

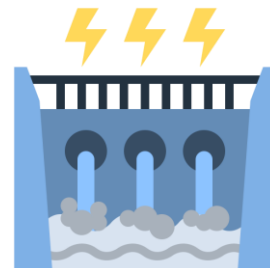
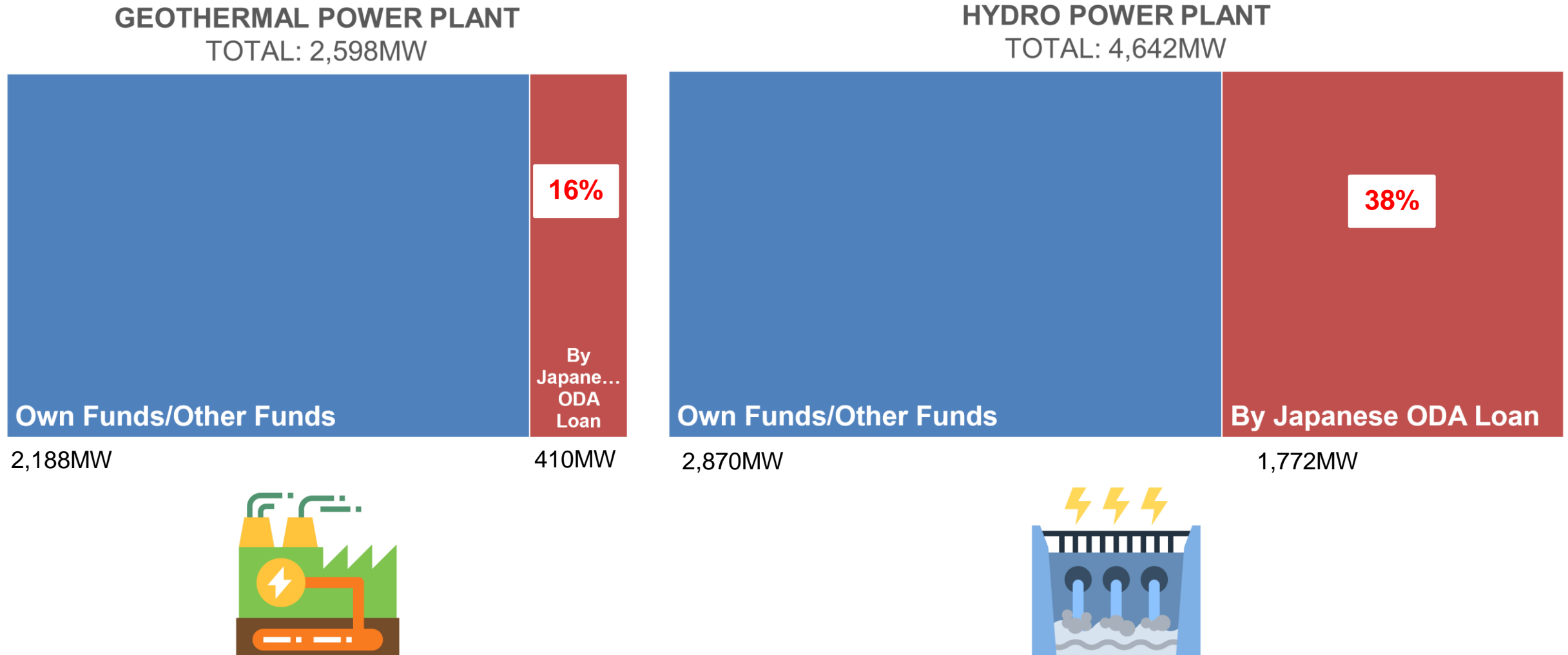
JICA's Cooperation for Energy Transition in Indonesia

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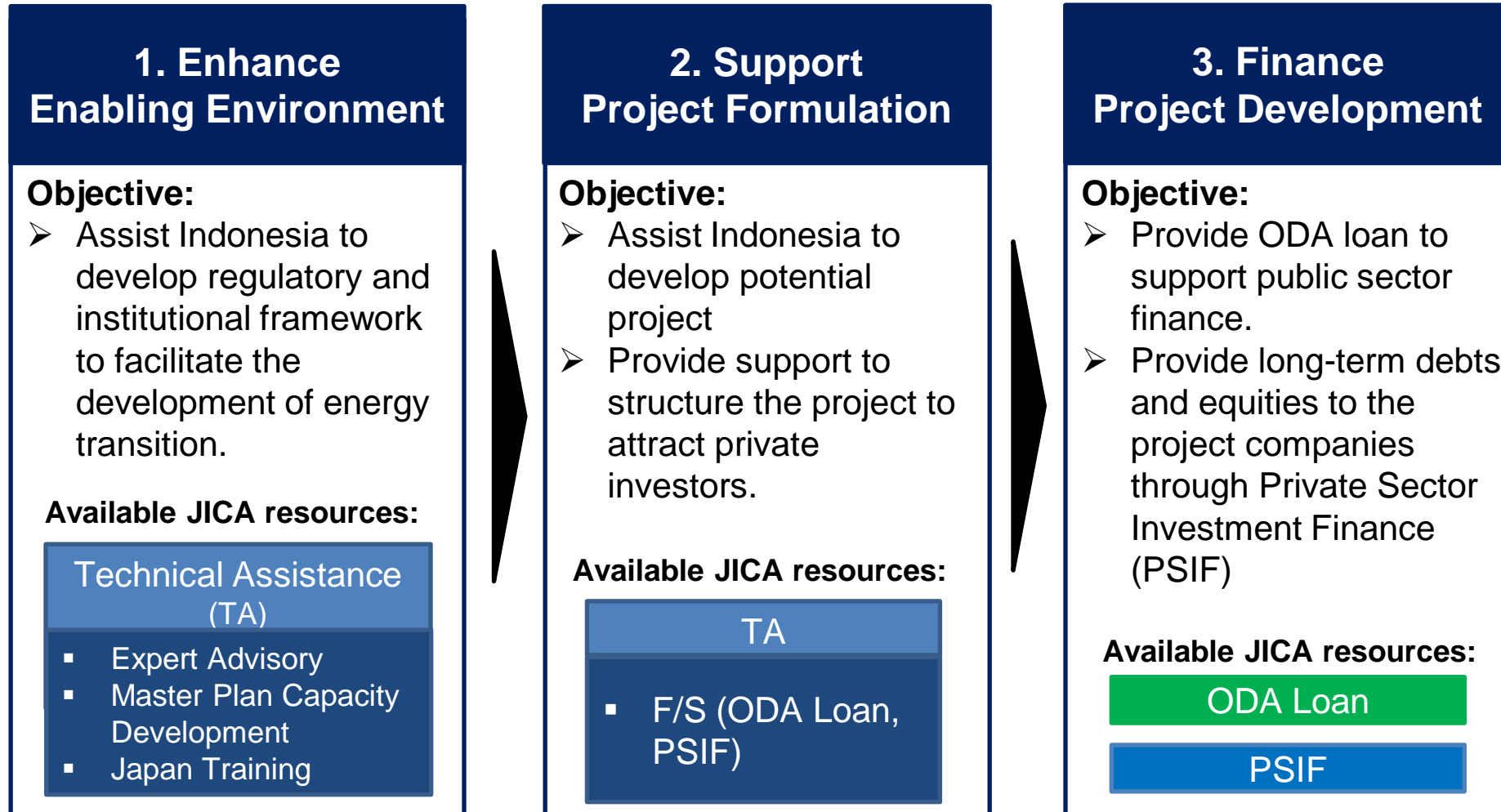
JICA's Contribution to Renewable Energy Development in Indonesia

➤ Indonesia's Overall Installation Capacity of Geothermal and Hydro PP (as of 2023) and contribution from Japanese ODA Loan since 1973



JICA's holistic approach to support Energy Transition in Indonesia

- JICA provides full fledge support from upstream to downstream



Overview of JICA's Assistance Strategy for Energy Sector in Indonesia

Objective: To realize stable, reliable, affordable and sustainable power supply with achievement of the de-carbonization in Indonesia through Multi-Pathway Transition.

(1) Renewable Energy

Hydroelectric Power Plant

- ✓ Asahan 3 (ODA Loan)
- ✓ Peusangan (ODA Loan)

Geothermal Power Plant

- ✓ Lumut Balai (ODA Loan)
- ✓ Hululais (ODA Loan)

Waste to Energy

- ✓ Waste to Energy: Legok Nangka (Transaction Advisory with IFC)
- ✓ Project for Capacity Development of Municipal Solid Waste Management (TA)

(2) Energy Transition

Power Development Plan

- ✓ Master Plan for Energy Transition Management Project for PT. PLN (TA)

Hydrogen and Ammonia

- ✓ Data collection survey for promoting hydrogen society in Indonesia (Study)

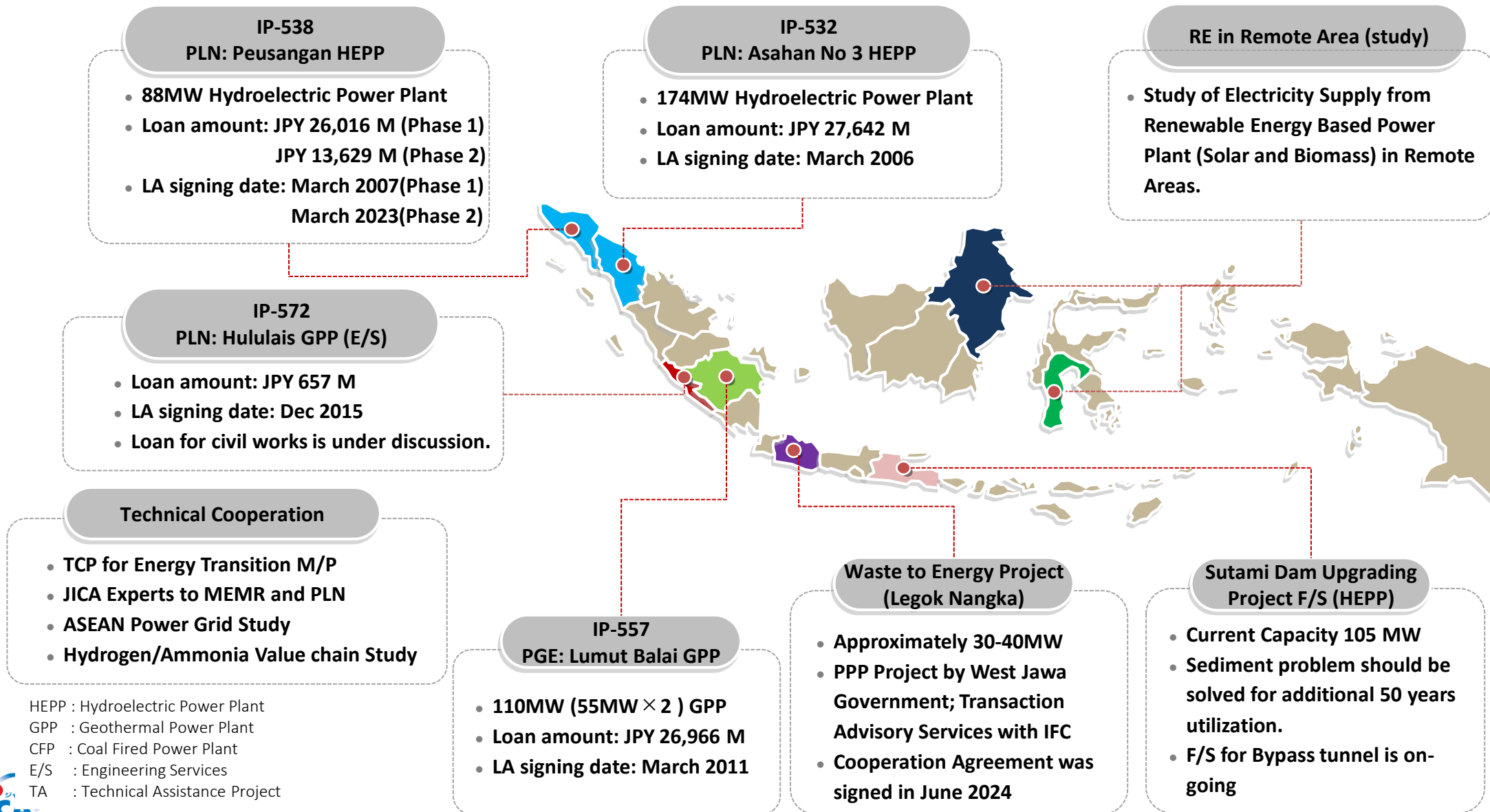
International Interconnection

- ✓ Data collection survey for ASEAN Power Grid (Study)

(3) Capacity Development of MEMR, PLN, Pertamina staffs
(Experts, Japan Training, Site Visit etc.)

Note: Red = Ongoing, Blue = Plan

JICA's On-going Projects in Energy Sector



Expected Focusing Areas of JICA and way forwards

2024-2025

(1) Renewable Energy

- ✓ Geothermal Powerplants project development

(2) Energy Transition

- ✓ Materializing the Master Plan for Energy Transition Management Project for PT. PLN
- ✓ Starting the “Data collection survey for promoting hydrogen society in Indonesia” from November 2024 until February 2026.

Future cooperation ideas (Tentative)

(1) Renewable Energy

- ✓ Any other potential financing through ODA Loan (including VGF and PPP Standby Guarantee) and PSIF (Transmission System, Geothermal, Hydro, Solar, Wind, and Hydrogen, etc.)

(2) Energy Transition

- ✓ Technical Assistance for development of policy, regulation, plan and human resources to contribute Energy Transition.

Concept of the “Data collection survey for promoting hydrogen society in Indonesia” (2024.11 - 2026.2)

➤ Based on Indonesia’s National Hydrogen Strategy and Roadmap, the survey will contribute promoting hydrogen society in Indonesia

Indonesia 

 Japan 

- Working closely among the public partners to build private partners’ confidence in market creation
- Series of forums to strengthen public and private stakeholder engagement for both Indonesia and Japan

• Development of **foundational regulatory frameworks and standards**

• **JICA’ Data collection survey** for Indonesia-Japan partnership **towards establishing value chain**

• Cooperation for **development of regulatory frameworks and standards**

• **Harmonized standards and regulations**

• Development of **international and domestic supply chain**

• **Advanced technology and knowledge for production and distribution**
• Investment and financial support for development

• **Procurement** of Hydrogen and Ammonia from IDN

Energy transition

• Development of **domestic usage market** (Transportation and Power generation)

• **Advanced technology and knowledge for usage**
• Investment for development and financial assistance

Energy transition

Key points to accelerate Energy Transition in Indonesia with Japan

Indonesia

Japan

Public partners

Private partners

- ✓ **Build private stakeholder confidence in market creation**

- ✓ **Sharing information on initiatives and programs related to Energy Transition**

- ✓ **Exchanging information on initiatives and issues that JICA could help solve**

- ← ✓ **Series of forums and meetings on Energy Transition to strengthen public and private stakeholder engagement for both Indonesia and Japan** →



*Terima
Kasih!*



(Reference)



Memorandum of Cooperation between MEMR, BRIN, IFHE, and JICA for partnership towards promoting Hydrogen and Ammonia Development



- **Cooperation outline** : The Parties will strengthen their comprehensive cooperation in; (i)Research and development of policies, regulatory framework and standards on new energy (hydrogen and ammonia), (ii)Public and private stakeholder engagements for both Indonesia and Japan, (iii)Knowledge and capacity development for the latest technologies and policies, (iv)Formulation of new program/project for financing necessary infrastructures to accelerate the market creation for new energy (hydrogen & ammonia).
- **Purpose** : Based on the Indonesia Hydrogen Roadmap, MOC intends to develop cooperation in the field of promoting new energy(hydrogen and ammonia) toward decarbonization in Indonesia with the view to achieve the purpose of Article 2 of Paris Agreement and net zero target by 2060 in Indonesia.
- **Other points** : JICA will launch Data Collection Survey regarding supply chain of Hydrogen and Ammonia within 2024 based on the MOC.



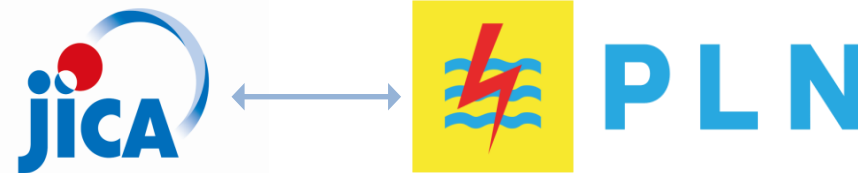
MOC signing



MOU between JICA and PT PLN (Persero) for Capacity Building to promote Energy Transition in Indonesia



- **Cooperation outline** : Both JICA and PLN confirm the importance of collaborative efforts on energy transition to achieve net zero target by 2060 in Indonesia. Particularly capacity building of PLN staffs is the key to enhance energy transition.
- **Purpose and objectives of MOU** : Both parties will collaborate on capacity building in the field of renewable energy(geothermal, wind, solar, and biomass), grid stability/battery storage and smart grid, CCUS, new energy (hydrogen and ammonia), carbon credit etc. Such collaboration will enable PLN to incorporate cutting edge technology and policy trends from Japan and the world, which will contribute long term capacity development of PLN for the multi-pathway approach to realize net zero.
- **Other points** : The training program is under consideration to start from 2024.



Capacity Building to promote Energy Transition in Indonesia

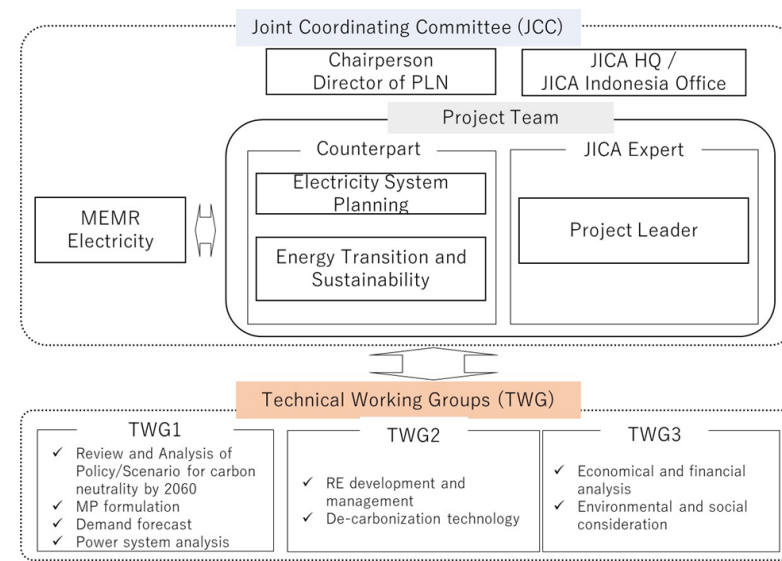
Master Plan for Energy Management Project in Indonesia (PT PLN (Persero) and JICA)

- **Cooperation outline** : It aims to strengthen the capacity of PLN to plan associated with energy transition toward carbon neutrality by 2060 in Indonesia, contributing to socio-economic development by providing stable, affordable and sustainable power supply.
- **Purpose or objectives of MOU** : In order to promote smooth decarbonization in Indonesia, the project will support the development of a flexible and realistic long-term plan that could take into consideration a variety of decarbonization technology options, based on the latest trends in decarbonization technologies in Japan and around the world.
- **Other points** : Cooperation, in cooperation with MEMR (Electricity), is scheduled to start from February next year, and TWG will be established.

<Project Image >



<Scheme >





Letter of Intent between Pertamina and JICA for partnership towards promoting energy transition in Indonesia



- **Cooperation outline** : The Parties will discuss and explore potential collaboration such as; (i) financing support for energy transition programs, (ii) conducting research or technical assistance for new energy (Hydrogen & Ammonia), CCS/CCUS, renewable energy, biomethane, and battery (iii) connecting technology partner and market in Japan, (iv) potential collaboration in marine & logistic sector, (v) capacity development program for energy transition, etc.
- **Purpose** : To develop cooperation in the field of promoting energy transition in Indonesia with the view to achieve the purpose of Article 2 of Paris Agreement and net zero target by 2060 in Indonesia.

