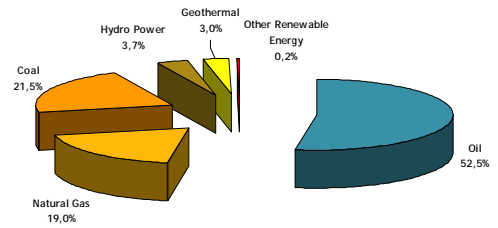


RENEWABLE ENERGY POLICY IN INDONESIA

Andi Novianto

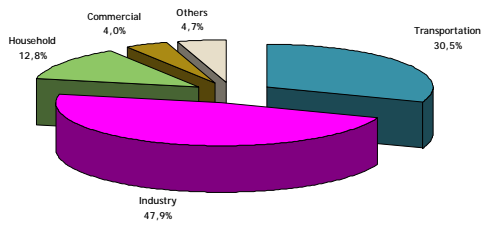
Presented at APEC EGNRET Meeting
Honolulu, March 29-April 3, 2009

Energy Mix Situation:



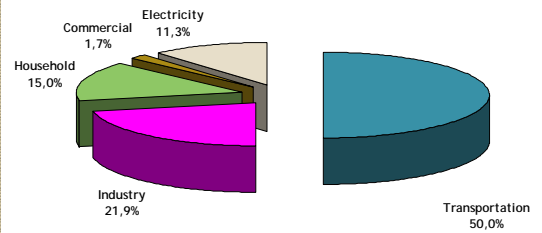
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Industry is The Largest Consumption of Energy:



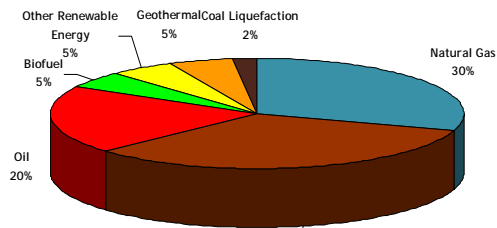
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PETROLEUM FUELS CONSUMPTION :

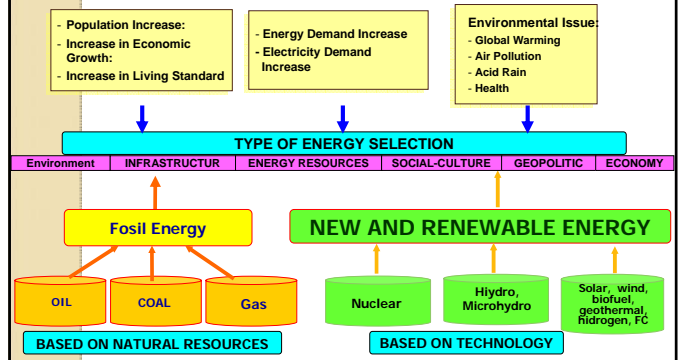


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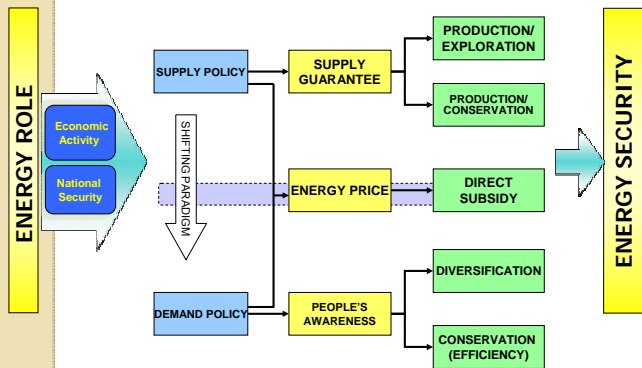
TARGET ENERGY MIX 2025 :



NATIONAL ENERGY PLANNING to 2025:



ENERGY POLICY FRAMEWORK:



RENEWABLE ENERGY POTENCY:

NON FOSSIL ENERGY	RESOURCES	UTILITY CAPACITY
Hydro Power	75,670 MW	4,200 MW
Geothermal	27,000 MW	1,042 MW
Mycro Hydro	450 MW	210 MW
Biomass	49,810 MW	445 MW
Solar Energy	4,80 kWh/m ² /day	12 MW
Wind Energy	3-6 m/second	2 MW

New and Renewable Energy Development

TARGET:

- **Short & Medium Term :**
 - Small scale for fulfilling basic energy need for rural area
 - Intensification use of hydro, geothermal, solar and win energy for electricity generation
 - Development of Biofuel
- **Long Term :**
 - Development of new energy (fuel cells, hydrogen)
 - Development of Nuclear Energy
 - Development of Unconventional energy sources (tar/oil sand, biogenic gas, etc)
- **In the year 2025 :**
At least 15% of the energy mix should be based on renewable energy (Presidential Decree 5/2006)

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RENEWABLE ENERGY DEVELOPMENT

1. **Electricity generation**
 - Generated from new renewable energy sources such as microhydro, solar, wind, biomass;
 - Priority for diesel fuel substitution for electricity generation in rural area and for rural electrification
2. **Fuel**
 - Currently, it is generated from biomass;
 - Priority for petroleum-based fuel substitution in transportation sector and kerosene substitution in household sector
3. **Thermal/mechanical energy uses**
 - Can be generated from mostly renewable energy sources;
 - Current applications are for agricultural food processing, water pumping;
 - Technologies are suitable for rural implementation.

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RENEWABLE ENERGY PROGRAM (1)

1. **Program on Rural Electrification** : to provide access on electrification for rural communities; since 2005 the government has been decided not to utilize diesel genset and only to implement locally available renewable energy (if the extension of grid is impossible).
2. **Program on Interconnection of Renewable Energy Power Generation** : as an initiative for investor to develop small/medium scale power generation from renewable energy to sell of electricity to PLN (state electricity company) with standardized price following government regulation.
3. **Integrated Microhydro Development Program (IMIDAP)** : a hibah from GEF through UNDP for 2007-2012 to accelerate microhydro implementation by removing existing barriers.
4. **Micro Hydro Power Program (MHPP)** : technical cooperation with Germany through GTZ to develop capacities on technology and sustainability of microhydro implementation.

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Renewable Energy Program (2)

5. **Program on Urban Solar** : launched in 2003 to support solar photovoltaic implementation in urban society. The results are not significant yet
6. **Program on Biogas** : launched in January 2008 in cooperation with Dutch government; consists of technical assistance and financing mechanism development system.
7. **Program on Energy Self-Sufficient Village** : launched in 2007 to improve energy security on village level by diversifying rural energy mix; developing locally available renewable energy sources in the form of fuel (biofuel) and electricity for household and also productive end uses.
8. **Program on regulation preparation** : as mandated by Energy Law.

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☀ Self-sufficient Energy Village (SSEV) Program

❖ SSEV is a village having capability to produce a part/whole their energy demand for consumptive and productive use.

❖ **CRITERIA**

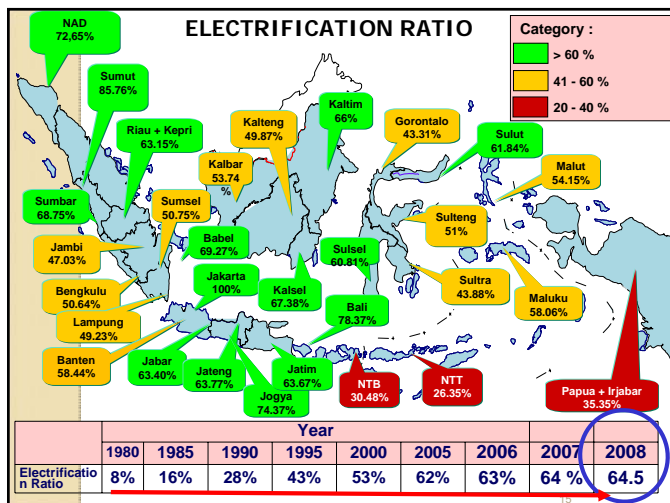
- Utilization of locally available energy (renewable energy)
- Creation of productive activities
- Job creation

❖ **PROGRAM:**

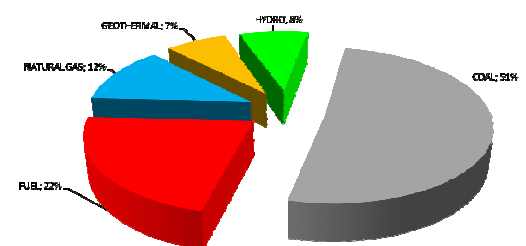
- Utilization of locally available energy resources
- Development of productive activities
- Development of applicable technologies
- Development of institution and people participatory

ELECTRICITY OBJECTIVES:

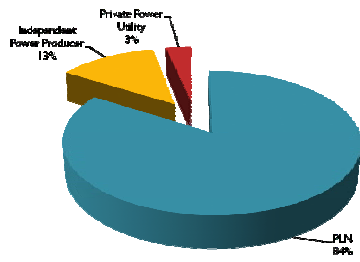
- INCREASE ELECTRIFICATION IN HOUSEHOLD SECTORS (RURAL - URBAN) AND INDUSTRY IN EFFICIENT AND ENVIRONMENTAL WAYS TO SUPPORT ECONOMIC GROWTH AND PEOPLES' WELFARE.



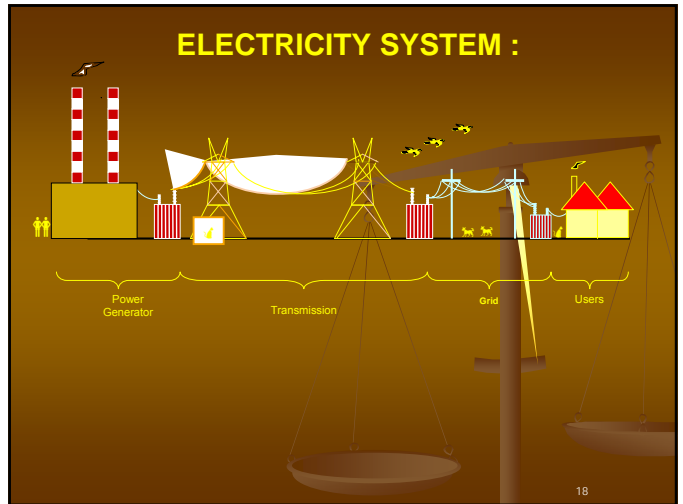
ELECTRICITY SOURCES:



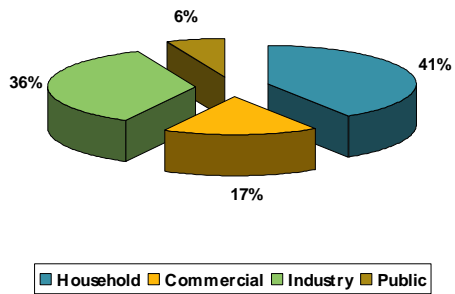
ELECTRICITY UTILIZATION SHARE:



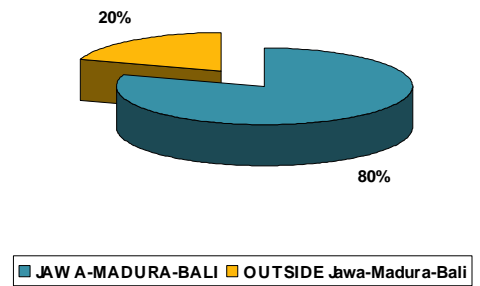
ELECTRICITY SYSTEM :



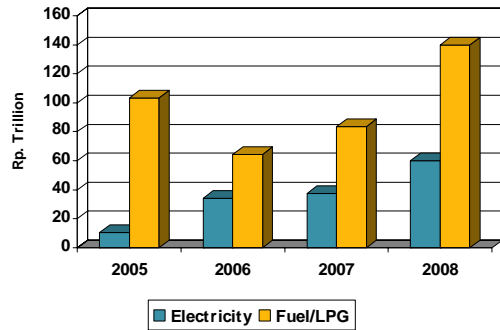
SALES TARGET BY PLN-2008 (TWh) :



ELECTRICITY BY REGION :



GOVERNMENT SUBSIDY :



SUPPORT POLICY TO RENEWABLE ENERGI:

- Non Fiscal Incentives through Regulation.
- Support Small-Medium Scale Power Connection Program at Medium and Low Grid.
- Non Uniform Tariff, based on Region, Peoples' Capability, and Sources.