



Sweihan Photovoltaic IPP Project (UAE 1,177MW)



Shiloh IV Wind Power IPP Project (USA 102.5MW)

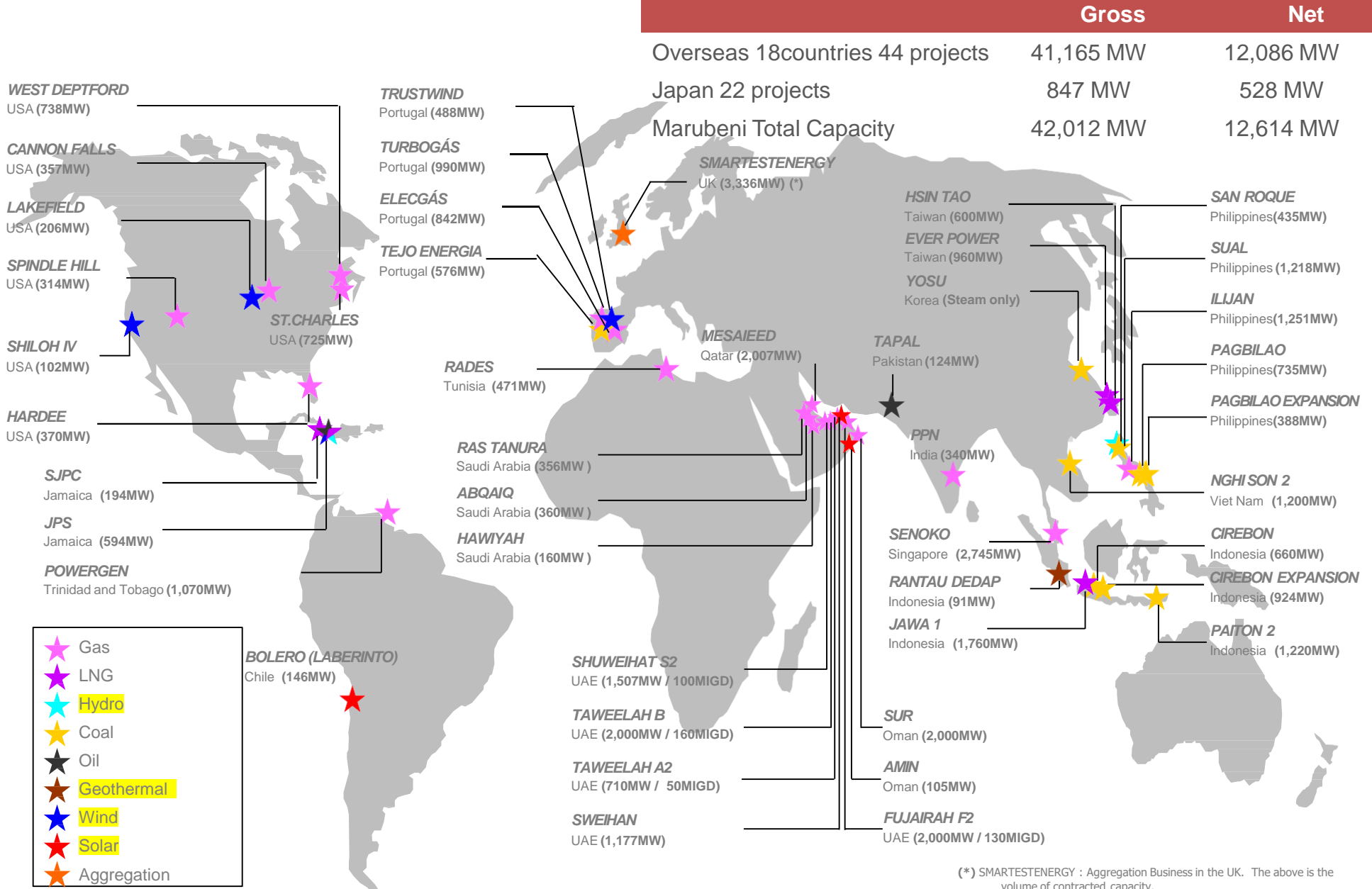
Investing in Indonesian Power Project Eyes on Renewable Energy (RE)

1. Marubeni Power Experience
2. Indonesian Power Market- eyes on Renewable energy
3. Investing in Indonesian Renewable Energy
4. Conclusions

22 June 2021

Marubeni

Marubeni Power experience - IPP assets in the world



(*) SMARTESTENERGY : Aggregation Business in the UK. The above is the volume of contracted capacity.

Marubeni Power experience - Involvement in Indonesian Power Projects

In addition to operating power assets, Marubeni has keen interest in increasing Renewables in Indonesia

Asahan Tangga (EPC)
(4x81.4MW, 1980)

Keramasan (EPC)
(2x40MW, 2011)

Lumut Balai (EPC)
(55MW, Operation from Feb 2020)

Tarahan #3&4 (EPC)
(2x100MW, 2004)

Suralaya #1-7 (EPC)
(Total 3,400MW, 1980, 84, 93, 94)

Suralaya #1-2 (EPC)
(+40MW BLR Rehabilitation, 2007)



Tanjung Priok (EPC)
(2x590MW, 1992)

Muara Tawar Block 1&2 (EPC)
(1x660MW, 3x145MW, 1994)

Muara Tawar Block 5 (EPC)
(225MW, 2007)



Patuha #1 (EPC)
(55MW, 2011)

Kamojang #2&3 (EPC)
(2x55MW, 1985)

Tambak Lorok (EPC)
(780MW, Under Construction)

Rantau Dedap (IPP)
(91MW, Under Construction)



Jawa 1 (IPP)
(2x880MW, Under Construction)



Cirebon (IPP)
(660MW, 2007)

Cirebon Exp. (IPP)
(1,000MW, Under Construction)



Paiton 2 (IPP)
(2x660MW, 2007)



	Installed Capacity
EPC Records	7,545 MW
IPP Assets	4,831 MW
Total Capacity	12,376 MW

Marubeni Power experience - Major Track Records of Renewable IPP



San Roque Multi Dam BOT

Country	Philippines
Capacity	435MW
Off Taker	National Power Corp.
COD	May, 2003
Project Cost	US\$1billion
Ownership	50%
Finance	JBIC and Commercial Banks



TrustWind

Country	Portugal
Capacity	488MW
Time of participation	October 2013
Project Cost	US\$1billion
Ownership	50%
Partner	Engie



Sweihan Photovoltaic

Country	UAE
Capacity	1177MW
Off taker	Emirates Water and Electricity Co.
COD	April 2019
Project Cost	US\$1billion
Ownership	20%



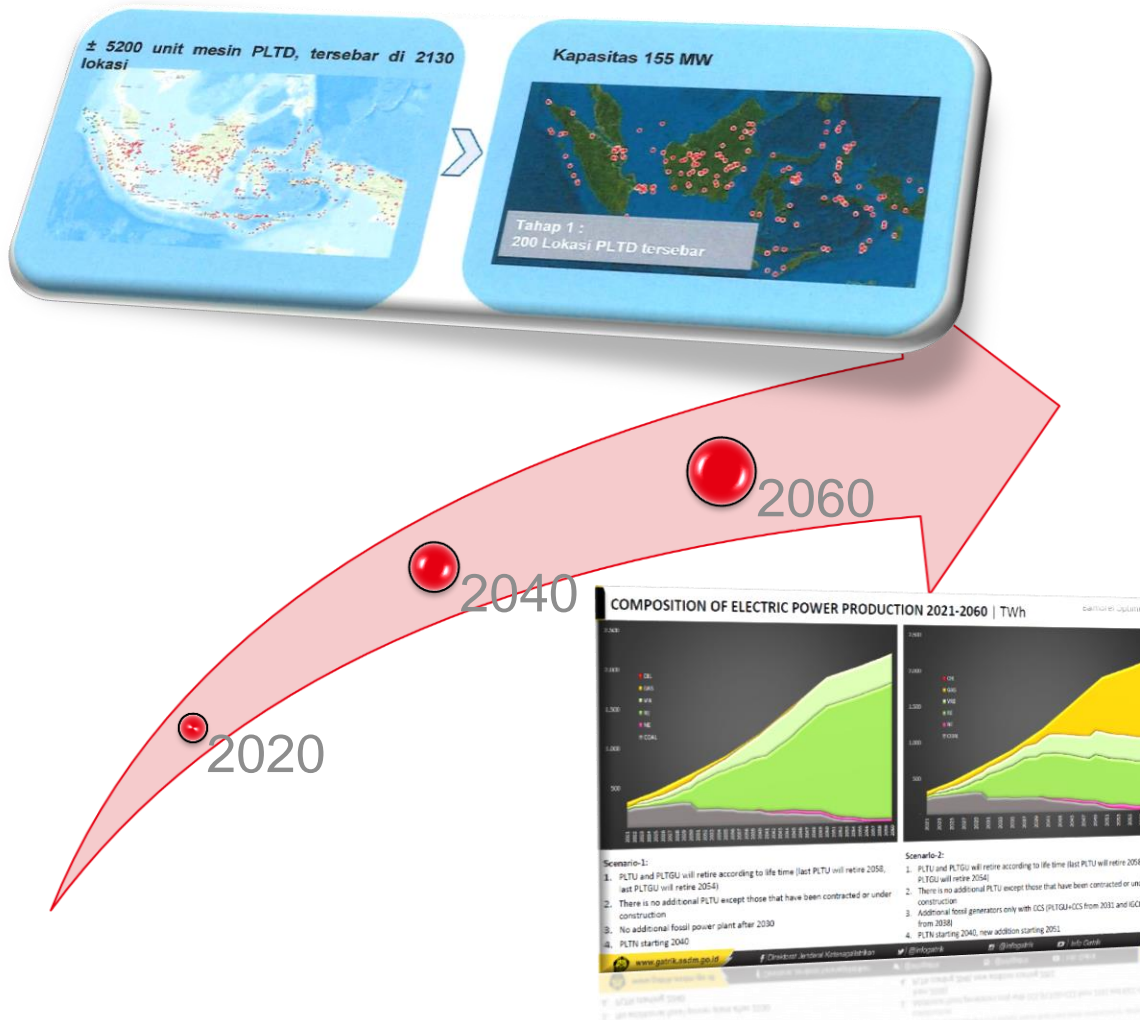
Rantau Dedap Geothermal

Country	Indonesia
Capacity	91MW
Off taker	PLN
Expected COD	September 2021
Project Cost	US\$0.7billion
Ownership	32.05%


	Gross	Net
Marubeni Renewable portfolio	4,119 MW	1,585 MW

Indonesian Power Market- eyes on Renewable based energy

Indonesian ambitious renewable target attracts investment. For electricity generation, currently around 11.3% are from renewables in 2020, still huge gap (=potentials) to achieve National policy on Energy Mix (23% from RE by 2025) and further expansion.



Challenges in each Renewable in Indonesia

- 
De-dieselisation (DG conversion to renewables)
 - Scattered
- 
Solar PV, Wind
 - Land acquisition
 - Small capacity
- 
Geothermal
 - Front heavy Investment (Exploration, etc.)
- 
Hydro
 - Environment
- 
Co-firing (Biomass, Ammonia, Hydrogen)
 - Relatively higher cost

Investing in Indonesian Renewable Energy

From investor point of view, procurement scheme for renewables in Indonesia is relatively new and under continuous improvement. Marubeni is keen to increase portfolio of renewables.

Indonesia renewable targets: 23% by 2025
(under discussion)

Conventional Energy
(Coal, Gas)

Project size relatively
large (>100MW per
project)

Procurement process
matured

Renewables
Challenges in development

Project size relatively
small (<50MW per
project (Solar, Wind))

Procurement process
flexible (relatively
new, not fixed)

Front heavy
investment (for
geothermal and
hydro)

Suggestions for steep acceleration in renewable development

- a. **Strong and consistent commitment from host country, e.g.**
 - land preparation
 - grid connection at boundary
 - FIT (Feed-in Tariff)
 - tax incentives
 - regulatory framework
- b. **Established procurement process and qualification**
- c. **Incentives to project initiators**

Conclusions

Renewables in Indonesia: Substantial potentialities and growth of renewable developments in Indonesia attract strong interest of investors.

- Higher renewable share in next power development plan
- Renewables in energy mix 23% in 2025 (still under discussion)

Marubeni Business Policies Pertaining to Sustainability: Proactive Involvement in Renewable Energy Generation Business

- Expansion of the renewable energy generation business, target ratio of power generation by renewable energy sources expand from 10% to 20% by 2023.
(<https://www.marubeni.com/en/sustainability/environment/approach/>)

Marubeni commits to increase portfolio in renewable sector in Indonesia

THANK YOU FOR YOUR ATTENTION

Terima Kasih Banyak

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