

India Power Sector Reforms Update

Issue VII – December 2003

(Updates in the period: September 2003 to December 2003)

India power sector reforms update is prepared by Prayas, an Indian NGO based in Pune, working on power sector issues for a decade. Our aim is to monitor the power sector developments in three Indian states of Orissa, Andhra Pradesh and Uttar Pradesh. Six issues of the update have been brought out so far. First issue was in October 2001 with detailed historical overview covering up to October 2001. Second, Third, Fourth, Fifth and Sixth issues were brought out in January 2002, May 2002, September 2002, February 2003 and September 2003, covering the updates in the respective previous period.

This issue covers the period September 2003 to December 2003. These updates, tracking developments in these states will be published periodically. For better understanding, it would be desirable if readers also read the earlier updates. All these updates are available at our website www.prayasenergy.org. Please direct your suggestions and comments to Prayas at prayasenergy@vsnl.net.

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Part I: Overview of the Indian Power Sector

Electricity Act 2003

Developments leading to the enactment of Electricity Act 2003 (E-Act) in June 2003 were reported in our Issue 6. Updates on the E-Act in the review period are given in this section. Next section gives updates on the policy front.

Amendments to sections 14, 42, 121, 135, 139, 140 and 146 were passed in the Rajyasabha on December 8 and Lok Sabha on December 18, 2003. These amendments are related to the open access, appellate tribunal and theft. Timeframe for introducing distribution open access was defined as 5 years and overriding importance of Appellate tribunal was reduced by these amendments.

Reorganisation of SEBs has started. In October, it is reported that Assam SEB would be split into 5 companies: one for generation & transmission, three distribution companies and one holding company. In December, the move to split Punjab SEB to 6 was announced. There would be one generation company, one transmission company, 3 distribution companies and one holding company. The West Bengal government said in September that it has reservations about the E-Act and it would delay the re-organisation of the SEB. Kerala has initiated steps to reorganise its SEB by June 2004. In September, Maharashtra state has appointed an expert panel with the Mr P Abraham as the Chairman to advise the government on E-Act and policies. This panel is to submit report in 6-months time. December 2003 was the end of the 6-month deadline for the formation of state level RCs. 7 states and 4 union territories have missed the deadline and not constituted RCs by December 2003.

Transmission licence to a private-public transmission company was issued by CERC in October to Tala Delhi Transmission Company Ltd. This JV Company between POWERGRID (49%) and Tata Power (51%) would evacuate power from the 1020 MW Tala Hydro electric project in Bhutan. The 1200-km transmission line costing Rs.1200 crores is expected to be commissioned in 2006.

Subsequent to the E-Act, there has been lot of interest in power trading and several companies have approached CERC for license. This includes Reliance Energy, Adani Exports Ltd, Essar, Koyela Energy, Tata Power and Amalgamated Transpower. Some have been given temporary licence by CERC where as in November, CERC has turned down Tata Power's application for a trading licence on technical grounds. CERC asked Tata power to form subsidiary for the trading first and then apply afresh for trading license.

Permitting multiple distribution licences in the same area is another key feature of the E-Act. In September, BSES has applied to MERC for distribution license to supply urban Pune, urban Nagpur, Nasik, Aurangabad, Navi Mumbai, Bhandup and Mulund areas. In line with section 15 of the E. Act 03, public notice was issued immediately after these applications were made before the MERC and public comments were invited. Shortly after this, the Tata Power Company also made similar applications for second distribution license in same areas and public notice was issued for the same also. Though the last dates for submission of public comments on Reliance's and TPC's applications were 21 November 2003 and 23 December 2003 respectively, there has been no further development and MERC has not conducted any public hearing or issued any notice as yet. The areas for which these companies have applied for license are urban, industrial areas and contribute significantly to cross-subsidy for other consumers under MSEB. Prayas's

comments on these license applications are available at http://prayaspune.org/energy/eng_pub_merc.htm

Another fallout of the E. Act has been application by Reliance (BSES) for open access. In August 2003 Reliance approached MERC for seeking open access on transmission networks of TPC and MSEB. This would enable Reliance to procure power from sources other than TPC. Recently (Jan 04) MERC approved Reliance's plea for open access and directed TPC and MSEB to provide open access to Reliance subject to other conditions such as availability of spare capacity and agreement regarding transmission cost.

Policy Initiatives

In Issue 6, we had reported progress on the **Tariff Policy** released by MoP in June. Comments on this have come from many states and organisations. A comment of Prayas is available at our website. Tariff policy is still not finalised.

Up till now PTC was the sole agency for the power trading in the country. CERC released a draft regulation on **interstate trading license** in December and invited comments. Those applying for trading license should have power system expertise, minimum asset base and should pay an annual license fee to CERC. A Trading licensee cannot have transmission business. The CERC is expected to issue regulations on trading in January 2004. Prayas submission in this context is available at our website.

CERC prepared a discussion paper on **Open access** for interstate transmission in August 2003. Comments were invited, public hearing held in September and an order issued in November 2003. With this order the interstate open access has come into force. Open access on the state level transmission and distribution lines is to be decided by the state RC. CERC site has the order and Prayas site has our submission to CERC

In the month of November 2003, the MoP came out with a Discussion Paper on National **Rural Electrification** (RE) Policies, which sheds light on the planned process as well as substantive issues involved in framing the RE policies. The discussion paper refers to the two policies mentioned in the Act – i.e. national policy on stand-alone systems for rural areas and national policy for rural electrification and for bulk purchase of power and management of local distribution in rural areas through local government institutions, NGOs, or franchisees. These provisions are major deviations from the past. Consultation at regional and national level planned on these policies before finalising them in January-February 2004.

In December, CERC has advised the GoI to introduce **competitive bidding** for award of power projects including those in the public sector. It is also reported that CERC may revise norms on return on equity etc.

In Issue-6, we had reported the formation of a national level **Task Force** on investments and reforms. Task Force has been consolidating feedback on all the new policies. Its report is expected in early 2004.

Availability Based Tariff

The last region to implement the availability-based tariff is the North Eastern region (NER). The ABT is made applicable in NER from November 1, 2003. With this all the five regions, Western, Eastern, Southern, Northern and North Eastern are under the ABT mechanism. It has been

widely reported that the grid operation has vastly improved with this. CERC has proposed that ABT should be implemented at State levels also in a phased manner.

Capacity Addition Plan

In Issue 6, we had reported the Hydro initiative, under which 50,000 MW hydro capacity is planned to be set up by 2012. Most of this would be in the North-Eastern region. In addition to this, MoP has plan to add 100,000 MW capacity by 2012. In December, MoP has stated that the target for 10th plan (2002-2007) of 40,702 MW would be met.

Elections

Elections were held in November in 4 states – Madhya Pradesh, Rajasthan, Delhi and Chattisgarh. Except in Delhi, the BJP has won. All these 4 states were under Congress rule before. Elections are expected to be held in AP and to Loksabha in early 2004.

Power failures in Western Region

There were major grid failures in the Western Region on November 5, November 7 and December 6. The reason behind these seems to be low voltage and excess drawing of power by Madhya Pradesh.

Mega project policy

Current guidelines on Mega Project policy require a capacity of 1000 MW for thermal and 500 MW for hydro. It is reported in November that many states have demanded and MoP is considering lowering the capacity limit to 250 MW. It is to be noted that Mega Projects enjoy many benefits including tax exemptions.

PPA revision in Gujarat

In an unprecedented move, the Gujarat government has revised the PPAs with 5 IPPs (GPECL, Essar, GSEC, GIPCL and GSEG). The possible benefit to GEB may be Rs 495 Crores. These PPAs were signed for a period of 20 years, but the government has revised them in less than 10 years.

DPC updates

Last few months witnessed significant developments regarding the DPC project. On one hand GE and Bechtel subsidiaries involved in the project succeeded in winning the arbitration award against US OPIC for political risk insurance by claiming that the actions of Indian agencies including MSEB and Government of Maharashtra constitute expropriation of their assets. Other foreign lenders to the project have also initiated such arbitration proceedings. On the other hand the Government of India has constituted a committee under the Chairmanship of Shri. Naresh Chandra (former Indian Ambassador to US) to resolve the issue. In the mean while, in one of the cases filed before the Supreme Court, the Supreme Court has made GE and Bechtel also party to the proceedings. It has also directed all stakeholders (e.g. MSEB, IDBI etc.) to file affidavits regarding the plan and tariff for re-starting the project. Also discussions appear to be heading towards purchase of foreign debt by India financial institutions at a significant discount. Only time will tell if and how these developments could lead to resolution of this controversy.

Part II: Orissa

1. STATE OVERVIEW

World Bank has put the Orissa government in a state of uncertainty, as it is not likely to process the Rs. 5000 crore Orissa Economic Revival Loan (OERL) to the state. The OERL is supported by World Bank under the structural adjustment Programme. In December, World Bank has said that unless there is strong commitment from state and central government for the power sector reform it will not process the loan. World Bank has also said that if the state does not prepare a detailed power sector business plan, the bank is likely to suspend all ongoing power loans to the state. This indeed is surprising since the World Bank and its consultants prepared the power reform script in Orissa.

The lack of funds with the Orissa government and GRIDCO resulted in non-payment of interest to RBI on the power bonds issued by GRIDCO. As a result RBI deducted. 46.87 crore from the Orissa governments account in November.

The Orissa government is trying to sell the power to the power deficit states like Karnataka and Delhi. Currently GRIDCO is exporting 500 MW of power through PTC and BBNL (the trade arm of NTPC). The expected revenue from the sell of power is sufficient to pay the current bills of the NTPC and OHPC. There is also a possibility of increase in the rates for the sale of power in case of increase in demand. Export of power to the power deficit states like Maharashtra, Madhya Pradesh and Karnataka through PTC will help the GRIDCO to pay the current bills of the generating companies. Gridco expects to earn Rs 75 to 80 crore per month from the export of power from November onwards.

Some hydropower projects are planned in Orissa under the Hydro Initiative of GoI. The proposed projects are Kolab (375 MW), Tikarpada (205 MW), Naraj (215 MW) and Balijori (393 MW).

2. REGULATORY INTERVENTION

In September, the HC ordered the OERC to conduct a fresh public hearing before fixing the tariff order for the FY 2002-03. The HC said that the commission should decide about the passing of benefit of Rs 78.50 crore special revenue be passed on to the consumers instead of GRIDCO and four distribution companies. This special revenue is due to change in depreciation policy. The revenue is equal to the downward trend in the revenue requirement of the GRIDCO and four distribution companies.

OERC had passed two tariff orders- for 2002-03 and 2003-04. These are the conditional tariff orders passed by regulatory commission. There is no hike in tariff for 2002-03. For 2003-04 there is a hike of 30 to 40 paise for domestic consumers. The commission has given December 22, 2003 as the deadline for the government to inform commission whether the government is ready to absorb the increase in tariff. For the year 2002-03 Commission had put the condition that the government should accept the Kanungo committee suggestions and some corrective measures suggested by OERC. The order for bulk supply tariff (BST) and retail supply tariff (RST) for 2003-04 would be effective from January 1, 2004. In BST, the Commission has given a hike of 7 paise per unit to WESCO and 8 paise per unit to NESCO, SOUTHCO and CESCO.

The table below shows increase in tariff for domestic consumes.

Units consumed	Current Rates	FY 2003-04
First 100 units	RS. 1.40	Rs. 1.80
Next 100 units	Rs. 2.30	Rs. 2.60
More than 200 units	Rs. 3.20	Rs. 3.20

The commission said that if the government does not take over the loan servicing liability of Grid Corporation of Orissa (Gridco) to the tune of Rs 93 crore per annum then the tariff in Orissa is bound to go up. If the Parekh Committee recommendations on liability liquidation of electricity boards is not accepted by the Orissa government then, the revenue requirement of Gridco for 2003-04 will increase by Rs. 94.08 crore, thereby leading to rise in the bulk supply tariff and effectively Retail supply tariff. In a subsequent development in December, OERC has stayed this tariff order based on a petition from GoO.

As we discussed in Issue 6, PFC was ready to give loan of Rs. 1200 crore to GRIDCO for settlement of dues to NTPC. For giving this loan certain conditions are put forward by PFC. One of these conditions is guarantee form the three private distribution companies run by reliance. The private distribution companies are not co-operating the GRIDCO on this issue. So GoO appealed against DISCOM in OERC. In September, OERC has passed the order asking BSES to provide performance and financial guarantee for its three DISCOM. The OERC also asked to submit business plan in consultation with GRIDCO within 15 days.

In another case, these three DISCOMs also applied in OERC for the relaxation of the escrow as they are not able to pay the salaries. The OERC has allowed conditional operation of the escrow account. The commission said that if BST bills to the GRIDCO were not paid for the two consecutive months then the escrow facility would not work till the settlement of dues. The commission has further ordered the three DISCOM to open irrecoverable revolving letter of credit (IRLC) by October 10 for liquidating the BST bill of GRIDCO as per the Bulk Supply Agreement.

As a follow-up to E-Act, OERC has released draft regulations on grievance redressal and invited comments. It has also notified that no permission needs to be taken to set up captive power plant.

3. PRIVATE SECTOR GENERATION

As reported in our earlier issue, AES is trying to sell its state in the OPGC. Last year AES India has asked permission to transfer a 16% stake to AES Mauritius. The RBI strongly opposed this move of AES India. This proposal was considered by FIPB and it confirmed violation of FEMA regulation. Later FIPB referred the proposal to RBI for taking action, as RBI is most suitable body. GRIDCO also opposed AES move to transfer its entire stake to Mauritius-based AES OPGC Holding, and it is reported in October that AES India has dropped this idea. In another development, after many rounds of discussions between AES and TPC about TPC buying AES stake in OPGC, in November, TPC has closed the matter from their side.

In October, it is reported that the Tata Power Company is planning a 120 MW coal based power plant at Jojobera in Orissa. The power generated through this plant will be supplied to the PTC or the New Delhi Circle. The cost of power generated through this coal-based plant is estimated at Rs. 2.00 per unit. The wheeling charges to supply power from this plant to New Delhi circle are Rs. 0.30 per unit. The project is likely to be completed by 2005. The project also includes the

transmission line from the Jojobera plant to Ramcahndrapur in Jharkhand. The total cost of plant is Rs. 370 cores.

Hirma Power Project is a 3960 MW coal based power plant planned in Orissa. The project was earlier to be built by US-based Mirant Corporation and Reliance Power Ltd. Mirant and later Reliance had withdrawn from the project. In early December, it is reported that NTPC and Neyveli Lignite Corporation may jointly develop the project. In another twist of events, it is also reported in late December, that Reliance has again shown interest in the project.

4. PRIVATE SECTOR DISTRIBUTION

The new CEO Srikant Paikray of CESCO is hopeful that the CESCO will be again handed over to the suitable private company. AES is very unlikely to take over again as the settlement of dues to GRIDCO for the BST tariff is still pending.

Part III: Andhra Pradesh

1. STATE OVERVIEW

State assembly was dissolved and elections announced 11 months ahead of schedule in November. Political debate has heated up and power remains one of the controversial topics, with issues like free power to agriculture, review of IPP contracts, external loans, benefit of large scale capital investments etc. Dates for election is to yet be announced by the Election Commission, but it is expected in March-April 2004.

In Issue 6, we had reported that GoAP was not very keen to extend the loan assistance from World Bank for reforms. In November, GoI has approved the proposal to swap Rs. 2600 Crores high cost loans (14% interest) with low interest (9.5%) loans from PFC and REC.

2. REGULATORY INTERVENTION

The APERC has released the draft electricity supply code for four distribution companies in December. Now licensees have to inform about the billing cycle and date of meter reading. The licensees have to submit full details of consumers, meter readings and other charges and surcharges, if any, and arrears up to the preceding financial year to the regulator. As per new draft codes the bills should reach the consumers before the due date of payment.

APERC has published draft regulations for the establishment of an electricity ombudsman for redressal of grievances of consumers, on State Advisory Committee, procedure for filing appeal to Appellate Tribunal etc. In December, APERC has removed the need for taking government consent to set up captive power plant.

APTRANSCO and 4 DISCOMs have submitted tariff proposals for 2003-4 in December. No tariff hike is proposed. The only change in RST is the reduction of energy charges for agricultural pumpsets under tatkal scheme from 100 paise/unit to 50 paise/unit. BST to DISCOMs is proposed to be 2 part with peak and non-peak charges.

3. STATE AND CENTRAL UTILITIES

This year also the Thermal generating plants of APGENCO achieved the highest PLF of 85%. Last year too, the PLF of Thermal plants of APGENCO was the highest in the country. The PLF at the gas-based power station in Vijjeswaram was the highest among gas stations in the country and was pegged at 90.9 per cent.

The Rayalaseema Thermal Power Project Stage II is a 2x210 MW thermal power plant at Muddanur in Cuddapah district. In December, the EPC contract for the second stage of the project has been the BHEL. Earlier the contract was given to The Chinese firm, CMEC, but PFC refused to give deferred payment guarantee to CMEC. CMEC also wanted the monthly payments should proceed independent of the contract and project's performance, which were not acceptable to APGENCO resulting in cancellation of the contract.

Mini hydel Power Plants of APGENCO: In all there are 11 mini hydel plants running in the state, which are commissioned by APGENCO. In this month also APGENCO has commissioned and synchronised another two mini hydel plants. These plants are on D-83 branch canal of Sriram Sagar project. APGENCO plans total capacity to 4.15 MW on Kakatiya canal.

New plant at Marinade by IOC: A Power plant is coming up at marinade with 2.5 million tonne LNG facility. The 1000 Mw power plant will sell 500 MW power to the state government. The power generated through this plant will be available at Rs. 2.50 per unit. The state government approval is yet to come.

DFID has provided funds for AP energy Efficiency projects. Of the £42.7 million provided by DFID only £35.57 million are spent on the distribution systems in four districts of AP. The aim was to improve energy efficiency of the distribution network. With the implementation of project in Khammam, Mahabubnagar, Nalgonda and Hyderabad districts, it is reported in November that the technical loss in the distribution system has reduced by 40-60%.

APTRANSCO and DISCOMs are going to implement a single window system for customer services in the rural and semi-urban areas on a trial basis. All kinds of day-to-day grievances from the customers such as application for new connection, bill discrepancies, power conditions and failure of distribution transformers will be accepted on the single window system

To meet additional demand from the agriculture sector APTRANSCO is going to purchase 300 MW from the PTC in the months of September-October. In addition APTANSCO is also buying power from West Bengal and Orissa to cater the increased demand in the khariff season. The daily demand is increased to 145 MU in khariff agricultural working days.

The Feedback Ventures Pvt Ltd, is assisting the Transmission Corporation of AP (APTransco) in preparing the business plan for 2003-07. In the draft report it is estimated that the volume of power to be purchased from private sector and central generating stations will be higher when compared to the purchases from APGENCO from the next financial year. Up till, now APGENCO is the single largest power supplier for APTRANSCO.

In an interesting development, the Andhra Pradesh State Electricity Employees' Union has floated a power company to take up outsourcing and other contracts being offered by state power utilities. It has proposed to issue shares amounting to Rs 3 crore among the union members and retired electricity employees. This new company is expecting to get O&M and revenue collection business from 25-30 substations in the state.

4. PRIVATE SECTOR GENERATION

In October, it was reported that the state government has agreed to give escrow cover 30-60 days before the commercial operation of the 6 proposed gas based IPPs. This step would lead to financial closure of these projects. IPPs are BPL - Ramagundam TPP (520 MW), Vemagiri CCGT (468 MW), Kondapally CCGT (350 MW), NCC/Gautami (464 MW), BSES Power Ltd (210 MW), and GVK Extension. (160 MW). Subsequently, it is reported in December that GVK Extension project has achieved financial closure. Loan of Rs 716 crore for the project has been sanctioned. The GVK Jegurupadu is the first project to achieve financial closure in last five years. To run the plant with a full capacity the company will need 1.1 million cubic metres of gas per day. Alstom Projects India has been given the contract to build the combined cycle plant.

The Spectrum board is restructured in the board meeting on Oct. 12, 2003. Mr.K Narasimha Murthy was appointed as Chairman by the Financial Institutions, but he resigned on Dec. 1, 2003. The Rolls Royce also appointed their two representatives on the Spectrum board. The private companies Reliance energy and GVK are now reported to be interested in purchasing 35% stake in Spectrum Power Generation Ltd.

The 1040 MW Visakhapatnam Hinduja coal based power project in Andhra Pradesh is one of the first few fast track IPP projects identified in 1992. Besides obtaining State government guarantee and the GOI counter guarantee in 1998, all the other clearances/linkages (environment, water etc) did not materialise. The project was earlier to be jointly developed by the Hinduja group (through Ashok Leyland) and National Power of the UK. In November, it is reported that Hinduja group is ready to implement the project alone and commission it by 2008. During this period, the project cost has shot up by Rs 1,200 crore to Rs 6,202 crore. The central government expects the promoters to match the cost of power from the Visakhapatnam project with that of NTPC's Simhadri plant.

A 6.6-MW power plant using municipal solid waste (MSW) as fuel was dedicated to nation in December. The plant consumes 700 tonnes of MSW everyday. The power plant set up by Selco International at Elikatta village in Mahboobnagar district sells power to APTRANSCO at Rs.3.47 paise per unit, while the Municipal Corporation of Hyderabad has agreed to supply the waste free-of-cost for the next 30 years.

Part IV: Uttar Pradesh

1. STATE OVERVIEW

The Uttar Pradesh Government has announced a new Power Policy in early December 2003. The New Energy Policy-2003 is applicable with immediate effect and will continue till March 31, 2009. This is the third Energy policy announced by Uttar Pradesh Government, first was in 1994 and second in 1998.

Main features:

- 100% metering in the state by June 2004.
- State Government will give interest free loan for seven years for outlay between Rs. 150 crores to Rs. 1500 crores to promote private investment in the state.
- The government will also spend annually Rs. 800 crores for the rural electrification up to 2009.

- Electrification of 40,000 villages by 2009.
- Continuous electricity supply for minimum 14 hours for rural areas.
- A special Task force headed by Chief Secretary will be formed. This special task force will grant all state level approval and clearances to the private transmission projects.
- No approval needed to the licensee for obtaining right on any land, premises to lay lines.
- Targeted subsidy (as in Tamil Nadu) where government directly compensates the consumers.

2. STATE & CENTRAL UTILITIES

The NTPC is undertaking the capacity expanding of the Feroze Gandhi Uchahar thermal Power Plant with a Stage II of 210 MW capacity. BHEL has bagged the contract from NTPC to build the plant.

Anpara power plant is a 2 X 500 MW thermal power plant in Uttar Pradesh being set up by Uttar Pradesh Government. A MOU is likely to be signed between the Japanese Bank of International Co-operation (JBIC) and the Central & State governments in the month of December. The JBIC will give a loan of Rs. 2802 Crores at 2.3% interest. The loan is refundable over a period of 40 years.

We had reported the formation for 4 distribution companies in Issue 6. These four distribution companies will be operating under UPPCL till June 2004.

3. REGULATORY INTERVENTION

The Uttar Pradesh Electricity Regulatory Commission (UPERC) has published the draft regulations for the establishment of a forum and an electricity ombudsman for redressal of grievances of consumers.

There has been delay in filing the ARR and tariff proposals by UPPCL, NPCL and KESCO. In separate orders, UPERC has given extension of time till January 2004 to all 3 to file the proposals. In the case of KESCO, UPERC has taken serious note of the various delays and imposed a fine of Rs. 1 Lakh on the utility.

As of December, UPERC has only two members, Mr. Vijoy Kumar (Chairman) and Arun Sarkar (Member).

4 PRIVATE GENERATION AND DISTRIBUTION

It is reported in December that Reliance is planning 2000 – 3000 MW power plant in Uttar Pradesh at the cost of Rs 8000 Crores. It is also reported that TPC is thinking of developing a power plant in Uttar Pradesh instead in New Delhi.

REFERENCES

1. TERI Newswire: Fortnightly News abstracts on economy, energy and environment, TERI, New Delhi, Volume 9, Numbers 17-24 (September 2003 to December 2003)
2. Power News: Weekly News updates on Power, Power Line, New Delhi, September 2003 to January 2004
3. Power Line: Magazine on Power, New Delhi, Vol. 7 no. 12 and Vol. 8, Issue 1-3 (Sep. to December 2003)
4. Several News Paper reports and Discussions with people working in the sector.
5. Web site of Ministry of Power: www.powermin.nic.in
6. Web site of Central Electricity Regulatory Commission: www.cercind.org
7. Web site of Central Electricity Authority: www.cea.nic.in
8. Website of OERC: www.orierc.org
9. Website of APGENCO: www.apgenco.com
10. Website of APTRANSCO: www.aptranscorp.com
11. Website of APERC: www.ercap.org
12. Website of UPERC: www.uperc.org
13. Website of World Bank: www.worldbank.org.in
14. India Power Sector Reforms Update, Issue 1,2,3,4,5,6 (October 2001, Jan 2002, May 2002, September 2002, February 2003, September 2003) Prayas, Pune. (Available at www.prayaspune.org)
15. The Electricity Act, 2003
16. Infraline Email news service, September 2003 to December 2003

GLOSSARY OF TERMS

ABT	Availability Based Tariff
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 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	M/s Central Electricity Supply Company of Orissa Ltd.
CPP	Captive Power Project
CRISIL	Credit Rating Information Service of India Limited
Crore	1,00,00,000
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)
FEMA	Foreign Exchange Management Act
Financial Year	Indian Financial Year - 1 st April to 31 st March. Typically represented as FY 98-99 etc.
FIPB	Foreign Investment Promotion Board
GENCO	Generation Company
GoI	Government of India
GoAP	Government of Andhra Pradesh
GoO	Government of Orissa
GoUP	Government of Uttar Pradesh
GRIDCO	Grid Corporation
HP	Horse Power (1 HP = 746 Watts)
HT	High Tension (or High Voltage)
HVDC	High Voltage Direct Current
Hz	Hertz
ICRA	Investment information and Credit Rating Agency 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)
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	M/s North-Eastern Electricity Supply Company of Orissa Ltd.
ODA	Overseas Development Agency, UK (now called DFID)
OECD	Overseas Economic Corporation Fund of Japan
ONGC	Oil and Natural Gas Corporation
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

PTC	Central Power Trading Corporation
R&M	Repair & Maintenance
RBI	Reserve Bank of India
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	M/s 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
UPPCL	Uttar Pradesh Power Corporation Limited
UPSEB	UP State Electricity Board
WB	The World Bank group
WESCO	M/s Western Electricity Supply Company of Orissa Ltd.