Indian Power Sector

An Overview of Recent Developments

Structure of the Presentation

- Indian Power Scenario
- Enabling Legal Framework for Investors – Electricity Act 2003
- Transparency & Competition in Power Procurement – Tariff Policy
- Streamlined Environmental Clearance Procedures – EIA Notification
- Competition in Procurement of Transmission Services
- Facilitation to Investors by IL&FS – Sectors & Activities
- IL&FS Competitive Advantage
- IL&FS Experience in Power

Indian Power Scenario – A Review

- **Installed Capacity: 132 GW + 15 GW Captive (As on Mar 07)**

  - Hydro – 26%
  - Thermal – 65%
  - Nuclear – 3%
  - Renewable – 6%

- State Sector – 53%
- Central Sector – 34%
- Private Sector – 13%

Indian Power Scenario – Shortfall

- Shortfall from April 06 – Mar 07

Region	Northern	Western	Southern	Eastern	North Eastern	All India
Shortfall in Energy (%)	11.0	15.6	2.7	3.0	9.9	9.6
Shortfall in Peak Demand (%)	15.5	24.7	7.0	4.1	21.1	13.8

Indian Power Scenario – Projected Growth

- **Power for all by 2012**
- Present Per capita Consumption – 631 kwh
- Per capita Consumption by 2012 – 1,000 kwh
- Peak demand Estimation by 2012 – 157 GW
- Inter Regional Transmission capacity to upgrade 37,000 MW by 2012 from 14,000 MW presently
- Investment requirement by 2012 – USD 100 Billion
  - Generation – USD 50 Billion
  - Transmission & Distribution – USD 50 Billion

Capacity Addition – Targets & Achievements

Five Year Plan	Year	Target	Achievement
Eighth Plan	1992-1997	30,538	16,423
Ninth Plan	1997-2002	40,245	19,015
Tenth Plan	2002-2007	41,110	21,180
Eleventh Plan	2008-2012	78,577	N.A.

Demand Estimates – Working Group on Power

Year	GDP - 8%		GDP – 9%	
	Requirement (MW)	Addition Required (MW)	Requirement (MW)	Addition Required (MW)
2006-07	140,000	-	140,000	-
2011-12	206,000	66,000	215,000	75,000
2016-17	303,000	97,000	331,000	116,000
2021-22	445,000	142,000	510,000	179,000
2026-27	655,000	210,000	785,000	275,000
2031-32	962,000	307,000	1207,000	422,000

IL&FS

Power Deficit to Continue in Foreseeable Future

Enabling Framework for Investors – Electricity Act 2003

- De-licensing of Generation except Hydropower
- No license for Dedicated lines & Distribution in Rural Areas
- Transmission Open Access
- Distribution Open Access in Phased Manner
- Transparency & Competition in procurement of services
- Encouragement to Captive Power Plant including Group Captives
- Trading of Power – a distinct activity
- Focus on Renewable Sector – Minimum Purchase Obligation
- Institutional Framework – Independent Regulators
- Appellate Tribunal Operational since July 2005

Key Milestones

Competitive Bidding in Generation	19th Jan 05
National Electricity Policy	12th Feb 05
Tariff Policy for Power Procurement	6th Jan 06
Guidelines for Competition in Transmission	17th Apr 06
National Environment Policy	18th May 06
Rural Electrification Policy	23rd Aug 06
New EIA Notification	14th Sep 06
Guidelines for Coal Allocation	3rd Nov 06

Competition in Power Procurement

- Power Procurement by Discoms only through Competitive Bidding – Sec 63, IE Act
  - ✓ " .. the Commission shall adopt the tariff if such tariff has been determined through transparent process of bidding .."
- Exemption to Government Project for five years – Cost Plus under Sec 62, IE Act

Transparency & Competition in Power Procurement – Tariff Policy

- Initiatives by Ministry of Power
  - ✓ Facilitation for Ultra Mega Power Project
  - ✓ Promoting Merchant Power Projects
- Bidding Framework announced for Power Procurement
  - ✓ Case – 1: Site & Fuel not specified
  - ✓ Case – 2: Site and/or Fuel specified
- Focus on Renewable Sector – Minimum Purchase Obligation on Distribution Licensees

Streamlined Environment Clearance Procedure – New EIA Notification

- Categorization of all Projects – A, B1, B2
- Category A – Central Environmental Appraisal Committee (EAC)
- Category B – State Environmental Appraisal Committee (SEAC)

Category A - EAC

Screening
Scoping
Public Consultation by SPCB
Appraisal by EAC
Prior Environ. Clearance

Category B - SEAC

Screening
B1 – EIA Study, B2 – No EIA
Scoping for B1
Public Consultation by SPCB
Appraisal by SEAC
Prior Environ. Clearance

Competition in Procurement of Transmission Services

- Network Plan by CEA – No new lines not included in the plan (except dedicated transmission lines)
- Empower Committee constituted by Ministry of Power to select projects to be implemented under tariff bidding
- Bid Process Committee (BPC) to do initial project development & manage tariff bidding
- Regulator to adopt tariff arrived by tariff bidding
- Standard bidding documents being notified
- Cost plus for CTU and STU projects for 5 years

Facilitation to Investors by IL&FS - Sectors

Generation Sector

- Co-developer
- Captive Power for Clusters
- Sole Transaction Advisory
- Managing Tariff Bidding
- Financial Advisory
- Syndication of Debt & Equity
- Project Management

Transmission Sector

- Co-developer
- Sole Transaction Advisory
- Support to BPC
- Financial Services
- Project Management

Coal Mining

- Allocation Support
- Co-developer
- Mine Development Advisory
- Bid Management for Operator Selection
- Financial Services

Distribution Sector

- Structuring of Franchisee Model and Bid Process Management
- Supervision Support
- Energy Management at Consumer end

Facilitation to Investors by IL&FS - Activities

Project Preparation

- Conceptualization
- Identification of Sites
- Pre-feasibility Studies
- Linkages (Fuel/water)
- Statutory Clearances
- Regulatory Clearances
- Risk Management Framework

Project Development

- Project Structuring
- Detailed Studies
- Anticipatory Hurdle Tracking System
- Contractual Arrangements
- Marketing Strategies
- Business Plan & Modeling
- Financial Structuring

Project Financing

- Preparation of IM
- Debt & Equity Syndication
- Financing Agreements
- Security Agreements
- Financial Closure

Project Execution

- Engineering & Procurement
- Project Management
- Construction Supervision
- Operations Management

IL&FS Competitive Advantage

Leadership in Infrastructure

- Leadership in Project Development
- Strong Domain Knowledge
- Extensive Networking & Relationships
- Strong Partnerships with State & Central Governments, PSU's
- Geographic Spread
- Access to Financing

IL&FS Experience in Power Sector

- ONGC Tripura Project, Tripura
  - 740 MW CCGT, 700 km Transmission Line
  - Conceptualization to Complete Project Development
  - Equity Participation & Syndication of Balance Funds
- Karimnagar Project, AP
  - 2,100 MW CCGT
  - Complete Project Development
- Krishnapatanam Project, AP
  - 2 x 800 MW Super Critical Blended Coal based Plant
  - Complete Project Development

IL&FS Experience in Power Sector

- JV's for Project Development
  - Government of Tripura
  - Government of Chhattisgarh
  - Government of Andhra Pradesh
  - Government of Jharkhand
  - Government of Uttranchal
  - Government of National Capital Territory of Delhi
  - Bodoland Tribal Council
  - Power Grid Corporation of India
  - Oil & Natural Gas Corporation
  - Mineral & Metal Trading Corporation
  - Government of Assam

IL&FS Experience in Power Sector

- Renewable Sector
  - Wind Farm in Andhra Pradesh
  - Wind farm in Karnataka for ONGC
  - Waste to Energy Projects – Delhi, UP, Rajasthan, Maharastra
  - Identification and development of hydro projects in Uttaranchal
  - Development of Bagasse based Co- Gen. Projects in Sugar factories in Maharashtra with Urja Ankur Fund
- Financing
  - Equity Fund
  - Managing Various Lines of Credits
  - Association with IIFSL & other funding sources

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Thank You