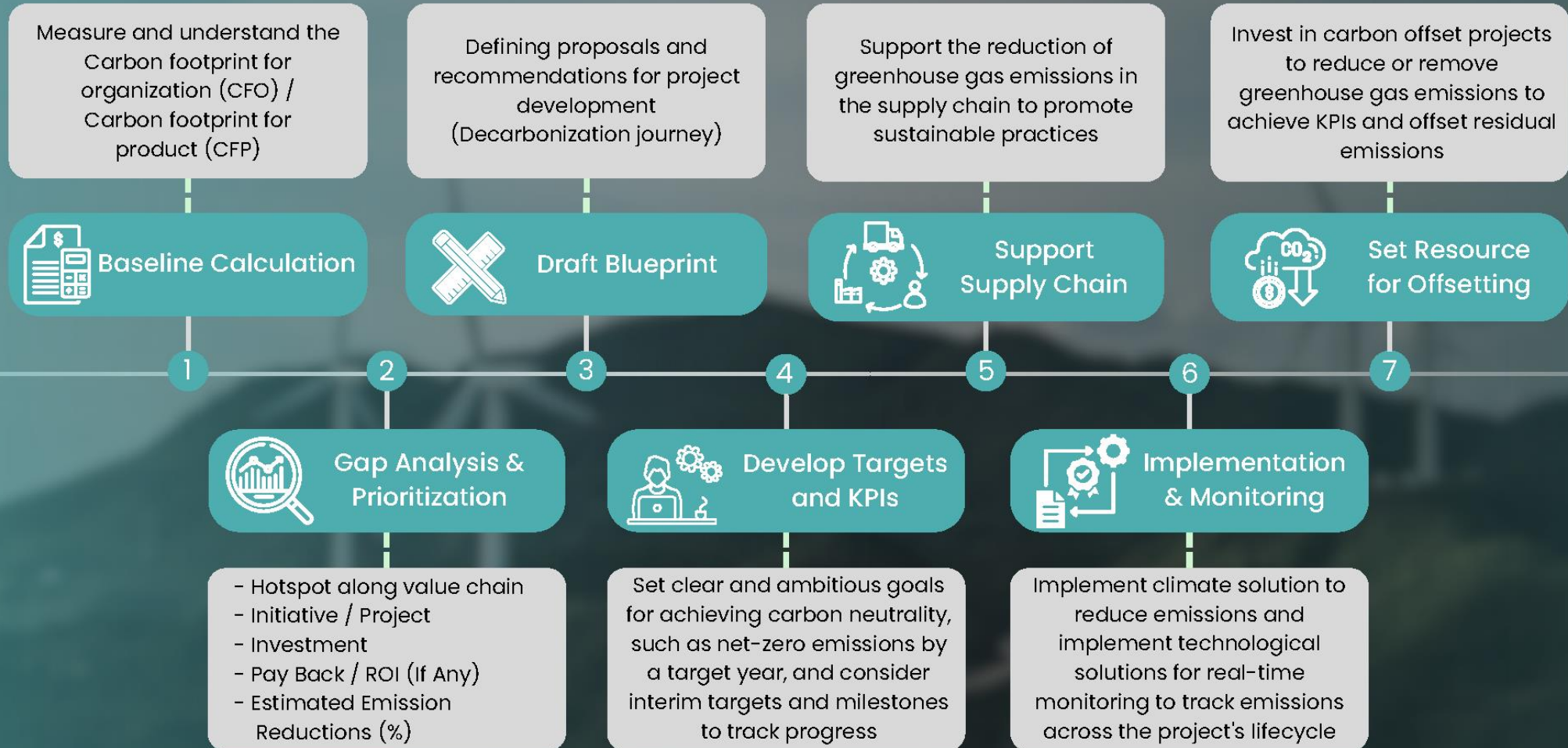
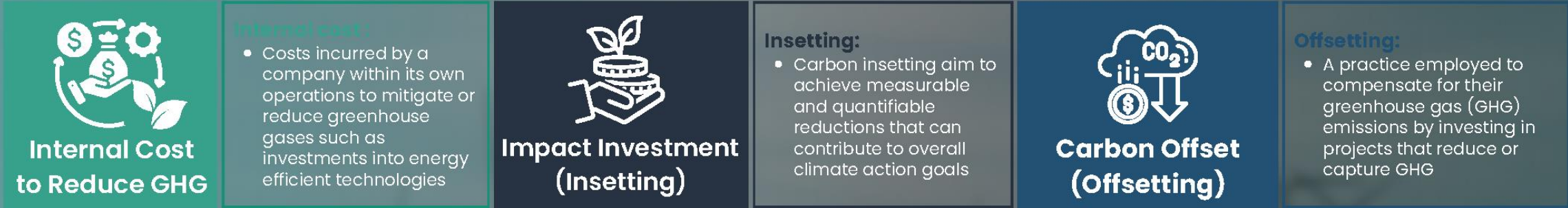


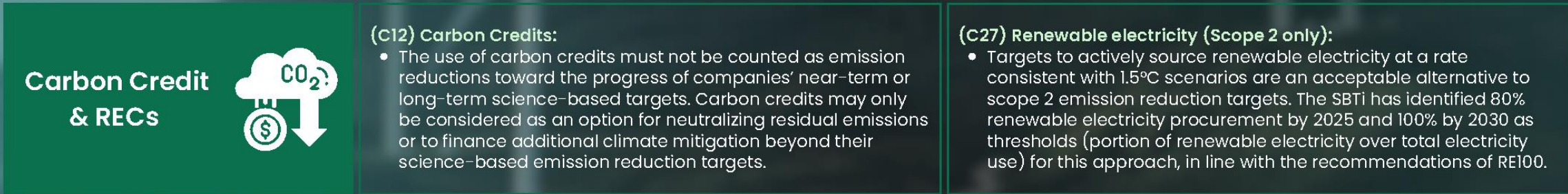
DECARBONIZATION STRATEGY



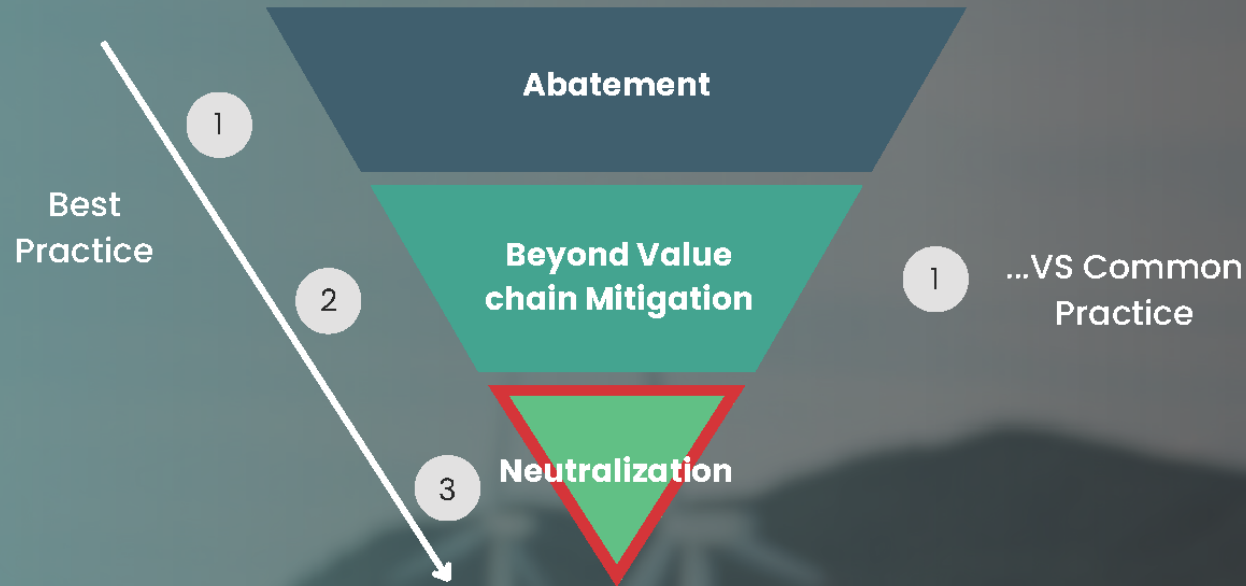
OFFSETTING TO ALIGN WITH SCIENCE BASED TARGET INITIATIVES



SCIENCE BASED TARGET



VALUE CHAIN MITIGATION



Emission Reductions Within The Value Chain to Transition to Net-Zero	Beyond Value Chain Mitigation Can Accelerate The Global Transition
<ul style="list-style-type: none"> Companies must prioritize making real emissions reductions within their value chains that align with 1.5 C pathways. To do this they must complete emissions inventories following the GHG Protocol and set near and long-term science-based targets. Implement strategies to achieve these targets. Disclose progress annually. This is the minimum ambition and where possible, decarbonization should be achieved ahead of target years. 	<ul style="list-style-type: none"> In the near-term, prioritize securing and enhancing carbon sinks (terrestrial, coastal and marine etc.) to avoid emissions that arise from their degradation. There is also a critical need to invest in nascent GHG removal technologies (e.g., direct air capture and storage). These actions do not count towards achieving science-based targets. In the long-term, when the net-zero target date is reached, companies must neutralize any residual emissions that cannot be abated through permanent emission removals. Companies must continue to neutralize any remaining emissions.

Neutralization

What: Measures companies take to remove carbon from the atmosphere and permanently store it, counterbalancing the impact of emissions that remain unabated.

Why: Although most companies will reduce emissions by at least 90% through their long-term science-based targets, some residual emissions may remain. These emissions must be neutralized to reach net-zero emissions and a state of no impact on the climate from GHG emissions.

Remark: A company cannot claim to have reached net-zero until the long-term science-based target for all scopes is achieved and the company has neutralized residual emissions.

Location-Based Method

Definition

- A method to quantify scope 2 GHG emissions based on average energy generation emission factors for defined geographic locations, including local, subnational, or national boundaries.

How method allocates emissions:

- Emission factors representing average emissions from energy generation occurring within a defined geographic area and a defined time period.

Market-Based Method

Definition

- A method to quantify the scope 2 GHG emissions of a reporter based on GHG emissions emitted by the generators from which the reporter contractually purchases electricity bundled with contractual instruments, or contractual instruments on their own.

How method allocates emissions:

- Emission factors derived from the GHG emission rate represented in the contractual instruments that meet scope 2 quality criteria.

Cross Border Offsetting

Emission Factor of Electricity, Grid Mix Between Thailand and Vietnam



Year	Thailand	Vietnam
2021	0.433 tCO ₂ /MWh.	0.7221 tCO ₂ /MWh.
2020	0.442 tCO ₂ /MWh.	0.8041 tCO ₂ /MWh.
2019	0.445 tCO ₂ /MWh.	0.8458 tCO ₂ /MWh.
2018	0.459 tCO ₂ /MWh.	0.9130 tCO ₂ /MWh.
2017	0.471 tCO ₂ /MWh.	0.8649 tCO ₂ /MWh.

Source: 1. Electricity Generating Authority of Thailand (EGAT)
2. Department of Climate Change, Vietnam (DCC)

CLAIM STANDARD (GHG SCOPE 2)

Are any of your energy-consuming facilities located in areas where grid customers can be provided with product or supplier-specific data in the form of certificates, contracts with generators or suppliers for specified source electricity, supplier labels, supplier emission rates, green tariffs, contracts, residual mixes, or other contractual instruments?

If No

If Yes

You will report one scope 2 total based on the location-based method.

You will report two scope 2 totals for the overall corporate inventory: one market-based and one location-based.

For location-based scope 2: calculate using grid average emission factor types in table 6.2

For market-based scope 2: determine whether each energy-consuming facility (or group of facilities in a given jurisdiction) has electricity product or supplier-specific data that meet the scope 2 quality criteria, listed in table 6.3.

If No

If Yes

Calculate using residual mix or location-based emission factors (will render that facility's market-based scope 2 total the same as the location-based total).

Calculate using the emission factors derived from contractual instrument to report market-based scope 2 for that operation.

Source: GHG Protocol Scope 2 Guidance