Ekosistem untuk Mendukung Revolusi Energi Surya

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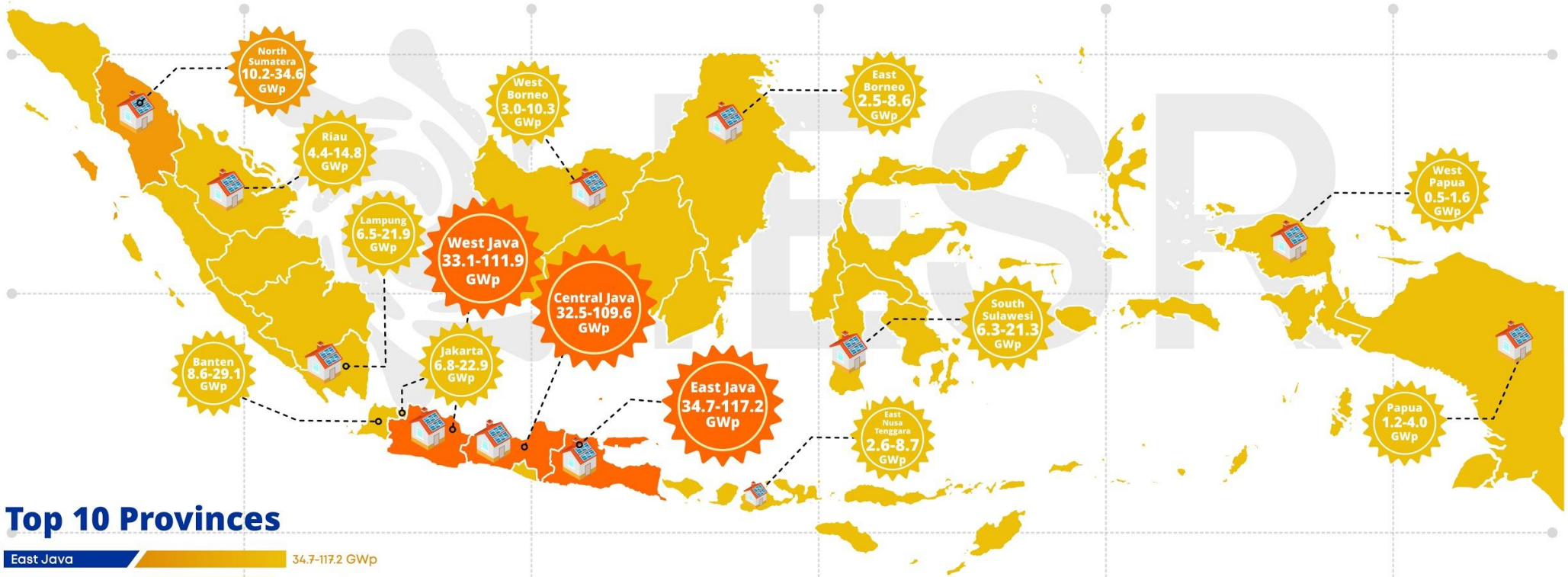
Residential Rooftop Solar

Technical Potential in 34 Provinces in Indonesia



Top 10 Provinces

Total Residential Rooftop Solar Technical Potential, GWp

Total Residential Rooftop Solar Market Potential, GWp

Scenario 1: 24% access factor | **Scenario 2**: 60% access factor | **Scenario 3**: 81% access factor | **Scenario 4**: 33% access factor

Reference: Damayanti, H., Tumiwa, F., and Citraningrum, M., (2019). ***Residential Rooftop Solar Technical and Market Potential in 34 Provinces in Indonesia.*** Available at www.iesr.or.id.

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Accelerating Low-Carbon Energy Transition

Technical Note

July 2019

Powering the Cities:

Technical Potential of Rooftop Solar for Public and Commercial Buildings in Two Metropolitan Cities in Indonesia

Agus Tampubolon • Hapsari Damayanti • Fabby Tumiwa
• Marlistya Citraningrum

Background

Indonesia has committed to reduce its fossil fuel dependence by aiming to increase renewable energy use in the national energy mix. Indonesia's National Energy Policy (NEP) is very clear, Indonesia must increase its renewable energy share with from only 8% in 2013 to 23% by 2025. This target, however, has yet to be executed effectively, as renewable energy deployment in Indonesia is moving slowly since the target was set in 2014. For the past three years, the share of renewables in Indonesia's power system is stable at 11 – 13%. Renewables growth reached only 3.6% each year[1], dominated by large-scale renewables: hydropower and geothermal. Other renewables, including solar energy and wind, contributed to less than 1% of total renewable installed capacity in 2018. This sluggish deployment is not in agreement with NEP, with 23% target by 2025, Indonesia must add 5 – 6 GW of renewables power plants each year. It means increasing its current renewables deployment rate by 6- to 8-fold.

Indonesia is often called a country with massive, untapped solar energy potential. Indonesia's average global horizontal irradiation[2] is 4.8 kWh/m^2, meaning a significant amount of electricity per year could be generated, as high as 1,534 kWh/year for each

1 IESR, 2018, *Laporan Status Energi Bersih Indonesia 2018*

2 Solargis, https://solargis.com/maps-and-gis-data/download/indonesia

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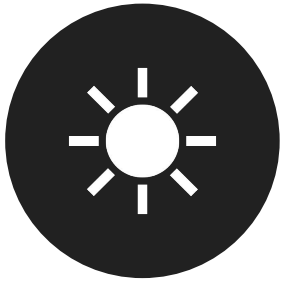
POWERING THE CITIES

Technical Paper

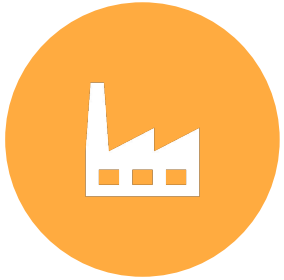
Perhitungan Potensi PLTS Atap untuk Bangunan Pemerintah di Sumatera Utara, DKI Jakarta, Jawa Tengah, Surabaya, dan Bali

A leapfrogging strategy for solar PV rapid deployment in Indonesia

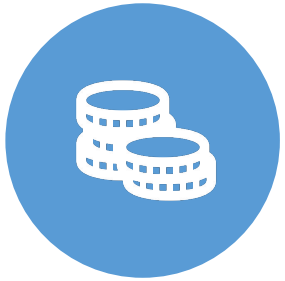


Make national programs on solar

Make (policy) targets binding



A flexible industrial policy



An attractive profit model

Ecosystem National Solar Program

- Policy & Regulatory Support
- Institutional Strengthening
- Design and Standardization
- Product testing and Label
- Capacity Building & Training
- Outreach & Awareness
- Financing Mechanism

Diffusion strategy

Shotgun

- Single approach
- Uniform policy and/or incentives

Snowball

- Peer influence
- Create hotspot
- Social contagion effect

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