



Effective and sustainable carbon market development for Vietnam

Vietnam Initiative for Energy Transition

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Contents

1. Carbon pricing principle

2. International experiences on carbon market

3. Roadmap to develop carbon market in Vietnam

4. SWOT analysis

5. Recommendations

1. Carbon pricing principle



What is carbon pricing?



A way to put a price on a tonne of GHG emitted

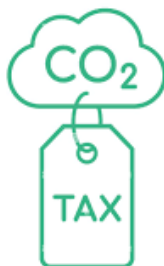


Making emissions more expensive



Generate revenue and create incentives for cleaner technologies

2 ways to price carbon emissions



Carbon tax

- Government sets a price for each tCO_{2e} emitted.
- Market determines quantity emitted.



Carbon market

- Government sets a cap on the total GHG emissions.
- Market determines the price.

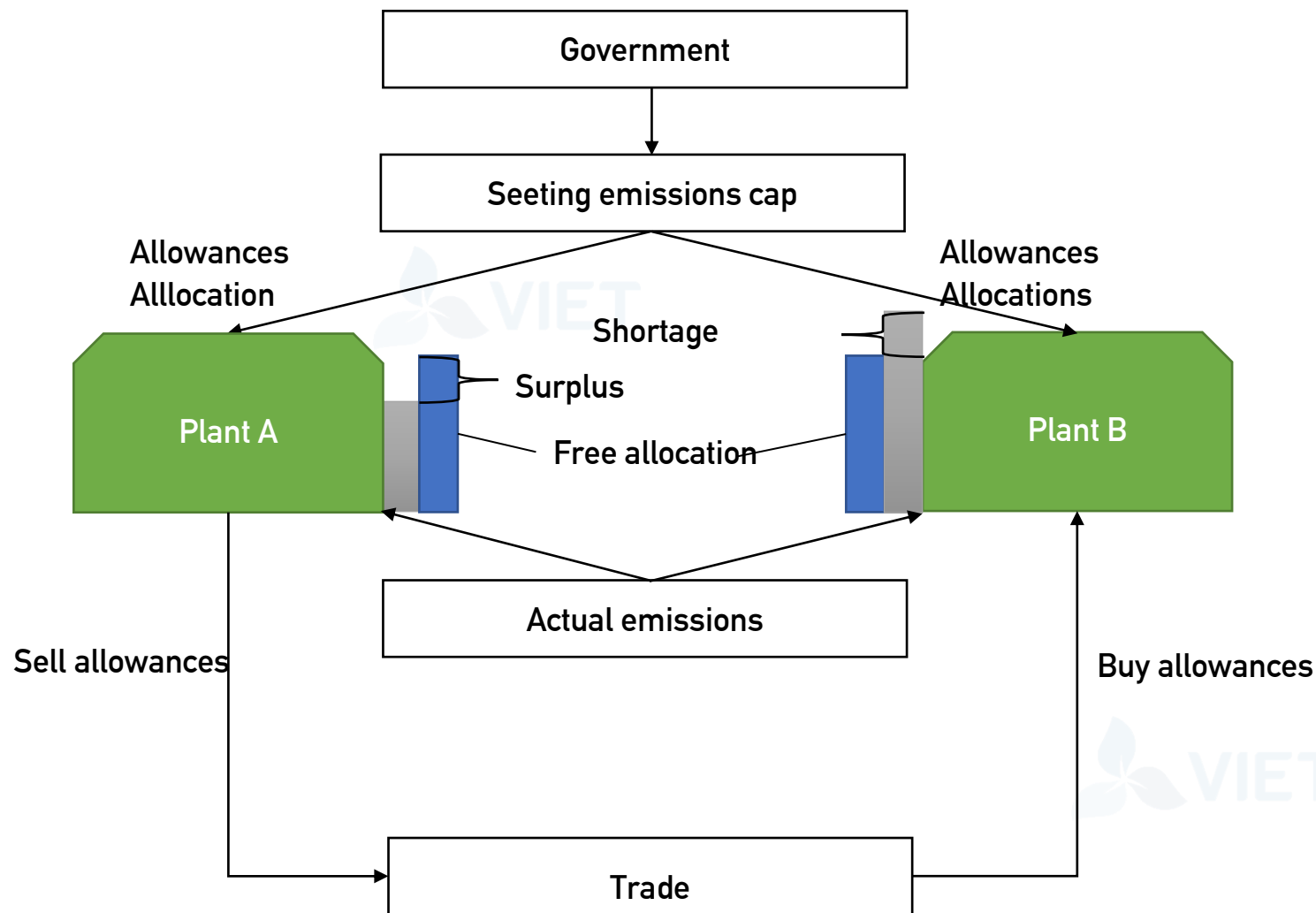
By 2022:

- **46 nations** applied carbon pricing.
- **11.83 GtCO₂** (23.11% global GHG emissions) covered.
- ~6% of total global GHG emissions are taxed today (in 28 countries)
- ~17% of total global GHG emissions priced by carbon market (38 countries)

Principle concept of a carbon market or Emission Trading System (ETS)

Option to comply with the allocated allowances:

- Invest in emissions reduction technologies
- Buy more allowances from auction
- Buy carbon credits (normally restricted at a small percentage of total allowances)
- Pay the fine for emissions exceeding allocated allowances



2. International experiences on carbon market



Carbon market has demonstrated its effectiveness

Help reduce GHG emissions

- EU-ETS has succeeded in reducing GHG emissions in its 03 phases. Emissions from ETS' sectors has reduced 42.8% by mid-2021 compared to 2005 level.
- Piloting ETS at provicical level in China helped reducing emissions by 16.7%, reduce emissions intensity by 9.7% in 2013 – 2015 period.

Create driver and financial flow to clean technologies

- EU-ETS's revenue reached 31 billion Euro in 2021.
- Korean ETS's revenue was 257.7 million USD in 2021 and cumulative revenue from 2015 reached 667.5 million USD.

Some lessons learned from international experiences

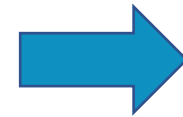
- Provide signal guarantee that carbon price will increase annually (roadmap to gradually reduce emissions cap) will encourage market participants to invest in emission reduction technologies earlier.
- Flexible mechanism such as **banking** and **borrowing allowance** to support market participants in selection of suitable options for complying with allocated allowances.
- Positive market interventions have been applied in Korea -ETS và EU-ETS to stabilize carbon market:
 - Market stability reserve (store surplus allowances when carbon price dip, or release more allowances when price increase too high);
 - Allowances floor/ceiling price.
- Use of revenue mechanism to promote clean technologies and climate protection activities
 - 75% total cumulative revenue of EU-ETS in 2013 – 2020 period (68 billion Euro) was used for climate protection activities.
 - Revenue from EU-ETS, aside from going to national and EU budgets, is also used for Innovation Fund and Modernisation Fund, which established to fund innovation project on low-carbon technologies and modernization of power sectors as well as improving energy efficiency.

3. Roadmap to develop carbon market in Vietnam



Vietnam's context

- Fast-growing economy and social development
- High carbon-intensity
- Projected continuous rise of emissions
- Market economy policy
- Strong commitment for Net-zero by 2050



Carbon pricing could provide incitations and revenue to reduce GHG.

Legal foundation of Carbon Market roadmap in Vietnam

Environment Law 2020

- Legalized the establishment of Vietnam's carbon market

PM's Decree 06/2022 on GHG reduction and ozone protection

- Introduce a general roadmap for carbon market development

General roadmap for carbon market development in Vietnam

Phase 1 2022-2027

- Develop regulations on management of carbon credits, ETS, regulations on operation of exchanges.
- Piloting credit exchange and ETS.
- Establishment & organization of pilot operation of carbon credit trading in 2027.
- Implementing activities to strengthen capacity, raise awareness about carbon market development.

Phase 2 From 2028

- The organization operates the official carbon credit exchange.
- Regulating activities of connecting and exchanging carbon credits in the country with regional and world carbon markets.

Some key elements of carbon market are specified

Scope

- Sectors and facilities in the list issued by Prime Minister that are mandated to conduct GHG inventory and allocated with emission allowances
 - Facilities emit > 3000 tCO₂/y
 - Facilities consume > 1000 TOE/y

Flexibility mechanisms

- Borrowing of allowances
- Banking of allowances
- Use of carbon credits (max 10% total allocated allowances)

Responsible for developing market

- MONRE
- MOF

Some key elements need to be specified

Mechanism to set the annual national emissions cap

Mechanism to allocate allowances

Level of fine for non-compliance

Market stabilization mechanism

Mechanism for the use of revenue

4. SWOT analysis



SWOT analysis of developing carbon market in Vietnam

Strength

- The Government has set specific emission reduction targets
- Experiences in joining international carbon credits mechanisms (CDM, REDD+, JCM...)
- Experience with stock exchange market
- TA and financial supports from international communities to build ETS

Weakness

- The scope of facilities that are mandated to conduct GHG inventory is quite large → challenges in implementation and increase allowance transaction cost.

SWOT Carbon market

Opportunities

- Create drivers for facilities to invest in emission reduction technologies.
- Compatibility with international mechanism (i.e. Carbon border adjustment).
- Raise revenue which can be spent on mitigating effects pollution.

Threat

- High costs to establish the system
- MRV system is not yet ready (in development by related authorities);.
- Requirements on capacity building for market participants on GHG inventory methodology, MRV at the national/sector/sub-sector/production facility level.

5. Recommendations



Recommendations

- Emissions cap setting and allowances allocation should harmonize the mitigation goal and economic development. This is a difficult and critical balance-finding exercise that requires:
 - Reliable emissions data;
 - Detailed a mechanism for inventory following a standardized and updated methodology, ensuring accuracy and compatibility with international markets;
 - National-specific Emission factors for sectors to be issued and updated regularly to ensure the accuracy of inventory;
 - Managing anticipations that caps will only decrease.

Recommendations

- **Need to determine mechanisms to use the carbon market's revenue to promote low-carbon technologies as well as the mechanisms for non-compliance to ensure transparency of the market.**
- **Use of revenue mechanism should be able to separate the revenue stream from carbon market, set up fund to finance supporting programs for emissions reduction technologies, initiatives and activities.**
- **Piloting phase should start with sectors that are easier for measuring emissions and emission reduction: power, industry, building then gradually extend to other sectors like road transport, shipping, aviation... This also allows for evaluating the unwanted impacts on the economy and necessary adjustments to mitigate them.**
- **Capacity building needs to be conducted at all levels: carbon market management and operation authorities, sectors and facilities on GHG inventory, MRV, auctioning, allowances exchange...**



Vietnam Initiative for Energy Transition
Sáng kiến về Chuyển dịch Năng lượng Việt Nam

Thank you