

**POWER SECTOR
RATING**

**Consolidated
Report to the Ministry of Power**

March 2005



1. BACKGROUND

ICRA / CRISIL have been mandated by the Power Finance Corporation (PFC) at the instance of the Ministry of Power (MoP) to carry out a performance rating of the state power sector across all states. The initial report, which was finalised based primarily on the information available/made available till August 2002, was released in January 2003. The first review based on data available till mid August 2003 was released in January 2004. This is the second review exercise based on data available till end December 2004.

Based on the feedback obtained from MoP and the utilities, as also the most recent developments in the sector, the parameters used for the rating exercise have undergone a few changes compared to the first review exercise. The more significant of such changes can be summed up as follows:

- ◆ Explicit evaluation of the progress made by the States in terms of implementing the various provisions of the Electricity Act, 2003 utilities towards attaining commercial viability
- ◆ A more stringent scoring framework for assessing the coverage of costs from own revenues.
- ◆ Use of negative marking in case of any policy announcements/ developments which , in the opinion the rating agencies, could adversely impact on the progress towards attaining commercial viability.

On an overall basis, the parameters used and the weightages are as follows:

Parameter	Original	1 st Review	Current
External	40	30	32
- State Government Parameters	20	17	17
- SERC Related Parameters	20	13	15
Internal	60	70	68
- Business Risk Analysis	25	27	27
Generation	6	6	6
Transmission & Distribution	19	21	21
- Financial Risk Analysis	30	23	20
Others	5	5	5
Progress in attaining commercial viability	NA	15	16

The key aspects evaluated under each of the areas can be summed up as follows:

(a) **State Government**

- Progress in terms of implementing the key provisions of the Electricity Act, 2003, which would include things like constitution of special courts for trial of theft related cases, designation of assessing officers and constitution of district level committees
- Progress in attaining 100% rural electrification
- Track record in terms of subsidy payment.

- Timeliness in release of funds obtained under the APDRP scheme by the respective State Government to the utilities
- Structural adjustment support provided to the sector
- Success in increasing revenue realisation through implementation of Anti-Theft measures
- Success in terms of increasing generating capacity, either in the State Sector or through creating an enabling environment for private producers
(In case of any actions by the State Government which has an adverse impact on the power sector, upto three marks have been deducted)

(b) State Energy Regulatory Commission (SERC)

- Timeliness in terms of issuing tariff orders
- Actual implementation of tariff orders as well as other directives that may be contained in the order
- Nature and scope of the tariff order, which would include both tariff and non-tariff issues
- Implementation of the various provisions of the Electricity Act from a regulatory perspective.
(A negative marks of 2.5 is assigned to States which are yet to set up an SERC)

(c) Business Risk Analysis

- Performance of the power plants in terms of PLF, Availability Factor, Auxiliary Power Consumption
- Progress in distribution reforms with respect to key areas like metering all 11 kV feeders, energy audit and increasing the quantum of units billed on metered basis. Also, the scoring against the energy parameter has been capped at 2.5 out of a maximum of 5 since comprehensive energy audit is possible only after all distribution transformers and consumers are also metered.
- Manpower levels , both absolute compared to normative parameters as well as trends in the same, with a negative marking of 1 in case the trend is adverse
- Aggregate Technical and Commercial losses

(d) Financial Risk Analysis

- Coverage of costs through revenues
- Track record of debt servicing
- Trends in receivables and power purchase / fuel creditors
- Progress in terms of funding pension and gratuity liabilities

(e) Others

- The current quality of information systems,
- Availability of audited accounts within a reasonable time frame (six months)
- Extent to which the utilities have been able to computerise their metering and billing systems

(f) Progress in attaining Commercial Viability

- Gap between ARR and ACS both in absolute and percentage terms. Further ARR is computed on the basis of cash collections since it is cash flows alone that enables an

- utility to meet operational expenditure, service debt and invest the surplus, if any in modernization / expansion projects.
- Trends in cash loss reduction compared to 2000-01 as base year
(A negative marks of upto three has been assigned in case of any developments / policy announcements which could adversely impact on the commercial viability going forward. Similarly negative marks have been allotted in case it was felt that the progress seen may not be sustainable)

Information Sources: The performance assessment has been dependent on operational and financial data available with the SEBs/Utilities or as available from other sources such as PFC/Planning Commission/Central Electricity Authority and other sources in the public domain.

As a rule, a Zero score has been assigned against all parameters where authentic data was not available.

1. SCORES ASSIGNED

The scores assigned to the states / Electricity Department is as shown below:

S. No.	States	SG	SERC	Gen	T&D	Fin. Risk	Others	Comm Viability	Total	Previous Year
1	Andhra Pradesh	8.20	12.38	4.75	11.75	12.50	4.25	3.20	57.03	56.75
2	Gujarat	12.26	6.50	3.25	11.40	12.25	3.75	4.20	53.61	50.99
3	Delhi	12.88	10.88	2.25	11.65	10.00	4.25	0.00	51.91	57
4	Karnataka	9.73	9.25	5.00	10.50	9.13	3.25	4.60	51.46	51.25
5	Tamil Nadu	6.21	8.75	4.00	12.90	11.63	3.25	4.20	50.94	39.63
6	Goa	6.90	0.00	0.00	14.55	12.50	2.50	14.00	50.45	52.20
7	Himachal Pradesh	6.60	5.00	4.00	10.38	11.13	3.00	9.80	49.91	44.16
8	West Bengal	3.40	8.25	1.50	11.95	8.25	3.25	8.00	44.60	40.89
9	Uttar Pradesh	8.96	10.25	2.25	7.80	7.63	3.25	2.00	42.14	41.85
10	Chattisgarh	3.98	0.50	3.25	6.30	9.38	0.50	16.00	39.91	13.83
11	Rajasthan	8.52	8.25	4.50	4.98	8.25	3.00	0.00	37.50	41.83
12	Maharashtra	2.75	7.75	5.00	5.70	8.75	3.50	3.80	37.25	37.75
13	Punjab	3.54	5.00	4.50	9.10	5.13	0.25	9.30	36.82	46.00
14	Haryana	9.40	8.13	3.50	5.25	6.38	2.50	0.00	35.16	49.63
15	Tripura	7.55	0.00	1.50	6.00	8.00	1.00	7.60	31.65	13.85
16	Kerala	3.75	4.25	1.25	12.13	5.00	3.50	1.60	31.48	34.25
17	Assam	6.42	7.90	0.50	5.50	3.00	2.00	2.00	27.32	27.43
18	Meghalaya	3.17	0.00	2.00	9.50	3.75	2.50	5.80	26.72	23.03
19	Madhya Pradesh	5.54	9.25	4.25	3.25	0.00	0.50	0.00	22.79	24.75
20	Sikkim	8.34	-2.50	0.75	1.13	5.75	1.00	4.60	19.07	15.87
21	Uttaranchal	5.90	6.25	1.00	2.95	2.50	0.00	0.00	18.60	37.75
22	Nagaland	6.80	-2.50	0.00	2.25	7.25	1.00	1.00	15.80	14.13
23	Orissa	2.00	5.63	1.50	2.50	2.00	0.00	0.00	13.63	20.31
24	Jammu & Kashmir	7.80	0.00	0.75	0.63	0.00	0.25	0.00	9.43	8.50
25	Arunachal Pradesh	2.60	-2.50	0.00	0.00	5.00	0.50	3.60	9.20	9.05
26	Mizoram	4.00	-2.50	0.50	4.88	0.00	1.00	0.00	7.88	7.80
27	Manipur	5.80	-2.50	1.25	0.50	0.00	1.50	0.00	6.55	10.60
28	Bihar	0.30	0.00	0.25	1.73	2.00	1.25	0.00	5.53	10.63
29	Jharkhand	0.00	3.00	0.00	0.00	0.00	0.00	0.00	3.00	NA

N.B: SG : State Government Parameter

SERC: State Electricity Regulatory Commission Parameter

Gen. : Generation Parameters

T&D: Transmission & Distribution Parameters

Fin Risk: Financial Risk Analysis

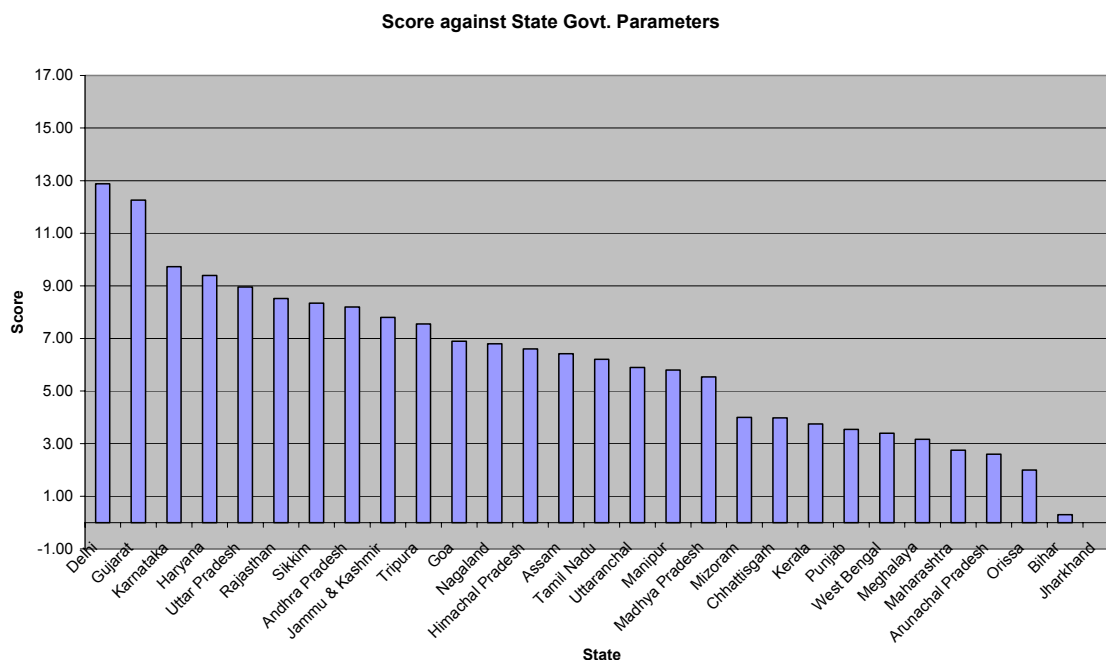
Comm. Viability: Progress against Commercial Viability

States highlighted in bold indicates those States which have been evaluated by Crisil

States, which have not been highlighted, indicates States, which have been evaluated by ICRA

ANNEXURE – PARAMETER WISE DISCUSSION

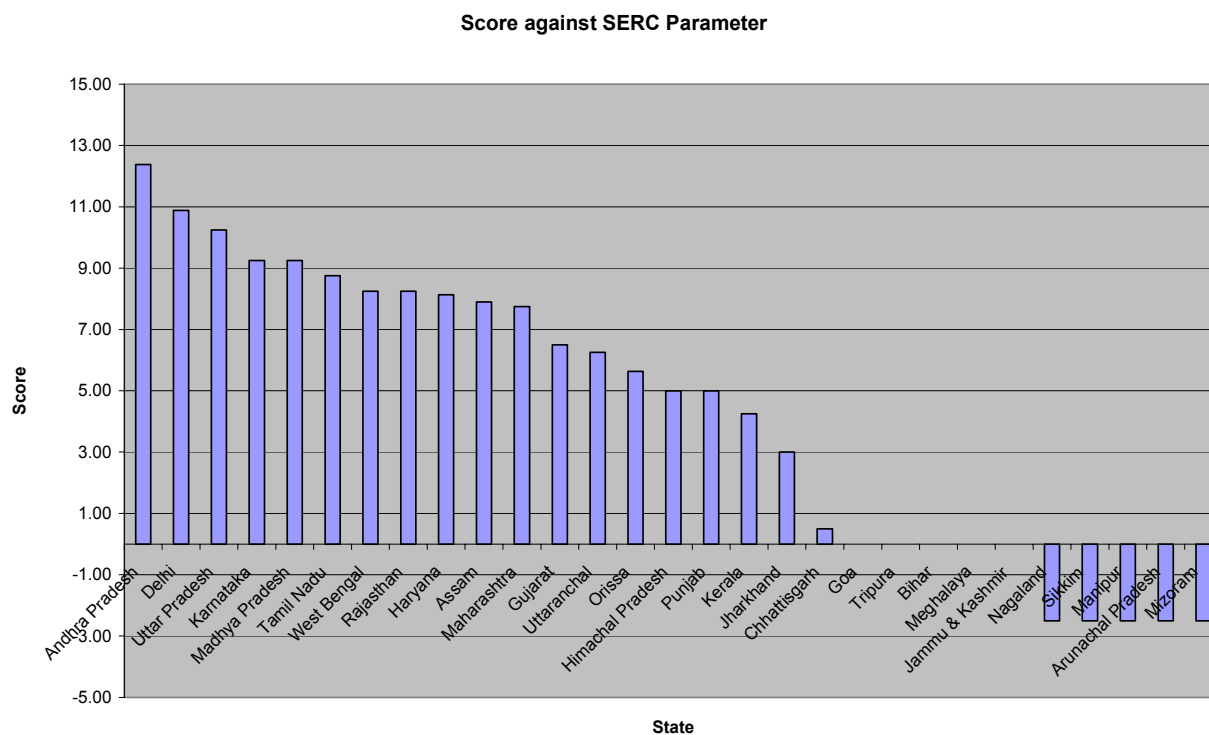
2.1 STATE GOVERNMENT PARAMETERS



- ◆ Delhi, Gujarat, Karnataka and Uttar Pradesh have scored higher than the rest of the states on account of good structural adjustment support provided to the utilities, along with above average subsidy payment track-record. Some of these states have also made decent progress in terms of implementation of the Electricity Act, 2003.
- ◆ Several states like Assam, Meghalaya and Tripura are in the process of formulating Financial Restructuring Plans, unbundling on functional lines and providing the required transitory support. Scores for these, and some other, states are expected to go up in the next review exercise.
- ◆ The states need to proactively address the issues of addition to the power generation capacity in the state to cope up with the increasing demand in the sector.
- ◆ Most of the Electricity Departments in the North East and the Electricity Department in Sikkim, despite having taken limited steps in terms of reforming the sector, have been able to secure decent scores against the parameter 'subsidy payable' - since the Non-Plan expenses

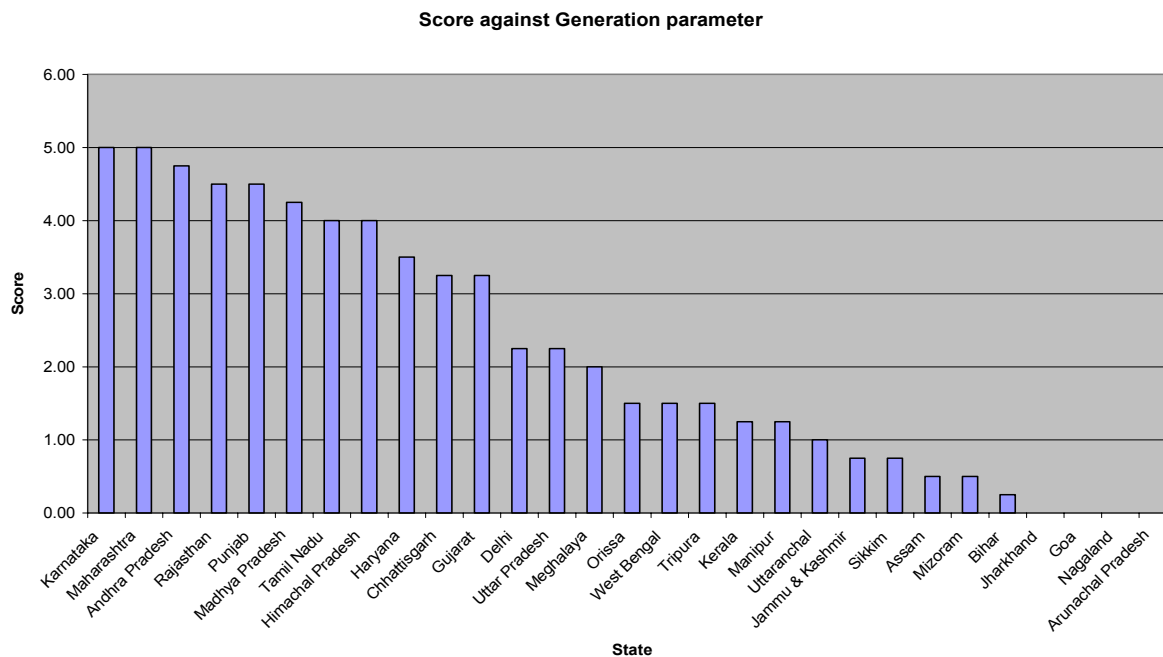
to the Departments for meeting cash shortfall is being treated as ‘subsidy’ payment. However, for most of these states, the non-plan allocation for meeting the expenses of the department are stagnating, implying curtailing of power purchases unless cash collections are stepped up significantly.

2.2 SERC PARAMETERS



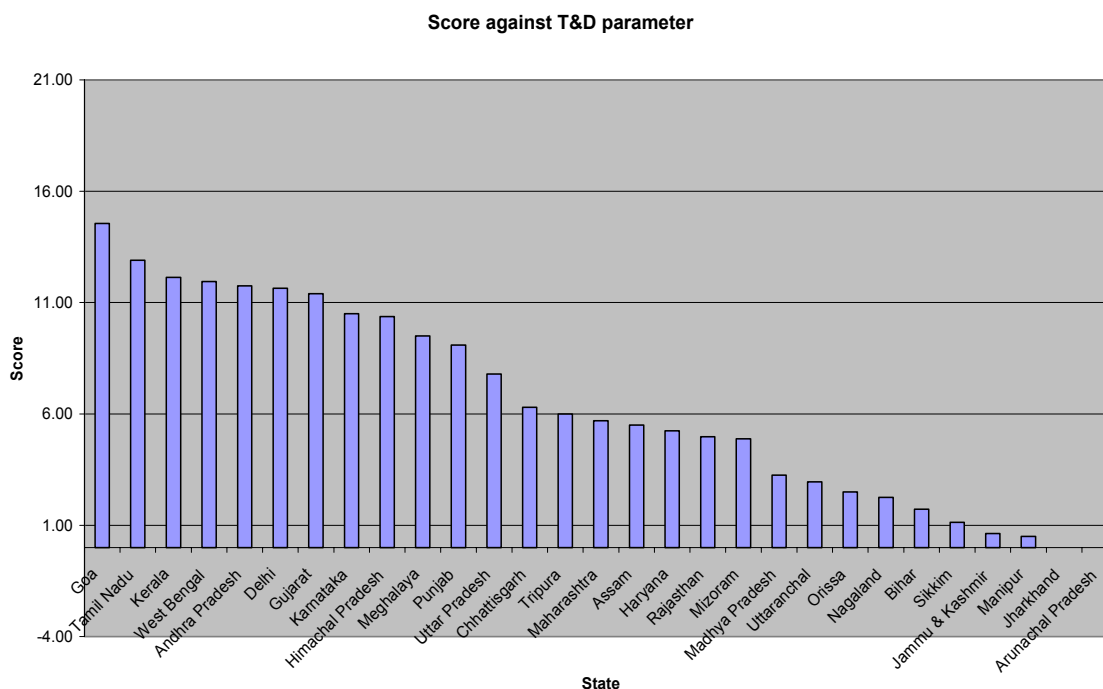
- ◆ States like Andhra Pradesh, Delhi, Uttar Pradesh, Karnataka and Tamil Nadu , which have scored well on the SERC related parameters , have seen timely issuance of tariff orders, acceptable tariff philosophies and also implementation of the tariff orders within a reasonable time frame.
- ◆ Many SERC have also shown good progress in terms of implementing the provisions of Electricity Act, 2003 w.r.t laying down of performance standards of licensees, setting up forum for redressal of consumer grievances and appointment of Ombudsman.
- ◆ Scores against this parameter for several states like Gujarat and West Bengal have shown an improvement on account of greater timeliness in terms of release of tariff orders compared to the last rating exercise.
- ◆ Most of the States in the North East are yet to constitute SERCs and therefore continue to get negative marks.

2.3 GENERATION PARAMETERS



- ◆ States like Karnataka, Maharashtra, Andhra Pradesh, Rajasthan and Punjab have scored well on this parameter by virtue of showing strong performance on PLF and auxiliary consumption.
- ◆ In case of Goa, no scores have been assigned since the State does not have any generation in the State sector
- ◆ West Bengal, Assam and Bihar have low scores on account of unfavourable PLF.
- ◆ All the EDs in the North East have low scores, even though we are of the opinion that generation parameters are not representative for states which operate their plants only for meeting peaking load.

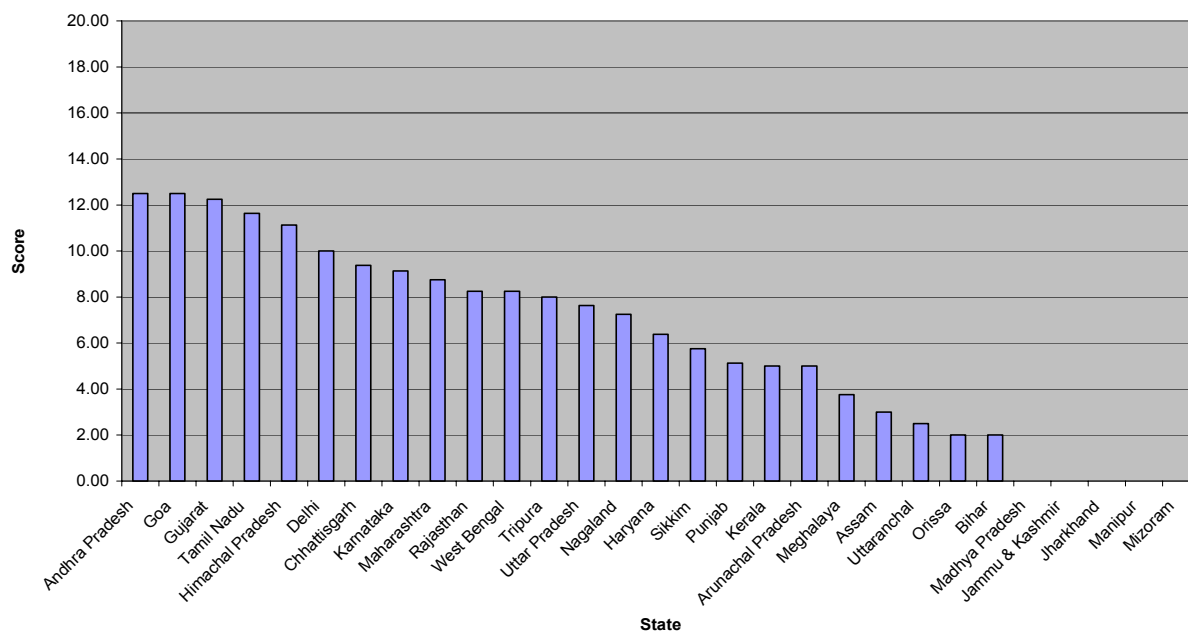
2.4 TRANSMISSION & DISTRIBUTION



- ◆ Scores against this parameter continue to be constrained by the high level of AT&C losses and low proportion of units billed on metered basis.
- ◆ States like Goa, Tamil Nadu, Kerala and West Bengal, which have scored higher than average against this parameter, have shown good progress in interface metering, units billed on metered basis, and energy audit.
- ◆ While scores against inter-face metering has improved, in the absence of adequate progress in DTR and consumer metering, scores against Energy Audit continue to be on the lower side.
- ◆ The power sector in the country is over staffed leading to low productivity per employee and high manpower costs.
- ◆ The Electricity Departments in the North East, with the exception of Tripura and Mizoram are yet to make any significant progress in the area of distribution reforms. In addition, most of the ED s have very high level of ATC losses.
- ◆ The quality of data available across all states is limited by the quality of metering across various consumer segments.

2.5 FINANCIAL RISK ANALYSIS

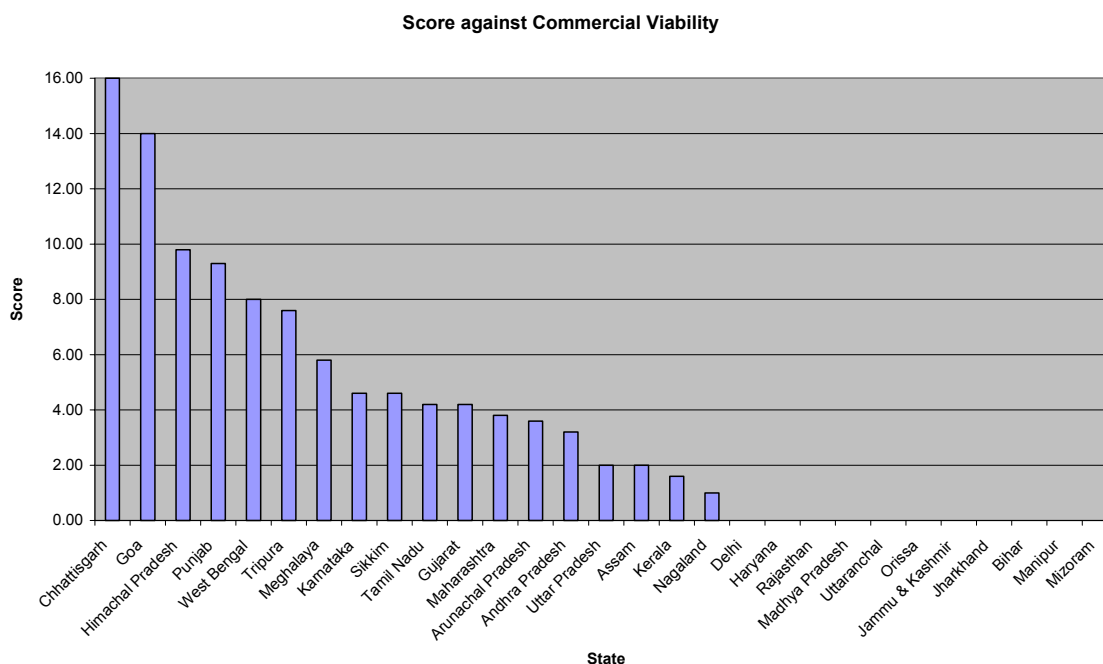
Score against Financial Risk Analysis



- ◆ The scores reflect the improving trend in receivables seen in case of most of the SEBs, and progress in funding pension and gratuity liabilities. However, power purchase and fuel creditors, which had shown a marked improvement in the last rating exercise, is again showing signs of slippage.
- ◆ A number of states, especially in the Eastern region, have shown improved performance on the back of high trading income from export of surplus power.
- ◆ However, the solvency position of most of the utilities continue to be unsatisfactory, with either negative net worth or high gearing levels. The operations of the utilities need to be turned around to reduce dependence on the state governments or external debt.
- ◆ There are only two states, Goa and Chhattisgarh, where coverage of costs through revenue, without subsidy, is more than 100%. Other states, which have a above average coverage of costs through revenues include Karnataka, Himachal Pradesh, Tamil Nadu and Punjab . In case of the ED s in the North East, the coverage (cash basis, since accrual figures are usually not available) is very low and typically less than 35%.

- ◆ A key parameter making the difference in the scores here is ‘Actual Track Record of Debt servicing’. AP, Goa, Gujarat, and Tamil Nadu , which have higher than average score, have earned full score against this parameter.

2.6 COMMERCIAL VIABILITY



- ◆ Chattisgarh and Goa have scored very high marks on account of ARR being higher than ACS in 2003-04 . In case of Goa, however, the sustainability of the same remains to be seen in view of discontinuance of trading operations from this year.
- ◆ Punjab has done well on this parameter as it has reduced losses in 2003-04 compared to 2001-02.
- ◆ States like Andhra Pradesh, Tamilnadu and Maharashtra have shown improvements in their finances. However, commercial viability is expected to be under stress due to free power scheme announced by the respective State Governments.
- ◆ Himachal Pradesh has also earned high scores, mainly on account of the intrinsic cost advantage enjoyed by the State and receipt of arrears from Government Departments, leading to a significant increase in Cash Collections during 2003-04.
- ◆ West Bengal continues to show good progress on this parameter.

ANNEXURE – RATIONALE –INDIVIDUAL STATES

1. ANDHRA PRADESH

A score of 57.03 has been assigned to the power sector in Andhra Pradesh. The distribution of marks against the parameters is as follows:

Sr. No.	Parameter	Maximum Score	ScoreAssigned
1	State Government Related Parameters	17.00	8.20
2	SERC Related Parameters	15.00	12.38
3	Business Risk Analysis		
	- Generation	6.00	4.75
	- Transmission & Distribution	21.00	11.75
4	Financial Risk Analysis	20.00	12.50
5	Others	5.00	4.25
6	Progress in attaining Commercial Viability	16.00	3.20
	Total	100.0	57.03

Strengths

- Strong regulatory processes in place with timely filing of revenue requirement and issue of orders; multi-year framework for tariff setting is being attempted
- Significant addition to generating capacity in state
- Sound operating performance of thermal plants (PLF 87% in 2003-04, high availability factors)
- Inter-face metering has been completed
- Debt servicing of loans has been timely
- Pension liabilities have been quantified and master trust has been created
- Subsidy payments have been committed at the beginning of the year

Weaknesses

- Free power to agriculture consumers expected to impact commercial viability
- Limited support for servicing of past pension liabilities of the utility
- Aggregate Technical and Commercial losses at 24% as at March 31, 2004
- Low metered sales at 47% of the total units input in the system
- Gearing on the higher side

The State Government

Key positives

GoAP has provided significant support to the changes being made in the power sector like functional dis-aggregation of the state utility, setting up of regulatory commission. It has provided financial support in the form of subsidy, equity and soft loans to the utility. The subsidy payments

on account of the policy decision to provide free power to farmers have been timely and are as per the regulatory directives. GoAP has also consistently supported generation capacity addition in the state. GoAP has also issued the notification for setting up of fast track courts in the state.

Areas of Improvement

GoAP needs to provide support for the servicing of past pension liabilities (presently on APGenco's books) as a measure of support to the sector. In addition, the financial plan needs to be finalized for the power sector to provide continuing support to the utility during the transition period. The number of households electrified also needs substantial improvement over the short to medium term. The appointments to the regulatory commission need to be timely and delays need to be avoided in the appointment of the Chairman of the SERC as seen in the recent past.

Electricity Regulatory Commission

Key Positives

Andhra Pradesh Electricity Regulatory Commission (APERC) was set up in 1999 and has issued about five tariff orders till date and the orders have been implemented. The commission has issued these orders after detailed discussions with all the stakeholders. A conscious approach has been taken towards reducing the cross-subsidy across consumer categories. The tariff order includes instructions to APTransco to follow merit order principles for purchase of power. In addition, the commission has introduced a 2 part tariff for bulk supply of power to distribution companies. The commission is in the process of implementing Time-of Day tariff for the consumers. It has also issued an order on Long Term Tariff principles to be adopted by the distribution companies. The commission has issued orders for setting up of consumer grievance forum and appointment of Ombudsman.

Areas of Improvement

The Time-of-day tariff needs to be introduced in the state of Andhra Pradesh as has been implemented in other states. In addition, increase in fixed charge in retail tariff to mirror the actual cost structure of the utility – fixed and variable components - needs to be considered.

Operational Performance:

Key Positives

The thermal plants in the state of Andhra Pradesh have exhibited strong operational performance with Plant Load Factors (PLFs) at about 87% in 2003-04. The availability of its thermal and hydel plants is also high at 91% in 2003-04. The metering at the interface points is 100% with 672 interface points being metered. The availability of the transmission lines is also high at about 99%. The manpower employed in transmission and distribution per 1000 consumers is comfortable at 3.83 per 1000 consumers.

Areas of improvement

The metering at the consumer end has to increase for a better estimation of the energy flow in the system. Further, the distribution transformer failure rate of 15% in 2003-04, though an improvement compared to 2002-03 (19.5%) has to improve significantly. The manpower in thermal generation 3.09 employees per MW is on the higher side compared to a benchmark of 0.96 /MW.

Finances**Key Positives**

The financials of the integrated entity (generation, transmission and distribution) have improved in 2003-04 compared to 2001-02. The cash coverage of costs stands at about 89% for 2003-04. The adjusted book losses have also reduced in 2004 compared to 2002. The improvement in the finances is the result of reduction in AT&C losses to about 24% in 2003-04. The transmission and distribution utilities had been regular in servicing the debt service obligations. A master trust had been created for meeting the pension and gratuity liabilities of the employees.

Areas of improvement

GoAP's policy of providing free power to agriculture consumers is expected to impact financials of entities in the power sector in long run. The gearing of the consolidated entity is on the higher side at 3.59 times. This is also due to the long term bonds issued by the generation entity for meeting pension payments. The debtors, though showing a declining trend are still at about 3 months of sales for 2003-04. The creditors too are high at 77 days of payables for 2003-04, which is higher than the benchmark of 60 days payables.

2. GUJARAT

A score of 53.61 has been assigned to the power sector in Gujarat. This assessment is predominantly based on information available/ made available till January 2005.

The distribution of scores against the parameters is as follows:

<i>S.No</i>	<i>Parameter</i>	<i>Maximum Score</i>	<i>Score Assigned</i>	<i>Previous Scores</i>
1	State Government Related Parameters	17.00	12.26	9.69
2	SERC Related Parameters	15.00	6.50	2.50
3	Business Risk Analysis			
	- Generation	6.00	3.25	3.75
	- Transmission & Distribution	21.00	11.40	9.30
4	Financial Risk Analysis	20.00	12.25	15.50
5	Others	5.00	3.75	3.75
6	Progress in attaining commercial viability	16.00	4.20	6.50
	Total	100	53.61	50.99

The scores assigned to the Gujarat power sector has shown a marginal improvement from 50.99 in the January 2004 exercise to 53.61 currently. While not strictly comparable because of change in certain parameters, the increase in scores essentially reflects :

Progress in terms of restructuring the sector and strong State Government support as reflected in subsidy payments

Release of the latest tariff order for FY 2003-04 and finalisation of some of the regulations by GERC under the Electricity Act 2003. In the previous exercise, the scoring was constrained by the fact that no tariff orders had been released after 2000

Progress in energy audit and improvement in manpower productivity parameters

These strengths has been offset by an increase in losses suffered by GEB during FY04 since the FY03 numbers contained some one-time income like incentives and interest credit on State Government loans. In addition FY04 performance has also been adversely affected by prior period charges relating to delayed payment surcharge to IPPs. The scores against the financial parameters has also been affected by increase in power purchase creditors compared to the last exercise and more stringent scoring framework used for assessing coverage of costs from own revenues.

STRENGTHS

- Significant progress towards the restructuring of GEB has been achieved. The Gujarat Electricity Industry (Reorganisation and Regulation) Act 2003 has been passed and notified by GoG. GoG vide its order dated 24th October 2003 issued a notification for provisional transfer scheme for restructuring of GEB. As per the transfer scheme, the board will be restructured into seven entities on functional lines. Subsequently, on December 31, 2004, the GoG vide its notification has notified the provisional opening balance sheets of the successor entities.
- Satisfactory track record in terms of receipt of subsidy from State Government
- Progress in cost reduction through renegotiations of Power Purchase Agreements (PPAs) with IPPs and restructuring its high interest rate loans
- Moderate progress has been made in implementing the targets laid down in the Electricity Act 2003. GoG has issued a notification for the constitution of Special Courts and three special courts have been constituted recently in September 2004. Further GERC has issued five Regulations and Codes and has also prepared around twenty draft Regulations and concept papers for inviting comments from stakeholders.
- Substantial progress has been achieved on with respect to feederwise energy accounting covering urban, industrial, HT express feeders and rural feeders. 100% metering exists at all interface levels upto 11kV alongwith the monthly energy accounting at all 11 kV feeders to monitor losses across the feeders.

WEAKNESS

- Under the current tariff structure, the level of subsidy required from the Government is very high which continues to put strain on Government finances. As per the agreement between GOG and ADB, there has been a ceiling of Rs. 1100 Cr. for the agriculture subsidy since FY 2001.
- Despite improvements, present level of revenue falls short of meeting the operating and finance cost requirement of the Board. Coverage of costs from own revenues, without subsidy, is still less than 80 %.
- The adjusted book losses in FY 04 has increased as compared to FY 03 mainly because of (a) during FY 03, the net credit of Rs 391 Crore was considered in interest and financing charges which was not available in FY 04 and (b) Net prior period expenses of Rs 466 Crore in FY 04 against net prior period income of Rs 210 Crore in FY 03.
- Although units billed on metered basis have improved from FY02 to FY04, the ratio of units billed on metered basis to total units input into the system continues to be lower than 50%. Metering of agriculture consumption remains key area of concern considering assessment of energy sale to agriculture consumers constitutes over 40% of total sale of GEB.

The assigned score continues to reflect the strong support from Government of Gujarat (GoG) in terms of structural reforms as well as subsidy payment, progress in distribution reforms , above average performance of the generating stations, and good track record of debt servicing. The scoring continues to be constrained by AT&C loss level above 30%, inadequate coverage of costs

through revenues without subsidy , and a gap between ARR and ACS of over 47 paise, as a result of which it scores moderately against the parameter ‘Progress in attaining commercial viability’.

The State Government has notified the Gujarat Electricity Industry (Reorganisation and Regulation) Act 2003 and Anti-theft legislation. Further, GoG has notified the provisional opening balance sheets of the successor entities. In addition, the State Govt’s track record of subsidy payment in cash has been good. GoG has initiated action towards implementation of the Electricity Act 2003 and issued a notification for constitution of Special Courts. The Financial Restructuring Plan (FRP) is currently under finalization. Therefore, the scores on State Government related parameters are high.

The sector scores moderate against the SERC related parameters, as there has been delays in filing by ARR and Tariff Petitions by GEB in the past. Since its formation, the Commission issued only its second tariff order on 25th June 2004 on the ARR Petitions for FY 2001-02, FY 2002-03 and FY 2003-04. The Order issued by GERC is fully implemented by GEB and the GEB has also submitted the compliance report on the directives issued by the Commission. Further, GERC has finalized 5 Regulations and Codes and has prepared 20 Draft Concept Papers and Regulations for inviting comments from stakeholders, including concept paper on Multi Year Tariff Principles.

The score against T&D parameters has shown an improvement consequent upon completion of interface metering and energy auditing covering all 11 kV feeders and at least on one feeder from each circle upto DTR level. The availability of transmission network at all voltage levels is consistently above 98% and AT&C losses for FY 2003-04 are around 30.31%.

The Gujarat Electricity Board has reported an increase in revenues in FY04. However, despite improvements, its coverage of costs from own revenues without factoring in subsidy support stand at less than 80%. It, however, scores well on timely servicing of its debt obligations to REC and PFC and other lenders and reduction in level of receivables. The ratio of average revenue realisation (ARR) to average cost of supply (ACS) has marginally improved from 79% in FY 02 to 82% in FY 04, however, the gap between ARR and ACS still remains at nearly 47 paise / unit. Accordingly, the scores on financial parameters and progress in attaining the commercial viability for Gujarat Power Sector are above average.

The GEB maintains and updates financial and account related information from time to time. The accounts for FY 03 have been finalised and the provisional accounts for FY04 have also been prepared. It has also embarked upon adoption of IT systems in its operations and initiated several measures such as computerised billing centres, installation of computers at substations for logging of outages and monitoring performance.

3. DELHI

A score of 51.91 has been assigned to the power sector in Delhi. The distribution of marks against the parameters is as follows:

Sr. No.	Parameter	Maximum Score	Score Assigned
1	State Government Related Parameters	17.00	12.88
2	SERC Related Parameters	15.00	10.88
3	Business Risk Analysis		
	- Generation	6.00	2.25
	- Transmission & Distribution	21.00	11.65
4	Financial Risk Analysis	20.00	10.00
5	Others	5.00	4.25
6	Progress in attaining Commercial Viability	16.00	0.00
	Total	100.0	51.91

Strengths

- Strong Cash support to the Transco during the transition period. Power sector already unbundled and the Discoms being run on commercial basis.
- High level of household electrification at over 96%.
- Almost complete level of interface metering.
- The regulator has come out with necessary regulations as per the Electricity Act 2003 along with a Multi year tariff approach.
- Reduction in manpower at Distribution level with introduction of Voluntary Separation Scheme.
- High level of IT adoption by the Discoms in consumer services such as metering, billing, complaint handling, etc.

Weaknesses

- Level of systemic losses remain high with Transco having accumulated losses of Rs. 2448 Crores leading to Negative network.
- AT&C losses remain at a high level of 49.33%.
- Low revenue cost coverage of 62.5% for the consolidated state power sector.
- Low generation parameters such as PLF (59.3%).
- Delays by State Govt. in implementation of certain targets as per the Electricity Act.

The State Government.

Key Positives

The Govt. of Delhi has committed to provide cash support to the Delhi Transco of over Rs. 3450 Crores during the transition period upto 2005-06 beyond which the sector is expected to breakeven. There are no subsidies paid to the Distribution companies, which are being run on commercial basis with reference to the levels of efficiency gains committed by them at the time of privatization in July 2002. The level of household electrification is at a high level of over 96% and the Govt. has been making attempts to increase the generation capacity within the state. 330 MW were added by the state sector during 2002-03.

Areas of Improvement

Though the Govt. of Delhi is providing strong transitional support to Transco, the nature of support being by way of loan is leading to a skewed capital structure and heavy losses on the revenue account. Support in terms of subsidy grants or clarity on the terms of the transitional loans being extended to the Transco is required. Also, there have been delays in implementation of certain targets as per Electricity Act 2003 such as notification of district level committees or designation of assessing officers. Further, there have been delays in the appointment of Chairman/ Members of the Electricity Commission, which need to be improved.

Electricity Regulatory Commission

Key Positives

The Policy Directions require the tariffs to be determined such that they are uniform for all consumer categories across all Distribution Companies, which makes the tariffs of the Licensees interlinked with each other. Depending on the ARRs for different Discoms, the bulk supply tariff is adjusted in a manner that the Discoms can run on commercial basis and are not burdened beyond the efficiency gains already committed by them at the time of privatization. The tariff order for 2004-05 has awarded an overall tariff increase of 10% with a view to increase the recovery rates and to bring the tariffs close to cost of supply.

The Commission has also issued directives to the utilities operating in the State from time to time, in order to improve the functioning of the power sector in the State in terms of operational efficiency, costs, and quality of service. Wherever directives have not been fully implemented, the regulator has taken a very serious note of the same. DERC has come out with various regulations as per Electricity Act 2003 and the Delhi Electricity Reform Act such as Performance Standards- Metering & Billing and Guidelines for establishment of forum for redressal of consumer grievances and Ombudsman. DERC was one of the first commissions to come out with a multi year tariff policy in 2001.

Areas of Improvement

Timeliness of the tariff orders need to be improved since the tariff for both 2003-04 and 2004-05 came out only in June whereas the licensees had submitted the ARR's on time.

Operational Parameters (Generation, Transmission and Distribution)

Key Positives

There has been a high level of feeder level metering in Delhi and the Distribution companies are strengthening the Energy audit systems with extensive Distribution transformer metering which is at an advanced stage of completion. Already 100% of the consumers are metered and complete consumer indexing has been done. The quality of T&D network is also high with very low distribution transformer failure rate. All the Distribution companies have taken several important steps to improve the customer services and tackle the consumer grievances in a timely manner. Further, there has been an attempt to rationalize workforce at the distribution levels with the reduction in manpower levels through Voluntary separation scheme. The Distribution companies have reduced the manpower by a third during 2003-04.

Areas of Improvement

The bulk of the generation plants are aged and have low PLF (59.35% during 2003-04) and high levels of manpower with over 2.33 employees per MW of capacity. The AT&C losses remain at a high level of 49.33% and the level of metered billing is at a low level of 53% of the units input.

Financial Risk Analysis

Key Positives

After the unbundling of the DVB and its subsequent privatization, there has been a remarkable improvement in the level of receivables of sale of power, which stood at 58 days in 2003-04. The fuel and power purchase creditors also are at a very comfortable level of 25 days of the total power & fuel purchases. The pension liabilities of the employees are being taken care of by the Govt. of Delhi, which has funded the initial corpus of the DVB Employee Terminal Benefit Fund 2002 based on actuarial calculations.

Areas of Improvement

The power sector as a whole has a negative net-worth due to accumulated losses of Rs. 2746 crores including Rs. 2448 Crores in the Transco's books. This coupled with a low cost coverage ratio of 52.5% reflects unfavorably on the financial health of the sector as a whole.

4. KARNATAKA

A score of 51.46 has been assigned to the power sector in Karnataka. The distribution of marks against the parameters is as follows:

Sr. No.	Parameter	Maximum Score	Score Assigned
1	State Government Related Parameters	17.00	9.73
2	SERC Related Parameters	15.00	9.25
3	Business Risk Analysis		
	- Generation	6.00	5.00
	- Transmission & Distribution	21.00	10.50
4	Financial Risk Analysis	20.00	9.13
5	Others	5.00	3.25
6	Progress in attaining Commercial Viability	16.00	4.60
	Total	100.0	51.46

Strengths

- Financial position better than many similar sized entities. Gearing at 2.88 times for the sector as on March 31, 2004.
- Good cost coverage. 92% of the cash expenses are covered by revenue from sale of power in FYO4.
- Good accretion to generating capacity

Weaknesses

- Delay in filing of tariff petitions.
- Multi-year policy framework for tariff setting not yet in place.
- Energy audit of only small a small proportion of feeders is complete.
- MIS and customer mapping needs to be taken up on urgent basis.
- Aggregate Technical and Commercial losses at about 30% are on the higher side

The State Government

Key Positives

Government of Karnataka (GoK) has been supportive of the reform process in the State which is manifest in the various steps it took such as enactment of Karnataka Electricity Regulatory Act 1999, Setting up of Electricity Regulatory Commission in Nov. 1999 reorganisation and corporatisation of erstwhile KEB and subsequent unbundling of the sector etc. GoK has, during the transition, provided substantial support to sector by way of balance sheet restructuring. It took

over loans of Karnataka Power Transmission Corporation Ltd. (KPTCL) to the tune of Rs. 1050 crore and also wrote of bad debts to the tune of 866 crore. Further it separated the distribution function and the transmission function by creating four distribution companies. The Government also brought out 'The Electricity (Karnataka Amendment) Act, 2001 (known as Anti Theft Law) with stringent Provisions for fines and imprisonment to curb theft and pilferage of electricity in the state. This is much earlier than what has been subsequently made mandatory in Electricity Act 2003. (EA 03)

Areas of Improvement

The power sector in Karnataka continues to incur losses. Subsidy releases have not been uniform through the year thereby aggravating the liquidity position of the licensees. Though distribution function is now mandated to four companies MIS improvement and database buildup has been slow. Tariff filings for FY05 are delayed to stagnating user charges.

Electricity Regulatory Commission

Key Positives

KERC has taken efforts to bring in the efficiency improvements in the sector. The major effort has been in the direction of codifying and systematizing the licensees in terms of consumer interface and building up the information databases. Karnataka Electricity Regulatory Commission (KERC) has issued three tariff orders so far. The first two orders allowed tariff hike of 16.85% & 16.20%. The third tariff order for FY 2004 has also been issued in a timely manner and the order has been implemented. Further in 2004, the Commission has also brought out various regulations under the EA 2003. Some of these deal with terms and conditions for open access, complaint handling and redressal standards, consumers' right to information and the consumer grievance handling procedure. The commission has proposed to reduce the number of slab, reduce the cross-subsidy burden on high-tension consumers and charge tariffs for consumers that are more reflective of the cost of supply. KERC has also issued the KERC (Second Appellate Authority) Regulations 2002. This provides impartial dealing of dispute on billing between the licensee and the consumer. Three such Appellate Tribunals have been constituted in the State, each with two members – one of whom is a retired judge and the other one an experienced electrical engineer.

Areas of Improvement

A multi-year framework for determining tariff shall be a logical step going forward. Commission has sought services of TERI for this purpose.

Operational Parameters (Generation, Transmission and Distribution)

Key Positives

The performance of the thermal plants of Karnataka in the state sector has been satisfactory, demonstrated by high levels of availability. The auxiliary consumption of the plants is within the limits prescribed for thermal plants.

Areas of Improvement

MIS, energy audit, metering and customer mapping are some of areas where scope for improvement exists.

Finances

Key Positives

Cash Cost coverage is comfortable at 92% in FY04. Gearing for the sector is also relatively lower at 2.88 times. Debt repayment record during FY04 of entities other than Visvesvaraya Vidyuth Nigama Ltd. has been good.

Areas of Improvement

Payment for fuel supply and power purchases are stretched as evinced by high creditors as on March 31, 2004 of 85 days. This is an improvement over 98 days as on March 31, 2003. Main reason for high creditors is high level of debtors which was 97 days as on March 31, 2004. Debtor management and collection performance should clearly be the area of thrust for the Karnataka power utilities.

5. TAMIL NADU

A score of 50.94 has been assigned to the power sector in Tamilnadu. The distribution of marks against the parameters is as follows:

Sr. No.	Parameter	Maximum Score	Score Assigned
1	State Government Related Parameters	17.00	6.21
2	SERC Related Parameters	15.00	8.75
3	Business Risk Analysis		
	- Generation	6.00	4.00
	- Transmission & Distribution	21.00	12.90
4	Financial Risk Analysis	20.00	11.63
5	Others	5.00	3.25
6	Progress in attaining Commercial Viability	16.00	4.20
	Total	100.0	50.94

Strengths

- Significant capacity addition in the state
- Inter-face metering has been completed
- Low distribution transformer failure rate
- Debt servicing of loans has been timely
- Sound operating performance of thermal plants

Weaknesses

- Free power to agriculture consumers expected to impact commercial viability
- Significant accumulated financial losses
- Limited financial support from Government of Tamilnadu (GoTN)
- Regulatory process needs to be strengthened in terms of timely filing for meeting revenue gap (either through subsidy or tariff hike)
- Regulation should adopt multi-year framework for tariff setting
- Energy audit needs to be adopted on a continuous basis
- Aggregate Technical and Commercial losses at 23.6% on the higher side
- Pension liabilities not quantified and are being met as part of revenue expense.

The State Government

Key Positives

Government of Tamil Nadu (GoTN) has been supportive of the private sector investment in the power sector and as a result, the state has seen significant generating capacity additions in the

recent past. GoTN has been making timely subsidy payments for the year 2004-05, which is as per the commission's order.

Areas of Improvement

GoTN has provided limited subsidy support (cash and adjustments through electricity duty). In fact, the subsidy payments for the past few years have been adjusted against the bond issuances made by GoTN to Central Public Sector Undertaking's (CPSU's). Tamilnadu Electricity Board (TNEB) has been incurring losses and has accumulated losses Rs. 2642 crores as at March 31, 2004. The losses incurred by TNEB would have to be reduced significantly (through implementation of anti-theft measures and operating efficiency improvements) for the Board to turnaround. The appointment of officers as per section 126 of the Electricity Act 2003 needs to be done for improving efficiency. In addition, the State level/ district level co-ordination forum needs to be appointed by GoTN for bringing about improvements in the power system.

Electricity Regulatory Commission

Key Positives

Tamilnadu Electricity Regulatory Commission (TNERC) has issued the tariff order for FY 2004 in a timely manner and the order has been implemented. The tariff order for 2003-04 has been issued after detailed discussions with all the stakeholders. The commission has proposed to reduce the number of slabs, rationalize tariff by increasing the low-tension tariff, reduce the cross-subsidy burden on high-tension consumers and charge tariffs for consumers that is more reflective of the cost of supply. Further, for the first time in the state, agricultural tariff has been introduced. However, agriculture tariff has been revised subsequent to the GoTN's policy for providing free power to agriculture consumers and reduced tariff to domestic consumers. TNERC has issued an order in June 2004 in this regard which has been implemented.

Areas of Improvement

TNEB has been in a revenue deficit in 2003-04, which has further added to the losses accumulated in the past. TNEB should finalize its revenue application to TNERC much ahead of the financial year. In fact, it is imperative for the financial year 2005-06 as this would help in determining the subsidy payable by GoTN for 2005-06. The delay in filing in the tariff filing is likely to delay the regulatory process for determining the revenue and expenses for 2005-06 and the means for meeting the gap, if any.

TNERC has attempted reduction in cross-subsidy and rationalizing of tariff in its tariff order for 2003-04. The tariff rationalization needs to be implemented on a continuous basis and the commission needs to develop a multi-year framework for determining tariff.

Operational Parameters (Generation, Transmission and Distribution)

Key Positives

The performance of the thermal plants of TNEB has been satisfactory, demonstrated by high levels of availability. The auxiliary consumption of the plants is within the limits prescribed for thermal plants. TNEB has one of the lowest losses in the Transmission & Distribution (T&D) system, when compared to utilities of similar size.

Areas of Improvement

TNEB needs to accelerate its metering programme at all levels. Further, the energy audit needs to be completed for the entire system and not in a selective manner as is being done presently. The metering of consumers needs to be done at an aggressive pace, as this would help in a better estimation of the system losses.

Finances

Key Positives

TNEB's finances have improved significantly compared to 2001-02. Though the losses have reduced in 2003-04, the accumulated losses as at March 31, 2004 stand at Rs. 2462 crores. TNEB has a good record in terms of managing its receivables and payables. The receivables have reduced to 78 days of sales as at March 2004 (reduction of 4% from 82 days in March 2002). The payables too are comfortable at 49 days of purchases. The coverage of interest and operational costs has improved consequent to the tariff hike in 2003-04. Further, TNEB has been timely in servicing its debt.

Areas of Improvement

TNEB's financials have a fairly low gearing (excluding State Government loans). However, the gearing ratio deteriorates when adjusted for subsidy not received. The cash losses have increased in 2003-04. This is, also, essentially because of the lack of subsidy inflows in the form of cash. Further, a substantial portion of the receivables are from state government bodies. The collection from these consumers needs to be improved for improving the financial health of TNEB. The free power scheme to agriculture consumers is expected to have a negative impact on the financials of TNEB.

6. GOA

A score of 50.45 has been assigned to the power sector in Goa. This assessment is predominantly based on information available/ made available till January 2005.

The distribution of scores against the parameters is as follows:

Nos	Parameter	Maximum Score	Score – Jan2005	Score – Jan2004
1	State Government Related Parameters	17	6.90	8.90
2	SERC Related Parameters	15	0.0	0
3	Business Risk Analysis			
	- Generation*			
	- Transmission & Distribution	27	14.55	10.05
4	Financial Risk Analysis	20	12.5	15.75
5	Others	5	2.5	2.5
6	Progress in attaining commercial viability	16	14.00	15.00
	Total	100	50.45	52.2

**As there is no State sector generation in Goa, maximum Scores related to generation are reallocated to Transmission and Distribution parameters in line with earlier rating exercise.*

The scores assigned to the Goa Electricity Department have declined marginally from 52.2 in the previous rating exercise to 50.45 in the current exercise. The marginal decline has primarily been on account of the non-availability of proforma Balance Sheet for the year ended March 2004 because of which scores could not be assigned to certain parameters. In addition, the Goa Electricity Department has discontinued trading operations from May 2004, and since this may have an adverse impact on the financials of the Department from next year, the score against the parameter 'Progress in Commercial viability' has been moderated.

STRENGTHS

- There has been significant improvement in the financial performance on account of trading income earned through sale to Power Traders including Power Trading Corporation (PTC) and income earned through Unscheduled Interchange (UI) charges.
- The Average Revenue Realization (ARR) for the ED has been higher than Average Cost of Supply (ACS) for the second year running during 2003-04
- Favourable progress in inter-face metering, consumer metering and energy accounting. A high proportion of energy is billed on metered basis.

WEAKNESSES

- The State's financial performance for the last two years was primarily driven by income earned from trading operations. With reduced Central Sector allocation and discontinuation of trading w.e.f May 2004, the sustainability of the Department's profitability remains to be seen.
- The State Electricity Regulatory Commission although constituted, is not operational.
- Slow progress in terms of reforms and restructuring The efforts to corporatise the Electricity Department has been delayed and subsequent to the enactment of the Electricity Act 2003, fresh study has been envisaged and for which the Govt. of Goa is in the process of finalising the consultancy organisation.
- While the State has taken several measures to reduce T&D losses and curb theft, the ATC loss of 32.0% during FY04 for Goa grid is high for the area covered and number of consumers served.
- The manpower base is relatively high in comparison to the number of consumers served. The Electricity Department has initiated the process of computerization in a phased manner.

The State Government has not made any substantial progress with respect to the implementation of the targets laid down in Electricity Act 2003. The State Government is in the process of finalising a consultant for a fresh study on corporatisation and restructuring of the Electricity Department. The State Government is in the process of selecting Chairman and Members for the State Electricity Regulatory Commission (SERC), subsequent to the resignation by the Chairman of the one member Goa Electricity Regulatory Commission (GERC). Therefore, the scores on State Government related parameters are moderate.

The ED has earlier revised tariff for various consumer categories during April 2002, prior to the constitution of the GERC. The revision reflects an average reduction of seven percent in the tariff in anticipation of the significant reduction in the power purchase cost and additional revenue through trading of power through Power Trading Corporation. However, no Tariff Order has been effected through the regulatory process. Also, as the SERC is not functional, none of the regulations that are envisaged as per the Electricity Act 2003 have been issued till date.

The Goa Electricity Department receives power through its allocated share in the Central Generating Stations (CGS) in the Western Region as well as in the Southern Region in addition to purchasing power from the only IPP in the State. The ED has temporarily surrendered its share upto 49 MW and further the Central Sector allocation to ED from Southern Region has been reduced from 100 MW to 75 MW. The ED was trading surplus available power through Power Traders including Power Trading Corporation till May 2004. The ED has been able to derive significant financial benefit through above arrangements. Further, voltage profile and reliability of power within the State has improved after commissioning of 400/220 kV substation at Colvale and upgradation of Tivim substation and completion of 220 kV line from Colvale to Tivim, the availability of the Transmission lines during FY 04 was above 99%. The average aggregate technical and commercial (ATC) losses in the State for the past three year period are high at 32.7% considering area covered and number of consumers served. 100% Energy Auditing is carried out at all 11 kV feeders. Around 96% of the total consumers are metered, while DTC metering is in progress. Accordingly, the scores on technical parameters are above average.

The ED has reported good profits in FY 04. It also scores well on timely servicing of its debt obligations to REC and PFC and favorable cash cost coverage ratio. The ratio of average revenue realisation (ARR) to average cost of supply (ACS) is also favourable. Accordingly, the scores on financial parameters for Goa Electricity Department are very high.

The State has booked record profits during FY03 and FY 04 on account of trading income through PTC and UI incentive income. Earlier Goa Electricity Department has entered into agreements with M/s Power Trading Corporation (PTC) for sale of 100 MW power on round the clock basis and with M/s Global Energy Limited (GEL) for sale of 50 MW for 8 hours during off peak hours. However, as the Central Sector allocation to the State has been reduced and subsequent to CERC Order on open access charges, Goa Electricity Department has stopped trading since May 10, 2004, trading income is likely to reduce from FY 2004-05 onwards which will affect the profitability of Electricity Department. Electricity Department informed as trading is being stopped, power purchase expenses would also reduce as the surplus power is being treated as part of UI Charges. However, the actual impact of reduction in trading income and power purchase expenses on profitability will be known at the end of the year. During FY 05, Electricity Department has received around Rs 33 Crore as UI incentive income till December 2004.

The ED maintains and updates financial and account related information from time to time. It has also embarked upon adoption of IT systems in its operations and initiated several measures such as computerized billing centres, installation of computers at substations for logging of outages and monitoring performance.

7. HIMACHAL PRADESH

A score of 49.90 has been assigned to the power sector in Himachal Pradesh. This assessment is predominantly based on information available/made available till December 2004.

The distribution of marks against the parameters is as follows:

Nos.	Parameter	Maximum Score	Score – January 2005	Score- January 2004
1	State Government Related Parameters	17	6.60	7.78
2	SERC Related Parameters	15	5.00	2.50
3	Business Risk Analysis	27	14.375	16.13
	- Generation	6	4.00	5.00
	- Transmission & Distribution	21	10.375	11.13
4	Financial Risk Analysis	20	11.125	11.13
5	Others	5	3.00	3.00
6	Progress in attaining commercial viability	16	9.80	6.00
	TOTAL	100	49.90	44.16

The scores assigned to the Himachal power sector have shown an improvement from 44.16 in the January 2004 exercise to 49.90 currently. While not strictly comparable because of change in certain parameters, the increase in scores essentially reflects:

- Progress in functioning of the SERC, with timely release of the latest tariff order, in the previous exercise, the scoring was constrained by the fact that no tariff orders had been released after 2001.
- Higher collections (especially from Government Department) resulting in significant decrease in receivables from Rs. 2.67 billion as on March 31, 2003 to Rs. 1.80 billion as on March 31, 2004.
- The higher collections have also resulted in a decline in gap between Average Revenue Realization (ARR) and Average Cost of Supply (ACS) resulting in an increase in scores against the parameter 'Progress in Attaining Commercial Viability'

These strengths have been offset by high staffing levels and further increase in manpower levels, which greatly negates the benefits arising out of cheap power and low loss levels.

Strengths:

- Sharp increase in cash collections, which has been on account of higher current collections and initiative taken by the board to reduce its receivables from Rs. 2.67 billion as on March

31, 2003 to Rs. 1.80 billion as on March 31, 2004. However the sustainability of the same has to be seen.

- Satisfactory cost coverage arising out of low ATC losses and cheap power.
- Satisfactory progress in the area of distribution reforms, particularly metering and energy accounting. Achievement of almost 100% rural and consumer electrification.

Weaknesses:

- Very limited progress in terms of reforms and restructuring the sector.
- Consistent delays in filing Annual revenue Requirement with the Commission, though it seems to have been rectified to some extent lately. State Government support for the functioning of the SERC also has scope for improvement.
- In the past, there have been delays in paying committed subsidy (to compensate for roll back of domestic tariff). Though the State Government has recently issued an order to clear the past subsidy dues, however such instances can recur in future, which can affect the profitability of the board.
- Heavy overstaffing resulting in high employee expenses. Also, the trend in employee productivity parameters is unfavourable, which greatly negates the benefits arising out of cheap power and low loss levels.

The State Government

The GoHP has not initiated power sector reforms in any significant way. Further its track record in terms of implementing the directives issued by HPERC has also been unsatisfactory, and there have been delays in providing Government Subsidy (against rollback of tariff hikes for the domestic consumers). Moreover most of the steps required, as per the Electricity Act, 2003 have not been implemented.

There is no anti-theft courts set up in HP, however, the board has taken significant steps to curb the same, with 68,770 installations checked in FY04. The recovery from erring parties has also been moderate. One positive of the HP state power sector has been the significant addition in capacity, particularly in the IPP segment, with several other major capacity additions also in the pipeline.

ERC

The HPERC was constituted in December 2000 and has passed only two tariff orders till date. The first tariff order was issued in October 2001 in response to the Annual Revenue Requirement (ARR) filed on April 30, 2001 and the second tariff order was issued in July 2004 against the Annual Revenue Requirement (ARR) filed on March 3, 2004. The State Govt. implemented most of the tariff proposals except for the increase in domestic tariff, which was rolled back in lieu of the subsidy support to be provided by the GoHP. However, there have been significant delays in subsidy committed by GoHP.

The HPERC's tariff philosophy is satisfactory with respect to targets for reduction of T&D losses, two-phase tariff policy, determination of cost of supply at different voltage levels and gradual move towards elimination of cross-subsidy. However the tariff order does not seem to have taken any major steps towards formulation of multi-year tariff policy.

Operational Parameters (Generation, Transmission and Distribution)

The HPSEB primarily owns and operates hydel power plants. The operating parameters of these plants such as auxiliary power consumption and availability factor are well within normative figures. The HPSEB's quality of T&D network is also satisfactory with high level of metering at 11 kV levels and satisfactory availability factor and distribution transformer failure rate. The HPSEB also claims that most its sales are on metered basis, which gets reflected, in moderate T&D losses and satisfactory collection efficiency. The HPSEB has also undertaken energy accounting upto the 11 kV, however comprehensive energy audit is expected to start thereafter. On the negative side, HPSEB is heavily overstaffed in both generation and T&D functions, worse, with the regularisation of casual labour in the past; the manpower levels have been going up in absolute terms as well.

Finances

The HPSEB has a high proportion of in-house hydel energy available at low costs. Its cost of purchase of energy is low and the tariff levels are adequate in relation to the cost of energy purchased and generated. This, combined with the moderate AT&C losses, provides for adequate coverage of operating costs. However, despite these positive factors, the HPSEB is still incurring a moderate net loss because of overstaffing (the employee costs being exceptionally high). Still, the HPSEB has a positive net worth on the strength of adequate equity and accumulated reserve of the past. Besides, the Board is not defaulting on any loans, except on the interest accrued against State Government loans. The HPSEB's receivable days have decreased with higher emphasis on collections. However, continually high power purchase creditors and unfunded pension and gratuity liabilities constrain the overall score of HPSEB at 11.12 against financial parameters.

Others

HPSEB has adequate information systems in place and its accounts are audited within a reasonable period. HPSEB is in the process of computerizing its billings and metering systems.

Progress in Attaining Commercial Viability

With significant access to low cost power and relatively low ATC losses, HPSEB fares well on the parameter on difference between ARR and ACS. However a large part of the improvement is on account of arrear collections from State Government, the sustainability of which remains to be seen.

8. WEST BENGAL

A score of 44.60 has been assigned to the power sector in West Bengal. The distribution of marks against the parameters is as follows:

Nos	Parameter	Maximum Score	Scores- Jan 2005	Scores- Jan 2004
1	State Government Related Parameters	17	3.40	6.81
2	SERC Related Parameters	15	8.25	2.00
3	Business Risk Analysis	27	13.45	9.58
	- Generation	6	1.50	1.25
	- Transmission & Distribution	21	11.95	8.33
4	Financial Risk Analysis	20	8.25	7.25
5	Others	5	3.25	3.75
6	Progress in attaining commercial viability	16	8.00	11.50
	TOTAL	100	44.60	40.89

The scores assigned to the West Bengal power sector have shown a marginal improvement from 40.89 in the January 2004 exercise to 44.60 currently. While not strictly comparable because of change in certain parameters, the increase in scores essentially reflects:

- Considerable improvement in the regulatory front, with timely release of tariff orders, implementation of the orders by most utilities and progress in terms of implementation of EA, 2003 from the regulatory perspective.
- Significant progress in distribution reforms , especially interface metering and energy accounting
- Satisfactory track record of debt servicing of institutional loans subsequent to the restructuring of overdues that has been carried out .

The Boards financial position has also improved with reduction in cash losses in 2003-04 compared to the previous year, largely on the back of increased trading income. However the scores do not reflect the same since in 2002-03, the gap between Average Revenue Realisation (ARR) and Average Cost of Supply (ACS) was very low on account of a very impressive collection performance which included collections from arrears. Also, the scores against State Government parameters have declined because of limited progress in terms of restructuring of the Board and lack of any structural adjustment support provided by the State.

Strengths:

- Significant reduction in cash losses in 2003-04 compared to 2002-03 due to trading operations and incentive payments from CPSUs

- Satisfactory progress against the targets laid out in Electricity Act, 2003 with respect to appointment of Special Courts, designation of Assessing officers , appointment of Ombudsman etc.
- Satisfactory completions of interface metering, though DTR & consumer metering projects have been delayed.
- Modest improvement in most financial parameters as reflected by improving trend in receivables and debt service track record.

Weaknesses:

- Limited progress in terms of restructuring of the Board and drawing up Financial Restructuring plan
- Poor record in terms of 100% electrification of households.
- Adverse trend in AT&C¹ losses, also the gap between ACS and ARR has widened in 2003-04 compared to the previous year.
- In the past, there has been several delays in release of tariff orders. Also the efficiency targets specified are aggressive.
- Poor capital structure of the State utilities as reflected in huge debt burden and negative networth.
- Low PLF of the thermal plants, although it is improving due to trading operations.
- High manpower levels, although productivity parameter has been showing an increasing trend.

The West Bengal Government has implemented most of the targets outlined in the Electricity Act, 2003, in terms of setting up Special Courts, designation of Assessing Officers, constitution of District Level Committees and appointment of members of the Regulatory Commission. The Anti Theft Legislation passed by the West Bengal Government has yielded positive results, although the amount collected from the raids continues to be a insignificant percentage of the ATC losses. The scoring against 'State Government' parameters is however constrained by the delays in the restructuring of WBSEB, lack of any progress in terms of drawing up financial restructuring plan, absence of any subsidy support to the utilities by the State Government despite losses and poor progress in the electrification of households.

After getting itself involved in number of litigation relating to tariff, which delayed the timely issuance of tariff orders, WBERC has released the tariff orders for 2004-05 and the previous years. However, the Commission's approach, as in the past is underpinned by aggressive assumptions on improving various operational parameters, which has adversely affected the financials of the utilities, with one of the utilities continuing to defy the order and seeking legal remedies. The commission is yet to spell out multi year tariff philosophy and further rationalise the tariff slabs. The commission though has played a proactive role with regard to enforcing the performance standards of the utilities and monitoring the consumer grievances. The overall score against the SERC parameter has improved to average level from low levels at the time of last review.

¹ AT&C loss computation excludes collections from trading income, UI charges etc.

There has been no change in scores assigned to the Generation parameters - the power stations belonging to the State Sector in West Bengal continue to operate at low PLFs, average Availability Factor and Auxiliary Consumption and higher manpower levels, even though Manpower productivity parameters are showing an positive trend. However, distribution reforms have been making satisfying progress – interface metering upto 11 kV has been completed with DTR metering in the final stages of completion. Completion of consumer metering has been delayed mainly in agricultural segment. As a result, metered energy sales has improved from the previous year levels to around 68% in 2003-04. Energy audit upto 11 kV feeders has been completed in all the 41 divisions. However, in the absence of 100% DTR metering and consumer metering, scoring against the energy audit has been capped at 2.50. T&D losses have steadily declined from 38% in 2000-01 to 31% in 2003-04. However, ATC losses after showing an improvement to 25% in 2002-03 has increased to 36% in 2003-04 due to relatively lower collection efficiency.

The scores assigned to the Financial Risk parameters reflect the average cost coverage levels, negative net worth, high level of creditors (due to the yet to be resolved valuation of thermal stations transferred to WBPDCCL by WBSEB) and receivables despite a decline seen in the last two years (down from 213 days as on March 03 to 158 days as on March 04). Debt service track record by WBSEB and WBPDCCL has been satisfactory after restructuring of the debt effected in 2002.

As per the provisional results of 2003-04, cash loss of WBSEB has shown a sharp decline in 2003-04 as compared to the previous year mainly due to trading of power, UI income, cash incentives received from CPSUs for adhering to the payment terms and marginal reduction in T&D loss level. However, this gain was moderated by lower collections resulting in adverse movement in the gap between ACS compared to ARR, which widened from 10 paisa / kWh in 2002-03 to 40 paisa / kWh in 2003-04. (84% vis a vis 95% in % terms). As a result, though the State has earned above average scores against the parameter “Progress towards Commercial Viability”, in absolute terms the score has declined compared to 2002-03

Overall MIS and progress in computerisation are satisfactory. The Board has been preparing zonal wise accounts as per the MoU parameters. However, there has been a delay in the finalisation of audited accounts of 2003-04 and provisional accounts for HY 2004-05.

9. UTTAR PRADESH

A score of 42.1 has been assigned to the power sector in Uttar Pradesh based on the data available till December 2004. The distribution of marks against the parameters is as follows:

No.	Parameter	Maximum Score	Score Assigned	
			Jan 2005	Jan 2004
1	State Government Related Parameters	17	8.96	9.50
2	SERC Related Parameters	15	10.25	10.50
3	Business Risk Analysis	27	10.05	8.85
	- Generation	6.0	2.25	2.25
	- T&D	21.0	7.80	6.60
4	Financial Risk Analysis	20.0	7.63	9.75
5	Others	5.0	3.25	2.00
6.	Progress towards commercial Viability	16.0	2.00	1.25
	Total	100.0	42.14	41.85

The scores assigned to the Uttar Pradesh power sector has remained more or less unchanged in the current exercise compared to previous one. This reflects lack of any appreciable improvement against the key operating and commercial parameters. While the scores on the financial parameters have shown a decline mainly because of more stringent scoring norms used to assess coverage of costs from own revenues, scoring on T&D and “Others” has shown some a marginal increase mainly because of some improvement in manpower productivity parameters and better data availability.

Strengths

- Satisfactory progress in terms of reforms and restructuring of the sector, which includes unbundling on functional lines and payment of subsidy as required in terms of the Financial Restructuring Plans. The GoUP has also been providing funding support to the utilities in the form of equity infusion which has resulted in positive networth for the utilities, in spite of high loss levels.
- Effective functioning of the Uttar Pradesh Electricity Regulatory Commission
- Implementation/steady progress in key reform measures such as special courts for anti-theft measures, unbundling of utilities, setting up of consumer grievance forums etc.
- Progress in some distribution measures such as computerised assessment and billing in key cities and satisfactory progress in metering at 11kV levels.

Weaknesses

- Continuing weak financial position, with coverage of costs through revenues at only around 75%, AT&C losses of over 40% and gap between ARR and ACS of close to 88 paisa/ kWh. Further, the situation has shown virtually no improvement since the last rating exercise
- Huge unmetered consumption and billings on flat rate basis.
- Receivables position is showing further deterioration
- Poor PLF in UPRVUNL's generating facilities
- While Adjusted Book Losses had shown a marginal reduction in 2002-03, they have again increased in 2003-04. Inability to meet operational efficiency improvements as prescribed by the Commission is one of the contributory factors. Crucial distribution reform measures like energy audit are yet to show any significant progress

Government of Uttar Pradesh (GoUP) continues to show a strong commitment towards restructuring the sector, which has been manifest in the financial restructuring of the power sector utilities involving a write-off of liabilities to the tune of Rs 19,000 Crores, continued transitory support to the utilities as per the FRP, assuming the entire pension and gratuity liabilities of the erstwhile UPSEB as on January 14, 2000 and securitisation of dues to CPSUs. There has also been regular equity infusion to the utilities, as a result, despite losses, the net worth of the utilities remain positive. While unbundling on functional lines was completed in FY 2003-04, the GoUP has recently invited tenders for dis-investing its stake in all five DISCOMS. The state government (and the UPERC) have also made satisfactory progress in implementing certain key reform measures required in terms of the EA, 2003 such as setting up district level forums, designating assessing officers and setting up of special courts. However, the collections from anti-theft measures continue to remain poor. The state is also lagging behind in rural electrification and addition to generation capacity in the state sector.

The functioning of the UPERC continues to be one of the strong positives of the UP Power Sector. The UPERC has already passed five tariff orders with the last tariff order pertaining to FY 2004-05 being passed in November 2004. The UPERC's tariff orders have been implemented without any significant delays in the past, although the implementation of the 2003-04 faced a moderate delay on account of infrastructural constraint in implementing time of day metering required by the current tariff order. In our opinion, UPERC's tariff philosophy is sound with realistic targets for efficiency improvement and gradual move towards eliminating cross-subsidy such that the viability of the licensee is not threatened, nor are consumers subject to sudden tariff-shocks. The UPERC's tariff orders over the years have addressed issues such as rationalisation of tariff structure and use of merit order despatch principle to reduce power purchase costs. The UPERC has also made progress in implementing key provisions of the EA, 2003. The UPERC has vide the UPERC (Consumer Grievance Redressal Forum & Electricity Ombudsman) Regulations, 2003 provided for setting up of district level forums for redressal of grievances of consumers and for electricity ombudsman. While the state has already set up consumer grievance forum, interviews for selection of ombudsmen are underway. The UPERC has also issued a draft electricity supply code, which among other things defines performance standards for licensees. The UPERC has, apart from concentrating on tariff issues, also focussed on long-term reforms

issues such as efficiency improvement, improvement in quality of services and greater transparency. Towards this end it has issued several directives to the state utilities vide its tariff orders and other rulings, although the utilities compliance with these have been unsatisfactory.

There has been no significant change as far as the generation parameters are concerned with the PLF and availability factor continuing to remain below average. UPPCL also continues to suffer from high T&D losses and poor collection efficiency which has resulted in ATC loss of over 40%. According to the UPERC tariff orders, the problems are compounded by huge unmetered consumption, large billings on assessment basis, limited attempts at recovering arrears and inadequate investment in metering, system improvement and capacity augmentation. However, some progress has been made in metering and energy accounting at 11 KV feeders and in automating metering and billing in some key cities.

The state sector entities are scoring around 8 marks on 20 in the Financial Parameters. The scoring is constrained because of the entities' weak financial performance with coverage of costs through revenues at less than 80%, continuing defaults to institutions and worsening receivables position. Perhaps the only positive is that the pension and gratuity liabilities are fully funded .

UPPCL's overall MIS needs improvement. The Commission, in its tariff orders has expressed itself on the shortcomings in UPPCL's MIS and information retrieval systems, as also its inability to comply with the Commissions directive on several areas such as metering and customer database management. On the positive side however the state entities have provided us with provisional accounts in time and also made some progress in computerising metering and billing in some key cities.

UPPCL's progress towards achieving commercial viability is extremely limited. The deficit between ARR and ACS at 88 paise/ kWh in 2003-04 was a very moderate improvement over the figure of 100 paise/ kWh in 2001-02. In absolute terms, it remains unsustainably high. Similarly, the ratio of ARR/ACS ratio too has shown a very moderate improvement to 63% in 2003-04 as against 55% in 2001-02. Adjusted Book Losses have increased in 2003-04 after showing a marginal improvement in 2002-03.

10. CHATTISGARH

A score of 39.91 has been assigned to the power sector in Chhattisgarh. The distribution of marks against the parameters is as follows:

Sr. No.	Parameter	Maximum Score	Score Assigned
1	State Government Related Parameters	17.00	3.98
2	SERC Related Parameters	15.00	0.50
3	Business Risk Analysis	27.00	
	- Generation	6.00	3.25
	- Transmission & Distribution	21.00	6.30
4	Financial Risk Analysis	20.00	9.38
5	Others	5.00	0.50
6	Progress in attaining Commercial Viability	16.00	16.00
	Total	100.0	39.91

Strengths

- Revenue surplus situation of CSEB
- Surplus generating capacity in relation to demand
- Sound operating performance of CSEB's generating plants; other operational parameters aided by favorable customer mix
- Positive stance of the State Government in attracting power sector investments

Weaknesses

- Non-implementation of Electricity Act 2003 related parameters – unbundling of transmission and trading functions, functional unbundling of utilities, constitution of special courts
- Absence of audited financial statements due to ongoing dispute with MPSEB
- Lack of an established regulatory process in the state – first ARR yet to be filed with CSERC by CSEB
- Low levels of household electrification in the state at about 41%

The State Government

Key Positives

The State Government has been very proactive in inviting investors to set up generation capacity in the state, consistent with their stated policy of making Chhattisgarh a power hub. Captive power plants have also been encouraged as spelt out in the State Energy Policy 2001.

Areas of Improvement

The State Government as a 100% owner of the utilities has not played its envisaged role under the Electricity Act 2003 in terms of facilitating the functional unbundling of utilities, bifurcation of the transmission and trading function, and setting up special courts for anti-theft cases.

Electricity Regulatory Commission

Key Positives

The CSERC has been functional with effect from 1 July 2004 and has brought out regulations with respect to the State Advisory Committee and Conduct of Business. Draft regulations have also been framed with respect to License Regulations, fees and charges, redressal of consumer grievances etc.

Areas of Improvement

The absence of any tariff orders is due to the lack of a tariff filing by CSEB till date. CSEB is expected to file its tariff proposal with CSERC by end January 2005, this aspect would be taken care of.

Operational Parameters (Generation, Transmission and Distribution)

Key Positives

The operational parameters with respect to the generating plants of CSEB show an encouraging performance trend – PLF, availability and auxiliary power consumption levels are above average in relation to the specified benchmarks. Manpower productivity on the T&D side is relatively good in relation to peers. Agricultural load is a small component of overall energy sales and hence the ratio of metered sales to overall energy handled in the system is also favorable leading to a lower AT&C loss level.

Areas of Improvement

Manpower levels in thermal generation are high in relation to the benchmark levels. Metering of interface points at only 63% is low in relation to its peers. Overall quality of the T&D network is also poor with high DTR failure rates and low voltage profile in rural areas. Lack of energy audit at a systemic level is also a significant area of weakness

Finances

Key Positives

Creation of the Master trust and funding of employee pension and gratuity liabilities partially is seen as a positive step. CSEB currently reports a revenue surplus

Areas of Improvement

Absence of audited financial statements remains a major bottleneck with continuing dispute between MPSEB and CSEB on the allocation of past liabilities. Debt servicing of all such unallocated liabilities has been compromised as a consequence.

11. RAJASTHAN

A score of 37.50 has been assigned to the power sector in Rajasthan. The distribution of marks against the various parameters is as follows:

Sr. No.	Parameter	Maximum Score	Score Assigned
1	State Government Related Parameters	17.00	8.52
2	SERC Related Parameters	15.00	8.25
3	Business Risk Analysis		
	- Generation	6.00	4.50
	- Transmission & Distribution	21.00	4.98
4	Financial Risk Analysis	20.00	8.25
5	Others	5.00	3.00
6	Progress in attaining Commercial Viability	16.00	0.00
	Total	100.0	37.50

Strengths

- Strong role of the state government in facilitating capacity addition in generation
- Comfortable operational profile of the generating stations.
- Low level of power & fuel purchase creditors

Weaknesses

- High AT&C losses at over 47%.
- Low revenue cost coverage of 78% and an increasing trend in adjusted book losses from Rs. 1713 crores (2001-02) to Rs. 2167 crores (2003-04).
- Moderately high level of receivables at 93 days of sales with an increasing trend since 2001-02.
- High manpower strength at Transmission & distribution levels.
- A Negative Network of the consolidated power utilities in the state..
- High level of unmetered agricultural consumers along with almost nil DTR metering leading to a weak energy audit system.
- Low household electrification levels compared to neighboring states.

The State Government

Key Positives

Govt. of Rajasthan is making efforts to expand the generation capacity within the state wherein over 450 MW of addition capacity has already been commissioned during the past two years.

Areas of Improvement

Low household electrification of 59% remains an area of concern.

Electricity Regulatory Commission

Key Positives

RERC has come out with regulations such as Guidelines for setting of Forum for redressal of Consumer grievances and Ombudsman as per the Electricity Act 2003 and has brought out strict directives for the distribution companies for improvement in efficiency levels.

Areas of Improvement

The timeliness of the tariff orders is an area of concern. The Distribution tariff for 2004-05 was issued only in December 2004 while there have been significant delays in the previous orders for 2002-03 & 2003-04 too.

Operational Parameters (Generation, Transmission and Distribution)

Key Positives

The generating capacity in the state enjoys a comfortable operational performance profile with performances on parameters such as auxiliary consumption, Plant Load factor and plant availability being very close to the normative levels. Further, the manpower levels on the generation side are relatively low with Hydel having 1.67 employees per MW and thermal having 1.15 employees per MW.

Areas of Improvement

The AT&C Losses continue to be at high levels (47.82% for the entire state) and there is a need to improve metering as the units billed on metered basis form only about 45% of the total power input into the state.

The power sector has a high manpower strength, especially in the T&D sector where there are roughly 8 employees per '000 customers.

There is a need to improve the T&D infrastructure appreciably as the transformer distribution failure rates are at a high level of 14.29% and there are large scale interruptions and outages along with load shedding especially in the rural areas. The state is yet to achieve 100% interface metering with only around 89% of the 11KV feeders being metered. Further, the Discoms need to step up their efforts to have strong energy audit system and there is an urgent need to take up complete Distribution transformer metering, consumer indexing and consumer metering.

Finances

Key Positives

The creditors of purchase of power and fuel are at a low level of 24 days of the total fuel and power purchases. Also, the servicing of the pension liabilities is being taken care of by two trusts which are being adequately funded based on actuarial valuation.

Areas of Improvement

The cash loss levels for Discoms and Transco together have increased from Rs. 1713 crores (2001-02) to Rs. 2167 crores (2003-04). The revenue cost coverage remains at a low level of 77.8%. The power sector debt levels have also increased substantially and there is a significant quantum of subsidy receivable from the state govt., which once taken out leads to a negative networth for the state utilities as a whole. Further, the receivable levels for the three DISCOMs have increased to 93 days of annual sales in 2003-04 from 81 days in 2001-02.

12. MAHARASHTRA

A score of 37.25 has been assigned to the power sector in Maharashtra. The distribution of marks against the parameters is as follows:

Sr. No.	Parameter	Maximum Score	Score Assigned
1	State Government Related Parameters	17.00	2.75
2	SERC Related Parameters	15.00	7.75
3	Business Risk Analysis		
	- Generation	6.00	5.00
	- Transmission & Distribution	21.00	5.70
4	Financial Risk Analysis	20.00	8.75
5	Others	5.00	3.50
6	Progress in attaining Commercial Viability	16.00	3.80
	Total	100.0	37.25

Strengths

- High cost coverage of operating costs and interest
- Low gearing of the utility
- Sound operational performance of plants
- Inter-face metering has been completed (98%)

Weaknesses

- Free power to agriculture consumers expected to impact commercial viability
- Accumulated financial losses of Rs. 1104 crores as at March 31, 2004
- Limited financial support from Government of Maharashtra (GoM)
- Regulatory process needs to be strengthened in terms of timely filing for meeting revenue gap (either through subsidy or tariff hike)
- Regulation should adopt multi-year framework for tariff setting
- Energy audit needs to be adopted on a continuous basis
- Aggregate Technical and Commercial losses at 38% on the higher side
- Terminal benefits (gratuity liability) are not quantified and are being met as part of revenue expense.

The State Government

Key Positives

Government of Maharashtra (GoM) has been providing subsidy (for free power to agriculture consumers) to MSEB prior to issue of bills to agriculture consumers, which is as per regulatory commission's order.

Areas of Improvement

GoM has provided limited financial support to MSEB for meeting its losses. A Financial Restructuring Plan (FRP) for providing financial support till turnaround of MSEB has not been formulated. In general, the subsidy payment track record of GoM is a cause for concern. The subsidy payments in the past three years have been made through adjustments against the dues (electricity duty) of MSEB to GoM. There has been a delay in the appointments to the commission and the Chairman's position is vacant since September 2004. Further, there has been no addition to the generation capacity either by MSEB or from the private sector in the last few years. This is a cause for concern in the face of mounting demand supply deficits in the state power sector.

Electricity Regulatory Commission

Key Positives

Maharashtra Electricity Regulatory Commission (MERC) has issued three tariff orders till date and the orders have been implemented. The commission has issued these orders after detailed discussions with all the stakeholders. A conscious approach has been taken towards reducing the number of slabs across customer categories and also in having a time of day metering tariff for High Tension (HT) consumers. The commission has reduced the cross-subsidy across consumer categories. The tariff order includes instructions to MSEB to follow merit order principles for purchase of power. In addition, the commission has increased the fixed charge recovery from the tariff has been increased to 40% in 2003-04 from 35% earlier. The differential between peak and off-peak tariff has been increased and MSEB has been directed to install Time of Day (ToD) meters. The commission has issued orders for setting up of consumer grievance forum and appointment of Ombudsman.

Areas of Improvement

MERC has issued tariff orders for the financial year 2000-01 in May 2000, for the financial year 2001-02 in January 2002, for the financial year 2003-04 in December 2003. There has been a significant delay in filing of tariff application and the subsequent issue of tariff orders. The timeliness of filing tariff application by MSEB and thereby, issue of tariff orders by MERC needs to be improved so that MSEB is not exposed to the risk of non-recovery of costs. Further, a long-term tariff framework needs to be evolved for improving the financial health of MSEB. The commission is yet to issue an order on performance standards for licensees.

Operational Parameters (Generation, Transmission and Distribution)

Key Positives

The performance of the thermal plants of MSEB has been satisfactory, demonstrated by high capacity utilization of its plants. The auxiliary consumption of the plants is within the limits prescribed for thermal plants. The metering level at the cross-over points and interface points is quite high and 2983 interface points out of 3053 have been metered. MSEB has been conducting energy accounting at division level, MIDC areas and express feeders.

Areas of Improvement

The metering of consumers needs to be done at an aggressive pace, as this would help in a better estimation of the system losses. The metered units are at 48% of the units input in the system. This would also help in reducing the aggregate technical and commercial losses (39% in 2003-04), which is an area of concern. MSEB needs to invest substantially in improving the transmission and distribution network, as indicated by the distribution transformer failure rate (15% in 2003-04) and the number of feeder interruptions. The Energy Audit needs to be completed for the entire system and not in a selective manner as is being done presently.

Finances

Key Positives

MSEB's financials are fairly strong characterized by low gearing (excluding State Government loans) and complete coverage of interest & operational costs. The cash collection is also impressive with cash collected being 89% of the costs incurred in 2003-04. MSEB has been able to reduce its adjusted book losses in 2003-04 when compared to 2001-02.

Areas of Improvement

GoM's free power policy to agriculture consumers is expected to impact the commercial viability of the entity. MSEB has accumulated losses in the past few years and the accumulated losses are at Rs. 1104 crores as at March 31, 2004. Further, adjusted book losses have reduced in 2003-04, this has been off-set by the huge pile-up of receivables, which has shown an increasing trend (250 days of sales in 2003-04 compared to 2001-02). The majority of the receivables are from the state government bodies. The collection efficiency needs to be improved substantially for improving the financial health of MSEB. In addition, there is a significant delay in payments for fuel and power purchase (97 days), which needs improvement.

13. PUNJAB

A score of 36.82 has been assigned to the power sector in Punjab. The distribution of marks against the various parameters is as follows:

Sr. No.	Parameter	Maximum Score	Score Assigned
1	State Government Related Parameters	17.00	3.54
2	SERC Related Parameters	15.00	5.00
3	Business Risk Analysis		
	- Generation	6.00	4.50
	- Transmission & Distribution	21.00	9.10
4	Financial Risk Analysis	20.00	5.13
5	Others	5.00	0.25
6	Progress in attaining Commercial Viability	16.00	9.30
	Total	100.0	36.82

Strengths

- Household electrification at 93% is a distinct strength
- Trend in commercial viability parameters in relation to base year performance in 2001-02; PSEB has reported profit after tax of Rs 174 crores in 2003-04
- Achievement of 100% Interface metering
- Moderate proportion (53%) of energy being billed on a metered basis in relation to the total energy handled in 2003-04
- Sound operating performance of generation plants in terms of PLF and auxiliary power consumption

Weaknesses

- Large component of subsidy support from Government of Punjab (GoP) is met through interest set-offs on state government loans and not in cash
- Lack of timeliness in filing of tariff proposals is an area of concern
- Energy audit at a systemic level is at a very preliminary stage
- Aggregate Technical and Commercial losses at 26.6% is on the higher side
- Unfunded pension liabilities which have not been quantified on an actuarial basis
- Large quantum of defaults on state government and external loans
- High manpower base in the power sector despite efforts to manage the same

The State Government

Key Positives

Household electrification levels of 93% is a distinct strength in the Punjab power sector. GoP has also taken initiatives as per its notification in April 2001 to ensure that PSERC has been fully functional with 3 members effective 18 April 2001. All positions are currently staffed.

Areas of Improvement

Subsidy payments remain an area of weakness due to the non-cash nature of adjustment and strains the liquidity position of PSEB. A healthier means of subsidy payment would be to pay cash to PSEB on a monthly basis and permit interest payments on GoP loans separately depending on the liquidity position of the utility. External stakeholders would get preferential servicing of their financial obligations while the GoP as the owner and “lender of last resort” would adopt a more benign stance towards servicing of its own liabilities by PSEB. GoP has also been lacking in its identified role under the Electricity Act by way of constituting special courts for theft cases, designation of assessing officers, constituting district level committees etc, formulation of an FRP and unbundling of utilities. Generation capacity too has stagnant in the state over the last two years.

Electricity Regulatory Commission

Key Positives

The tariff order discusses various cross-subsidy definitions within the ambit of the Electricity Act. Reduction in tariffs has been notified across all categories of customers. There is a larger reduction for subsidizing categories (railway traction @10%) as against subsidized categories (domestic, AP sets @3%). Pros and cons of implementing Time-of-Day metering have been considered before deciding against the same.

Areas of Improvement

Timeliness of tariff orders has been an area of concern in the Punjab power sector. While PSERC's tariff order for 2004-05 has been implemented, PSEB is likely to file a petition against the tariff order, which is seen to be inimical to its interests by way of disallowance of certain cost components and a reduction of tariffs across all consumer categories. PSEB's track record on compliance of regulatory directives is not very encouraging with respect to the metering plan for consumers, energy audit and loss reduction measures in addition to reducing employee costs. These aspects have been adversely commented upon in the latest tariff order by PSERC.

Operational Parameters (Generation, Transmission and Distribution)

Key Positives

The achievement of 100% interface metering across 6296 interface points is a positive. Auxiliary power consumption at 5.52% is lower than normative levels. PLF of thermal generation is also above average at about 76%. Moderate proportion (53%) of energy is being billed on a metered basis in relation to the total energy handled in 2003-04

Areas of Improvement

Manpower levels are high both in the generation and transmission & distribution function. DTR failure rates are also high at 11.5% in 2003-04 and effectively lead to a lower quality of supply at the consumer end. Energy audit at a systemic level is at a very preliminary stage and can be significantly expanded. ATC losses at 26.6% though relatively better in comparison to some of the peer utilities, is still high in absolute terms.

Finances

Key Positives

PSEB has reported profit after tax of Rs 174 crores in 2003-04, though it is not seen to be sustainable in future particularly in light of the 2004-05 tariff order wherein certain cost components have been disallowed and tariffs brought down across consumer categories. Cash coverage of costs to the extent of 98.6% is also a distinct positive. In terms of debtor days as at 31 March 2004 (69 days), there is a marginal decline of 5% from base year 2002 levels (72 days).

Areas of Improvement

Debt servicing of both state government and external loans is not happening in a timely fashion. Creditors for power purchase and fuel costs are higher than the acceptable benchmark of 60 days of relevant costs. Pension obligations are not being funded through a Master Trust and are being serviced on a "Pay as you Go" basis

14. HARYANA

A score of 35.16 has been assigned to the power sector in Haryana. The distribution of marks against the parameters is as follows:

Sr. No.	Parameter	Maximum Score	Score Assigned
1	State Government Related Parameters	17.00	9.40
2	SERC Related Parameters	15.00	8.13
3	Business Risk Analysis	27.00	
	- Generation	6.00	3.50
	- Transmission & Distribution	21.00	5.25
4	Financial Risk Analysis	20.00	6.38
5	Others	5.00	2.50
6	Progress in attaining Commercial Viability	16.00	0.00
	Total	100.0	35.16

Strengths

- Thrust on addition of generation capacity within the state.
- Active regulator with several years of regulatory experience even prior to the enactment of the Electricity Act 2003.
- 100% feeder level metering upto 11 KV level.
- Low level of power & fuel purchase creditors

Weaknesses

- High AT&C losses at over 41%.
- Low revenue cost coverage of 73% and an increasing trend in adjusted book losses leading to greater reliance on subsidies.
- High level of receivables at 199 days of sales.
- High manpower strength, both at the generation and T&D levels.
- High gearing at 7.55 times.
- High level of unmetered agricultural consumers along with almost nil DTR metering leading to a weak energy audit system.

The State Government

Key Positives

Govt. of Haryana is making efforts to expand the generation capacity within the state wherein already 250 MW have been added during 2004-05.

Areas of Improvement

Adequate efforts need to be put on recovery of theft related dues since the amount collected remains a very small percentage of the overall AT&C losses. Further, there have been delays in the implementation of various targets of the Electricity Act 2003 such as constitution and functioning of the Special Courts for theft related cases.

SERC**Key Positives**

HERC has come out with regulations as per the Electricity Act 2003 and has brought out strict directives for the distribution companies for improvement in efficiency levels. Further, the regulator has developed strict norms for flat rate agriculture consumption which the licensees have to adhere to for ARR purposes.

Areas of Improvement

HERC's track record of issuing tariff orders is less than timely; the tariff orders for 2001-02 to 2003-04 each took eight months to be issued after the initial tariff filing by the utilities. Further there has been a delay in the process during the current year and the tariff order for 2004-05 is yet to be issued.

Operational Parameters (Generation, Transmission and Distribution)**Key Positives**

100% metering of all the feeders upto 11 KV has been completed. The Plant load factor for the generating plants has improved substantially from 56.6% in 2001-02 to 75.1% in 2003-04. The availability factor of the generating plants has also increased from 69.97 % in 2001 to 83.38% in 2003-04.

Areas of Improvement

The AT&C Losses continue to be at high levels (41.15% for the entire state) and there is a need to improve metering as the units billed on metered basis form only about 42% of the total power input into the state. The Discoms should hasten their efforts in metering agricultural consumers for proper billing and hence improve revenue collections.

The power sector has very high manpower strength. In generation the strength is 3.25 per MW of thermal plants and 8.61 per '000 customers in T&D, both being towards the higher side.

There is a need to improve the T&D infrastructure appreciably as the transformer distribution failure rates are at a high level of 14.82% and there are large scale interruptions and outages along with load shedding especially in the rural areas. The Distribution companies need to step up their

efforts to have strong energy audit system and there is an urgent need to take up complete Distribution transformer metering, consumer indexing and consumer metering.

Financial Risk Analysis

Key Positives

The creditors of purchase of power and fuel are at a low level of 24 days of the total fuel and power purchases. Also, the servicing of the pension liabilities is being taken care of by two trusts which are being adequately funded.

Areas of Improvement

The cash loss levels for Discoms and Transco have increased from Rs. 1479 crores (2001-02) to Rs. 1962 crores (2003-04). The revenue cost coverage remains at a low level of 73.2%. The power sector debt levels have also increased substantially without any corresponding increase in the networth leading to high gearing levels of 7.55 times. Further, there have been overdue interest payments not only to the state govt. but also to commercial banks and the public, though the amount is small.

The receivable levels for the two DISCOMs have increased to 199 days of annual sales in 2003-04 from 163 days in 2001-02. With high collection efficiency on current dues, the increase is attributable to old dues and addition of annual surcharge on the same. The dues should be either recovered or written off to clean the utility books.

15. TRIPURA

A score of 31.7 has been assigned to the power sector in Tripura. This is based on data available till end December 2004.

The distribution of scores against the parameters is as follows:

Nos	Parameter	Score - 2004		Score - 2003	
		Maximum	Assigned	Maximum	Assigned
1	State Government Related Parameters	17	7.6	17	7.6
2	SERC Related Parameters	15	0	13	-2.5
3	Business Risk Analysis	27		27	
	- Generation	6	1.5	6	1.5
	- Transmission & Distribution	21	6	21	1
4	Financial Risk Analysis	20	8	23	4
5	Others	5	1	5	1
6	Progress in attaining commercial viability	16	7.6	15	1.3
	Total	100	31.7	100	13.9

The scores assigned to the power sector in Tripura has shown a significant improvement from 13.9 assigned during the last rating exercise, to 31.7 in the current exercise. The increase in scores reflects the progress made by the Government in terms of reforming the sector, which includes corporatisation of the Department, setting up an SERC and initiating some other steps required under the EA (2003). The scores also reflect the significant increase in the financial position of the Department, driven primarily by a steep increase in trading income, the sustainability of the same, however, remains to be seen. The scores against T&D parameters have also improved on account of completion of metering till the 11 kV level, and commencement of energy accounting at 11kV feeder level..

Strengths

- Considerable progress made in initiating reforms in the state power sector. Tripura has been the first Power Department in the North East which has corporatised the Department, set up an SERC which is likely to issue the first tariff order shortly, and undertaken some other steps required under Electricity Act, 2003 (e.g. formation of District Level Committees)
- Initiation of Distribution reforms, with completion of metering at 11 kV level and commencement of Energy Accounting at 11 kV feeder level.
- Appreciable improvement in cash collections during 2003-04 to Rs 1,218 million from Rs 597 million in the previous year, primarily due to trading income. As a result, coverage of costs from revenues has increased from 43% in FY03 to 76% in FY04. The gap between

ARR and ACS has also reduced considerably. However sustainability of the trading income remains to be seen

Weaknesses

- Considerable more ground to be covered in terms of restructuring the Department, drawing up Financial Restructuring Plan and other initiatives required in terms of the Electricity Act, 2003
- Despite tariff hikes, Tripura's electricity tariffs is only marginally higher than cost of power purchased
- AT&C losses, despite decline, continue to be high
- Significant numbers of consumer meters are defective and need to be replaced. In the absence of working meters at the consumer end, complete energy audit cannot be undertaken till the consumer level. As a result, billing figures are estimated and it also becomes difficult to track power theft.
- The Department suffers from poor MIS as the functions of the Department are not centralised and there is absence of IT in billing and meter reading.

The Tripura Government has taken steps to achieve the targets laid down in 'The Electricity Act 2003'. The State has formed 'Tripura State Electricity Corporation Ltd.' on 10th June 2004 under Companies Act 1956. The State level Distribution Reforms Committee has been formed on 17th November 2003 and the District Level Reforms Committee has been formed on 4th November 2003. The respective SE(E) has been declared the Chief Executive Officer (CEO) in each of the districts. A one member Tripura Electricity Regulatory Commission (TERC) has been constituted and started functioning since 31st May 2004. The TERC has initiated the filing of tariff petition and the new tariff order is expected soon. Vigilance squads have been set up to check power theft. The Department is now planning to undertake financial reforms, and is in the process of recommending a suitable financial restructuring plan.

The Power Department has started energy accounting across the state since April 2004. The energy accounting is now restricted till the 11 KV outgoing feeders. The department has now started implementation of computerised energy billing in Agartala Municipal Council Area. Further, the department has completed procurement of computers for data logging at 16 EHV substations.

The power stations belonging to the State Sector in Tripura are operating at low PLFs. Manpower break-up for generation and distribution is not available. Billing figures are also not available. While there is 100% metering till the 11 KV level, significant progress needs to be made for consumer metering. Thus, in 2004, out of a total of 288,487 consumers, only 161,928 consumers (56% of consumers) had functional meter. Nevertheless, improvements in cash collections have reduced ATC losses to below 40%.

The Power Department continues to score low on most financial parameters on account of gap between cash collections and total expenditure. However, the Department has made commendable progress in reducing losses, aided by a steep increase in power trading and partly

because of the sharp tariff hike in 2003. The sale of power outside the state has increased to Rs. 350 million in 2003-04, compared to Rs. 53 million in the previous year. Revenue receipts have therefore increased from Rs. 596.7 million in 2002-03 to Rs. 1217.8 million in 2003-04.

The gap between Average Revenue Realisation (ARR) and Average Cost of Supply (ACS) has come down to below 50 paisa/ kWh in 2003-04 vis-à-vis Rs 1.25/ kWh in the previous year. The State has also been prompt in repaying its interest and principal repayment obligations against which it scores favourably.

In all, the State has made significant progress since the last rating exercise, which is reflected in the increase in score by over 13 points. While the reforms measure need to be continued, there is a pressing need for computerisation, since manual data entry and retrieval has been resulting in considerable delay in data accumulation, along with data inconsistency.

16. KERALA

A score of 31.48 has been assigned to the power sector in Kerala. The distribution of marks against the parameters is as follows:

Sr. No.	Parameter	Maximum Score	Score Assigned
1	State Government Related Parameters	17.00	3.75
2	SERC Related Parameters	15.00	4.25
3	Business Risk Analysis	27.00	13.38
	- Generation	6.00	1.25
	- Transmission & Distribution	21.00	12.13
4	Financial Risk Analysis	20.00	5.00
5	Others	5.00	3.50
6	Progress in attaining Commercial Viability	16.00	1.60
	Total	100.0	31.48

Strengths

- High level of household electrification (85%)
- Significant metering completed in the state (72% of units input in the system)
- Inter-face metering has been completed
- Low distribution transformer failure rate (4.3% in 2003-04)

Weaknesses

- Appointments to the commission should be timely (presently only Chairman and one member)
- Significant capacity addition has not taken place
- Regulatory process needs to be strengthened in terms of timely filing for meeting revenue gap (either through subsidy or tariff hike)
- Regulation should adopt multi-year framework for tariff setting
- Significant accumulated financial losses (Rs. 3982 crores as at March 31, 2004), networth is negative
- Limited financial support from Government of Kerala (GoK)
- Energy audit needs to be adopted on a continuous basis
- Aggregate Technical and Commercial losses at 33% on the higher side
- Pension liabilities not quantified and are being met as part of revenue expense.

The State Government:**Key positives**

Government of Kerala (GoK) initiatives has been instrumental in the state achieving household electrification of 85%. GoK has provided subsidy support for the financial year 2003-04, which is as per the commission's order.

Areas of Improvement:

GoK has provided limited transitional support to KEB. KEB has accumulated significant losses of Rs. 3982 crores as at March 31, 2004. The government has not formulated any Financial Restructuring Plan (FRP) for active support to the power sector. The continuing deficits are a cause for concern for the state and utility which needs to be addressed either through tariff hikes or subsidy payments. GoK needs to take a more active role in pushing across reforms in the state. In addition, the appointment of a member to the commission is yet to be done. GoK has also to make appointments of assessing officers (under section 126 of the Electricity Act 2003) and also constitute a co-ordination forum for improving the power system in the state (under section 166 of the Electricity Act 2003).

Electricity Regulatory Commission**Key Positives:**

GoK has constituted SERC in November 2002 and the commission has issued two orders till date. These orders have been implemented. KERC has taken significant initiatives in introducing merit order dispatch in the purchase of power. It has issued a number of directives to the utility for improving collection efficiency, computerization of billing etc.

Areas of improvement

The commission has issued two tariff orders; however, the tariffs in the state have not been revised. The revenue gap for 2003-04 has been met through subsidy but the final decision on meeting the gap for 2004-05 is yet to be arrived at. In addition, the commission has not attempted reducing cross-subsidy between customer categories and also rationalization of tariff slabs pending finalization of cost of service study. The commission has started this study but is yet to finalize its findings.

Operational Performance (Generation, Transmission and Distribution)**Key Positives:**

KEB has metered a significant amount of units (72%) input into the system. In fact, the metering is almost 100% for the state. The distribution transformer failure is low at 4.3% for 2003-04. In

addition, KEB has completely metering the feeders at the interface level. The auxiliary power consumption of both its hydel and thermal generation stations are lower than normative levels.

Areas of Improvement:

The Aggregate Technical & Commercial (AT&C) losses are high at 33% in FY04. KEB is yet to complete energy audit of the state. This is an area of concern as the audit would bring out the areas of improvement in terms of reducing losses.

Financial Risk**Key Positives**

The revenue from sale of power covered around 84% of the operating expenses and interest cost in 2003-04. KEB has been regular in its commercial debt obligations. GoK's order to net off Rs. 2414 Crores in FY03 will help KEB in strengthening its balance sheet. However, this is yet to reflect in the balance sheet.

Areas of Improvement:

KEB's deficits (adjusted book losses) have increased in 2003-04 compared to 2001-02. As a result, KEB has accumulated losses and the total accumulated losses as at March 31, 2004 is Rs. 3982 crores. In fact, the difference between the average revenue realized and cost of has increased in 2004. The accumulated losses result in a negative networth of the KEB. The receivables have also increased to 143 days in 2004 compared to 140 days in 2002. The receivables have been mainly on account of poor collections from state government departments. In addition, KEB has not made significant cash provisions for meeting the future pension and gratuity liabilities. This expense is expected to increase, which will have an impact on the financials of KEB.

17. ASSAM

A score of 27.32 has been assigned to the power sector in Assam based on the information available till December 2004. The distribution of marks against the parameters is as follows:

No.	Parameter	Maximum Score	Score – January Scores- January	
			2005	2004
1	State Government Related Parameters	17	6.42	5.93
2	SERC Related Parameters	15	7.9	4.00
3	Business Risk Analysis	27	5.5	6.50
	- Generation	6.0	0.5	1.00
	- T&D	21.0	5.0	5.5
4	Financial Risk Analysis	20.0	3.0	6.5
5	Others	5.0	2.0	2.0
	Progress in attaining Commercial			
6	Viability	16.0	2.0	2.5
	Total	100.0	27.32	27.43

The score assigned to the Assam power sector has remained at almost the same level as in the earlier (i.e. January 2004) rating exercise, although distribution of the score assigned against the individual parameters has changed. The key changes observed to earlier are:

- The Government of Assam's (GoA) reform efforts that were in the initial stages during the exercise conducted in January 2004 has now achieved considerable progress – however this is not getting reflected in current score as the final milestones of reforms, based on which the scores are being assigned, are still in the process of being achieved. The full impact, we feel, will be clear in the next rating exercise.
- The score against SERC parameter have shown significant improvement on account of timely implementation of tariff orders. Further the state has also scored against the new parameter introduced - implementation of the EA 2003 from the regulatory perspective.
- The score on the financial parameter has declined because of inadequate improvement in debtor levels and also on account of more stringent norms used in scoring against 'coverage of costs from own revenues'

Strengths

- Substantive steps are being taken by the Government of Assam in terms of reforms and restructuring the sector, aided by financial assistance from Asian Development Bank (ADB) under its Assam State Power Sector Development and Rural Electrification programmes
- SERC has issued two tariff orders which have been already implemented
- Operating losses, on accrual basis, for 2002-03 and 2003-04 are significantly lower than previous years with the Average Cost of Supply (ACS) showing a reducing trend. Coverage of costs through revenues has increased from 51% in 2001-02 to 70% in 2003-04.

Weaknesses

- Continuing weak financial position with gap between Average Revenue Realisation (ARR) and Average Cost of Supply (ACS) at over Rs 1.9 / kWh. The reduction in losses on an accrual basis is being largely offset by a decline in collection efficiency with receivables going up from Rs 3.44 billion as on 31st March 2002 to Rs 4.11 billion as on 31st March 2004.
- As result of the weak financial position, the State continues to be in default to institutions. However the debt restructuring is currently underway
- Inadequate and high cost of own generation
- Weak transmission and distribution network, which combined with the decline in collections also gets reflected in an increase in ATC losses from a level of around 40% in the previous years to over 50% in 2003-04.
- Poor track record in electrification of households and addition to generation capacity in the state sector

The power sector reforms in the state of Assam is now progressing at a much faster pace than witnessed during the last assessment. The GoA has committed itself to the Financial Restructuring Plan as part of the ADB led reforms programme (Assam Power Sector Development and Development of Rural Electrification) and is more or less meeting its financial commitments. The unbundling of the Board along functional lines is already underway and is expected to be completed by May 2005. The proposed unbundling will create five entities – a generating company, a transmission utility and three distribution companies. In addition, the ASEB will continue to function as a holding entity for all the successor companies and will undertake the residual functions like power trading, co-ordination and facilitation of programs like RE works. The first transfer scheme for the same has already been notified in December 2004 and the final transfer scheme is to take effect by 31st May 2005. The reform process is being aided by ADB as part of its Assam Power Sector Development Program and Development of Rural Electrification. Till date, ADB has sanctioned two lines of credit - one of USD 150 million for funding the financial reforms in the state power sector and another of USD 100 million to fund investments in T&D infrastructure, billing systems, RE works etc. The disbursement against the same is subject to certain pre conditions, compliance with which is being monitored on a regular basis (the first tranche of USD 90 million has already been disbursed). GoA has already provided for Rs 8.06 billion in its budget for 2004-05 for funding power sector reforms (including

Rs 0.53 billion through supplementary demand). GoA has also notified the setting up of special courts, appointment of assessing officers in each state and setting up of district level committees as per the provisions of Electricity Act 2003 and these measures are in the process of being implemented.

The State Electricity Regulatory Commission, which was set up in August 2001, is currently a one member Commission, although the commission may have two additional members in the current financial year itself. No separate fund has been set up by the GoA for meeting the Commission's expenses although adequate budgetary provision is being made for the same. SERC has issued tariff orders till 2004-05, although the last order (for 2003-04 and 2004-05 combined) was issued with some delay. The tariff order has sought to rationalise the fixed charges and promote merit order despatch. However, SERC is yet to notify any multi-year tariff policy due to the lack of sufficient data on many technical parameters. The cross subsidy issue has also been left untouched with the hope that Board's efficiency improvements and natural load growth will address the same in coming years. The Commission has already issued three guidelines relating to Conduct of Business Regulations, Redressal of Consumer Grievances and performance standards of licenses (the last one has been submitted to the government who is yet to notify the same). However, an Ombudsman is yet to be appointed.

There has been no significant change in the area of generation from that witnessed during the last assessment, with ASEB not operating either the 240 MW coal-based Bongaigaon thermal power station (BTPS) or the 60 MW Chandrapur thermal power station (CTPS) in 2003-04. Only the gas-based plants at Lakwa (LTPS) and Namrup (NTPS) are currently generating power, which too is constrained by the inadequate supply of gas (in LTPS) and the condition of equipment (in NTPS). The technical and commercial losses in ASEB T&D system continue to remain high at around 50%. The 100% metering at the 11KV feeder level which is expected to be complete by end of January 2005, and subsequent feeder-wise energy audit as well as the initiatives to computerise billing in major towns is expected to help the Board to curtail the losses in near future. In order to improve the quality of power supplied, the Board is also focussing on improving its sub-transmission and distribution network. As mentioned earlier, a major part of the USD 100 million loan from ADB is proposed to be earmarked for the T&D projects.

Although the existing financial health of ASEB remains weak, in 2003-04 ASEB has largely sustained the improved performance exhibited during 2002-03, primarily due to 19% growth in revenue on the back of increase in average realisations and higher sale volumes. The power purchase costs in 2003-04, although higher than 2002-03, is still significantly lower than the 2001-02 levels. The operating losses have remained manageable (although it increased from Rs 2.9 billion in 2002-03 to Rs 3.2 billion, it is still significantly lower than Rs 5.6 billion recorded in 2001-02) and with financial assistance being provided by the GoA, ASEB has been largely able to restructure the existing debts, where it is currently in default. However, the improved performance has been largely negated by poor collection performance, which has resulted in an increase in AT&C losses to over 50%, and further widening of the gap between ARR and ACS, from Rs 1.59 in 2002-03 to Rs 1.94 in 2002-03. ICRA expects the same trend to be arrested with the unbundling of the ASEB, the completion of 100% metering programme at 11 kV level, progress in consumer metering and commencement of energy audit.

Overall, the information systems still need further improvement – computerised billing is yet to be implemented in a large scale, although the work on the same is currently underway; the availability of information has also not improved over last year.

18. MEGHALAYA

A score of 26.72 has been assigned to the power sector in Meghalaya based on the data available till December 2004. The distribution of marks against the parameters is as follows:

No.	Parameter	Maximum Score	Scores- January	
			2005	2004
1	State Government Related Parameters	17	3.17	4.40
2	SERC Related Parameters	15	0.0	-2.50
3	Business Risk Analysis	27	11.5	9.38
	- Generation	6.0	2.0	2.00
	- T&D	21.0	9.5	7.38
4	Financial Risk Analysis	20.0	3.75	6.25
5	Others	5.0	2.5	2.00
6.	Progress towards commercial Viability	16.0	5.8	3.50
	Total	100.0	26.72	23.03

The score assigned to the Meghalaya power sector has improved marginally compared to the scores assigned in the rating exercise carried out in January 2004. While not strictly comparable because of change in certain parameters, the increase in score essentially reflects:

- The state government's decision to set up an SERC during the current year
- Completion of the 100% metering programme upto the 11 KV feeder level by MeSEB
- Significant improvement in the adjusted book losses in 2003-04 on account of a one-time settlement of dues with LIC

These improvements have however been offset to some extent by the slow progress on the implementation of EA 2003 and on the reforms programme till date -although the same is expected to gain momentum in the next financial year- and increase in ATC losses in 2003-04 as compared to 2002-03. More a more stringent scoring framework used for assessing the 'coverage of costs from own revenues' has also impacted the score.

Strengths

- Availability of cheap hydel generation
- Regular hike in tariff rates and declining trend of receivables , which has resulted in a marginal reduction in the gap between ARR (average revenue realisation) and ACS (Average cost of supply)
- Relatively low AT&C losses
- Computerised billing systems for a major portion of the urban consumers

Weaknesses

- Sub-optimal performance in own generation
- The unremunerative rural electrification works undertaken by the Board and the inadequate subsidy receipts from the state government have strained the Board's cashflows, leading it to default on all its debt obligations.
- The tariff hikes, although effected at regular intervals in the recent past, have remained inadequate to cover the entire cost of supply including the interest cost.
- Significant progress on power sector reforms yet to be achieved.

The power sector reforms in the state of Meghalaya is expected to gain momentum after Power Finance Corporation (PFC), the consultants appointed for chalking out the reform roadmap, submit their final recommendations (expected by the end of the current financial year). Till date, the achievements in this area have been the decision to form a one member Electricity Regulatory Commission (which is expected to be functional by the end of 2004-05), constitution of a State Level Distribution Reform committee, conversion of a major part of the principal portion of the State government loan outstanding to SEB to equity and securitisation of the dues to CPSU. The SEB too continues to perform well in certain areas like implementing tariff hikes at regular intervals, maintaining adequate quality of the transmission system and having satisfactory manpower productivity levels in generation. However, progress achieved on distribution reforms is limited as on date, although we expect the same to proceed faster in the next financial year.

MeSEB's generation performance has been affected in the past two years (ie 2002-03 and 2003-04) both due to low rainfall and on account of long machinery outages in some stations. Despite having the advantage of having substantial hydel generation facilities, MeSEB had to rely on costlier central sector power to meet the power demand within the state. The score on generation, therefore, remains low at 33% of the total marks. The score on T&D parameters have shown a decline on account of an increase in AT&C losses despite the State's well developed revenue collection systems, with computerised billing systems for all industrial consumers and for consumers in the major towns of Shillong and Jowai (covering nearly 70-80% of the total demand of power within the State). Although the quality of the existing T&D network is adequate in terms of the low failure rate of distribution transformer and over 99% availability of the transmission network, the network needs to be augmented to meet the full demand of energy within the state. MeSEB is currently undertaking strengthening and expansion of the transmission and distribution network within the state to address the same. Additionally, despite the absence of

a functional Electricity Regulatory Commission, MeSEB has increased its power tariff at regular intervals in the past with the last tariff hike being implemented in November 2003. This coupled with a reduction in interest burden on account of conversion of state government loans into equity and one time settlement of LIC loan, helped MeSEB to mitigate the increase in power purchase costs and reduce the gap between ARR (average revenue realisation) and ACS (average cost of supply). The gap between ARR and ACS declined from 77 paise in 2002-03 to 63 paise in 2003-04. MeSEB reported adjusted book profits in 2003-04 largely on account of one time loan settlement with LIC. However MeSEB continues to incur substantial operational losses and has been defaulting on some of its loan obligations, although it is currently taking the initiative to restructure the debt.

19. MADHYA PRADESH

A score of 22.79 has been assigned to the power sector in Madhya Pradesh. The distribution of marks against the parameters is as follows:

Sr. No.	Parameter	Maximum Score	Score Assigned
1	State Government Related Parameters	17.00	5.54
2	SERC Related Parameters	15.00	9.25
3	Business Risk Analysis		
	- Generation	6.00	4.25
	- Transmission & Distribution	21.00	3.25
4	Financial Risk Analysis	20.00	0.00
5	Others	5.00	0.50
6	Progress in attaining Commercial Viability	16.00	0.00
	Total	100.0	22.79

Strengths

- Sound operating performance of MPSEB's generating plants
- Efforts of the MPERC to push through efficiency improvements and bring down cross-subsidy levels
- Established regulatory process in the state - 3 tariff orders passed by the MPERC
- Proactive stance of the state government in increasing hydel generation capacity

Weaknesses

- Absence of audited financial statements due to ongoing dispute with CSEB
- Low level of subsidy payments in cash by the state government at an average level of 45% over the last three years due to their strained financial position
- Low levels of household electrification in the state at about 43%
- Aggregate Technical and Commercial losses at 46% (estimated) on the higher side
- Defaults by MPSEB on state government and external loans

The State Government

Key Positives

The state government has partly implemented some of the aspects as required under the Electricity Act with respect to setting up of 92 special courts as per GoMP notification dated 16 June 2004. MPERC has also been functioning with a full complement of members since May 2003. The state government has also facilitated an increase in state-owned generation capacity by 18% from the base year of 2002.

Areas of Improvement

Formulation of a Financial Restructuring Plan (FRP) is not yet complete and is awaiting State Government approval. Efforts towards maximizing cash collections through implementation of anti-theft measures can also be improved. A scale up in the level of household electrification and the state government's track record of subsidy payments in cash to MPSEB would also lead to a higher score on this parameter.

Electricity Regulatory Commission

Key Positives

The regulatory process is well-established in the state of Madhya Pradesh with three tariff orders having been issued in 2001-02, 2002-03 and most recently in 2004-05. The most recent tariff order quantifies cost-to-serve across various customer categories and attempts to rationalize the tariff structure. The power purchase focus is based on merit order principles; retail tariffs are moving towards a higher fixed cost component consistent with MPSEB's fixed cost structure. MPERC has issued performance standards for transmission and distribution licensees as per the provisions of Electricity Act 2003.

Areas of Improvement

Timeliness of tariff orders remains an area of concern – even the most recent tariff order for 2004-05 has been passed on 10 December 2004, leading to a situation where the benefit of the revised tariffs are not available to MPSEB for the full financial year. The utilities have been able to partially comply with the regulatory directives in past tariff orders.

Operational Parameters (Generation, Transmission and Distribution)

Key Positives

The performance of MPSEB's generating plants continues to be an area of strength. Availability factors have consistently been high, auxiliary power consumption is marginally higher than normative levels, and PLF has been at an average level of 68.8% over the last three years.

Areas of Improvement

Manpower levels in thermal generation at 2.64 per MW, are higher than benchmarks levels.

Finances

Areas of Improvement

Finalization of audited financial statements for past years is a significant area of improvement and is pending a settlement of the dispute with CSEB on allocation of past liabilities. Debt servicing has not been timely and there have been defaults both on State Government and external loans. Creation of a Master Trust is pending despite the actuarial valuation of unfunded pension liabilities.

20. SIKKIM

A score of 19.07 has been assigned to the power sector in Sikkim. The distribution of marks against the parameters is as follows:

Nos	Parameter	Maximum Score	Scores – Jan 2005	Scores- Jan 2004
1	State Government Related Parameters	17	8.34	7.37
2	SERC Related Parameters	15	-2.50	-2.50
3	Business Risk Analysis	27	1.88	2.00
	- Generation	6	0.75	0.50
	- Transmission & Distribution	21	1.13	1.50
4	Financial Risk Analysis	20	5.75	8.00
5	Others	5	1.00	1.00
6	Progress in attaining commercial viability	16	4.60	0.00
	Total	100	19.07	15.87

The scores assigned to the Sikkim power sector have shown a marginal improvement from 15.87 in the January 2004 exercise to 19.07 currently. While not strictly comparable because of change in certain parameters, the increase in scores essentially reflects :

- Progress in attaining commercial viability with decline in the gap between ACS and ARR, largely attributable to trading income,
- Satisfactory budgetary support extended by the Government of Sikkim for meeting the Department's expenses, including debt servicing.

These strengths have been offset by lack of any progress in energy audit and unsustainably high AT&C losses and limited progress in terms of restructuring the sector.

Strengths:

- Improving coverage of costs due to income earned from trading operations
- Satisfactory budgetary support for meeting revenue expenses , including purchase of power from CPSUs.
- Satisfactory track record on debt servicing despite the cash loss in the department
- Availability of cheap hydel power and vast potential for new hydel stations. Due to availability of cheap power and trading income, the gap between ARR and ACS remains modest at 46 paisa
- State to benefit from 12% 'free share' of power from the new hydel stations being set-up by NHPC and IPPs. Once the projects are commissioned, the State will have the scope to further improve on its trading operations.

Weaknesses:

- Slow progress of power sector reforms
- Very high ATC loss (55% in 2003-04) due to rampant theft of power and overdrawal of power in unmetered connections
- Due to subsidised tariff for most segments and high losses, cash coverage of costs, if trading income is excluded, remains low.
- As a result, the financial health of the department is weak .
- Very high manpower levels
- Limited progress in distribution reforms with only 50 % of metering at 11 kV level having been completed. Universal energy audit is also yet to commence.

There has been limited progress in power sector reforms in Sikkim, which has resulted in the department scoring low on the parameters relating to the State Government and SERC. Most of the targets laid out in the Electricity Act, 2003 have not been met with. Implementation of anti-theft measures has been slack. The Government had earlier appointed ASCI, Hyderabad as a consultant to advise it on restructuring of the department and initiation of other power sector reforms. The consultant has since submitted a report which advocates corporatisation of the department to be preceded by financial restructuring. The existing assets and liabilities of the department are to be taken over by Sikkim Power Development Corporation Ltd (SPDCL), a company already in existence. The Government plans to complete this process by March 2005.

There is no SERC in the State as of now. Hence a negative score has been assigned against SERC related parameters. The Government has recently appointed a committee to select the members of the commission, who are expected to be in place by March 2005.

The State has awarded few hydel projects to IPPs from which it would get 12% free share. This is in addition to NHPC project which is expected to commence generation in 2006-07. Consequently, the surplus power scenario is expected to be further strengthened over the medium to long term, and the State can be expected to capitalise on the same through trading.

The scoring assigned to the generation parameters continue to be low on account of the fact that generation is affected by irregular flow of water during both peak and off peak seasons, average auxiliary consumption level , high manpower levels and lack of data regarding availability factor for the generating stations. Similarly, scoring against T&D parameters also continues to be constrained by average quality of T&D network, high ATC losses and adverse manpower productivity parameters. Interface metering project is underway and universal energy audit is expected to be undertaken once it is completed. Consumer metering has been completed upto 88%.

The department is scoring low on all financial parameters on account of unavailability of proforma accounts, cash losses, low coverage of costs through revenues and unfunded pension and gratuity liabilities. Consequently, the department has also scored poorly on progress in attaining commercial viability. However, there has been some improvement in ATC losses (55% in 2003-04 vs 57% in 2002-03) and ARR/ACS coverage (74% in 2003-04 vs 39% in 2002-03).

The improvement in the gap between ARR and ACS is essentially due to trading income. In spite of the cash losses generated by the department, the Government has honoured all the debt service commitments against the department. Improvement in financial performance is critically dependent on further tariff rationalisation, reduction in T&D losses and downsizing of manpower.

Overall MIS continues to be below average. The department does not capture many critical data required for monitoring the operations in a systematic manner. However, it is in the process of putting in place an IT network which should improve the quality of MIS over the short to medium term.

21. UTTARANCHAL

A score of 18.60 has been assigned to the power sector in Uttarakhand. The distribution of marks against the parameters is as follows:

Sr. No.	Parameter	Maximum Score	Score Assigned
1	State Government Related Parameters	17.00	5.90
2	SERC Related Parameters	15.00	6.25
3	Business Risk Analysis	27.00	3.95
	- Generation	6.00	1.00
	- Transmission & Distribution	21.00	2.95
4	Financial Risk Analysis	20.00	2.50
5	Others	5.00	-
6	Progress in attaining Commercial Viability	16.00	-
	Total	100.0	18.60

Strengths

- Regulators has reduced cross-subsidy across customer categories, implemented merit order despatch principles, rationalized tariff slabs etc.
- Inter-face metering has been completed

Weaknesses

- Significant increase in losses in 2004 compared to 2002
- Regulatory process needs to be strengthened in terms of timely filing for meeting revenue gap (either through subsidy or tariff hike)
- Energy audit needs to be adopted on a continuous basis
- Aggregate Technical and Commercial losses at 44% on the higher side
- No significant capacity addition to state
- Terminal benefits are not quantified and are being met as part of revenue expense.

The State Government

Areas of Improvement

The appointments to the regulatory commission need to be done on a timely basis. In addition, transitional support should be provided to the utility as losses have begun to accumulate in the sector. The government needs to formulate a Financial Restructuring Plan (FRP) for providing support in the future. In addition, the government should play an active role in reducing losses in the State.

Electricity Regulatory Commission

Key Positives

Uttaranchal Electricity Regulatory Commission (UERC) has been constituted and has issued its tariff order on September 8, 2003. The commission has attempted to rationalize the tariff and in the process has reduced the HT tariff in the state.

Areas of improvement

UERC has issued tariff order for the financial year 2003-04 in September 2003. The timeliness of filing tariff application by utility and thereby, issue of tariff order by UERC needs to be improved as UPCL is not exposed to the risk of non-recovery of costs. Further, a long-term tariff framework needs to be evolved for improving the financial health of the sector.

Operational Parameters (Generation, Transmission and Distribution)

Key Positives

The performance of the hydel plants of UPCL is impressive with high availability factors. Further, the auxiliary consumption of the hydel plants is within the normative levels.

Areas of Improvement

The aggregate technical and commercial losses need to be reduced substantially, which is an area of concern. UPCL needs to further improve the transmission and distribution network considering the high distribution transformer failure rate. The Energy Audit needs to be completed for the entire system for better estimation of losses in the system.

Finances

Key Positives

UPCL has been regular in its debt servicing to the lenders and has had a cash profit in the years 2001-02 and 2002-03. The coverage of cash costs is quite high at 85% in 2003-04.

Areas of Improvement

The huge pile-up of receivables is a significant area of concern. The collection efficiency needs to be improved substantially for improving the financial health of UPCL.

22. NAGALAND

A score of 15.8 has been assigned to the power sector in Nagaland. This is based on data available till end December 2004.

The distribution of scores against the parameters is as follows:

Nos	Parameter	Maximum Score	Scores- Jan 2005	Scores- Jan 2004
1	State Government Related Parameters	17	6.8	9
2	SERC Related Parameters	15	-2.5	-2.5
3	Business Risk Analysis	27		
	- Generation	6	0	0.25
	- Transmission & Distribution	21	2.25	1.13
4	Financial Risk Analysis	20	7.25	5.25
5	Others	5	1	1
6	Progress in attaining commercial viability	16	1	0
	Total	100	15.8	14.13

There has been no appreciable change in the scores assigned to the Power Sector in Nagaland over the last two rating exercises. There has been marginal increase in scores assigned to the parameters 'Progress in attaining commercial viability' and 'Financial Risk Analysis' because of increase in both cash collections and Non-Plan allocation to the Department resulting in timely servicing of debt obligations and satisfactory payment to CPSUs for power purchase. The increase is however largely offset by limited progress in reforms, inadequate tariff hikes and increase in losses on accrual basis.

Strengths

- Satisfactory Non-Plan allocation to meet the cash deficits of the Electricity Department, reflected in adequate payment to CPSUs for power purchase .
- Appreciable improvement in cash collections during 2003-04
- The Government has enacted an innovative legislation, 'Additional Conditions of Supply of Electricity to Villages, 2002' in December 2002 which seeks to transfer the responsibility of electricity management in the villages to the Village Councils under the Nagaland Communitisation of Public Institutions and Services Act, 2002. The Department has implemented Single Point Metering (SPM) through the village council in 158 villages. This has resulted in an significant improvement in collections in the villages which have been covered under the SPM.

Weaknesses

- Increasing trend in losses despite improvement in cash collections, pointing to the fact that tariff hikes have not kept pace with the cost increases, most notably increase in power purchase cost. The current tariffs were last revised in June 2001.
- Correspondingly high level of ATC Losses , at nearly 65%, and gap between ARR and ACS remains at over Rs 2.40 / kWh
- Absence of a commercial orientation in the way the Department is structured and functions.
- Inadequate progress in reforms , including setting up of SERC
- The 24 ME Likimro HE , commissioned at a cost close to Rs 2 billion is not generating any power, resulting in a complete dependence on purchased power from CPSUs.

The Government of Nagaland has decided to undertake Power Sector Reforms & Restructuring Study under the consultancy of M/s International Management Institute (IMI), New Delhi who are expected to recommend a blue print for the state power sector reforms and restructuring. The milestones achieved have been:

- Amendment of Nagaland Village and Area Council Act (1978) to include power as a mandate for development by village councils
- Enactment of Additional Conditions of Supply and Model Rules (2002) for Village Electricity Management Board (VEMB) for communitisation of electricity
- Commissioning of power sector reforms and restructuring study in April 2003

However, apart from the Single Point Metering scheme as part of the VEMB model for supply of electricity and collection of revenues, progress made in term of reforming the sector or achieving the milestones as envisaged under the Electricity Act, 2003 has been unsatisfactory. A positive aspect of the sector, however, has been the increase in Non-Plan allocation for Power Department from Rs 594 million in 2001-02 to Rs 786.7 million in 2003-04(RE), which has enabled it meet power purchase dues towards CPSUs,

The state continues to score low against Generation as well as T&D parameters on account of low PLFs, inadequate progress in areas like 100% metering and energy audit, high level of ATC losses and non-availability of data against some parameters.

Despite improvements in collections from Rs 210 million in 2002-03 to Rs 276.8 million in 2003-04, the Department's cash collections meet less than 30% of its total revenue expenditure, implying a high level of dependence on State Governments budgetary support to meet its expenses. AT&C Losses, remain at a very high level at 63%, though they have declined from the levels of above 70% seen in the previous year. Availability of cheap power from the 24 MW Hydel Power plant at Likimro commissioned in February 2002 could have helped in reducing the power purchase cost and improved the financials to an extent, but the unit has not been operational since September, 2002. The tariffs were last revised in June 2001, and the tariffs are clearly inadequate to meet the expenses. The department also claims that the increase in budgetary allocation has been used primarily to meet payment dues to CPSUs, and because of inadequacy of funds, it is understaffed, leading to poor maintenance of the T&D network and generating units. Due to a ban on appointment of Work Charged staff since 1995, vacancies caused due to death and retirement is also no being filled up, further affecting the O&M work in

the Department. This is despite the fact that the State Power Sector's staffing per 1,000 consumers at over 17 is above the national average.

With gap between ARR and ACS at over Rs 2.40 per unit despite the improvements, progress towards attaining commercial viability will be critically dependent on the extension of the Single Point Metering scheme to cover more villages and sustenance of the success of decentralised model of revenue management , once it extends to all villages and urban centres.

Overall, there is a pressing need for "capacity building" in the Electricity Department and strengthening its finance and commercial functions, including book keeping, billing, metering and collections.

23. ORISSA

A score of 13.63 has been assigned to the power sector in Orissa. The distribution of marks against the parameters is as follows:

Sr. No.	Parameter	Maximum Score	Score Assigned
1	State Government Related Parameters	17.00	2.00
2	SERC Related Parameters	15.00	5.63
3	Business Risk Analysis		
	- Generation	6.00	1.50
	- Transmission & Distribution	21.00	2.50
4	Financial Risk Analysis	20.00	2.00
5	Others	5.00	-
6	Progress in attaining Commercial Viability	16.00	-
	Total	100.0	13.63

Strengths

- Pioneer in power sector reforms, first one to privatize distribution
- Comfortable demand supply scenario, can gain under ABT
- Multi year tariff philosophy in place

Weaknesses

- Significant accumulated financial losses in the sector
- MIS and financial reporting needs to be strengthened
- Lack of financial statements in the system is a clear area of weakness

The State Government

Key Positives

Orissa is the first state in the country, which has undertaken unbundling of the integrated SEB (OSEB) into generation and Transmission & Distribution companies. The Distribution companies were subsequently privatized. The Orissa Electricity Reform Act 1995 was enacted with an aim to restore viability to the sector, attract private sector participation to bring in necessary investment in the sector. Under the Act, Orissa Electricity Regulatory Commission has also been constituted.

Though during the initial years some of the Governments decisions (such as upvaluation of the assets, doing away with subvention to compensate power at below cost etc) were partially responsible for the aggravation of the financial situation of the sector, State Government, recognising precarious situation of the sector accepted the Kanungo Committee recommendations

in January 2003. Some of other major positive of the state are its hydel generation capacity, its coal deposits and comfortable power situation in the state. Under ABT it stands to gain by trading its surplus power.

Areas of Improvement

The power sector in Orissa continues to incur losses. There is no alternative but to improve the operational performance in terms of MIS, metering, energy audit, collection improvement and monitoring of T&D losses. Logical conclusion of financial restructuring being undertaken is a must for restoring credibility to the sector.

Electricity Regulatory Commission

Key Positives

Being the first Electricity Regulatory Commission to be set up, in the country, OERC has played a pioneering role in the regulation of the energy sector in the country. It has taken active steps to bring in efficiency improvements in the sector. The latest tariff order passed by the Commission pertains to FY04. The tariff order has been issued after detailed discussions with all the stakeholders. OERC has also brought out an order on Long Term Tariff Strategy – so as to bring in an element of certainty in tariff setting process.

Further in 2004, the Commission has also brought various regulations (as required under Electricity Act 2003) to bring in efficiency in the sector. Some of them pertain to areas like Distribution (Conditions of Supply), Procedure for filing appeal before the Appellate Authority, Licensees' Standard of Performance, Grievances Redressal Forum and Ombudsman etc.

OERC, being the Commission, which has been in existence for the longest time amongst all ERCs, the regulatory approach to tariff setting is very well evolved.

Areas of Improvement

Timeliness of ARR filing is an area where improvement is possible.

Operational Parameters (Generation, Transmission and Distribution)

Key Positives

The performance of the thermal plants (belonging to OPGC) has been satisfactory as demonstrated by good availability and PLFs. Auxiliary consumption however has been on a higher side.

Areas of Improvement

Metering, MIS, customer mapping, energy audit, collections and strict control on theft and pilferage are some of the priority areas where improvement is a must.

Finances

Key Positives

Acceptance of Kanungo Committee report in Jan 03 was is the major positive for the sector.

Areas of Improvement

Lack of audited financial statements for various utilities in the Orissa power sector is an area of weakness.

24. JAMMU & KASHMIR

A score of 9.43 has been assigned to the power sector in J&K. The distribution of marks against the parameters is as follows:

Sr. No.	Parameter	Maximum Score	Score Assigned
1	State Government Related Parameters	17.00	7.80
2	SERC Related Parameters	15.00	0.00
3	Business Risk Analysis		
	- Generation	6.00	0.75
	- Transmission & Distribution	21.00	0.63
4	Financial Risk Analysis	20.00	0.00
5	Others	5.00	0.25
6	Progress in attaining Commercial Viability	16.00	0.00
	Total	100.0	9.43

Strengths

- Strong support from the govt. of J&K in taking care of bulk of the revenue expenditure of the power deptt.

Weaknesses

- Exceptionally high AT&C losses at 67.6%.
- The power sector recovering only a fraction of its expenses (<20%) from sale of power.
- State Govt. yet to frame a state Act on the lines of Electricity Act 2003, since the latter is not applicable in the state of J&K.
- SERC, though constituted, is yet to be fully operational.
- Restructuring of the power sector yet to be taken up by the State Govt. JKPDD not being run on commercial basis.
- Low level of interface metering (only 32% at 11KV level)
- Negligible metered sales (<8% of units in the system) due to low consumer metering and faulty meters.
- Energy Audit, in any shape, yet to be taken up.
- High payables on account of UI charges (>Rs. 300 Crores)
- Poor Quality of power with high DTR failure rate of 38.7%.
- High manpower levels (19.5 employees per '000 consumers).

The State Government

Key Positives

There exists a strong support from the state govt. to take care of the expenses of the power deptt. with the state exchequer funding the entire funding gap which is over 80% of the total expenditure of the J& K power deptt. Govt. of J&K directly making payments to CPSUs for purchase of power.

Areas of Improvement

Govt. of J&K is yet to frame a state Act on the lines of electricity Act 2003 since the latter is not applicable in the state of J&K. The restructuring of the power department yet to be taken up which assumes immense urgency in the presence of large scale losses and the JKPDD not being run on commercial basis. There have been significant delays in the operationalisation of the SERC. The state continues to have a very low household electrification level of 60%.

Electricity Regulatory Commission

The SERC is not yet fully operational as the Chairman has been appointed only recently in October 20045 and the supporting staff is yet to be strengthened. No ARR has been filed by the JKPDD yet.

Operational Parameters (Generation, Transmission and Distribution)

Key Positives

The hydel generating plants in the state are having a comfortable operational profile with low auxiliary consumption.

Areas of Improvement

The state is having an exceptionally high Aggregate Technical & Commercial losses at 67.6% which is a fallout of low level of interface metering (only 32% at the 11KV level), negligible (<8%) metered billing and a complete absence of energy audit. The quality of power remains poor with a DTR failure rate of as high as 38.7%. Further, the manpower levels in T&D are significantly high with over 19 employees for every thousand customers.

Finances

Areas of Improvement

Financial data for J&K power sector remains unreliable and inadequate since the JKPDD which maintains the entire transmission and distribution in the state is not being run on commercial basis. There is a need to urgently corporatise the JKPDD, so that the entity's stand alone financial

position can be clearly segregated from the integrated finances of the state govt. The revenues collected as on today are not even 30% of the expenses on the purchase of power from the CPSUs, so considerable financial improvements need to take place. Further, the state has been continuously defaulting on payment of UI charges for overdrawls from the Grid, though the payments have been timely to CPSUs for power purchase after signing of the tripartite securitization scheme of the Central Govt.

25. ARUNACHAL PRADESH

A score of 9.2 has been assigned to the power sector in Arunachal Pradesh. This assessment is predominantly based on information available/ made available till December end, 2004. The scoring has also been constrained by lack of data against several key parameters, especially with respect to T&D.

The distribution of scores against the parameters is as follows:

Nos	Parameter	Maximum Score	Score Assigned	Previous Score Assigned
1	State Government Related Parameters	17	2.6	2.8
2	SERC Related Parameters	15	(-) 2.5	(-) 2.5
3	Business Risk Analysis	27	0.0	0.0
	- Generation	6	0	0
	- Transmission & Distribution	21	0.0	0.0
4	Financial Risk Analysis	20	5	6.50
5	Others	5	0.5	1.00
6	Progress in attaining commercial viability	16	3.6	1.25
	Total	100	9.2	9.05

The score assigned to Arunachal Pradesh has remained at almost the same level as in the exercise carried out in January 2004. While the final scores are not strictly comparable because of redistribution of scores against the parameters, the key change that was noticed during this exercise was the sharp increase in revenues from the sale of power, from Rs 121.6 million in 2002-03 to Rs 328 million in 2003-04. The increase in revenues was driven by trading sales of nearly Rs 240 million, which has helped to reduce the gap between ACS and ARR in 2003-04, and hence the higher score awarded against the parameter 'Progress in attaining commercial viability'.

The financial state of the power department of Arunachal Pradesh continues to remain weak largely on account of very low tariff levels and high costs of operation viz manpower costs. The T&D infrastructure continues to remain weak. The poor cash collection and increasing receivables have accentuated the cashflow problems of the power department. The power sector reforms have not been pursued satisfactorily, nor has any satisfactory progress been made till date on the implementation of the Electricity Act 2003.

Strengths

- Vast hydroelectric power capacity
- Potential to increase revenues through trading, which has been demonstrated in 2003-04 with revenues increasing from Rs 122 million to Rs 328 million. As a result the gap between ARR and ACS declined in 2003-04

- Satisfactory track record of servicing institutional loans

Weaknesses

- Very weak financial position, with high ATC losses and gap between ARR and ACS at over Rs 2.4 per unit even after the improvement seen in 2003-04. Coverage of costs through revenues at less than 30% in 2003-04.
- Unsatisfactory progress in terms of initiating reforms in the sector
- Inadequate Non-Plan allocation to meet the operational expenses of the Department
- Very high staffing levels
- Weak MIS

The Arunachal Pradesh Government has not been able to initiate power sector reforms in any significant way. The proposal for corporatisation has been submitted to the cabinet. No decision regarding the setting up of SERC has yet been taken. The state government is yet to take any action on fulfilling the requirements of the Electricity Act, 2003 like setting up special courts for theft related cases, appointing assessing officers for every district/circle, setting up of district committees etc. The ED continues to function as a part of the State Government, and the expenses of the Department are funded by the State through Plan and non-Plan expenditure. However, the non-plan support by the State Government to the ED is inadequate, leading to low scores on the subsidy parameter as well.

The Government is yet to set up a SERC. Though initially it was in talks with State governments of Manipur and Mizoram to set up a Joint SERC, it is now planning to have common ERC with Assam. Since the SERC is yet to be set up, a negative score of (-) 2.5 has been assigned.

Arunachal Pradesh has 59.60 MW of installed generation capacity, which is mainly in the form of distributed stations having installed capacities of several kilowatts only and serving the local demand. The thermal power stations belonging to the State Sector in Arunachal Pradesh have been operating at low PLFs as most of these are operated only during the evenings to save on the expensive diesel cost. The availability of the hydel units is also lower than the normative levels. The State therefore depends on purchased power to meet most of its demand (around 90% of the energy input into the system was purchased in 2003-04). However, we are of the opinion that the Generation parameters are not really indicative for a state that has small distributed generating stations and which does not use its generation facilities continually.

The State's transmission and distribution system is also inadequate as far as meeting demand within the State is concerned. The T&D network in the state comprises isolated grids supplying power to restricted areas within the state. The technical and non-technical losses in the state remain high. The metering of feeders upto the level of 11KV stage under the APDRP has also just started. The energy audit can only be taken up after the completion of installation of meters. The scoring against this parameter, however, has been constrained by lack of data on many of the variables.

The ED continues to score low on most financial parameters on account of low cash collections and the high level of receivables. Despite a steep increase in revenues on account of trading income (it has sold nearly 200 MU of energy outside state in 2003-04, which has given it additional revenue of Rs 24cr), the cash losses have not declined, even though the gap between ARR and ACS has reduced (although it still remains high at Rs 2.48 per unit). However, the government has not defaulted on any of its loan obligations. The Department continues to be heavily dependent on Plan and Non-Plan allocation from the Government to meet its commitments.

The information systems of the power department need to be geared up. The utility has now started taking initiatives to computerise the billing systems under the APDRP scheme. However lot of data that was required for the current exercise (like distribution failure rates, interruptions, metering on feeders etc) was not available within the department.

26. MIZORAM

A score of 7.88 has been assigned to the power sector in Mizoram. This is based on data available till mid January 2005 .

The distribution of scores against the parameters is as follows:

Nos	Parameter	Score - 2004		Score - 2003	
		Maximum	Assigned	Maximum	Assigned
1	State Government Related Parameters	17	4	17	5.3
2	SERC Related Parameters	15	-2.5	13	-2.5
3	Business Risk Analysis	27		27	
	- Generation	6	0.5	6	0.75
	- Transmission & Distribution	21	4.88	21	0.5
4	Financial Risk Analysis	20	0	23	1.5
5	Others	5	1	5	1
6	Progress in attaining commercial viability	16	0	15	1.25
	Total	100	7.88	100	7.80

There has been no significant change in the scores assigned to the power sector in Mizoram. In fact the financial position has worsened compared to the last rating exercise and reforms are yet to be initiated. Power tariffs continue to be low, which when combined with high AT&C losses and complete dependence on purchased power results in very low coverage of costs from own revenues. However, on the positive side, the State has made some progress in the area of metering, both at 11 kV level and at the consumer end, and this is expected to impact the sector positively in the coming years.

Strengths

- Some progress in the area of metering, both at 11 kV level and at the consumer end. Over 70% of the 11 kV feeders is metered
- Energy accounting has been initiated in all 5 circles of the State.

Weaknesses

- Worsening financial position as reflected in an increase in cash losses, further increase in gap between ARR and ACS, and overdues to both CPSUs and Financial Institutions like REC and PFC. The ATC loss remains at above 50% and gap between ARR and ACS has widened to over Rs 3.50/ kWh.

- Absence of a commercial orientation in the way the Department is structured and functions. Despite inadequate cost coverage, Tariffs were last revised in August 2002.
- Inadequate progress in reforms , including setting up of SERC
- High administrative costs with little avenue to reduce the same, coupled with limited scope for increasing power tariffs as the consumer base is predominantly domestic and possibility of cross-subsidization is limited.
- Significant payments outstanding to CPSUs; alongside, the State has defaulted in its principal and interest repayments to REC and PFC

The score assigned to the Power Department of Mizoram continues to reflect the unsatisfactory progress in terms of initiating reforms in the sector, worsening financial position with increase in gap between ARR and ACS and defaults to both CPSUs and Financial Institutions.

The Mizoram Government signed the Memorandum of Agreement (MoA) with the Ministry of Power (MoP), Government of India on 18th July 2002. However, while steps have been initiated in the areas of 11 kV metering, consumer metering and energy audit, the state is yet to achieve any of the targets as laid down in the Electricity Act 2003 in terms of setting up Special Courts, District level Committees or setting up of SERCs. However, since the Department is a part of the State Government, the expenses of the Department are funded by the State through Plan and non-Plan expenditure. Hence, the State receives a satisfactory score where the parameter “subsidies payable by the Government” is concerned.

The power stations belonging to the State Sector in Mizoram continue to operate at low PLFs because they are mainly for standby purposes. AT&C losses continue to be high and remain consistently above 50%. For the year ended March 2004, only 31% of the energy input into the State was billed on metered basis, and is one of the contributory reasons for the high AT&C losses. However, with progress in the areas of metering and initiation of energy audit in all 5 circles, it is expected that , going forward, AT&C losses may be curtailed.

The Department therefore continues to score low on most financial parameters on account of low coverage of costs from revenues, no noticeable improvement in cash collections and outstanding to CPSUs. While details of power purchase dues are not available, the same will show a rising trend as the State has been facing financial difficulties. In fact, the CPSUs have regulated power supply in the recent past because of payments outstanding. The State also has substantial outstanding to PFC and REC. Gap between Average Revenue Realisation (ARR) and Average Cost of Supply (ACS) is at over Rs 3.50 / unit and the Department will be heavily dependent on Plan and Non-Plan allocation from the Government to meet its commitments. With increase in cash losses and widening of gap between ARR and ACS, the sector is clearly not showing any progress in the area of commercial viability.

There is a pressing need for computerisation, since manual data entry and retrieval has been resulting in inconsistency in data obtained from different sources. The Department needs to strengthen its finance and commercial functions, including book keeping, billing, metering and collections.

ICRA, however, acknowledges the constraints which have been impacting on the performance of the Power Department which includes overwhelming reliance on purchased power, skewed consumption mix with very low industrial consumer implying limited scope for cross subsidisation, weak T&D network because of inadequate investments and difficulties in maintenance, metering and billing owing to nature of the terrain.

27. MANIPUR

A score of 6.55 has been assigned to the power sector in Manipur. This assessment is predominantly based on information available/ made available till December end , 2004.

The distribution of scores against the parameters is as follows:

Nos	Parameter	Maximum Score	Scores- Jan 2004	Scores- Jan 2005
1	State Government Related Parameters	17	5.80	7.6
2	SERC Related Parameters	15	-2.5	-2.5
3	Business Risk Analysis	27	1.75	2.5
	- Generation	6	1.25	1.5
	- Transmission & Distribution	21	0.5	0.5
4	Financial Risk Analysis	20	0	2
5	Others	5	1.5	1
6	Progress in attaining commercial viability	16	0	1
	Total	100	6.55	10.6

The scores assigned to the power sector in Manipur has shown a decline compared to the last rating exercise. This decline reflects further deterioration in the performance of the Department, with cash collections having fallen in 2003-04 after a commendable increase in 2002-03, increasing losses and build up of receivables. With no tariff hikes since October 2002 and very high AT&C loses, the financial position of the sector has weakened further, also reflected in increase of overdues to Financial Institutions. The progress in reforms has also been limited. On the positive side , mention needs to be made of the one-time increase in budgetary allocation during 2003-04 to meet the outstanding power purchase dues of CPSUs

Strengths:

- Some progress in increasing cash collections during 2002-03 though it has again slipped in 2003-04
- Special budgetary allocation in 2003-04 to clear a major part of the outstanding dues to CPSU

Weaknesses

- After having shown some improvement in 2002-03, the Departments financial performance has deteriorated again, with slippage in cash collections as well as increasing losses. Receivables too is showing further deterioration.
- Despite the very weak financial position, there has been no tariff hike after October 2002.

- ATC Losses continue to remain exceptionally high at 75%. The gap between ARR and ACS has widened from below Rs 2 / kWh in 2002-03 to around Rs 2.30 in 2003-04
- Unsatisfactory progress in terms of initiating reforms in the sector
- Absence of a State Electricity Regulatory Commission (SERC)
- Outstanding to institutions like Rural Electrification Corporation has increased

The Manipur Government's progress with respect to implementation of the Electricity Act, 2003 has so far been unsatisfactory. The Government of Manipur had appointed the Administrative Staff College of India, Hyderabad, (ASCI) to provide consultancy services to, *inter alia*, assess the restructuring options for the power sector, to recommend suitable regulatory system for the sector and for financial restructuring. An inception report highlighting the approach and methodology for the assignment, time schedules and current status of the power sector in Manipur was prepared, submitted and approved. A High Level Committee consisting of the Chief Secretary, Principal Secretary (Finance), Commissioner (Power) and Chief Engineer (Power) has been constituted for implementation of the reforms. A draft final report has been prepared and is under examination.

A positive feature of the State power sector has been the one-time increase in budgetary allocation to meet the power purchase dues of CPSUs. The budgetary allocation was increased from Rs 360 million in 2002-03 to Rs 2295.8 million in 2003-04, as a result, the Department earns full scores against the parameter 'Subsidy Paid / Payable'. That apart, progress with respect to reforms remain very limited, while the Manipur Government is holding talks for setting up a Joint Electricity Regulatory Commission (JERC) with Mizoram and Arunachal Pradesh, no JERC/SERC has been formed as yet. Therefore, a negative score of (-) 2.5 has been assigned.

The score assigned to the Generation parameters continue to reflect the low PLF and Availability Factor since most stations are run for Stand-by purposes only. The 6 X 6 MW Heavy Fuel Oil based plant at Leimakhong, commissioned in 2002-03, also operated at very low PLF in both 2002-03 and 2003-04 due to . a) high cost of power and b) inadequate evacuation capacity.

The Department attained significant improvement in cash collections in 2002-03, when it went up to Rs 352 million from Rs 180 million in 2001-02. While the Department had targetted a cash collection of Rs 555 million in 2003-04, actual collections in fact, slipped again to Rs 285 million. As a result, ATC loses continue to remain very high, at over 75%. The Department is planning to initiate Energy Audit once the 11 kV/ 400 V substations are metered which is expected shortly for some of the substations. ICRA is constrained in the analysis here because of lack of availability of data on this front.

The ED continues to score low on most financial parameters on account of low cash coverage of costs, and the high level of receivables. The Government has been declared as a 'defaulter' by REC in 2003-04. Gap between Average Revenue Realisation (ARR) and Average Cost of Supply (ACS) has declined to around Rs 2.25 / kWh from a little less than Rs 2 / kWh in the previous year. The Department will be heavily dependent on Plan and Non-Plan allocation from the Government to meet its commitments..

There is a pressing need for computerisation, since manual data entry and retrieval has been resulting in inconsistency in data obtained from different sources, even though ICRA acknowledges that the quality of MIS is definitely superior to that seen in case of the other Electricity Departments in the North East. .

28. BIHAR

A score of 5.53 has been assigned to the power sector in Bihar based on the data available till December 2004. The distribution of marks against the parameters is as follows:

No.	Parameter	Maximum Score	Score Assigned	
			Jan 2005	Jan 2004
1	State Government Related Parameters	17	0.3	2.25
2	SERC Related Parameters	15	0.0	-2.50
3	Business Risk Analysis	27	2.23	2.88
	- Generation	6.0	0.25	0.25
	- T&D	21.0	1.73	2.63
4	Financial Risk Analysis	20.0	2.0	6.00
5	Others	5.0	1.25	1.00
6.	Progress towards commercial Viability	16.0	0.00	1.00
	Total	100.0	5.53	10.63

The scores assigned to the Bihar power sector has shown a deterioration from 10.63 in the January 2004 exercise to 5.78 currently. While not strictly comparable because of change in certain parameters, the decrease in scores was essentially because of :

- Virtually no progress in implementation of Electricity Act, 2003.
- More stringent scoring criteria followed for assessing cost coverage from revenues.

The overall score for Bihar is very poor at less than 10 mainly because of the following factors:

- Very weak financial position with coverage of costs from revenue at less than 45% and defaults on institutional loans. The gap between ARR and ACS is in excess of Rs 2.5/ kWh. The financial position is showing signs of further deterioration.
- Absence of any significant progress in power sector reforms. The SERC is yet to be constituted.
- State lagging behind in rural electrification and addition to capacities.
- Poor PLFs and availability factor arising out of relatively high age of plants and inadequacy of R&M exercise taken.
- Poor MIS and data availability.

The Bihar Government (GoB) has yet to start power sector reforms in a significant way. It has not passed any comprehensive legislation for power sector reforms or formulated any FRP/ restructuring plans for the state utility, the Bihar State Electricity Board (BSEB). However, the GoB is contemplating organisational restructuring for BSEB and the Board has also submitted a financial restructuring proposal to the GoB. The GoB has also announced its intention to set up a SERC under the CERC Act and according to state officials a retired judge of the Patna HC has been shortlisted for the post of the SERC Chairman, the same has yet to be constituted. Although the GoB has been infusing substantial funds into BSEB, the same has been in the form of loans as well as a one-time assumption of liabilities under the tripartite agreement in 2003-04 rather than as subsidy payments. Further, the quantum of the funds infusion is not sufficient in relation to the Board's losses. The state has also made only limited attempts to curb power thefts and the state is also lagging behind in household electrification and addition to generation capacities.

The power stations belonging to the BSEB continue to operate at low PLFs and availability factor with high manpower levels. Although, the BSEB has commenced an energy audit in Bihar, in the absence of adequate number and quality of meters (both at 11kV levels and at consumer end) it has been unable to carry out comprehensive energy audit to determine real T&D losses. Data on most T&D and commercial parameters were also not available to ICRA. ATC loss is estimated at over 40% for the two-year period we have looked at. However, ATC loss figures may be misleading in the absence of any data on units metered and any scientific assessment of agricultural consumption

BSEB's financial position continues to be weak, in fact there has been progressive deterioration in certain key areas like receivables. . Dismal PLF levels in the power plants owned by BSEB, high manpower costs owing to major overstaffing both in relation to energy generated and consumers served, high interest costs and non receipt of subsidy from the government has resulted in large cash losses. These, coupled with non receipt of any fresh equity support from the Govt., has resulted in an erosion of its net worth and large defaults to its lenders, including the state governments, bond holders and other institutions.

The losses as measured by ARR-ACS or ARR/ACS too remain high and in fact has worsened over the years with gap between ARR and ACS at over Rs 2.5 / kWh for 2003-04. The adjusted book losses estimated on the basis of cash collection figures made available to us too have increased since FY 2002.

BSEB's MIS is also very poor and it is unable to provide several critical data, particularly those pertaining to T&D and commercial functions as well as detailed provisional/audited accounts for the years 2002-03 and 2003-04.

29. JHARKHAND

A score of 3.00 has been assigned to the power sector in Jharkhand. The distribution of marks against the parameters is as follows:

Sr. No.	Parameter	Maximum Score	Score Assigned
1	State Government Related Parameters	17.00	-
2	SERC Related Parameters	15.00	3.00
3	Business Risk Analysis	27.00	-
	- Generation	6.00	-
	- Transmission & Distribution	21.00	-
4	Financial Risk Analysis	20.00	-
5	Others	5.00	-
6	Progress in attaining Commercial Viability	16.00	-
	Total	100.0	3.00

Strengths

- Regulator has reduced cross-subsidy in tariff (reduced High Tension tariff and increased tariff of domestic consumers)
- Regulator has applied merit-order dispatch principles for purchase of power

Weaknesses

- No significant capacity addition in the state
- Tariff order for 2003-04 not implemented by the utility
- Significant delay in passing of the tariff order
- Limited financial support from Government of Jharkhand
- Low operating performance of plants
- Quality of data and MIS availability needs significant improvement

The State Government

Areas of Improvement

Government of Jharkhand (GoJ) has provided limited financial support to Jharkhand State Electricity Board (JSEB) for meeting its losses. A Financial Restructuring Plan (FRP) for providing financial support till turnaround of JSEB needs to be formulated. There has been a delay in the appointments to the regulatory commission. GoJ needs to take greater initiative in adding capacity in the state as there have been no capacity additions in the past 3 years.

Electricity Regulatory Commission

Key Positives

Jharkhand State Electricity Regulatory Commission (JSERC) has issued one tariff order till date. A conscious approach has been taken towards reducing the number of slabs across customer categories and also reducing the cross-subsidy across consumer categories. The tariff order includes instructions to JSEB to follow merit order principles for purchase of power. The commission has issued orders for setting up of consumer grievance forum and appointment of Ombudsman.

Areas of Improvement

There has been a significant delay in the tariff filing by JSEB and subsequently in the issue of the tariff order. In fact, the tariff order has been issued in December 2003 for 2003-04. The timeliness of filing tariff application by JSEB and thereby, issue of tariff orders by JSERC needs to be improved so that JSEB is not exposed to the risk of non-recovery of costs. In addition, the tariff order has not been implemented in the state. The commission is yet to issue an order on performance standards for licensees.

Operational Parameters (Generation, Transmission and Distribution)

Areas of improvement

The performance of the thermal plants of JSEB is unsatisfactory, with low capacity utilization of its plants. In addition, the auxiliary consumption of the plants is much higher than the limits prescribed for thermal plants. The metering of consumers needs to be done at an aggressive pace, as this would help in a better estimation of the system losses. This would also help in reducing the aggregate technical and commercial losses (53% in 2002-03), which is an area of concern.

Finances

Areas of Improvement

JSEB losses have increased in 2003-04 compared to 2001-02. JSEB has significant industrial consumption in the state and therefore an improvement in the efficiency would significantly improve its financials. As per the tariff order for 2003-04, JEB required subsidy support of Rs. 40 crores to meet the revenue gap.

ANNEXURE - COMPARATIVE SCORESHEET

	STATES----->	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
	Max score	Andhra Pradesh	Gujarat	Delhi	Karnataka	Tamil Nadu	Goa	Himachal Pradesh	West Bengal	Uttar Pradesh	Chhattisgarh	Rajasthan	Maharashtra	Punjab	Haryana	Tripura	Kerala	Assam	Meghalaya	Madhya Pradesh	Sikkim	
I	External Factors	32.00	20.58	18.76	23.76	18.98	14.96	6.90	11.60	11.65	19.21	4.48	16.77	10.50	8.54	17.53	7.55	8.00	14.32	3.17	14.79	5.84
A	State Govt related parameters	17.00	8.20	12.26	12.88	9.73	6.21	6.90	6.60	3.40	8.96	3.98	8.52	2.75	3.54	9.40	7.55	3.75	6.42	3.17	5.54	8.34
A1	- Implementation of Targets laid down in EA, 2003	3.00	2.00	1.38	1.00	2.38	0.50	-	0.60	2.50	2.50	0.75	2.75	0.25	0.75	1.25	1.25	0.25	1.88	-	1.25	-
A2	Access to Electricity	3.00	2.20	2.88	2.88	2.85	2.46	2.90	3.00	0.90	0.96	1.23	1.77	1.50	2.79	2.40	1.30	2.50	0.54	1.17	1.29	2.34
A3	- 3 year track record on subsidy payments	4.00	2.00	4.00	4.00	2.00	1.00	4.00	1.00	-	3.00	1.00	1.00	1.00	-	4.00	2.00	1.00	2.00	1.00	1.00	4.00
A4	Structural Adjustment Support provided to utilities	3.00	-	1.00	2.00	1.50	0.25	-	-	-	2.50	-	-	-	-	(0.25)	-	-	2.00	1.00	-	1.00
A5	Implementation of Anti-Theft Legislation measures	2.00	-	2.00	1.00	-	-	-	-	-	-	-	1.00	-	-	-	1.00	-	-	-	-	-
A6	Addition to Generation Capacity	2.00	2.00	1.00	2.00	1.00	2.00	-	2.00	-	-	1.00	2.00	-	-	2.00	2.00	-	-	-	2.00	1.00
B	SERC related parameters	15.00	12.38	6.50	10.88	9.25	8.75	-	5.00	8.25	10.25	0.50	8.25	7.75	5.00	8.13	-	4.25	7.90	-	9.25	(2.50)
B1	Timeliness of Tariff Order	5.00	5.00	1.00	3.75	3.00	2.00	-	1.00	2.00	4.00	-	2.00	2.50	1.00	2.50	-	2.50	3.00	-	2.50	-
B2	Implementation of Tariff Order	3.00	2.75	2.00	2.50	2.25	2.75	-	0.50	2.00	1.75	-	2.50	2.25	1.50	2.50	-	0.50	2.00	-	1.75	-
B3	Nature and Scope of Tariff Order	3.00	2.63	1.50	2.63	2.00	2.00	-	2.00	1.25	2.50	-	1.75	2.00	1.50	1.13	-	0.25	0.90	-	2.00	-
B4	Implementation of Electricity Act 2003	4.00	2.00	2.00	2.00	2.00	2.00	-	1.50	3.00	2.00	0.50	2.00	1.00	1.00	2.00	-	1.00	2.00	-	3.00	-
II	Internal Factors	68.00	36.45	34.85	28.15	32.48	35.98	-	38.31	32.95	22.93	35.43	20.73	26.75	28.28	17.63	24.10	23.48	13.00	23.55	8.00	13.23
C	Business Risk Analysis	27.00	16.50	14.65	13.90	15.50	16.90	14.55	14.38	13.45	10.05	9.55	9.48	10.70	13.60	8.75	7.50	13.38	6.00	11.50	7.50	1.88
C1	- Generation	6.00	4.75	3.25	2.25	5.00	4.00	-	4.00	1.50	2.25	3.25	4.50	5.00	4.50	3.50	1.50	1.25	0.50	2.00	4.25	0.75
	> Auxiliary power consumption (as % of gross generation for stations put together) (B)-(A) as computed in next sheet	1.00	0.75	0.75	0.75	1.00	1.00	-	1.00	0.50	0.75	0.75	0.75	1.00	1.00	0.50	1.00	0.75	0.50	1.00	0.75	0.75
	> PLF (%) -Only for thermal units (Weighted Average based on capacity)	2.00	1.50	1.00	0.50	1.50	1.50	-	1.00	1.00	1.50	1.50	1.50	1.50	1.50	1.00	0.50	0.50	-	-	1.00	-
	> Availability factor (%) (A)- (B) as computed in the next sheet	2.00	2.00	1.00	1.00	2.00	1.00	-	4.00	-	-	0.50	1.50	2.00	1.50	2.00	-	NA	-	-	2.00	-
	> Manpower level per MW generated-thermal (NTPC as benchmark)	0.50	-	-	-	-	-	-	-	0.50	-	0.25	-	-	-	-	NA	-	-	-	-	-
	> Manpower level per MW generated-hydel (WAPCOS Report)	0.50	0.50	0.50	NA	0.50	0.50	-	(1.00)	-	-	0.50	0.50	0.50	0.50	-	NA	-	1.00	0.50	-	
C2	- Transmission And Distribution	21.00	11.75	11.40	11.65	10.50	12.90	14.55	10.38	11.95	7.80	6.30	4.98	5.70	9.10	5.25	6.00	12.13	5.50	9.50	3.25	1.13
	> Level of Interface Metering	2.50	2.50	2.50	2.50	2.50	2.50	3.00	2.50	2.50	2.50	1.25	1.88	2.50	2.50	2.50	2.50	2.50	1.25	2.50	2.50	0.63
	> Quality of T&D Network	2.00	0.50	1.00	1.75	0.25	2.00	2.50	1.50	1.00	0.50	-	0.25	-	-	0.25	0.50	2.00	0.50	1.00	0.25	0.50
	> Units billed on metered basis/ Units input in the system	3.50	-	-	1.75	-	1.75	3.00	2.63	1.75	-	1.75	-	-	1.75	-	-	2.63	1.75	1.75	-	-
	> Energy Audit (11 KV)	4.00	2.00	3.00	2.50	1.00	1.00	3.75	2.00	3.00	2.00	-	1.50	-	1.60	1.50	-	1.00	1.50	-	-	
	> Redressal of Consumer Grievances	1.00	1.00	1.00	0.25	1.00	0.50	0.50	-	1.00	0.50	-	0.25	0.50	0.50	0.50	-	0.50	0.50	-	-	
	> Aggregate technical & commercial losses (ATC) in % terms	5.00	2.75	1.50	0.50	2.75	2.75	1.80	2.75	1.50	0.50	1.50	0.50	1.50	2.75	0.50	1.50	1.50	0.50	2.75	0.50	
	> Manpower in T&D per 000 Customers	3.00	3.00	2.40	2.40	3.00	2.40	-	(1.00)	1.20	1.80	1.80	0.60	1.20	-	-	3.00	-	-	-	-	
D	Financial Risk Analysis	20.00	12.50	12.25	10.00	9.13	11.63	12.50	11.13	8.25	7.63	9.38	8.25	8.75	5.13	6.38	8.00	5.00	3.00	3.75	-	5.75
D1	> Gearing level (Total Debt / Adjusted Networth)	2.50	1.25	-	-	1.88	0.63	2.50	0.63	-	1.88	0.63	-	2.50	0.63	0.63	-	-	-	-	NA	-
D2	> (Revenues from sale of power excl subsidy)/operating costs + I	5.00	2.50	1.25	-	3.75	3.75	5.00	3.75	2.50	1.25	5.00	1.25	3.75	3.75	1.25	-	2.50	1.25	1.25	NA	-
D3	- Actual track record of debt servicing	5.00	5.00	5.00	2.50	-	5.00	5.00	3.75	2.50	-	-	2.50	2.50	-	-	5.00	2.50	-	-	-	5.00
D4	> Trends in Level of receivables (Days of sales)	3.00	0.75	3.00	3.00	1.50	0.75	-	3.00	2.25	-	0.75	-	-	0.75	-	3.00	-	0.75	1.50	NA	-
D5	> Power purchase and fuel creditors	1.50	-	-	1.50	-	1.50	-	-	1.50	-	-	1.50	-	-	1.50	-	-	-	-	NA	0.75
D6	> Funding of pension and gratuity liabilities	3.00	3.00	3.00	3.00	2.00	-	-	-	1.00	3.00	3.00	3.00	-	-	3.00	-	-	1.00	1.00	-	-
E	Others	5.00	4.25	3.75	4.25	3.25	3.25	2.50	3.00	3.25	3.25	0.50	3.00	3.50	0.25	2.50	1.00	3.50	2.00	2.50	0.50	1.00
	> Adoption of IT	2.50	2.00	1.50	2.00	1.25	1.00	1.50	1.00	1.00	1.50	-	1.00	1.50	-	1.00	-	1.50	0.50	1.50	-	-
	> Availability of audited / provisional accounts by September 30, 2004	1.25	1.25	1.25	1.25	1.25	-	1.00	1.25	1.25	-	1.25	1.25	-	0.75	0.25	1.00	1.00	0.50	-	-	
	> Quality and availability of MIS	1.25	1.00	1.00	1.00	0.75	1.00	1.00	1.00	0.50	0.50	0.50	0.75	0.75	0.25	0.75	0.75	1.00	0.50	0.50	0.50	1.00
F	Progress in attaining commercial viability	16.00	3.20	4.20	-	4.60	4.20	14.00	9.80	8.00	2.00	16.00	-	3.80	9.30	-	7.60	1.60	2.00	5.80	-	4.60
F1	Average Revenue Realisation - Average Cost of supply where ARR = Cash Collection / Units Input into system ACS = Expenditure on Accrual basis/ Units input into system	4.00	1.60	1.60	-	1.60	1.60	4.00	3.20	2.40	-	4.00	-	2.40	2.40	-	1.60	1.60	-	0.80	NA	1.60
F2	Same as above, in % terms (ARR - ACS) / ARR X 100	4.00	1.60	1.60	-	-	1.60	4.00	3.60	1.60	-	4.00	-	2.40	2.40	-	-	-	-	-	NA	-
F3	Trends in ARR - ACS with 2001-02 as base year	4.00	1.00	1.00	-	1.00	2.00	4.00	1.00	1.00	4.00	-	1.00	2.50	-	3.00	-	1.00	1.00	NA	3.00	
F4	Trends in Adjusted Book Loss reduction with 2001-02 as base year	4.00	2.00	-	-	2.00	2.00	2.00	2.00	3.00	1.00	4.00	-	1.00	2.00	-	3.00	-	1.00	4.00	NA	-
	Adjusted book loss will be computed for all DISCOMS and TRANSCO or SEB																					
	Adjusted book loss for 2001-02 (X) will be compared with Average loss of subsequent years (Y)																					
	Negative score for measures which could impact commercial viability in future		(3.00)	-	-	-	(3.00)	-	-	-	-	-	(3.00)	-	-	-	-	-	-	-	-	-
	Final Score	100.00	57.03	53.61	51.91	51.46	50.94	50.45	49.91	44.60	42.14	39.91	37.50	37.25	36.82	35.16	31.65	31.48	27.32	26.72	22.79	19.07

21			22	23	24	25	26	27	28	29	
Uttaranchal		STATES----->	Max score	Nagaland	Orissa	Jammu & Kashmir	Arunachal Pradesh	Mizoram	Manipur	Bihar	Jharkhand
12.15	I	External Factors	32.00	4.30	7.63	7.80	0.10	1.50	3.30	0.30	3.00
-				-	-	-	-	-	-	-	-
-				-	-	-	-	-	-	-	-
5.90	A	State Govt related parameters	17.00	6.80	2.00	7.80	2.60	4.00	5.80	0.30	-
0.25	A1	- Implementation of Targets laid down in EA, 2003	3.00	-	NA	-	-	-	-	-	-
1.65	A2	Access to Electricity	3.00	1.80	NA	1.80	1.60	2.00	1.80	0.30	NA
4.00	A3	- 3 year track record on subsidy payments	4.00	4.00	NA	4.00	1.00	2.00	4.00	-	NA
-	A4	Structural Adjustment Support provided to utilities	3.00	1.00	2.00	-	-	-	-	-	NA
-	A5	Implementation of Anti-Theft Legislation measures	2.00	-	NA	-	-	-	-	-	NA
-	A6	Addition to Generation Capacity	2.00	-	NA	2.00	-	-	-	-	NA
6.25	B	SERC related parameters	15.00	(2.50)	5.63	-	(2.50)	(2.50)	(2.50)	-	3.00
1.50	B1	Timeliness of Tariff Order	5.00	-	2.50	-	-	-	-	-	-
1.75	B2	Implementation of Tariff Order	3.00	-	0.75	-	-	-	-	-	-
2.00	B3	Nature and Scope of Tariff Order	3.00	-	1.88	-	(2.50)	(2.50)	(2.50)	-	2.00
1.00	B4	Implementation of Electricity Act 2003	4.00	-	0.50	-	-	-	-	-	1.00
6.45	II	Internal Factors	68.00	11.50	6.00	1.63	-	6.38	3.25	5.23	-
3.95	C	Business Risk Analysis	27.00	2.25	4.00	1.38	-	5.38	1.75	1.98	-
1.00	C1	- Generation	6.00	-	1.50	0.75	-	0.50	1.25	0.25	-
1.00		> Auxiliary power consumption (as % of gross generation for stations put together) (B)-(A) as computed in next sheet	1.00	-	NA	0.75	-	0.50	0.75	0.25	-
NA		> PLF (%) -Only for thermal units (Weighted Average based on capacity)	2.00	-	1.50	-	-	-	-	-	-
-		> Availability factor (%) (A)- (B) as computed in the next sheet	2.00	-	NA	NA	-	-	0.50	-	NA
NA		> Manpower level per MW generated-thermal (NTPC as benchmark)	0.50	-	NA	NA	-	-	-	-	NA
-		> Manpower level per MW generated-hydel (WAPCOS Report)	0.50	-	NA	NA	-	-	-	-	NA
2.95	C2	- Transmission And Distribution	21.00	2.25	2.50	0.63	-	4.88	0.50	1.73	-
1.25		> Level of Interface Metering	2.50	-	2.50	0.63	-	1.88	-	0.63	NA
-		> Quality of T&D Network	2.00	0.50	NA	-	-	1.00	0.50	-	-
NA		> Units billed on metered basis/ Units input in the system	3.50	1.75	NA	-	-	-	-	-	NA
NA		> Energy Audit (11 KV)	4.00	-	NA	-	-	2.00	-	-	NA
NA		> Redressal of Consumer Grievances	1.00	-	NA	NA	-	-	-	-	NA
0.50		> Aggregate technical & commercial losses (ATC) in % terms	5.00	-	NA	-	-	-	-	0.50	NA
1.20		> Manpower in T&D per 000 Customers	3.00	-	NA	-	-	-	-	0.60	NA
2.50	D	Financial Risk Analysis	20.00	7.25	2.00	-	5.00	-	-	2.00	-
NA	D1	> Gearing level (Total Debt / Adjusted Networth)	2.50	-	NA	NA	-	-	-	-	NA
2.50	D2	> [Revenues from sale of power excl subsidy]/operating cost	5.00	-	NA	NA	-	-	-	-	NA
NA	D3	- Actual track record of debt servicing	5.00	5.00	NA	NA	5.00	-	-	-	NA
-	D4	> Trends in Level of receivables (Days of sales)	3.00	0.75	NA	NA	-	-	-	-	NA
NA	D5	> Power purchase and fuel creditors	1.50	1.50	NA	-	-	-	-	-	NA
-	D6	> Funding of pension and gratuity liabilities	3.00	-	2.00	-	-	-	-	2.00	NA
-	E	Others	5.00	1.00	-	0.25	0.50	1.00	1.50	1.25	-
NA		> Adoption of IT	2.50	-	NA	-	-	-	-	1.00	-
NA		> Availability of audited / provisional accounts by September 30, 2004	1.25	-	NA	0.25	-	0.50	1.00	-	NA
NA		> Quality and availability of MIS	1.25	1.00	NA	-	0.50	0.50	0.50	0.25	NA
-	F	Progress In attaining commercial viability	16.00	1.00	-	-	3.60	-	-	-	-
-	F1	Average Revenue Realisation - Average Cost of supply where ARR = Cash Collection / Units input into system ACS = Expenditure on Accrual basis/ Units input into system	4.00	-	NA	NA	-	-	-	-	-
-	F2	Same as above, in % terms (ARR - ACS) / ARR X 100	4.00	-	NA	NA	-	-	-	-	-
-	F3	Trends in ARR - ACS with 2001-02 as base year	4.00	1.00	NA	NA	3.60	-	-	-	-
-	F4	Trends in Adjusted Book Loss reduction with 2001-02 as base year. Adjusted book loss will be computed for all DISCOMS and TRANSCO or SEB. Adjusted book loss for 2001-02 (X) will be compared with Average loss of subsequent years (Y)	4.00	-	NA	NA	-	-	-	-	-
-		Negative score for measures which could impact commercial viability in future		-	-	-	-	-	-	-	-
18.60		Final Score	100.00	15.80	13.63	9.43	9.20	7.88	6.55	5.53	3.00