



**MINISTRY OF ENERGY AND MINERAL RESOURCES
DIRECTORATE GENERAL OF OIL AND GAS**

BIOFUEL DEVELOPMENT IN INDONESIA

by :

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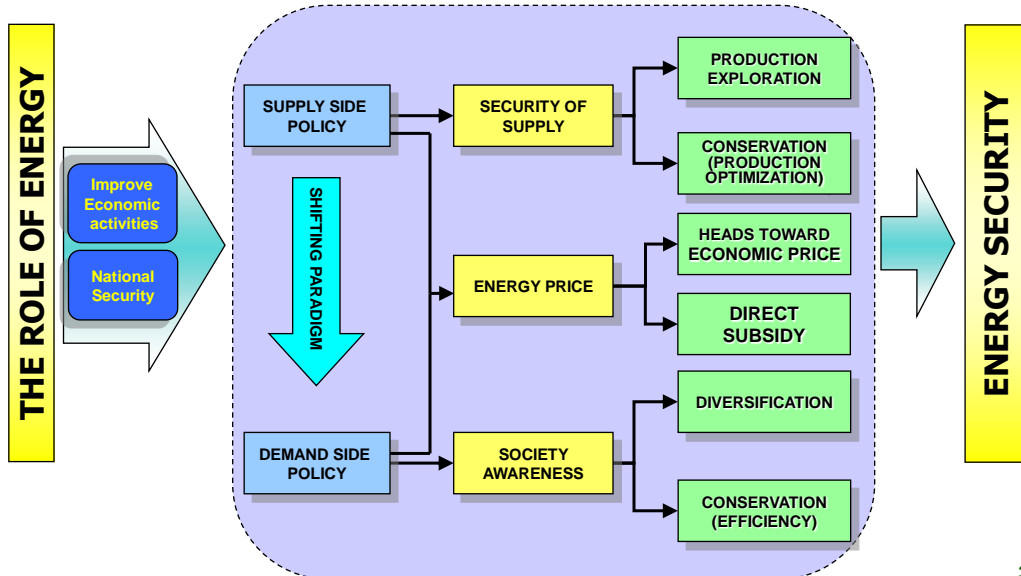


OUTLINE

- **NATIONAL ENERGY POLICY**
- **FUEL POLICY**
- **BIOFUEL DEVELOPMENT POLICY**
- **FACILITIES AND INCENTIVES FOR BIOFUEL DEVELOPMENT**
- **MANDATORY OF BIOFUEL UTILIZATION**
- **PROGRESS OF BIOFUEL DEVELOPMENT**
- **THE LAST PROGRESS ON BIOFUEL DEVELOPMENT POLICY**

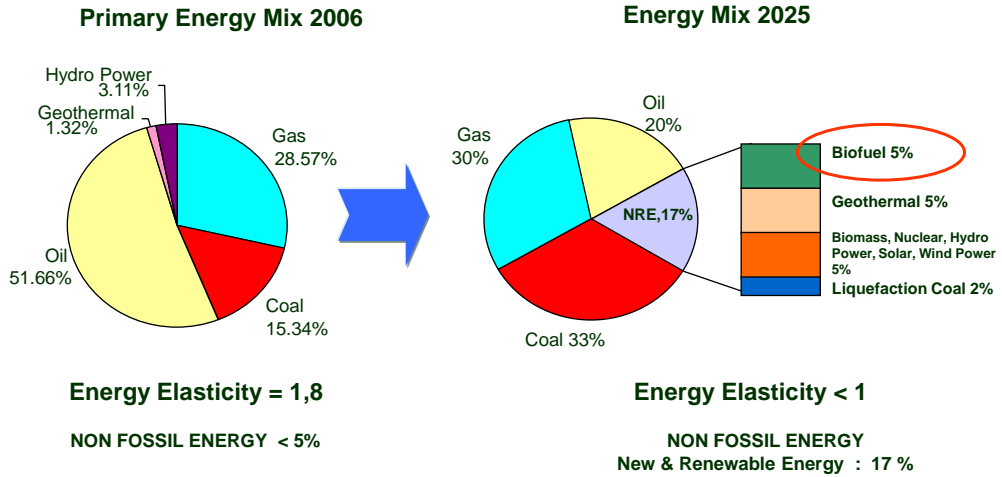
NATIONAL ENERGY POLICY

INDONESIA'S ENERGY POLICY



TARGET OF ENERGY MIX

(Presidential Regulation No. 5 of 2006)



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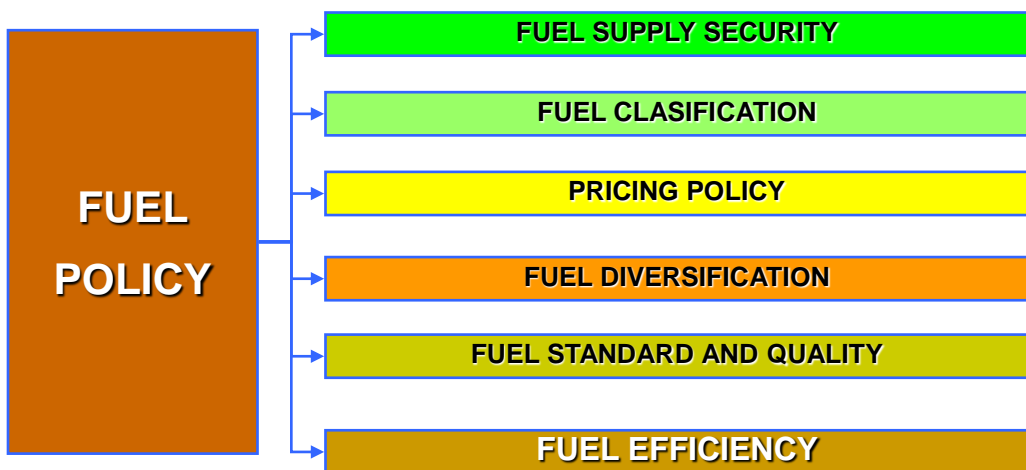
ENERGY DIVERSIFICATION PROGRAM

ENERGY	Household	Transportation	Industry	Power Plant
• Gas				
> LPG	√	√	√	-
> CNG	√	√	√	√
• Coal				
> Coal	√	-	√	√
> Briquette	√	-	√	-
> Liquefied Coal	√	√	√	√
> Gasified Coal	-	√	√	√
• Biofuel				
> Bio-ethanol	√	√	-	√
> Bio-diesel	√	√	√	√
> Bio-oil	√	√	√	√
• Geothermal	√	-	-	√
• Other Renewable Energy				
> Biomass	√	-	-	√
> Nuclear	-	-	-	√
> Hydro	-	-	-	√
> Solar	√	√	-	√
> Wind	-	-	-	√
> Coal Bed Methane (CBM)	√	√	√	√
> Hydrogen / Fuel Cell	-	√	-	√
> Oil Shale/Oil Sand	-	√	√	√
> Biogenic Gas	√	-	-	√

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FUEL POLICY

FUEL POLICY



BIOFUEL DEVELOPMENT POLICY

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WHY BIOFUEL?

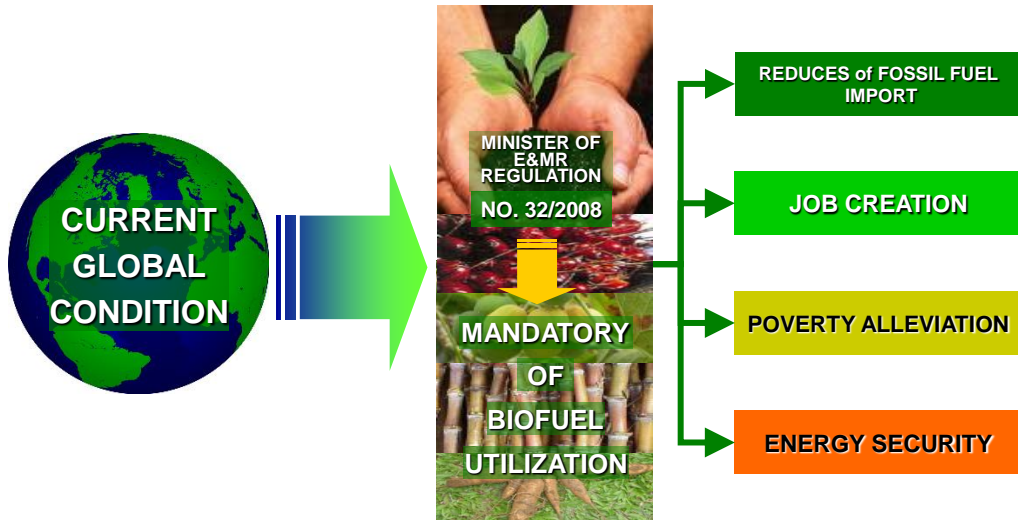


1. Reducing percentage of crude oil within energy mix (current: 52%);
2. High of fuel subsidy (subsidy in 2007 → Rp. 83,8 T/ ± US\$ 9,22 B and budget in 2008 is allocated Rp. 126,8 T/ ± US\$ 13,93 B);
3. High biodiversity in Indonesia for BIOFUEL feedstock supply and land availability that suitable for BIOFUEL plantation;
4. Proven BIOFUEL technology by domestic potential, first generation;
5. Biofuel is renewable energy and environmental friendly;
6. Biofuel industry allows community participations, including farmer;
7. High number of unemployment that could be employed in biofuel industry - Poverty alleviation.

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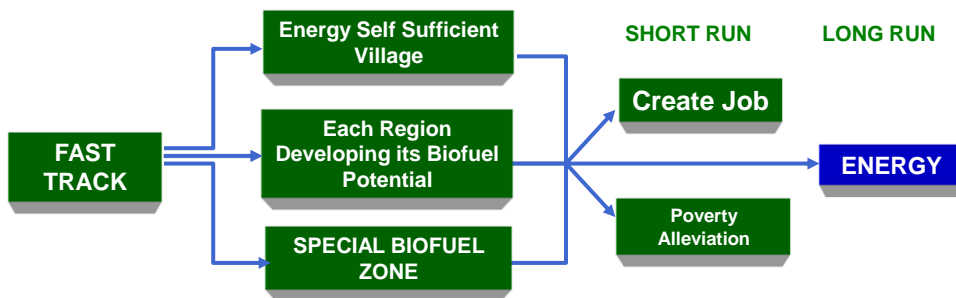
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ENCOURAGING BIOFUEL UTILIZATION



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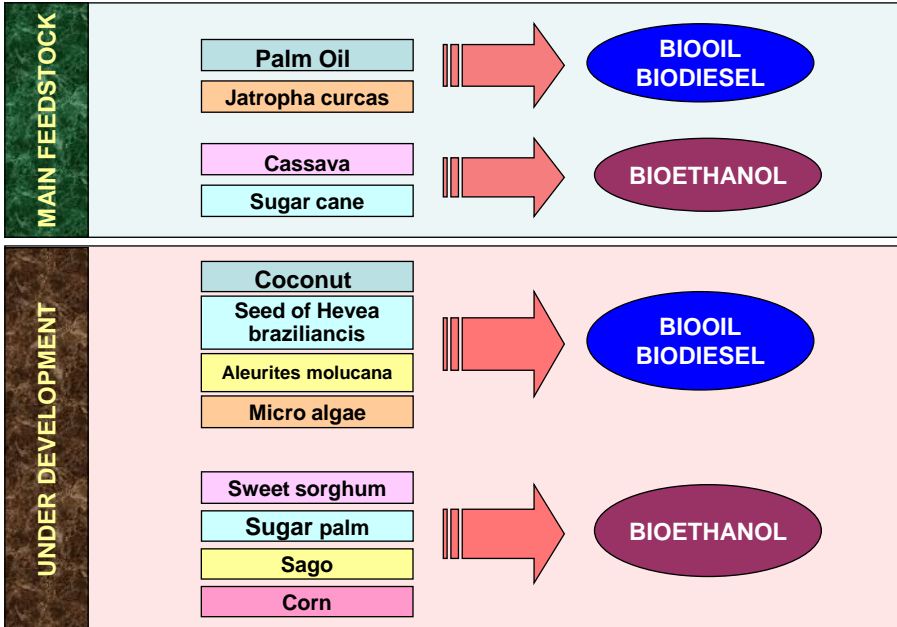
BIOFUEL DEVELOPMENT STRATEGY



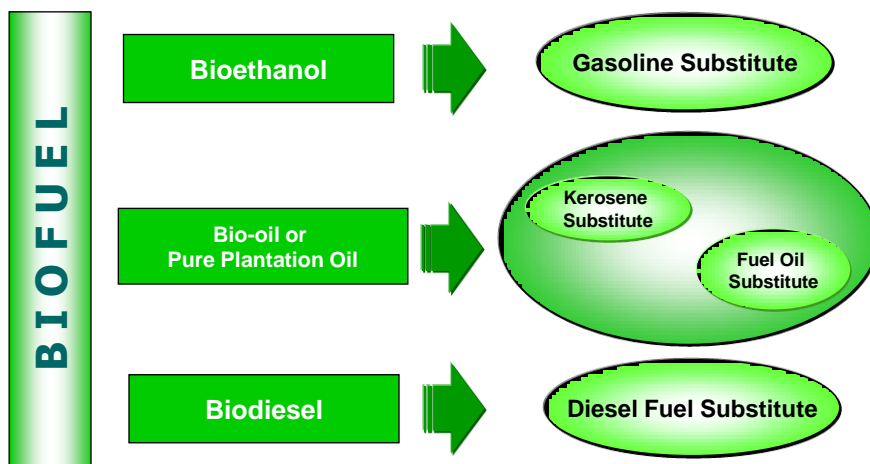
- Infrastructure
- Demplot
- On time schedule
- Explicit investment employment ratio

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BIOFUELS FEEDSTOCK



BIOFUEL PRODUCT



ROADMAP FOR BIOFUELS DEVELOPMENT

Year	2005-2010	2011-2015	2016-2025
Biodiesel	Biodiesel Utilization 10% of Diesel Fuel Consumption 2.41 million kL	→ Biodiesel Utilization 15% of Diesel Fuel Consumption 4.52 million kL	→ Biodiesel Utilization 20% of Diesel Fuel Consumption 10.22 million kL
Bioethanol	Bioethanol Utilization 5% Gasoline Consumption 1.48 million kL	→ Bioethanol Utilization 10% Gasoline Consumption 2.78 million kL	→ Bioethanol Utilization 15% Gasoline Consumption 6.28 million kL
Bio-oil			
- Biokerosene	Biokerosene Utilization 1 million kL	→ Biokerosene Utilization 1.8 million kL	→ Biokerosene Utilization 4.07 million kL
- Pure Plantation Oil for Power Plant	PPO Utilization 0.4 million kL	→ PPO Utilization 0.74 million kL	→ PPO Utilization 1.69 million kL
BIOFUELS	BIOFUELS Utilization 2% of energy mix 5.29 million kL	→ BIOFUELS Utilization 3% of energy mix 9.84 million kL	→ BIOFUELS Utilization 5% of energy mix 22.26 million kL

FACILITIES AND INCENTIVES FOR BIOFUEL DEVELOPMENT

FACILITIES AND INCENTIVES FOR BIOFUEL DEVELOPMENT

1. Government Regulation No. 1/2007 concerning Income Tax Facility for Capital Investment in certain Business Sectors and/or Areas;
2. Minister of Finance Decree No. 117/PMK.06/2006 concerning Credit for Bioenergy Development and Revitalization of Plantation (KPEN-RP);
3. Minister of Finance Decree No. 79/PMK.05/2007 concerning Credit for Food and Energy Security (KKPE).



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MANDATORY OF BIOFUEL UTILIZATION

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MANDATORY for **BIODIESEL** UTILIZATION (MINIMUM PRECENTAGE)

SECTOR	October 2008 till December 2008	January 2009	January 2010	January 2015**	January 2020**	January 2025**	REMARK
Household	-	-	-	-	-	-	Not determined yet
PSO Transportation	1 % (existing)	1 %	2,5 %	5 %	10 %	20 %	* Based on Total Needs
Non PSO Transportation	-	1 %	3 %	7 %	10 %	20 %	
Industry and Commercial	2,5 %	2,5 %	5 %	10 %	15 %	20 %	* Based on Total Needs
Power Plant	0,1 %	0,25 %	1 %	10 %	15 %	20 %	* Based on Total Needs

** Specification is adjusted in line with global specification and domestic interests

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MANDATORY for **BIOETANOL** UTILIZATION (MINIMUM PRECENTAGE)

SECTOR	October 2008 till December 2008	January 2009	January 2010	January 2015**	January 2020**	January 2025**	REMARK
Household	-	-	-	-	-	-	Not determined yet
PSO Transportation	3 % (existing)	1 %	3 %	5 %	10 %	15 %	* Based on Total Needs
Non PSO Transportation	5 % (existing)	5 %	7 %	10 %	12 %	15 %	* Based on Total Needs
Industry and Commercial	-	5 %	7 %	10 %	12 %	15 %	* Based on Total Needs
Power Plant	-	-	-	-	-	-	Not determined yet

** Specification is adjusted in line with global specification and domestic interests

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**MANDATORY for PURE PLANTATION OIL UTILIZATION
(MINIMUM PRECENTAGE)**

SECTOR		October 2008 till December 2008	January 2009	January 2010	January 2015**	January 2020 **	January 2025 **	REMARK
Household		-	-	-	-	-	-	Not determined yet
Industry and Transportation (Low and medium speed engine)	Industry	-	-	1 %	3 %	5 %	10 %	
	Marine	-	-	1 %	3 %	5 %	10 %	
Power Plant		-	0,25 %	1 %	5 %	7 %	10 %	* Based on Total Needs

** Specification is adjusted in line with global specification and domestic interests

**PROGRESS OF BIOFUEL
DEVELOPMENT**

PROGRESS OF BIOFUEL DEVELOPMENT IN INDONESIA

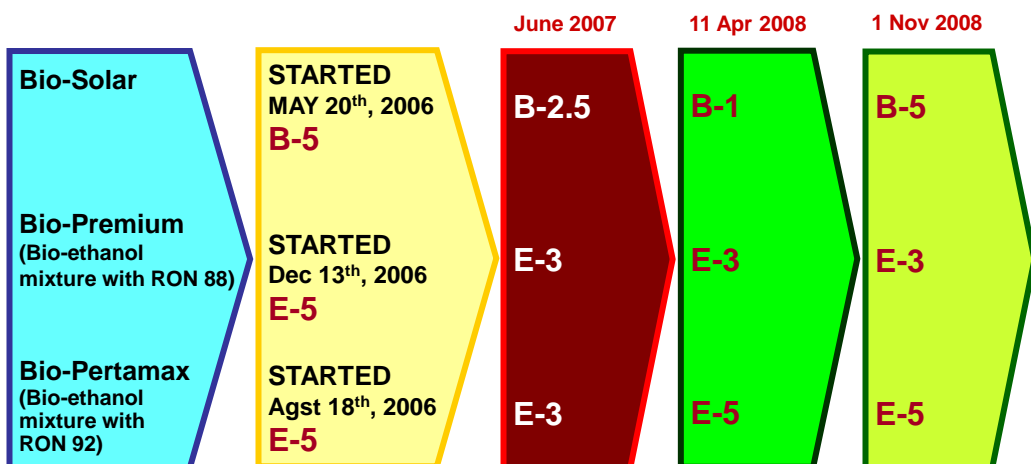
CURRENT:

- Installed capacity for bioethanol production (status June, 2008): 192.349 kL/year;
- Installed capacity for biodiesel production (status Dec, 2008): 2.529.110 kL/year;
- Energy Self Sufficient Village (ESSV), status June, 2008: 123 villages;
- Biofuel Power Generator by State Owned Electricity Company (PLN) installed capacity (status June, 2008) = 96 MW;
- Biofuel utilization in Industry started November 11th, 2008 (5%);
- Biofuel utilization in Electric Sector by State Owned Electricity Company (PLN) in PLTGU Gresik 19 MW, started January 31st, 2009, with consumption 8 kL/day (B5).

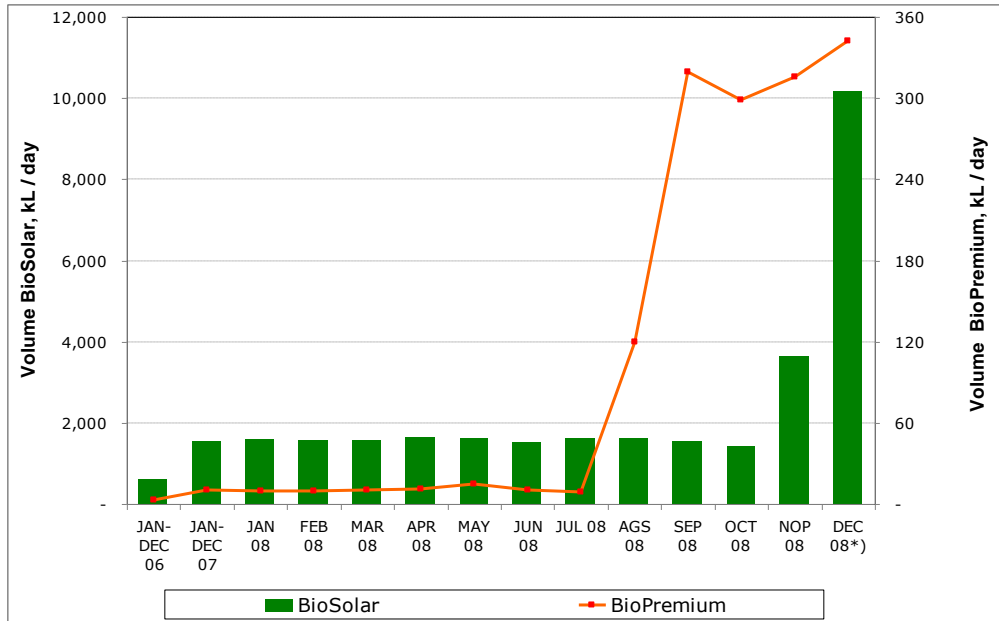
PROJECTION:

- Bioethanol Development: projection up to 2010 ± 4.000.000 kL/yr;
- Biodiesel Production: projection up to 2010 ± 5.000.000 kL/year;
- Biofuel Power Generator by state owned electricity company (PLN): projection on 2009 – 2010 will use 220.000 kL Bio-Diesel at all Biofuel Power Generator in around Indonesia.

BIOFUEL FOR TRANSPORTATION



BIOFUEL CONSUMPTION



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THE LAST PROGRESS ON BIOFUEL DEVELOPMENT POLICY

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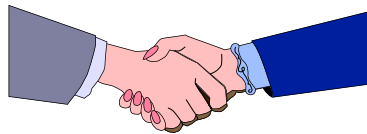
THE LAST PROGRESS ON BIOFUEL DEVELOPMENT POLICY

- Value Added Tax Breaks (PPN DTP) for Biofuel Industry;
- In progress, determining biofuel price based on South East Asia Price Index for Biodiesel and Bioethanol;
- The Government of Indonesia in the mean time is establishing Biofuel Pricing Team and Biofuel Supervising Team;
- The Government of Indonesia is providing budget for stimulus programme on new renewable energy for Energy Self Sufficient Village (ESSV);
- The Government of Indonesia in Discussion with the Parlement to give additional subsidy to Biofuel if the price of Biofuel higher than MOPS (fossil fuel's price).

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THANK YOU



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BIOFUEL CONSUMPTION

