and other ancillary systems that consume electricity or require an Uninterrupted Power Supply (UPS).
 - ETTV and opportunities for co-sharing facilities.
 - Water conservation and water harvesting systems.
- Establishing a performance metrics
 - Reasonable and practical targets are set accordingly.
 - Incorporated into the master plan when the detailed design is produced.
- Waste Management systems



Search for opportunities to generate new assets like carbon as they are valuable to meet NDCs but also to increase profitability and/or to reduce costs in the long-run

Identifying Opportunities



- New ideas and concepts which you feel could reduce carbon emissions
- Understanding how exactly emissions are reduced

- Establishing the correct baseline through the use of the GHG Protocol (Scope 1,2 & 3 emissions)
- Understanding how additional revenues from carbon assets or environmental attributes can reduce your emissions or make up for unavoidable Scope 2 emissions
- Setting credible and manageable targets to reduce emissions.
- **Speak to credible consultant(s):**
 - Mitigate **risks** and ensure understanding and know-how to identify credible projects

Are your ideas and concepts
real, long-term and
measurable?



Carbon & Sustainable Finance

Carbon financing is a funding mechanism that places a financial value on carbon emissions and allows companies to generate additional income in a measurable manner – as a seller.



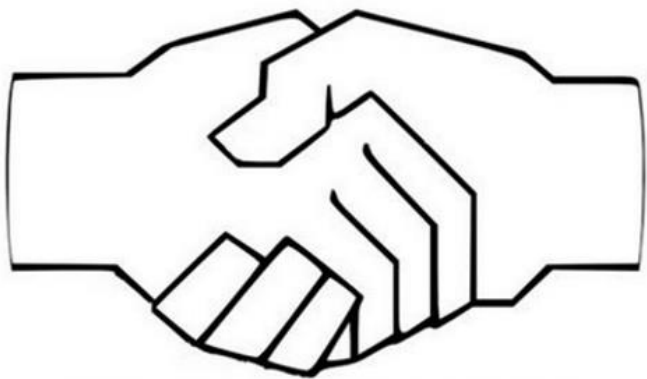
Carbon Credits

- Fungible commodity for a buyer to meet a voluntary or compliance target as well



Green bond

- Lowered cost on the CAPEX or OPEX of financing a project.
- Applied to the Debt vs the Equity to reduce costs and hence share the additional returns in exchange.



THANK YOU

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