

**Energy Working Group Meeting**

**CAFEO 2019**

**Renewable Energy Implementation  
in Indonesia (Update Report)**

Jakarta, August 2019



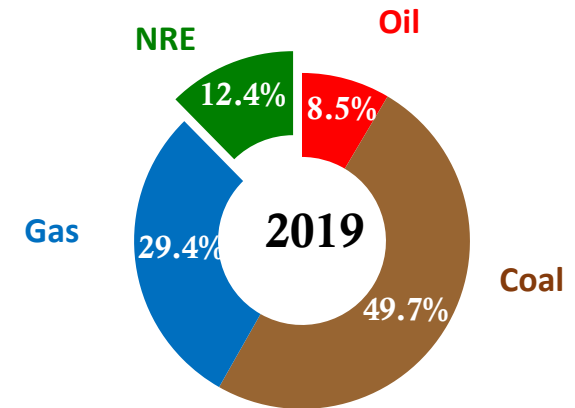


# Fuel Mix & Renewable Energy in Electricity



# Existing Power Generation & Fuel Mix

	2015	2016	2017	2018	Mid-19
DIESEL PP	6.390	6.268	6.487	4.757	4.973
COAL FIRED PP	25.200	27.308	27.499	28.273	29.021
GAS PP	13.579	14.727	14.715	17.662	17.178
GEO THERMAL PP	1.348	1.443	2.197	1.924	1.924
SOLAR PV PP	9	20	21	25	42
HYDRO PP	4.289	4.831	4.860	4.938	4.947
BIOMASS & WIND PP	45	67	147	243	305
	<b>50.859</b>	<b>54.664</b>	<b>55.926</b>	<b>57.822</b>	<b>58.390</b>



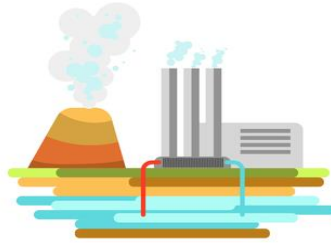
- PLN Power Generation up to Mid 2019 : 58.390 MW
- NRE Power Generation : 7.218 MW

# Renewables Energy Capacity in Indonesia



HYDROELECTRIC

4.973 Mega Watt (MW)  
Hydro Power



GEOTHERMAL

1.924 Mega Watt (MW)  
Geothermal Power



SOLAR

42 Mega Watt (MW)  
Solar PV



BIOMASS

174 Mega Watt (MW)  
Biomass Power



WIND

130 Mega Watt (MW)  
Wind Power

- Year 2019 included Wind Power in Jeneponto Sulawesi with capacity 60 MW by IPP Energy Bayu Jeneponto



# Resume of PLN General Electricity Planning (RUPTL) 2019-2028



Electricity Growth  
**6,42 %**



Additional Generation Capacity  
**56.395 MW**



Energi Mix

RE	23,0 %
Gas	22,0 %
Coal	54,6 %
Oil	0,4 %



Additional Transmission Capacity  
**57.247 kms**



Additional Substation Capacity  
**124.221 MVA**



Additional Distribution Grid  
**494.526 kms**



Additional Customer  
**21.743 thousand**

# Indonesia's Strategies for RE Development



1

Optimizing the development of RE plants that have great potential, namely geothermal, Hydropower, Wind power, Biogas and Solar cell while taking into account supply-demand, system readiness and economic consideration

2

Maximizing the potential of local RE to increase the electrification ratio in Eastern Indonesia

3

Prioritizing the development of hybrid systems for regions of the Diesel Power plant with operate under 12 hours / day.

4

Develop a Smart Grid and Control System to increase RE penetration in the PLN system.

5

The use of biofuel (B20) for Diesel Power Plant existing and examines the development of a bio-nabati power plant using CPO fuel.

6

consider and study the development of a Sea Current Power Plant, and encourage the utilization of Wind potential for the development of Wind Power esp in Eastern Indonesia

7

encourage the utilization of the development of PV Roof Top, and is expected to help achieve the target of utilizing energy resources from EBT by 23% in 2025.



# Tarrif and Incentive for Renewable in Electricity



# *New and Renewable Energy Tarrif*

## NRE INCENTIVE ABOVE FOSSIL

### NRE

85%-100% BPP

General standard price  
Permen No 50 2017

### FOSSIL

75% BPP

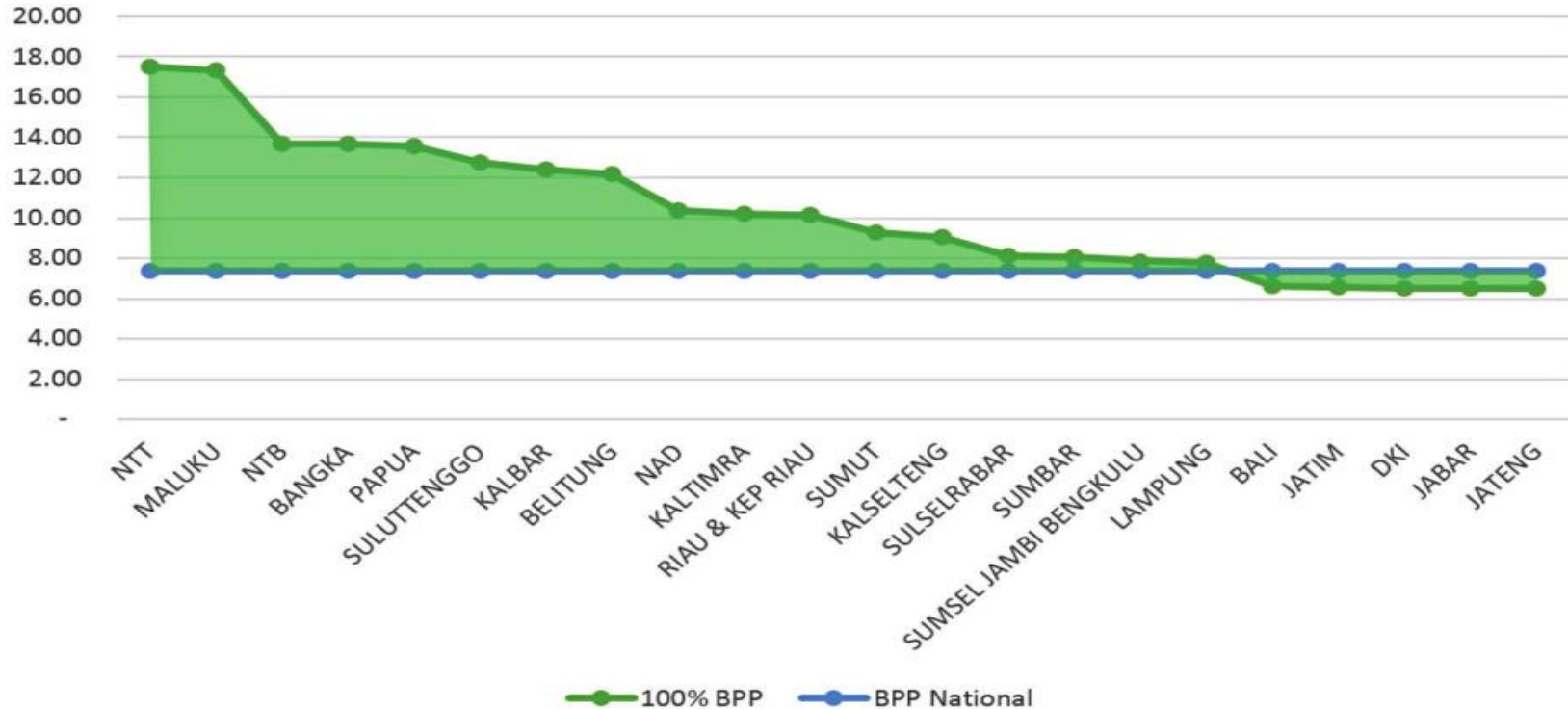
General standard price  
Permen No 19 2017

A 10% -25% difference could be considered as NRE incentive  
from fossils

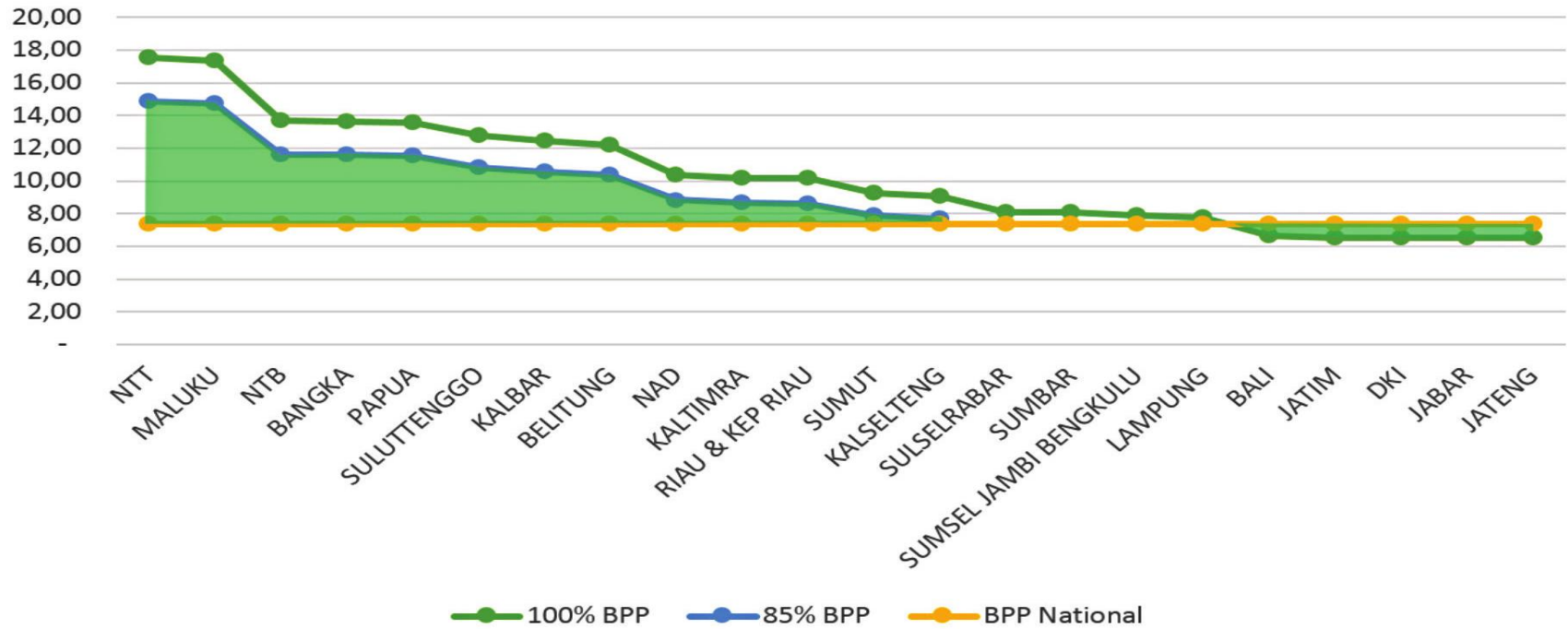
Note : BPP (Biaya Pokok Pembangkitan) = Cost Of Electricity Generation



# Recommendations on geothermal, hydro and municipal waste prices (in cent USD)



# Recommendations for bioenergy, wind, solar and ocean energy prices (in cent USD)



# INCENTIVES TO SUPPORT NEW AND RENEWABLE ENERGY

## TAX ALLOWANCE

Gov't Regulation No.9/2016

**Reduction** of corporate net income tax for 6 years, 5% each year.

**Eligible** for tax allowance, expanded from 129 segments in the previous regulation.

Under **certain requirements**

among others: investment value or export orientation, manpower absorption, local content.

## IMPORT DUTY FACILITY

MoF Regulation  
No.176/PMK.011/2009 jo. MoF  
Regulation No.  
76/PMK.011/2012 jo. MoF  
Regulation 188/PMK.010/2015

**Import duty on Machineries and Equipments, goods, and raw materials for production**

- Exemption of import duty on machineries and equipments
- **2 years** exemption of import duty on raw materials
- Additional 2 years import duty exemption for raw materials if company using locally-produced machineries and equipments (min 30%)

MoF Regulation No.  
66/PMK.010/2015

**Import duty on Capital Goods for Development and Expansion of Power Generation Industries for Public Purpose.**

## TAX HOLIDAY

MoF Regulation No.35/PMK.010/2018

Tax relief facility, starting from the commencement of commercial production. Can be extended for Max. 20 years under certain consideration.

### 100% (Single Rate) Tax Relief for:

Investment Plan minimal IDR 500 million - IDR 1 trillion : 5 Years  
Investment Plan min IDR 1 trillion - IDR 5 trillion : 7 years  
Investment Plan min IDR 5 trillion - IDR 15 trillion : 10 years  
Investment Plan min IDR 15 trillion - IDR 30 trillion: 15 years  
Investment Plan minimal IDR 30 trillion : 20 years  
Transition Time 50% Corporate Income Tax Relief for 2 Years

### **Pioneer Industry:**

1. Upstream metal;
2. Oil refinery;
3. Basic organic-chemical from oil and gas;
4. Machinery industry that manufacture industrial machine;
5. Processing industry based on commodity from agriculture, forestry and fishery;
6. Telecommunication, information and communication;
7. Medical component;
8. Sea transport;
9. The main aircraft and train component industry;

**10. Industrial power generation machinery**

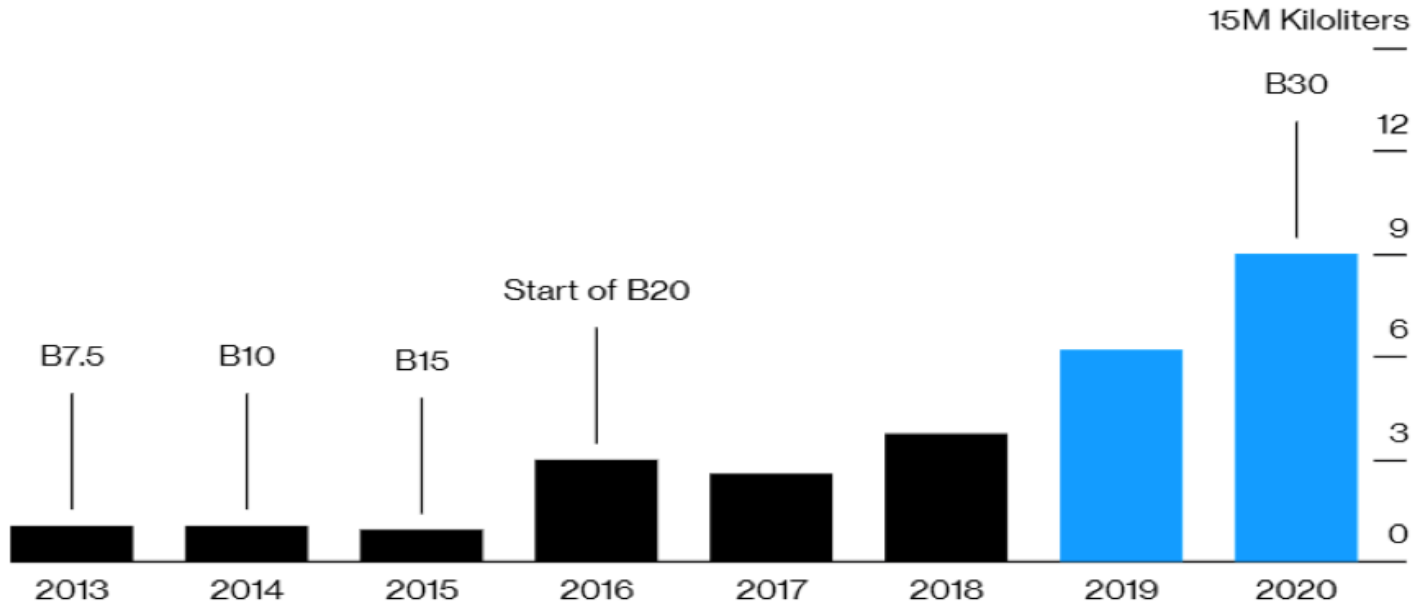


# Implementation of Biofuel Mandatory Usage



# Go Green : Higher Blending Mandate to Boost Indonesia's Biodiesel Usage

■ Annual consumption ■ Estimated consumption



Source: Energy and Mineral Resources Ministry

- Note :
1. Indonesia plans to raise biodiesel blending to 30% next year
  2. Country's biofuel mandate will help reduce fuel import costs

# Thank You



**PII - Persatuan Insinyur Indonesia**  
**The Institution of Engineers Indonesia**