

CENTRAL ELECTRICITY REGULATORY COMMISSION

NEW DELHI

No.L-_____/2009-CERC

Dated___ 2009

NOTIFICATION (DRAFT)

In exercise of the powers conferred under section 178 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, namely:

1. Short title and commencement - These regulations may be called the Central Electricity Regulatory Commission (Terms and Conditions for Tariff determination from Renewable Energy Sources) (Amendment) Regulations, 2009.

(2) These regulations shall come into force from their notification in official gazette.

2. Amendment of Regulation 2 - Sub-clause (j) of clause (1) of regulation 2 the Draft Central Electricity Regulatory Commission (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2009 shall be substituted as under, namely-

(j) **'Inter-connection Point'** shall mean interface point of renewable energy generating facility with the transmission system or distribution system, as the case may be.

For wind energy projects and solar photovoltaic projects, inter-connection point shall be line isolater on outgoing feeder on HV side of the pooling sub-station,

For small hydro, biomass and bagasse cogeneration projects and solar thermal power projects the inter-connection point shall be line isolator on outgoing feeder on HV side of generator transformer.

- (2) After sub-clause (s) of clause (1) of regulation 2 of the Draft Central Electricity Regulatory Commission (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2009, clause (s-a) shall be inserted as under, namely

(s-a) 'Solar PV power plant' means the Solar Photo Voltaic Power Plant that directly convert, solar energy into electricity and are based on the technologies such as crystalline silicon or thin film as may be approved by MNRE.

- (3) After newly inserted sub-clause (s-a) of clause (1) of regulation 2 of the Draft Central Electricity Regulatory Commission (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2009, clause (s-b) shall be inserted as under, namely

(s-b) 'Solar Thermal power plant' shall mean the Solar Thermal Power Plants that uses sunlight for direct conversion into electricity through

Concentrated Solar Power technology viz. solar trough or solar tower, as may be approved by MNRE.

(4) Sub-clause (u) of clause (1) of regulation 2 of the Draft Central Electricity Regulatory Commission (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2009, shall be substituted as under namely,

(u) **“Useful Life”** in relation to a unit of a generating station including evacuation system shall mean the following duration from the date of commercial operation (COD) of such generation facility, namely:-

- | | |
|---|-----------------|
| (a) Wind energy power project | 25 years |
| (b) Biomass power project, non-fossil fuel cogeneration | 20 years |
| (c) Small Hydro Plant | 35 years |
| (d) <u>Solar PV /Solar thermal power plant</u> | <u>25 years</u> |

3. Amendment of Regulation 3 – Regulation 3 of the Draft Central Electricity Regulatory Commission (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2009 shall be substituted as under namely,

“Scope and extent of applications”

These regulations shall apply in all cases where tariff, for a generating station or a unit thereof based on renewable sources of energy, is to be determined by the Commission under Section 62 read with Section 79 of the Act thereof.

Provided that in cases of wind, small hydro projects, biomass power and non-fossil fuel based cogeneration projects and Solar PV and Solar Thermal Power Projects, these regulations shall apply subject to the fulfilment of eligibility criteria specified in regulation 4 of these Regulations.

- 4. Amendment of Regulation 4** -After sub-clause (4) of Regulation 4 of the Draft Central Electricity Regulatory Commission (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2009, clause (5) shall be inserted as under, namely-

“(5) Solar Photovoltaic and Solar Thermal power projects – Based on technologies approved by MNRE.”

- 5. Amendment of Regulation 5** – The following proviso shall be inserted after the first paragraph of Regulation 5 of the Draft Central Electricity Regulatory Commission (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2009, namely-

“Provided that the benchmark capital cost for Solar PV and Solar thermal projects may be reviewed annually by the commission.”

- 6. Amendment of Regulation 6** - Regulation 6 of the Draft Central Electricity Regulatory Commission (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2009 shall be substituted as under, namely,

“ (1) The Tariff Period for determination of tariff under these regulations for all types of RE projects except in case of Solar PV and Solar thermal power projects shall be thirteen (13) years.

(2) In case of Solar PV and Solar thermal power projects the Tariff Period shall be twenty five (25) years.”

7. Amendment of Regulation 7 - Clause (1) of Regulation 7 of the Draft Central Electricity Regulatory Commission (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2009 shall be substituted as under, namely,

“(1) Project specific tariff, on case to case basis, shall be determined by the Commission for Municipal Solid Waste Projects or for any other new renewable energy technologies approved by MNRE.

Provided that project specific tariff, on case to case basis, may be determined by the Commission in case of Solar PV and solar Thermal Power Projects, in case Petition for such tariff determination is filed in accordance with provisions outlined under Regulation 8. The Commission while determining the project specific tariff for Solar PV and Solar Thermal shall be guided by the provisions of chapters 8 of these Regulations.”

8. Amendment of Regulation 19 - Clause (1) of regulation 19 of the Draft Central Electricity Regulatory Commission (Terms and Conditions for Tariff determination

from Renewable Energy Sources) Regulations, 2009 shall be substituted as under namely,

“(1) The Working Capital requirement in respect of wind energy projects, small hydro power, solar photovoltaic and solar thermal power projects shall be computed in accordance with the sub-Regulations below:

Wind Energy / Small Hydro Power/Solar Photovoltaic/Solar Thermal

- a) Operation & Maintenance expenses for one month,
- b) Receivables equivalent to 1½ (one and a half) months of energy charges for sale of electricity calculated on the normative CUF
- c) Maintenance spare @ 15% of operation and maintenance expenses ”

9. Insertion of new Chapter - After Chapter 6 of the Draft Central Electricity Regulatory Commission (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2009, Chapter 7 and 8, shall be added as under namely

“Chapter 7: Technology specific parameters for Solar Photovoltaic Project

56. Technology Aspects

(1) Norms for Solar Photovoltaic (PV) power under these Regulations shall be applicable for grid connected PV systems that directly convert solar energy into electricity and are based on the technologies such as crystalline silicon or thin film as may be approved by MNRE

57. Capital Cost

- (1) The normative capital cost for setting up Solar Photovoltaic Power Project shall be Rs.1800 Lakh/MW for FY 2009-10.

Provided that the Commission may deviate from above norm in case of project specific tariff determination in pursuance of Regulation 7 and Regulation 8.

58.Capacity Utilisation Factor

- (1) The Capacity utilisation factor for Solar PV project shall be 19%.

Provided that the Commission may deviate from above norm in case of project specific tariff determination in pursuance of Regulation 7 and Regulation 8.

59.Operation and Maintenance Expenses

- (1) The O&M Expenses shall be Rs.9 Lakhs/MW for the 1st year operation.

- (2) Normative O&M expenses allowed at the commencement of the Control Period under these Regulations shall be escalated at the rate of 5.72% per annum.

10.Insertion of new Chapter - After Regulation 59 of the Draft (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2009 chapter 8, regulations 60 to 64 shall be inserted as under namely

Chapter 8: Technology specific parameters for Solar Thermal Project

60.Technology Aspects

- (1) Norms for Solar thermal power under these Regulations shall be applicable for Concentrated solar power (CSP) technologies viz. solar trough or solar tower, as may be approved by MNRE and uses direct sunlight, concentrating it several times to reach higher energy densities and thus higher temperatures whereby the heat generated is used to operate a conventional power cycle to generate electricity.

61. Capital Cost

- (1) The normative capital cost for setting up Solar Thermal Power Project shall be Rs.1300 Lakh/MW for FY 2009-10.

Provided that the Commission may deviate from above norm in case of project specific tariff determination in pursuance of Regulation 7 and Regulation 8.

62. Capacity Utilisation Factor

- (1) The Capacity utilisation factor shall be 25%.

Provided that the Commission may deviate from above norm in case of project specific tariff determination in pursuance of Regulation 7 and Regulation 8.

63. Operation and Maintenance Expenses

- (1) The O&M Expenses shall be Rs 13 Lakhs/MW for 1st year operation.
- (2) Normative O&M expenses allowed at the commencement of the Control Period under these Regulations shall be escalated at the rate of 5.72% per annum.

64. Auxiliary Consumption

- (1) The auxiliary consumption factor shall be 10%.

Provided that the Commission may deviate from above norm in case of project specific tariff determination in pursuance of Regulation 7 and Regulation 8.”

(Alok Kumar)
Secretary