

APEC EGNRET-32 WORKSHOP

RECENT ADVANCES IN UTILITY BASED FINANCIAL MECHANISM THAT SUPPORT ON-GRID RENEWABLE ENERGY

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PT PLN (PERSERO) PUBLIC STATE ELECTRICITY CORPORATION

- Task:
 - Public service obligation on electricity service
 - As an electricity company
- System
 - Interconnection: Java-Bali and the majority of Sumatera
 - Others are still isolated
- Total installed capacity: 29,500 MW
 - PLN: 26,000 MW (88.6%)
 - IPP: 3,500 MW (11.4%)

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PLN POWER PLANT DEVELOPMENT POLICY

- Non oil power plant development
- Non oil primary energy utilization (coal, natural gas etc) for PLN power plant
- Utilization of alternative-renewable energy sources (hydro power, geothermal, biomass, biofuel, solar, wind etc.) as long as in technically & financially feasible
- Reduce of oil consumption for power plant operation composition from 33 % (2007) to 2 % in 2018 (RUPTL-Electricity Supply General Plan 2009-2018)

OIL TO ALTERNATIVE ENERGY CONVERSION PROGRAM

Alternative Energy

- Renewable Energy utilities (geothermal, hydro, solar, wind)
- New Energy utilization (biomass, biogas etc)
- Coal gasification
- Biofuel/Biodiesel utilization

UTILIZATION OF RENEWABLE-ALTERNATIVE ENERGY FOR POWER PLANT

- Feasible in technical, economical and financial aspects
- As a substitution of diesel PP, to reduce oil consumption
- Majority from small scales in rural areas, especially for outside of Java island
- Developed by private participation and PLN as a partnership
- Availability of infrastructure support to reduce investment cost

Policies and Regulation on Renewable Energy for Electricity Generation

1. Regulation on Electricity Supply and Utilization (Government Regulation No. 26/2006)
 - ☀ As a revision of Government Regulation No. 10 Year 1989 in order to secure national electricity.
 - ☀ Relation with new renewable energy development:
 - Putting priority to utilize locally available renewable energy resources for electricity generation;
 - Process of procurement is implemented through direct selection (without tender)

Policies and Regulation on Renewable Energy for Electricity Generation

2. Small Distributed Power Generation Scheme for Renewable Energy (Ministerial Decree: No. 1122 K/30/MEM/2002)
 - **Developer : Small Enterprises**
 - **Capacity : ≤ 1 MW**
 - **Electricity Price by Utility :**
 - **60% x Utility's Production Cost, if connected to the low voltage grid**
 - **80% x Utility's Production Cost, if connected to the medium voltage grid**

Policies and Regulation on Renewable Energy for Electricity Generation

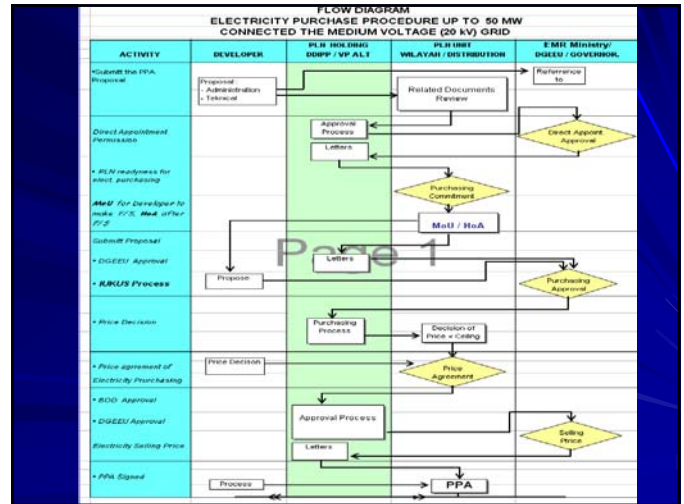
3. Medium Scale Power Generation Scheme for Renewable Energy (Ministerial Regulation : No. 002/2006)
 - **Developer : Business Entity**
 - **Capacity : $1 < \text{Cap} \leq 10$ MW**
 - **Electricity Price by Utility :**
 - **60% x Utility's Production Cost, if connected to the low voltage grid**
 - **80% x Utility's Production Cost, if connected to the medium voltage grid**
 - **Purchase Contract : 10 years and could be extended**



Capacities, Contracts (PPA), Regional production cost and its declaration

Procedure

- Procedure of Renewable Energy Power Plant Development by Independent Power Producers (IPP) in PLN



Pricing Policy

- The price is Levelized Ceiling Price
- Capacity classification :
 - Up to 1 MW
 - 1 MW to 10 MW
 - > 10 MW
- Staging Price applied for :
 - Up to 10 MW: 5 years first & 10 yrs second
 - > 10 MW : 10 years first & 20 yrs second

Financial Indicators

- For up to 10 MW :
 - IRR on equity : interest + margin (7%)
 - Interest : BI* rate + spread (5%)
- For > 10 MW :
 - IRR on equity : interest + margin (5%)
 - Interest : 6 month-LIBOR + spread (5%)

* : Indonesia Central Bank

THANK YOU

