

CENTRAL ELECTRICITY REGULATORY COMMISSION

NEW DELHI

No.L-1(1)/2011-CERC

New Delhi, the 5th March, 2012

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) (Second Amendment) Regulations, 2012.
- (2) These regulations shall come into force with effect from 2nd of April, 2012.

2. 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 Cap Rate as specified in the Schedule 'A' of these regulations:

 Provided also that the charges for the Unscheduled Interchange for the underdrawls 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 Cap Rate as specified in the Schedule A of these regulations.

(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 2010 to January 2011 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 and 'below 50.02 Hz and not below 50.0 Hz'.

(d) The Charge for Unscheduled Interchange in grid frequency interval of 'below 49.82 Hz and not below 49.80 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 grid frequency interval of 'below 50.02 Hz and not below 50.0 Hz' and 'below 49.82 Hz and not below 49.80 Hz'.

(f) The Charge for Unscheduled Interchange at grid frequency "below 49.50 Hz" shall be based on the highest of the average energy charges of generating stations for the six months period of August 2010 to January 2011 and suitably adjusted upward to decide on the UI price vector.

(g) The UI Price Vector shall accordingly, be in steps for a frequency interval of 0.02 Hz between grid frequency interval of 'below 49.82 Hz and not below 49.80 Hz' and 'below 49.5 Hz'.

(h) The UI Price Vector shall be in steps for a frequency interval of 0.02 Hz between 50.2 Hz to 49.70 Hz corresponding to the Charge for Unscheduled Interchange in grid frequency intervals of 'not below 50.2 Hz', 'below 50.02 Hz and not below 50.0 Hz', 'below 49.82 Hz and not below 49.80 Hz' and "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 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 49.82 Hz and not below 49.80 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 49.82 Hz and not below 49.80 Hz' as specified in Schedule "A" of these Regulations.

(6) The Charge for Unscheduled Interchange may be reviewed and re-notified every six months by the Commission and Schedule "A" of these regulations shall be re-notified accordingly.

(7) The infirm power injected into the grid by a generating unit of a generating station during the testing, prior to COD of the unit shall be paid at UI rates for power injected into the grid, consequent to testing, for a period not exceeding 6 months or the extended time allowed by the Commission in the Central Electricity Regulatory Commission (Grant of Connectivity, Long-term Access and Medium-term Open Access and related matters) Regulations, 2009, as amended from time to time, subject to ceiling of Cap rates corresponding to the main fuel used for such generation as specified in the Schedule "A" of this

Regulation.

(8) Charges for Inter-regional UI Exchanges between the two asynchronous Regions shall be computed by the respective Regional Power Committees, based on UI rates as per the frequency of the respective Region. The amount to be settled for the inter-regional exchanges shall be average of the UI charges computed for the two regions by way of such inter-change. "

3. Amendment of Regulation 7 of the Principal Regulations.-

Regulation 7 of the Principal Regulations shall be substituted as under, namely.-

"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 49.80' Hz and 3% on a daily aggregate basis for all the time blocks when the frequency is 'below 49.80 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 49.80 Hz' and 3% on daily aggregate basis for all the time

blocks when the frequency is 'below 49.80 Hz' .

(3) In addition to Unscheduled Interchange Charges 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 49.7 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 49.7 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 49.7 Hz' .

(4) The additional Unscheduled Interchange charge for over-drawals and under-injection of electricity for each time block when grid frequency is below 49.7 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 rates for additional Unscheduled Interchange charges for over draws and

under injections and for different ranges of frequencies 'below 49.7 Hz'.

(5) The additional Unscheduled Interchange charge for under-injection of electricity during the time-block when grid frequency is 'below 49.7 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 rates for additional Unscheduled Interchange charges for under injections at different ranges of frequencies 'below 49.7 Hz'.

(6) 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 by the Commission 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 49.80 Hz'.

(7) 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 49.80 Hz' and up to 49.7 Hz.

(8) The charges for over-drawal/under-injection and under-

drawal/over-injection of electricity shall be computed by the respective Regional Power Committee in accordance with the methodology used for preparation of 'Regional Energy Accounts'.

(9) 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 49.7 Hz and between 49.80-49.7 Hz separately."

Sd/-
(Rajiv Bansal)
Secretary

Note: The Principal Regulations were published in the Gazette of India Extraordinary Part III Section 4 at Ser No.43 on 3rd March 2009 and the first amendment to the Principal Regulations were published in the Gazette of India Extraordinary Part III Section 4 at Ser No. 114 on 28th April 2010.

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:-

Average Frequency of the time block(Hz)		UI Rate
Below	Not Below	(Paise per kWh)
	50.20	0.00
50.20	50.18	16.50
50.18	50.16	33.00
50.16	50.14	49.50
50.14	50.12	66.00
50.12	50.10	82.50
50.10	50.08	99.00
50.08	50.06	115.50
50.06	50.04	132.00
50.04	50.02	148.50
50.02	50.00	165.00
50.00	49.98	193.50
49.98	49.96	222.00
49.96	49.94	250.50
49.94	49.92	279.00
49.92	49.90	307.50
49.90	49.88	336.00
49.88	49.86	364.50
49.86	49.84	393.00
49.84	49.82	421.50
49.82	49.80	450.00
49.80	49.78	478.13
49.78	49.76	506.25

49.76	49.74	534.38
49.74	49.72	562.50
49.72	49.70	590.63
49.70	49.68	618.75
49.68	49.66	646.88
49.66	49.64	675.00
49.64	49.62	703.13
49.62	49.60	731.25
49.60	49.58	759.38
49.58	49.56	787.50
49.56	49.54	815.63
49.54	49.52	843.75
49.52	49.50	871.88
49.50		900.00
<p>(Each 0.02 Hz step is equivalent to 16.50 Paise/kWh in the 50.2-50.00 Hz frequency range, 28.50 Paise/kWh in 50 Hz to 49.8 Hz and 28.12 Paise/kwh in frequency in the below 49.8 Hz to 49.5 Hz range.)</p>		

2. Unscheduled Interchange Cap Rates

(a) In terms of clauses (1) and (3) of Regulations 5, the UI Cap Rate shall be 421.50 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 (6) of Regulations 5, the UI Cap Rate shall be 450.00 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 (7) of Regulations 5, the UI Cap Rate shall be 450.00 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.

(d) In terms of clauses (1) of Regulation 5, the UI Cap Rate shall be 165.00 Paise/kWh 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.

(e) In terms of clauses (1) of Regulation 5, the UI Cap Rate shall be 165.00 Paise/kWh 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 Cap Rate as specified in the Schedule 'A' of these regulations.

(f) In terms of clauses (7) of Regulation 5, the cap rates for the infirm power injected into the grid by a unit of a generating station

during the testing/commissioning prior to COD of unit shall be as follows corresponding to the fuel used for the generation:

Domestic coal/ Lignite/Hydro (₹ / kWh sent out)	:	1.65
APM gas as fuel (₹/ kWh sent out)	:	2.60
Imported Coal/RLNG (₹/ kWh sent out)	:	3.30
Liquid Fuel (₹ / kWh sent out)	:	9.00

3. Additional Unscheduled Interchange Charges

(a) In terms of clause (4) of Regulation 7 , the Additional Unscheduled Interchange Charge for over-drawal of electricity for each time-block when grid frequency is "below 49.7 Hz" and up to "Not below 49.5 Hz" shall be equivalent to 20% of the Unscheduled Interchange Charge corresponding to 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 49.7 Hz" and up to "Not below 49.5 Hz" shall be equivalent to 20% of the Unscheduled Interchange Charge of the corresponding 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 49.5 Hz and up to 49.2 Hz shall be equivalent to 40% of the Unscheduled Interchange Charge 900.0 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 40% of the Unscheduled Interchange Charge of 900.0 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 900.0 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 100% of the Unscheduled Interchange Charge of 900.0 Paise/kWh corresponding to the grid frequency of below 49.5 Hz.

(b) In terms of clause (4) of Regulation 7, the Additional Unscheduled Interchange Charge for under-injection of electricity during the time-block when grid frequency is below 49.7 Hz and up to 49.5 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 421.50 Paise/kWh:

Provided that the Additional Unscheduled Interchange Charge for under-injection of electricity during the time-block when grid frequency is below 49.5 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 421.50 Paise/kWh.