

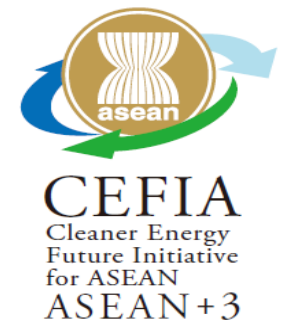
# **Cleaner Energy Future Initiative for ASEAN (CEFIA)**

**June 9<sup>th</sup>, 2023**

**Norihiro Kimura**  
**Senior Negotiator for Climate Change**  
**Ministry of Economy, Trade and Industry, Japan**

## ***Cleaner Energy Future Initiative for ASEAN***

- Launched at the **16th ASEAN+3 Energy Ministerials** in September, 2019
- A Public and Private initiative for accelerating the deployment of cleaner energy and decarbonization technologies, contributing to **Just Energy transition and decarbonization in the ASEAN region**
- 3 Key Pillars:
  - (1) **Decarbonizing Technologies** (energy efficiency, renewables, etc.)
  - (2) **Institutional Arrangements** (policy framework, standardization, etc.)
  - (3) **Finance** (SDGs, ESG, local financial institutions, etc.)
- Align and collaborate with 3 programs under **the ASEAN Plan of Action for Energy Cooperation (APAEC) Phase II (2021-2025)**
  - No. 4 Energy Efficiency and Conservation
  - No. 5 Renewable Energy
  - No. 6. Regional Energy Policy and Planning
- Provide **Capacity building support through Flagship projects**



# Flagship projects

Title	Purpose	Activities
<b>ZEB</b>	Promoting and developing <b>the Net-Zero Energy Building (ZEB)</b> to contribute to the acceleration of energy efficiency in the demand side in ASEAN.	<ul style="list-style-type: none"> <li>➤ International Standardisation</li> <li>➤ Seminar and workshop</li> <li>➤ Demonstration project in Malaysia</li> </ul>
<b>RENKEI</b>	Disseminating <b>control optimisation (RENKEI) to reduce energy consumption throughout utility plants and manufacturing plants through IoT.</b>	<ul style="list-style-type: none"> <li>➤ Feasibility Study for Thailand Industry</li> <li>➤ Workshop</li> <li>➤ Capacity Building</li> </ul>
<b>SteelEcosol</b>	Diagnosing and introducing <b>the best available energy-saving technologies (BAT) to the steel industries.</b>	<ul style="list-style-type: none"> <li>➤ Capacity Building</li> <li>➤ Public-Private Dialogue</li> <li>➤ Steel plant diagnosis</li> </ul>
<b>Finance</b>	Activities for <b>mobilizing finance</b> to facilitate energy transition and decarbonization in ASEA.	<ul style="list-style-type: none"> <li>➤ Survey local financial institutions</li> <li>➤ Capacity Building for local financial institutions (webinar)</li> </ul>

➤ Candidates of new Flagship projects proposed at 4<sup>th</sup> CEFIA Forum (February, 2023)

Title	Presenter
<b>Carbon Neutrality solution: Healthy and Energy Efficient AC system for ASEAN market</b>	Daikin Industries, Ltd.
<b>DENSO “Lean &amp; Clean” Factory toward Carbon Neutrality</b>	Siam DENSO Manufacturing Co., Ltd.
<b>CO2 Neutral Energy + Carbon Sink using Local Biomass</b>	Forest Energy Inc.
<b>Development of Clean Ammonia Value Chain</b>	IHI Corporation

# CEFIA flagship project (ZEB)

Contribute to accelerating the decarbonization in the building sector in ASEAN by promoting the **step-by-step approach to achieving Net-Zero Energy Building (ZEB)**.

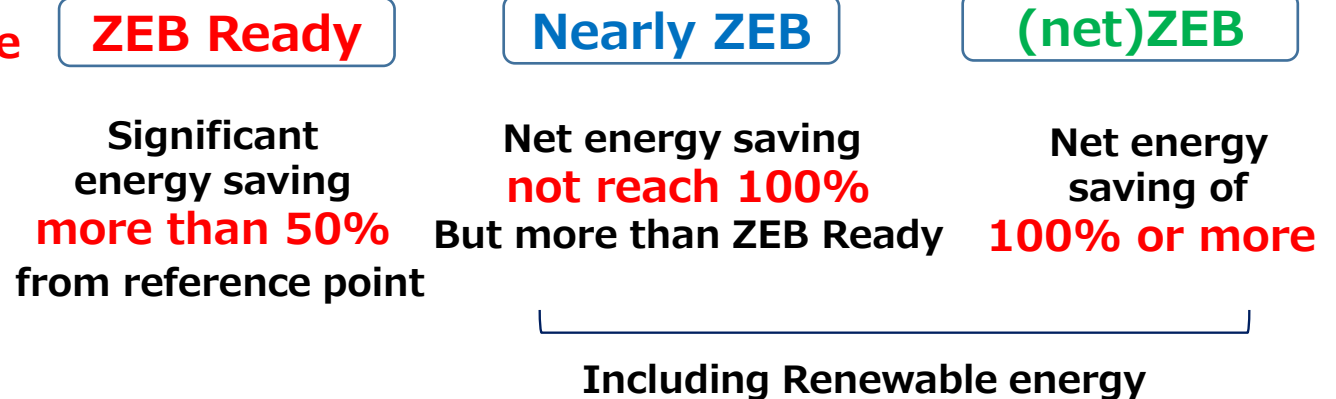
## ◆ Implementation System

CEFIA supports the activities of the "ZEB Solution WG" at **the Japanese Business Alliance for Smart Energy Worldwide (JASE-World)**.

## ◆ Expected Effect

Contributing to accelerating decarbonization in the building sector

## Step-by-step approach to achieving ZEB



## ◆ Major Activities

- Promote awareness of technologies and **ISO Technical Specification TS23764 (Workshop, Promotion video, etc.)**  
<https://www.cefia-dp.go.jp/fp/zeb/01>
- Support in formulating **Demonstration project in Malaysia**

## ※ISO/TS23764

- “Methodology for achieving non-residential zero-energy buildings (ZEBs).” A technical specification proposed to ISO by JASE-W, approved and issued by ISO.
- TS 23764 advocates a step-by-step approach to implementing ZEB.



Video footage of "Introduction of CEFIA Flagship Project: ZEB"

# CEFIA flagship project (RENKEI)

RENKEI aims to reduce energy consumption in power plants and entire business sites through IoT.

## ◆ Implementation System

Based on Working group of Japan Electronics and Information Technology Industries Association (**JEITA**). Collaborates with **Japanese and Thai universities**.

## ◆ Expected Effect

Compared to energy-saving projects involving the introduction of hardware equipment, RENKEI can be an add-on to existing facilities, resulting in a shorter project implementation period and better cost-effectiveness as a measure to reduce greenhouse gas emissions.

## ◆ Major Activities

- Conducting **research on GHG reduction potential** in industry under RENKEI control (Estimation of CO2 reduction potential by the introduction of RENKEI control in the Philippines, Thailand, Malaysia, Singapore, Indonesia, and Vietnam)
- Conducting **feasibility studies** (estimating energy-saving effects through RENKEI control, etc.)
- Holding seminars for companies in Thailand to promote RENKEI control
- **Dissemination of information** (Introduction of activities at the Energy Week International Conference organized by the ASEAN Centre for Energy)

Important milestone

**Potential survey  
of RENKEI Control  
Application in Thailand**



Video Message  
on RENKEI



RENKEI Control  
Dr. David Banjerdpongchai  
Professor,  
Chulalongkorn University

Dr. David Banjerdpongchai (Professor at Chulalongkorn University) presented results of Potential survey of RENKEI control at CEFIA Japan Seminar 2021

# CEFIA flagship project (SteelEcosol)

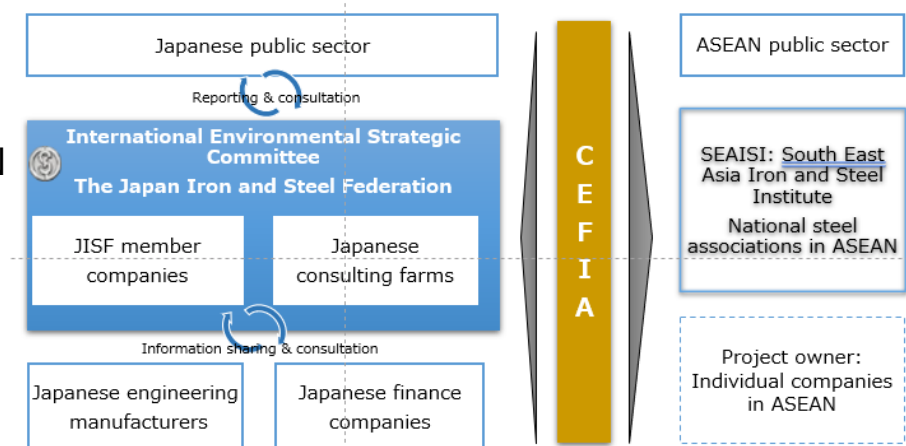
Under CEFIA, conducting public-private dialogues and energy diagnosis of steel plants to promote the adoption of **Best Available Technology (BAT)** in the ASEAN steel industry.

## ◆ Implementation System

Through the CEFIA platform, the International Environmental Strategy Committee of **the Japan Iron and Steel Federation** lead communication and information sharing activities with steel associations, member companies and the public sector in ASEAN countries.

## ◆ Expected Effect

- ❑ Showing benefits of technology implementation, CO2 reductions, and payback period
- ❑ Facilitating policy dialogues to introduce best practices that promote energy conservation and CO2 reductions
- ❑ Promoting understanding of methods to reduce energy consumption and CO2 emissions in steel plants



## ◆ Major Activities

Proposed a decarbonization project in the steel sector as a candidate for a new flagship project at the 3rd CEFIA Public-Private Forum.



## Capacity Building

0. Activity foundation formation

- **BAT list (technology customized list)**
- ISO 14404 (Energy/CO2 intensity assessment)
- Dialogue Channels between Japan Steel Industry and ASEAN Steel Industry

### 1. Public-private dialogue

Sharing Japan's policies related to BAT dissemination and climate change with a wide range of ASEAN stakeholders

### 2. Steel plant diagnosis

Visiting individual steel plants to conduct energy diagnosis and recommend BAT implementation



# Overview of CEFIA Flagship Project (Finance)

Activities for mobilizing finance to facilitate energy transition and decarbonization in ASEAN; conducting analysis of challenges in implementing decarbonization technology in ASEAN, identifying the needs of local financial institutions, and organizing seminars.

## ◆ Implementation System

Association of Development Financing Institutions in Asia and the Pacific (ADFIAP\*), which has a network of development banks in ASEAN, take the lead in the implementation of the project. It also collaborates with experts in the financial sector in ASEAN.

\***ADFIAP** has currently 90 member-institutions in 40 countries.

## ◆ Expected Effect

- ❑ Accelerating the mobilization of funds in the flagship sectors
- ❑ Expanding the efforts of financial institutions in the energy transition sector

## ◆ Activities So far

- Conducting analysis of challenges in implementing decarbonization technology
- Identifying the needs of local financial institutions
- Organizing seminars to mobilize finance.

## ◆ Current Activity

### TRANSITION FINANCE ACCELERATION LABORATORY (TFAL)

- Supporting Developing Finance Institute and implementation of programs

## Example of Webinars and Other Events

- Webinar "Fostering mutual understanding of bottleneck and opportunities for accelerating cleaner energy finance": March 2021
- Workshop "Visualization of carbon footprint reductions by financial institutions" : March 2021
- Webinar "Financing Energy Transition Pathways under the CEFIA": March 2022



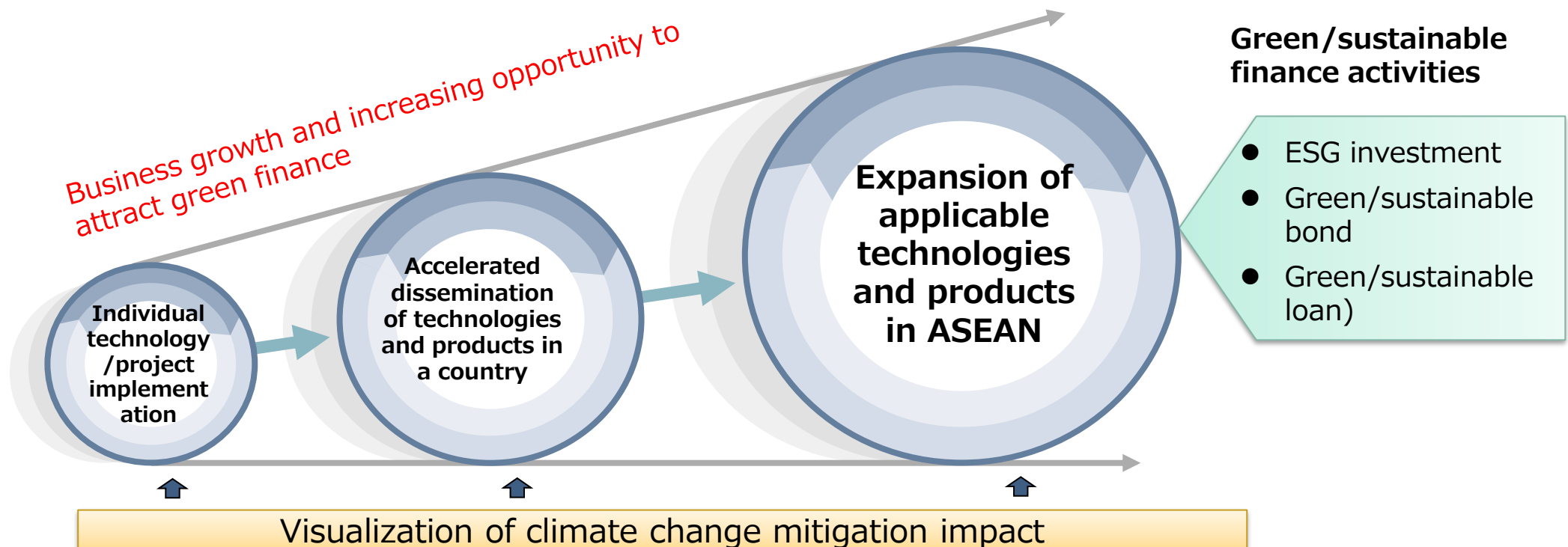
Scene from the webinar

# CEFIA Visualization -Basic Concept-

## Expected Objective of Visualization

- Contribute to securing of climate finance as disclosure of climate mitigation impact is increasingly important.
- Visualization of climate mitigation impact contributes to and enhance activities planned in APAEC II.

APAEC Phase II: Programme Area	APAEC Phase II: Outcome Based Strategy
PA 6. Reginal Energy Policy and Planning	OBS 2. Promote information sharing on energy-climate nexus OBS 5. Attract Investment and Financing to Accelerate ASEAN's Energy Infrastructure Growth

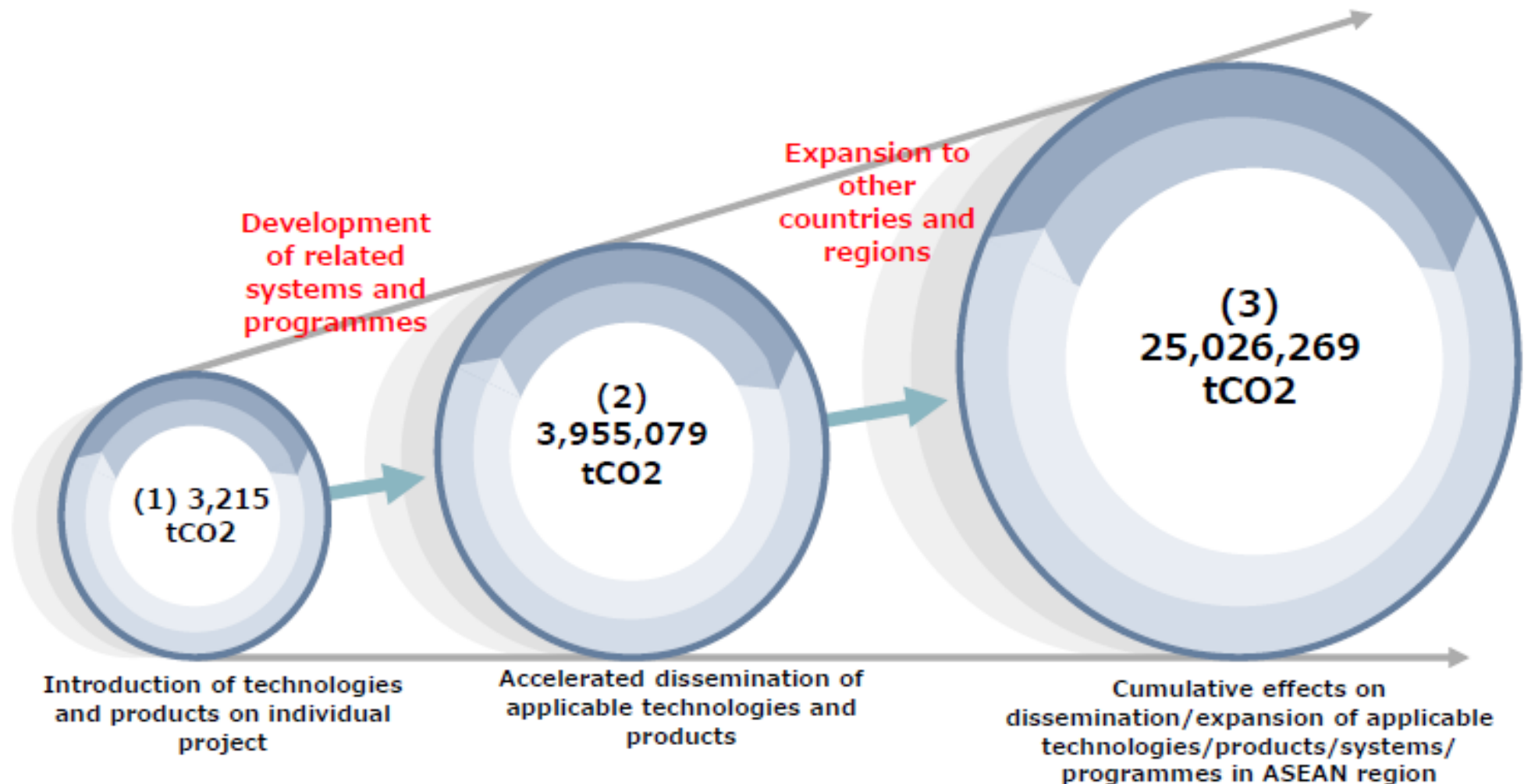




# CEFIA Visualization –Case Study 1-

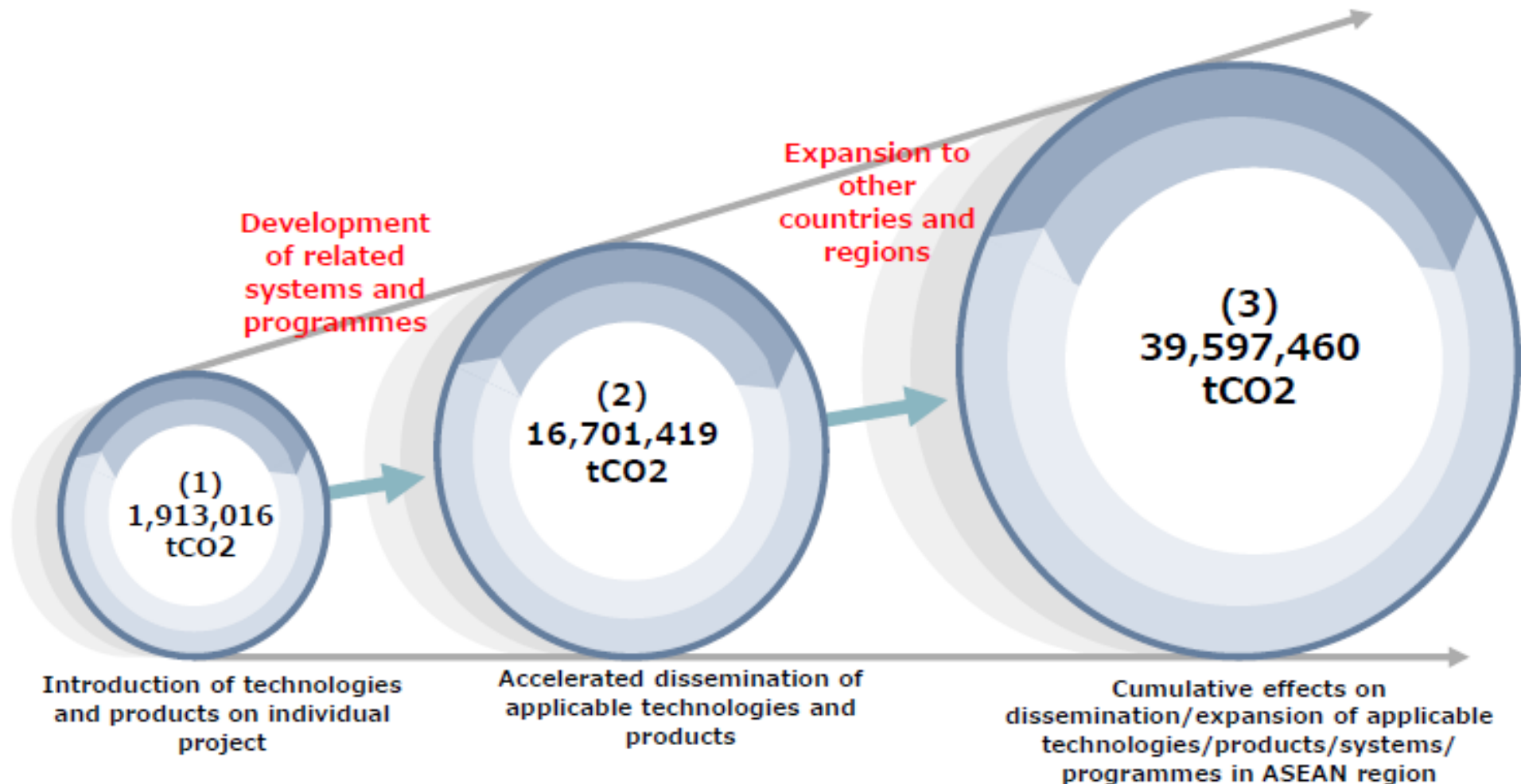
## Mitigation through Japanese companies' activities in Indonesia (Rooftop PV as a service)

Using CEFIA visualisation concept, potential of reduction contribution for rooftop PV as a service in Indonesia is estimated as follows.



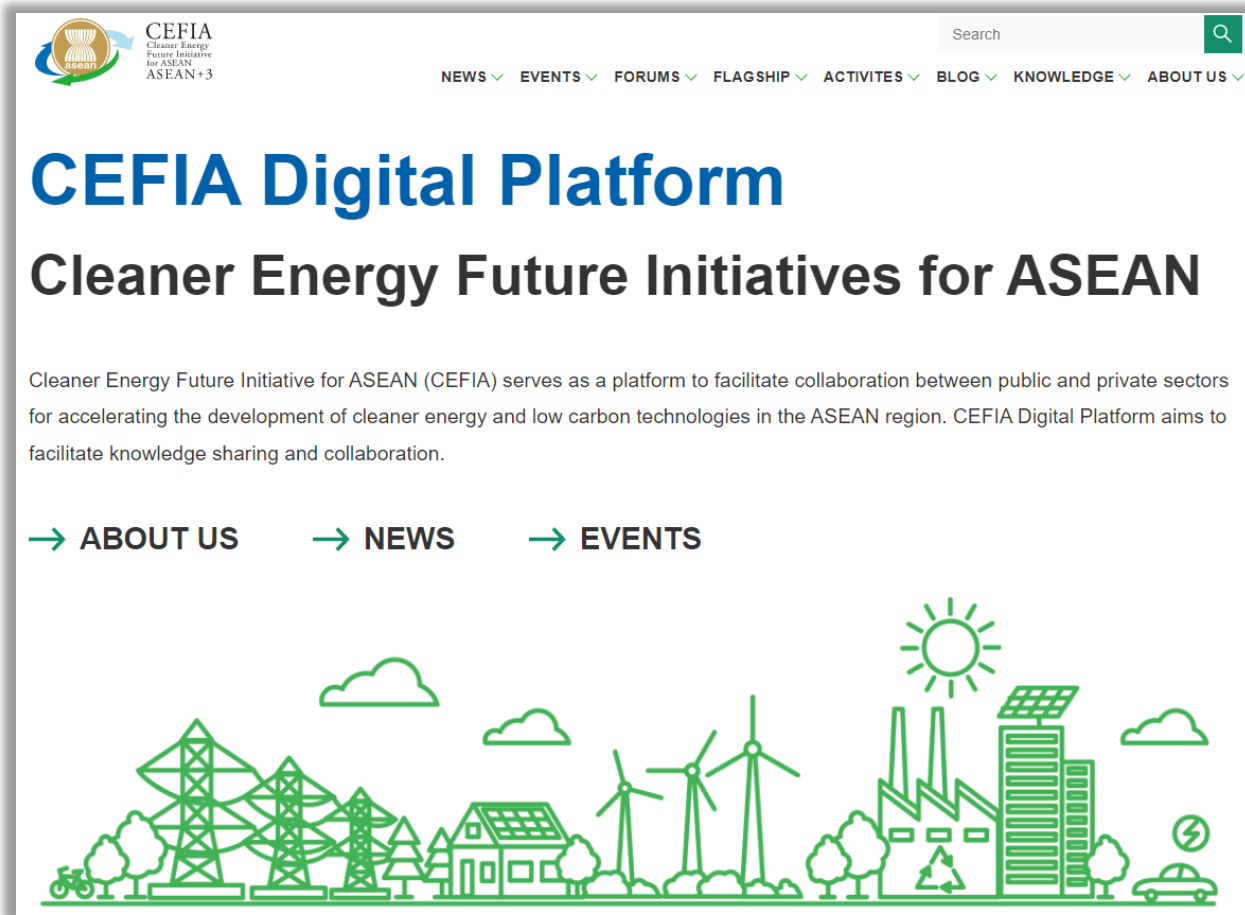
## Mitigation through energy efficiency technologies in steel sector

Using CEFIA visualisation concept, potential of reduction contribution for CDQ technology in steel sector is estimated as follows.



# CEFIA Digital Platform

- CEFIA Digital Platform aims to facilitate knowledge sharing and collaboration.



## Objective

- To enhance roles (Showcase, Workspace, Databank, and Catalyst) through Digital Collaboration
- To provide various information of CEFIA activities to facilitate knowledge sharing and various collaborations

<https://www.cefia-dp.go.jp/>

# CEFIA Government-Private Forum



- 4 annual Government-Private Forums have been successfully held since 2019. (2019 (host: Philippines), 2021 (host: Thailand, online), 2022 (host: Malaysia, online))

- **4th CEFIA Government-Private Forum (February 16 in Cebu, Philippines)**

Host : Department of Energy, Government of the Philippines

Audience : 26 speakers/panelists, 76 attended in-person, 35 views on Facebook Live

Attendee: **ASEAN Center for Energy (ACE), Governments and private companies from Japan and ASEAN countries, ADB, ADFIAP**

Program: Introduction of CEFIA's activities

Discussions on cross-cutting efforts such as Mobilization of finance,  
Visualization of GHG emission reductions, Entrepreneurship for Cleantech,  
CEFIA's future directions



**The 5<sup>th</sup> CEFIA Government-Private Forum will be held back to back with ASEAN Energy Business Forum (AEBF) on August 24 in Bali, Indonesia. Please come and join us!!**



# Lessons and learned from our NMA

- Regional vs Bilateral
  - Various pathways in light of each country's geographical and energy situation. Bilateral cooperation will complement CEFIA.  
(e.g. Training programs on Energy Efficiency and Renewables)
- Public vs Private
  - G-G cooperation is valuable but not enough. CEFIA involves private sectors in order to promote decarbonizing technologies contributing to energy transition and mitigation in ASEAN countries
- Energy vs Climate
  - Energy discussions will definitely contribute to climate mitigation
- Capacity building to project implementation
  - Transitions from Capacity building and FS to demonstration, from demonstration to financing and project implementation



# Thank you for your attention!

Contact: [kimura-norihiro@meti.go.jp](mailto:kimura-norihiro@meti.go.jp)



**CEFIA**  
Cleaner Energy  
Future Initiative  
for ASEAN  
ASEAN+3