

ORISSA ELECTRICITY REGULATORY COMMISSION
BIDYUT NIYAMAK BHAWAN
UNIT-VIII, BHUBANESWAR-751 012

NOTIFICATION

Dated the 17th December, 2007

No.OERC-JD (EA)-264/2006 – In exercise of the powers conferred under sub-sections (2) (zd) and (2)(zp) of Section 181 of the Electricity Act, 2003 (36 of 2003) and all other powers enabling it in that behalf, the Orissa Electricity Regulatory Commission hereby makes the Intra-State Availability Based Tariff (ABT) Regulations, 2007.

CHAPTER-I

GENERAL

1. Short Title, Commencement and Interpretation :-

- (i) These Regulations shall be called the Orissa Electricity Regulatory Commission (Intra-State ABT) Regulations, 2007.
- (ii) These Regulations extend to the whole of the State of Orissa.
- (iii) These Regulations shall come into force on the date of their publication in the Official Gazette.
- (iv) These Regulations are to be read with the Act and Regulations as stated at 2(II) below.

2. Definitions:-

(I) In these Regulations, unless the context otherwise requires –

- a) **“ABT”** shall mean “Availability Based Tariff”.
- b) **"Act"** means the Electricity Act, 2003 (36 of 2003);
- c) **"Commission"** means the Orissa Electricity Regulatory Commission;
- d) **“Drawl”** shall mean the electricity which has been delivered at the interconnection of transmission system or installation of the ‘user’ with specified network.
- e) **“Injection”** shall mean the transfer of electricity by a generating company or licensee to the user at a predefined interconnection point with specified network.
- f) **“Intra-State UI Rate”** shall mean unscheduled interchange rates as specified by these Regulations.

- g) **“Intra-State Generating Station”** shall mean a generating station or a captive generating plant (CGP) which is not an Inter-State generating station and is operating and supplying entire electricity generation within the State.
- h) **“User”** shall mean generating station including CGP, distribution licensee, trading licensee and open access customers within the state utilizing specified network.
- i) **“State”** means the state of Orissa;
- j) **“Supplier”** shall mean any generating company or licensee from whose system electricity flows into the system of another generating company or licensee or consumer.
- k) **“Time Block”** shall have meaning as defined in Indian Electricity Grid Code.
- l) **“Specified Network”** means state transmission network of 33 kv and above voltage level owned and operated by the transmission licensee(s) of the State.
- m) **“SLDC”** means the State Load Dispatch Centre under sub-section (1) of section 31 of the Act;
- n) **"State Transmission Utility (STU)"** means the utility notified by the Government of Orissa under Section 39(1) of the Act.

(II) Words and expressions appearing in these regulations and not defined herein above shall bear the meaning assigned to them in the following:

- a) The Electricity Act-2003.
- b) OERC (Terms & Conditions for Open Access) Regulations 2004.
- c) OERC (Terms & Conditions for Determination of Tariff) Regulations, 2004.
- d) Orissa Grid Code (OGC) Regulations, 2006.
- e) Indian Electricity Grid Code, 2005.
- f) CERC (Terms & Conditions of Tariff) Regulations, 2004.
- g) CEA (Installation and Operation of Meters) Regulation, 2006.

3. **Applicability of Intra-State ABT:**

Intra-State ABT shall be applicable to users/suppliers who are required to give daily schedules to SLDC, unless excluded from the applicability of ABT under these Regulations.

Provided that the applicability of the ABT shall remain suspended for the period of Grid disturbance, islanded mode of grid operation as intimated by SLDC as per provisions of the Orissa Grid Code.

D) Generating Stations:

A generating station except the following shall be covered by Intra-State ABT:

- (i) Those covered by Inter-State ABT,
- (ii) Nuclear, Wind and Solar Power Stations,
- (iii) Run of River Hydro Power Stations without storage facility,
- (iv) Power Plants of capacity below 5 MW

II) Licensees:

A distribution/trading licensee shall be covered by Intra-State ABT, if

- (i) It draws from generating stations & licensees governed by Inter-State and/or Intra-State ABT and
- (ii) Its drawl during any time block exceeds its drawl from Non-ABT sources (i.e. generating, trading licensee & DISTCOs not governed by Inter-State or Intra-State ABT).

III) Open Access Customers:

An open access customer, within the State, shall be governed by Intra-State ABT only in respect of electricity supplied to him by the Intra-State generating station including CGP/licensee to the extent of such supply only, governed by Inter-State/Intra-State ABT.

IV) HT & EHT Consumers:

HT & EHT consumers having contract demand of 5 MVA or more.

CHAPTER-II

AVAILABILITY-BASED TARIFF

4. Components of Availability Based Tariff

The tariff under the Intra-State ABT regime shall have three components, namely fixed charges, energy charges and Un-scheduled Inter-change charges (UI Charges). The fixed charges shall be linked to Availability and variable charges to scheduled energy. Un-scheduled Interchange (UI) rate shall be applicable for the deviations from the schedule.

I) Fixed Charges/Capacity Charges:

- i) Capacity charges of the generators shall be payable by users on the capacity allocated to them, irrespective of the quantum of power they draw or scheduled to draw.
- ii) Capacity charges shall be related to 'Availability' of the generating station.
- iii) Capacity charges at various 'Availability' levels shall be computed in accordance with OERC Regulations / guidelines. Recovery of capacity charges below the level of such target Availability shall be on pro-rata basis. At zero Availability, no capacity charges shall be payable.
- iv) The requirements of Deemed Generation (DG) shall not be necessary for working out Availability as the energy charges shall be payable on ex-bus scheduled energy corresponding to scheduled generation.

II) Energy Charges

- i) Energy charges or variable charges shall be payable by every user on the scheduled energy irrespective of actual drawl.

- ii) Energy charges shall be worked out in accordance with OERC Regulations / guidelines.

III) Unscheduled Interchange (UI) Charges

- (i) Variation between actual generation or actual drawl and scheduled generation or scheduled drawl shall be accounted for through Unscheduled Interchange (UI) charges.
- (ii) UI charges are payable by the users/suppliers for the deviations from the schedule and are dependent on the frequency prevailing at that point of time.
- (iii) UI for a generating station shall be equal to its actual generation minus its scheduled generation.
- (iv) UI for a user including open access customer shall be equal to its total actual drawl minus its total scheduled drawl.
- (v) The UI rates and threshold frequencies as determined from time to time by CERC in its Tariff Regulations shall apply to the users of the intra-state grid for each 15 minute block linked to frequency.
- (vi) The existing rates of UI as approved by CERC (and amended from time to time) and shown in the appended schedule shall apply to Intra-State ABT.
- (vii) In respect of the following only UI charge component of the Intra-State ABT shall be applicable:
 - a) Users wheeling their captive power;
 - b) All consumers with captive/ co-generation with capacity of 5 MVA and above in parallel operation with the GRID with a possibility to inject inadvertent power into GRID.

5. Reactive Power Compensation

This shall be as provided in the OGC as amended from time to time.

CHAPTER-III

ENERGY ACCOUNTING & COMMERCIAL SETTLEMENT

6. Scheduling

- a) All eligible suppliers and users shall comply with the scheduling and dispatch requirements as specified in the Orissa Grid Code and as per the instructions given by SLDC.
- b) SLDC shall aggregate the requisitions of drawl of power from the DISTCOs and traders and prepare the dispatch schedule keeping in view the merit order of dispatch. The SLDC shall issue the following which shall form the basis of Intra-State ABT:

- i) Drawl schedule to ERLDC against state's entitlement for communication to the CGSs.
 - ii) Dispatch schedule to the State Generators.
 - iii) Dispatch schedule to Others (IPPs /CGPs).
 - iv) Drawl schedule to the DISTCOs/Open Access Customers/Traders.
- c) Drawl schedule of the HT / EHT consumers of 5 MVA and above shall be prepared by the DISTCOs.

7. Demonstration of Declared Capability:

The generating stations may be required to demonstrate their declared capability as and when directed by the SLDC. In the event of a generating company failing to demonstrate the declared capacity, the capacity charges due to the generator shall be reduced proportionately and in case of persistent failure to prove the declared capacity, the same shall be dealt as per Regulation 1.18 of OGC, 2006. In case of captive generating plant, the quantum scheduled for sale to any licensee will be under demonstration of declared capacity.

8. Gaming

- a) Generating Stations generating up to 105% of the declared capacity in any time block of 15 minutes and averaging up to 101% of the average declared capacity over a day shall not be construed as gaming, and the generator shall be entitled to UI charges for such excess generation above the scheduled generation (SG).
- b) For any generation beyond the prescribed limits, the SLDC shall investigate so as to ensure that there is no gaming, and if gaming is found, the corresponding UI charges due to the generating station on account of such extra generation shall be reduced to zero and the amount shall be adjusted in UI account of users in the ratio of their capacity share in the generating station.
- c) If any DISTCO or any person under Section 13 or under 8th proviso of Section 14 of the Act draws less power than the scheduled drawl in spite of availability of power as per schedule and at the same time has load shedding in his area of supply, then the action shall be construed as gaming and no UI charge shall be receivable by him. UI amount shall be adjusted in the UI account of users as in para (b) above. However, for any direction by SLDC, if such incidence occurs, then UI charge may be receivable to him, if applicable.
- d) Any significant deviation of more than 5% shall be treated as gaming and may be disallowed by SLDC.

9. Metering and Meter Reading:

- a) Where the entry and exit points are connected to the network of transmission system, the metering arrangements, including installation, testing and operation and maintenance of meters and collection, transportation and processing of data required for accounting of energy

exchanges and average frequency on 15 minute time block basis shall be organised by the STU.

- b) Where, however, the entry and exit points are connected to the network of DISTCOs' System, the metering arrangements, including installation, testing and operation and maintenance of meters and collection, transportation and processing of data required for accounting of energy exchanges on 15 minute time block basis shall be organised by the individual DISTCOs.
- c) Metering arrangements, including installation, testing and maintenance of meters shall be the responsibility of the STU for the transmission network and individual DISTCOs for their distribution network on payment basis. Collection and transportation of raw data to SLDC shall be the responsibility of individual licensee. Processing of the data required for accounting of energy exchanges and UI account based on average frequency of 15-minute time block shall be done by the SLDC. Initial time synchronization of the meters and further checking and time synchronization, as and when required, shall be done by STU / DISTCOs in co-ordination with the SLDC. All concerned entities (in whose premises the ABT compliant special energy meters are installed), shall fully cooperate with the STU/DISTCOs and extend necessary assistance to STU/DISTCOs for taking weekly meter readings and transmitting them to the SLDC. On the basis of processed data of meters along with data relating to declared capacity and schedules etc., the SLDC shall issue the State Energy Accounts for energy on monthly basis as well as UI and Reactive Energy Charges Accounts on weekly basis. UI accounting procedures shall be governed by the Orders of the Commission. In case of any dispute, the matter shall be referred to the GCC for decision and in case the same is not resolved in GCC, the matter shall be referred to the Commission for decision which shall be final.
- d) The cost of metering shall be borne by the owners of the meters. Regarding the ownership of meters and its accessories, the entities involved shall follow Regulation-6 of CEA (Installation and operation of meters) Regulations, 2006.
- e) ABT compliant meters [interface meters as per CEA's (Installation and Operation of Meters) Regulations, 2006] shall be provided at the points of injection/drawl, by the respective users who shall also ensure communication of data to SLDC. The time synchronization of the metering system shall be through Global Positioning System (GPS) with counter check from State Energy Accounting and Billing Centre. Respective users shall bear their own expenses.
- f) For the purpose of Intra-State ABT, the existing metering CTs and PTs/CVTs installed and operated in the system shall be valid until these are replaced by those of specified accuracy and class as specified by CEA in its Regulations.
- g) Metering and Accounting shall be as per the Orissa Grid Code as amended from time to time.

10. Energy Accounting:

- a) SLDC shall be the agency responsible for implementation of Intra-State ABT. It shall coordinate with ERLDC for application of Inter-State ABT in consultation with generators, transmission licensees, traders, DISTCOs and open access customers. SLDC shall process the metering data received from all the stations and maintain energy account on regular basis and shall take all measures necessary to prevent gaming.
- b) The SLDC shall establish Area Load Dispatch Centres (ALDCs) to monitor and control their drawl of power, injection/ drawl of open access customers on real time basis and shall set up communication links with SLDC so as to have effective and efficient operation. The DISTCOs shall set up their own Distribution System Operation & Control Centres (DSOCCs). The DSOCCs shall take appropriate action in response to grid warnings as decided by the Distribution Licensees and convey suitable instructions to their operating staffs. The DSOCCs shall also take timely action in response to grid warnings as per standard instructions laid down by the Distribution Licensees in this regard and if necessary, issue appropriate instructions in addition if a particular situation warrants. The SLDC/ALDC shall intimate the Distribution Licensees through DSOCCs, regarding significant deviations of final schedules of State Generators and Central Generating Stations (CGSs) on overall merit order. The DSOCCs shall undertake suitable load management and curtailment in their respective areas of operation.
- c) All expenses to upgrade necessary software, hardware, human resources for real time operations and communication of data to SLDC etc. as allowed by the Commission shall be recovered.
- d) All stake-holders shall comply with the directions of SLDC and provide required assistance on timely and regular basis for smooth operation. SLDC is authorized to impose penalty on users in accordance with the provisions of the Act for non-compliance of any directions. In case of persistent failure to adhere to such directions of SLDC, the same shall be dealt as per Regulation 1.18 of OGC, 2006.
- e) A monthly State Energy Account for billing and settlement of 'Capacity Charge' and 'Energy Charge' and weekly accounts on 'UI Charge' and 'Reactive Charge' shall be prepared by the SLDC.
- f) All Accounting Calculations carried out by SLDC shall be open to all Agencies for any checking / verification, for a period of 15 days. In case any mistake is detected, SLDC shall forthwith make a complete check and notify the mistakes.
- g) The SLDC shall table the complete statement of the State UI account and the State Reactive Energy account in the GCC's Commercial Committee meeting, on a quarterly basis, for audit by the latter.
- h) SLDC shall forward the necessary data/schedules to regional level in line with Regulations formulated by Central Electricity Regulatory Commission.

11. Commercial Settlement:

- a) The users shall pay to the respective generating companies capacity charges corresponding to plant Availability and energy charges for the scheduled dispatch. However, calculation of capacity charges and energy charges may be based on CERC (Terms & Conditions of Tariff) Regulations, 2004 as amended from time to time. The bills for these charges shall be issued by the respective generating companies to each user on monthly basis based on State Energy Accounts (SEA) issued by SLDC.
- b) The payment and / or receipt on account of UI charges shall be governed as per Regulation 4 (III) above.
- c) In case of energy drawn by an open access customer in excess of its drawl schedule given by SLDC, such excess drawl for each time block shall be deemed to have been supplied by the concerned DISTCO (in whose license area such open access customer is situated). In case of over frequency, the DISTCO shall be paid for by the customer at UI rate depending on frequency prevailing at that 15-minute time block. In case of over drawl during under frequency, such excess drawl shall be billed at UI rate depending on the frequency prevailing at that 15-minute time block.
- d) In any case, the overdrawl either during over frequency or under frequency should not exceed 20% of the contract demand for safety of the installation. In case of such persistent overdrawl, the licensee may inform the Open Access customer and may disconnect power supply until the customer agrees to abide by the stipulation. In case of under drawl by the Open Access customer from the drawl schedule given by the SLDC during the period of under frequency, the concerned DISTCO (in whose license area such open access customer is situated) shall be entitled to UI benefits on this account depending on frequency prevailing at that 15-minute time block which will be notified by the Commission from time to time.
- e) The summation of station-wise ex-power plant despatch schedules from each generating station and any bilaterally agreed interchanges of each user shall be adjusted for transmission losses, and the net drawl schedule so calculated shall be compared with the actual net drawl of the user.
- f) Payment of UI and Reactive energy charges may be made as specified by OGC (Chapter 6).
- g) Delay in payment of UI and VAr charges shall invite payment of interest as specified in OGC (Chapter 6).
- h) If total payment receivable in the UI pool account is higher or lower than UI payable, then UI payable/receivable shall be properly adjusted to make the payable and receivable equal.
- i) The money remaining after pay out of all VAr charges shall be utilized as outlined in the OGC.

- j) In case the voltage profile of a State Grid improves to an extent that the total pay-out from the State VAr charges account for a week exceeds the total amount being paid-in for that week, and if the State reactive account has no balance to meet the deficit, the pay-outs shall be proportionately reduced according to the total money available in the above account.
- k) All 15-minute energy figures (net scheduled, actually metered and UI) shall be rounded off to the nearest 0.01 MWh.

CHAPTER-IV

BANKING AND CAPACITY ALLOCATION

12. Banking

No generator shall be allowed the facility of banking the electricity generated by them, nor will such facility be extended to any open access customer.

13. Status of Capacity/Energy Allocation to DISTCOs

The GoO shall finalise the allocation of the capacity/energy from the PPAs entered into by erstwhile OSEB (and/or GRIDCO) to the DISTCOs constituted after restructuring, based on the DISTCOs' load requirements, and communicate the same to the Commission.

14. Two-Part Tariff

A two-part tariff shall be implemented for all the generating stations and DISTCOs within the state to facilitate implementation of Intra-State ABT.

CHAPTER-V **MISCELLANEOUS**

15. Issue of Orders and Directions

Subject to the provisions of the Electricity Act, 2003 and these Regulations, the Commission may from time to time issue Orders and Directions in regard to the implementation of these Regulations and procedure to be followed on various matters, which the Commission has been empowered by these Regulations to specify and direct, and matters incidental or ancillary thereto.

16. Savings

- a) Nothing in these Regulations shall be deemed to limit or otherwise affect the power of the Commission to make such orders as may be necessary to meet the ends of justice.
- b) Nothing in these Regulations shall bar the Commission from adopting in conformity with provisions of the Act, a procedure which is at variance with any of the provisions of these Regulations, if the Commission, in view of the special circumstances of a matter or a class of matters, deems it just or expedient for deciding such matter or class of matters.
- c) Nothing in these Regulations shall, expressly or impliedly, bar the Commission dealing with any matter or exercising any power under the Act for which no regulations have been framed, and the Commission may deal with such matters, powers and functions in a manner, as it considers just and appropriate.

17. Power of the Commission to Amend:

The Commission may, at any point of time, at its sole discretion, vary, alter, modify, add or amend any provisions of these Regulations.

18. Powers to Remove Difficulties:

If any difficulty arises in giving effect to any of the provisions of these Regulations, the Commission may, with reasons to be recorded in writing, direct the users/beneficiaries/generators, by general or special order, for taking suitable action not inconsistent with the provisions of the Act, as may appear to be necessary for removing the difficulty.

By order of the
Commission

**(M.P. MISRA)
SECRETARY**

APPENDIX

Schedule of UI Charges

[See Regulation 4(III)(vi)]

UI shall be worked out for each 15-minute time block. Charges for all UI transactions shall be based on average frequency of the time block and the following rates shall apply:

Average frequency of time block (Hz)		
Below	Not below	UI Rate (Paise per kWh)
---	50.50	0.0
50.50	50.48	6.0
50.48	50.46	12.0
-----	-----	-----
-----	-----	-----
49.84	49.82	204.0
49.82	49.80	210.0
49.80	49.78	219.0
49.78	49.76	228.0
-----	-----	-----
-----	-----	-----
49.54	49.52	336.0
49.52	49.50	345.0
49.50	49.48	361.0
49.48	49.46	377.0
-----	-----	-----
-----	-----	-----
49.04	49.02	729.0
49.02	-----	745.0

(Each 0.02 Hz step is equivalent to 6.0 paise/kWh in the 50.5-49.8 Hz frequency range, and to 9.0 paise/kWh in the 49.8-49.5 Hz frequency range, and to 16.0 paise/kWh in the 49.5-49.0 Hz frequency range.)