South Korea
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ASOSIASI ENERGI SURYA INDONESIA

Tuesday, 20 April 2021
08.00 – 10.00 AM WIB
(10.00 AM - 12.00 PM KST)

BUSINESS OPPORTUNITIES AND CHALLENGES IN THE FIELD OF SOLAR ENERGY IN INDONESIA

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Centre for Strategic and International Studies (CSIS), Tenggara Strategics and the Indonesian Embassy in Seoul
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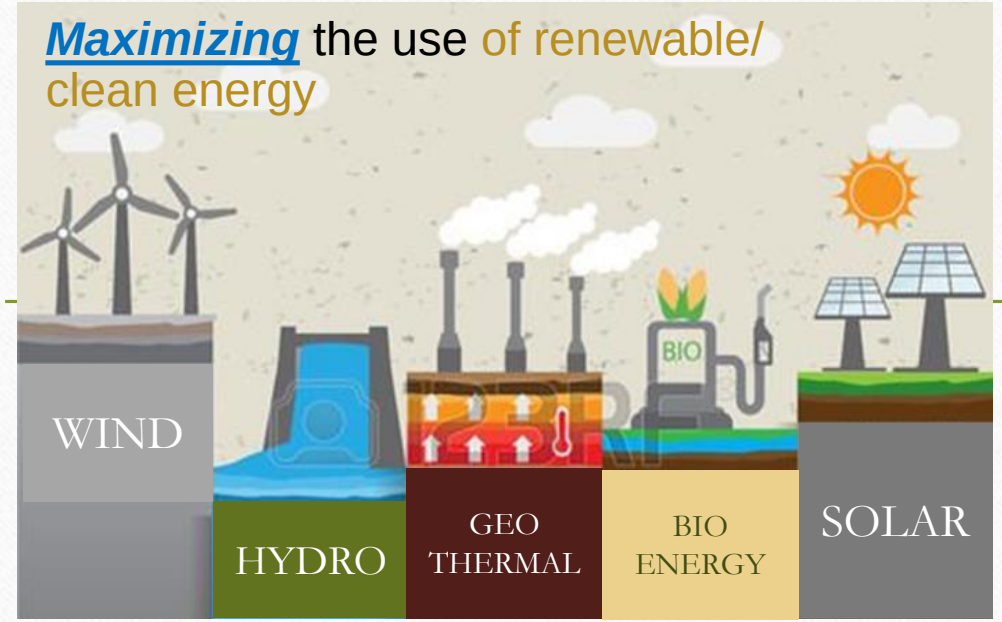
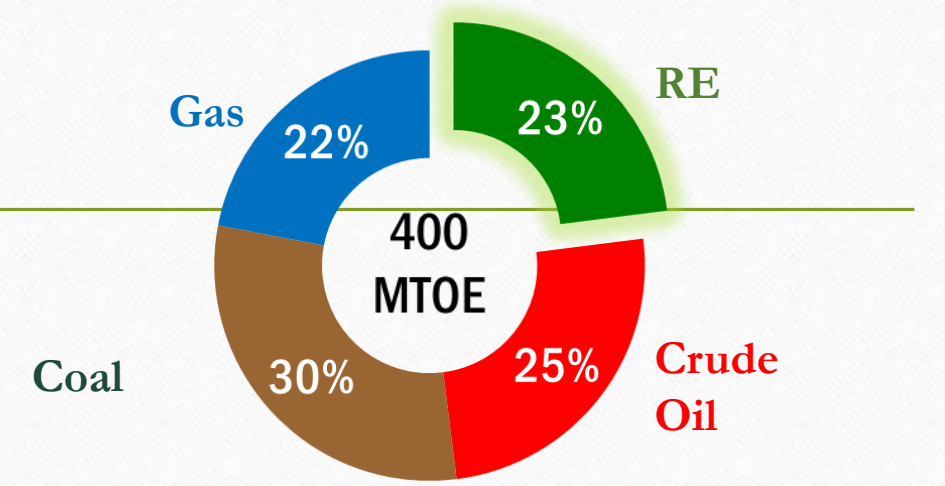
20 APRIL 2021

NATIONAL ENERGY POLICIES (RE TARGET)



PRIMARY ENERGY MIX TARGET BY 2025



Based on:
- PP 79/2014 National Energy Policy
- Perpres 22/2017 National Energy General Planning

23 % NRE → 92.2 MTOE

92.2 MTOE → 69.2 MTOE

Non Direct Use

Electricity	45.2 GW

1. Geothermal, 7,2 GW
2. Hydro, 17,9 GW
3. Mini Hydro, 3 GW
4. Biomass , 5,5 GW
5. Solar, 6,5 GW
6. Wind, 1,8 GW
7. Others 3,1 GW

92.2 MTOE → 23.0 MTOE

Direct Use

Biofuels	13.8 Million KL
Biomass	8.4 Million tons
Biogas	489.8 Million M3
CBM	46.0 MMSCFD

UTILIZATION OF SOLAR ENERGY IN INDONESIA:

DRIVEN BY GOVERNMENT PROGRAMS FOR RURAL ELECTRIFICATION

UTILIZATION OF SOLAR ENERGY IN INDONESIA:

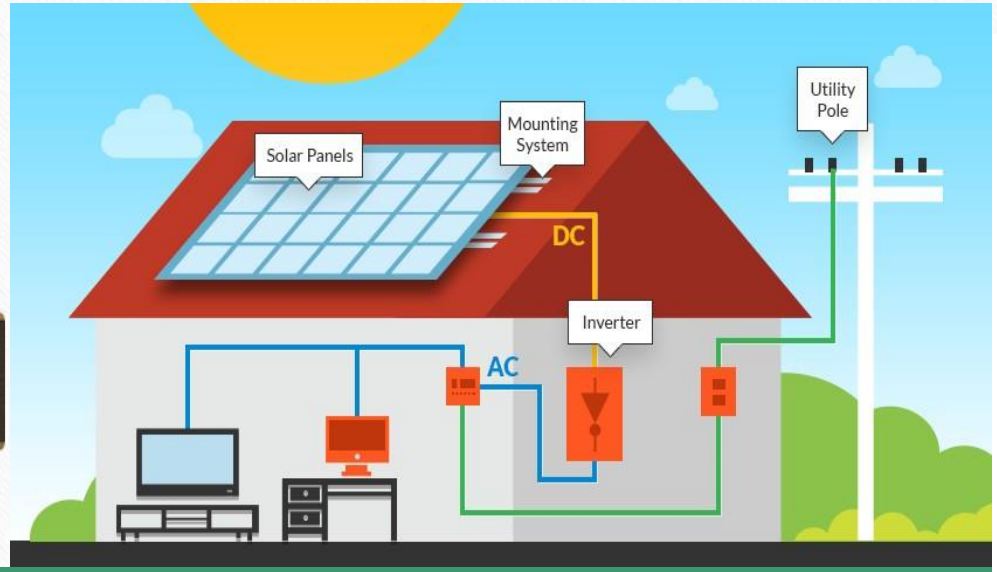
INDEPENDENT POWER PRODUCER

- Selling its electricity to state owned electricity company PLN
- Tied to a 20-year PPA contract
- Potentially replacing Diesel Generator operated by PLN
- Most of the locations are outside Java
- The selling price is stipulated in the Regulation of the Minister of Energy and Mineral Resources 50/2017 at a rate of 85% of the cost of regional PLN production
- The Ministerial Regulation on the selling price of electricity will be replaced by a Presidential Regulation that will come out in the near future

NATIONAL MOVEMENT OF MILLION SOLAR ROOFTOP

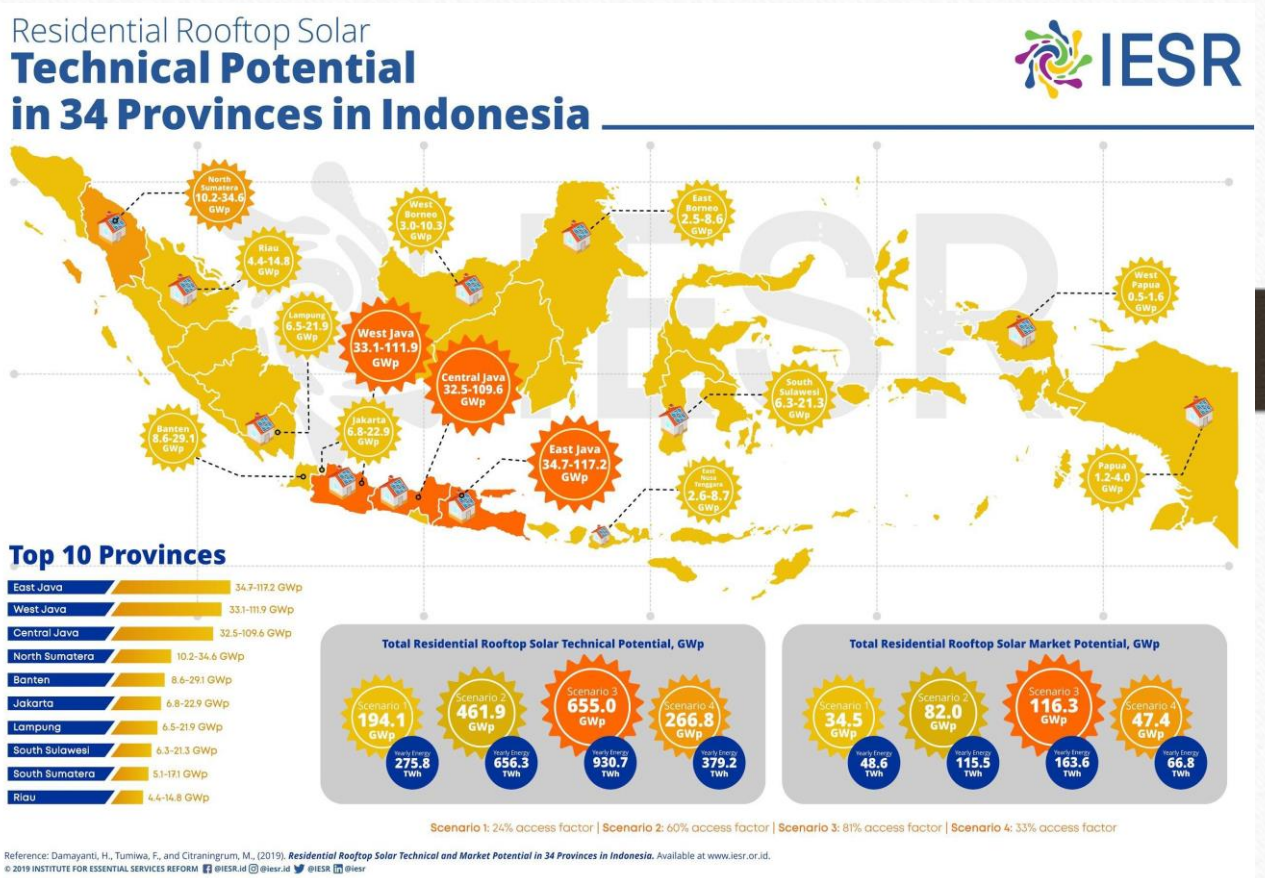
- Encourage and accelerate the construction of rooftop photovoltaic solar power plants in residential, public facilities, government offices, commercial buildings, and industrial complexes, until it reaches the gigawat order before 2020;
- Encourage the growth of a competitive national photovoltaic system industry and create green employment opportunities (*green jobs*);
- Encourage the provision of reliable, sustainable and competitive electricity;
- Encourage and mobilize **community participation and funding** to reduce greenhouse gas emissions and the threat of climate change, and support Indonesia's commitment to the Paris Agreement and efforts to achieve *Sustainable Development Goals* (SDGs) goals.

NATIONAL MOVEMENT OF MILLION SOLAR ROOFTOP



TOTAL POTENTIAL

655 GWp



INVESTOR CHALLENGES

PV UTILIZATION UNDER GOVERNMENT PROGRAMS

- Intended to electrify remote areas that have not been electrified and have not been reached by PLN electricity network
- Usually EPC projects and conducted with open tenders according to the government's annual budget
- Open possibility funded by foreign aid or G to G loan

INDEPENDENT POWER PRODUCER

- Regulation of the Minister of Energy and Mineral Resources 50 of 2017 which was later revised through the Regulation of the Minister of Energy and Mineral Resources No. 4 of 2020 limits the selling price of renewable energy to only 85% of the cost of PT PLN regional production. This price does not attract developers who build PV Power plant in Java Island. But for outside Java although the price is quite good, the challenge is sometimes the location is quite difficult

INVESTOR CHALLENGES

SOLAR PV ROOFTOP PROGRAM

- Declared to help the government achieve the RUEN (National Energy Planing) target in 2025 by mobilizing community participation
- Independently funded by the user community without a government budget
- Electricity prices sent to PLN grid is stipulated in regulation of the Minister of Energy and Mineral Resources 49 of 2018, which is 65% of the selling price of electricity from PLN
- For most people capital cost of PV Rooftop still too expensive
- There are more industrial and commercial buildings have used PV Rooftop and the most favourable scheme is BOT or pay the energy costs only. Therefore, many ESCO companies are starting to provide rooftop PV installation services with energy selling schemes only
- More investors needed to provide innovative funding with an attractive interest to these ESCO companies


Presentation
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Full Speed Ahead!
Accelerating Solar Energy
in Indonesia - Are We Ready?
The sun's potential as a natural energy source
offers unique opportunities to Indonesia.
Learn how to harness solar energy for a cleaner
energy source for the country and the world
Rida Mulyana, Energy and Mineral Resources Ministry
Electricity Director General
Anita Karina Sungkono, Senior Associate Hadiputranto
Hadinoto & Partners (HHP)
Lisa Hall, Babcock Ranch
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Thank You