India Power Sector Reforms Update

Issue IV – August 2002

(Updates in the period: June 2002 to August 2002)

India power sector reforms update is a joint initiative of Prayas, an Indian NGO based in Pune, working on power sector issues for a decade and Public Services International (PSI) which is an international trade union federation, uniting public sector workers in more than 500 trade unions in over 140 countries. Our aim is to monitor the power sector developments in three Indian states of Orissa, Andhra Pradesh and Uttar Pradesh. This is the fourth issue of the update covering three months period from June 2002 to August 2002. First issue was a detailed historical overview covering up to October 2001; second update covered the period from October 2001 to January 2002 while the third update covered February 2002 to May 2002. For better understanding it would be desirable if readers also read the earlier updates. Please direct your suggestions and comments to PSI at psiru@psiru.org.

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Part I: Overview of the Indian Power Sector

Change of Guard:

The most important update is the change of guard at the Ministry of Power. Mr. Suresh Prabhu, the union power minister resigned in August at the request of his party leadership. Mr. Prabhu was a dynamic campaigner for power reforms and had started many initiatives during his tenure. Mr. Anand Geete, from the same party, who was a junior minister for Finance, has taken over on August 27. Another change is in the CEA. Mr. HL Bajaj, who was Director (Commercial) with NTPC, has taken over as Chairman, CEA in June.

In a presentation made shortly before he left, Mr. Prabhu had captured some key aspects of Power reforms as below:

- 21 of the 28 states have Electricity Regulatory Commission
- 12 State RCs have passed Tariff orders
- MOUs on power reforms have been signed with 21 states
- Electricity has reached 80% of villages and 60% of households
- Capacity addition plan for Tenth Five-year plan (2002-7) is 41 GW. By 2012, the plan is to add 100 GW and reach power to all
- The target capacity addition in the 9th plan (1997-2002) was 40 GW. Only 21 GW has been actually added.

DVB Privatisation:

The Delhi Vidyut Board (DVB) has been split into six companies- three distribution companies, one holding company, one transmission and one generation company. DVB, which has been reporting very high losses particularly in distribution, has transferred distribution of power to two private companies, effective from July 1, 2002. On 31st May Delhi Vidyut board signed an agreement with Tata Power Company (TPC) and Bombay Suburban Electric Supply (BSES) for distribution of power. Under the agreement, a 51 per cent stake was sold to these private companies. TPC will distribute power in North & Northwest zone while BSES will supply to two distribution zones - Central & East and South & Southwest.

In February 2002, seven companies had shown interest to take over the distribution business. In April, only BSES and TPC submitted bids, which were rejected because they did not meet the loss reduction criterion, laid down by DVB. Then a three-member committee was formed to negotiate with the bidders on reduction of losses and other issues. BSES agreed to reduce Aggregate Technical and Commercial (AT&C) losses by 17 per cent in five years for the South & Southwest Delhi distribution company and by 17.25 per cent for the Central & East Delhi company. TPC also agreed to reduce the total loss in its distribution area by 17 per cent within the next five years. Both the companies requested Delhi government to enact an anti theft legislation as part of privatisation of the board. It is reported that both the companies are planning huge investment in the next five years for up-gradation of the existing system. BSES Chairman has said that he expects to bring Delhi distribution system to Mumbai standards in 3-5 years.

In August, the two distribution companies of BSES have been re-named as BSES Rajdhani Power Limited (Southwest region) and BSES Yamuna Power Limited (Central-East region). TPC has renamed the North-Northwest Delhi Distribution company as North Delhi Power Limited.

DPC:

DPC plant continues to be down and the issues are not resolved. Indian lenders are exploring ways to restructure the project and in June had appointed Rothschild (of UK) as the consultant. Initially IDBI proposed to sell power at Rs. 2.75 / unit at 75% PLF, but MSEB said it can buy only at Rs.2.25/unit at 50% PLF. MSEB has filed petition before the MERC in this matter but the hearings on the same are yet to begin NTPC may enter to Operations and Maintenance contract to operate the plant if this plan of MSEB materialises.

Western Grid Collapse:

The Western Power Grid, comprising of the states of Maharashtra, Madhya Pradesh, Gujarat and Goa collapsed at 2011 hrs on July 30. Frequency had dipped to 47.7 Hz and there was a generation loss of 18,000 MW making the whole of the region go dark except Mumbai, Ahmedabad and Kakrapur.

NASSCOM Recommendations:

In July, NASSCOM has come up with some recommendations on IT for Distribution reforms. 5% of the annual revenue of each utility and 15% of the APDRP spending is to be invested in IT. Use of IT applications in utilities is to be audited, survey conducted to identify best practices in IT and a power portal is to be set up.

Tariff Policy from MoP:

MoP plans to bring out a new tariff policy by December 2002. Some level of consultations have been held and CRISIL has been asked to evaluate the suggestions. This policy is expected to provide the broad framework for SERCs to fix tariff.

New players in Distribution:

NTPC and Powergrid, both central utilities have taken steps to enter the Distribution area. NTPC has set up a wholly owned subsidiary, NTPC Electricity Supply Company Limited (NESCL) in August. NESCL plans to take over distribution in the cities of Kanpur (in UP) and Gwalior (in Madhya Pradesh State). NTPC has been providing consultancy services to SEBs as part of the APDRP in 63 distribution circles. Powergrid also plans to set up a fully owned subsidiary to provide value-added services in power distribution. In a tender released in August, Powergrid has invited partners who are interested to own and operate distribution circles

PSEG leaves?

US based PSEG has stakes in two IPPs - 74% stake in Tannir Bavi project in Karnataka and 20% stake in the PPN Project in Tamil Nadu. In June, PSEG has decided to sell the stake in Tannir Bavi. It may do the same with PPN, marking the exit of another multinational from India.

Evolving the reform Model in Maharashtra:

As promised during the budget speech by Finance Minister of Maharashtra, the GoM has come out with a White Paper on Power Sector Reforms in the state. The GoM has also adopted the unbundling and privatisation as the power sector reforms model.

MP and Karnataka unbundle:

KPTCL, the state owned T&D utility in Karnataka has been unbundled to separate out the distribution business. 4 distribution companies have been set up in June. MP is planning to set up 5 companies to handle the sector - one for generation, one for transmission and 3 for distribution.

RC Vs Judiciary:

In a land mark judgement given on May 14,2002, a two-member division bench of the Calcutta High Court set aside the tariff order issued by WBERC in November 2001. This was in response to an appeal filed by the CESC. Judgement questions RC's method of calculating costs, and setting targets for performance (like T&D losses). It also questions the wisdom of public participation in the tariff process. This order has deep implications for the power for RC in tariff fixation, fixing standards for licensees etc. WBERC has moved the Supreme Court against this order.

E-Bill not passed:

Electricity Bill 2001 was expected to be passed in the Monsoon session of the Parliament. But this did not take place.

Part II: Orissa

1. STATE OVERVIEW

The World Bank funded reform program is still under review. With the loan period due to end this year, GRIDCO plans to ask for extension. A five-member WB team is in Orissa in September for review. Orissa government has requested PFC for a loan of Rs. 12 billion for implementing transmission projects in the state.

The hydel power generation in Orissa come down to 165 MW due to insufficient rainfall. (The installed hydel capacity is 1877 MW). Orissa Hydro Power Corporation (OHPC) has shut down the two plants Upper Kolab Power Station and Ragali Power station. This shortage of generation will add to the current power crisis in Orissa.

In end May, it was reported that GRIDCO has appointed Karvey consultants, RR Finance consultants, HB Portfolio limited and a three member consortium led by Srei capital markets for private placement of its state government guaranteed redeemable non-convertible non cumulative un-rated debentures.

To avoid acute possible power shortage caused due to the threat of NTPC to regulate power supply (450 MW) to state, the Chief Minister had assured Power minister of signing the tripartite agreement with Centre and Reserve Bank of India for payment to NTPC. But there have been differences in the cabinet and this had resulted in "no decision" being taken on signing of tripartite agreement. The centre has been extending the deadline for signing the agreement from time to time and NTPC has lifted its power supply regulation hoping for this event. GRIDCO's stated problem is the non-recovery of dues from the DISCOMs. In August, GoO has given an ultimatum to BSES to provide Bank Guarantees to GRIDCO for these dues.

2. REGULATORY INTERVENTION

Recently OERC conducted a study of the distribution companies. According to OERC, none of the DISCOMs are working satisfactorily. Three distribution companies NESCO, WESCO, SOUTHCO are run by BSES while CESCO is run by AES Corporation. OERC reported that losses of these distribution companies are increased. Collection of electricity bills from consumers is decreased. The OERC has threatened to cancel the licenses of the distributing companies unless they show a steady improvement in their performance.

3. PRIVATE SECTOR GENERATION

PTC has asked the promoters of the 3960 MW Hirma Project to scale it down to 1000 MW. Rajasthan, Haryana, Madhya Pradesh, Punjab, Gujarat, will be five takers of power from this project, promoted by Reliance Industries. Promoter is busy in taking different approvals from government. Payment Security Mechanism (PSM) is currently under advanced stage of approval by the Government of India. Power Purchase Agreement (PPA) is under negotiation with the developers. The first unit is likely to be declared commercial by December 2006 and the complete station by March 2008. The transmission scheme developed by Powergrid consisting of HVDC and AC systems is currently under approval by the Central Electricity Authority.

4. PRIVATE SECTOR DISTRIBUTION

Performance of the DISCOMs was reviewed by the OERC. Review showed that the losses have been increasing, cess collection reducing and billing efficiency dropping. GRIDCO is having problems with NTPC for payment of dues and has blamed the DISCOMs, which in-turn own GRDICO.

Questions have been asked how BSES (which controls three DISCOMs) has been able to buy majority stake in 2 Distribution companies in New Delhi. Mr SS Dua, CMD of BSES has said in July that when they took over the DISCOMs, they had expected a turn around time of 2-3 years. But this was based on base line data prepared by reform consultants, which has 'proved to be far from reality'. BSES plans to take corrective steps like improvement in billing, giving extensive training to field staff (at Mumbai and at international distribution companies), conducting consumer awareness programs, forming village committees and speedy implementation of WB supported projects. BSES has asked for support from OERC, GoO, WB, and DFID to tide over the crisis. DISCOMs plan to reduce losses by 2% for the next two years and 3% thereafter. Target for improving collection is 2% in the next year and 3% thereafter. With all this, Mr. Dua says that turnaround will happen for NESCO by 2004, SOUTHCO by 2005 and WESCO by 2006.

Financial condition of CESCO is so worse that it is difficult for the utility to make salaries of employees for the current two months. The escrow account of AES managed Orissa Power Generation Corporation with Gridco is stated to be the reason for poor condition of CESCO. Gridco has right to first access the revenue earned by CESCO through this escrow facility. The state Government and state run corporation owe around Rs. 1500 m to CESCO. Earlier in May CESCO's chief Executive wrote a letter to state finance secretary asking him to clear the dues. He urged the finance secretary to release at least Rs. 100 m so that CESCO can pay salary to its employees. As there is no response from state government CESCO filed a petition in high court against the state government. High court ordered the state government and its undertaking to pay Rs. 120 m to CESCO within two weeks and also dues for the month of July by August 15, 2002.

Another update is about the Tata Power Company. In 1999, the Tata Power Company had taken part in competitive bidding procedure for taking stakes in distribution companies. Though initially TPC was awarded one zone, later TPC backed out. Then Gridco invoked the guarantee with SBI of Rs. 50 m saying that TPC failed to sign acquisition agreement for purchase of 51% of stake in CESCO. Orissa High court directed GRIDCO to deposit Rs. 50 m with Tata Power Company by June 14, 2002. Earlier GRIDCO appealed in High court against the order given by Khurda District Court. The district court ordered that Gridco should refund the Rs. 50 m guarantee deposited by Tata Power Company with 18% interest with effect from July 31, 2001.

Part III: Andhra Pradesh

1. STATE OVERVIEW

In September 2002, the current Chief Minister completed 7 years in office. He has re-iterated his resolve to go ahead with the power sector reforms as an integral part of the on-going reform program in the major sectors in the state. He has asserted that but for power reforms, the tariffs would have been higher and the quality of power supply much poorer. He has said that the government would not hasten the privatisation of the distribution companies (due in 2003-4 as per the reform timetable), learning from the experiences of Orissa. It is clear that issues of power sector will play a significant role in the elections to the State assembly, due in 2004.

Mr. TL Sankar, one of the architects of power reforms in the state, presented a paper titled: "Towards a *People's Plan* for Power Sector Reform". This paper is being discussed in the sector. He questions the implementation of the reform process and feels that "reforms have almost become a corporate plan for the revival of power companies at the cost of all other stake holders". He suggests that demand for agriculture and poor domestic consumers could be met by a separate generation company (based mostly on hydel generation). He supports third party sales and suggests creation of smaller distribution companies.

2. REGULATORY INTERVENTION

The technical member of the APERC, Mr. AV Subba Rao retired and Mr K Sreerama Murthy assumed charge as commission member in July 2002. Mr Murthy was a Chief Engineer in APSEB, then was with the CEA to establish the National Power Training Institute at Nagpur and till recently was on deputation to the Zimbabwe Electricity Supply Authority.

During the reporting period, APERC has issued 4 orders, held 2 public hearings and one workshop. Three orders relate to the PPAs of BPL, BSES and Rayalseema Thermal Power Plant (RTPP). Fourth order is on the Load Forecast of APTRANSCO. Public hearings were held on the Long Term Tariff Principles (LTTP) and the APGENCO PPA during this period. A workshop was held on the LTTP.

2.1 Public Hearings

Public hearing on the APGENCO PPA and LTTP were held in June 2002. Both were well attended. On the LTTP, APERC organised a one-day workshop (with limited participation from civic society institutions) in August 2002. In February 2002, APERC had come up with a LTTP draft, which fixes the broad framework for fixing retail tariff over the next few years. It is clear that the purpose of LTTP is to create favourable conditions for the entry of private players in the electricity distribution business. As stated by APERC, LTTP provides a road map, which clearly spells out the principles of tariff fixation for the medium term and provides investors with well-defined rules. Order has not yet been passed on the LTTP.

2.2 Orders

Orders on PPAs of BPL, BSES-Andhra and RTPP were issued in July 2002. Conditional consent has been granted to BSES, where as in the other 2 cases, consent has been with held.

BPL PPA issue has been reported in Issue II of this update. In November 2001, APERC has withheld consent on the PPA and asked for APTRANSCO to make some changes and approach

the commission again. Quite a few issues were raised in the November order of APERC for clarification by APTRANSCO and BPL. These related to keeping the threshold PLF for incentive calculation at 80%, maintaining the Foreign exchange component at the limit given by CEA, Clarifications on escrow procedure, dispatch instructions etc. In the order dated July 29, 2002, APERC says that APTRANSCO has not satisfactorily explained all the issues and there fore consent for the PPA is withheld.

BSES Andhra Project (BAPL) was also reported in Issue II when the public hearing on the PPA was held. Many had raised issues related to gas availability, incentive scheme, dispatch instructions, capacity addition requirement etc in the hearing. As reported in Issue III, this project was commissioned in February 2002. After getting clarifications from APTRANSCO, GAIL and BAPL, in its order dated July 29, 2002, APERC has given conditional acceptance to this PPA.

Public hearing on APGENCO's RTPP was held in October 2001. There was support for this project, though issues on the bidding procedure, requirement of generating capacity and tariff calculation were raised. In its order dated July 29, 2002, APERC says that some issues on tariff calculation remain to be addressed and therefore has withheld consent to the PPA.

On the crucial subject of Load Forecast proposal of APTRANSCO, there was no public hearing. During the public hearing of BSES Andhra project in January 2002, APTRANSCO made a presentation on the Load forecast proposal for 2001 to 2007. It suggested generating capacity addition of 4489 MW by 2007. There was correspondence between APERC and TRANSCO on different issues: reasonable load factor, load growth rates, reserve margin to be maintained, generation potential of some projects like Srisailam Right bank canal etc. In its order dated July 29, 2002, APERC has limited the generation capacity addition figure to 3180 MW. This order will have a significant impact on the plans generation and transmission expansion plans in AP.

3. STATE AND CENTRAL UTILITIES

NTPC is setting up a 2 x 500 MW plant at Simhadri, near Vishakhapatanam. Unit 1 was commissioned in February 2002 and unit 2 in August 2002, much ahead of schedule. All the 1000 MW from this station will be purchased by APTRANSCO.

APTRANSCO had a change of guard with Racheal Chatterjee taking as the CMD in June 2002. In the tariff order 2002-3, APERC had approved the proposal of APTRANSCO to sell excess power. Accordingly, APTRANSCO is selling power to Karnataka, Tamil Nadu and Madhya Pradesh. It may also sell power to Punjab, Haryana, Gujarat and Rajasthan through PTC.

Andhra Pradesh government is ready to implement an Information Technology package for transmission and distribution of power as part of the power sector reforms in the state. Arthur Anderson (now part of Ernst & Young group) has prepared this in May 2002. The new information system Plan (IS) and an Information technology package for the AP Transco and distribution companies is expected to restructure the operations and service delivery mechanisms. The computer-based state Load Dispatch Centre at Mamidipudi 400 kV substation near Hyderabad has been made operational in August 2002. This is part of the World Bank funded Southern regional Load Dispatch project executed by GE-Harris.

Rural Electrification Corporation has decided to give loan of Rs. 13.7 billion to AP Transco to bring down its losses. AP Transco will use the amount to provide electricity for 8,000 habitations, energies pumpsets, create infrastructure for supply of electricity to all villages, and metering a distribution transformers and 11 kV feeders. It is also reported that WB, DFID, JBIC,

REC and PFC have sanctioned Rs. 72.82 b for strengthening the transmission & distribution system in AP.

In the distribution front, the Chief Minister inaugurated a computer based SCADA system, set up by ABB with funding from DFID (about Rs. 300m) on May 31, 2002. Central Power Distribution Company Ltd. has plans to make distribution LT-less in Hyderabad City. This project called High Voltage Distribution System (HVDS) project will cost about Rs 2.5 b. Distribution companies are expected to be privatised by 2003-4 as per the reform time table. It is reported that a study on distribution privatisation (by CRISIL/HSBC) has been presented to the state government.

4. PRIVATE SECTOR GENERATION

Problems with Spectrum Power Generation Ltd. (SPGL) continue. SPGL is a 208 MW combined cycle gas based power plant at Kakinada in Andhra Pradesh. It has not been paying its interest and loan payments to Export Credit Guarantee Department (ECGD) of UK. SPGL also defaulted in its payment to IDBI, which is an Indian lender for the project. In the second week of May 2002, IDBI, LIC, ICICI, and UTI formally informed the SPGL board their suggestion to convert Rs. 55 crore debt into equity. It is reported that company management resisted the move of financial institutes to convert debt in to equity. The Board of SPGL has taken a decision to set up Trust and Retention Account (TRA) by end May 2002. TRA will expedite the procedure to clear pending dues to GAIL and the operation and maintenance contractor Rolls Royce. Issues in GVK Jagurupadu project, after CMS energy decided to quit in October 2001 are not yet settled. It is reported that CMS now started negotiations with joint venture partner GVK group for offloading its state in the Jagurupadu project. The 235 MW gas based plant started its operation in July 2000. AP Transco also hold 2% stake in Jagurupadu Plant. Other stakeholders are CMS energy (24%), GVK Group (40%), International Finance Corporation (10%), Asia Infrastructure Fund (25%). CMS energy wants to offload its entire share in Jagurupadu project. The capital cost of the project is increased by Rs. 1000 m over the sanctioned amount due to depreciation of Rupee against Dollar. The increased cost is yet to be approved by AP Transco.

As reported in Issue III, PPAs for 4 IPPs (Vemagiri, Konaseema, GVK-II and Gautami) were released for review. After the Load forecast order of APERC (in which APERC reduced the generation capacity requirement), it is reported that these PPAs may not come up for public hearings in near future. CEA has returned the proposals of GVK-II and Konaseema (submitted for Techno-Economic Clearance), as the promoters were not able to get the necessary approvals.

5. EMPLOYEES AND CSIs

It was reported in the last issue that employees might go on strike in June 2002 over the issue of retirement benefits, distribution of employees among the unbundled companies (APTRANSCO, APGENCO and 4 DISCOMs). State government and employee unions had several rounds of discussions and based on the assurances given, employees did not go on strike. Transfer orders have been issued and are being implemented.

CSIs participated actively in the public hearings and many public programs on power reforms. Loksatta - CORE has filed a case in the High Court against the Tariff order. It argues that that the utilities are not honouring RC directives (given in previous order) especially on T&D loss targets, metering plan, agriculture census preparation etc.

Part IV: Uttar Pradesh

1. STATE OVERVIEW

The Uttar Pradesh Government has announced a new industrial policy for the state in June. Private sector would be allowed to set up captive power projects. Industrial units in special economic zones would be free to generate, transmit, and distribute power. Any surplus power generated would be purchased by UPPCL. Government has allowed entrepreneurs to purchase power directly from NTPC.

The Uttar Pradesh Government has decided to sign a tripartite agreement with the central government, Reserve Bank of India (RBI) and UPPCL. This is as per the Ahluwalia committee report on power sector reforms.

The Power Finance Corporation sanctioned a loan of Rs. 3.35 billion to the state thermal generation utility, Uttar Pradesh Rajya Vidyut Utpadan Nigam Limited (UPRVUNL) based on new interest rates. This will be utilised for renovation and modernization of two 50 MW thermal power stations.

GoUP and the Central government have signed a MoU in early September to augment power supply to three circles - Bareilly, Gorakhpur and Moradabad, at the cost of Rs 1.2 billion.

Uttar Pradesh government is planning to sell Kanpur Electric Supply Company (KESCO) to NTPC. It has been reported in August that NTPC has set up a wholly owned subsidiary NTPC Electricity Supply Company Limited (NESCL) which will take over KESCO. The decision is taken to securitise the dues of GoUP to NTPC and also to get the pending World Bank grant.

2. REGULATORY INTERVENTION

2.1 Tariff process

As stated in our earlier issue, UPERC (in its order dated May 7, 2002) had directed UPPCL to remove the deficiencies in the ARR filed on April 29, 2002. UPPCL had provided some information to commission on June 13, 2002. But the information provided was incomplete and not in the formats as required under Chapter II of the UPERC (Conduct of Business) Regulation 2000. UPERC inform about its observation to UPPCL on June 17, 2002. UPERC observed that:

- UPPCL has not given information about slab wise, category wise, voltage wise sale and revenue of at least four billing cycles of the year 2001-02.
- The revenue figures submitted from each category to UPERC in the letter June 13, 2002 mismatch with ARR filed on April 29, 2002.
- Besides request of commission several times, mutually agreed PPAs between UPPCL and state generating companies have not been submitted to UPERC.
- Information submitted to commission is not as per directives of commission given in last two tariff orders

UPERC, in its order dated June 25, 2002 directed UPPCL to furnish information of sale of energy, revenue assessed and revenue collected during the year, revised ARR for 2002-03 with proposal for meeting revenue gap, PPAs between UPPCL & Generating companies and in

particular agreed purchase price of energy. Cost of energy for different categories at different voltage levels has been requested. Commission also asked for time bound definite action plan for implementation of directives of the commission and also asked for the names of the persons responsible for implementation of directives of commission.

As per the direction of UPERC, UPPCL has submitted its proposal of Aggregate Revenue Requirement and Tariff for the year 2002-03 on July 23,2002. Further action by UPERC on ARR filed by UPPCL is awaited.

2.2 Electricity Supply code and Publications

The Electricity Supply code prepared by UPERC has been made effective on July 01. 2002. The three supply licensees, namely UPPCL, NPCL and KESCO are expected to follow this code. This code has guidelines on new connections, metering, handling consumer complaints etc. A review panel is expected to meet at least once in 6 months to remove difficulties in implementing the code.

UPERC continues to bring out two publications (5-6 pages long and brought out about once in a month) called Power Diary and Economic Diary. These contain reports on important state and national events in the power sector. This is indeed a unique feature of the state RC.

3. PRIVATE SECTOR IN GENERATION AND DISTRIBUTION

Updates are available on two IPPs - Vishnuprayag (400MW Hydel Power Project in Uttaranchal, developed by Jaiprakash Power Industries) and Shrinagar (330 MW Hydel Power Project developed by Duncans North Hydro Power company, a Joint Venture between Synergics hydro Asia of US and Duncans Industries). The decision by the GoUP (in August 2002) on the quantum of free power (around 12%) to be given to Uttaranchal has initiated the financial closure of these projects.

NOIDA distribution continues to be with the private company, NPCL. As reported, KESCO is expected to be shortly taken over by NTPC.

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GLOSSARY OF TERMS

ADB Asian Development Bank

AP (The Indian state of) Andhra Pradesh

APCPDCL Central Distribution Company of Andhra Pradesh
APEPDCL Eastern Distribution Company of Andhra Pradesh
APNPDCL Northern Distribution Company of Andhra Pradesh
APSPDCL Southern Distribution Company of Andhra Pradesh
APERC Andhra Pradesh Electricity Regulatory Commission
APDRP Accelerated Power Development & Reforms Programme

APDP Accelerated Power Development Programme
APSEB Andhra Pradesh State Electricity Board

ARR Annual Revenue Requirement

BST Bulk Supply Tariff

CCGT Combined Cycle Gas Turbine (based power plant)

CEA Central Electricity Authority

CERC Central Electricity Regulatory Commission
CESCO Central Electricity Supply Company of Orissa Ltd.

CPP Captive Power Project
CSIs Civil Society Institutions

DFID Department for International Development (of UK, called ODA before)

DISTCOM/ Distribution Company

DISCOM

DSM Demand Side Management

EHV Extra High Voltage

ERC Act Electricity Regulatory Commissions Act (1998)

Financial Year - 1st April to 31st March. Typically represented as FY

98-99 etc.

GENCO Generation Company GoI Government of India

GoAP Government of Andhra Pradesh

GoO Government of Orissa

GoUP Government of Uttar Pradesh

GRIDCO Grid Corporation

HDFC Housing Financing Development Corporation of India

HP Horse Power (1 HP = 746 Watts)
HT High Tension (or High Voltage)
HVDC High Voltage Direct Current

Hz Hertz

ICICI Industrial Credit Investment Corporation of India

IDBI Industrial Development Bank of India

IDFC Infrastructure Development Finance Company Ltd

IPPs Independent (Private) Power Producers

IPS Irrigation Pump Sets

IRP Integrated Resource Plan (usually implying a least-cost plan that takes an

integrated view toward all energy options)

JBIC Japan Bank for International Cupertino

kCal Kilo Calories kg Kilograms kV Kilo Volt

kVA Kilo Volt Ampere

kW Kilo Watt kWh Kilo Watt Hour LNG Liquefied Natural Gas

LT Low Tension (or Low Voltage)

MDBs Multilateral Development Banks (such as the WB and ADB)

MkCal Million Kilo Calories

MoU Memoranda of Understanding

MP (The Indian state of) Madhya Pradesh

MU Million Units (million kWh)

MW Mega Watts

NGOs Non-Government Organisations NHPC National Hydro Power Corporation

NPC Nuclear Power Corporation

NTPC National Thermal Power Corporation

NESCO North-Eastern Electricity Supply Company of Orissa Ltd.
ODA Overseas Development Agency, UK (now called DFID)

OECF Overseas Economic Corporation Fund of Japan

O&M Operation & Maintenance OSEB Orissa State Electricity Board

PFC Power Finance Corporation (a GoI-owned financing agency for the power

sector)

PLF Plant Load Factor (also called Capacity Utilisation Factor)

PSIRU Public Services International Research Unit

R&M Repair & Maintenance RC Regulatory Commission

REC Rural Electrification Corporation, New Delhi

Rs Rupees (Indian currency)
RST Retail Supply Tariff

SAR Staff Appraisal Report (the project appraisal document from the WB)

SEBs State Electricity Boards (vertical monopoly power utility owned by the state

government)

SERC State Electricity Regulatory Commission

SOUTHCO Southern Electricity Supply Company of Orissa Ltd.

T&D Transmission and Distribution TEC Techno Economic Clearance

TOD Time-Of-Day

TRANSCO Transmission Corporation

UP (The Indian state of) Uttar Pradesh

UPSEB UP State Electricity Board WB The World Bank group

WESCO Western Electricity Supply Company of Orissa Ltd.