DIRECTORATE GENERAL OF **NEW** RENEWABLE ENERGY AND ENERGY CONSERVATION
MINISTRY OF ENERGY AND MINERAL RESOURCES, INDONESIA

NEW AND RENEWABLE ENERGY POLICY

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Introduction

- Average growth of energy consumption is 7% per year, the fulfilling of energy demand is still dominated by fossil fuels.
- Electrification ratio and accessibility to electricity are limited, therefore Government of Indonesia has to strangthen its energy security.
- Indonesia has an abundance potential of new and renewable energy. Unfortunately, many of the potentials are left unutilized.
- Indonesia ‘s commitment : to reduce GhGs emission as much as 767 million TOE (26%) by 2020, in which energy sector to contribute 30 million TOE.
- To support the utilization of new and renewable energy, the Government of Indonesia has to change paradigm of energy utilization from a supply side to demand side.
- The target in energy utilization based on new and renewable energy will reach to 25% of total national mixed energy in year 2025.

CURRENT CONDITION

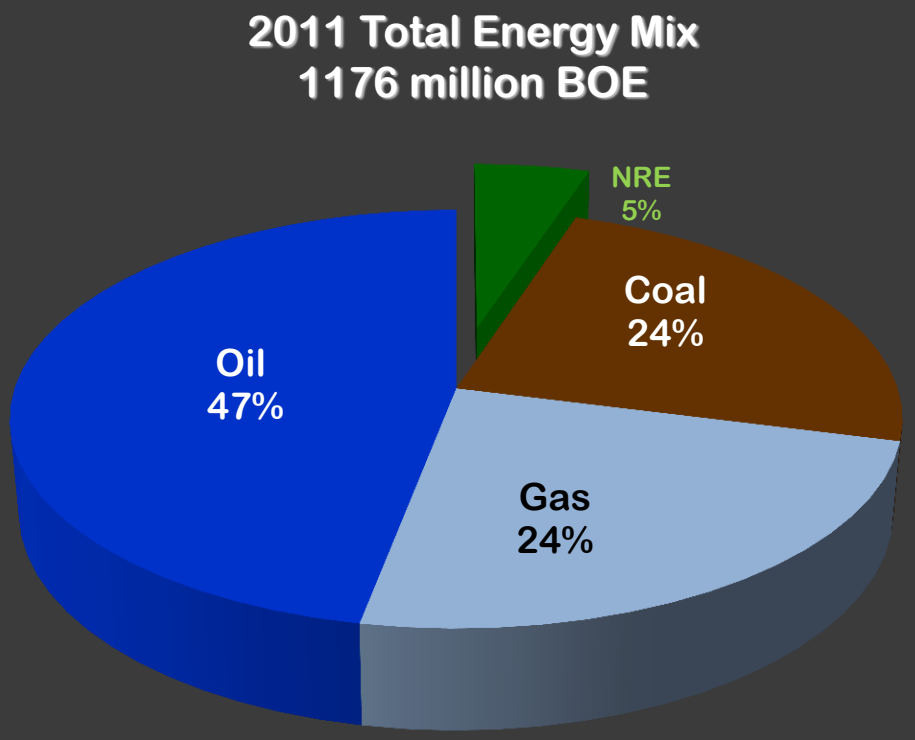






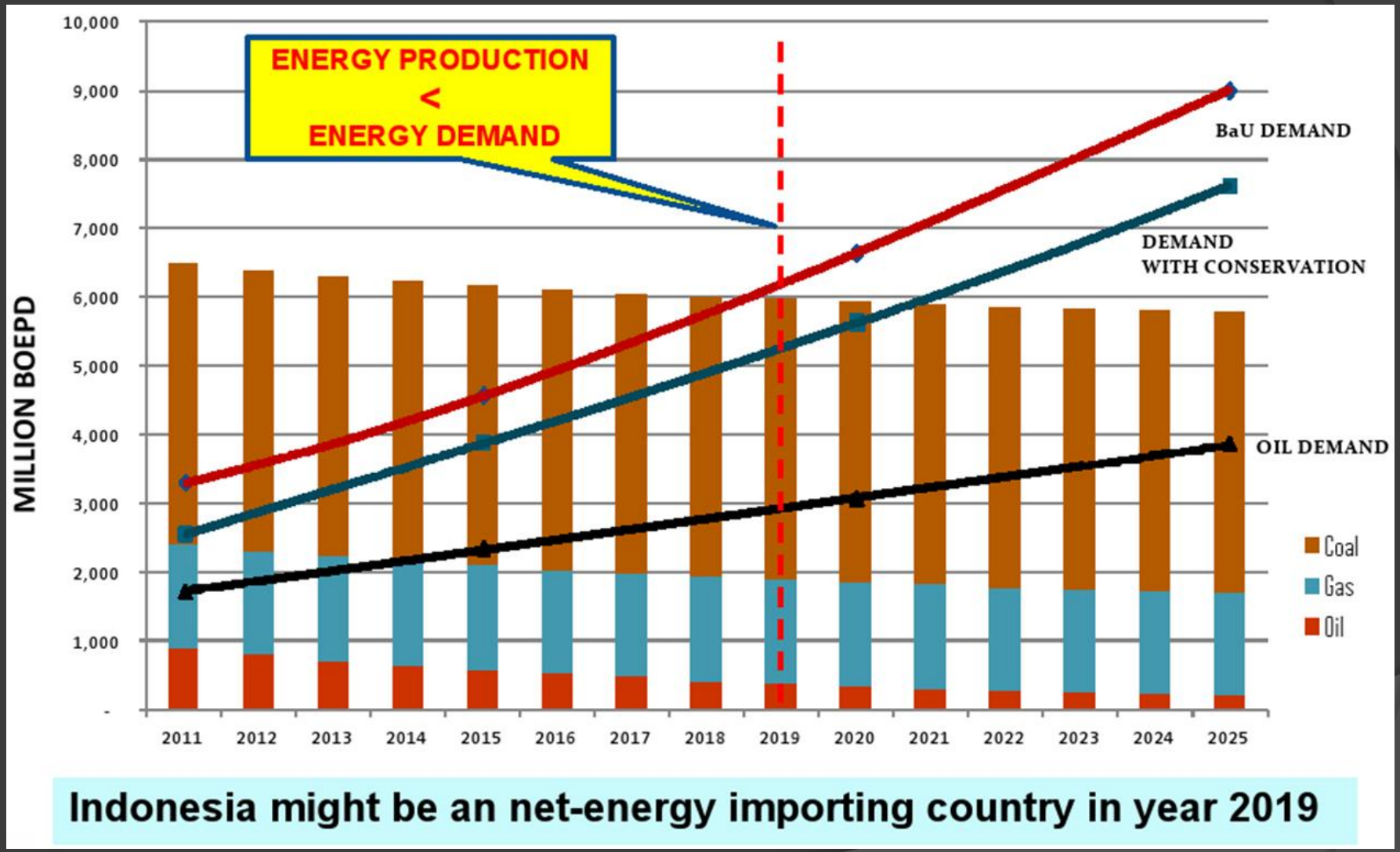


CURRENT CONDITION



Share of Non Fossil Energy ≈ 5%

- The average of growth rate of energy consumption is 7% per year
- High dependence on fossil energy while it reserves are more limited
- Less of development of energy infrastructure particularly in rural / remote areas and outer islands
- Utilization of renewable energy and implementation of Energy Conservation is not optimal
- Public access to energy (modern) is still limited, Electrification ratio (2012) is 74.%
- Linkage to environmental issues about mitigation of climate change



Indonesia might be an net-energy importing country in year 2019

ENERGY RESERVES AND PRODUCTION

NO	NON FOSSIL ENERGY	RESOURCES (SD)	INSTALLED CAPACITY (KT)	RATIO KT/SD (%)
1	2	3	4	5 = 4/3
1	Hydro	75,670 MW	5,705.29 MW	7.54
2	Geothermal	29,038 MW	1,189 MW	4.10
3	Mini/Micro Hydro	1,013.5 MW	462.0 MW	46.0
4	Biomass	49,810 MW	1,618.40 MW	3.25
5	Solar Energy	4.80 kWh/m^2/day	13.5 MW	-
6	Wind Energy	3 – 6 m/s	1.87 MW	-
7	Uranium	3.000 MW (e.q. 24,112 ton) for 11 years*)		

*) only in Kalan – West Kalimantan

NO	FOSSIL ENERGY	RESOURCES (SD)	RESERVES (CAD)	RATIO SD/CAD (%)	PRODUCTION (PROD)	RASIO CAD/PROD (YEAR)*)
1	2	3	4	5 = 4/3	6	7 = 4/6
1	Oil (billion barrel)	56.6	7.99 **)	14	0.346	23
2	Gas (TSCF)	334.5	159.64	51	2.9	55
3	Coal (billion ton)	104.8	20.98	18	0.254	83
4	Coal Bed Methane/CBM (TSCF)	453	-	-	-	-

*) note: assuming that there is no new found

**) Cepu Block is included

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NATIONAL COMMITMENT TO REDUCE GHG EMISSION

Presidential Regulation No. 61/2011 on National Action Plan on GHGs Emission Reduction *)

Own efforts

26% (767 million Ton)

41%

Own efforts and international support

Forestry, Peat Land, Agriculture	680 million Ton
Energy Sector	**30 million Ton**
Waste	48 million Ton
Industry and Transportation	9 million Ton

Through the development of new renewable energy, implementation of energy conservation and clean fossil technology

*) by the year of 2020, as the Government of Indonesia's commitment at the G-20 meeting at Pittsburg.



REGULATIONS TO PROMOTE RENEWABLE ENERGY

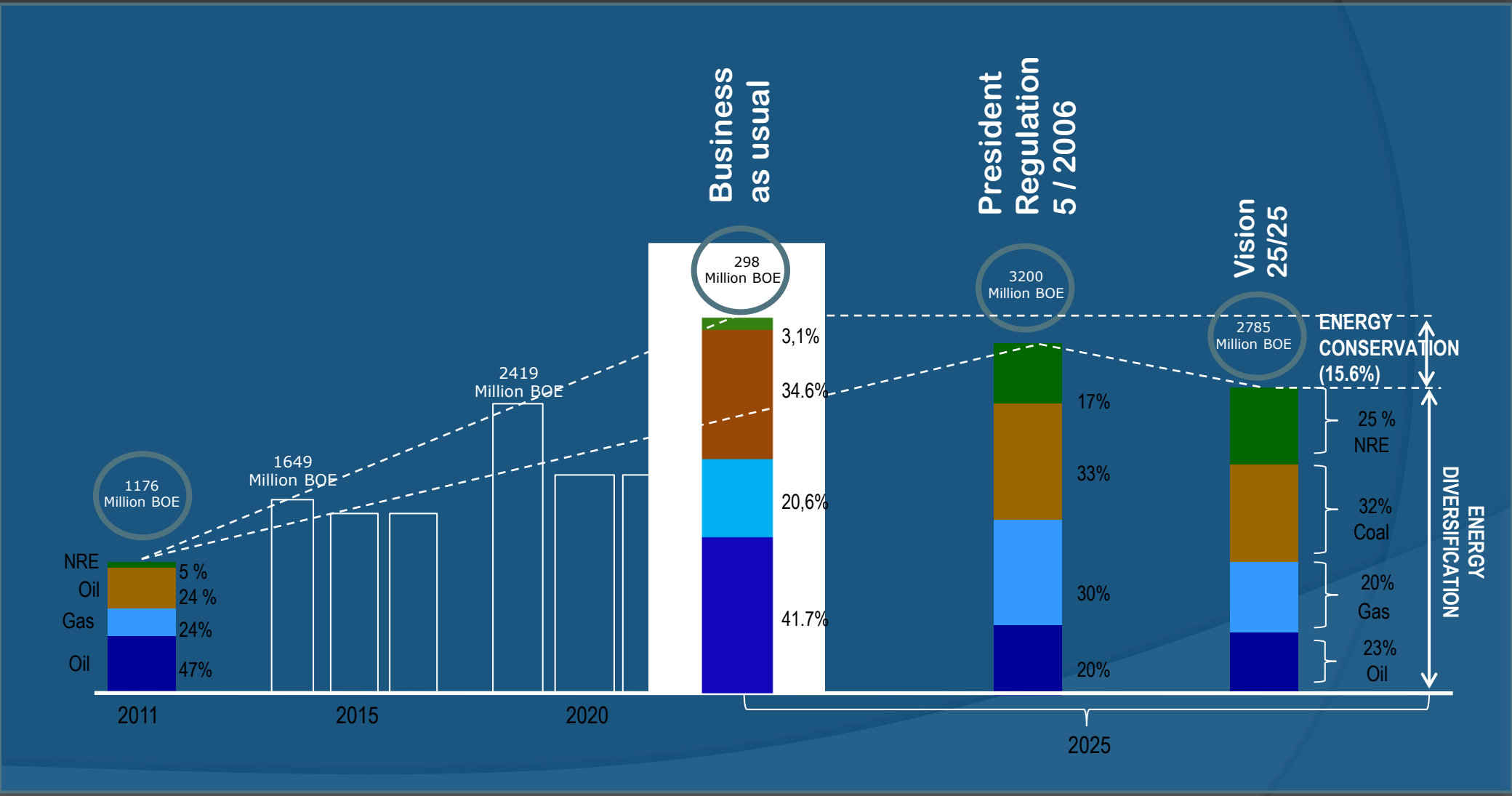
POLICY DIRECTIONS

- Global trend shows that new and renewable as well as clean energy are energy option. Based on energy potential of Indonesia as well as GHGs Emission Reduction, in the future new renewable energy is main of energy resources with non renewable energy (fossil energy) act as balancing;

- Facing the situation, Indonesia is focusing on developing renewable energy sector, especially in the fields of **Geothermal, Hydro Power, Photo Voltage,** and **Biomass/Biofuel.**

- To enhance the development of renewable energy, Indonesia has set up a series of regulation on fiscal incentive as well feed-in tarriffs.

POLICY DIRECTION



PROJECTION OF INDONESIA'S ENERGY MIX (%)

SCENARIO ENERGY MIX	2010	2015	2020	2025	2030	2040	2050
Biomass – Biofuel	3,1	4,7	5,2	7,9	8,3	9,5	9,7
Biomass from waste (for electricity)	0,0	0,5	1	2,4	4,2	5,4	5,6
Geothermal	1,9	4,2	5,2	7,9	8,3	8,8	8,7
Hydro Power	0,6	0,9	1,7	2,9	3,1	2,7	2,4
Ocean Power	0	0	0,2	0,3	0,3	0,4	0,6
Solar Power	0	0,2	0,7	1,1	1,3	1,9	1,8
Other Renewable Energy Resources	0	0,1	0,3	0,4	0,4	0,5	0,5
Oil	49,7	38,6	29,3	23,7	19,4	16,9	16,5
Gas	20,1	19,5	19	19,7	18,8	16,2	14,3
Coal	24,5	31,3	36,9	30,7	31	30	29,7
New Energy (nuclear, etc.)	0	0	0,7	3,2	5	8,1	10,2
Non New Renewable Energy Mix	94,30	89,40	85,00	74,10	69,10	62,70	60,50
New Renewable Energy Mix	**5,7**	**10,6**	**15**	**25,9**	**30,9**	**37,3**	**39,5**

STRATEGY FRAMEWORK AND POLICY INSTRUMENTS

STRATEGY FRAMEWORK

- **Energy diversification:** to increase the utilization of new renewable energy.
  - Geothermal power plants
  - Biodiesel
  - Municipal solid waste power plants
- **Energy conservation:** to have the sectors of household, commercial, industry, and transportation use the energy efficiently.
  - Mandatory energy management for energy user > 6000 TOE/years
  - Labelization of energy efficiency products
  - Sosialization of energy efficiency
- **Transformation Energy management :** to change the paradigm of energy management with orientation to use more NRE, also to develop small scale NRE with local resources.
  - Development of Self Suficient Energy Village (Desa Mandiri Energi, DME)
    - Micro and pyco Hydro Powers
    - Solar Energy (Photo Voltaic) Home System (100 W)
    - Bio Digester

POLICY INSTRUMENTS

Fiscal

- Fiscal incentive for NRE development
- Pricing for new renewable energy (Feed-in Tariff/FIT)
- Renewable Portfolio Standard (RPS)



INCENTIVES IN DEVELOPING NEW AND RENEWABLE ENERGY

Fiscal Incentives

1. Ministry of Finance Regulation (PMK) No. 21/PMK.011/2010 and No. 24/PMK.011/2010 on tax and custom facilities for renewable energy utilization;
2. Ministry Of Finance Regulation No. 130/PMK.011/2011 on Provision of Exemption Facilities or Reduction of Income Tax.
3. Ministry of Energy and Mineral Resources Regulation No. 04/2012 concerning Electricity Power Purchased Price from Renewable Generations (small and medium scale) and Excess Power.
4. Incentives for geothermal developers:
   - ✓ MEMR Regulation No. 22/2012 on geothermal.
   - ✓ Exemption custom facilites for imported goods (PMK No. 177/PMK011/2007)
   - ✓ GoI to guarantee value added taxes on imported goods (Ministry of Finance Decree No. 22/PMK011/2011)
   - ✓ Income tax facility (Governmental Regulation No. 62/2008 jo No. 1/2007)
5. Incentive grants for the implementation of Energy Conservation Programs (President Instruction No. 2/2008).

Pricing for Renewable Energy, Geothermal

(Minister of Energy and Mineral Resources Decree No. 22 Year 2012)

No.	AREA	PRICE (Cent US$/kWh	
		High Voltage	Medium Voltage
1.	Sumatera	10	11,5
2.	Java, Madura and Bali	11	12,5
3.	South, West and Southeast Sulawesi	12	13,5
4.	North and Central Sulawesi and Gorontalo	13	14,5
5.	West amd East Nusatenggara	15	16,5
6.	Maluku and Papua	17	18.5

MANDATORY ON RENEWABLE ENERGY

- President Regulation No. 4 / 2010 about the assignment of PLN to support the Fast Track Program.
- Minister of Energy and Mineral Resources Regulation No. 22 / 2012 about the assignment of PLN to buy electricity from geothermal power plants.
- Minister of EMR Regulation No. 15/2010 on Crash Program 10.000 MWe Phase II, to support and to enhance the development of geothermal
- Presidential Regulation No. 61/2011 on National Action Plan of GHG Emission Reduction (RAN-GRK)
- Presidential Instruction No. 13/2011 on Energy and Water Saving
- Ministerial Regulation No. 13/2010 on Determination and Enforcement of Energy Manager's Competency Standards for Industrial Sector
- Ministerial Regulation No. 14/2010 on Determination and Enforcement of Energy Manager's Competency Standards for Building Sector
- Ministerial Regulation No. 6/2011 on Energy Efficiency Labeling on Swabalast Lamp
- Ministerial Regulation No. 13/2012 on Electricity Saving
- Ministerial Regulation No. 14/2012 on Energy Management
- Ministerial Regulation No. 32/2008 on Provision, Utilization and Procedures of Commerce Biofuel

Thank You



Go Green Energy!

Green energy, Future energy

DIRECTORATE GENERAL OF NEW RENEWABLE ENERGY AND ENERGY CONSERVATION
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PROJECTION OF INDONESIA'S ENERGY MIX (MTOE)

SCENARIO ENERGY MIX	2010	2015	2020	2025	2030	2040	2050
TOTAL Energy	159	215	290	380	480	740	980
Biomass – Biofuel	5	10	15	30	40	70	95
Biomass from waste (for electricity)	-	1	3	9	20	40	55
Geothermal	3	9	15	30	40	65	85
Hydro Power	1	2	5	11	15	20	24
Ocean Power	-	-	0,5	1	1,4	3	5
Solar Power	-	0,5	2	4	6	14	18
Other Renewable Energy Resources	-	0,2	1	1,5	2	4	5
Oil	79	83	85	90	93	125	162
Gas	32	42	55	75	90	120	140
Coal	39	67	107	117	149	222	291
New Energy (nuclear, etc.)	-	-	2	12	24	60	100
Subtotal of Biomass	5	11	18	39	60	110	150
Subtotal of NON Biomass Renewable Energy	4	12	24	48	64	106	137
Subtotal of Renewable Energy	9	23	42	87	124	216	287
TOTAL of New Renewable Energy	**9**	**23**	**44**	**99**	**148**	**276**	**387**

Pricing for renewable energy, Biomass

Electricity Price of Small Scale and Medium Scale Renewable Energy Electricity Generation or Excess Power (Minister of Energy and Mineral Resources Decree No. 4 Year 2012)

No.	Energy	Capacity	Electricity Tariff	Note
Medium Voltage				
1.	Biomassa	until 10 MW	Rp. 975,- / kWh X F	
2.	Biogas	until 10 MW	Rp. 975,- / kWh X F	Non Municipal Solid Waste
3.	Municipal Solid Waste (MSW)	until 10 MW	Rp. 1050,- / kWh	Zero waste *)
4.	Municipal Solid Waste (MSW)	until 10 MW	Rp. 850,- / kWh	Landfill *)
Low Voltage				
1	Biomassa	until 10 MW	Rp. 1.325,- / kWh X F	
2	Biogas	until 10 MW	Rp. 1.325,- / kWh X F	Non Municipal Solid Waste
3	Municipal Solid Waste (MSW)	until 10 MW	Rp. 1.398,- / kWh	Zero waste *)
4	Municipal Solid Waste (MSW)	until 10 MW	Rp. 1.198,- / kWh	Landfill *)

- **F as an incentive factor based on the region where the power plant installed, as follows:**
  Jawa, Bali, and Sumatera region : F = 1
  Kalimantan, Sulawesi , NTB and NTT region : F = 1,2
  Maluku and Papua region : F = 1,3

Note : *) Based on Act No. 18 Year 2008 concerning to Waste Management.