

Discussion Paper on “Wheeling and Banking Charges for Renewable Energy Generators”

I. Preamble:

The Commission in its order dated 09.06.2005 in the matter of 'Determination of Transmission Charge, Wheeling Charge and Cross Subsidy Surcharge under Open Access' has determined the wheeling charges for all RE generators at 5% of the energy injected to the grid and Banking charges for Mini-hydro & Wind generators at 2% of the injected energy. Further, the order specified that those generators availing banking facility have to pay the difference in UI charges at the time of injection and drawal to compensate for the difference in power purchase cost at the time of injection and drawal. Subsequently, in its order dated 22.03.2013, the Commission has introduced banking facility to solar power plants also. The Commission has also waived wheeling charges for solar plants in its latest tariff order. The above wheeling and banking charges are being continued till date by the Commission.

The Distribution Licensees (ESCOs) in the State have represented that the above concessional wheeling and the banking facilities extended to RE sources are adversely affecting their finances. Further, they have also stated that charging of difference in UI charges at the time of injection and drawal to compensate for the difference in power purchase cost at the time of injection and drawal is difficult to implement.

In the past few years several changes have taken place in the power sector. In order to introduce competition, open access and trading have been introduced. Further, Renewable Certificate Mechanism has also been introduced to enable obligated entities not having access to RE sources to meet their RPO by Purchasing RECs which represent the cost of environmental benefits of renewable energy. All the above changes have necessitated a fresh look at the wheeling and banking charges levied in the State.

The Commission notes that, in States like Gujarat and Tamil Nadu, State Electricity Regulatory Commissions have already introduced normal Transmission and wheeling charges

for RE generators availing RECs. While Gujarat has not extended banking facility, Tamilnadu has provided ToD based monthly banking facility for those RE Generators opting for REC mechanism. Further, the Commission notes that there is a need to introduce a system of non-concessional Wheeling & Banking facility for renewable energy sources.

In the light of the above, the Commission proposes to discontinue the banking facility on an annual basis and to introduce Transmission and/or wheeling charges for all RE generators seeking open Access/wheeling to Transmission and/or distribution network on par with charges applicable to non RE/conventional power generating companies. These charges shall be as determined by the Commission in its tariff orders issued from time to time.

The revised charges would be made applicable to renewable projects commissioned from the date on which the final order in the matter is issued by the Commission. For existing projects where Agreements have already been signed and are in vogue, such Agreements shall continue to apply for the terms specified in those agreements. For such projects the revised charges become applicable only after the expiry of the term specified in those agreements or termination of the agreement or for any extended period where the extension is agreed between parties after the issue of the final orders on the present proposal.

The details of the proposals are discussed below:

II. Wheeling Charges:

The Commission proposes to levy wheeling charges for all RE sources for using the network of Transmission licensee and/or distribution licensee/s in the State on par with charges applicable to non RE/conventional power generating companies. The present charges for wheeling as determined by the Commission in its tariff order dated 06.05.2013 for FY14 are as indicated below:

1. Transmission Charges for using Transmission Network

The Transmission Charges for long term open access will be Rs. 95,442/MW/Month. The Transmission charges payable for the short-term open access are as indicated below:

- a) More than 12 hrs & upto 24 hrs in a day in one block : Rs.784.46/MW/day
- b) More than 6 hrs & upto 12 hrs in a day in one block : Rs.392.23/MW/day
- c) Upto 6 hrs in a day in one block : Rs.196.11/MW/day

In addition, transmission losses of 3.94% in kind shall be applicable for both long term and short term Open Access transactions.

2. Wheeling Charges for Using Distribution Network:

The following wheeling Charges are payable for use of the network of the Respective ESCOMs [injection and drawal within the same ESCOM]:

The actual wheeling charges payable will depend upon the point of injection & point of drawal as indicated below:

a. BESCO

- i) If both the injection point and drawal point are at HT level: 10 paise/unit & 4.0% loss in kind.
- ii) If both the injection point and drawal point are at LT level: 23 paise/unit & 8.84% loss in kind.
- iii) If the injection point is at HT level and drawal point is at LT level or the injection point is at LT level and drawal point is at HT level: 33 paise/unit & 12.84% loss in kind.

b. MESCOM

- (i) If both the injection point and drawal point are at HT level: 20 paise/unit & 4.27% loss in kind.
- (ii) If both the injection point and drawal point are at LT level: 48 paise/unit & 6.92% loss in kind.

- (iii) If the injection point is at HT level and drawal point is at LT level or the injection point is at LT level and drawal point is at HT level: 68 paise/unit & 11.19% loss in kind.

c. CESC

- (i) If both the injection point and drawal point are at HT level: 20 paise/unit & 5.31% loss in kind.
- (ii) If both the injection point and drawal point are at LT level: 48 paise/unit & 8.63% loss in kind.
- (iii) If the injection point is at HT level and drawal point is at LT level or the injection point is at LT level and drawal point is at HT level: 68 paise/unit & 13.94% loss in kind.

d. HESCOM

- (i) If both the injection point and drawal point are at HT level: 21 paise/unit & 8.69% loss in kind.
- (ii) If both the injection point and drawal point are at LT level: 48 paise/unit & 8.76% loss in kind.
- (iii) If the injection point is at HT level and drawal point is at LT level or the injection point is at LT level and drawal point is at HT level: 69 paise/unit & 17.46% loss in kind.

e. GESCOM

- (i) If both the injection point and drawal point are at HT level: 23 paise/unit & 6.78% loss in kind.
- (ii) If both the injection point and drawal point are at LT level: 52 paise/unit & 8.97% loss in kind.
- (iii) If the injection point is at HT level and drawal point is at LT level or the injection point is at LT level and drawal point is at HT level: 75 paise/unit & 15.76% loss in kind.

3. In case the wheeling of energy involves usage of Transmission network or network of more than one licensee, the charges shall be as indicated below:

- a. If only the transmission network is used, transmission charges determined by the Commission shall be payable to the Transmission Licensee.
- b. If the Transmission network and the ESCOMs' network are used, Transmission Charges shall be payable to the Transmission Licensee and Wheeling Charges of the ESCOM where the power is drawn shall be shared equally among the ESCOMs whose networks are used.

Illustration:

If a transaction involves transmission network and BESCO's network and 100 units of energy is injected, then at the drawal point the consumer is entitled for 83.73 units, after accounting for Transmission loss of 3.94% and BESCO loss of 12.84%.

The Transmission charge in cash as determined in the Transmission Tariff order shall be payable to KPTCL and Wheeling charge of 33 paise per unit shall be payable to BESCO. In case more than one ESCOM is involved the above 33 paise shall be shared by all ESCOMs involved.

- c. Where the network of only ESCOMs is used, the Wheeling Charges of the ESCOM where the power is drawn shall be payable which will be shared equally among the ESCOMs whose networks are used.

Illustration:

If a transaction involves injection into MESCO's network and drawal at BESCO's network, then at the drawal point the consumer is entitled to draw 87.16 units for every hundred units injected, after accounting for BESCO's loss of 12.84%.

The Wheeling charge of 33 paise per unit applicable to BESCO shall be equally shared between MESCO and BESCO.

The Commission proposes to levy the above wheeling charges for the period of the tariff order for 2013-14. These charges will be determined in the Commission's tariff orders from time to time in future.

III. Banking Charges:

At present, the Banking charges determined by the Commission are 2% of the injected energy for Wind, Minihydel and solar power plants for the electricity generated and wheeled within the State. Further, RE generators availing banking facility have to pay the difference in UI charges at the time of injection and drawal.

The Commission proposes to discontinuethethe yearly banking facility. Thus, banking could be done within the relevant month and any excess energy injected to the grid and not utilized by the Wheeling and Bankingcustomer shall at the end of the month be deemed to be utilized by the distribution licensee in whose area the Generator is located. Further, the energy banked [within the month] during off-peak period shall be drawn during off –peak period only and the peak energy banked shall be off-set against peak period drawal. To monitor the same, ToD meters shall be installed at both the injection point and the drawal point.

For the excess energy injected to the grid and remaining unutilized by the Wheeling and Banking customer at the end of the month, the ESCOM shall pay the generator at 85% of the generic tariff determined by the Commission for the particular RE source, in case the RE Generator Opts for **Non-REC route** and at the APPC in case the RE Generator Opts for **REC route**. The option of **Non-REC route** or **REC route** has to be exercised before entering into agreement with the Licensees and the eligibility criteria for accreditation under REC mechanism shall be as specified in the relevant KERC RPO/REC Regulations.

In the light of the above discussion, the Commission invites comments/suggestions from interested persons on the above proposals. Comments/Suggestions on the above may be

communicated to the Commission in writing addressed to the Secretary of the Commission at the address given below so as to reach on or before 15th July 2013 by 5 p.m.

**The Secretary
Karnataka Electricity Regulatory Commission
6th& 7th Floor, Mahalakshmi Chambers,
9/2, M.G.Road, Bangalore – 560 001.**

Approved by the Commission

Secretary