

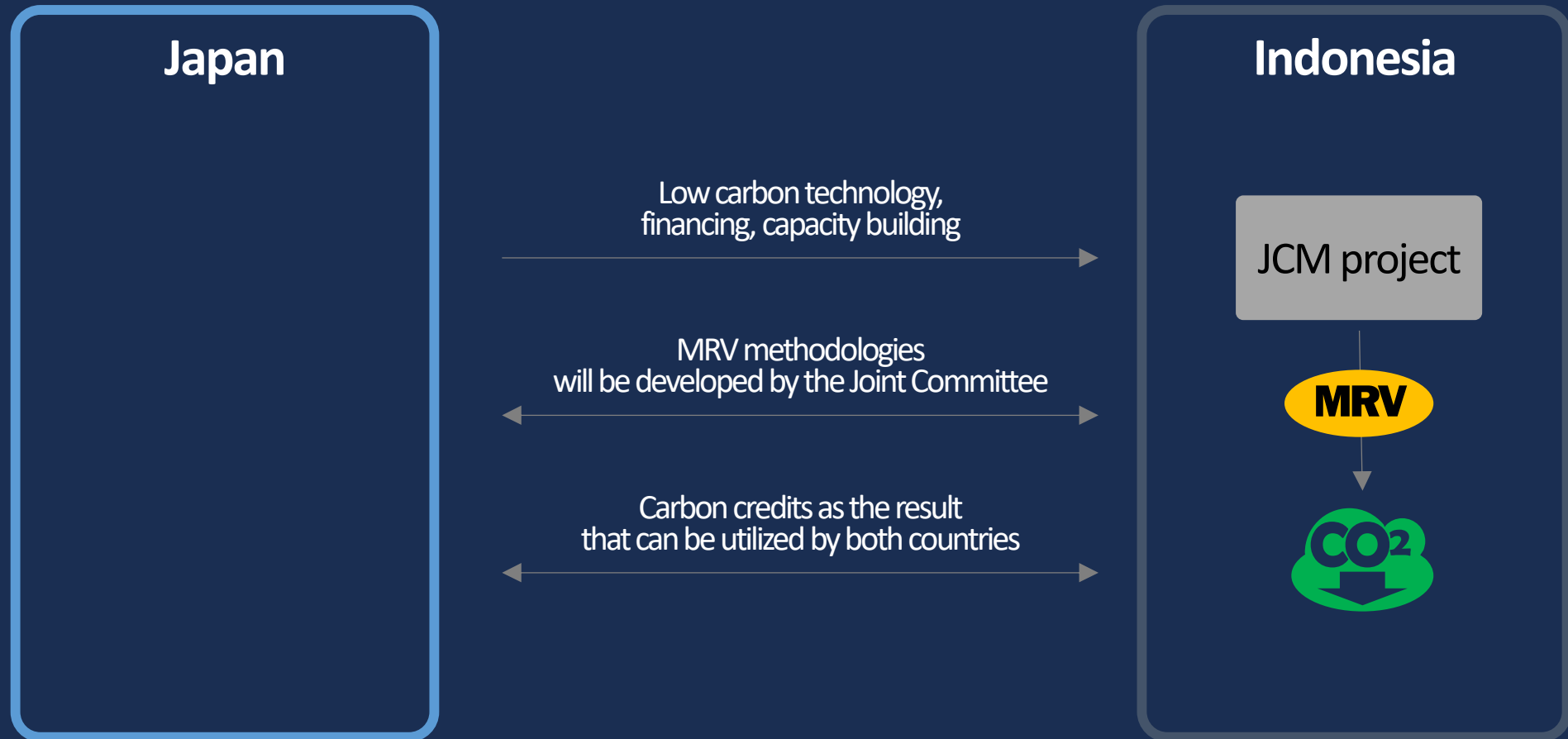
Implementation of Joint Crediting Mechanism in Indonesia



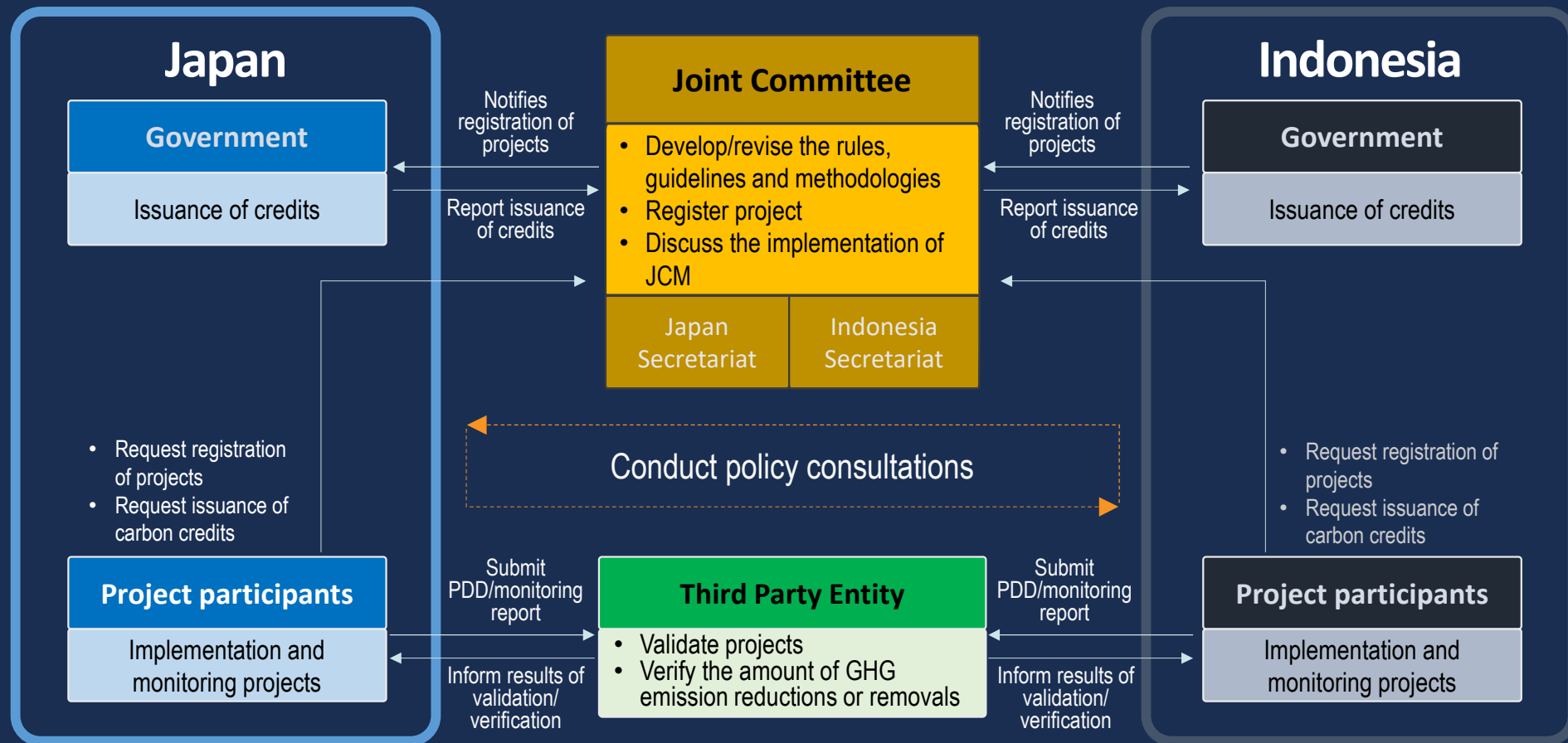
Coordinating Ministry
for Economic Affairs
Republic of Indonesia



Basic concept of cooperation

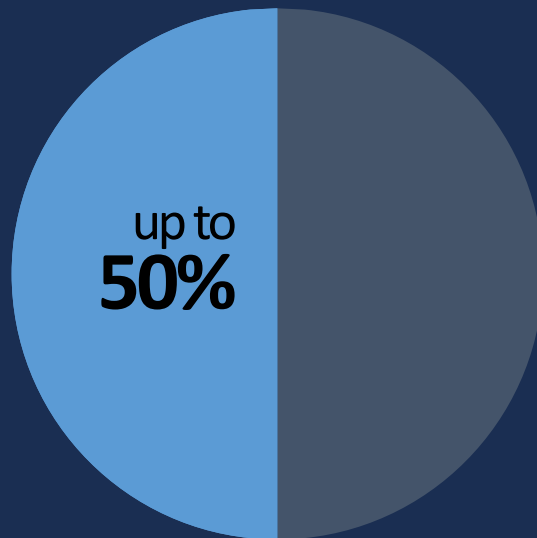


Structure of cooperation



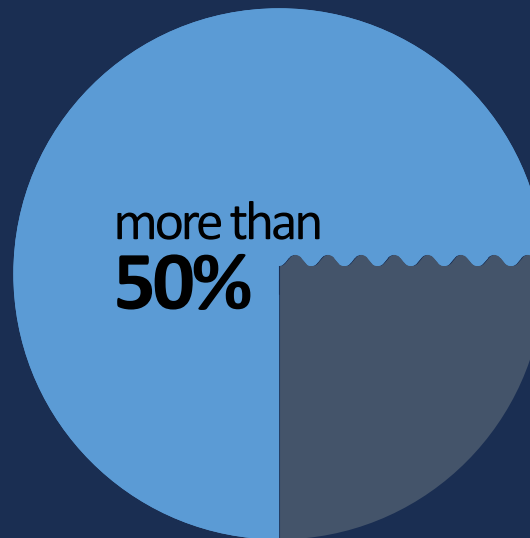
Financing schemes

Model project



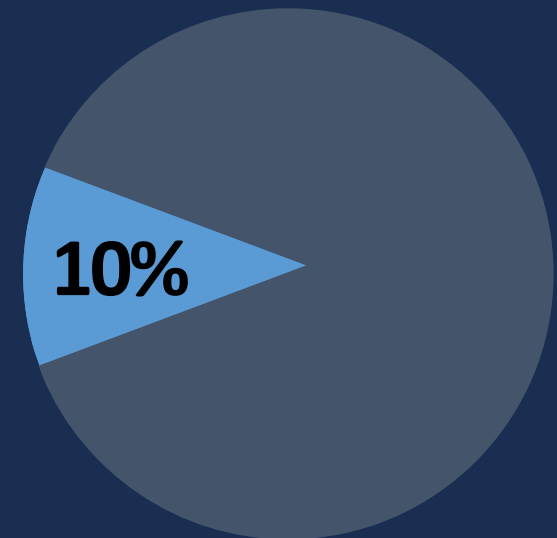
- Supported by MOEJ
- 37 projects

Demonstration project



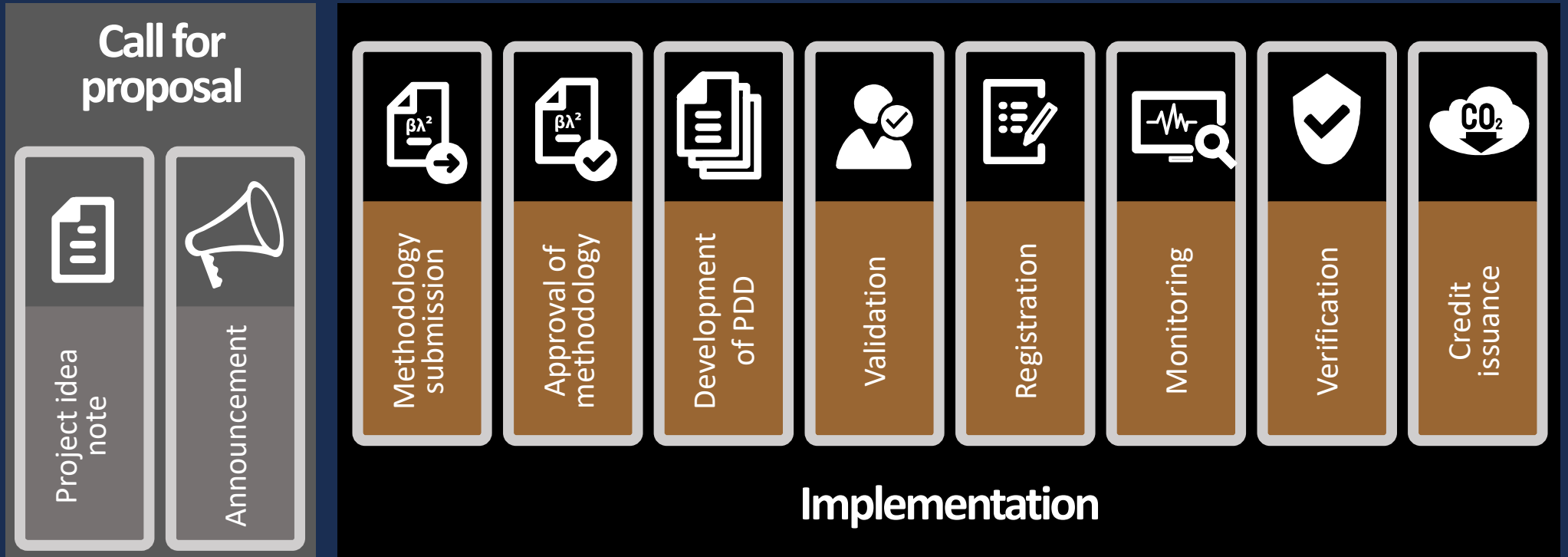
- Supported by METI/NEDO
- 3 projects
- Implemented the new technology in Indonesia

Japan Fund for JCM



- Managed by ADB
- Sovereign: grant for incremental cost
- Non-sovereign: interest subsidy for ADB's loan

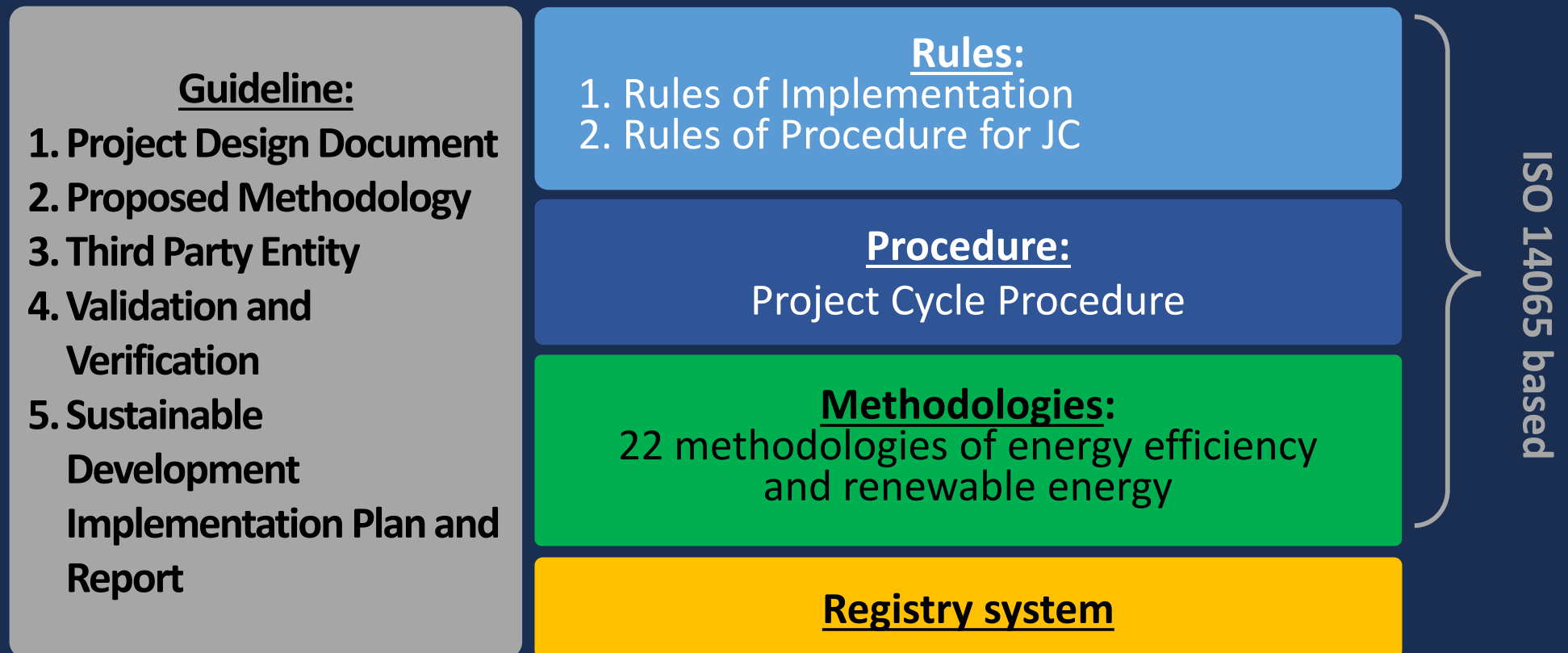
Project cycle



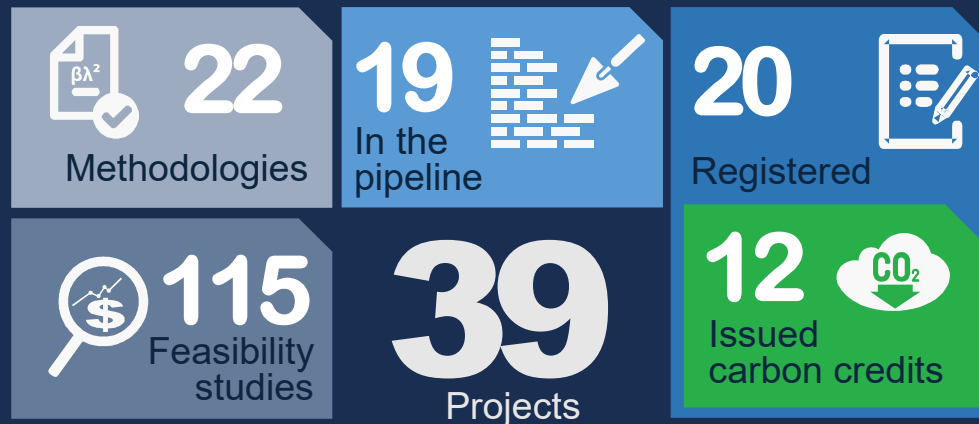
Stakeholders



Infrastructure of JCM

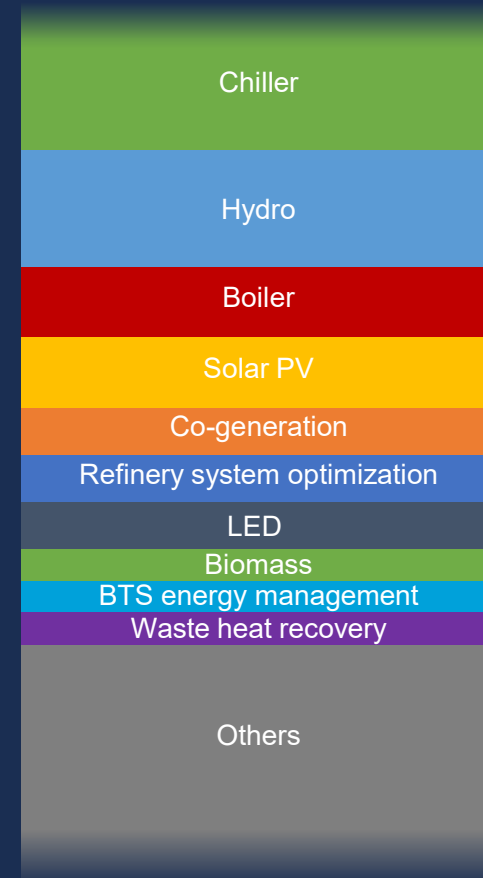


Recent updates



Sectors

Automotive, building, cement, chemical, food, oil and gas, paper, plastic, power generation, retail, rubber, telecommunication, textile, transportation



City to city cooperation



Surabaya & Kitakyushu

- Energy management in buildings
- Waste management

Bandung & Kawasaki

- Energy management in buildings
- Waste management
- Street lamps

Batam & Yokohama

- Energy efficiency in airport
- Energy efficiency in waste water treatment
- Biomass energy

Semarang & Toyama

- Bus rapid transit
- Mini hydro
- Solar PV

Jakarta & Kawasaki

- Green building & green industry
- Solid waste
- Solar PV in remote areas

Project example

Power generation by waste heat recovery



PT. Semen Indonesia & JFE Engineering Co.



PT. Semen Indonesia, Tuban Factory



14,063 tCO₂/year

- The waste heat recovery (WHR) system utilizes unused waste heat currently emitted from 4 kiln plants at the cement factory.
- System will produce steam using the waste heat exhausted from the cement plant, and the steam is fed to the steam turbine generator to generate electricity.

Project example



Energy-Efficient Waste Paper Processing System



PT. Fajar Surya Wisesa & Kanematsu Corp.



PT. Fajar Surya Wisesa Factory, Bekasi



19,011 tCO₂/year

- This project aims to achieve 10% electricity usage reduction per ton produced by introducing high efficient system for the old corrugated carton (OCC) proces, thereby contributing to CO₂ reduction.
- The OCC is a process to prepare clean raw materials containing dissolved paper fibers by mixing used corrugated board into water for defiberization and removing dirt.
- Since a large amount of material (water) is used in this process, the electricity is significantly consumed to the power motors.

Project example

GHG emission reductions through utility facility operation optimization system for refineries



PT. Pertamina & Azbil Corp.



PT. Pertamina, Refinery Unit IV Cilacap

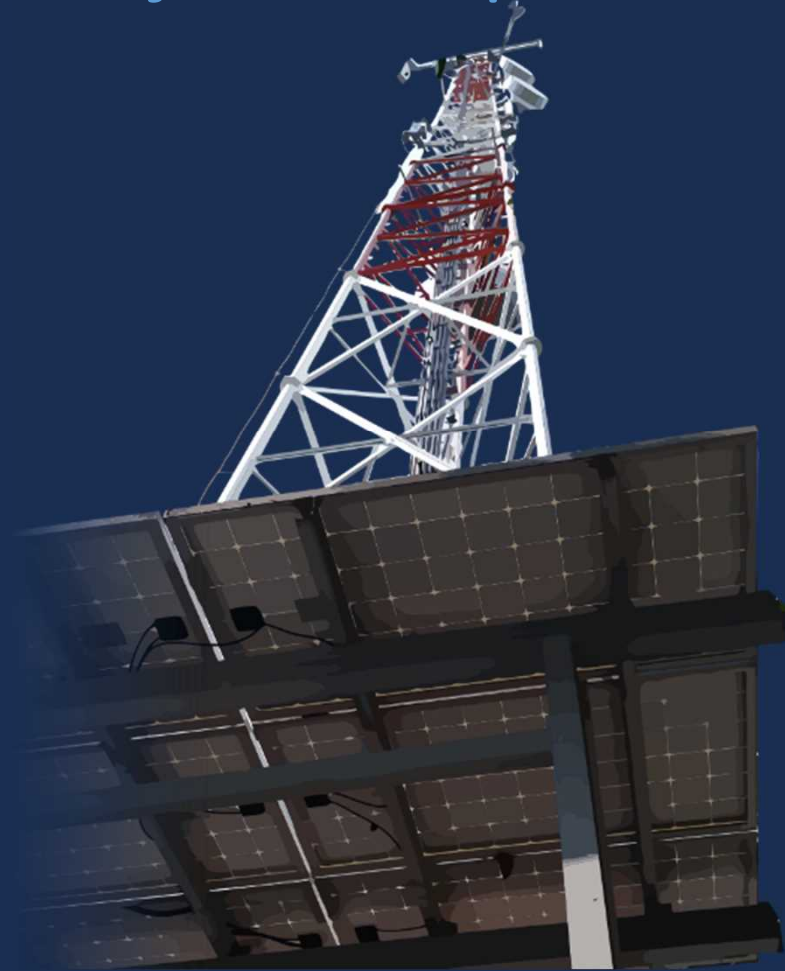


55,000 tCO₂/year

- The implementation project applied in utility facility at RU IV consists of 10 boilers, which supply high pressure steam to the steam turbine generators. “RENKEI Control”, or the utility facility operation optimization technology through application of software algorithm using linear programming method and advanced process control (APC).
- A remote monitoring system to monitor the performance of the system is also installed. As a result, a great saving in fuel consumption for the utility facility is achieved.



Project example



Installation of Tribrid System to mobile communication's Base Transceiver Stations



PT. XL Axiata & KDDI Corp.



20 locations in Sumatera, Java & Kalimantan



380 tCO2/year

- Tribrid System is defined as a combined system of solar PV, batteries, and electric power control system
- This system controls charge-discharge of battery, and also improves the operational efficiency of diesel generators with its electric power control system
- Installed in off-grid and poor-grid areas in Indonesia

Project example



Solar PV Power Plant Project in Jakabaring Sport City



PDPDE Sumsel & Sharp Corp.



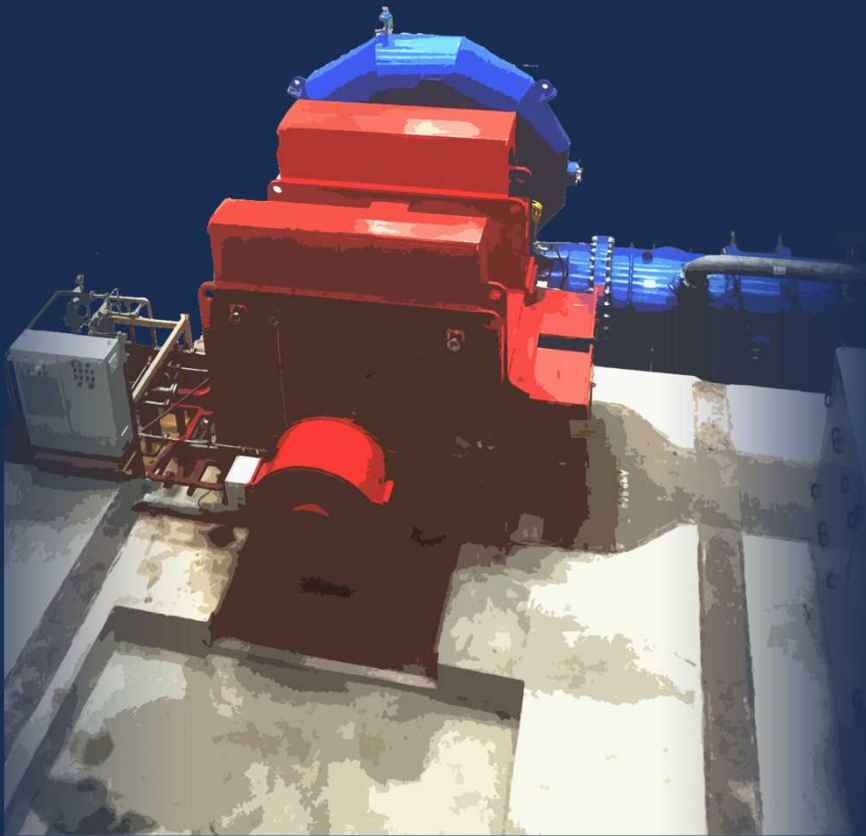
Jakabaring Sport City, Palembang



1,277 tCO₂/year

- This project aims to reduce CO₂ emissions by introducing a 2 MW solar power plant in the Jakabaring Sport City complex of South Sumatra Province
- The power plant uses polycrystalline PV modules, 315W, module efficiency 15.5%. About 5,243 of these modules and peripheral systems installed on an expansive area of about 2.5 ha.

Project example



10MW Mini Hydro Power Plant Project in North Sumatra



PT. Citra Multi Energi & Toyo Energy Farm Co., Ltd.



Parlilitan, Humbang Hasundutan



47,182 tCO₂/year

- A mini hydro power plant is to be constructed in Humbang Hasundutan District of North Sumatra with a capacity of 10MW (5MW x 2)
- The electricity generated by the plant is to be supplied to a power company (PLN) resulting in GHG emission reductions by replacing grid electricity
- This project is also expected to contribute to improving energy supply in the region.

Thank you



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