



INVESTMENT POLICY ON ENERGY SECTOR

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ENERGY & MACROECONOMY

MACROECONOMICS AT A GLANCE

	Unit	Realisation			Projection
		2000	2001	2002	2003
Inflation Rate	%	9,4	12,5	10,0	8,5-9,0
Economic Growth	%	4,9	3,3	3,7	3,5-4,0
Per Capita GDP (Nominal)	USD	756	677	810	944
Current Account (of GDP)	%	5,3	4,9	4,2	2,2
Budget Surplus/Deficit (of GDP)	%	-1,6	-2,8	-1,7	-1,8

BASIC ASSUMPTION

	Unit	2004 APBN	2005 RAPBN
Economic Growth	%	4.8	5.0-5.5
Inflation	%	6.5	5.0-6.0
Exchange Rate	(Rp/US\$)	8.600	8.400-8.750
Oil Price	US\$/Barrel	22.0	22.0-25.0
Oil Production	MBCD	1.150	1.100
S B I	%	8.5	6.5-7.5

Electricity & Macroeconomy (Pre and Post Crisis)

	Pre-Crisis (< 1997)	Post-Crisis (2002-2003)
Tariff (US\$/kWH)	0.08	0.06-0.07
Cost of generation (US\$/kWH)	0.06	0.06
Conversion of USD to IDR	2400	8500
Income per capita (US\$)	1,500	710
Cash flow of PT. PLN	Surplus	Deficit

INVESTMENT SOURCES

1. **Central Government:** APBN + Loan (Soft Loan, concession loan, export credit, supply credit dan commercial loan) -> PLN and PGN
2. **PEMDA :** APBD, mainly concentrated on public works, less allocated on energy especially on electricity
3. **Private (PMDN & PMA) + Cooperatives + Partnership + Restribution + Banking .** Due to tariff structure, banking sector is still reluctant to fund energy sectors
4. **Bond,** mostly depends on SBI rate (PT.PGN).
5. **IPO and divestation,** mostly depends on the corporate cash flow and balance (PT.PGN).
6. **Other sectoral sources:** Clean Development Mechanism (CDM) and Global Environment Facility (GEF).

COGEN

COGEN: PRINCIPLE AND DEFINITION

1. Principle: Utilizing waste heat produced by an energy system.
2. Definition : “..as the sequential generation of two different forms of useful energy, typically mechanical energy and thermal energy from a single energy system..”

(ESCAP report)

COGEN: SOME CHARACTERISTICS

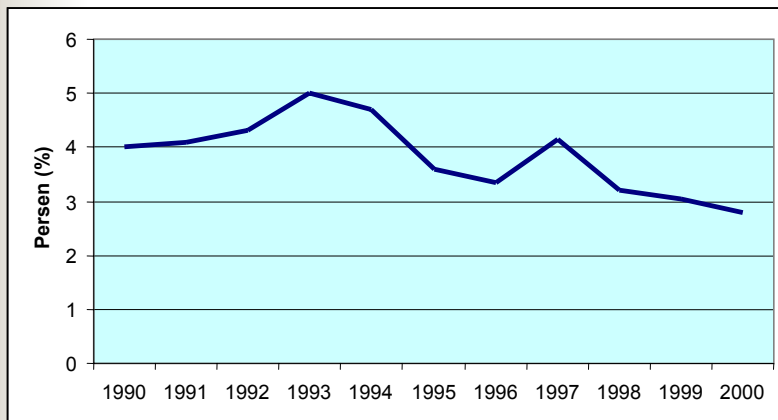
1. Non Conventional → utilizing waste → profit?
2. Conservation supported by:
 - a. Sensitivity to Energy Pricing
 - b. Technology
3. Environmental aspects.

CONSTRAINTS

INVESTMENT CONSTRAINTS

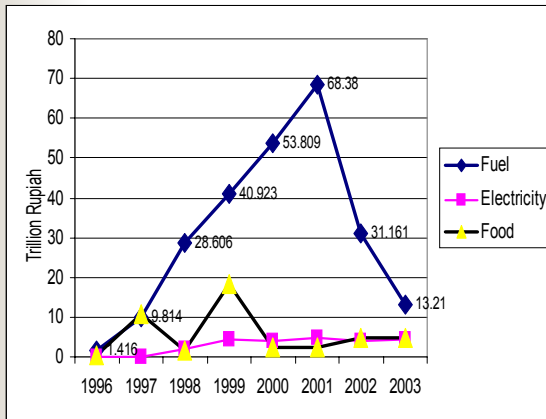
1. **Economical Price is still to be achieved.**
 - **Conventional is still more attractive than Non Conventional;**
2. **Limited National Budget** (Less than 2 % of APBN for all infrastructure project, DAU has been allocated as block grant to local government)
3. **The lending scheme for a loan is now less attractive.** (Tigh conditionalities)
4. **Market fluctuation is unpredecitable**
5. **Small Scale Generation is now promoted for local government initiatif, but difficult to comply with KMK 35 for to reloan.**
6. **Government guarantee and *security package* are no longer available or more difficult to get.**
7. **Incentive for non-conventional energy does not exist yet.**
8. **High Additional Invesment Cost cannot offset the additional revenue due to both of additional energy and selling price.**

INFRASTRUCTURE ALLOCATION (% Of GDP)



Source: Bank Indonesia

Fuel Subsidy so far.....



Source : Ministry of Finance

■ Fuel Subsidy will be gradually eliminated but in the last 5 years it had cost almost Rp. 200 trillion to the nation, on the expense of other sectors.

■ It has been observed that oil subsidy in the past has created distorted market enjoyed by the wealthy, and has not given enough compensation to the poor.

■ Compensation for the elimination of fuel subsidy in transport sector has not yet been appropriately and deliberately designed to carry the principle of income redistribution in urban areas.

GUIDELINES, SOURCES & POLICY

GUIDELINES For Loan Management (1)

1. **GBHN 1999-2004:**
 - A. **Fiscal Policy** to be set up in transparent way, fair, efficient, and effective to add government income and to reduce dependence on offshore loan.
 - B. **Government loan** is only justified for productive economic activity.
 - C. **National Budget (APBN) needs to be less dependent on donors and less subsidized**

GUIDELINES For Loan Management (2)

- B. **TAP MPR No.II/MPR/2002** about Recommendation and Policy to National Economic Recovery (Ch III 4.c):
 1. **Policy evaluation to increase bargaining position in loan negotiation.**
 2. **Set up comprehensive strategies in loan management, debt restructuring, and debt rescheduling.**

ENERGY POLICY

- **Energy Mix Policy:** based on optimization from related policy on indexation, diversification, conservation and tariff.
- **Guaranteed Energy Security** (quantity, quality, schedule and off course price)
- **Policy based on major diversification has higher risk than minor diversification.**

INVESTMENT REGULATION

(Based on UU NO. 20/2002)

Market	Regulator	References	System	Scheme
Competitive	BAPEPTAL	<ul style="list-style-type: none"> ➢ RUKN ➢ Electricity Market ➢ RPTL Operator System 	<ul style="list-style-type: none"> ➢ Generation (Competition) ➢ Transmission and Distribution (Regulated) 	<ul style="list-style-type: none"> ➢ Limited Competition ➢ Full Competition ➢ Join w/ IUPL and BUMN
		<ul style="list-style-type: none"> ➢ RUKN ➢ RPTL 	<ul style="list-style-type: none"> ➢ Generation, Transmission and Distribution (Regulated) 	<ul style="list-style-type: none"> ➢ Join w/ IUPL and BUMN
Non Competitive	Off Grid: Pemda	<ul style="list-style-type: none"> ➢ RUKD ➢ RPTL 	<ul style="list-style-type: none"> ➢ G, T, D (Regulated) 	<ul style="list-style-type: none"> ➢ Join w/ PIUPL (BUMD, private, Coop)

Note: RUKN: Rencana Umum Ketenagalistrikan Nasional; RUKD: RUK Daerah; RPTL: Rencana Penyediaan Tenaga Listrik; IUPL: Izin Usaha Penyediaan Tenaga Listrik

Source: Ditjen LPE, 2003

Therefore... **INVESTMENT POLICY must address the followings:**

- Awareness of public and decision makers to Cogen's role and potential contribution due to limited energy resources and energy conservation policy;
- Formulation an attractive financing scheme;
- Tax incentive (not PPH, but corporate tax);
- Optimization of local resources and uniqueness (e.q. use of rice husk and other biomass for cogen);
- Utilizing waste heat (flare gas in Oil and Gas field, combined cycle, binary system for PLTP);
- Energy Pricing should be set to make the energy policy works.
- Emission standard should be complied for all supply side.

PROPOSED SOLUTION

1. Investment gap for cogen compared to conventional power plant should be compensated by
 - a. Bridging financing (grant, CDM, and GEF);
 - b. Cost of money should be reduced by offering better financial condition;
2. Incentive to the efficient power plant such as cogen, and penalties for the inefficient ones;
3. Additional Benefit of using cogen should be greater than additional invesment cost by increasing efficiency and setting energy price.
4. Inventarizing existing thermal power plants to increase possibility of cogen development.



**THANK YOU &
GOOD LUCK IN YOU CAREER**