

Box-A Presentation by Gujarat govt to Piyush Goyal

Gujarat Power Scenario in 2002

- State's installed capacity was 8,756 MW
- Peak deficit of 20%
- Power cut / Load shedding of 4-5 hrs
- Low voltages due to inadequate transmission network and substations
- Erratic power supply due to mixed load of agriculture and villages
- T&D losses as high as 34.20% - rampant power theft
- Severe voltage fluctuations and transformer failure issues
- Problem of phase converter
- Retail tariff – not cost reflective
- Poor billing and collection efficiency
- Loss of Rs 2,543 crores in FY 2000-01

Fuel Wise installed capacity – Gujarat

Fuel	As on 31.3.2002		As on 31.3.2014	
	MW	Share %	MW	Share%
Coal & Lignite	5,599	63.94%	13,000	54.43%
Gas	2,196	25.08%	5,268	22.06%
Hydro	547	6.25%	779	3.26%
Nuclear	315	3.60%	559	2.34%
Renewable	99	1.13%	4,277	17.91%
Total	8,756	100%	23,883	100%

Few highlights of Gujarat Power sector

Particulars	In 2002	In 2014	% Growth
Generation Capacity (MW)	8,756	23,883	173%
Transmission Substation (Nos.)	730	1,470	101%
Transmission Lines (KM)	31,012	50,131	62%
Distribution Lines (CKM) (HT+LT)	351,917	624,019	77%
Distribution Transformers (Nos.)	212,973	726,559	241%
Distribution Feeders (Nos.)	4,954	12,028	143%
Consumers (Nos.)	0.73 Crs	1.30 Crs	78%
Agriculture Consumers (Nos.)	6 Lakhs	11 Lakhs	83%
Consumption (Billed Units) (MUs)	23,129	50,431*	118%
Distribution Losses (%)	30%	18.55%	-
Revenue from sale of power (Rs Crs.)	7,274	26,000	257%
Profit / Loss (in Rs Crs.)	2,543 (loss)*	539 (profit)*	-

Details for FY 2000-01

* Details for FY 2012-13

Capacity addition planned (2014-17)

Name of Plant	Ownership	Fuel	MW	Likely commissioning
Sikka Unit 3&4	GSECL	Coal	500	2014-15
Bhavnagar Energy Co (Unit 1 & 2)	BEECL	Lignite	500	
UMPP – Tilaiya	JIPL	Coal	300	2015-16
Wanakbori Ext Unit 8	GSECL	Coal	800	
Mouda Stage II	NTPC	Coal	240	
Lara	NTPC	Coal	140	
Kakrapar Ext	NPCIL	Coal	476	2016-17
Shapoorji Pallonji Energy	SPEGL	Coal	800	
Essar Power Gujarat Ltd.	EPGL	Coal	800	
GIPCL Exp Stg III	GIPCL	Lignite	500	
Lara	NTPC	Coal	140	
Dhuvaran STPP Stage I	NTPC	Coal	660	
Khargone STPP	NTPC	Coal	220	
Gadarwara STPP Stage I	NTPC	Coal	220	
Total			6,296	

Installed capacity – Gujarat

Installed Capacity	As on 31.3.2002		As on 31.3.2014	
Total	8,756 MW		23,883 MW	
- State Owned	5,644	64%	8,447	35%
- Private IPPs	1,544	18%	11,596	49%
- Central Sector	1,568	18%	3,840	16%

Category wise Consumers (as on Mar-2013)

Category	Consumers (Nos.)	% share wrt total	Consumption (MUs)	% share wrt total
Residential	9,708,153	79.16%	8,012	13.66%
Commercial	1,205,410	9.83%	194	0.33%
Industrial	277,422	2.26%	24,859	42.37%
Agriculture	991,185	8.08%	15,116	25.76%
Water Works	54,288	0.44%	1,302	2.22%
Street Light	26,787	0.22%	223	0.38%
Railways & Licensee	14	0.00%	8,965	15.28%
Total	12,263,259	100%	58,671	100%

Steps taken to turnaround sector

Aggressive Capacity addition

- Own Generation = 2,800 MW
- Competitive bidding = 7,615 MW
(PPA signed; Tariff Rs 2.25 - 2.89; Already commissioned 5,005 MW)
- Central Utilities = 5,800 MW
(PPA signed; Commissioned 2,300 MW)
- Present installed capacity = 23,883 MW
 - Conventional = 19,606 MW
 - Renewable = 4,277 MW
- Present peak demand = 13,740 MW
- Hence, Gujarat has become power surplus state in a period of 10 years
- Capacity addition planned in 12th Five year plan – 6,296 MW

Steps taken to turnaround sector

Steps taken – Transmission

- Private sector participation saved investment in generation and hence used in transmission & distribution
- Investment made from 2002 onwards – Rs 13,050 Crs. More than 400% rise (up to 2001-02 – Rs 3,150 Crs)
- Substations increased from 730 to 1,470 Nos.
- Transmission lines increased from 31,012 to 50,131 ckt kms
- Resulted to 99.46% transmission system availability and 3.89% transmission losses

