



# **Report of the Task Force on Measures for Operationalising Open Access in the Power Sector**

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## **GLOSSARY**

Act	Electricity Act 2003 (as in para. 1)
APERC	Andhra Pradesh Electricity Regulatory Commission (as in Table 1)
AERC	Assam Electricity Regulatory Commission (as in Table 1)
ABT	Availability Based Tariff (as in para. 10)
BERC	Bihar Electricity Regulatory Commission (as in Table 1)
BESCOM	Bangalore Electricity Supply Co. (as in Table 2)
BU(s)	Billion Unit(s) (as in Table 7)
CPP	Captive Power Producer (as in para. 12)
CERC	Central Electricity Regulatory Commission (as in para. 6)
CPSU(s)	Central Public Sector Unit(s) (as in para. 55)
CSERC	Chhattisgarh State Electricity Regulatory Commission (as in Table 1)
CESC	Chamundeswari Electricity Supply Corporation Ltd. (as in Table 2)
CESU	Central Electricity Supply Utility of Orissa (as in Table 2)
CTU	Central Transmission Utility (as in para. 65)
DERC	Delhi Electricity Regulatory Commission (as in Table 1)
DPL	Durgapur Projects Ltd. (as in Table 2)
DPSC	Dishergarh Power Supply Corporation Ltd. (as in Table 2)
Discom(s)	Distribution company(ies) (as in para. 13)
ERC(s)	Electricity Regulatory Commission(s) (as in para. 2)
EHT	Extra High Tension (supply energised at more than 33 kV) (as in Table 2)
EHV	Extra High Voltage (as in Table 2)
FOR	Forum of Regulators (as in para. 37)
GERC	Gujarat Electricity Regulatory Commission (as in Table 1)
GESCOM	Gulbarga Electricity Supply Co. Ltd. (as in Table 2)
HERC	Haryana Electricity Regulatory Commission (as in Table 1)
HESCOM	Hubli Electricity Supply Company Ltd. (as in Table 2)
HT	High Tension (supply energised at a voltage more than 450 V but not more than 33 kV) (as in Table 2)
HPERC	Himachal Pradesh Electricity Regulatory Commission (as in Table 1)
HVPN	Haryana Vidyut Prasaran Nigam (as in Annex 4)
IPP(s)	Independent Power Producer(s) (as in para. 14)
J&KERC	Jammu and Kashmir Electricity Regulatory Commission (as in Table 1)
JSERC	Jharkhand State Electricity Regulatory Commission (as in Table 1)
KERC	Karnataka Electricity Regulatory Commission (as in Table 1)
KSERC	Kerala State Electricity Regulatory Commission (as in Table 1)

kV	Kilo Volt (as in Table 2)
KW	Kilo Watt (as in Table 2)
kWh	Kilo Watt Hour (as in para. 10)
LT	Low Tension (supply energised at 230 V or 400 V (as in Table 2)
LIP	Consumer category in Rajasthan (as in Table 2)
MPERC	Madhya Pradesh Electricity Regulatory Commission (as in Table 1)
MERC	Maharashtra Electricity Regulatory Commission (as in Table 1)
MESCOM	Mangalore Electricity Supply Co. Ltd. (as in Table 2)
MkWh	Million kilo Watt hours (as in Table 4)
ML	Consumer category in Rajasthan (as in Table 2)
MsERC	Meghalaya Electricity Regulatory Commission (as in Table 1)
MRI(s)	Meter Reading Instrument(s) (as in para. 21)
MU	Million units (as in para. 40)
MVa	Million Volt Amperes (as in Annex 4)
MW	Mega Watt (as in para. 6)
NDS	Non-Domestic Supply Consumers in Rajasthan (as in Table 2)
NESCO	Northern Electricity Supply Co. of Orissa (as in Table 2)
NOC	No Objection Certificate (as in para. 13)
Policy	National Electricity Policy 2005 (as in para. 67)
OERC	Orissa Electricity Regulatory Commission (as in Table 1)
PERC	Punjab Electricity Regulatory Commission (as in Table 1)
RERC	Rajasthan Electricity Regulatory Commission (as in Table 1)
RLDC(s)	Regional Load Despatch Centre(s) (as in para. 65)
SEB(s)	State Electricity Board(s) (as in para. 13)
SERC(s)	State Electricity Regulatory Commission(s) (as in para. 5)
SOUTHCO	Southern Electricity Supply Co. of Orissa (as in Table 2)
SLDC(s)	State Load Despatch Centre(s) (as in para. 13)
STU(s)	State Transmission Utility(ies) (as in para. 27)
TNERC	Tamil Nadu Electricity Regulatory Commission (as in Table 1)
Tariff Policy	Tariff Policy 2006 (as in para. 7)
TERC	Tripura Electricity Regulatory Commission (as in Table 1)
UI	Unscheduled Interchange (as in para. 10)
UERC	Uttarakhand Electricity Regulatory Commission (as in Table 1)
UPERC	Uttar Pradesh Electricity Regulatory Commission (as in Table 1)
WESCO	Western Electricity Supply Co. of Orissa (as in Table 2)
WBERC	West Bengal Electricity Regulatory Commission (as in Table 1)
WBSEDCL	West Bengal State Electricity Distribution Co. Ltd. (as in Table 2)

# **Report of the Task Force on Measures for Operationalising Open Access in the Power Sector**

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## **I. INTRODUCTION**

1. The inter-Ministerial Task Force on Measures for Operationalising Open Access in the Power Sector was constituted on 8 February 2008 under the chairmanship of Shri B.K. Chaturvedi, Member (Power), Planning Commission, pursuant to the decision taken in the fifteenth meeting of the Empowered Sub-Committee on Infrastructure held on 25 January 2008. The Task Force was asked to examine the current status and make recommendations on measures for operationalisation of the provisions of the Electricity Act 2003 (the “Act”) in respect of open access. The composition, and order constituting the Task Force, is at **Annex 1**.

2. The Task Force met with representatives of the State Governments of Chhattisgarh, Haryana, Orissa, Rajasthan and Kerala (Andhra Pradesh was invited, but could not participate) as well as the Electricity Regulatory Commissions (the “ERCs”) of Haryana and Rajasthan in order to elicit their points of view. A questionnaire circulated to these States by the Task Force is at **Annex 2**.

3. The Task Force also held discussions with a select group of representatives of other stakeholders, notably, consumers, developers and traders. The stakeholders invited to the discussions are listed in **Annex 3**.

4. The Empowered Sub-Committee of the Committee on Infrastructure considered the Report of the Task Force at its meeting held under the chairmanship of Deputy Chairman, Planning Commission, on 7 November 2008. Pursuant to its decision, the Task Force elicited the views of the Electricity Regulators and other invitees on the Report at its meeting held on 28 November 2008, and incorporated the agreed recommendations into the revised Report below.

## II. MEETINGS HELD BY THE TASK FORCE

5. **First Meeting:** The first meeting of the Task Force was held on 27 February 2008. The Task Force recapitulated the provisions relevant to open access in the Act, the extant policies and guidelines, the status of implementation of open access, and the constraints and problems. The discussions included issues of compliance by State Governments and State Electricity Regulatory Commissions (the “SERCs”) with the Act, costs of open access both in the short-term and long-term, capacity availability and other structural issues.

6. It was noted that the Central Electricity Regulatory Commission (the “CERC”) first issued the ‘Inter-State Open Access Regulations’ on 30 January 2004, read with the amendments of 21 February 2005. Revised ‘Inter-State Open Access Regulations’ effective from 1 April 2008 were issued on 25 January 2008. As of May 2008, intra-State open access regulations for transmission and distribution have been issued by 21 State regulators of which 19 Regulators have allowed open access to consumers with connected load greater than or equal to 1 Mega Watt (MW) by 1 January 2009, that is, within the time frame specified in the Act. The cross subsidy surcharge has been specified by 18 State regulators. Though 21 State regulators have specified the transmission charges, only 18 have specified wheeling charges, 14 have notified the loss levels for their transmission systems, and 12 have notified loss levels for their distribution systems. The details are given in **Table 1** below:

**Table 1: Status of Notifications of Open Access Regulations, Surcharge and Other Charges (as of May 2008)**

Sl. No	State Regulator	Notification of Open Access Regulation	Determination of Surcharge	Open Access allowed to consumers with connected load $\geq 1$ MW	Determination of Wheeling Charges	Determination of Transmission Charges
1	Andhra Pradesh	Yes	Yes	Yes	Yes	Yes
2	Assam	Yes	Yes	wef 31.12.2008	Yes	Yes
3	Bihar	Yes	Yes	wef 01.12.2008	Yes	Yes
4	Chhattisgarh	Yes	Yes	Yes	Yes	Yes
5	Delhi	Yes	No	Yes	Yes	Yes
6	Gujarat	Yes	Yes	Yes	Yes	Yes
7	Haryana	Yes	No	Yes	Yes	Yes



Sl. No	State Regulator	Notification of Open Access Regulation	Determination of Surcharge	Open Access allowed to consumers with connected load $\geq 1$ MV	Determination of Wheeling Charges	Determination of Transmission Charges
8	Himachal Pradesh	Yes	Yes	Yes	Yes	Yes
9	Jammu & Kashmir	Yes	Yes	No	Yes	Yes
10	Jharkhand	Yes	Yes	Yes	Yes	Yes
11	Karnataka	Yes	Yes	Yes	Yes	Yes
12	Kerala	Yes	Yes	wef 01.12.2008	Under Process	Yes
13	Madhya Pradesh	Yes	Yes	Yes	Under Process	Yes
14	Maharashtra	Yes	Yes	Yes	Yes	Yes
15	Meghalaya	No	No	No	No	No
16	Orissa	Yes	Yes	Yes	Yes	Yes
17	Punjab	Yes	Yes	Yes	Yes	Yes
18	Rajasthan	Yes	Yes	Yes	Yes	Yes
19	Tamil Nadu	Yes	Yes	-	Yes	Yes
20	Tripura	No	No	No	No	No
21	Uttar Pradesh	Yes	Yes	Yes	Yes	Yes
22	Uttarakhand	Yes	Case to case basis	wef 31.12.2008	Under Process	Yes
23	West Bengal	Yes	Yes	Yes	Yes	Yes
<b>Status (Number of "Yes")</b>		<b>21</b>	<b>18</b>	<b>19</b>	<b>18</b>	<b>21</b>

Source: Forum of Regulators.

7. The State-wise cross subsidy surcharge applicable on open access, as well as the conformity of the surcharge with the Tariff Policy 2006 (the "Tariff Policy") notified by the Central Government, are given in **Table 2** below:

**Table 2: Intra-State Open Access: Cross-Subsidy Surcharge (as on 20 August 2008)**

*(in paise per kWh)*

Sl. No.	State		Cross-Subsidy Surcharge (Paise/Unit)	Period	Surcharge Methodology and its conformity with Tariff Policy
1	Andhra Pradesh		Yet to be decided		Surcharge notified using Embedded Cost method (which is contrary to Tariff policy) is <i>sub-judice</i>
2	Assam	LT General Supply	6	2007-08	Cost of Supply method: Contrary to Tariff Policy
		Public Water Works	77		
		Bulk (Education)	46		
		HT bulk Supply	38		
		HT Industries I	47		
		HT Industries II	35		
		Tea & Coffee	148		
		Oil & Coal	41		
3	Bihar	132 kV EHT	170	2007-08	Not available
		33 kV HT	141		
4	Chhattisgarh	132 kV & above	65	2007-08	Average cost method: Contrary to Tariff Policy
		33 kV	38		
5	Delhi		Yet to be decided		Under discussion with stakeholders
6	Gujarat		100	2007-08	Approved annually on submission of ARR: Contrary to Tariff Policy

Sl. No.	State		Cross-Subsidy Surcharge (Paise/Unit)					Period	Surcharge Methodology and its conformity with Tariff Policy
7	Haryana		Nil					Jan 2008 to March 2009	Embedded Cost: Contrary to Tariff Policy
8	Himachal Pradesh		Nil					2007-08	Avoided Cost: Contrary to Tariff Policy
9	Jharkhand	EHT (132 kV)	29					2007-08	Average Cost of Supply: Contrary to Tariff Policy
		HT (33 kV)	39						
10	Jammu and Kashmir		Not available						
11	Karnataka		BESCOM	MESCOM	CESC	HESCOM	GESCOM	2007-08	Cost of Supply: Contrary to Tariff Policy
		EHT	93	62	52	66	86		
		HT bulk supply	78	34	20	22	67		
12	Kerala		5					2008	Lack of adequate clarity for long and medium applications
13	Madhya Pradesh	132 kV & above	94					2007-08	Lack of adequate clarity for long and medium applications
		33 kV & above	63						
14	Maharashtra		Nil					April 2007 onwards	Lack of adequate clarity for long and medium applications
15	Meghalaya		Yet to be decided						Yet to be decided
16	Orissa		WESCO	NESCO	SOUTHCO	CESU	2008-09	Avoided Cost: Contrary to Tariff Policy	
		HT	Load						
			100%	47	69	125			84
			90%	54	77	133			92
80%	64	87	143	102					

Sl. No.	State		Cross-Subsidy Surcharge (Paise/Unit)				Period	Surcharge Methodology and its conformity with Tariff Policy
			70%	77	100	156	115	
			60%	94	117	173	132	
			50%	116	139	195	154	
			40%	132	154	211	170	
			30%	157	180	236	195	
			20%	208	231	287	246	
		EHT	100%	98	130	185	154	
			90%	106	139	194	162	
			80%	117	149	204	173	
			70%	130	162	217	186	
			60%	148	180	235	204	
			50%	173	205	260	228	
			40%	188	220	275	244	
			30%	213	245	300	269	
20%	264	296	351	320				
17	Punjab		Nil				2007-08	Surcharge equal to one-half of current cross subsidy: Contrary to Tariff Policy
18	Rajasthan	LIP-EHV	55.00				2008-09	Embedded Cost: Contrary to Tariff Policy
		LIP-33 kV	38.00					
		LIP-11 kV	16.00					
		ML-132 kV	44.00					
		ML-33 kV	28.00					
		ML-11 kV	5.00					
		NDS-132 kV	147.00					
		NDS-33 kV	130.00					
		NDS-11 kV	108.00					

Sl. No.	State		Cross-Subsidy Surcharge (Paise/Unit)				Period	Surcharge Methodology and its conformity with Tariff Policy
			Drawal Voltage	Industrial consumer	Educational Institution	Commercial Consumer		
19	Tamil Nadu	Injection Voltage					2005-06	Lack of adequate clarity for long and medium applications
		22KV/11KV	22KV/11KV	97.17	91.71	274.87		
		33 KV	22KV/11KV	105.47	100.01	283.17		
		110 KV	22KV/11KV	108.49	103.03	286.19		
		110 KV	33 KV	116.8	111.34	294.5		
		110 KV	110 KV	119.82	114.36	297.52		
		230 KV	22KV/11KV	110.76	105.3	288.46		
		230 KV	33 KV	119.06	113.6	296.46		
		230 KV	110 KV	122.08	116.62	299.78		
230 KV	230 KV	124.35	118.89	302.05				
20	Tripura		Yet to be decided					Yet to be decided
21	Uttarakhand		Nil					Case to case basis: Contrary to Tariff Policy
22	Uttar Pradesh		Nil				2008-09	Lack of adequate clarity for long and medium applications
23	West Bengal		CESC LTD	WBSEDCL	DPSC LTD	DPL	2007-08	Avoided Cost: Contrary to Tariff Policy
			192.75	239.88	307.93	118.42		

Source: Forum of Regulators.

## States

8. **Meetings with States:** The second meeting of the Task Force was held on 17 March 2008, and the third on 27 March 2008. In these meetings representatives of the State Governments of Haryana and Rajasthan, and the concerned SERCs were invited to present the situation as regards implementation of the provisions in the Act and the difficulties faced by them in their operationalisation. The fourth meeting of the Task Force was held on 15 April 2008, and the fifth on 26 May 2008. In these meetings representatives of the State Governments of Orissa, Kerala and Chhattisgarh were similarly invited.

9. The substantive discussions with the States are summarized below, and the details of their open access regulations are enumerated in **Annex 4**.

### Haryana

10. The Government of Haryana informed that the Haryana Electricity Regulatory Commission (the “HERC”) notified Open Access Regulation on 19 May 2005. In light of the power supply deficit, the surcharge and the additional surcharge on short-term open access transactions was waived off in the summer months of 2006 and 2007, and from January 2008 the waiver has been extended until March 2009. The rates of surcharge and additional surcharge have, therefore, not been fixed as yet, and modalities to address over/under-drawal in accordance with the Availability Based Tariff (ABT) are being worked out. Unscheduled Interchange (UI) charges, which have also not been specified by HERC, derive by default, therefore, from the CERC notification effective from 1 April 2008. The total estimated applicable charges for contracted power, of say 10 MW round the clock @ Rs. 3/- at State periphery worked out as below:

- State Transmission Charges : 4.6 Paise/kWh
- Losses @ 2.6% : 7.8 Paise/kWh (by reduction in volume)
- SLDC Charges : 0.42 Paise/kWh approx.
- Distribution Charges: : 25 Paise/kWh
- Losses @ 6% : 18 Paise/kWh (by reduction in volume)
- Surcharge/Addl. Surcharge : 0 Paise/kWh (waived off)
- Total at consumer end : Rs. 3.56/kWh

11. The Task Force noted that an interesting feature in Haryana was that despite waivers on surcharge and additional surcharge, consumers were still not able to draw power on open access basis from outside the State. The Government of Haryana drew attention to the current practice of some surplus States in prevailing upon their generators

not to supply power directly to consumers in other States and to the need for the Task Force to address the situation.

12. The Task Force also noted that the HERC regulations would have different implications for tariffs under open access depending on whether the power was drawn from a Captive Power Producer (the “CPP”), other generators or suppliers within the State, or from outside the State. The few applications received were for short-term power supply, indicating that either surplus power was not available, or auctions in open market were more profitable for the respective suppliers.

13. The Government of Haryana recommended to the Task Force that although a single point application for open access has been instituted, and direct application to the State Load Despatch Centre (the “SLDC”) without going through the distribution company is also possible for existing consumers, automatic grant of a No Objection Certificate (the “NOC”) from the exporting State should be enabled. The Task Force noted that the concerned SLDC did not grant the NOC automatically. It was also noted that charges on standby power had not been notified by HERC, in the absence of which consumers of open access would be dependent on case by case charges imposed by the State Electricity Boards (the “SEBs”) or distribution companies (the “Discoms”), as the case may be. It was felt that unless a long-term policy on open access was introduced, open access may not be viable.

14. The Government of Haryana also stated that shortage of power supply and frequent outages and restrictions imposed in some States were the other main problems or constraints to operationalising open access under Section 42. Noting that some States have sought to identify the lack of adequate capacity for inter-State transmission as a bottleneck to open access under Section 42, the Task Force also discussed such capacity constraints. It was noted that there was limited surplus power with CPPs and the Independent Power Producers (the “IPPs”). In the case of Orissa, for instance, the surplus is sold to the state-owned trading company at reasonable prices, which it then sells outside the State at excessive prices with a view to wiping out its losses. It was also noted that the issue was not one of adequate capacity in transmission, but whether substitution of suppliers and competition among them was being restricted by the SEB/Discoms.

15. The Task Force noted that there was no consumer in the State who had availed of open access under Section 42 of the Act.

## **Rajasthan**

16. The RERC (Terms and Conditions of Open Access) Regulations 2004 were notified in May 2004. RERC has also notified RERC (Tariff for Captive Power Plants) Regulations, 2007 and determined tariff for different supplies (firm/non-firm/inadvertent) of captive plants to distribution licensees. RERC (Levy of Fee and Charges by the State Load Despatch Centre) Regulations, 2005 defines the scheduling requirements and charges levied by SLDC.

17. The Task Force noted that although RERC has largely followed the principles and elements of the Tariff Policy for determination of the cross subsidy surcharge, the formula itself for calculation of cross subsidy surcharge varied from that in the Tariff Policy.

18. In Rajasthan, as in Haryana, differentiation between short-term and long-term consumers was being made because the transmission capacity had to be created for long-term consumers. Even though the network is independent of the source of supply, some substitution among suppliers of power would entail additional capacity. The Task Force considered that such differentiation between consumers in the regulatory framework was not appropriate. Even under the Act, such differentiation between short-term and long-term consumers was not contemplated.

19. The Government of Rajasthan also clarified that consumers were being consulted with a view to resolving their problems. However, their lack of preparedness was a constraint and technical capacity building among stakeholders was necessary. Moreover, open access consumers would not be forthcoming unless standby supply was assured. Open access has been used so far only by CPPs for whom banking of energy was also being permitted.

20. The Task Force noted that open access under Section 42 had not yet been operationalised in Rajasthan.

## **Orissa**

21. In Orissa, the OERC (Terms and Conditions for Open Access) Regulations were notified on 6 June 2005. The formats, procedures, guidelines, etc. were approved by OERC and issued in August 2006. Open access charges are determined by OERC (Determination of Open Access Charges) Regulations of 6 June 2006, and the subsequent amendment of 13 June 2006. Energy accounting is based on joint meter reading and electronically dumped data through Meter Reading Instrument (the "MRI").



The ABT compliant APEX metering system has been approved for open access consumers. The segregation of UI charges is done at the State level by the SLDC.

22. Specific issues discussed included the rationale for differentiating between short-term and long-term consumers, definition of ‘wrongful use’ and penalty charges, use of average cost instead of marginal cost mandated by the Tariff Policy in the calculation of surcharge by Orissa, and State intervention in export of power. It was felt that the pricing of open access supply is prohibitive since the normal tariff is much lower. Moreover, the surcharge was not being levied in accordance with the Tariff Policy. The Government of Orissa noted that CPPs were allowed to sell power outside Orissa if bilateral agreements with the State had not been entered into. Besides, with the surge in domestic demand, the availability of surplus for export was negligible (with only around Rs. 200 crore accruing from trading of power). 25 MW were being supplied to Haryana under an existing bilateral agreement, with all other such agreements having expired. Since October 2006, IPPs were mandated to supply 25% of generated power to GRIDCO Ltd. Orissa, with the balance to be sold through competitive bidding.

23. The Task Force noted that no consumer in Orissa has so far been able to avail of open access under Section 42.

### **Kerala**

24. It was explained that the Kerala State Electricity Regulatory Commission (the “KSERC”) (Terms and Conditions for Open Access) Regulations of 2 November 2005 were partly amended in September 2007, but no open access applications were reported in Kerala. The nodal agency was not yet determined and the application fee was not yet fixed. Any charges for strengthening the system would have to be borne by the consumer.

25. The emphasis in the State’s policy on the achievement of the social objectives was discussed in light of the current policy direction of the Government of Kerala in respect of open access. The Task Force was of the view that the provisions of the Act did not disregard social objectives, and measures to operationalise open access could be put in place consistent with the social objectives.

26. The Task Force noted that open access under Section 42 has not been operationalised so far in Kerala.

## **Chhattisgarh**

27. The CSERC had notified Intra-State Open Access Regulation on 26 July 2005, as amended on 20 July 2007. Procedures and Guidelines for Intra-State Short Term Open Access were issued on 10 April 2006. At present, and after some amendments, the Nodal Agency for short term open access is SLDC and for long term, the State Transmission Utility (the “STU”). Any open access customer can avail open access of the distribution system on payment of wheeling charges, cross-subsidy surcharge and additional surcharge. The cross subsidy surcharge is applicable on 33 kV and 132 kV and above voltage categories.

28. The Government of Chhattisgarh confirmed that there has been no application for open access under Section 42, attributing it mainly to the lack of surplus power and the absence of provision on banking. However, no legal constraints were perceived to operationalising open access.

29. The Task Force noted that open access under Section 42 had not been operationalised in Chhattisgarh.

### **Stakeholders**

30. ***Meeting with Stakeholders:*** The Task Force met with developers, consumers, traders, and industry associations on 26 May 2008. The stakeholders generally lauded the objectives of the open access provisions of the Act, notably drawing attention to the free sale and purchase of surplus power to bridge the demand supply gap at affordable prices, and enabling non-discriminatory transactions by utilizing the transmission system and distribution system by a third party across the country.

31. However, there was unanimity among the participants that the process for obtaining open access is long drawn in practically every state, and that even after getting open access, it may not be competitive due to heavy transmission losses and cross subsidy charges. Among the reasons cited were (a) that the state generally prevented export of power to other states usually on the pretext of having no surplus transmission capacity but more generally because no state wanted cheaper power to go outside the state; (b) electricity becomes unaffordable due to high transmission losses of SEBs and high cross subsidy surcharge levied by the SERCs; and (c) a plethora of charges and fees have been specified, which vary from state to state.

32. The stakeholders offered the following suggestions: (a) accelerated efforts to build up new transmission capacity across the country; (b) the state grid should be mandated to grant permission within a time bound programme to permit free sale and purchase of electricity and not compel generators to sell electricity to the SEB/Discom in the state; (c) the transmission losses should be rationalised; (d) the mechanisms for scheduling, metering, accounting and settling of bills should be handled through a central clearing cell; and (e) the cross subsidy surcharge should be phased out.

33. The fact of Haryana having eliminated the cross subsidy surcharge a few weeks ago was perceived to be useful, but there was no experience in its actual working. It was also argued that this was a short term measure, and uncertainty remained regarding its status in the long term. Consumers would be hesitant to contract open access in such cases. Even in respect of short term open access, a five day notice period for revision of the scheduling of power was considered to be prohibitive.

34. It was generally felt that the open access surcharge levied by SERCs was not in line with the Tariff Policy, and that this situation needed to be rectified. No state has so far provided a level playing field between open access suppliers and SEB/Discom. The generating companies, among the stakeholders, showed resistance to sales of electricity in a short supply market to individual consumers under Section 42. It was also felt that consumers under Section 42 would need a standby option for continuity in electricity supply, and excessive charges associated with such standby arrangements would be a disincentive. Augmentation of transmission and distribution capacity was also seen as vital to assured availability and reliability of electricity supplies.

35. The prevailing view was that since producers, state utilities and traders were able to sell power at exorbitant prices to licensees in scarcity-ridden States, there was hardly any surplus available for supply to bulk consumers at stable prices. The trading prices have often exceeded Rs. five per unit in the recent past and if this continued, any meaningful competition or even the evolution of an orderly market would not be possible.

### **Electricity Regulators**

36. The Task Force met with the Central and State Electricity Regulators on 28 November 2008. There was agreement that open access for consumers was an important aspect of the Act and that despite shortages of electricity, the enabling conditions for open access to bulk consumers should be established.

37. Chairman CERC provided details of the deliberations in the Forum of Regulators (the “FOR”), which has constituted a Working Group on open access and whose report is awaited. So far, the following constraints and recommendations have been identified:

- (i) States should separate transmission from trading in conformity with the Act. It was noted that all SEBs have not been reorganised and further that in many States either a holding company continues to control the subsidiaries created for transmission, distribution and trading or a trading arm of the STU has been created to perpetuate the single buyer model;
- (ii) independent functioning of SLDCs free from the control of a transmission or trading licensee must be ensured. This would also include financial autonomy;
- (iii) capacity building of SLDCs, including technology upgradation, organisational restructuring, certification of competence, and standardised qualification requirements of personnel was necessary;
- (iv) reasonable and pre-determined standby charges and other arrangements for standby power for open access consumers need to be established;
- (v) adequate metering, billing, balancing and settlement mechanisms were necessary; and
- (vi) cross subsidy surcharge should be calculated according to the formula specified in the Tariff Policy. Where a formula yielded a negative surcharge, it should be set at zero. It should also be clarified that cross subsidy surcharge would be reduced over time so that any fears relating to a possible increase in future are eliminated.

38. The broad conclusions drawn from the meeting were as below:

- (i) Strengthening of SLDCs and their independence was key to open access;
- (ii) recommendations in Part A were broadly endorsed;
- (iii) States should be sensitised to operationalising the provisions of the Act without delay as denial of open access amounted to their violation; and
- (iv) use of the term ‘direct’ in respect of regulatory commissions may be reconsidered.

### III. ASSESSMENT OF THE DEMAND-SUPPLY GAP

39. The Task Force noted that in the Tenth Plan, 2002-03 through 2006-07, the overall demand-supply situation and peak shortage were exacerbated with actual capacity addition restricted to 21,180 MW (or 27,284 MW, taking into account additions due to renewable energy projects and other non-conventional energy projects identified for execution to bridge the expected shortfall) against a capacity addition target of 41,110 MW. Among the reasons for slippages in capacity addition were delays in supplies/erection by suppliers and contractors and in obtaining environmental and other clearances, failure to achieve financial closure, problems of resettlement and rehabilitation of project-affected persons and non-availability of fuel/gas.

40. The peak demand for power during the year 2007-08 was 108,866 MW but with the available generation capacity, a peak load of only 90,793 MW could be met, thus leaving a deficit of 16.6%. This compares very unfavourably with the peak deficit of 13.8% reported in 2006-07 at end of the Tenth Plan. Similarly, against an energy requirement of 739,345 million units (MUs) in 2007-08, availability was confined to 666,007 MU, falling far short of the requirement by 9.9%. Region-wise growth in demand has exceeded supply in every region. The region-wise position of peak demand met and energy availability during the period 2007-08 is given in Table 3 below:

**Table 3: Region-Wise Power Shortage Situation in 2007-08**

Region	Energy Requirement (MU)	Energy Availability (MU)	Deficit %	Peak Demand (MW)	Peak Met (MW)	Deficit %
Northern	219,797	196,147	10.8	32462	29,495	9.1
Western	247,173	208,223	15.8	38277	29,385	23.2
Southern	187,743	181,820	3.2	26777	24,368	9.0
Eastern	75,833	72,099	4.9	12031	10,699	11.1
North Eastern	8,799	7,713	12.3	1742	1,347	22.7
<b>All India</b>	<b>739,345</b>	<b>666,007</b>	<b>9.9</b>	<b>108,866</b>	<b>90,793</b>	<b>16.6</b>

Source: Central Electricity Authority.

41. During the first quarter of the current financial year, April-June 2008-09, energy requirements exceeded availability by 10.1% as compared to a deficit of 8.7% in the corresponding period of the previous year. Deficit in peak availability was 14.6% as compared to 13.5% in the corresponding period of the previous year. According to the

Seventeenth Electric Power Survey conducted by CEA, a peak energy requirement of 152,746 MW has been projected for 2011-12, the terminal year of the Eleventh Plan. Viewed against the planned capacity addition, the projected demand-supply gap in the last four years of the Eleventh Plan would be as shown in Table 4 below.

**Table 4: Projected Power Demand-Supply Situation in the Eleventh Plan**

ALL INDIA		ESTIMATED			
		2008-09	2009-10	2010-11	2011-12
Peak Availability	MW	107879.0	117759.0	133497.0	153902.0
Peak Load	MW	121185.0	130652.0	140947.0	152746.0
<b>Surplus (Deficit)</b>	<b>MW</b>	<b>-13306.0</b>	<b>-12893.0</b>	<b>-7450.0</b>	<b>1155.5</b>
<b>Surplus (Deficit)</b>	<b>%</b>	<b>-11.0</b>	<b>-9.9</b>	<b>-5.3</b>	<b>0.8</b>
Energy Availability	MU	709526.0	780140.0	885111.0	1025488.0
Energy Requirement	MU	794561.0	848390.0	906316.0	968659.0
<b>Surplus (Deficit)</b>	<b>MU</b>	<b>-85035.0</b>	<b>-68250.0</b>	<b>-21205.0</b>	<b>56828.8</b>
<b>Surplus (Deficit)</b>	<b>%</b>	<b>-10.7</b>	<b>-8.0</b>	<b>-2.3</b>	<b>5.9</b>

Source: Central Electricity Authority.

42. Any slippages in realisation of the planned capacity additions would correspondingly reduce the projected decline in the deficits. Table 5 below details out the status in respect of 2007-08, the first year of the Eleventh Plan.

**Table 5: Slippages in Capacity Addition in 2007-08**

(in MW)

Type/Sector	Target for 2007-08	Achievement in 2007-08	Deficit
<b>Thermal</b>	<b>12704.20</b>	<b>6620.00</b>	<b>6084.20</b>
Central	4650.00	1990.00	2660.00
States	5017.20	3880.00	1137.20
Private	3037.00	750.00	2287.00
<b>Hydro</b>	<b>2751.00</b>	<b>2423.00</b>	<b>328.00</b>
Central	1030.00	1030.00	0.00
States	1721.00	1393.00	328.00
Private	0.00	0.00	0.00
<b>Nuclear</b>	<b>880.00</b>	<b>220.00</b>	<b>660.00</b>
Central	880.00	220.00	660.00
<b>Total</b>	<b>16335.20</b>	<b>9263.00</b>	<b>7072.20</b>
Central	6560.00	3240.00	3320.00
States	6738.20	5273.00	1465.20
Private	3037.00	750.00	2287.00

Source: Central Electricity Authority.

43. With the growing deficit in the availability of electricity in various States in the last few years, the prices of electricity sold by licensees in surplus states, either through SEBs/Discoms or with intermediation of traders, in the short-term market has been rising rapidly. The details are given in Table 6 below. Table 7 details out the volume of electricity traded by sale-price bands.

**Table 6: Trends of Prices of Electricity in Inter-State Trade**

Year	Volume of Electricity Traded (BUs)	Growth in the volume of electricity traded (%)	Weighted Average Sale Price (Rs./kWh)
2004-05	11.85	-	2.32
2005-06	14.19	20%	3.23
2006-07	15.02	6%	4.51
2007-08	20.96	40%	4.52

Source: Central Electricity Regulatory Authority.

**Table 7: Volume of Electricity Traded by Sale-Price Bands**

Sale Price (Rs)	2004-05		2005-06		2006-07		2007-08		April-June 2008	
	Volume (MUs)	% to Total Vol.	Volume (MUs)	% to Total Vol.	Volume (MUs)	% to Total Vol.	Volume (MUs)	% to Total Vol.	Volume (MUs)*	% to Total Vol.
0.0-1.0					252.2	1.8				
1.0-2.0	1210.0	10.2								
2.0-3.0	10378.3	87.6	5103.3	36.0	2732.7	19.6	9226.4	44.0		
3.0-4.0	258.3	2.2	8437.1	59.5						
4.0-5.0			647.9	4.6	10507.4	75.3	9803.6	46.8	6.5	0.2
5.0-6.0										
6.0-8.0					461.7	3.3	1934.8	9.2	2889.8	64.9
8.0-10.0									414.9	9.3
<b>Total</b>	<b>11846.5</b>	<b>100</b>	<b>14188.3</b>	<b>100</b>	<b>13954.0</b>	<b>100</b>	<b>20964.8</b>	<b>100</b>	<b>3311.1</b>	<b>74.4</b>

Source: Central Electricity Regulatory Authority.

\* The volume traded excludes trades through swapping or banking arrangement (1140.66 MUs) since such price information is not available.

44. The Task Force felt that the growing shortages and the rising unregulated prices of traded electricity would have unsustainable consequences for the financial viability of the SEBs and for the orderly development of the power sector.

#### IV. UNREGULATED PRICES

45. The Task Force noted that the prices of electricity supplied by intra-state traders were unregulated and this had created a situation where the ruling wholesale prices exceeded Rs. 5 per unit. A similar problem was also noted in inter-State sales by some utilities and generating companies. As a result, no bulk consumer was in a position to buy electricity at these rates and also bear the open access charges. The Task Force noted that the Act did not envisage the prevalent situation where sales of surplus power are being made to the utilities without any regulation of tariffs, thus exposing consumers to exploitation especially in power deficit States.

46. The Task Force noted that as long as there is shortage of power and the utilities are buying power at the higher end of the price spectrum, open access to consumers would not be actualized. However, it was also noted that sale of electricity at such high prices could not be justified nor deemed as consistent with the objectives of the Act or the Tariff Policy.

47. The impending situation could be characterized as one arising out of varied interpretations of Section 62(1)(a) relating to determination of tariffs in transactions involving sale by traders to utilities at exorbitant prices, with resultant adverse implications for their consumers. The Task Force felt that generating companies should not have unrestrained freedom to sell electricity to Discoms at unregulated prices and that operationalising open access would enable price signals to flow to consumers and promote a healthy development of the market.

48. The Task Force also felt that the trading margins fixed by the CERC under the Tariff Policy 2006 should apply in a seamless manner in an inter-State transaction, that is, without the trading margin being increased at each sale-purchase point in a chain of transactions emanating from a generating company and finally reaching a Discom through multiple traders.

49. Although it was also argued that Section 86(1)(b) of the Act provided that the concerned SERC shall regulate electricity purchase and the procurement process of distribution licensees, including the price at which electricity shall be procured from the generating companies or licensees or other sources through agreements for purchase of power for distribution within the State, emergency purchases by deficit States as well as inter-State transactions which incorporate sales within the surplus State through an intra-State trader are not addressed. Section 86(1)(b) has been rendered inutile because a number of SERCs have provided for emergency purchases of electricity in their tariff



regulations, which allow SEBs/Discoms to purchase a percentage of emergency supplies at a price higher than the highest merit order price approved by the concerned SERC. Given the demand-supply gap in deficit States, the concerned SERC could not be expected to curtail such emergency purchases from a socio-economic or political perspective. The results of these practices are reflected in the surge in the traded prices despite the fact that inter-State trading margins have been fixed by CERC at 4 paise per unit. The Task Force also noted that the Act requires SERCs to protect consumers in relation to intra-State matters while it is the duty of the CERC to protect consumers in relation to inter-State matters. The transactions between licensees of surplus States and deficit States lie in the jurisdiction of CERC and must, therefore, be regulated by CERC. Giving the varying interpretations of law, the Task Force was of the view that an amendment to Section 62(1)(a) of the Act as reasoned below would be imperative to mitigate this situation and to protect the interests of the consumers and to prevent exploitation by licensees of surplus States.

50. The Task Force also noted that the problem has arisen because of a perceived lack of clarity in the law on the extent to which sale of electricity via electricity traders should be regulated. Section 62(1)(a) provides that the Appropriate Commission shall determine the tariff for “supply of electricity by a generating company to a distribution licensee”. It does not explicitly spell out that such supply should also include supply through an electricity trader. Although trading margins are subject to caps imposed by the appropriate regulatory commission, there are two possible situations in which these caps may be ineffective in controlling the price of supply. First, a generating company may sell electricity to an intra-State trader in State A, who in turn may sell to an inter-State trader for resale to a distribution company in State B. While the second inter-State sale to State B is subject to a trading cap by the CERC, the initial intra-State sale is required to be regulated by the SERC. But many SERCs do not impose any caps on the trading margins for sale outside the State. In fact, some SERCs have fixed trading margins for intra-State transactions relating to electricity that is ultimately consumed within the State. However, no such margin is being fixed where the ultimate consumer is outside the State. The price of electricity can therefore be raised in the initial sale itself and then resold across the border with a regulated inter-State trading margin. The Task Force felt that such discrimination is untenable and violates the provisions of the Constitution of India that prohibit restrictions on inter-State trade, and recommended that the Tariff Policy should be suitably amended to address this issue. Second, even if intra-State trading margins are enforced, the regulation can be bypassed by creating

multiple layers of traders through which a substantial price build up could take place in intra-State trades before the electricity is sold to another State.

51. Ordinarily, what cannot be done directly should not be allowed to be done indirectly as it would defeat the intent and purpose of the law. The intention of Section 62(1)(a) is clearly that tariff for sale by a generating company to a distribution licensee shall be regulated since the tariffs the distribution company can charge on its sales are also regulated. However, it could be argued by electricity-surplus States that the law does not explicitly regulate indirect sales by a generating company via an electricity trader and that in any situation of shortage in some other States such as prevails at present, traders could not be prevented from obtaining electricity from within a surplus State for sale outside it at a large profit thus capturing the scarcity premium on electricity. These prices could create a market signal that would stimulate investment in generation, which would in the course of time expand supply and erode the scarcity premium in such trading. However, this argument is questionable because the sale is taking place to a regulated entity in another State which is bound to meet its commitments to consumers of electricity even if this is done through purchases of electricity at high prices. There are features of the electricity market which make normal market functioning less effective, notably the inability to stock electricity which creates a situation where scarcity can lead to large price spikes. In fact if such sales perform a useful market function there would be no reason to prevent the generating company to directly sell the surplus electricity to a distribution company in another State fully internalizing the profit on surplus sales. The law explicitly excludes this possibility and logic requires that this intention should not be circumvented.

52. Moreover, the reason why such unregulated sales are not contemplated is that they are not intrinsically market-based, since most of them are among State-owned companies that will pay the unreasonable amounts for electricity even though they can not recover these high costs of these purchases from their own customers. The rationale for allowing them to buy only from a regulated sale is precisely because such purchases will by definition be passed on to consumers in the form of a higher allowed tariff.

**53. From the discussions held by the Task Force, it was confirmed that no consumer in any State has availed of open access under Section 42 of the Act so far, and in fact in many States the provisions of the Act have not been operationalised so far. The facility has been availed of only by captive producers, and that too marginally.**

54. It was also considered that the so called electricity surplus is itself not really a surplus since it is being created in States that have a substantial unmet demand because rural connectivity has not been expanded. The distribution company or trading entity in State A would thus have a justification to avoid supplying electricity at regulated prices to its own consumers and potential consumers, and instead to divert it for out-of-state sales at a premium.

**55. The Task Force noted that the surplus states were extracting undue rent from their surplus supplies, some of which actually came from the Central Public Sector Units (CPSUs). It was also noted that the SERCs had acquiesced in this.**

56. The Task Force, therefore, felt that it would be highly desirable to create appropriate price signals by opening up the market for open access under which there would be no restriction on sale of electricity at an unregulated price to the final consumer. Once open access is effectively operationalised, it would provide a legitimate window for market forces in which knowledgeable consumers can choose between supply from the utility at regulated prices and unregulated supplies at negotiated prices.

57. The Task Force considered the point raised by some Members whether the proposed amendment to Section 62(1)(a) of the Act could result in restraining generating companies from making direct sales at unregulated prices, and instead either sell their surplus electricity through the grid at UI charges or through an energy exchange. In either case, the problem of sales of surplus electricity at high prices to deficit States would not be mitigated. In this regard it was reasoned that the nature of sales at UI charges and those at spot prices on the energy exchange are intrinsically different from the transaction between the generating company and the SEBs/Discoms with intermediation of the trader that is being sought to be captured through the proposed amendment. It was felt that the Central Government should advise the State Governments to direct their respective SERCs to specify reasonable transmission charges, standby charges as well as SLDC charges expeditiously, and further that the procedural requirements for open access under Section 42 of the Act should be simplified. These measures, along with the technological upgrading and capacity building of SLDCs to enable such open access, would serve to encourage developers to invest in additional capacity generation by factoring in demand for electricity by open access consumers in a more realistic manner.

58. It was also noted that although the weighted average price of traded power has increased substantially over the last few years, it remains lower than that obtained through the UI mechanism, the ceiling of which is Rs. 10 per unit as fixed by CERC. Accordingly, in fact, UI is acting as a surrogate trading mechanism and giving perverse incentive to generators to earn higher revenues at the cost of grid security – since instead of the UI serving as a penalty for violation of grid discipline, it is now emerging as a surrogate market price determining factor in shortage scenarios. That also defeats the underlying principle of securing grid discipline by making sure that the generators and the off-takers work within the declared availability and allocated dispatch capacities. Accordingly, the Task Force recommended that it should be ensured that UI is prevented from becoming a vehicle for trading by default and that utilities are deterred from gaming in the sector.

59. The Task Force noted further that the planned capacity addition, excluding CPPs, for supply to utilities as per the approved XI Plan Document is 78,700 MW. It has been assessed that funding, both equity and debt components, has been substantially tied up for the Central generation projects, and that the required resources will need to be mobilised by state utilities / state governments. In physical terms, approx. 67,000 MW of planned capacity addition is already under construction with funding having been tied up by the implementing agencies. Since a substantial portion of the planned additional capacity is already backed by power purchase agreements, such capacity addition would not be adversely affected by any proposed amendments to the trading regime for electricity.

**60. Accordingly, the Task Force concluded that it would be in public interest to amend section 62(1)(a) to make it explicit that supply of electricity by a generating company to a distribution licensee includes supply through an electricity trader.**

61. The Task Force felt that an amendment to the Act could take time. In the meanwhile, the Ministry of Power, in consultation with CERC, may be advised to evolve suitable policies and measures to check unregulated and exploitative prices in inter-State sales of electricity. This may include capping of prices by CERC under the provisions of Section 62(1)(a) of the Act, which empowers the appropriate commissions to cap electricity prices to deal with price rise in scarcity conditions. The Task Force felt that the provisions of this Section are sufficiently attracted because of widespread shortages in peak and energy demand. It recommended that the appropriate commission should, therefore, be advised to exercise their powers and perform their

duties under the aforesaid Section. The Task Force also recommended that if necessary, the Tariff Policy should also be suitably amended to give effect to these provisions.

*Views of the representative of DEA*

62. The Finance Secretary was represented by Joint Secretary, Department of Economic Affairs, who did not agree with some of the recommendations of the Task Force. In his view, statutory changes recommended in the draft Report may not be taken up for further consideration noting also that “trading” has been recognized as a salient feature of the Act and the amendments proposed in regard to Section 62(1)(a) by the Task Force would go against the basic scheme of the Act, as evidenced by the Statement of Objects and Reasons, the National Tariff Policy, issued under Section 3 of the Act (refer clause 5.7.1 which provides for 15% of the generating capacity to be sold outside long term Power Purchase Agreements) and the Parliamentary Standing Committee Report on Electricity Bill, 2001.

63. It was also stated that available evidence may not support a contention that “trading in electricity in substantial volumes at exorbitantly high prices is snuffing out the electricity available for open access transactions”. Therefore, any tinkering with the emerging fledgling power market would be retrograde.

*Views of the representative of Ministry of Power*

64. The Power Secretary was represented by Additional Secretary, Ministry of Power, who did not agree with some of the recommendations of the Task Force. In his view also, statutory changes recommended in the draft Report may not be taken up for further consideration. Furthermore, he observed that the mandate before the Task Force was to deliberate only on the issue of open access and not on issues related with power market and trading, and that, therefore, recommendations relating to the market mechanism, trading of electricity, regulation of trading and price cap should be deleted.

## V. PROVISIONS OF THE ELECTRICITY ACT 2003 REGARDING OPEN ACCESS

65. The Electricity Act 2003, while repealing the Electricity (Supply) Act 1948, brought in significant changes in the power sector by enabling competition, mandating open access to transmission and distribution networks, recognising trading and supply as a licensed activity, and delicensing generation. The Act also provides significant powers and functions to the State and Central ERCs for regulating generating companies, Central and State Transmission Utilities (the “CTU” and “STU”, respectively), Regional and State Load Despatch Centres (the “RLDCs” and “SLDCs”, respectively), transmission licensees, distribution licensees and electricity traders.

66. Electricity is a commodity with several features that distinguish it from other goods and services. It can not be stored and must, therefore, be consumed as soon as it is produced. Its instant transportation requires a transmission and distribution network. For ensuring orderly transportation of electricity, regional and state load centres are required to supervise, coordinate and ensure optimum flow of electricity. Sections 28, 29, 32 and 33 of the Act stipulate the powers, functions and duties of these load centres. Since transmission and distribution networks operate as natural monopolies, their regulation is critical to the orderly functioning of the electricity industries. The powers and functions relating to regulation of inter-State and intra-State networks are vested in the Central and State ERCs respectively.

67. Open access is defined in Section 2(47) of the Act as “*non-discriminatory provision for the use of transmission lines or distribution system or associated facilities with such lines or system by any licensee or consumer or a person engaged in generation in accordance with the regulations specified by the Appropriate Commission*”. Sections 38(2)(d), 39(2)(d) and 40(c) provide for open access by the CTU, STU and transmission licensees respectively. Section 42(2) provides for open access to the networks of distribution licensees. The National Electricity Policy (2005) and the Tariff Policy (2006) read with Section 42(2) and 42(4) of the Act specify the formula for cross subsidy surcharge. A copy of these provisions of the Act is at **Annex 5**, and of the National Electricity Policy (2005) and the Tariff Policy (2006) are at **Annexes 6 and 7**, respectively.

68. Part V of the Act deals with the functioning and regulation of transmission licensees. While denying it the right to engage in the business of generating of electricity or trading therein, Section 38(2)(d) enjoins upon the CTU “... *to provide non-discriminatory open access to its system for use by –*

*(i) any licensee or generating company on payment of the transmission charges, or*

*(ii) any consumer as and when such open access is provided by the State Commission under sub-section (2) of section 42, on payment of the transmission charges and a surcharge thereon, as may be specified by the Central Commission.”*

69. Section 28 imposes on the Central Government the responsibility of establishing RLDCs, whose functions are provided in Section 28. Sections 79 and 86 set out the functions of Central and State ERCs with respect to inter-State and intra-State transmission and wheeling of electricity respectively.

70. There are similar provisions in respect of State Transmission Utilities and other transmission licensees for ensuring orderly transmission and despatch of electricity. Section 30 imposes upon the State ERC, the responsibility to facilitate efficient and economical flow of electricity within its jurisdiction. Section 31 imposes on the State Governments the responsibility of establishing SLDCs, whose functions are provided in Section 32.

71. **Open access to distribution networks:** The rights conferred upon consumers of electricity to source their supply from competing producers and suppliers and the corresponding duties imposed upon transmission entities, distribution licensees and RLDCs/SLDCs to transport electricity in an efficient and non-discriminatory manner aim at creating a competitive market that would improve efficiencies and cut costs. Moreover, it would create a market for supply by competing producers and thus encourage investments in creation of generating capacities which need not rely on distribution licensees for payment security. Trading licensees have been introduced, under the provisions of Section 52, to lend greater efficiency and competitiveness in the sale and purchase of electricity. To ensure the 'last mile' access to consumer, Sections 42(2) through 42(4) stipulate the duties of distribution licensees in providing open access to their networks:

*42. Duties of distribution licensee and open access –*

*...*

*(2) The State Commission shall introduce open access in such phases and subject to such conditions, (including the cross subsidies, and other operational constraints) as may be specified within one year of the appointed date by it and in specifying the extent of open access in successive phases and in determining the charges for wheeling, it shall have due regard to all relevant factors including such cross subsidies, and other operational constraints:*

*Provided that such open access may be allowed before the cross subsidies are eliminated on payment of a surcharge in addition to the charges for wheeling as may be determined by the State Commission:*

*Provided further that such surcharge shall be utilised to meet the requirements of current level of cross subsidy within the area of supply of the distribution licensee:*

*Provided also that such surcharge and cross subsidies shall be progressively reduced in the manner as may be specified by the State Commission:*

*Provided also that such surcharge shall not be leviable in case open access is provided to a person who has established a captive generating plant for carrying the electricity to the destination of his own use:*

*Provided also that the State Commission shall, not later than five years from the date of commencement of the Electricity (Amendment) Act, 2003, by regulations, provide such open access to all consumers who require a supply of electricity where the maximum power to be made available at any time exceeds one megawatt.*

*(3) Where any person, whose premises are situated within the area of supply of a distribution licensee, (not being a local authority engaged in the business of distribution of electricity before the appointed date) requires a supply of electricity from a generating company or any licensee other than such distribution licensee, such person may, by notice, require the distribution licensee for wheeling such electricity in accordance with regulations made by the State Commission and the duties of the distribution licensee with respect to such supply shall be of a common carrier providing non-discriminatory open access.*

*(4) Where the State Commission permits a consumer or class of consumers to receive supply of electricity from a person other than the distribution licensee of his area of supply, such consumer shall be liable to pay an additional surcharge on the charges of wheeling, as may be specified by the State Commission, to meet the fixed cost of such distribution licensee arising out of his obligation to supply.*

72. An amendment to the Act in January 2004 mandated that open access to consumers of loads of more than 1 MW shall be ensured by January 2009 for all parts of the country.

73. Besides the above, under the provisions of Section 9(2), consumers who draw their supplies from their captive generating stations have been granted open access to the transmission and distribution networks without having to pay the open access surcharge applicable for consumers securing supplies under Section 42(2) of the Act.



74. By virtue of the above provisions of the Act, open access to the distribution networks for transportation of electricity to consumers has been made a statutory right and without discrimination among consumers across the country. The power to phase its introduction among consumers was intended to be only a form of reasonable restriction that should be imposed to the extent necessary. Such phasing could not, therefore, be a matter of arbitrary discretion. The concerned State ERCs would need to demonstrate that the phasing to be stipulated in their regulations under Section 42(2) was necessary and was of the extent warranted by public interest.

75. The Task Force noted the following salient points relating to open access:

- Open access is the backbone of competition and the corner stone of the Act;
- Relevant provisions of the Act must be used to promote open access as this would lead to better supplies at competitive prices;
- Open access should be encouraged for utilizing all the generating capacity available;
- Regulatory commissions must abide by the National Electricity Policy and Tariff Policy issued by the Central Government under Section 62 of the Act.
- Regulatory Commissions have a statutory duty to levy reasonable charges relating to open access so that consumers can avail of their statutory rights.
- Open access would help promote investment in generating capacity as it would allow producers to sell directly to credit worthy consumers instead of relying solely on SEBs/Distribution companies.

## VI. ASSESSMENT OF THE PRESENT SITUATION

76. It was noted that pursuant to the issuance of CERC regulations with the RLDCs operating as the nodal agencies, open access to inter-State transmission lines operated by the central transmission utility is fully operational. In fact, such non-discriminatory open access in transmission existed even prior to the Act. Provision of open access to the inter-State transmission networks also does not pose any significant problems. Moreover, captive power stations alone have been availing of such open access to States' transmission networks in several States even before the Act of 2003 came into force. Past practice coupled with the entitlement conferred under Section 9(2) upon captive producers demonstrate that provision of open access to the transmission and distribution networks is physically and technically feasible, although it has not been provided within the States with the requisite degree of transparency and operational efficiency. Postponing open access on the grounds of technical or physical constraints can not, therefore, be upheld. In this context it was noted that since the SEBs or Discoms could be expected to press for monopolistic retention of their bulk consumers by either postponing the introduction of open access or by making it unviable, the State ERCs would need to arrive at a reasonable judgement on its phasing in order to safeguard consumer interest by operationalising their statutory rights. Furthermore, non-discriminatory open access to licensee participants on the Indian Energy Exchange has been operationalised since 27 June 2008.

77. The Task Force noted that lack of transmission capacity could not be cited as a constraint to provision of open access under section 42 of the Act. While augmentation of the transmission system was necessary irrespective of whether the electricity is to be transmitted for a Discom or for a consumer availing of open access. The Task Force noted that the lack of adequate transmission capacity was a constraint to the flow of electricity *per se* and was not an issue specific to open access alone especially when open access is sought by a consumer who is already connected to the grid and drawing his requirements from the Discom. A change in the source of supply i.e. purchase from a supplier instead of the Discom did not in any manner alter the transmission load and could not be a reason for denying open access.

78. The Task Force, however, noted that separate wheeling charges and energy charges were generally not being notified by the Appropriate Commission consistently with section 42 read with section 62 of the Act. The result was that a level playing field did not exist for a supplier of electricity that wanted to compete with the distribution

licensee of the area. To enable competing suppliers to use the distribution network on a level playing field, the tariff for distribution companies should clearly specify the energy charges and wheeling charges separately. The Task Force, therefore, recommended that the SERCs should be advised to specify wheeling charges and energy charges separately in conformity with section 42 read with section 62 of the Act.

79. It was noted that some States were blocking intra-State open access to embedded captive plants or intra-State IPPs who wish to sell electricity to licensees or consumers outside the State. In effect, this compelled such producers to sell to the state-owned companies at comparatively low prices. In some cases, the electricity so procured, by denial of open access, is sold by these state-owned entities to other states at much higher prices.

80. The Task Force further noted that although the Act prohibits a transmission utility from trading, with the objective of ensuring non-discriminatory open access to competing suppliers, the provisions of the Act have not been implemented by many of the States even where they have unbundled the SEBs. Thus, either a trading arm has been created by the STU to perpetuate the single buyer model or the holding company continues to control the operations related to transmission and trading. The Task Force felt that segregation of transmission and trading was vital to ensuring non-discriminatory open access to consumers.

81. In respect of the functioning of the SLDCs, the Task Force noted that the SLDCs were not functioning independently of the transmission or trading licensees with adverse consequences for open access consumers. It recommended that the State Governments should be advised to create SLDCs with financial and operational independence from transmission and trading licensees.

82. It was agreed that the introduction of competition would only be achieved when bulk consumers are able to avail of open access under Section 42 of the Act, and the Task Force, therefore, decided to focus on operationalisation of open access to consumers under Section 42 as distinct from open access to transmission lines for transporting supplies to licensees.

83. It was noted that Section 42(3) is a substantive provision on open access to consumers since it provides for access to electricity other than from distribution licensees. Accordingly, for the category of consumers below 1 MW also, phased open access in distribution should be introduced. In this regard, it was noted that while consumers above 1 MW had open access starting 1990 under the United Kingdom Act

of 1989, all consumers upto the household level had open access by 1999. Moreover, the broad trends witnessed in the United Kingdom show that with introduction of competition and open access, the consumer prices generally declined and then stabilised at a comparatively lower level to the advantage of all consumers. The Task Force deliberated that unless the supply of power increases, such general trends in prices may not be seen in India.

84. The status of intra-State open access transactions is given in **Table 8** below:

**Table 8: Intra-State Open Access: Progress in Transactions**

*(in numbers as on 30 May 2008)*

<b>States</b>	<b>Open Access to CPPs u/s 9</b>	<b>Open access to consumers u/s 42</b>
Chhattisgarh	33	-
Gujarat	15	-
Himachal Pradesh	-	-
Haryana	-	-
Jharkhand	-	-
Kerala	0	-
Madhya Pradesh	18	-
Orissa	2	-
Maharashtra	4	-
Punjab	1	-
Rajasthan	9	-
Tamil Nadu	-	-
West Bengal	-	-
<b>Total</b>	<b>82</b>	<b>-</b>

*Source: Forum of Regulators.*

85. The Task Force noted that only CPPs had so far availed of open access under Section 9 of the Act. This section mandates provision of open access without payment of any cross subsidy surcharge. So far as bulk consumers were concerned, it was concluded that presently not a single MW of electricity was being supplied through the open access provisions of Section 42 in the entire country.

86. It was noted that several State ERCs had not followed the provisions of the Tariff Policy insofar as it related to determination of cross subsidy charges payable by consumers. As a result, the charges payable by consumers made it uncompetitive for them to buy from sources other than the SEBs/Discoms, thus defeating the letter and spirit of the Act. Other issues such as standby arrangements and UI had also not been addressed. As a result, open access has remained on paper only.

87. In the context of the criteria of allotment of transmission of open access and the priorities to long-term consumers versus short-term consumers, the issues of upgrading SLDCs as well as of whether the National Electricity Policy should lay down the guidelines and methodology for the determination of ABT were discussed.

88. It was generally agreed that the cross-subsidy surcharge under Section 42(2) and the additional surcharge under Section 42(4) should not be so onerous that they eliminate competition. Under the Tariff Policy, the formula for calculating the cross-subsidy surcharge was the applicable tariff less the licensee's marginal cost of supply adjusted for losses at the relevant voltage level and wheeling charges. The licensee's cost of supply is to be calculated as weighted average of power purchase costs of the costliest 5% power at the margin (excluding liquid fuel based power).

89. It was also felt that in the absence of assured provision of standby power supply arrangements and charges, the Discoms would be inclined to discourage open access by charging high standby charges for supply of electricity to an open access consumer in the event of failure of supply from the source contracted by such consumer. Paragraph 8.5.6 of the Tariff Policy provides that "*[i]n case of outages of generator supplying to a consumer on open access, standby arrangements should be provided by the licensee on the payment of tariff for temporary connection to that consumer category as specified by the Appropriate Commission.*" Accordingly, the Task Force recommended that the SERCs should be mandated to specify the temporary connection charges to be charged by the Discoms for providing standby supply.

90. The Task Force also recommended that since no case of open access under section 42 of the Act had been reported so far, the Regulators should meet with the stakeholders to address their concerns with a view to operationalising the scheme of the Act. It further recommended that consumer education and pro-active action by the electricity regulators both at the Centre and in the States was vital for encouraging open access to consumers.

91. Towards the further implementation of the provisions on open access, it was noted that although the Forum of Regulators had agreed, at their meeting held on 5 November 2007, to launch a website on open access with effect from 1 December 2007, many States were not providing the requisite information. Moreover, a Committee under Shri Bhanu Bhushan, Member, CERC, has been constituted for examining issues related to scheduling and metering of intra-State open access transactions, whose report has now been issued. Finally, a Committee has also been constituted under Shri

Gireesh Pradhan, Additional Secretary, Ministry of Power, for examining issues relating to staffing and autonomy of load dispatch centres, whose report has also been submitted.

### *International Experience*

92. The Task Force noted that open access has been introduced progressively in United Kingdom, United States of America, Europe, Australia, New Zealand and parts of Latin America. It was also noted that in a number of these countries, open access has been introduced right upto the level of household consumers. For example, household consumers in London, New York, Amsterdam, Melbourne and Auckland can choose among competing suppliers. In the case of London, such open access was introduced in 1999 and household consumers can presently choose from 12 competing suppliers.

## VII. RECOMMENDATIONS

### A. RECOMMENDATIONS OF THE TASK FORCE:

#### (i) Regulatory and System Changes

- (a) *Central and States' ERCs should be advised by the appropriate governments to comply with the statutory requirements relating to open access in a time bound manner. In particular, they must prescribe the open access surcharge in accordance with the provisions of the Tariff Policy notified by the Central Government under Section 3 of the Act.*
- (b) *The State Governments should be advised to advise the States' ERCs to specify the temporary connection charges to be charged by the Discom for providing standby supply in accordance with paragraph 8.5.6 of the Tariff Policy.*
- (c) *The States' ERCs should conform to the provisions of Section 42(2) of the Act which requires them to provide open access to all consumers of 1 MW and above within a period of five years from the coming into effect of the amendment of the Act in January 2004.*
- (d) *The state authorities should be advised to permit free sale of electricity and not compel generators to sell electricity to the SEB/Discom in the state except where a power purchase agreement exists.*
- (e) *State Governments and States' ERCs should be suitably advised to enable operationalisation of open access to promote a healthy development of the market where private investment can be attracted. Where the State Governments or the respective SERCs do not conform to the Act or the Tariff Policy thereunder, the State Governments be advised and matter discussed in the appropriate inter- and intra-State forum of Power Secretaries/Ministers.*
- (f) *To enable competing suppliers to use the distribution network on a level playing field, the tariff for distribution companies should clearly specify the energy charges and wheeling charges separately. It is, therefore, recommended that the SERCs should be advised to specify wheeling*

*charges and energy charges separately in conformity with section 42 read with section 62 of the Act.*

- (g) Segregation of transmission and trading should be undertaken by all States in accordance with the letter and spirit of the Act and in a time-bound manner.*
- (h) State Governments should be advised to set up SLDCs as independent entities with financial and operational autonomy.*
- (i) SLDCs should be upgraded in a time-bound manner to enable open access under section 42.*
- (j) SERCs should ensure other enabling arrangements such as standby supplies at affordable prices, metering and settlement.*
- (k) IPPs, captive and small generators should be allowed to bring power into the market without any hindrance in grant of open access.*
- (l) Regulators should meet with the bulk consumers and other stakeholders to address their concerns with a view to operationalising the scheme of open access as provided in the Act. Consumer education and pro-active action by Regulators, both at the Centre and in the States, was considered vital for encouraging open access to consumers.*

**(ii) Central Government**

- (a) The Central Government should not permit supplies from the unallocated central quota of CPSUs to be sold by a recipient state and/or its utilities outside the recipient state either directly or through an intra-State to deficit states at prices exceeding the regulated tariff and a margin of 4 paise per unit which is the permissible trading margin. States would, however, be free to use CPSU power and sell their comparatively expensive generation to other States so long as the trading margin is restricted as per regulations of CERC. States that do not conform to the above should not be allocated any power from the unallocated quota and the electricity thus saved could be diverted to other States/utilities.*
- (b) 25% of the Centre's discretionary allocation of 15% of CPSU generating capacity may be made available for direct sale by CPSUs to open access*



consumers. As for new capacity of CPSUs, 50% of the unallocated quota may be reserved for sale to open access consumers. Prices for sale to open access consumers may be determined by bidding. The profits made by the CPSUs may be shared equally with the respective states where open access consumers are located. (Reservation by Ministry of Power).

- (c) *the scheme of UI charges should be reviewed so as to ensure that UI does not become a vehicle for trading by default and gaming in scheduling is checked. A mechanism should be evolved to facilitate grid constituents and off-takers to verify and take corrective measures against gaming by anyone. Any grid disturbances attributable to such indiscipline by any utility should invite penalty that may include suspension/termination of the license and appropriate regulation of their errant behavior.*

## **B. ISSUES WHICH NEED FURTHER DISCUSSION**

### **(i) Statutory changes**

- (a) *Section 62(1)(a) should be amended to make it explicit that supply of electricity by a generating company to a distribution licensee includes supply through an electricity trader. This would ensure the benefit of regulated prices for all consumers buying electricity from their distribution companies. Suppliers of surplus power would be free to sell directly to consumers who wish to avail of open access at mutually determined prices.*
- (b) *Amendment to the Act could take time. In the meanwhile, the Ministry of Power, in consultation with CERC, may evolve suitable policies and measures to check unregulated and exploitative prices in inter-State sales of electricity. This may include capping of prices by CERC under the provisions of Section 62(1)(a) of the Act.*

### **(ii) Regulatory and System Changes**

- (a) *Section 62(1)(a) empowers the appropriate commission to cap electricity prices to deal with price rise in scarcity conditions. The provisions of this Section are sufficiently attracted because of widespread shortages in peak and energy demand. The appropriate commissions should, therefore, be*

*advised to exercise their powers and perform their duties under the aforesaid Section. If necessary, the Tariff Policy should also be suitably amended to reflect the above.*

- (b) Some SERCs have fixed trading margins for intra-State transactions relating to electricity that is ultimately consumed within the State. However, no such margin is being fixed where the ultimate consumer is outside the State. Such discrimination is untenable and violates the provisions of the Constitution of India that prohibit restrictions on inter-State trade. The Tariff Policy should be suitably amended to address this issue.*
- (c) The trading margin fixed by the CERC should apply in a seamless manner in any one transaction emanating from a generating company and terminating with a Discom through multiple traders. The total trading margin to be recovered by all the traders should not exceed the maximum margin allowed to a single trader.*

**(iii) Central Government**

- (a) The Central Government should release APRDP assistance to States that comply with the above and enable consumers to exercise their statutory right to open access. The States should demonstrate this by an actual increase in open access supplies under section 42 of the Act. An additional allocation of Rs. 1,000 crore over and above the present approved funding may be made under APDRP to incentivise the States that actually enable open access. An agreed incentive per unit of open access supplies may be disbursed to the States under APDRP.*

.....

**Constitution of Task Force on Measures for Operationalising Open Access in the Power Sector**

Government of India  
Planning Commission  
(Secretariat for the Committee on Infrastructure)

Yojana Bhavan, Sansad Marg,  
New Delhi – 110 001

No. N-14026/2/2008- Infra

Dated: 8<sup>th</sup> February 2008

**OFFICE MEMORANDUM**

**Subject: Task Force on Measures for Operationalising Open Access in the Power Sector**

Pursuant to the decision taken in the fifteenth meeting of the Empowered Sub-Committee on Infrastructure held on 25 January 2008, an inter-Ministerial Task Force on Measures for Operationalising Open Access in the Power Sector is hereby constituted as below:

- |      |  |          |
|------|--|----------|
| i)   | Shri B.K. Chaturvedi, Member, Planning Commission                                  | Chairman |
| ii)  | Shri Anil Razdan, Secretary, Ministry of Power                                     | Member   |
| iii) | Dr. D. Subba Rao, Finance Secretary, Ministry of Finance                           | Member   |
| iv)  | Shri Gajendra Haldea, Principal Adviser to Deputy Chairman, Planning Commission    | Member   |
| v)   | Shri Rakesh Nath, Chairman and Ex-Officio Secretary, Central Electricity Authority | Member   |

2. The Task Force will examine the current status and make recommendations on measures for operationalisation of the provisions of the Electricity Act, 2003, in respect of open access.

3. The Task Force will submit its report by 31 March 2008.

Sd/-

(Vandana Aggarwal)  
Director (Infra)  
Tele: 2309 6507  
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1. Shri B.K. Chaturvedi, Member (Power), Planning Commission, Yojana Bhawan, New Delhi
2. Shri Anil Razdan, Secretary, Ministry of Power, Shram Shakti Bhawan, New Delhi
3. Dr. D. Subba Rao, Finance Secretary, Ministry of Finance, North Block, New Delhi
4. Shri Gajendra Haldea, Principal Adviser to Deputy Chairman, Planning Commission, Yojana Bhawan, New Delhi
5. Shri Rakesh Nath, Chairman and Ex-Officio Secretary, Central Electricity Authority, Sewa Bhawan, R.K. Puram, New Delhi - 110 066

Copy to:

1. PPS to Deputy Chairman, Planning Commission
2. PPS to Secretary, Planning Commission

**Questionnaire for State Power Departments and State Electricity Regulatory Commissions (SERCs) regarding Open Access u/s 42 of the Electricity Act, 2003**

1.	Whether intra-State open access regulations have been notified? Please provide copies of notifications.
2.	What is the time frame introduction of open access?
3.	What are the eligibility conditions specified for availing open access u/s 42?
4.	Which is the Nodal Agency for grant of open access?
5.	What are the guidelines for transmission for open access consumers?
6.	Whether, and in what manner, open access consumers have been categorized (eg. long-term consumers or short-term consumers)?
7.	Application fee for open access consumers?
8.	What are the charges leviable on open access consumers? i) Surcharge ii) Additional Surcharge iii) Unscheduled Interchange Charge iv) Reactive Energy Charge v) Transmission Charge vi) Distribution Wheeling Charge vii) Any other, please specify
9.	What is the commercial principle adopted for energy accounting i.e. by way of scheduling or on actual based on Joint Meter Reading (JMR)?
10.	What is approved metering system for open access consumers (SEM or Conventional)?
11.	What is settlement procedure notified for Unscheduled Interchange?



**List of Stakeholders**

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## Details on the Provisions on Open Access in the Sample Five States

### 1. Haryana

1. Phasing of intra-State open access has been done: for consumers with contract demand of 15 MVa and above by 1 October 2006, of 3MVa and above by 1 October 2007, and of 1 MVa and above by 1 April 2008. The STU can allow open access even prior to the specified dates, eg. consumers with connected load of 1 MW and above were allowed open access from May 2006. Intra-State open access consumers have been categorized into (a) long-term (5 years or more), and (b) short-term consumers (others). Allotment priorities applied are: (i) distribution licensees; (ii) other long-term open access consumers; (iii) existing open access consumers, provided the application for renewal is made 30 days prior to the expiry of the existing term; and (iv) new consumers. Applications for open access are to be made to the Haryana Vidyut Prasaran Nigam (HVPN), the notified nodal agency.

2. An application fee of Rs. 5,000 for short-term and Rs. 50,000 for long-term open access is applicable. UI charges are 105% (for over-drawals) and 95% (for under-drawals) of the UI rate. Rates for short-term open access customers for FY 2008 for open access are as below:

- Charges up to 6 hours a day : Rs. 277.5 per MW/day
- Charges from 6 to 12 hours a day : Rs. 555.0 per MW/day
- Charges above 12 hours a day : Rs. 1,109.0 per MW/day  
or 4.6 paise/kWh approx.
- SLDC Charges : @ Rs. 1,000 per day  
or part of the day
- Wheeling charges for DISCOMs : @ 25 paise/Unit

3. Until the notification on UI charges is made by HERC, the open access consumer pays the charges for the contracted power to the supplier on the basis of scheduled energy. Any over-drawals of energy over the scheduled volume are charged the applicable consumer tariff to the relevant category upto the contract demand (in 15 minutes time blocks). Penalty of 25% on the applicable rate is charged on over-drawals beyond the contract demand. A monthly minimum charge based on the existing tariff schedule for connected load and contract demand is also mandated. Haryana has exempted the charges on reactive energy transactions until 31 March 2009, although the penalty for power factor below 0.85 remains applicable. Transmission losses of 2.6% and distribution losses of 6% are borne by open access consumers.

4. The status of existing open access consumers in Haryana is as below:

- Request by Reliance Energy Ltd. for 500 MW long-term open access is under process.
- Short-term open access for 60 MW to M/s Jindal Stainless Ltd

- Short-term open access for 4 MW to M/s Adani Enterprises Ltd
- Short-term open access for 9 MW to M/s RICO Auto Industries Ltd

## 2. Rajasthan

5. As from 1 April 2008, consumers with capacity of 1 MVA and more can avail open access. However, a person covered by a policy of the State Government relating to captive generation or generation through non-conventional energy sources existing on the date of commencement of open access regulations is eligible to avail open access irrespective of contract demand.

6. The charges applicable on open access consumers are as below:

- Transmission Charges : Rs. 87.20/kW/month
- Transmission Losses : 4.5%
- SLDC Operation Charges : Rs. 100/MW of contracted capacity/day subject to a maximum of Rs. 1,000/day payable in advance in four quarterly installments
- SLDC Scheduling Charges :
  - For generators above 10 MW : Rs. 50,000/Schedule if daily schedule is not submitted
  - For generators above 1 MW : Rs. 5,000/Schedule if weekly schedule is not submitted
  - For open access consumers : Rs. 1,000/Schedule if daily schedule is not submitted
- DISCOM's Wheeling charges :
  - 132 kV : 1 p/kWh
  - 33 kV : 11 p/kWh
  - 11 kV : 32 p/kWh
- Distribution Losses :
  - 33 kV : 3.80%
  - 11 kV : 12.60%
- Surcharge :

Category	LIP – EHV	LIP – 33 kV	LIP – 11 kV	ML – EHV	ML – 33 kV	ML – 11 kV	NDS - EHV	NDS – 33 kV	NDS – 11 kV
Surcharge (Rs./kWh)	0.73	0.50	0.22	0.59	0.37	0.07	1.96	1.74	1.44

7. Banking of energy was being permitted to captive users, with consumption upto 80% of the inadvertently injected power supply permitted in the next billing period. Minimum charges have been eliminated. Although in law a CPP has to consume all the power that it generates before making drawals and/or sales to the grid, in reality price arbitrage was taking place to circumvent the specified trading margin, which would need to be addressed. For deficit States, high priced transactions could not be ruled out upfront and recourse by the Regulator to Section 86(1)(b) on merits of the case was not possible. The Task Force noted that in many States CPPs were in fact being encouraged through the differentiation in policy between captive and other users, which ultimately

would be to the disadvantage of Discoms themselves. In Rajasthan outage supply has a premium of 50% over normal tariff, in contrast with 30% in Haryana. The open access consumer could alternatively opt for UI rates, where the difference in the rates would be the only issue, since in both cases supply was assured.

8. The status of intra-State open access in Rajasthan is as below.

	Name of firm	Injection at	Drawal at	Capacity wheeled
1.	Hindustan Zinc Ltd.	Chittorgarh	Debari	34 MW
2.			Rampura Agucha	20 MW
3.			Rajpura Dariba	5 MW
4.	RSWM Ltd.	Banwara	Reengas	4 MW
5.			Gulabpura	10 MW
6.			Rishabhdeo	6 MW
7.			Hamirgarh	4.5. MW
8.	Shree Cement Ltd.	Beawar (CPP at Beawar & Ras)	Khushkhhera	8 MW (14 MW w.e.f. 1.12.2007)
9.	DCM Sriram Consolidated Ltd.	Kota	Tonk	600 KW
10.	Sangam (India) Ltd.	Sareri	Hamirgarh	2 MW

### 3. Orissa

9. The regulations categorise open access consumers into short-term (those availing access for a maximum period of one year) and long-term consumers (those availing access for a period of 25 years or more). The eligibility conditions prescribe that the licensees and generating companies including persons who have established a captive generating plant and the consumer shall be eligible for non-discriminatory open access to intra-State transmission system of the STU or any other transmission licensee subject to availability of adequate transmission capacity. The nodal agency – OPTCL/SLDC – shall permit open access in phases with commencement dates as below:

- a. From a generating company power exceeding:
  - 5MW from 1.4.2008
  - 2MW from 1.10.2008
  - 1MW from 1.1.2009
- b. From a licensee other than distribution licensees of their respective area of supply power exceeding:
  - 5MW from 1.8.2005
  - 2MW from 1.4.2006
  - 1MW from 1.4.2008

10. The applicable charges and fees are as below:

- application fee
  - for short-term access : Rs. 5,000

- for long-term access
    - transmission : Rs. 1,00,000/MW
    - distribution : Rs. 50,000/500 KW
- transmission charges FY08-09 : 21 paise/unit
- transmission loss : @ 4.5%
- distribution loss : @ 8%
- distribution wheeling charges
  - for WESCO : 52 paise/unit
  - for NESCO : 64 paise/unit
  - for SOUTHCO : 67 paise/unit
  - for CESU : 74 paise/unit
- bulk supply price (FY08-09)
  - for WESCO : 157.25 paise/KWH
  - for NESCO : 125.00 paise/KWH
  - for SOUTHCO : 70.00 paise/KWH
  - for CESU : 101.50 paise/KWH
- surcharge (for HT at median tariff of 366 paise/unit)
  - for WESCO : 121 paise/unit
  - for NESCO : 144 paise/unit
  - for SOUTHCO : 200 paise/unit
  - for CESU : 159 paise/unit
- additional surcharge : Nil for embedded licensee
- UI charges : 105% for overdrawal or under-generation and 95% for underdrawal or over-generation of the UI rate
- Reactive energy charge : to be decided by OERC
- Demand charge : Rs. 200/KVA
- Customer service charge : Rs. 700/consumer/month

#### 4. Kerala

11. KERC Regulations 2005 had categorized open access customers into short-term (availing access for a period of less than 5 years) and long-term (availing access for a period equal to or more than 5 years), with each customer eligible to renew open access to be treated as a new customer for capacity allocation. This categorisation was amended in September 2007 to short-term (those availing access for a maximum period of one year) and long-term consumers (those availing access for a period of 25 years or more). Short-term requests would be allowed on the conditions of utilizing inherent design margins and spare capacity available and margins available due to variation in power flows with allotment on a first-come-first-served basis.

12. The time table for allowing open access for customers with a maximum demand as below is:

- 10MW and above from 1.12.2005
- 5MW and above from 1.12.2006
- 3MW and above from 1.12.2007
- 1MW and above from 1.12.2008

## 5. Chhattisgarh

13. The installed capacity of Chhattisgarh State Electricity Board (CSEB) is 1,924 MW (of which 1,786 MW is thermal and 138 MW is hydel). The peak demand of CSEB has been recorded to be 2,500 MW, with approximately 2,300 MW of the power produced by CPPs, biomass plants (102 MW) and IPPs (377 MW) also consumed by industries within the state, taking the total demand to 4,800 MW. CSEB is now purchasing 694 MW power from CPPs.

14. Under the CSERC regulations the non-conventional energy generators and users may be provided open access for one MW or above at voltage level not below 33 KV with immediate effect. Captive generating plants may also be provided open access for one MW and above for carrying electricity from plant to the destination of use with immediate effect, while its phasing in to other customers is as below:

- 10MW and above from 1.4.2006
- 5MW and above from 1.10.2007
- 1MW and above from 1.4.2008

15. Open access customers are eligible for open access to the intra-State transmission system of the STU or any transmission licensee and intra-State distribution system of the CSEB or any distribution licensee, with a person having been declared insolvent or bankrupt or having outstanding dues against him for more than three months billing of a transmission or distribution licensee shall not be eligible for open access.

16. A short term open access customer is one who avails open access for a period of one year or less, while a long term customer is one who avails open access for a period of two years or more, with renewal in both cases treated as a new application.

17. The applicable fees and charges are summarized below:

- application fee for short/long term : Rs. 1,000
- open access agreement fee (after feasibility) : Rs. 10,000
- open access charge (for short/long term 33 KV and below): 15 paise/unit
- transmission/wheeling charges : 6% energy to be deducted from input

- operating/SLDC charges : Rs. 1,000/day or part thereof
- reactive energy charge : 27 paise/KVARH
- cross subsidy surcharge : 38 paise/unit

18. Energy accounting for inter-state open access transactions is done by WRLDC/WRPC, while intra-state open access accounting is presently being done by commercial section of CSEB on joint meter reading. The approved metering system for open access consumers is SEM's energy meter which is ABT compliant. The SLDC monitors and keeps account of such open access users with power transmission quantum of 1 MW and above. The necessary arrangements for 10 MW open access users are expected to be completed by May 2008 at the SLDC, and for 1MW and above by December 2008.

.....

## Provisions of the Electricity Act 2003 relevant to Open Access

### Section 2(47):

#### *Definitions*

2. *In this Act, unless the context otherwise requires,*

...

(47) “open access” means the non-discriminatory provision for the use of transmission lines or distribution system or associated facilities with such lines or system by any licensee or consumer or a person engaged in generation in accordance with the regulations specified by the Appropriate Commission;

### Section 9(2):

#### *9. Captive Generation*

...

(2) *Every person, who has constructed a captive generating plant and maintains and operates such plant, shall have the right to open access for the purposes of carrying electricity from his captive generating plant to the destination of his use: Provided that such open access shall be subject to availability of adequate transmission facility and such availability of transmission facility shall be determined by the Central Transmission Utility or the State Transmission Utility, as the case may be: Provided further that any dispute regarding the availability of transmission facility shall be adjudicated upon by the Appropriate Commission.*

### Section 30:

#### *Transmission within a State*

30. *The State Commission shall facilitate and promote transmission, wheeling and inter-connection arrangements within its territorial jurisdiction for the transmission and supply of electricity by economical and efficient utilisation of the electricity.*

### Section 31:

#### *31. Constitution of State Load Despatch Centres*

(1) *The State Government shall establish a Centre to be known as the State Load Despatch Centre for the purposes of exercising the powers and discharging the functions under this Part.*

(2) *The State Load Despatch Centre shall be operated by a Government company or any authority or corporation established or constituted Government company or any authority or corporation established or constituted by or under any State Act, as may be notified by the State Government.*

*Provided that until a Government company or any authority or corporation is notified by the State Government, the State Transmission Utility shall operate the State Load Despatch Centre:*

*Provided further that no State Load Despatch Centre shall engage in the business of trading in electricity.*

### **Section 32:**

#### *32. Functions of State Load Despatch Centres*

*(1) The State Load Despatch Centre shall be the apex body to ensure integrated operation of the power system in a State.*

*(2) The State Load Despatch Centre shall –*

- (a) be responsible for optimum scheduling and despatch of electricity within a State, in accordance with the contracts entered into with the licensees or the generating companies operating in that State;*
- (b) monitor grid operations;*
- (c) keep accounts of the quantity of electricity transmitted through the State grid;*
- (d) exercise supervision and control over the intra-state transmission system; and*
- (e) be responsible for carrying out real time operations for grid control and despatch of electricity within the State through secure and economic operation of the State grid in accordance with the Grid Standards and the State Grid Code.*

*(3) The State Load Despatch Centre may levy and collect such fee and charges from the generating companies and licensees engaged in intra-State transmission of electricity as may be specified by the State Commission.*

### **Section 38(2)(d):**

#### *38. Central Transmission Utility and functions –*

...

*(2) The functions of the Central Transmission Utility shall be -*

...

- (d) to provide non-discriminatory open access to its transmission system for use by -*
  - (i) any licensee or generating company on payment of the transmission charges; or*
  - (ii) any consumer as and when such open access is provided by the State Commission under sub-section (2) of section 42, on payment of the transmission charges and a surcharge thereon, as may be specified by the Central Commission:*

*Provided that such surcharge shall be utilized for the purpose of meeting the requirement of current level cross-subsidy:*

*Provided further that such surcharge and cross-subsidies shall be progressively reduced and eliminated in the manner as may be specified by the Central Commission:*

*Provided also that such surcharge may be levied till such time the cross subsidies are not eliminated:*



*Provided also that the manner of payment and utilisation of the surcharge shall be specified by the Central Commission:*

*Provided also that such surcharge shall not be leviable in case open access is provided to a person who has established a captive generating plant for carrying the electricity to the destination of his own use.*

**Section 39(2)(d):**

*39. State Transmission Utility and functions –*

...

*(2) The functions of the State Transmission Utility shall be -*

...

*(d) to provide non-discriminatory open access to its transmission system for use by -*

*(i) any licensee or generating company on payment of the transmission charges; or*

*(ii) any consumer as and when such open access is provided by the State Commission under sub-section (2) of section 42, on payment of the transmission charges and a surcharge thereon, as may be specified by the State Commission:*

*Provided that such surcharge shall be utilized for the purpose of meeting the requirement of current level cross-subsidy:*

*Provided further that such surcharge and cross-subsidies shall be progressively reduced and eliminated in the manner as may be specified by the State Commission:*

*Provided also that such surcharge may be levied till such time the cross subsidies are not eliminated:*

*Provided also that the manner of payment and utilisation of the surcharge shall be specified by the State Commission:*

*Provided also that such surcharge shall not be leviable in case open access is provided to a person who has established a captive generating plant for carrying the electricity to the destination of his own use.*

**Section 40(c):**

*Duties of Transmission licensees*

*40. It shall be the duty of a transmission licensee -*

...

*(c) to provide non-discriminatory open access to its transmission system for use by -*

*(i) any licensee or generating company on payment of the transmission charges; or*

*(ii) any consumer as and when such open access is provided by the State Commission under sub-section (2) of section 42, on payment of the transmission charges and a surcharge thereon, as may be specified by the State Commission:*

*Provided that such surcharge shall be utilized for the purpose of meeting the requirement of current level cross-subsidy:*

*Provided further that such surcharge and cross-subsidies shall be progressively reduced and eliminated in the manner as may be specified by the Appropriate Commission:*

*Provided also that such surcharge may be levied till such time the cross subsidies are not eliminated:*

*Provided also that the manner of payment and utilisation of the surcharge shall be specified by the Appropriate Commission:*

*Provided also that such surcharge shall not be leviable in case open access is provided to a person who has established a captive generating plant for carrying the electricity to the destination of his own use.*

#### **Sections 42(2) to 42(4):**

*42. Duties of distribution licensee and open access –*

...

*(2) The State Commission shall introduce open access in such phases and subject to such conditions, (including the cross subsidies, and other operational constraints) as may be specified within one year of the appointed date by it and in specifying the extent of open access in successive phases and in determining the charges for wheeling, it shall have due regard to all relevant factors including such cross subsidies, and other operational constraints:*

*Provided that such open access may be allowed before the cross subsidies are eliminated on payment of a surcharge in addition to the charges for wheeling as may be determined by the State Commission:*

*Provided further that such surcharge shall be utilised to meet the requirements of current level of cross subsidy within the area of supply of the distribution licensee:*

*Provided also that such surcharge and cross subsidies shall be progressively reduced in the manner as may be specified by the State Commission:*

*Provided also that such surcharge shall not be leviable in case open access is provided to a person who has established a captive generating plant for carrying the electricity to the destination of his own use:*

*Provided also that the State Commission shall, not later than five years from the date of commencement of the Electricity (Amendment) Act, 2003, by regulations, provide such open access to all consumers who require a supply of electricity where the maximum power to be made available at any time exceeds one megawatt.*

*(3) Where any person, whose premises are situated within the area of supply of a distribution licensee, (not being a local authority engaged in the business of distribution of electricity before the appointed date) requires a supply of electricity from a generating company or any licensee other than such distribution licensee, such person may, by notice, require the distribution licensee for wheeling such electricity in accordance with regulations made by the State Commission and the duties of the distribution licensee with respect to such supply shall be of a common carrier providing non-discriminatory open access.*

*(4) Where the State Commission permits a consumer or class of consumers to receive supply of electricity from a person other than the distribution licensee of his area of supply, such consumer shall be liable to pay an additional surcharge on the charges of wheeling,*

*as may be specified by the State Commission, to meet the fixed cost of such distribution licensee arising out of his obligation to supply.*

**Section 52:**

*52. Provisions with respect to electricity trader*

*(1) Without prejudice to the provisions contained in clause (c) of section 12, the Appropriate Commission may, specify the technical requirement, capital adequacy requirement and credit worthiness for being an electricity trader.*

*(2) Every electricity trader shall discharge such duties, in relation to supply and trading in electricity, as may be specified by the Appropriate Commission.*

**Section 62(1)(a):**

*62. Determination of Tariff.*

*(1) The Appropriate Commission shall determine the tariff in accordance with provisions of this Act for –*

*(a) supply of electricity by a generating company to a distribution licensee: Provided that the Appropriate Commission may, in case of shortage of supply of electricity, fix the minimum and maximum ceiling of tariff for sale or purchase of electricity in pursuance of an agreement, entered into between a generating company and a licensee or between licensees, for a period not exceeding one year to ensure reasonable prices of electricity;*

**Section 79:**

*79. Functions of Central Commission*

*(1) The Central Commission shall discharge the following functions, namely:-*

*(a) to regulate the tariff of generating companies owned or controlled by the Central Government;*

*(b) to regulate the tariff of generating companies other than those owned or controlled by the Central Government specified in clause (a), if such generating companies enter into or otherwise have a composite scheme for generation and sale of electricity in more than one State;*

*(c) to regulate the inter-State transmission of electricity;*

*(d) to determine tariff for inter-State transmission of electricity;*

*(e) to issue licenses to persons to function as transmission licensee and electricity trader with respect to their inter-State operations;*

*(f) to adjudicate upon disputes involving generating companies or transmission licensee in regard to matters connected with clauses (a) to (d) above and to refer any dispute for arbitration;*

*(g) to levy fees for the purposes of this Act;*

- (h) *to specify Grid Code having regard to Grid Standards;*
- (i) *to specify and enforce the standards with respect to quality, continuity and reliability of service by licensees.*
- (j) *to fix the trading margin in the inter-State trading of electricity, if considered, necessary;*
- (k) *to discharge such other functions as may be assigned under this Act.*

*(2) The Central Commission shall advise the Central Government on all or any of the following matters, namely :- (a) Advise the Central Government on all or any of the following matters, namely:- (i) formulation of National electricity Policy and tariff policy: (ii) promotion of competition, efficiency and economy in activities of the electricity industry; (iii) promotion of investment in electricity industry; (iv) any other matter referred to the Central Commission by that Government.*

*(3) The Central Commission shall ensure transparency while exercising its powers and discharging its functions.*

*(4) In discharge of its functions, the Central Commission shall be guided by the National Electricity Policy, National Electricity Plan and tariff policy published under section 3.*

**Section 86(1)(a) and (b):**

*86. Functions of State Commission*

*(1) The State Commission shall discharge the following functions, namely:*

- (a) *determine the tariff for generation, supply, transmission and wheeling of electricity, wholesale, bulk or retail, as the case may be, within the State: Providing that where open access has been permitted to a category of consumers under section 42, the State Commission shall determine only the wheeling charges and surcharge thereon, if any, for the said category of consumers;*
- (b) *regulate electricity purchase and procurement process of distribution licensees including the price at which electricity shall be procured from the generating companies or licensees or from other sources through agreements for purchase of power for distribution and supply within the State;*

.....

## Relevant Extracts of the National Electricity Policy, 2005

### “5.3 TRANSMISSION

...

5.3.3 Open access in transmission has been introduced to promote competition amongst the generating companies who can now sell to different distribution licensees across the country. This should lead to availability of cheaper power. The Act mandates non-discriminatory open access in transmission from the very beginning. When open access to distribution networks is introduced by the respective State Commissions for enabling bulk consumers to buy directly from competing generators, competition in the market would increase the availability of cheaper and reliable power supply. The Regulatory Commissions need to provide facilitative framework for non-discriminatory open access. This requires load dispatch facilities with state-of-the art communication and data acquisition capability on a real time basis. While this is the case currently at the regional load dispatch centers, appropriate State Commissions must ensure that matching facilities with technology upgrades are provided at the State level, where necessary and realized not later than June 2006.

5.3.4 The Act prohibits the State transmission utilities/transmission licensees from engaging in trading in electricity. Power purchase agreements (PPAs) with the generating companies would need to be suitably assigned to the Distribution Companies, subject to mutual agreement. To the extent necessary, such assignments can be done in a manner to take care of different load profiles of the Distribution Companies. Non-discriminatory open access shall be provided to competing generators supplying power to licensees upon payment of transmission charge to be determined by the appropriate Commission. The appropriate Commissions shall establish such transmission charges no later than June 2005.

5.3.5 To facilitate orderly growth and development of the power sector and also for secure and reliable operation of the grid, adequate margins in transmission system should be created. The transmission capacity would be planned and built to cater to both the redundancy levels and margins keeping in view international standards and practices. A well planned and strong transmission system will ensure not only optimal utilization of transmission capacities but also of generation facilities and would facilitate achieving ultimate objective of cost effective delivery of power. To facilitate cost effective transmission of power across the region, a national transmission tariff framework needs to be implemented by CERC. The tariff mechanism would be sensitive to distance, direction and related to quantum of flow. As far as possible, consistency needs to be maintained in transmission pricing framework in inter-State and intra-State systems. Further it should be ensured that the present network deficiencies do not result in unreasonable transmission loss compensation requirements.

5.3.6 The necessary regulatory framework for providing non-discriminatory open access in transmission as mandated in the Electricity Act 2003 is essential for signalling efficient choice in locating generation capacity and for encouraging trading in electricity for optimum utilization of generation resources and consequently for reducing the cost of supply.

5.3.7 The spirit of the provisions of the Act is to ensure independent system operation through NLDC, RLDCs and SLDCs. These dispatch centers, as per the provisions of the Act, are to be operated by a Government company or authority as notified by the appropriate Government. However, till such time these agencies/authorities are established the Act

mandates that the CTU or STU, as the case may be, shall operate the RLDCs or SLDC. The arrangement of CTU operating the RLDCs would be reviewed by the Central Government based on experience of working with the existing arrangement. A view on this aspect would be taken by the Central Government by December 2005.

...

5.3.9 The National Load Despatch Centre (NLDC) along with its constitution and functions as envisaged in Section 26 of the Electricity Act 2003 would be notified within three months. RLDCs and NLDC will have complete responsibility and commensurate authority for smooth operation of the grid irrespective of the ownership of the transmission system, be it under CPSUs, State Utility or private sector.

...

## **5.4 DISTRIBUTION**

...

5.4.2 The Act provides for a robust regulatory framework for distribution licensees to safeguard consumer interests. It also creates a competitive framework for the distribution business, offering options to consumers, through the concepts of open access and multiple licensees in the same area of supply.

...

5.4.5 The Electricity Act 2003 enables competing generating companies and trading licensees, besides the area distribution licensees, to sell electricity to consumers when open access in distribution is introduced by the State Electricity Regulatory Commissions. As required by the Act, the SERCs shall notify regulations by June 2005 that would enable open access to distribution networks in terms of sub-section 2 of section 42 which stipulates that such open access would be allowed, not later than five years from 27th January 2004 to consumers who require a supply of electricity where the maximum power to be made available at any time exceeds one mega watt. Section 49 of the Act provides that such consumers who have been allowed open access under section 42 may enter into agreement with any person for supply of electricity on such terms and conditions, including tariff, as may be agreed upon by them. While making regulations for open access in distribution, the SERCs will also determine wheeling charges and cross-subsidy surcharge as required under section 42 of the Act.

...”

.....

## Relevant Extracts of the Tariff Policy, 2006

### “8.5 Cross-subsidy surcharge and additional surcharge for open access

8.5.1 National Electricity Policy lays down that the amount of cross-subsidy surcharge and the additional surcharge to be levied from consumers who are permitted open access should not be so onerous that it eliminates competition which is intended to be fostered in generation and supply of power directly to the consumers through open access.

A consumer who is permitted open access will have to make payment to the generator, the transmission licensee whose transmission systems are used, distribution utility for the wheeling charges and, in addition, the cross subsidy surcharge. The computation of cross subsidy surcharge, therefore, needs to be done in a manner that while it compensates the distribution licensee, it does not constrain introduction of competition through open access. A consumer would avail of open access only if the payment of all the charges leads to a benefit to him. While the interest of distribution licensee needs to be protected it would be essential that this provision of the Act, which requires the open access to be introduced in a time-bound manner, is used to bring about competition in the larger interest of consumers.

Accordingly, when open access is allowed the surcharge for the purpose of sections 38, 39, 40 and sub-section 2 of section 42 would be computed as the difference between (i) the tariff applicable to the relevant category of consumers and (ii) the cost of the distribution licensee to supply electricity to the consumers of the applicable class. In case of a consumer opting for open access, the distribution licensee could be in a position to discontinue purchase of power at the margin in the merit order. Accordingly, the cost of supply to the consumer for this purpose may be computed as the aggregate of (a) the weighted average of power purchase costs (inclusive of fixed and variable charges) of top 5% power at the margin, excluding liquid fuel based generation, in the merit order approved by the SERC adjusted for average loss compensation of the relevant voltage level and (b) the distribution charges determined on the principles as laid down for intra-state transmission charges.

#### Surcharge formula:

$$S = T - [ C (1 + L / 100) + D ]$$

Where

S is the surcharge

T is the Tariff payable by the relevant category of consumers;

C is the Weighted average cost of power purchase of top 5% at the margin excluding liquid fuel based generation and renewable power

D is the Wheeling charge

L is the system Losses for the applicable voltage level, expressed as a percentage

The cross-subsidy surcharge should be brought down progressively and, as far as possible, at a linear rate to a maximum of 20% of its opening level by the year 2010-11.

8.5.2 No surcharge would be required to be paid in terms of sub-section (2) of Section 42 of the Act on the electricity being sold by the generating companies with consent of the competent government under Section 43(A)(1)(c) of the Electricity Act, 1948 (now repealed) and on the electricity being supplied by the distribution licensee on the authorisation by the

State Government under Section 27 of the Indian Electricity Act, 1910 (now repealed), till the current validity of such consent or authorisations.

8.5.3 The surcharge may be collected either by the distribution licensee, the transmission licensee, the STU or the CTU, depending on whose facilities are used by the consumer for availing electricity supplies. In all cases the amounts collected from a particular consumer should be given to the distribution licensee in whose area the consumer is located. In case of two licensees supplying in the same area the licensee from whom the consumer was availing supply shall be paid the amounts collected.

8.5.4 The additional surcharge for obligation to supply as per section 42(4) of the Act should become applicable only if it is conclusively demonstrated that the obligation of a licensee, in terms of existing power purchase commitments, has been and continues to be stranded, or there is an unavoidable obligation and incidence to bear fixed costs consequent to such a contract. The fixed costs related to network assets would be recovered through wheeling charges.

8.5.5 Wheeling charges should be determined on the basis of same principles as laid down for intra-state transmission charges and in addition would include average loss compensation of the relevant voltage level.

8.5.6 In case of outages of generator supplying to a consumer on open access, standby arrangements should be provided by the licensee on the payment of tariff for temporary connection to that consumer category as specified by the Appropriate Commission.

## **9.0 Trading Margin**

The Act provides that the Appropriate Commission may fix the trading margin, if considered necessary. Though there is a need to promote trading in electricity for making the markets competitive, the Appropriate Commission should monitor the trading transactions continuously and ensure that the electricity traders do not indulge in profiteering in situation of power shortages. Fixing of trading margin should be resorted to for achieving this objective.”

.....