

Indonesia

“Update of Financial Incentives for Promoting Renewable Energy”

Presented by:

Emy Perdanahari

Ken Martina

Renewable energy potential & installed capacity in Indonesia

Source	Potential MW	Installed Capacity MW	Percentage %
Large Hydro	75,670	4,200	5.6
Geothermal	28,530	1,189	4.2
Mini/Micro Hydro	500	86	17.2
Biomass	49,810	445	0.9
Solar Energy	4.8 kWh/m ² /d	14	-
Wind Energy	3 - 6 m/s	1.4	-
Total	154,510	5,936	3.84

Source: Ministry of Energy and Mineral Resources, 2010

FINANCIAL REGULATIONS TO PROMOTE RENEWABLE ENERGY BASED POWER PLANT

- 1. MINISTRY OF FINANCE REGULATION NO. 21/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 for Promoting Renewable Energy.
- 3. MINISTRY OF ENERGY AND MINERAL RESOURCES REGULATION NO. 4 YEAR 2012** on Electricity Price Purchased by PT. PLN, from Small Scale and Medium Scale Renewable Energy Electricity Generation or Excess Power.

MINISTRY OF FINANCE REGULATION NUMBER 21/PMK.011/2010

Regulation of tax and customs facility for renewable energy resources utilization activities

FINANCIAL INSTRUMENTS SUPPORT

Income Tax



- Reduced net income tax for 30% of total investment (5% a year for 6 years)
- Accelerated depreciation
- Imposition of Income tax on dividend paid to Foreign Taxable at 10%
- Compensation for losses in certain circumstances

Value Added Tax



Exemptions of VAT for Taxable Goods, machinery and equipment for RE utilization (not included spare parts)

Import Duty



Exemptions for Import Duty of

- Goods and Machinery for development and capital investment
- Capital Goods Imports for construction and development of electricity industry

Tax Borne by Government



Regulated in State Annual Budget Law and its implementing regulations

MINISTRY OF FINANCE REGULATION NUMBER 130/PMK.011/2011

on Provision of Exemption Facilities or Reduction of Income Tax

CORPORATE TAXPAYERS

can get facilities:

EXEMPTION OR REDUCTION OF CORPORATE INCOME TAX

EXEMPTION OF CORPORATE INCOME TAX

5 - 10 tax year

After the end of Corporate Income Tax exemption facility

REDUCTION OF CORPORATE INCOME TAX

50% of Income Tax Payable for 2 tax years

Minister of Finance may provide facilities Corporate Income Tax exemption or reduction for a period EXCEED predetermined period of time

*) The facility can be utilized if:

1. Had executed the entire capital investment
2. Has been produced commercially

• PIONEER INDUSTRIES

- Having a new investment plan min. IDR 1 trillion
- Placing funds in the Indonesian banking min 10% from the total capital investment plan
- Existed as ENTITY INDONESIA

- Industry of Basic Metals Manufacture
- Industry of Oil Refining and / or Basic Organic Chemicals sourced from Oil and Natural Gas
- Industry of Machinery
- **INDUSTRY OF RENEWABLE RESOURCES FIELD**
- Industry of Communications Equipment

PIONEER INDUSTRIES

MINISTRY OF ENERGY AND MINERAL RESOURCES DECREE No. 4 / 2012
On Electricity Price Purchased by PT. PLN from Small Scale and Medium Scale Renewable
Energy Electricity Generation or Excess Power

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

▪ **F as an incentive factor based on the region where the power plant installed :**

- Java, 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 on Waste Management.*



GEO THERMAL



GOVERNMENT POLICIES TO SCALE UP GEOHERMAL DEVELOPMENT IN INDONESIA

1. **Presidential Regulation No. 04/2010**, 2nd phase of 10,000 MW Fast Track Program) in order to speed up the development of geothermal power.

Followed by MEMR Decree No.02 date 27 Jan 2010

- on Project list on the fast-track program of **10,153 MW** phase 2 from renewable energy, coal, and gas
- **Geothermal power plants contribute 40%** (44 new sites with total capacity of 3,977 MW), share capacity of **PLN 22% and IPPs 78%** - 12% from Hydro power plants (3 new sites with total capacity of 1,430 MW), PLN share capacity of 70%
- **Government guarantee**

2. Pricing Policy

- **Ministerial Regulation of MEMR No. 02/2011** on geothermal price structure. The MR gives certainty on electricity price from geothermal power plant:
 - Electricity price as the result of a GWA tender, is represent as purchase price by PT PLN in the Power Purchase Agreement, which is final and non negotiable
 - Ceiling price for geothermal energy : **US\$ 9.7 cents/kWh**
 - If the price exceeds US\$ 9.7 cents/kWh, negotiations between Parties are needed.

GOVERNMENT POLICIES TO SCALE UP GEOHERMAL DEVELOPMENT IN INDONESIA (cont'd)

3. Financial Incentives

•Fiscal incentives for geothermal development (based on Government Regulation No. 62/2008 jo No. 1/2007; MR of MoF No. 177/PMK.011/2007; and MR of MoF No. 22/PMK.011/2011) :

- 30%** of corporate income tax;
- 10%** of added-value tax paid by the GoI;
- Custom duties exemption for geothermal developer;
- 25%** per year depreciation for 8 years with double declining balance method; and
- Investment tax credit **5%** per year for 6 years.
- Currently the mechanism of Feed in Tariff for each GWA is being developed** by the GoI in order to make geothermal business more attractive to investors.

4. Access to Potential Geothermal Resources for Investors

- The Government offers a Preliminary Survey Assignment to third party (investor) which provides "**first right refusal**".
- The GoI establishes new GWAs and widely open opportunities for investors to participate in the geothermal business through GWAs tendering mechanism

GOVERNMENT POLICIES TO SCALE UP GEOHERMAL DEVELOPMENT IN INDONESIA (cont'd)

5. In order to accelerate the tender process of new GWAs, the policies which regulate **bidding process** are being revised in order to make the tender **more simple, transparent and bankable**.
6. Coordinating with all relevant parties to **accelerate and simplify the permit process**.
7. Related to Forestry Issues, currently MEMR and Ministry of Forest have signed the MoU regarding **the acceleration of geothermal utilization permit within production forest, protected forest, and conservation forest**.
8. The government has issued a Presidential Decree that guarantees support for investment in Geothermal Infrastructure Project (PR No. 13/2010 jo PR No.67/2005 and PR 78/2010) and Ministerial of Finance Regulation No. 139/2011 (PMK No. 139/2011) **which guarantee the business feasibility of PT PLN for developing electricity from renewable energy, coal, and gas through cooperation with Independent Power Producers**.



Thank you



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

UPDATE ON POLICIES TO PROMOTE INVESTMENT IN NEW AND RENEWABLE ENERGY

Presented by:

Maritje Hutapea

Director for Bioenergy

Presented at :

The 4th Indonesia – U.S. Energy Policy Dialogue

Surabaya, May 14th-15th 2012



OUTLINE

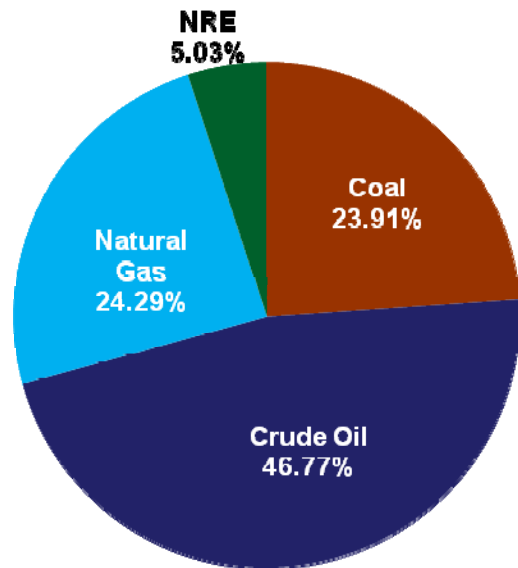
- I. CONDITION OF ENERGY (2011)
- II. INDONESIAN ENERGY POLICY
- III. THE DEVELOPMENT OF NEW AND RENEWABLE ENERGY
 - A. Geothermal
 - B. Bioenergy
 - C. Hydro, Solar, and Wind
- IV. CONCLUSION





I. CONDITION OF ENERGY (2011)

National Energy Mix Total
(2011)
1176 million BOE



Elasticity of Energy = 1,65
Share of Non Fossil Energy \approx 5%

1. High dependence on fossil energy;
2. The utilization of renewable energy is still low;
3. The average of growth rate of energy consumption is 7% per year ;
4. Public access to energy (modern) is still limited:
 - a. Electrification ratio of year 2011 is 72.95 % (27.05 % of households not yet electrified);
 - b. Less of development of energy infrastructure particularly in rural / remote areas and outer islands.
5. Linkage to environmental issues:
 - a. Mitigation of climate change;
 - b. Carbon trading;
 - c. National commitment to reducing emissions 26% by 2020.

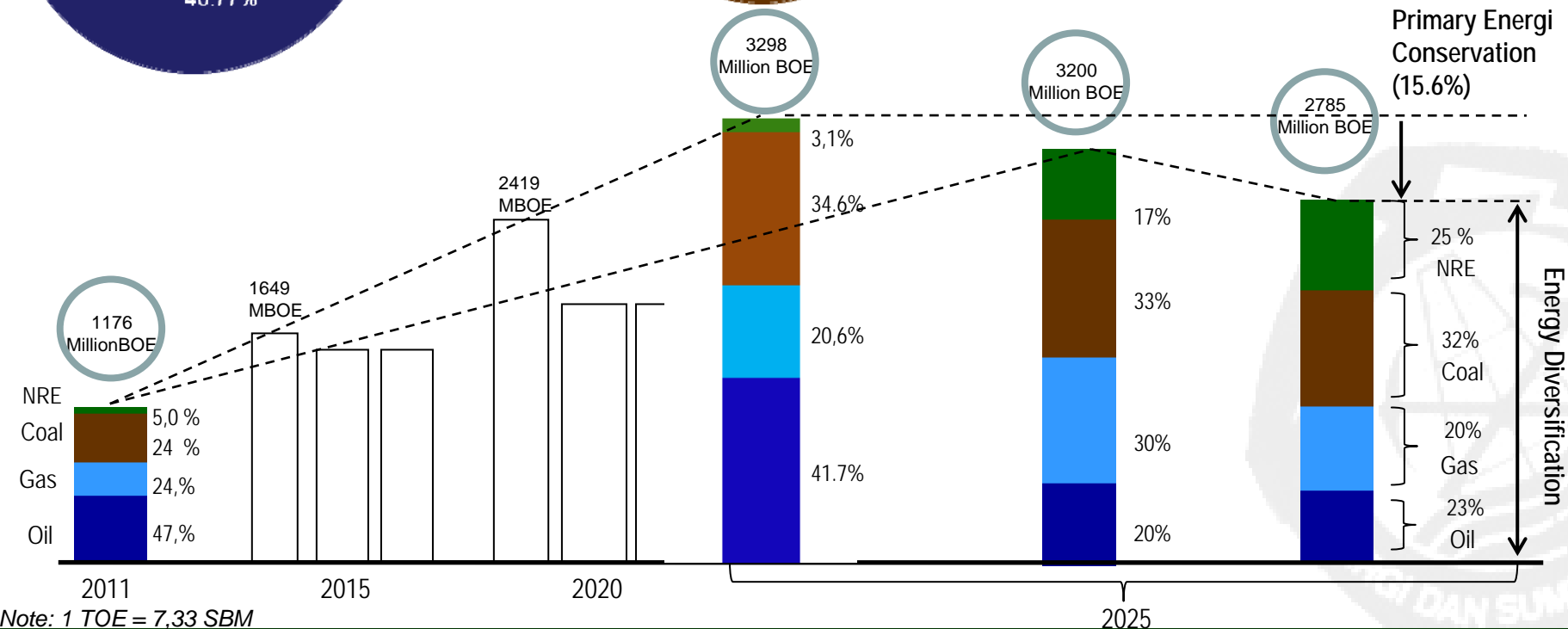
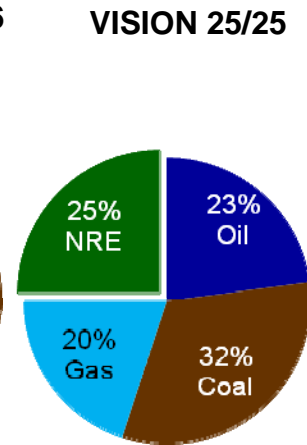
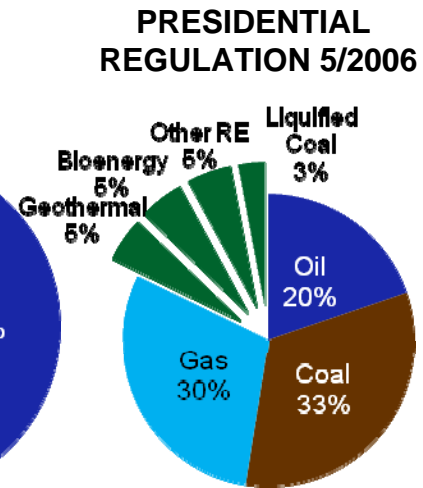
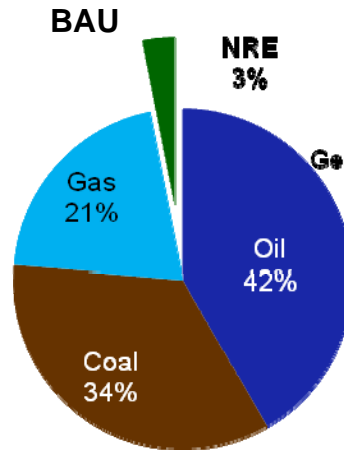
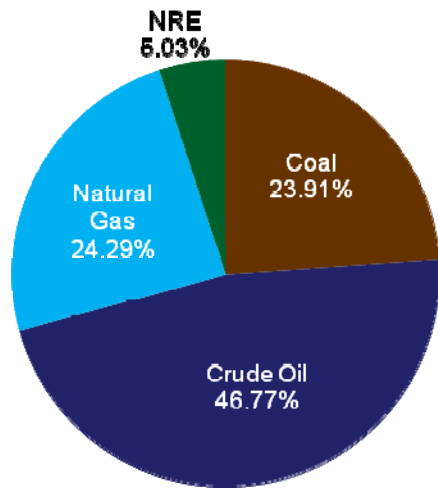


II. INDONESIAN ENERGY POLICY





POLICY DIRECTION





ENERGY POLICIES

1. **Energy Conservation** to improve efficiency in energy utilization from up-stream up to down-stream (***Demand Side***) i.e industrial, transportation, household and commercial sector
2. **Energy Diversification** to increase new renewable energy share in national energy mix (***Supply Side***). i.e

New Energy

- a. Liquefied Coal,
- b. Coal Bed Methane,
- c. Gasified Coal,
- d. Nuclear,
- e. Hydrogen,
- f. Other Methanes.

Renewable Energy

- a. Geothermal,
- b. Bioenergy,
- c. Hydro,
- d. Solar,
- e. Wind,
- f. Ocean.





III. THE DEVELOPMENT OF NEW AND RENEWABLE ENERGY



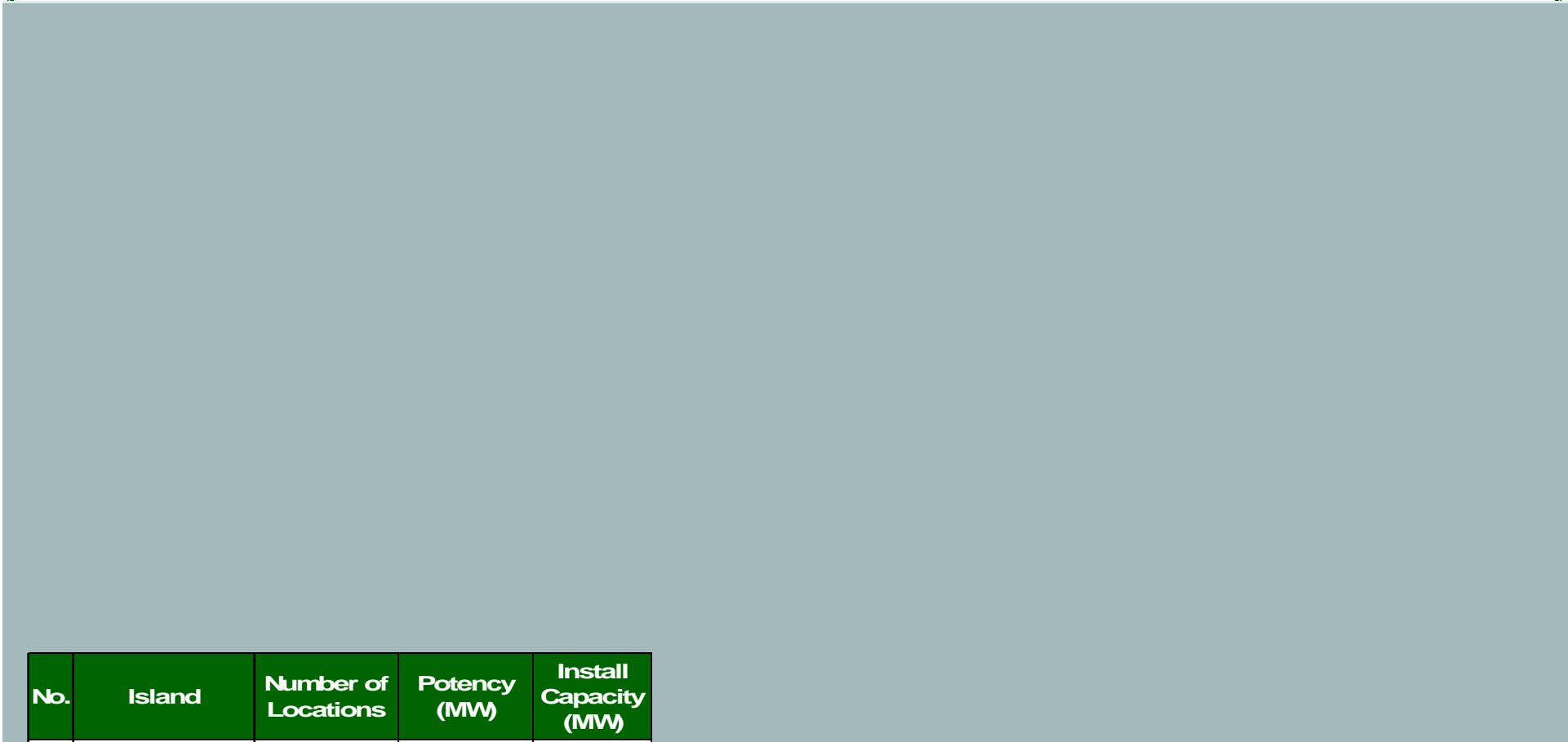


A. Geothermal





GEOHERMAL POTENTIAL MAP



No.	Island	Number of Locations	Potency (MW)	Install Capacity (MW)
1	Sumatera	86	13,516	12
2	Java	71	10,092	1,117
3	Bali	5	296	
4	Nusa Tenggara	22	1,471	
5	Kalimantan	8	115	
6	Sulawesi	55	2,519	60
7	Maluku	26	954	
8	Papua	3	75	
Total		276	29,038	1,189

Source : Geological Survey, MEMR(2010)

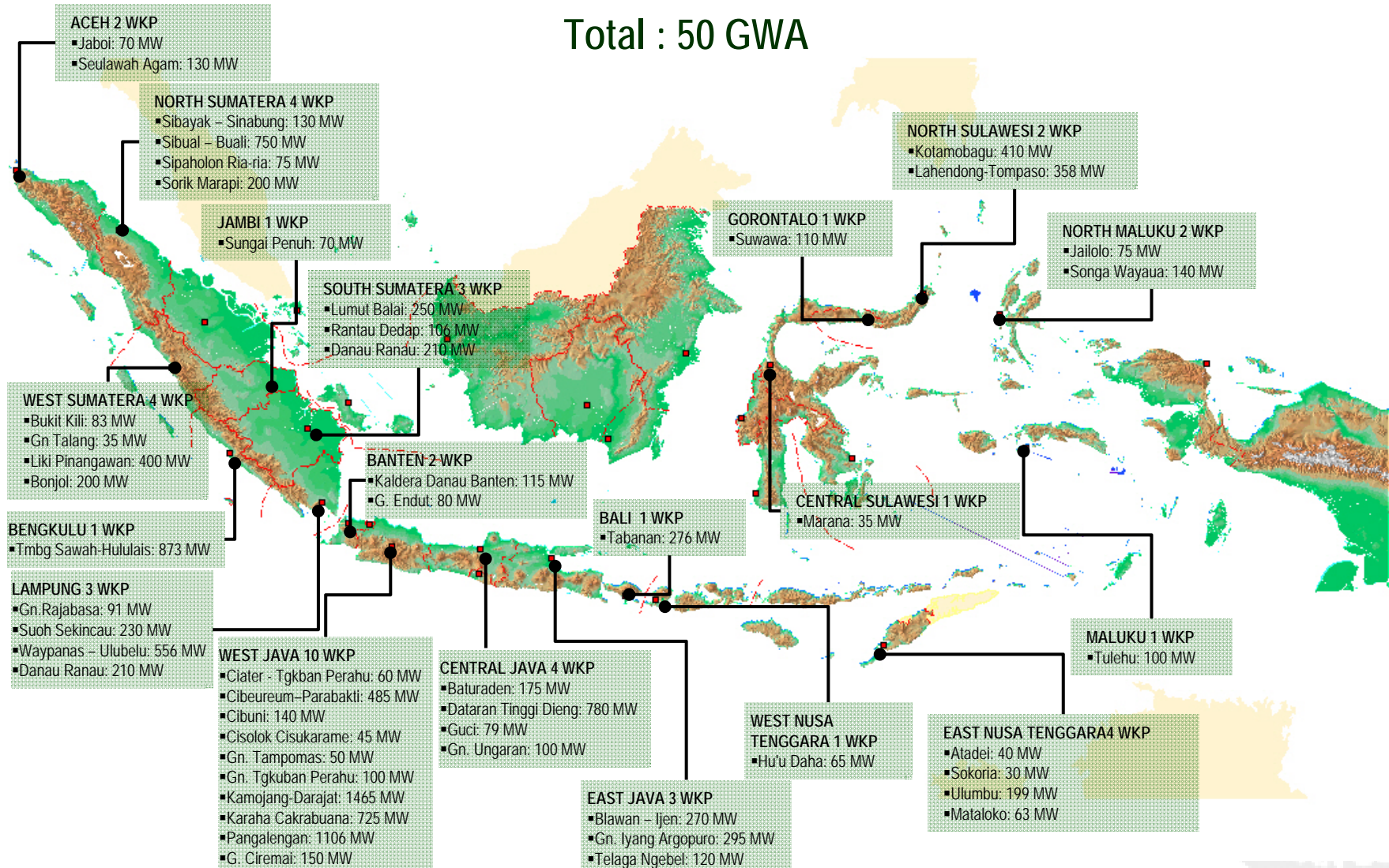
Note:

- Preliminary Survey
- Detail Survey
- Ready to Developad
- Already Developed



DISTRIBUTION OF GEOTHERMAL WORKING AREA (GWA)

Total : 50 GWA





INSTALLED GEOTHERMAL POWER PLANT (GPP)

Status on April 2012

GPP SIBAYAK: 12 MW

GPP LAHENDONG: 80 MW

GPP WAYANG
WINDU: 227 MW

GPP GUNUNG SALAK: 377 MW

GPP KAMOJANG:
200 MW

GPP DARAJAT: 270 MW

GPP DIENG: 60 MW



INSTALLED GEOTHERMAL POWER PLANT CAPACITY 2012

No.	Geothermal Working Area/ Location	License Holder	Developer	Name of Geothermal Power Plant	Installed Capacity (MW)
1	Sibayak – Sinabung, SUMUT	PT. Pertamina Geothermal Energy (PGE)	PT. Pertamina Geothermal Energy (PGE)	Sibayak	12
2	Cibeureum – Parabakti, JABAR	PT. Pertamina Geothermal Energy (PGE)	KOB - Chevron Geothermal Salak, Ltd (CGS)	Salak	377
3	Pangalengan, JABAR	PT. Pertamina Geothermal Energy (PGE)	KOB - Star Energy Geothermal Wayang Windu, Ltd (SEGWLL)	Wayang Windu	227
4	Kamojang – Darajat, JABAR	PT. Pertamina Geothermal Energy (PGE)	PT. Pertamina Geothermal Energy (PGE)	Kamojang	200
5	Kamojang – Darajat, JABAR	PT. Pertamina Geothermal Energy (PGE)	KOB - Chevron Geothermal Indonesia, Ltd (CGI)	Darajat	270
6	Dataran Tinggi Dieng, JATENG	PT. Pertamina Geothermal Energy (PGE)	PT. Geo Dipa Energi (GDE)	Dieng	60
7	Lahendong – Tompasso, SULUT	PT. Pertamina Geothermal Energy (PGE)	PT. Pertamina Geothermal Energy (PGE)	Lahendong	80
					1.226



GOVERNMENT POLICIES TO SCALE UP GEOTHERMAL DEVELOPMENT IN INDONESIA

The Government of Indonesia (GoI) intends to accelerate and speed up the development of geothermal. In order to do so, the government intends to enhance the investment climate for both existing developers as well as new entrants to the geothermal sector in Indonesia.

1. Law No. 27/2003 on Geothermal and Government Regulations No. 59/2007 on Geothermal Business Activities jo Government Regulations No. 70/2010 are the basis of geothermal development Indonesia

2. Presidential Regulation No. 04/2010 jo Ministerial Regulation No. 01/2012 as revised of Ministerial Regulation No. 15/2010 (2nd Stage of 10,000 MW Crash Program) in order to speed up the development of geothermal power.

3. Pricing Policy

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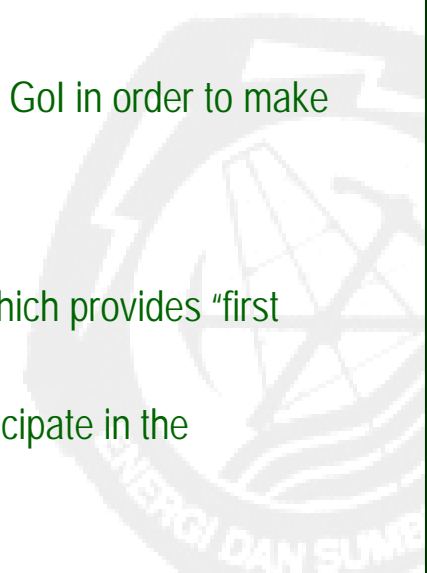
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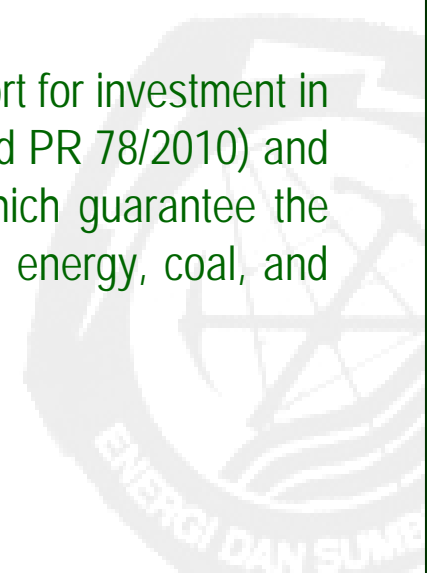
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GOVERNMENT POLICIES TO SCALE UP GEOHERMAL DEVELOPMENT IN INDONESIA (cont'd)

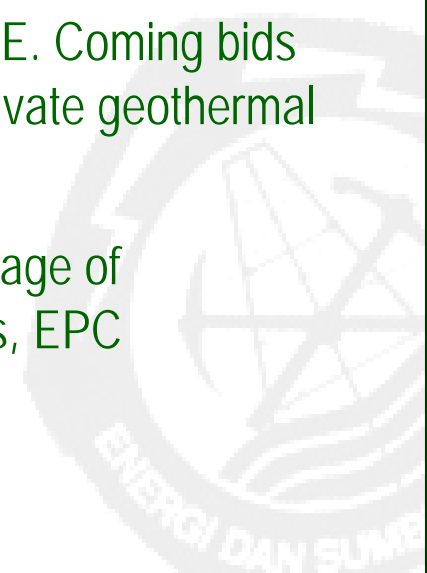
5. In order to accelerate the tender process of new GWAs, the policies which regulate bidding process are being revised in order to make the tender more simple, transparent and bankable.
6. Coordinating with all relevant parties to accelerate and simplify the permit process.
7. Related to Forestry Issues, currently MEMR and Ministry of Forest have signed the MoU regarding the acceleration of geothermal utilization permit within production forest, protected forest, and conservation forest.
8. The government has issued a Presidential Decree that guarantees support for investment in Geothermal Infrastructure Project (PR No. 13/2010 jo PR No.67/2005 and PR 78/2010) and Ministerial of Finance Regulation No. 139/2011 (PMK No. 139/2011) which guarantee the business feasibility of PT PLN for developing electricity from renewable energy, coal, and gas through cooperation with Independent Power Producers.





GEOHERMAL BUSINESS OPPORTUNITY IN INDONESIA

- Indonesia has geothermal potential approximately 28,000 MW. Currently installed capacity is 1226 MW. Government targeted 9500 MW installed until 2025.
- Government of Indonesia is actively tendering out geothermal new concession area in Indonesia. More than 15 new concession area with about 1200 MW has been awarded by Government under new geothermal law.
- US Geothermal Developers are welcomed and expected to participate in the coming bid alone or jointly with Indonesian Company including PGE. Coming bids is expected with improved contract term that more favorable for private geothermal developer.
- Aside from that, there are current geothermal projects are at the stage of development which will need capable and reliable drilling contracts, EPC contractors, manufacturer and supplier for the work related.





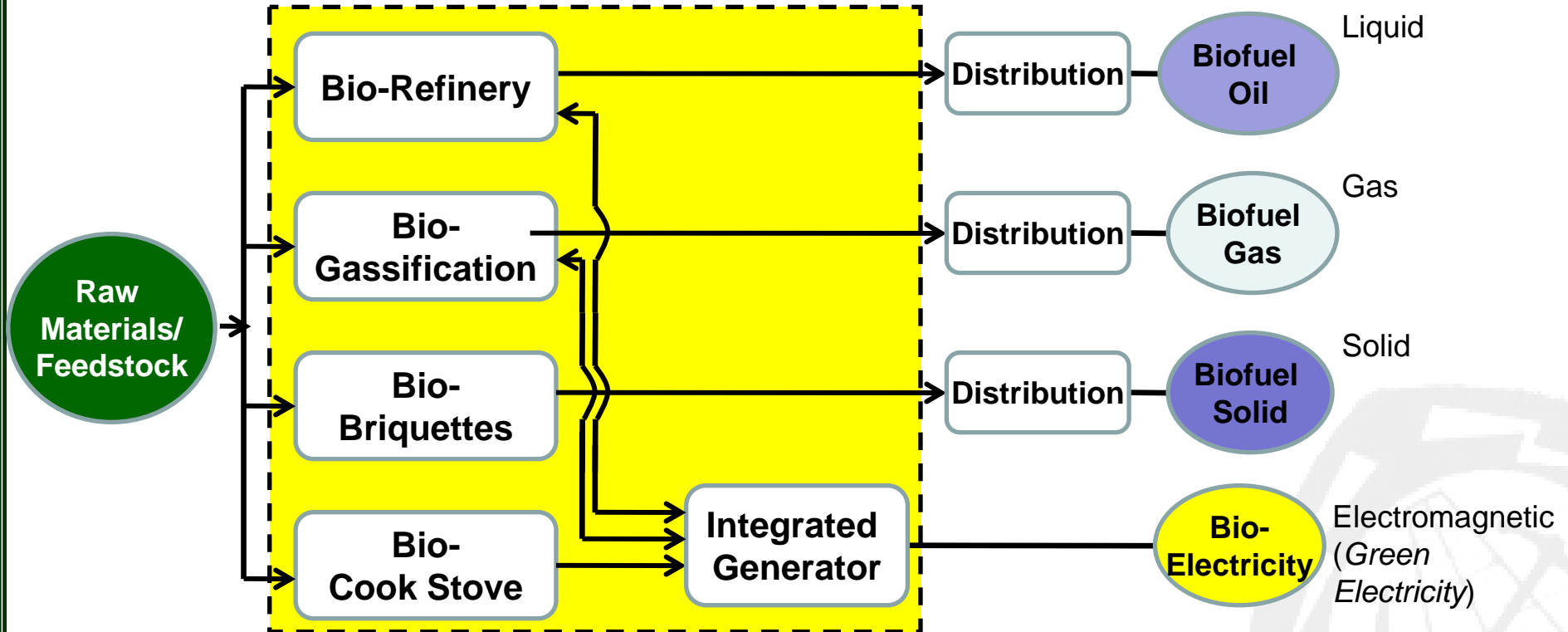
B. Bioenergy





BIOENERGY SUPPLY AND UTILIZATION SYSTEM

BIOENERGY CONVERSION INSTALLATION



- (1) Bioenergy products consist of:
1. Bio Fuel (Green Fuels)
 2. Bio-Electricity (Green Electricity)

- (2) Biofuels in point 1.1. consist of:
1. Liquid Biofuel / Green Gasoline
 2. Gas Biofuel, or Gas Plant / Green Gas
 3. Solid Biofuel, or Bio-Briquette



POTENTIAL OF BIOENERGY

BIOFUELS

- There are huge potential resources for biofuels from Palm Oil, Jatropha Curcas, Nyamplung, Molasses (Sugar Cane), Cassava, Sorghum and Algae.

BIOGAS

- Potential raw material biogas in Indonesia is mainly derived from cattle waste, industrial waste, municipal solid waste, and other organic materials.
- Indonesia has livestock as producers of raw material biogas in significant numbers include 13 million dairy cows and beef cattle, and approximately 15.6 million goats.
- This potential is equal with 1 million unit of biogas digester.

BIOSOLID/BIOMASS: WASTE TO ENERGY

- High potential of biomass waste from agricultural waste and municipal solid waste.





IMPLEMENTATION OF BIOENERGY PROGRAM IN INDONESIA

1. PROGRAM DEVELOPMENT OF BIOFUEL AS FOSSIL FUEL SUBSTITUTION

- There are 23 biodiesel producer and 7 bioethanol producer that have commercial business license to operate in Indonesia.
- Installed capacity of biodiesel is 4.8 million KL/year and installed capacity of bioethanol is 365.000 KL/year.
- Utilization of biofuel at transportation sector (with mix by 7,5% at PSO Fuel and 2% at Non PSO Fuel), industry sector (specifically on coal and mineral mining industries), and electricity generation.

2. PROGRAM DEVELOPMENT OF BIOGAS FOR HOUSEHOLD

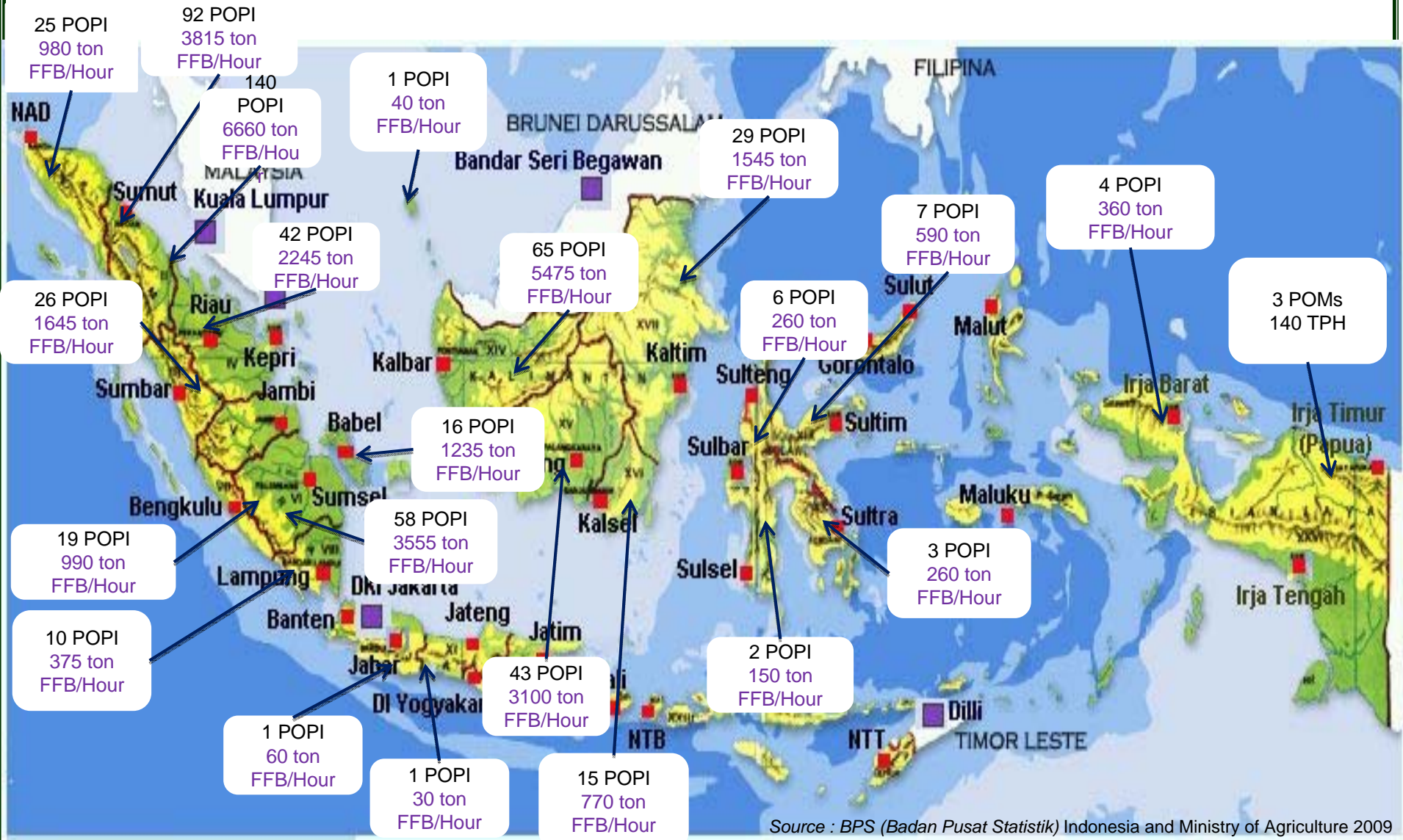
- Implemented by government budget through self sufficient energy village program, by private investment, and semi commercial basis through Indonesia Domestic Biogas Programme. This programme implemented by HIVOS, as NGO from Netherlands and funded by Netherlands Government. Status until April the total biogas digester that have been built is 4,963 unit from total target is 8,000 unit at the end of 2012.

3. PROGRAM DEVELOPMENT OF BIOENERGY BASED POWER PLANT

- The existing capacity of biomass, biogas and municipal solid waste power plant that connected on national grid (PT. PLN) by Februari 2012 is 61 MW.



POTENTIAL OF BIOENERGY/PALM OIL WASTE BASED POWER PLANT



Source : BPS (Badan Pusat Statistik) Indonesia and Ministry of Agriculture 2009



POTENTIAL OF MUNICIPAL WASTE FOR ELECTRICITY GENERATION...(1)

No	City	Final Waste Disposal Site Location	Potential Of City Waste (ton/day)	Potential (MW)
1	DKI Jakarta	Bandar Gebang, Sumur Batu	8.733	361,77
2	Batam	Telaga Punggur	450	18,64
3	Kota Semarang	Jatibarang	1.345	55,72
4	Kota Palembang	Sukawinata, Karya Jaya	1.171	48,51
5	Kota Surabaya	Benowo	2.562	106,13
6	Kota Padang	Air Dingin	682	28,25
7	Kota Pontianak	Batu Layang	340	14,09
8	Kota Medan	Namo Bintang, Terjun	1.812	75,06
9	Kota Bogor	Galuga	3.24	0,13
10	Kota Malang	Supit Urang	761	31,53
11	Kota Depok	Cipayung	1.217	50,42
12	Kota Jogja,Sleman,Bantul	Ngablak-Piyung	2	0,08
13	Bali		445	18,43
14	Kota Madiun		612	25,35
15	Kota Jember		2112	87,49



POTENTIAL OF MUNICIPAL WASTE FOR ELECTRICITY GENERATION...(2)

No	City	Final Waste Disposal Site Location	Potential Of City Waste (ton/day)	Potential (MW)
16	Kota Cianjur		1762	72,99
17	Kab. Sidoarjo		1568	64,96
18	Kota Balikpapan		400	16,57
19	Kab. Banyuwangi		1503	62,26
20	Kota Bandung		2114	87,57
21	Kota & Kab. Tegal	Sarimukti	3.519	145,78
22	Kota & Kab. Cirebon		2.012	83,35
23	Kota Tangerang	Rawakucing	1.352	56,01
24	Surakarta, Klaten & Boyolali		2.447	101,37
25	Kota & Kab. Tegal		1.485	61,52
26	Kota & Kab. Pasuruan		1.215	50,33
27	Kota & Kab. Probolinggo		1,3	0,05
28	Kota & Kab. Kediri		1.224	50,71
29	Kota Pekanbaru		603	24,98
30	Kota Bandar Lampung		703	29,12
31	Kota Makassar		1029	42,63



THE EXISTING CAPACITY OF BIOMASS, BIOGAS AND MUNICIPAL SOLID WASTE POWER PLANT – ON GRID CONNECTED (2012)

No	Company Name	COD	Type of Contract	Location	Buyer (Regional PLN Area)	Type of Biomass	Capacity Contract (MW)
1	PT Riau Prima Energy	2001	Excess power	Riau	PLN Riau Region	Palm waste	5
2	PT Listrindo Kencana	2006	IPP	Bangka	PLN Bangka Region	Palm waste	5
3	PT Growth Sumatra	2006	Excess power	Sumatera Utara	PLN Sumut Region	Palm waste	6
4	PT Indah Kiat Pulp & Paper	2006	Excess power	Riau	PLN Riau Region	palm waste	2
7	PT Belitung Energy	2010	IPP	Belitung	PLN Babel Region	Palm waste	7
8	PT Growth Sumatra	2010	Excess power	Sumatera Utara	PLN Sumut Region	Palm waste	9
9	PT Pelita Agung	2010	Excess power	Riau	PLN Riau Region	Palm waste	5
10	Permata Hijau Sawit	2010	Excess power	Riau	PLN Riau Region	Palm waste	2
11	PT Navigat Organic	2011	IPP	Bali	PLN Dist Bali	MSW	2
12	PT Navigat Organic	2011	IPP	Bekasi	PLN Dist Jabar	MSW	8
13	PT Growth Asia	2011	Excess power	Sumatera Utara	PLN Sumut Region	Palm waste	10
Total Capacity - On Grid (MW)							61
14	PTPN V	2011		Riau	Own Use	POME	1

Data Source : Updating Database Biomass/Biogas Power Plant PT. PLN (Persero) Divisi EBT



DEVELOPMENT PLAN OF BIOMASS, BIOGAS AND MUNICIPAL SOLID WASTE - ON GRID CONNECTION (YEAR 2012)

No	Company Name	COD	Type of Contract	Location	PPA Contract	Type of Biomass	Capacity (MW)	Status
1	PT Growth Asia	2012	Excess power	Sumatera Utara	PLN Region Sumut	Palm waste	10	Construction
2	PTPNI	2012	Excess power	Aceh, Panangkalan	PLN Region Aceh	Palm waste	1,5	Construction
3	PT Gikoko	2012	Excess power	Cakung, Jakarta	DISJAYA	MSW (sampah)	3	FS and Construction
4	Navigat Organic	2012	IPP	Bekasi	PLN Dist Jabar	MSW (sampah)	4	Construction
5	PT Victorindo	2012	Excess power	Sumatera Utara	PLN Region Sumut	Palm waste	5	Construction
6	PT Nubika Jaya	2012	Excess power	Sumatera Utara	PLN Region Sumut	Palm waste	6	Construction
7	Growth Steel Group	2012	Excess power	Simalungun, Sumut	PLN Region Sumut	Palm waste	10	Construction
8	Growth Steel Group	2012	Excess power	Jambi	PLN Region Sumsel	Palm waste	10	Construction
9	Growth Steel Group	2012	Excess power	Pontianak	PLN Region Kalbar	Palm waste	10	Construction
10	Growth Steel Group	2012	Excess power	Bekasi	PLN DisJabar	rice husk	10	Construction
Total Capacity 2012 (MW)							69,5	



DEVELOPMENT PLAN OF BIOMASS, BIOGAS AND MUNICIPAL SOLID WASTE - ON GRID CONNECTED (YEAR 2013)

No	Company Name	COD	Type of Contract	Location	PPA Contract	Type of Biomass	Capacity (MW)	Status
1	PT PN III	2013	Excess power	Sumatera Utara	PLN Region Sumut	Palm waste	1,8	FS
2	PT PN IV	2013	Excess power	Sumatera Utara	PLN Region Sumut	Palm waste	1,6	FS
3	Private	2013	IPP	Aceh, Langsa	PLN Region Aceh	Biogas POME	2	FS
4	Navigat Organic	2013	IPP	Bantar Gebang, Bekasi	PLN Dist Jabar	MSW (sampah)	2	FS
5	Private	2013	IPP	Gorontalo	PLN Region Gorontalo	Corn Cob	10	Planning
6	PT Gikoko	2013	IPP	Bekasi	DISJBB	MSW (sampah)	2	Planning
7	PT Gikoko	2013	IPP	Palembang	PLN Wil Sumsel Jambi Bengkulu	MSW (sampah)	3	Planning
8	PT Gikoko	2013	IPP	Makassar	PLN Region Sulselrabar	MSW (sampah)	3	Planning
9	Korindo Group	2013	Excess power	Kalteng	PLN Region Kalselteng	woodchip	4	FS
10	Growth Steel Group	2013	Excess power	Simalungun, Sumut	PLN Region Sumut	Palm waste	10	Planning
11	Growth Steel Group	2013	Excess power	Jambi	PLN Region Sumsel	Palm waste	10	Planning
12	Growth Steel Group	2013	Excess power	Pontianak	PLN Region Kalbar	Palm waste	10	Planning
13	Growth Steel Group	2013	Excess power	Bekasi	PLN DisJabar	rice husk	10	Planning
Total Capacity 2013 (MW)							69,4	



POLICY AND REGULATION RELATED TO BIOENERGY BASED POWER PLANT

1. LAW NO. 30 YEAR 2007 concerning on Energy.
2. LAW NO. 30 YEAR 2009 concerning on Electricity
3. PRESIDENTIAL REGULATION NO. 5 YEAR 2006 concerning on National Energy Policy.
4. MINISTRY OF ENERGY AND MINERAL RESOURCES REGULATION NO. 32 YEAR 2008 CONCERNING ON PROVISION, UTILIZATION, AND PROCEDURES OF COMMERCE OF BIOFUEL AS OTHER FUEL (BIOFUELS MANDATORY).
 - Mandatory utilization of biofuel in transportation, industry, and electricity generation sector.
5. MINISTRY OF FINANCE REGULATION NO. 21/PMK.011/2010 concerning on Tax and Custom Facilities for Renewable Energy Utilization.
6. MINISTRY OF FINANCE REGULATION NO. 130/PMK.011/2011 concerning on Provision of Exemption Facilities or Reduction of Income Tax.
7. MINISTRY OF ENERGY AND MINERAL RESOURCES REGULATION NO. 4 YEAR 2012 concerning on Electricity Price Purchased by PT. PLN from Small Scale and Medium Scale Renewable Energy Electricity Generation or Excess Power.



LAW NO. 30 YEAR 2007 Concerning On Energy

Regulates among others :

- Prioritizes the provision and utilization of new and renewable energy;
- All people have right to acces to energy;
- Central and Regional Government prioritize the utilization of new renewable energy;
- Central and Regional Government provide incentives for new and renewable energy.



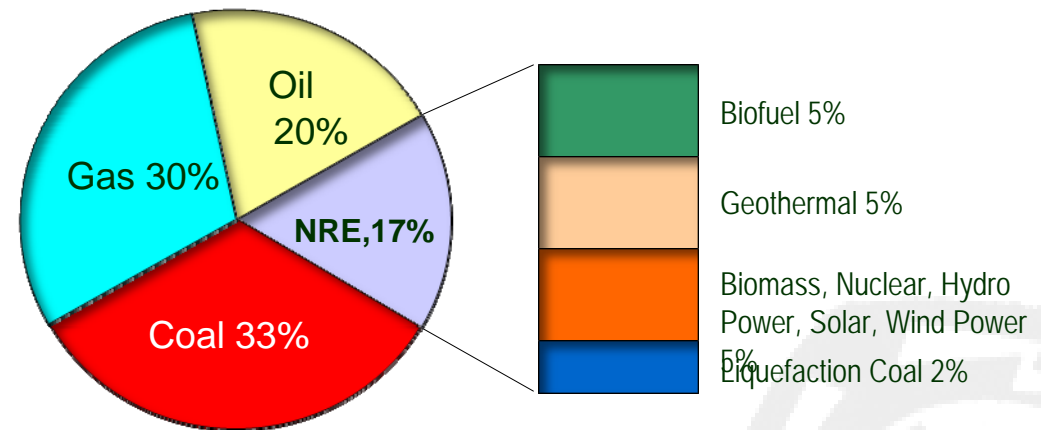


PRESIDENTIAL REGULATION NO. 5 YEAR 2006 concerning on National Energy Policy

The Main Target :

- Energy Elasticity less than 1 at 2025
- Optimizing Primary Energy Sources :

Energy Mix (2025)



Energy Elasticity < 1
Non Fossil Energy/NRE: 17 %





BIOFUEL USAGE MANDATORY

Ministry of Energy and Mineral Resources Regulation Number 32 Year 2008

BIOETHANOL (Minimum)						
Sector	2008	2009	2010	2015	2020	2025
Transportation, PSO	3% (Existing)	1%	3%	5%	10%	15%
Transportation, Non PSO	5% (Existing)	5%	7%	10%	12%	15%
Industry		5%	7%	10%	12%	15%

BIODIESEL (Minimum)						
Sector	2008	2009	2010	2015	2020	2025
Transportation, PSO	1% (Existing)	1%	2.5%	5%	10%	20%
Transportation, Non PSO		1%	3%	7%	10%	20%
Industry	2.5%	2.5%	5%	10%	15%	20%
Electricity	0.1%	0.25%	1%	10%	15%	20%



MINISTRY OF FINANCE REGULATION NUMBER 21/PMK.011/2010

Regulation of tax and customs facility for renewable energy resources utilization activities

FINANCIAL INSTRUMENTS SUPPORT

Income Tax



- Reduced net income for 30% of total investment
- accelerated depreciation
- Imposition of Income Tax on dividend paid to Foreign Taxable at 10%
- compensation for losses in certain circumstances

Value Added Tax



Exemptions of VAT for Taxable Goods, machinery and equipment for RE utilization (not included spare parts)

Import Duty



- Exemptions for Import Duty of
- Goods and Machinery for development and capital investment
 - Capital Goods Imports for construction and development of electricity industry

Tax Borne by Government

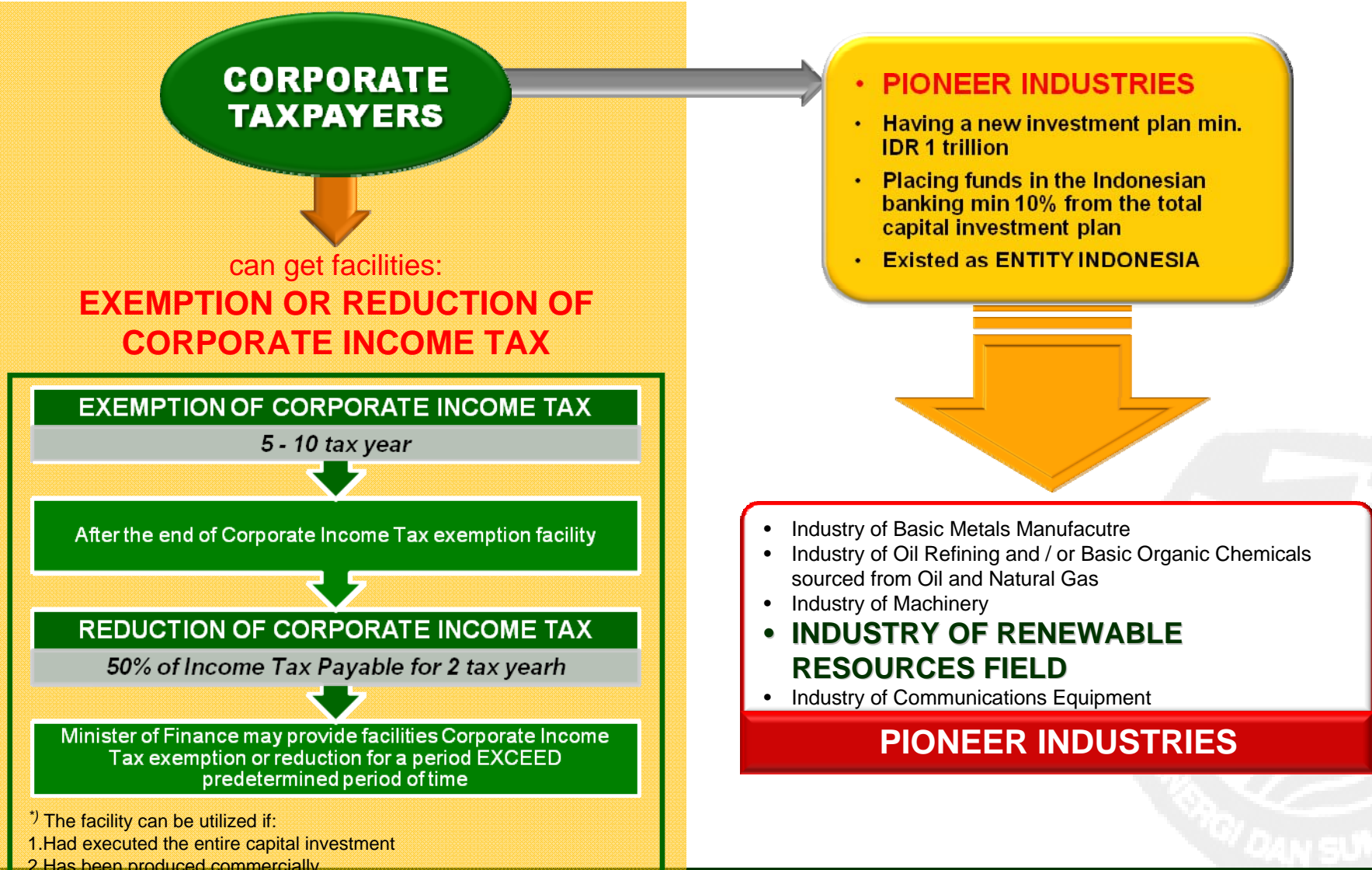


Regulated in State Annual Budget Law and its implementing regulations



MINISTRY OF FINANCE REGULATION NUMBER 130/PMK.011/2011

Concerning on Provision of Exemption Facilities or Reduction of Income Tax



^{*)} The facility can be utilized if:
1. Had executed the entire capital investment
2. Has been produced commercially



MINISTRY OF ENERGY AND MINERAL RESOURCES NUMBER 4 YEAR 2012

Concerning On Electricity Price Purchased by PT. PLN from Small Scale and Medium Scale Renewable Energy Electricity Generation or Excess Power

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.*





C. Hydro, Solar, and Wind



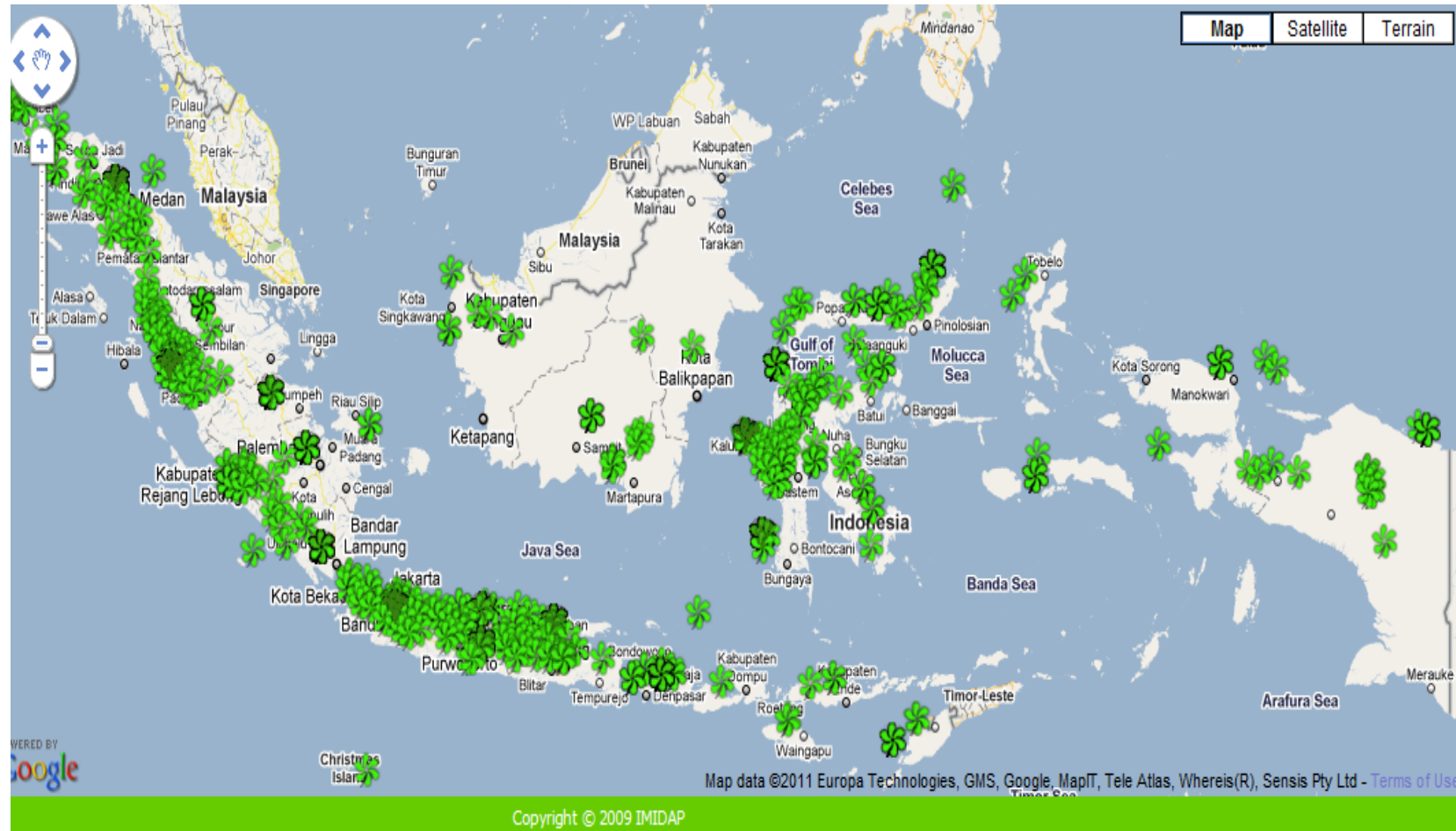


MAP OF POTENTIAL MIKROHYDRO-POWER





MAP OF EXISTING MIKROHYDRO-POWER



Utilization of Microhydropower potential in Indonesia has been developed in different regions



MEASUREMENT OF WIND POTENTIAL MAP

**PETA LOKASI MONITORING ENERGI ANGIN
TAHUN 1994 - 2008**



- | | | | | | |
|----------------------------------|----------------------------------|-------------------------|----------------------------------|----------------------------------|-------------------------------------|
| 1. Lilidaura, SUMUT | 21. Klaces, JATENG | 41. Menggala, NTB | 61. Kolisia, NTT | 81. Patirong Jeneponto, SULSEL | 101. Libas, SULUT |
| 2. Elsiwa, Nias, SUMUT | 22. Purworejo, JATENG | 42. Sajang, NTB | 62. Iper, NTT | 82. LAPAN Pare-pare, SULSEL | 102. Sondana, SULUT |
| 3. Kijang, RIAU | 23. G. Merapi, JATENG | 43. Sambelia, NTB | 63. Denduka, NTT | 83. Jallang, SULSEL | 103. Leganeng, SULUT |
| 4. Jambi, JAMBI | 24. Sri Gading Samas Bantul, DIY | 44. UPT Piong, NTB | 64. Hambapraing, NTT | 84. Galeso, SULBAR | 104. Malamenggu, SULUT |
| 5. Sipora Mentawai, SUMBA | 25. Srunggo, DIY | 45. doropeti, NTB | 65. Watumbelar, NTT | 85. Kaimbulawa, SULTRA | 105. Kaluwatu, SULUT |
| 6. Tanjung Mulyo, BENGKULU | 26. Kemadang, DIY | 46. Nangadoro, NTB | 66. Kamanggih, NTT | 86. Gerak Makmur, SULTRA | 106. Kalasuge, SULUT |
| 7. Air Petai, BENGKULU | 27. Pantai Sundak, DIY | 47. UPT Orooi, NTB | 67. Lairoka, NTT | 87. Lawela, SULTRA | 107. PLTD Mangarang, Talaut, SULUT |
| 8. P. Tikus, BENGKULU | 28. Bulak Baru, JATENG | 48. Pai, NTB | 68. Palakahembi, NTT | 88. Sampubalo, SULTRA | 108. Halmahera Tengah, MALUKU UTARA |
| 9. Nibung Putih, JAMBI | 29. Karimunjawa, JATENG | 49. Bajo Pulau, NTB | 69. Kabarui, NTT | 89. Langgara Laut, SULTRA | 109. UNPATI, MALUKU |
| 10. Penyak, BABEL | 30. Parang, JATENG | 50. T. N Komodo, NTT | 70. Ledeano, NTT | 90. Tinobu, SULTRA | 110. Aboru, MALUKU |
| 11. Patratani ATP M.Enim, SUMSEL | 31. Nyamuk, JATENG | 51. Papagarang, NTT | 71. Nemberala, NTT | 91. Abason, SULTENG | 111. Namaelo, MALUKU |
| 12. Bakung ATP, SUMSEL | 32. Pacitan, JATIM | 52. Pasir Putih, NTT | 72. Maubesi, NTT | 92. Bulungkobit, SULTENG | 112. Saleman, MALUKU |
| 13. Kahyapu Enggano, BENGKULU | 33. Krajan, JATIM | 53. Ujung, NTT | 73. Ds Suliran, Tulakadi Atambua | 93. Dongin, SULTENG | 113. Wasani, PAPUA |
| 14. Apoho, BENGKULU | 34. Bancamara Madura, JATIM | 54. Macang Tanggar, NTT | 74. Swarangan, KALSEL | 94. Besusu Tengah, SULTENG | |
| 15. Berundung, LAMPUNG | 35. Bali, BALI | 55. Nanggalili, NTT | 75. Semaras, KALSEL | 95. Palu, SULTENG | |
| 16. Muara Wasalam Lebak, BANTEN | 36. Giligede, NTB | 56. Robek, NTT | 76. Sepagar 1, KALSEL | 96. Wakai, Tojo Una-una, SULTENG | |
| 17. Pandeglang, BANTEN | 37. Kute, NTB | 57. Nanggalabang, NTT | 77. Appatanah, SULSEL | 97. Parigi, SULTENG | |
| 18. P. Karya, DKI | 38. Pangantap, NTB | 58. Sibowuli, NTT | 78. Bungaia, SULSEL | 98. Palasa Tangki, SULTENG | |
| 19. Cipularang, JABAR | 39. Selayar, NTB | 59. Lena, NTT | 79. Bontojai, SULSEL | 99. Tjg. Kramat, GORONTALO | |
| 20. Gn. Selok Cilacap, JATENG | 40. Tembere, NTB | 60. Egon, NTT | 80. UPT. Punaga, SULSEL | 100. Paudean, SULUT | |



PROGRAM OF SOLAR ENERGY, WIND AND OCEAN ENERGY

1. **RURAL ELECTRICITY:**
to increase rural community accessibility to electricity;
2. **URBAN ELECTRICITY:**
targeting middle and high class household, real estate, office and commercial buildings, hotel and resort, industry to install/use particularly solar PV;
3. **ELECTRICITY FOR FRONTIER ISLAND:**
targeting community in the island located along the country border line





IV. CONCLUSIONS

- Indonesia has relatively huge potential of renewable energy, therefore, Indonesia is the right place to develop investment of renewable energy due to particularly high growth demand of energy (electricity and non-electricity).
- Renewable energy is a clean energy. The more use of renewable energy the more secure of energy supply, while at the same time. the more potential for reducing the greenhouse gases emission.
- Government has issued some regulations to make the renewable energy business more conducive.
- Government will continue to up date the regulations to attract the investors to come.
- Welcome to the USA investor.



Thank You



Go Green Indonesia !
green energy, future energy



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

Jalan Jenderal Gatot Subroto, Kav. 49 Jakarta 12950; Telp: 021-52904235; 5250575; Faks: 021-25529106; 25529212

Email: bahan@ebtke.esdm.go.id ; bahan_ebtke@yahoo.com

- www.esdm.go.id - www.ebtke.esdm.go.id -

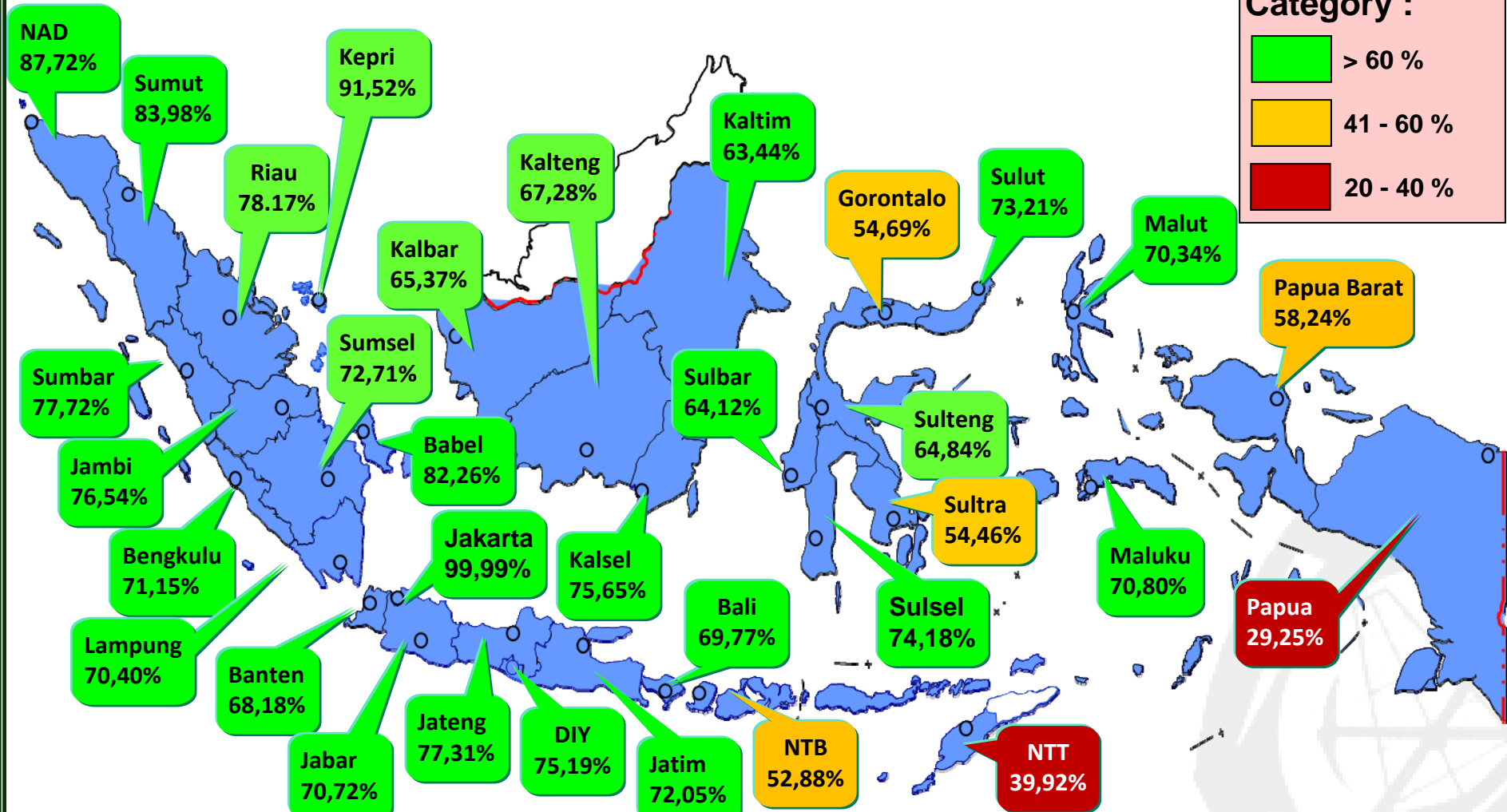
Energy and Mineral Resources for the People's Welfare



ELECTRIFICATION RATIO 2011

Category :

- > 60 %
- 41 - 60 %
- 20 - 40 %



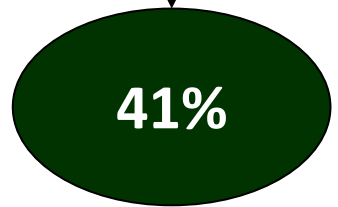
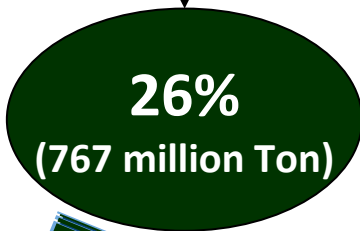
	Year											
	1980	1985	1990	1995	2000	2005	2006	2007	2008	2009	2010	2011
Electrification Ratio	8%	16%	28%	43%	53%	62%	63%	64.34%	65.10%	65.79%	67.15%	72.95%



NATIONAL COMMITMENT TO REDUCE GREENHOUSE GASSES

President Commitment in G-20 Pittsburgh and COP15 to reduce greenhouse gasses emission by 2020
and
Presidential Regulation Number 61 Year 2011 concerning on National Action Plan for Reducing Greenhouse Gas Emissions

Domestic efforts



Domestic efforts and international support

Forestry and Peat	672 million Ton
Agriculture	8 million Ton
Industry	1 million Ton
Energy	30 million Ton
Transportation	8 million Ton
Wastes	48 million Ton

Through new renewable energy development and energy conservation implementation in all sector