



PLN

# Technology Outlook for Electricity Sector

Presented by I Nyoman Ngurah Widiyatnya  
VP of Corporate Strategic Planning of PT PLN (Persero)

Jakarta, 20 Pebruari 2020



*PLTU Tanjung Jati B • PLTU Paiton Unit 1 - 2 • PLTGU Gresik  
PLTDG Pesanggaran • PLTP Kamojang Darajat*

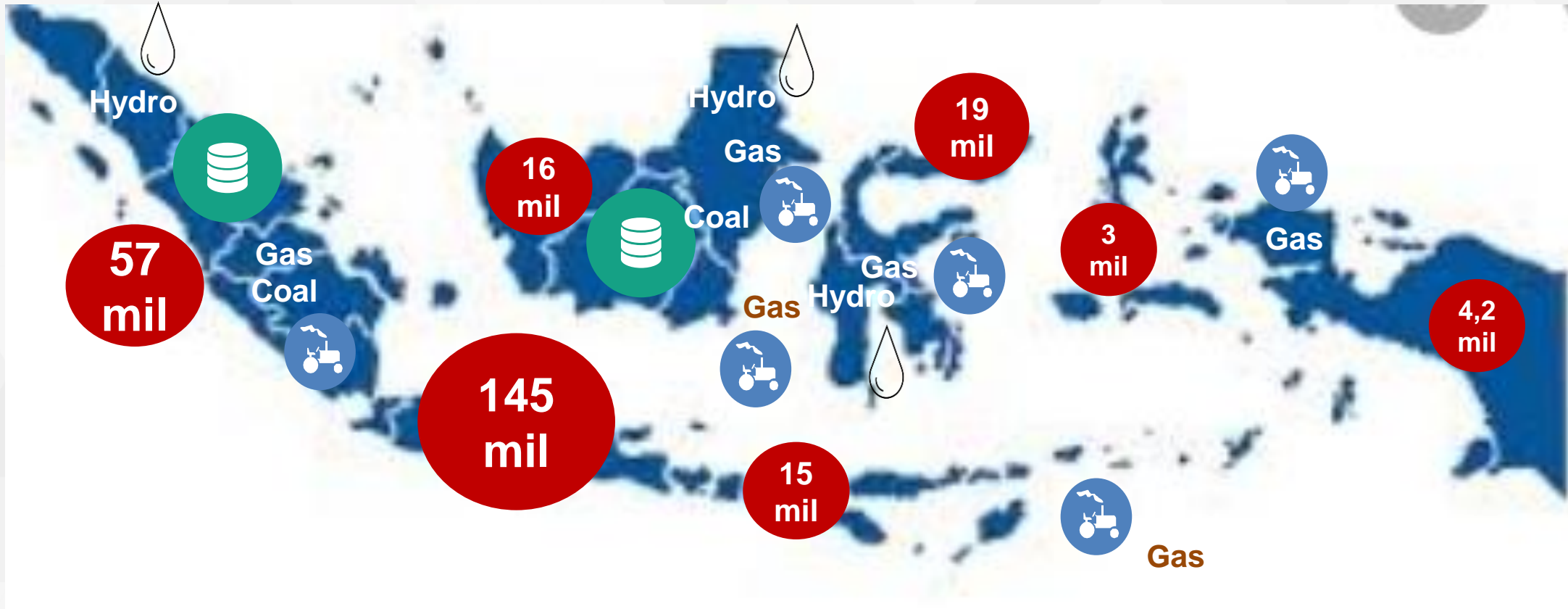


*PLTU Tanjung Jati B*

[www.pln.co.id](http://www.pln.co.id)

# Map of Indonesia

Indonesia consists of more than 17.000 islands and it is big challenge to provide electricity to all island.  
More than 50% of Indonesia population is located in 7 % of land area of Indonesia.  
Potential energy is located in specific areas



● population

Indonesia is the most complicated country for logistic matters

# Technology Trend

## Technologies

## Implications



**Energy efficiency**



**Electric vehicles**



**Renewables**



**Energy storage**



**Small modular reactor**



**A Decarbonization**



**Distributed generation**



**Micro grids**



**Energy services**



**B Decentralization**



**Digital and Advanced Analytics**



**Beyond the meter**

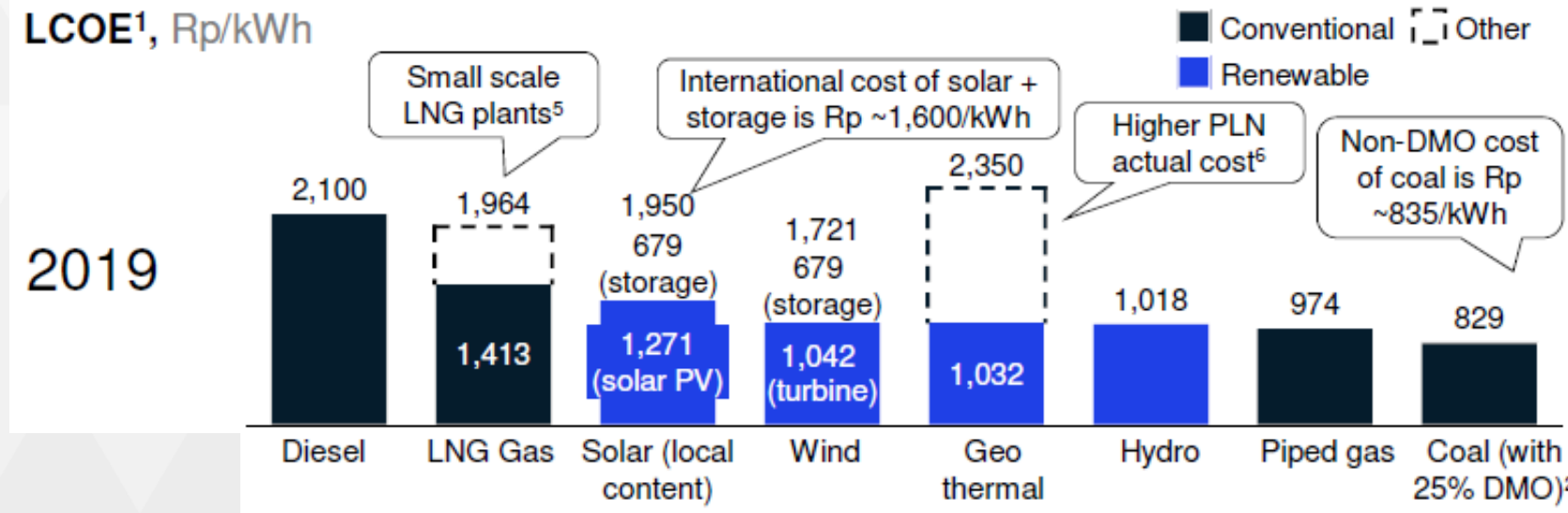


**Smart grids/  
Smart cities**



**C Digitization**

# Power Plant Cost Mapping



What is the best power plant for base load in medium/small island ?

- Risk for reliability of small coal power plant or small LNG power plant vs cost diesel plant.
- Risk for availability of sun/wind vs cost of diesel plant.
- Risk for reliability of small coal power plant vs small LNG power plant vs availability of sun/wind.

What is the best power plant to replace medium and peak load in medium/small island ?

- Risk for reliability of small LNG power plant vs cost diesel plant.
- Risk for reliability of battery vs cost of diesel plant.



# Thank You

