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Renewable Energy Certificate (REC) Market in Vietnam

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Vietnam Low Emission Energy Program II

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USAID Vietnam Low Emission Energy Program II

V-LEEP and V-LEEP II, implemented by Deloitte Consulting LLP, are flagship USAID energy programs in Vietnam.

V-LEEP II (2021-2025) works with MOIT to advance Vietnam's transition to a clean, secure and market-based energy sector by:



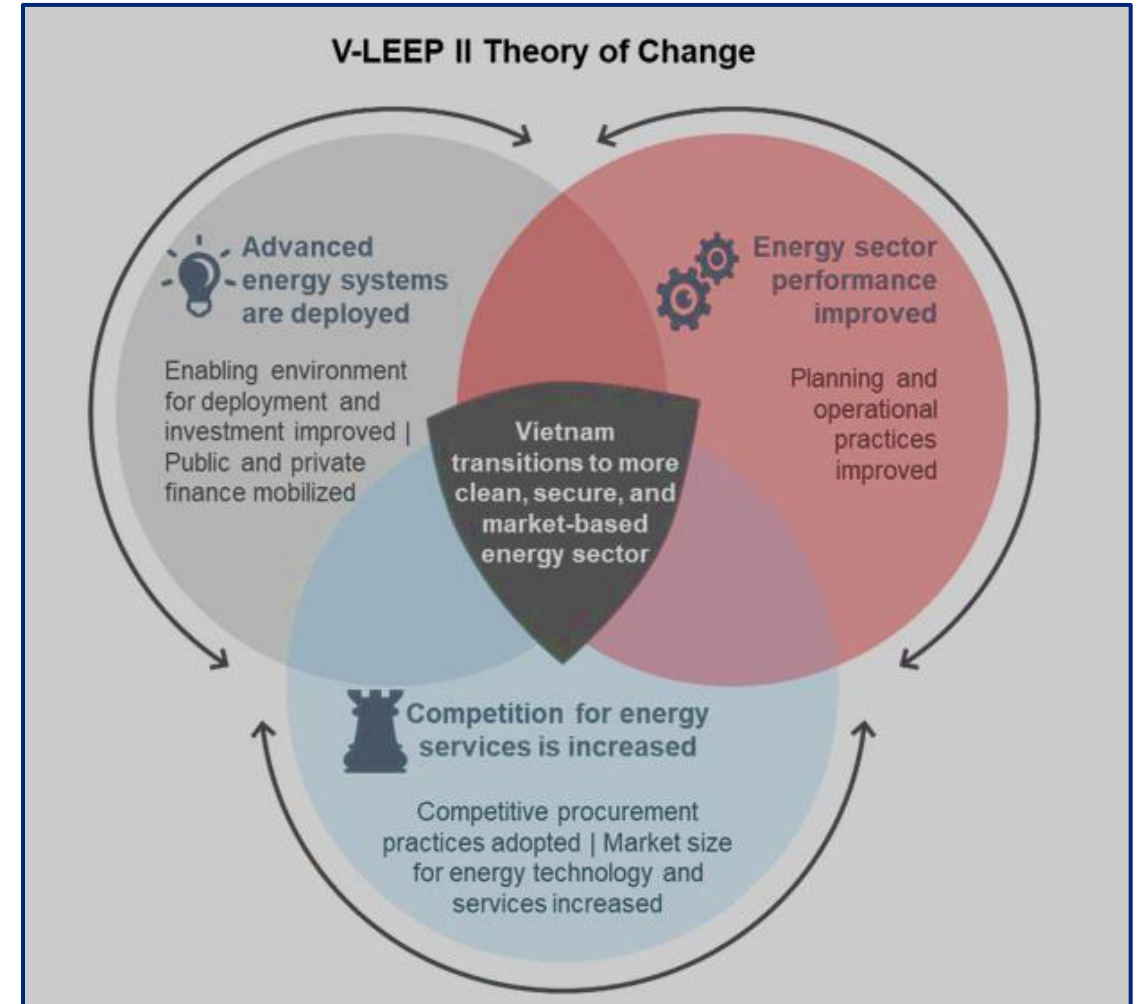
Increasing the deployment of advanced energy systems



Improving energy sector performance



Increasing competition in the energy sector



Renewable Energy Certificates (RECs)

- What are RECs?
- Why RECs?
- Who uses RECs?
- What is a REC market?
- The REC market in Vietnam

What are RECs?

Renewable Energy Certificates (RECs) are market-based instruments, in the form of virtual certificates, that track the renewable attributes of electricity from generation to consumption.

- **1 REC = 1MWh** of unique RE electricity
- RECs allow customers to purchase the environmental attributes associated with the generation of renewable power, without directly purchasing the electricity.
- RECs can be used for both voluntary and compliance purposes.
 - Voluntary markets, in which stakeholders *choose* to consume clean electricity. End users in voluntary REC markets often follow best practice guidelines from sustainability reporting frameworks.
 - Compliance markets, in which a government requires specific entities to consume renewable electricity, e.g. Renewable Portfolio Standards (RPS) and Renewable Portfolio Obligations (RPOs)

Attributes

RECs are recorded in a digital registry. Each REC contains information about the MWh:

- When it was produced (vintage)
 - Who produced it
 - Where it was produced
- What RE technology was used

Why RECs?

Why use RECs? (Company)

- **ESG:** Meet Sustainability commitments
- **Access:** Only way to claim RE from the power pool
- **Reporting:** Disclosure to CDP, RE100, and other based on guidelines
- **Ownership:** RE without RECs is like a car with no title

Why use RECs? (Policy Maker)

- **Support Local:** Global brands buy clean electricity, locally
- **Leverage Private \$:** Private finance helps meet public sector targets
- **Policy Support:** Supports current (or future) compliance schemes (RPS or RPO)
- **Utility Offerings:** Supports utility green tariff offerings

Who are REC Consumers?

An internationally credible REC market is a “must have” for many global companies with operations and supply chains in the country—making an effective REC ecosystem essential to attracting and retaining foreign direct investment (FDI) from international companies with ESG goals.

The image shows the cover of Apple's Environmental, Social, and Governance (ESG) report. It features the Apple logo in the top left corner. The main title "Environmental Social Governance Report" is written in large, white, sans-serif font on a black background. To the right of the text is a vertical bar with six colored stripes: green, yellow, orange, red, purple, and blue. Below the main title, there is a white box with a blue border containing text about renewable electricity.

Renewable electricity: We will continue to source 100 percent renewable electricity for our facilities, and transition our entire supply chain to 100 percent clean, renewable sources of electricity.



SCIENCE
BASED
TARGETS

DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

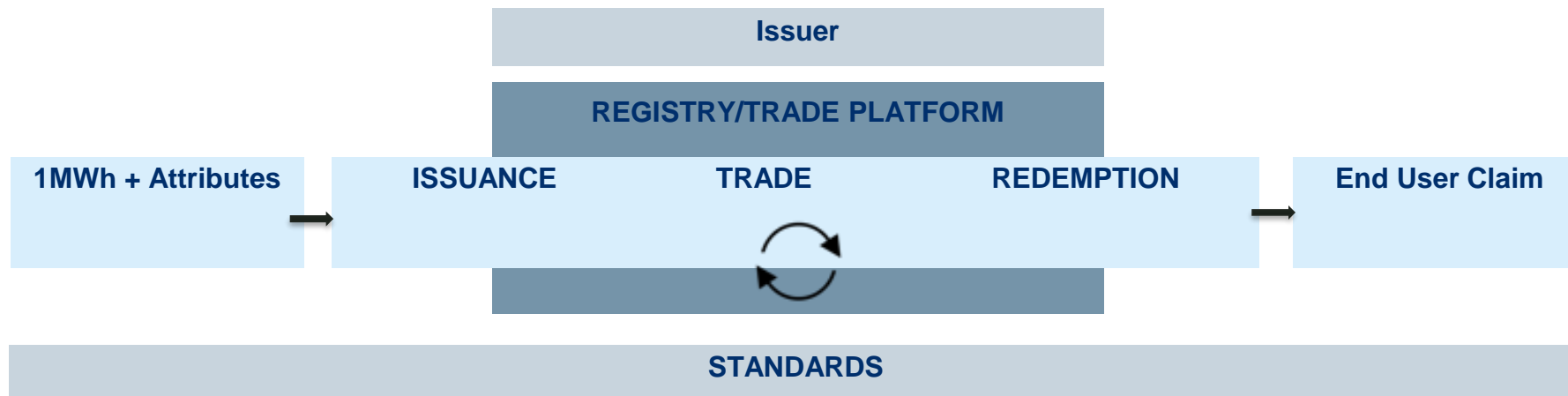
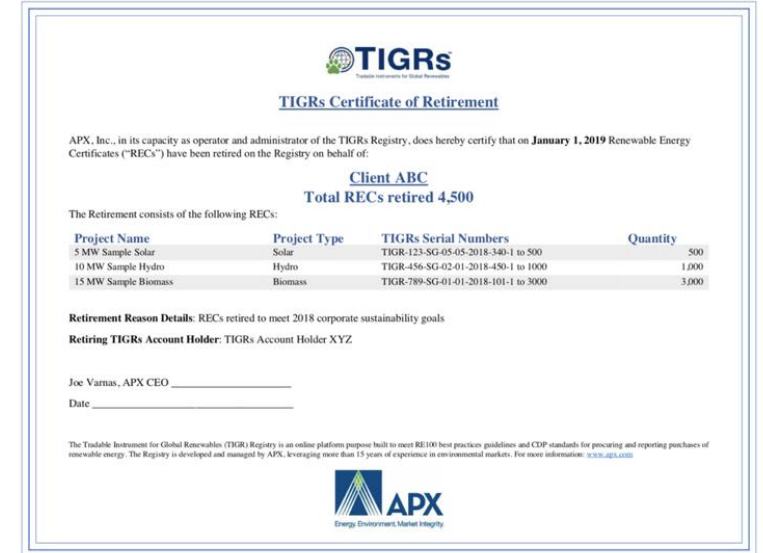
Apple, Inc. commits to reduce absolute combined scope 1, 2 and 3 GHG emissions 62% by FY2030 from a FY2019 base year. Apple also commits to continue annually sourcing 100% renewable electricity through FY2030.*



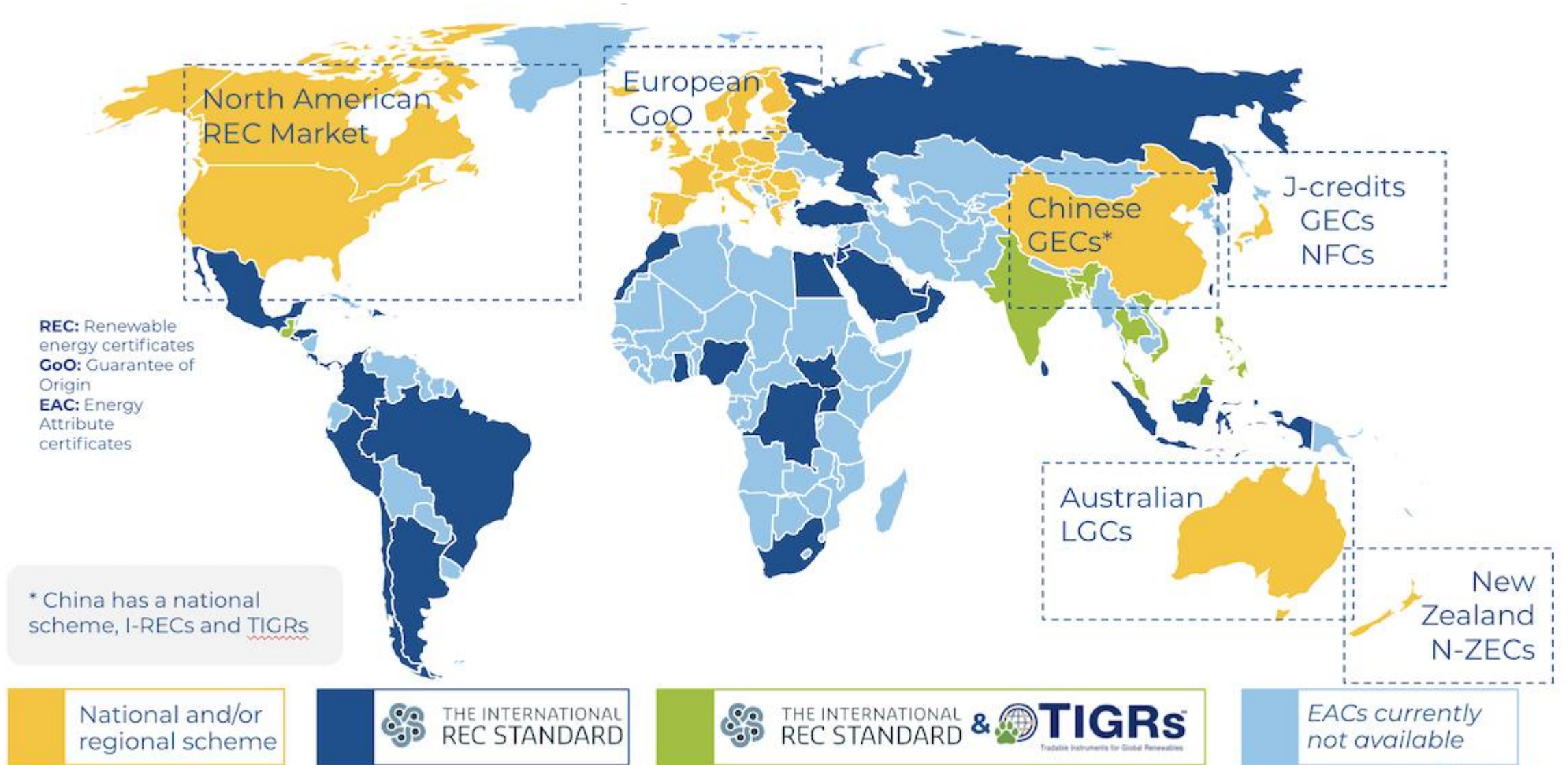
Source: RE100 slide of participants.

What is a REC Market?

- ❖ **A Standard:** The uniform set of rules and guidelines.
- ❖ **Local Issuer:** The entity which “creates” RECs and facilitates the market.
- ❖ **Infrastructure / Registry:** The book and claim software infrastructure for certificates.
- ❖ **Market Participants:** Buyers and sellers.
- ❖ **Government:** Adherence to laws, how RECs support national policies, NDC targets, and other objectives



Global REC Markets



The Vietnam REC Market



THE INTERNATIONAL
REC STANDARD

Empowering Electricity Purchasers

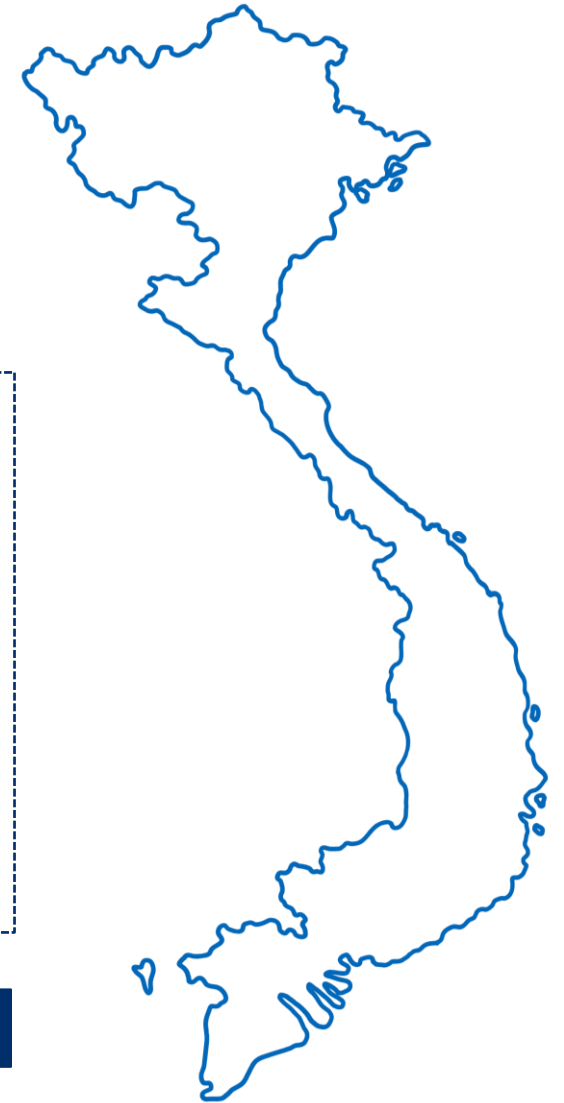
120 projects registered in Vietnam

- 80 Hydropower
- 36 Solar Projects
- 4 Wind
- More than 3,085 MW installed capacity



46 projects registered in Vietnam

- 14 Solar Photovoltaic projects
- 31 Solar Serving On-Site Load
- 1 Wind
- More than 307 MW installed capacity

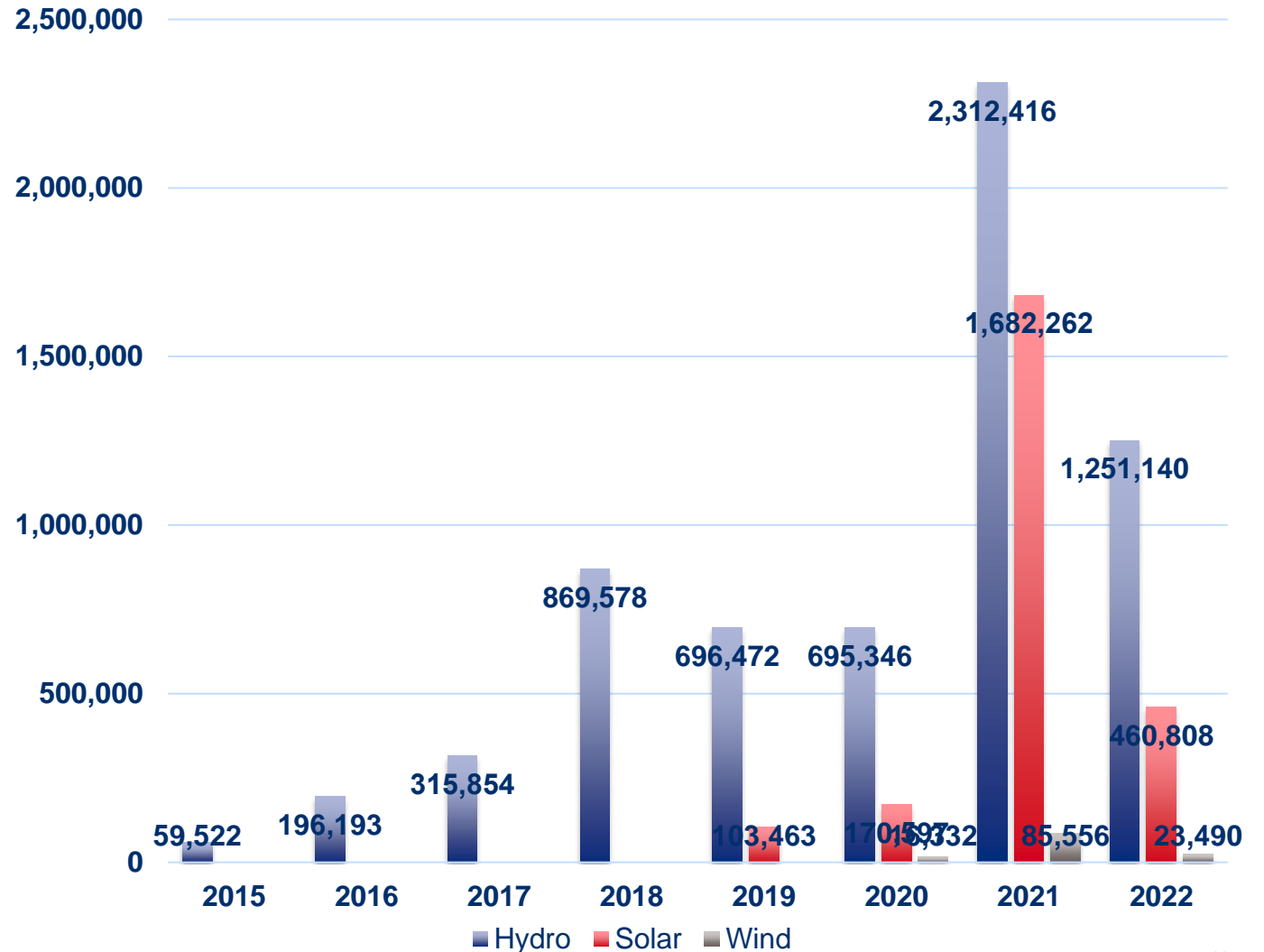


Recognized by organizations including the GHG Protocol, RE100 and CDP

I-REC Volume Issued in Vietnam

- I-RECs have been active since 2014
- Governed by the I-REC Standard Foundation - a non-profit organization
- Local issuance of I-REC certificates is administered by an independent entity

I-REC Volume Issued in Vietnam



Key Messages

- ❖ There is an active and growing REC market in Vietnam
- ❖ Voluntary RECs alone are not enough of an incentive for new RE generation
- ❖ **However, RECs are an essential pre-condition for new RE investors**
- ❖ **RECs must adhere to international standards to be credible**
- ❖ National REC and Carbon Market must be carefully designed
- ❖ Path forward for Vietnam:
 - Continue Status-quo
 - Adopt existing standards and platform and customize for Vietnam – in line with global criteria
 - Develop new standard, platform – approved by international organizations



Thank you!

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RECs vs. Carbon Credits

TOPIC	RECS	CARBON CREDITS
<p>What is measured?</p>	<p>Production of 1 MWh of renewable electricity.</p>	<p>Reduction, avoidance, or sequestration of 1 metric ton of carbon dioxide emissions from multiple types of projects.</p>
<p>How is it measured and verified?</p>	<p>Third party verifier (Local Issuer or QRE) confirms that 1 MWh of renewable electricity was generated, using meter readings or utility data.</p>	<p>[For renewable energy projects] Independent consultant or firm is engaged to show the project leads to emissions reductions relative to a business-as-usual scenario, and typically needs to prove “additionality”— that the project would not have been possible without financial resources made available through the carbon credit.</p>
<p>Common uses</p>	<p>Proof of production / consumption of renewable electricity. Most commonly used to address Scope 2 emissions (voluntary) and to prove compliance with RPS/RPO (compliance).</p>	<p><u>Voluntary Uses:</u> Used by companies or emitting entities to offset carbon emissions, most often for Scope 1 and Scope 3, in instances where voluntary market end users cannot directly reduce emissions at the source.</p> <p><u>Compliance Uses:</u> Used in emission trading schemes by carbon emitters, who buy or sell carbon credits in relation to their allowance limits</p>

Vietnam National Carbon Market

Law on Environmental Protection 2020 is the first legal document to officially introduce a carbon market:

- Article 91: GHG emission mitigation
- Article 139: Organizing and developing domestic carbon market

Decree 06/2022/ND-CP provides detailed guidelines to develop the domestic carbon market, act as the legal basis:

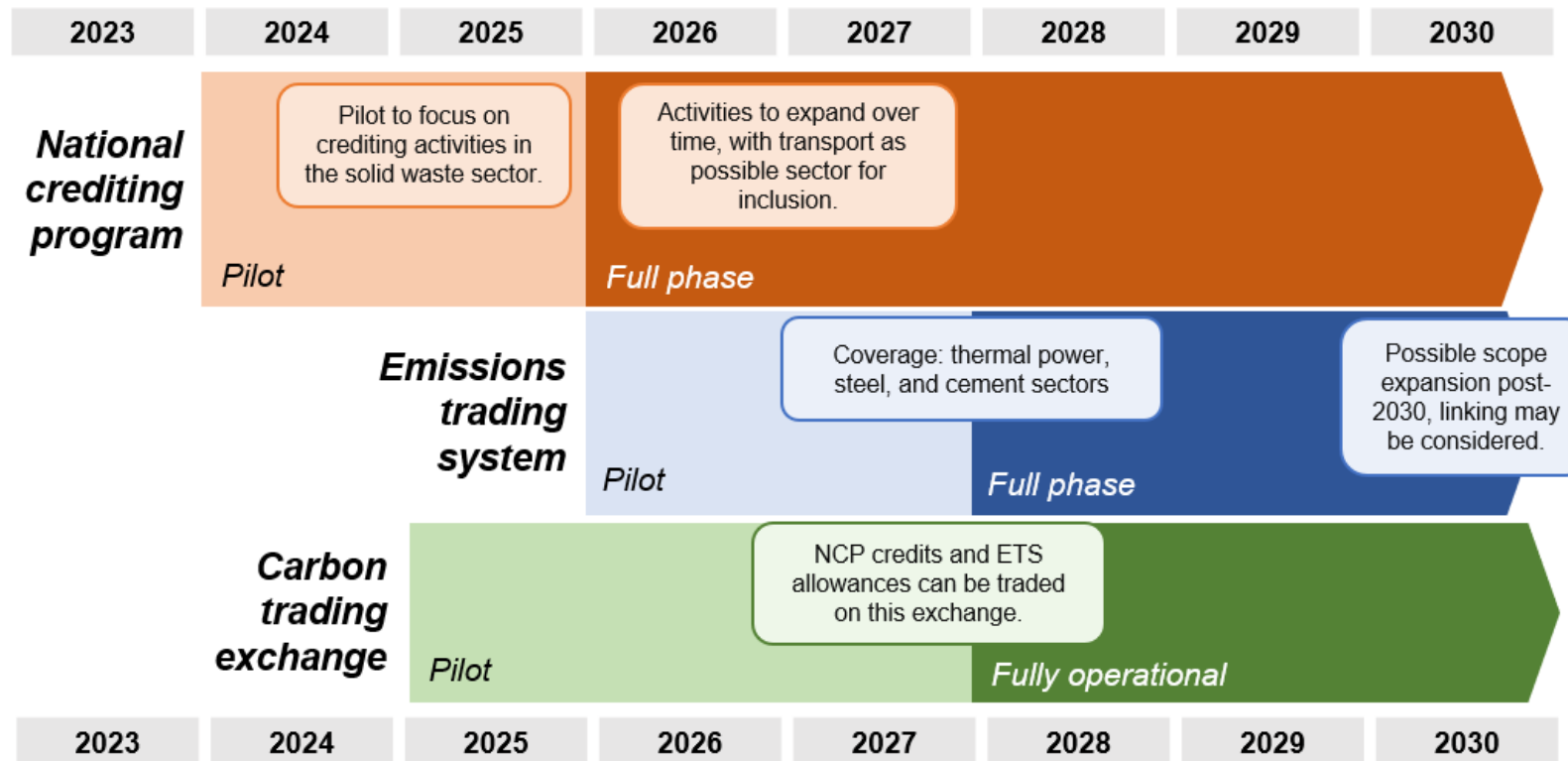
- **Ministry of Finance** in charge of formulation and establishment of the carbon trading platform and promulgate financial management mechanisms for carbon market operation
- **Ministry of Natural Resources and Environment** to cooperate with the relevant ministers in organizing carbon market trial and official operation of the carbon trading platform, and manage and supervise the carbon market
- The ministries, ministerial agencies, the provincial People's Committees responsible to cooperate with the Ministry of Resources and Environment and the Ministry of Finance in implementing the regulations

Participants

Entities that **participate in the domestic carbon market** are included in the list of “Sectors and entities that **must implement GHG inventory**” – Decision 01/2022/QĐ-TTg, promulgated by the Prime Minister

- GHG-emitting facilities that must carry out GHG inventory are facilities with annual GHG emissions of 3.000 tonnes of CO₂ equivalent or more
- Thermal power plants, industrial production facilities with total annual energy consumption of 1.000 tonnes of oil equivalent (TOE) or more
- Cargo transport companies with total annual fuel consumption of 1.000 TOE or more
- Commercial buildings with total energy consumption of 1.000 TOE or more
- Solid waste handling facilities with annual operating capacity of 65.000 tonnes or more

Domestic Carbon Market Timeline



REC Lifecycle: Book-and-Claim

