

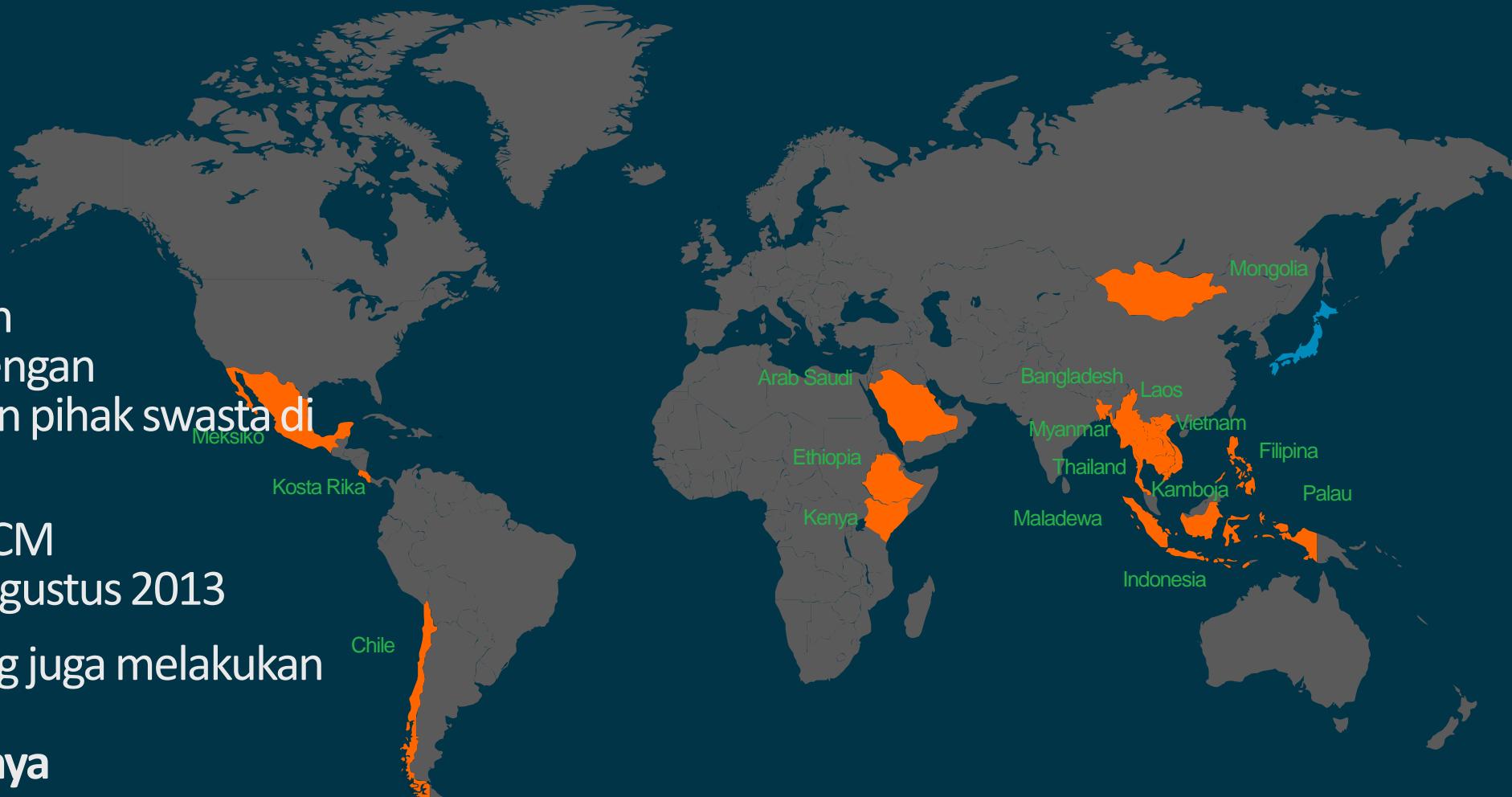


Perkembangan Implementasi *Joint Crediting Mechanism (JCM)*

Sekretariat JCM Indonesia
Jakarta, 21 Oktober 2019

Pendahuluan

- JCM merupakan kerjasama bilateral antara pemerintah Indonesia dan Jepang dalam kegiatan pembangunan rendah karbon di Indonesia, dengan mendorong keterlibatan pihak swasta di kedua negara
- Kesepakatan bilateral JCM ditandatangani bulan Agustus 2013
- Selain Indonesia, Jepang juga melakukan kerjasama JCM dengan **16 negara lainnya**



Konsep Dasar

Jepang

Teknologi, investasi,
pembangunan kapasitas

Operasionalisasi dan
manajemen oleh Komite
Bersama/Joint Committee

Pemenuhan target
penurunan emisi

Kredit Karbon

Indonesia

Proyek JCM

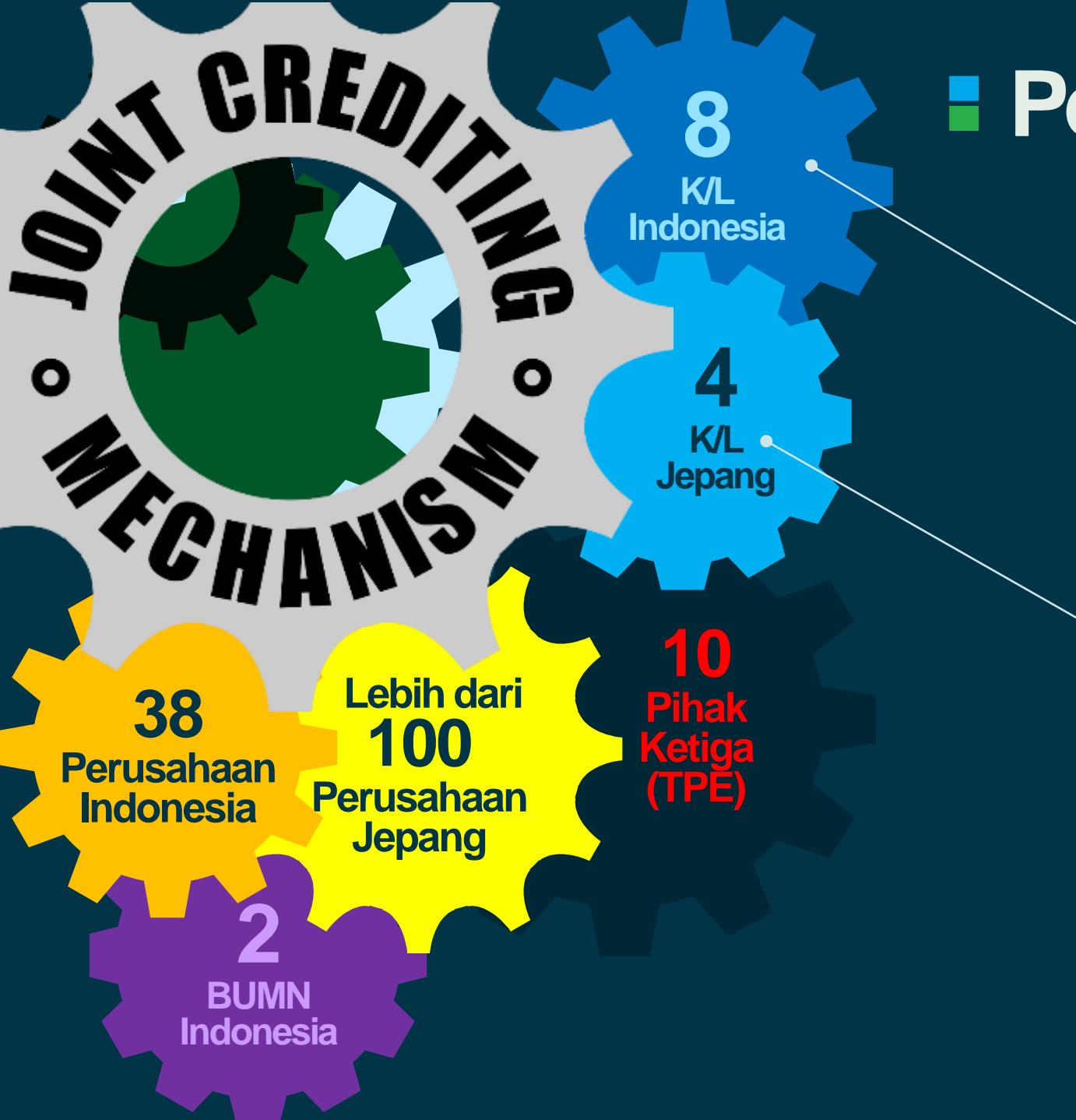
MRV

CO₂

Penurunan emisi GRK
& pemenuhan target
penurunan emisi

Struktur Implementasi





Pemangku Kepentingan

Kemenko Ekon
KLHK
KESDM
Kemenperin

Bappenas
Kemenkeu
Kemlu
Utsus PPI

Japan Embassy Jakarta
MOEJ
METI
Forestry Agency

Jenis Pendanaan

Model Project

Dukungan dana dari MOEJ



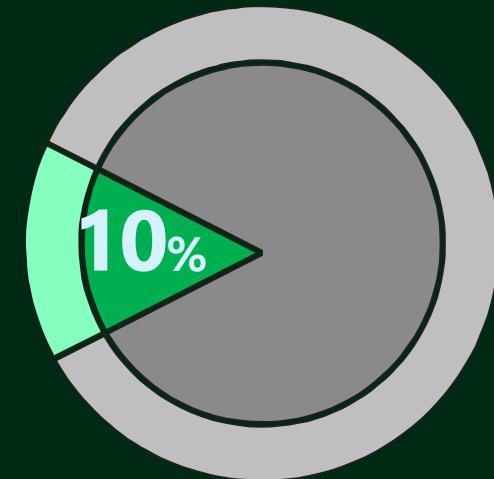
Demonstration Project

Dukungan dana dari METI



Japan Fund for JCM

Dikelola oleh ADB



- Hibah sampai dengan **10 %** untuk *incremental cost (sovereign loan)*
- **10%** subsidi bunga (*non-sovereign loan*)

Siklus Proyek

Measurement (M)

Submission of methodology



Project participants

Approval of methodology



Joint committee

Development of PDD^{a)}



Project participants

Validation^{b)}



Third party entity

Reporting (R)

Registration



Joint committee

Verification (V)

Monitoring



Project participants

Verification^{b)}



Third party entity

Credit issuance



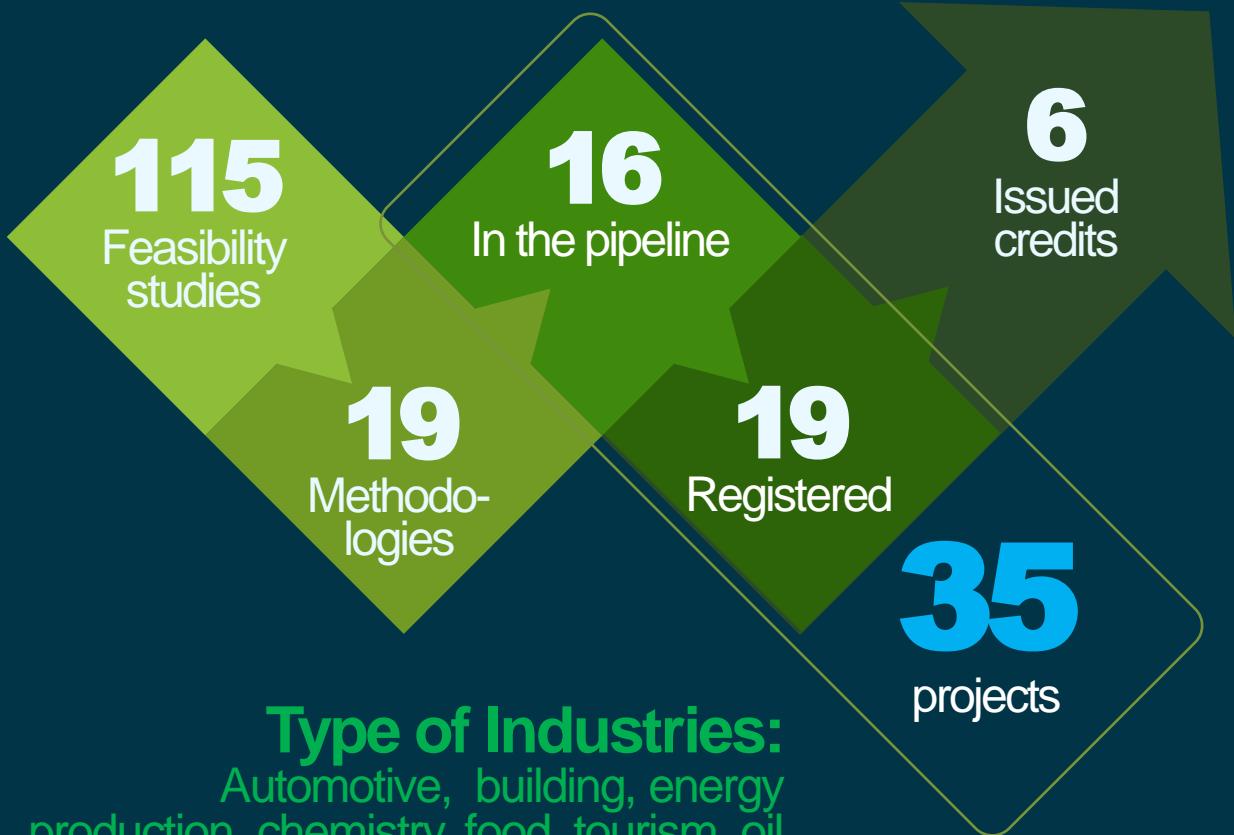
Joint committee

a) Project Design Document

b) Can be done simultaneously

Can be done by the same entity

Perkembangan Proyek JCM



\$128 mio
Total investment



\$10 mio
Feasibility studies

\$78 mio
Private investment



\$50 mio
Subsidy



Kerjasama Antarkota

- **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



Contoh Proyek 1

Power generation by waste heat recovery



PT. Semen Indonesia & JFE Engineering Co.



PT. Semen Indonesia, Tuban Factory



149,063 tCO₂/year

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

Contoh Proyek 2

Energy Saving by Optimum Operation at Oil Refinery



PT. Pertamina & Yokogawa Electric Co.



PT. Pertamina, Refinery Unit V Balikpapan



680 tCO₂/year

- Introduction of Advanced Process Control (APC) system, added and linked to Distribution Control System (DCS)
- Process model to simulate multi-variable process behavior to be able to operate the process at optimum minimum energy and CO₂ emission





Contoh Proyek 3

GHG emission reductions through utility facility operation optimization system for refineries

- PT. Pertamina & Azbil Corp.
- PT. Pertamina, Refinery Unit IV Cilacap
- 20,000 tCO₂/year
- The implementation project 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.

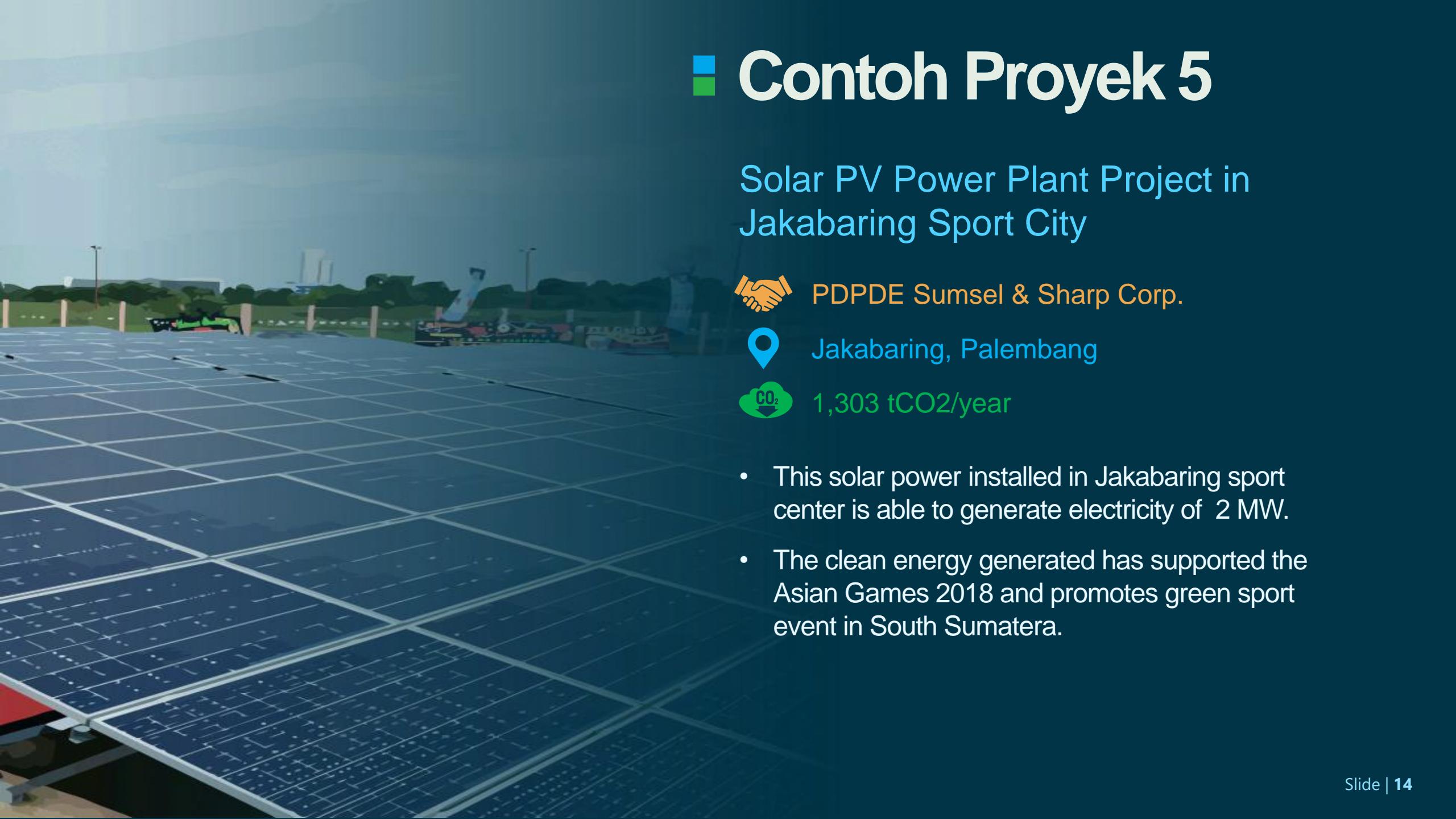


Contoh Proyek 4

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

- PT. XL Axiata & KDDI Corp.
- 20 locations in Sumatera, Java & Kalimantan
- 363 tCO₂/year

- Tribrid System is defined as a combined system of solar PV, batteries, and electric power control system.
- Tribrid System controls charge-discharge of battery, and also improves the operational efficiency of diesel generators with its electric power control system



Contoh Proyek 5

Solar PV Power Plant Project in Jakabaring Sport City



PDPDE Sumsel & Sharp Corp.



Jakabaring, Palembang



1,303 tCO₂/year

- This solar power installed in Jakabaring sport center is able to generate electricity of 2 MW.
- The clean energy generated has supported the Asian Games 2018 and promotes green sport event in South Sumatera.



Contoh Proyek 6

Introduction of CNG-Diesel Hybrid Equipment to Public Bus



BLU UPTD Semarang & Hokusan Co., Ltd.

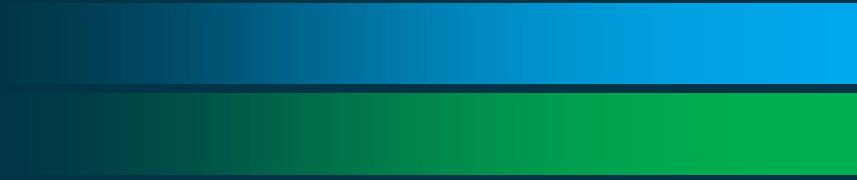


Semarang



1,870 tCO₂/year

- Based on the city-to-city cooperation agreement, between Semarang and Toyama, this project aims to reduce GHG emissions through fuel switch from diesel to CNG.
- 72 diesel buses owned by Trans Semarang are retrofitted from diesel engine to hybrid engine with CNG system available.
- These buses are considered more cost-effective through fuel switching.



Terima kasih

Sekretariat JCM Indonesia

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