

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**No.L-1(1)/2009-CERC**

**New Delhi, the 28<sup>th</sup> April 2010**

**NOTIFICATION**

In exercise of the powers conferred under Section 178 read with Section 79 (1) (c) of the Electricity Act, 2003 (36 of 2003), and all other powers enabling it in this behalf, and after previous publication, the Central Electricity Regulatory Commission hereby makes the following regulations to amend the Central Electricity Regulatory Commission (Unscheduled Interchange charges and related matters) Regulations, 2009 (hereinafter referred to as "the principal regulations"), namely:

**1. Short title and commencement.-**

- (1) These regulations may be called the Central Electricity Regulatory Commission (Unscheduled Interchange charges and related matters) (Amendment) Regulations, 2010.
- (2) These regulations shall come into force with effect from 3.5.2010.

**2. Amendment of Regulation 2 of the Principal Regulations**

- (i) Sub-clause (e) of Clause 1 shall be substituted as under, namely:

“(e) **‘buyer’** means a person, other than the beneficiary, buying electricity, through a transaction scheduled in accordance with the

regulations applicable for short term open access, medium term open access and long term access;”

- (ii) After sub-clause (e) of Clause 1, a new sub-clause (ee) shall be inserted as under:

“(ee) ‘gaming’ in relation to these regulations, shall mean an intentional mis-declaration of declared capacity by any generating Station or seller in order to make an undue commercial gain through Unscheduled Interchange charges.”

- (iii) In sub-clause (m) of clause 1, shall be substituted as under, namely:

“ (m) ‘**seller**’ means a person, other than a generating station, supplying electricity, through a transaction scheduled in accordance with the regulations applicable for short term open access, medium term open access and long term access;”

- (iv) In sub-clause (n) of clause 1, the words “block of 15 minutes” shall be substituted with the words “a time block of 15 minutes”.

### **3. Amendment of Regulation 4 of the Principal Regulations**

In clause (ii) of regulation 4, the words “open access or medium term access” shall be substituted by the words “short term open access or medium term open access”.

#### **4. Amendment of Regulation 5 of the Principal Regulations.-**

Regulation 5 of the principal regulations shall be substituted as under, namely,

##### **"5. Unscheduled Interchange (UI) Charges:**

(1) The charges for the Unscheduled Interchanges for all the time-blocks shall be payable for over drawal by the buyer or the beneficiary and under-injection by the generating station or the seller and receivable for under-drawal by the buyer or the beneficiary and over-injection by the generating station or the seller and shall be worked out on the average frequency of a time-block at the rates specified in the Schedule A of these regulations as per the methodology specified in clause(2) of this regulation.

Provided that the charges for the Unscheduled Interchange for the generating stations using coal or lignite or gas supplied under Administered Price Mechanism (APM) as the fuel, when actual generation is higher or lower than the scheduled generation, shall not exceed the Cap Rate as specified in the Schedule A of these regulations as per the methodology specified in clause (3) of this regulation,

Provided further that the Charges for the Unscheduled Interchange for the injection by a generating station other than the hydro generating station in excess of 105% of the Declared Capacity of the station in a time block or in excess of 101% of the average

Declared Capacity over a day shall not exceed the charges for the Unscheduled Interchange corresponding to grid frequency interval of 'below 50.02 Hz and not below 50.0 Hz'.

Provided also that the charges for the Unscheduled Interchange for the under draws by the buyer or the beneficiaries in a time block in excess of 10% of the schedule or 250 MW whichever is less, shall not exceed the Cap Rate as specified in the Schedule A of these regulations as per the methodology specified in clause (4) of this regulation.

Provided also that the charges for the Unscheduled Interchange for the injection by the seller in excess of 120% of the schedule subject to a limit of ex-bus generation corresponding to 105% of the Installed Capacity of the station in a time block or 101% of the Installed Capacity over a day shall not exceed the Cap Rate as specified in the Schedule A of these regulations as per the methodology specified in clause (5) of this regulation.

Provided also that the Charges for the Unscheduled Interchange for the injection by the seller in excess of ex-bus generation corresponding to 105% of the Installed Capacity of the station in a time block or 101% of the Installed Capacity over a day shall not exceed the charges for the Unscheduled Interchange corresponding to grid frequency interval of 'below 50.02 Hz and not below 50.0 Hz'.

(2) The Charge for Unscheduled Interchange shall be determined in accordance with the following methodology:

- (a) The Charge for Unscheduled Interchange shall be zero at grid frequency of 50.2 Hz and above.
- (b) The Charge for Unscheduled Interchange corresponding to grid frequency interval of 'below 50.02 Hz and not below 50.0 Hz' shall be based on the median value of the average energy charge of coal/lignite based generating stations for the six months period of August 2009 to January 2010 and suitably adjusted upward to decide on the UI price vector.
- (c) The UI Price Vector shall accordingly, be in steps for a frequency interval of 0.02 Hz between 50.2 Hz to 50.0 Hz.
- (d) The Charge for Unscheduled Interchange in grid frequency interval of 'below 49.70 Hz and not below 49.68 Hz' shall be such that it provides sufficient incentive to the generating station based on coal including imported coal to support the grid after meeting fixed and energy charge.
- (e) The UI Price Vector shall accordingly be in steps for a frequency interval of 0.02 Hz between 50.0 Hz to 49.70 Hz.
- (f) The Charge for Unscheduled Interchange at grid frequency below 49.5 Hz shall be based on the highest of the average energy charges of generating stations for the six months period of August 2009 to January 2010 and suitably adjusted upward to decide on the UI price vector.

(g) The UI Price Vector shall be in steps for a frequency interval of 0.02 Hz between 49.70 Hz to 49.50 Hz corresponding to the Charge for Unscheduled Interchange in grid frequency interval of 'below 49.70 Hz and not below 49.68 Hz' and Charge for Unscheduled Interchange in grid frequency interval of below 49.50 Hz.

(3) The Cap rate for the charges for the Unscheduled Interchange for the generating stations using coal or lignite or gas supplied under Administered Price Mechanism (APM) as the fuel shall be the same as the charges for the Unscheduled Interchange corresponding to grid frequency interval of 'below 49.70 Hz and not below 49.68 Hz' as specified in Schedule "A" of these Regulations.

(4) The Cap Rate for the Unscheduled Interchange for the under draws by the buyer or the beneficiaries in excess of 10% of the schedule or 250 MW whichever is less shall be the same as the charges for the Unscheduled Interchange corresponding to grid frequency interval of 'below 49.70 Hz and not below 49.68 Hz' as specified in Schedule "A" of these Regulations.

(5) The Cap Rate for the Unscheduled Interchange for the injection by the seller in excess of 120% of the schedule subject to a limit of ex-bus generation corresponding to 105% of the Installed Capacity of the station in a time block or 101% of the Installed Capacity over a day shall be the same as the charges for the Unscheduled Interchange corresponding to grid frequency interval of 'below 49.70 Hz and not below 49.68 Hz' as specified in Schedule "A" of these Regulations.

(6) The Charge for Unscheduled Interchange at grid frequency of '49.5 Hz and below', at grid frequency interval of 'below 50.02 Hz and not below 50.0 Hz' and at grid frequency interval of 'below 49.70 Hz and not below 49.68Hz' shall be re-notified every six months based on the relevant escalation indices notified by the Commission under the Competitive bidding guidelines of Government of India and Schedule "A" of these regulations shall be re-notified accordingly.

## **6. Amendment of Regulation 6 of the Principal Regulations.-**

(i) The proviso to clause (2) of Regulation 6 shall be substituted as under:

"Provided that the revision in generation schedule on the day of operation shall be permitted in accordance with the procedure specified under the Grid Code and Central Electricity Regulatory Commission (Open Access in inter-State Transmission) Regulations, 2008, as the case may be."

(ii) The clauses (3) and (4) of Regulation 6 shall be omitted.

(iii) The clause (5) of Regulation 6 shall be substituted as under:

"(5) In response to changes in grid frequency and inflow fluctuations, the hydro generating stations shall be free to deviate from the given schedule, without causing grid constraint, and compensation for the difference between the actual net energy supplied and the scheduled

energy (ex-bus) over a day shall be made by the concerned Regional Load Despatch Centre in the day-ahead schedule for the 4<sup>th</sup> day (day plus 3)."

(iv) A new clause (6) shall be inserted in Regulation 6 as under:

"(6)The Commission may, either suo motu or on a petition made by RLDC, initiate proceedings against any generating company or seller on charges of gaming and if required, may order an inquiry in such manner as decided by the Commission. When the charge of gaming is established in the above inquiry, the Commission may, without prejudice to any other action under the Act or regulations thereunder, disallow any Unscheduled Interchange charges received by such generating company or the seller during the period of such gaming."

## **7. Amendment of Regulation 7 of the Principal Regulations.-**

Regulation 7 shall be substituted as under:

### **"7. Limits on UI volume and consequences of crossing the limits.-**

(1) The over-drawal of electricity by any beneficiary or a buyer during a time block shall not exceed 12% of its scheduled drawal or 150 MW, whichever is lower, when frequency is below 49.7 Hz and 3% on a daily aggregate basis for all the time blocks when the frequency is below 49.7 Hz

**Explanation:** The limits specified in this clause shall apply to the sum total of over-drawal by all the intra-State entities in the



State including the distribution companies and other intra-State buyers, and shall be applicable at the inter-State boundary of the respective State.

- (2) The under-injection of electricity by a generating station or a seller during a time-block shall not exceed 12% of the scheduled injection of such generating station or seller when frequency is below 49.7 Hz and 3% on daily aggregate basis for all the time blocks when the frequency is below 49.7 Hz
- (3) In addition to Unscheduled Interchange Charges corresponding to frequency of 49.5 Hz as stipulated under Regulation 5 of these regulations, Additional Unscheduled Interchange Charge shall be applicable for over-drawal or under-injection of electricity for each time block when grid frequency is below 49.5 Hz at the rates specified in the schedule A of these regulations in accordance with the methodology specified in clause (3a) of this regulation. .

Provided further that Additional Unscheduled Interchange Charge for under-injection of electricity, during the time-block when grid frequency is below 49.5 Hz, by the generating stations using coal or lignite or gas supplied under Administered Price Mechanism (APM) as the fuel shall be at the rates specified in the schedule A of these regulations in accordance with the methodology specified in clause (3b) of this regulation.

**Explanation:** Additional Unscheduled Interchange Charges shall not be applicable for net over draws by a region as a whole from other regions when grid frequency is below 49.5 Hz.

- (3a) The additional Unscheduled Interchange charge for over-drawals and under-injection of electricity for each time block when grid frequency is below 49.5 Hz shall be as specified by the Commission as a percentage of the charges for the Unscheduled Interchange in grid frequency 'below 49.5 Hz' with due consideration to the behavior of the buyer and beneficiaries and sellers and the generating stations towards grid discipline.

Provided that the Commission may specify different additional Unscheduled Interchange charges for over draws and under injections and at different frequencies below 49.5 Hz.

- (3b) The additional Unscheduled Interchange charge for under-injection of electricity during the time-block when grid frequency is below 49.5 Hz, by the generating stations using coal or lignite or gas supplied under Administered Price Mechanism (APM) as the fuel shall be as specified by the Commission as a percentage of the Cap Rate, with due consideration to the behavior of the generating stations towards grid discipline.

Provided that the Commission may specify different additional Unscheduled Interchange charges for under injections at different frequencies below 49.5 Hz.

- (4) Payment of Unscheduled Interchange Charges under Regulation 5 and the Additional Unscheduled Interchange Charge under Regulation 7(3) above, shall be levied without prejudice to any action that may be considered appropriate under Section 142 of the Act for contravention of the limits of over-drawal or under-generation as specified in these regulations, for each time block when frequency is below 49.7 Hz.
- (5) The Commission may, if considered necessary, prescribe from time to time Additional Unscheduled Interchange Charge for over-drawal or under-injection of electricity during each time-block when grid frequency is below 49.7 Hz and up to 49.5 Hz.
- (6) The charges for over-drawal / under-injection and under-drawal/ over-injection of electricity shall be computed by the secretariat of the respective Regional Power Committee in accordance with the methodology used for preparation of 'Regional Energy Accounts'.
- (7) The Regional Load Despatch Centre shall prepare and publish on its website the records, on monthly basis, of the UI Accounts, specifying the quantum of over-drawal/under-generation and corresponding amount of UI charges paid for each beneficiary or buyer and received for each generating station or seller for the time-blocks when grid frequency was below 49.5 Hz and between 49.7-49.5 Hz separately."

**8. Amendment of Regulation 9 of the Principal Regulations –**  
Regulation 9 of the principal regulations shall be substituted as under, namely

**“9. Unscheduled Interchange Charges Accounting**

- (1) A statement of Unscheduled Interchange charges including Additional Unscheduled Interchange charges levied under these regulations shall be prepared by the Secretariate of the respective Regional Power Committee on weekly basis based on the data provided by the concerned RLDC and shall be issued to all constituents by Tuesday, for seven day period ending on the penultimate Sunday mid-night.
- (2) All payments on account of Unscheduled Interchange charges including Additional Unscheduled Interchange charges levied under these regulations and interest, if any, received for late payment shall be credited to the funds called the “Regional Unscheduled Interchange Pool Account Fund”, which shall be maintained and operated by the concerned Regional Load Despatch Centres in each region in accordance with provisions of these regulations.

Provided that the Commission may by order direct any other entity to operate and maintain the respective “Regional Unscheduled Interchange Pool Account Funds”:

Provided further that separate books of accounts shall be maintained for the principal component and interest component of Unscheduled Interchange charges and Additional Unscheduled

Interchange charges by the Secretariate of the respective Regional Power Committees.

- (3) All payments received in the “Regional Unscheduled Interchange Pool Account Fund” of each region shall be appropriated in the following sequence:
- (a) First towards any cost or expense or other charges incurred on recovery of UI charges
  - (b) Next towards over dues or penal interest, if applicable
  - (c) Next towards normal interest
  - (d) Lastly, towards UI and additional UI charges.

**Explanation:** Any additional UI charge collected from a regional entity shall be retained in the “Regional Unscheduled Interchange Pool Account Fund” of the concerned region where the regional entity is located.”

**9. Amendment of Regulation 10 of the Principal Regulations –**

Regulation 10 of the principal regulations shall be substituted as under, namely –

**“10. Schedule of Payment of Unscheduled Interchange Charges and Payment Security**

- (1) The payment of UI charges shall have a high priority and the concerned constituent shall pay the indicated amounts within 10 (ten) days of the issue of statement of Unscheduled Interchange

charges including Additional Unscheduled Interchange charges by the Secretariate of the respective Regional Power Committee into the "Regional Unscheduled Interchange Pool Account Fund" of the concerned region.

- (2) If payments against the Unscheduled Interchange charges including Additional Unscheduled Interchange charges are delayed by more than two days, i.e., beyond twelve (12) days from the date of issue of the statement by the Secretariate of the respective Regional Power Committee, the defaulting constituent shall have to pay simple interest @ 0.04% for each day of delay.
- (3) All payments to the entities entitled to receive any amount on account of UI charges shall be made within 2 working days of receipt of the payments in the "Regional Unscheduled Interchange Pool Account Fund" of the concerned region.

Provided that in case of delay in the UI Payment into the respective regional UI Pool Account Fund and interest there on if any, beyond 12 days from the date of issue of the Statement of UI charges then the regional entities who have to receive UI payment or interest thereon shall be paid from the balance available if any, in the regional UI Pool Account Fund of the region. In case the balance available is not sufficient to meet the payment to the constituents, then the payment from the regional UI Pool Accounts Fund shall be made on pro rata basis from the balance available in the Fund.

Provided further that the liability to pay interest for the delay in payments to the "Regional UI Pool Account Fund" shall remain till interest is not paid; irrespective of the fact that constituents who have to receive payments have been paid from the "Regional UI pool account Fund" in part or full.

- (4) All regional entities which had at any time during the previous financial year failed to make payment of Unscheduled Interchange charges including Additional Unscheduled Interchange charges within the time specified in these regulations shall be required to open a Letter of Credit (LC) equal to 110% of its average payable weekly UI liability in the previous financial year, in favour of the concerned RLDC within a fortnight from the date these Regulations come into force.

Provided that if any regional entity fails to make payment of Unscheduled Interchange Charges including Additional Unscheduled Interchange Charges by the time specified in these regulations during the current financial year, it shall be required to open a Letter of Credit equal to 110% of weekly outstanding liability in favour of respective Regional Load Despatch Centre within a fortnight from the due date of payment.

Provided further that LC amount shall be increased to 110% of the payable weekly UI liability in any week during the year, if it exceeds the previous LC amount by more than 50%.

**Illustration:** If the average payable weekly UI liability of a regional entity during 2009-10 is Rs. 20 crore, the regional

entity shall open LC for 22 crore in 2010-11. If the weekly payable liability during any week in 2010-11 is Rs. 35 crore which is more than 50% of the previous financial year's average payable weekly liability, the concerned regional entity shall increase the LC amount to Rs. 35 Crore by adding Rs. 13 Crore.

- (5) In case of failure to pay into the "UI Pool Account Fund" within the specified time of 12 days from the date of issue of statement of UI charges, the RLDC shall be entitled to encash the LC of the concerned constituent to the extent of the default and the concerned constituent shall recoup the LC amount within 3 days.

#### **10. Amendment of Regulation 11 of the Principal Regulations –**

Sub- clause (1) of Regulation 11 of the principal regulations shall be substituted as under, namely

##### **"11. Application of fund collected through UI**

- (1) The amount left in the UI pool account fund after final settlement of claims of Unscheduled Interchange charges of the generating station and the beneficiaries shall be transferred to a separate fund as may be specified by the Commission and shall be utilised, with the prior approval of the Commission for either or both of the following activities:



- (a) Servicing of investment for transmission schemes of strategic importance, provided that the Central Transmission Utility in consultation with a Central Electricity Authority shall identify the inter-State transmission schemes of strategic importance, not being utilised up to optimum level and seek prior approval of the Commission for servicing of capital costs during the initial years. Provided further that when utilisation of such transmission line or transmission system included in the transmission schemes of strategic importance reaches the optimum level of utilisation, the cost of such scheme shall be recovered from the users of the scheme in accordance with the methodology specified by the Commission
- (b) Providing ancillary services including but not limited to 'load generation balancing' during low grid frequency as identified by the Regional Load Despatch Centre, in accordance with the procedure prepared by it, to ensure grid security and safety:
- (2) The amount of fund, allocable for the purposes specified under clause (1) of this regulation, shall be decided by the Commission from time to time."

Sd/-  
(Alok Kumar)  
Secretary

**Note:** The principal regulations were published in Part III, Section 4 of the Gazette of India (Extraordinary) dated 30.3.2009.

## **SCHEDULE "A"**

### **1. Unscheduled Interchange (UI) Charges:**

In terms of clause (1) of Regulation 5, the charges for Unscheduled Interchanges for all the time-blocks payable for over-drawal by the buyer or the beneficiary and under-injection by the generating station or the seller and receivable for under-drawal by the buyer or the beneficiary and over-injection by the generating station or the seller shall be worked out on the average frequency of the time-block at the rates given hereunder: -

| <i>Average frequency of time block (Hz)</i><br><i>Below</i> | <i>Not below</i> | <i>UI Rate</i><br><i>(Paise per kWh)</i> |
|---|------------------|--|
|   | 50.20            | 0.00                                     |
| 50.20   | 50.18            | 15.50                                    |
| 50.18   | 50.16            | 31.00                                    |
| 50.16   | 50.14            | 46.50                                    |
| 50.14   | 50.12            | 62.00                                    |
| 50.12   | 50.10            | 77.50                                    |
| 50.10   | 50.08            | 93.00                                    |
| 50.08   | 50.06            | 108.50                                   |
| 50.06   | 50.04            | 124.00                                   |
| 50.04   | 50.02            | 139.50                                   |
| 50.02   | 50.00            | 155.00                                   |
| 50.00   | 49.98            | 170.50                                   |
| 49.98   | 49.96            | 186.00                                   |
| 49.96   | 49.94            | 201.50                                   |
| 49.94   | 49.92            | 217.00                                   |

|              |              |               |
|--------------|--------------|---------------|
| <b>49.92</b> | <b>49.90</b> | <b>232.50</b> |
| <b>49.90</b> | <b>49.88</b> | <b>248.00</b> |
| <b>49.88</b> | <b>49.86</b> | <b>263.50</b> |
| <b>49.86</b> | <b>49.84</b> | <b>279.00</b> |
| <b>49.84</b> | <b>49.82</b> | <b>294.50</b> |
| <b>49.82</b> | <b>49.80</b> | <b>310.00</b> |
| <b>49.80</b> | <b>49.78</b> | <b>325.50</b> |
| <b>49.78</b> | <b>49.76</b> | <b>341.00</b> |
| <b>49.76</b> | <b>49.74</b> | <b>356.50</b> |
| <b>49.74</b> | <b>49.72</b> | <b>372.00</b> |
| <b>49.72</b> | <b>49.70</b> | <b>387.50</b> |
| <b>49.70</b> | <b>49.68</b> | <b>403.00</b> |
| <b>49.68</b> | <b>49.66</b> | <b>450.00</b> |
| <b>49.66</b> | <b>49.64</b> | <b>497.00</b> |
| <b>49.64</b> | <b>49.62</b> | <b>544.00</b> |
| <b>49.62</b> | <b>49.60</b> | <b>591.00</b> |
| <b>49.60</b> | <b>49.58</b> | <b>638.00</b> |
| <b>49.58</b> | <b>49.56</b> | <b>685.00</b> |
| <b>49.56</b> | <b>49.54</b> | <b>732.00</b> |
| <b>49.54</b> | <b>49.52</b> | <b>779.00</b> |
| <b>49.52</b> | <b>49.50</b> | <b>826.00</b> |
| <b>49.50</b> |              | <b>873.00</b> |

(Each 0.02 Hz step is equivalent to 15.5 paise/kWh in the 50.2-49.7 Hz frequency range and 47.0 Paise/kWh in the 49.7-49.50 Hz frequency range).

## **2. Unscheduled Interchange Cap Rates**

(a) In terms of clauses (1) and (3) of Regulations 5, the UI Cap Rate shall be 403.0 Paise/kWh for all generating stations using coal or lignite or gas supplied under Administered Price Mechanism (APM) as the fuel, in case when actual generation is higher or lower than the scheduled generation.

(b) In terms of clauses (1) and (4) of Regulations 5, the UI Cap Rate shall be 403.0 Paise/kWh for the under draws by the buyer or the beneficiaries in excess of 10% of the schedule or 250 MW whichever is less.

(c) In terms of clauses (1) and (5) of Regulations 5, the UI Cap Rate shall be 403.0 Paise/kWh for the injection by the seller in excess of 120% of the schedule subject to a limit of ex-bus generation corresponding to 105% of the Installed Capacity of the station in a time block and 101% of the Installed Capacity over a day.

## **3. Additional Unscheduled Interchange Charges**

(a) In terms of clause (3a) of Regulation 7 , the Additional Unscheduled Interchange Charge for over-drawal of electricity for each time-block when grid frequency is below 49.5 Hz and up to 49.2 Hz shall be equivalent to 40% of the Unscheduled Interchange Charge 873.0 Paise/kWh corresponding to the grid frequency of below 49.5 Hz. The Additional Unscheduled Interchange Charge for under-injection of electricity for each time-block when grid frequency is below 49.5 Hz and up to 49.2 Hz shall be equivalent to 20% of the Unscheduled Interchange Charge of 873.0 Paise/kWh corresponding to the grid frequency of below 49.5 Hz.

Provided that the Additional Unscheduled Interchange Charge for over-drawal of electricity for each time-block when grid frequency is below 49.2 Hz shall be equivalent to 100% of the Unscheduled Interchange Charge 873.0 Paise/kWh corresponding to the grid frequency of below 49.5 Hz. The

Additional Unscheduled Interchange Charge for under-injection of electricity for each time-block when grid frequency is below 49.2 Hz shall be equivalent to 40% of the Unscheduled Interchange Charge of 873.0 Paise/kWh corresponding to the grid frequency of below 49.5 Hz.

(b) In terms of clause (3b) of Regulation 7, the Additional Unscheduled Interchange Charge for under-injection of electricity during the time-block when grid frequency is below 49.5 Hz and up to 49.2 Hz for the generating stations using coal or lignite or gas supplied under Administered Price Mechanism (APM) as the fuel shall be equivalent to 20% of the UI Cap Rate of 403.0 Paise/kWh.

Provided that the Additional Unscheduled Interchange Charge for under-injection of electricity during the time-block when grid frequency is below 49.2 Hz for the generating stations using coal or lignite or gas supplied under Administered Price Mechanism (APM) as the fuel shall be equivalent to 40% of the UI Cap Rate of 403.0 Paise/kWh.