II. PROGRAMS FOR MANAGING CRISIS OF ELECTRICITY SUPPPLY

PROGRAMS FOR MANAGING CRISIS OF ELECTRICITY SUPPPLY

I. URGENT SHORT-TERM PROGRAM (2002 – 2006): (Technical Program)

A. Jawa Madura Bali (JAMALI) System:

a) **Supply Side**:
1. Optimization of existing installed capacity
2. Completion / addition of network capacity
3. Completion of IPP
4. Utilization of captive power
5. Addition of new capacity
6. Revitalize PLN financial viability through debt restructuring, principal loan rescheduling payment, asset revaluation, and phased tariff increase.

b) **Demand Side**:
1. Load growth management (particularly on peak load)
2. Temporary limitation of installations of new connection particularly in several crisis regions
3. Promoting energy efficiency through Demand Side Management program

B. Outside JAMALI System :

a) **Supply Side**:
1. Addition of new capacity
2. Completion of network/grid

b) **Demand Side**:
1. Load growth management (particularly on peak load)
2. Temporary limitation of installation of new connection

II. LONG-TERM PROGRAM:

a. Electricity Sector Restructuring:

a) Revitalize PLN financial viability
b) Rationalize electricity tariff
c) Eliminate subsidy for industry / commodity
d) Restructure the electricity sector
e) Increase transparency in regulating the sector
f) Redefine government role
g) Increase private participation

b. Nusantara Grid

c. ASEAN Power Grids

III. URGENT SHORT-TERM PROGRAMS

A. JAWA MADURA BALI (JAMALI) SYSTEM

Region of Jawa Madura Bali (JAMALI)

a) Supply Side

PROGRAM	ACTIVITY	NECESSARY STEPS	GOAL (TIME & CONDITION)	FINANCIAL RESOURCES
1. Optimization of Existing Installed Capacity	➢ Increase availability through: – Tight schedule maintenance – Fuel supply security	• Complete maintenance on time		PT. Indonesia Power PT. PJB
		• Implement cooperation of fuel supply in upstream side		PT. Indonesia Power PT. PJB
		• Complete long-tern contract of coal supply for PLTU Suralaya and Paiton		PT. Indonesia Power PT. PJB
		• Complete long-tern contract of supply of generation spare parts	- Availability of spare parts for 2002-2006	PT. Indonesia Power PT. PJB
		• Gas supply security for genaration in:		
		- Muara Karang and Priok, New Contract	- End 2004 - Complete in 2006	
		- Gresik	- Receive power supply from other supplier in 2005	
		- Muara Tawar, Grati and Tambak Lorok	- Completion of new contract in 2005	
	➢ Rehabilitation	• Compete long-term contract supply of generation spare parts	- Availability of spare parts for 2002-2006	PT. Indonesia Power PT. PJB
		• Rehabilitate boiler PLTU Priok #3 & #4	- Each installed capacity is 50 MW, 2005	PT. Indonesia Power

PROGRAM	ACTIVITY	NECESSARY STEPS	GOAL (TIME & CONDITION)	FINANCIAL RESOURCES
1. Optimization of Existing Installed Capacity (continue)	➢ Rehabilitation	• Rehabilitate boiler PLTU Perak #3 & #4	• Each installed capacity 50 MW by 2005	PT. Indonesia Power
		• Renovate and Uprating PLTU Muara Karang #4 & #5	• Uprating 10% from current installed capacity in 2005	PT. PJB
		• Rehabilitate PLTU Gresik #3 & #4	• Increase efficiency, 2003-2004	PT. PJB Grant from Gov. of Japan
		• Uprating PLTGU Gresik #1, #2 & #3	• Add installed capacity by 10%, 2003-2005	PT. PJB
		• Uprating PLTP Gunung Salak #1, #2 & #3	• Add installed capacity by 10%, 2003	PT. Indonesia Power
		• Uprating PLTU Suralaya #1- #4	• Add installed capacity by 5%, 2003	PT. Indonesia Power
		• Rehabilitate PLTA Seloredjo & Mendalan, Add drain capacity of PLTA Mendalan	• Add rated capacity by 2,5 MW, 2003	PT. PJB
		• Rehabilitate oil coller pipe PLTA Saguling dan Cirata	• Increase of generation capacity in 2003	PT. Indonesia Power PT. PJB
		• Rehabilitate PLTG Grati	• Finish on 2004	PT. PJB
	➢ Repowering	• Relocate PLTG Priok 2x50 MW to Pemaron-Bali and install HRSG ex. Siemens 80 MW	• Increase of installed capacity in Bali, 2002-2004	PT. Indonesia Power
		• Add-on PLTGU Muara Tawar #2, 150 MW GT & 250 MW HRSG	• Increase of generation capacity in 2006	- F/S by JCI is in the process of completion - Will be suggested financing by JBIC

PROGRAM	ACTIVITY	NECESSARY STEPS	GOAL (TIME & CONDITION)	FINANCIAL RESOURCES
2. Increasing Network Capacity	➢ ***De-bottlenecking* 500 kV** – Non-permanent	• Install jumper in GITET Paiton, Kediri and Pedan, so that SUTET can be operated at 1 cct	• Add power supply of 600 MW from Paiton, April 2002	• Work completed APLN
	– Permanent	• Finalize GIL Paiton	• Add distribution capacity, 2003	• KE-3 Lot 3 Paribas
		• Finalize GITET Kediri (excl. trafo)	• 2 cct Paiton-Pedan is in operation, 2003	
		• Add IBT GITET Klaten	• Add capacity 420 MW in Jawa-Bali system, 2005/2006	
		• Finalize outlet 150 kV GITET Kediri	• Add distribution capacity SUTET	
	– Strengthen Interconnection Jawa-Bali – Interconnection Barikin-Tanjung	• Develop OHL 500 kV Jawa-Bali Crossing • Develop transmission 150 kV Barikin-Tanjung • Upgrading and extension for construction of 150 kV • Add switchyard bays, indoor switchgear feeders, power transformers and capacitors	• Increase reliability of subsystem Bali, 2006 • Expected to be finished by 2007	• ADB
	– Extension Jawa-Bali Power Grid Cianjur and Kebonagung 150 kV	• Develop transformer 120 MVA • Add power transformer 240 MVA	• Realized by September 2007	• ADB

PROGRAM	ACTIVITY	NECESSARY STEPS	GOAL (TIME & CONDITION)	FINANCIAL RESOURCES
2. Increasing Network Capacity	– Develop power quality	• Install capacitor in several GI, including : - GI Sanur & Nusa Dua - Cilacap, Banjar, Pekalongan, Bumiayu, Manisrejo, Banaran	• Increase of reliability subsystem Bali, 2006 • Complete November 2002 • Complete December 2002	
3. IPP Renegotiation	➢ **Rationalize special contracts and complete contract according to the priority** – Renegotiation according to Presidential Decree No. 133 of 2000	• Decide on completion scheme of PLTU Tanjung Jati B	• Satisfy additional power of 1320 MW, 2004	• JBIC
		• Renegotiate price and arrears to be paid by PLN to Paiton I and Paiton II	• To achieve price agreement for Paiton I 1230 MW and Paiton II 1220 MW, end of 2001	• APLN
		• Recommision PLTP Dieng dan establish of New-Company	• Operate PLTP Dieng 60 MW in 2002	• GoI and investor
	➢ **Implementation of Presidential Decree No.15 of 2002**	• Continue IPP project, which previously had been under reviews.	• PLTP Bedugul 1,2 (2x55 MW), in 2006 • PLTP Patuha unit 1 (55 MW), in 2006 • PLTP Kamojang (60 MW), in 2007 • PLTU Tj. Jati A unit 1 & 2 each of 660 MW in 2008 and 2010 • PLTU Tj. Jati C unit 1 & 2 each of 660 MW in 2009 and 2010	

PROGRAM	ACTIVITY	NECESSARY STEPS	GOAL (TIME & CONDITION)	FINANCIAL RESOURCES
3. IPP Renegotiation		• Continue IPP projects, which previously had been suspended.	• PLTP Bedugul 3 & 4 (2x55 MW), in 2007 • PLTP Patuha 2, 3 & 4 (3x55 MW), in 2008 • PLTP Dieng 2 & 3 (2x22 MW) and 4 (55 MW) each in 2008 and th. 2010 • PLTP Cibuni (10 MW) in 2005 • PLTU Cilacap (450 MW) in 2007 • PLTU Cilegon (400 MW) in 2007 • PLTU Serang (450 MW) in 2008 • PLTGU Pasuruan (500 MW) in 2005	
4. Utilization of Captive Power	➢ **Inventoried the potential of captive power** ➢ **Pass on questioner on the supply availability and follow up actions related to commercial, technical, and operational aspects.**	• Continue detailed survey for customer class of I3, I4 and B3 with installed capacity more than 1000 kW of Jawa-Bali	• Final Study End of November 2001 • Captive capacity, which can participate in power supply, waits for the result of the study.	• APLN

PROGRAM	ACTIVITY	NECESSARY STEPS	GOAL (TIME & CONDITION)	FINANCIAL RESOURCES
5. Addition of New Capacity	➢ **Repowering** – Recondition and increase the capacity of PLTU M. Karang	• Converse PLTU Muara Karang unit 1, 2, 3 (300 MW) to PLTGU (720 MW)	• Increase capacity of PLTU M. Karang unit 1,2,3 (300 MW), which has been 25 years in operation, to PLTGU 720 MW, which is forecasted to be in operation in 2005/06 • Improved heat rate • Optimal utilization the area of PLTU M. Karang	• The government suggests JBIC loan of US$ 348 million, in 2001
	➢ **Expansion** – Add generation unit in the existing location of PLTGU M. Tawar	• Develop PLTGU M. Tawar Blok 2 and 3	• Additional capacity of 2x750 MW PLTGU M. Tawar in 2006 • Utilization of common facilities resulting in a cheaper Construction Cost	• The government suggests JBIC loan of US$ 23.2 million for engineering design
	➢ **New generation** – Add generation of PLTG 840 MW and PLTU 1200 MW in new location	• Develop PLTG 840 MW and PLTU 1200 MW	• Meet the demand according to medium scenario	
	➢ **Develop new generation of PLTGU Tj. Jati B**	• Unit 1, 600 MW • Unit 2, 600 MW	• Additional capacity of 1320 MW in 2005/2006	• JBIC
	➢ **Urgent program for additional generation in Jawa, Bali and Madura PLTG**	• Develop new PLTG with capacity of 600 MW	• To address crisis which will be happened in 2005. PLTG is expected to be in the system in 2004	• Source of fund has not been identified
	➢ **Transmission and GI**	• Develop GI of 6734 MVA and transmission of 3042 kms (consider as on going-project)	• 2002-2005	• Source of fund has not been identified

b) Demand Side

PROGRAM	ACTIVITY	NECESSARY STEPS	GOAL (TIME & CONDITION)	FINANCIAL RESOURCES
1. Load growth management (particularly on peak load)	➢ **Promote energy saving concept and socialize the usage energy saver appliances particularly on lighting for consumer class R1 and street lighting (PJU)**	• National Campaign on energy efficiency/ energy saving by conducting seminars & running media advertisements	• Reduced peak load by: ✓527 MW in 2001 ✓1054 MW in 2002 ✓1581 MW in 2003 ✓2108 MW in 2004	• Proposed to be funded by APBN
	➢ **Reduce peak load**	• Increase the ratio of on-peak tariff to off-peak tariff		• Source of fund has not been identified
	➢ **Reduce non-technical loss**	• Improve consumer administration • Increase inspections on electricity connection (*PPTL : Penanggulangan Pencurian Tenaga Listrik*-Program to address Electricity Loss due Stealing)		• APLN
	➢ **Promote the use of energy-efficient appliances**	• Implement standard energy-usage appliances and label electricity consumption		• APBN
2. Temporary limitation of installation of new connection	➢ **Limit new consumers**	• New connections are limited to up to certain capacity		• On proposal by DJLPE
	➢ **Reduce installed capacity**	• Recollect data of installed capacity at the government offices		