Accelerating Renewable Energy Development in Indonesia

ISD Executive Briefing
Jakarta, 15 August 2016
President Jokowi Statement in COP 21 Paris

Indonesia made a commitment to reduce its emission as much as 29% on 2030 or 41% with international support.

The steps we are taking are:
1. Redirecting oil subsidy to more productive sector
2. Increasing 23% of RE use till 2025, and
3. Waste to energy conversion.

Nawa Cita
We will achieve energy sovereignty through policies as followings:

1) Reducing oil import by increasing exploration and exploitation of oil and gas at domestic and abroad;
2) Increasing business efficiency of Indonesian Energy SOE (e.g. Pertamina, PLN, PGN);
3) Gas pipeline construction;
4) Renewable energy development.
5) Prioritizing the use of coal and gas to increase electricity production in the country in order to serve the needs of households and industry.
Accelerating Renewable and Clean Energy

1. Fossil energy will run out, today we import 800 thousand barrels per day, meanwhile there’s around 800 GW NRE potential with only 1% of it utilize.

2. Law 30/2007 mandates the government to increase the use of renewable energy and ensuring energy diversification. There is a need for big leap of 17% renewable energy in 10 years which is now currently 6.8% where the target of 23% in 2025 (PP 79/201).

3. Ambitious target of renewable energy capacity installed by 6 fold in 10 years. 8 GW currently installed. EBT target of 46 GW installed in 2025 (RUEN). Rp. 1300-1600 B investment is needed.

4. 12,659 villages have no full access to electricity whilst 2,519 of the villages are without access at all. NRE is the easiest to use for implementing electrification.

5. EBT requires high technology. Indonesia needs to develop high technology capabilities to increase NRE market. NRE is managed on site therefore energy development must involve the community.
Indonesia Energy Mix 2050

- **New and renewable energy**
- **Oil**
- **Gas**
- **Coal**

**Now**
- Total of electricity needed: 51 GW
- RE portion: 9.6 GW (19%)

**2025**
- Total of electricity needed: 137 GW
- RE portion: 46 GW (34%)

**2050**
- Total of electricity needed: 448 GW
- RE portion: 172 GW (38%)

Source: National Energy Plan (RUEN)
2019: RE in energy mix: 6% → 17%; Electrification Ratio: 85% → 97%
Program 35 GW: 25% EBT (8.8GW); Commitment in emission reduction: 29% by 2030

**TECHNOLOGY**
Technology transfer at rapid rate

**FINANCIAL**
Rp. 1600 trillion by 2025; achieve economical price

**POLICY**
Effective and efficient governance (laws, government regulations, presidential & ministerial decrees)

**HUMAN RESOURCE**
Competent Leaders and professionals with high integrity

**INITIATIVES AND PROGRAM ON RE ACCELERATION**
Energy Resilience Fund (DKE)

DKE PRODUCTS:
- TA, PDF, VGF, Jaminan, Pinjaman, Hibah, Ekuitas, Subsidi Bunga
- 1) premi pengurusan fosil
- 2) dana dari penggunaan bahan bakar fosil
- 3) dana dari badan usaha bidang energi tak terbarukan

Center of Excellence

Clean Energy Fund

Oil Fund
- Strategic Petroleum Reserve
- Dana stabilisasi BBM

ONGRID (SEMI KOMERSIL)
- Program Indonesia Terang
- PLTS 5.000 MW
- PLTB
- PLTBm & PLTBg
- PLTSa
- PLTMH
- KNEB

BIOFUEL
- Program Bioenergi Lestari (biomassa, biodiesel, bioethanol)
- Insentif smart building & smart city
- KNEB

KONSERVASI ENERGI

R & D
- Center of Excellence
- Bioenergi Lestari

Feed in-Tariff (FiT)
- Selisih FiT
Center Of Excellence:
Strategic institute to support Indonesian Clean Energy Initiative

- COE provide assistance in all elements Chain Technology Diffusion of renewable energy in Indonesia

1. Research & Development
   - Appropriate technology commercialization
   - Standardize technology
   - Manufacturing technology incubator

2. Deployment
   - Acquisition and analysis of data
   - Modeling policy for the formulation of appropriate electrification
   - Decision support system for supplying energy modes which include: technical assessment of social, environmental, economic and energy

3. Financing
   - Government incentives (feed-in tariff)
   - PPA process
   - Scheme funding (loan, grant, project equity financing, government guarantee)

4. Project Development
   - Licensing
   - Land acquisition
   - Procurement
   - Construction
   - Project supervision

5. Operation & Maintenance
   - EBT technology supporting industries

- Decision Support
- Information
- Investment
- Collaborative learning
- Technology
- Support implementation program
Program Indonesia Terang

PIT aims to provide electricity for the lagging regions and isolated by local renewable energy sources.

12,659 villages are still lacking of electricity access; 2,519 villages out of total are totally dark due to unavailability of electricity.
Policy Breakthroughs

- Presidential Decree No 4/2016 on Electricity Infrastructure Development
- ESDM Ministeral Regulation No.29/2015 on Supply and Use of Biofuels (Biofuel) Biodiesel type within the framework of the financing by the Fund Management Board of Palm Oil
- ESDM Ministeral Regulation No 19/2016 on Related tariff incentives for the development of solar power plants, with a target of 5000 MW solar power until 2019.
- ESDM Ministeral Regulation No.14/2016 on Implementation of Energy Conservation Services Business to promote Energy Service Company (ESCO)
- ESDM Ministeral Regulation No.44/2015 on the purchase of electricity by PT. PLN from municipal waste-based power plant, to encourage the conversion of waste into electricity. In line with the Presidential Decree No.18 / 2016
- ESDM Ministeral Regulation No 21/2016 on Related tariff incentives for the development of biomass and biogas power plants.
THANK YOU

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