

**PUNJAB STATE ELECTRICITY REGULATORY COMMISSION
SCO NO.220-221, SECTOR 34-A, CHANDIGARH**

Review Petition No. 1 of 2017
in Petition No. 55 of 2016 (Suo-Motu)
Date of Order: 09.08.2017

Present: Shri D.S. Bains, Chairman
Shri S.S. Sarna, Member

In the matter of: Review Petition under Section 94(1)(f) of the Electricity Act, 2003 read with Regulation 64 (Chapter XIII) of the PSERC (Conduct of Business) Regulations, 2005 for Review of para 13 of the Commission's Order dated 23.11.2016 (Petition No. 55 of 2016-Suo Motu) deciding generic levelled generation tariff for Renewable Energy Biomass and 100% Rice straw based Power Projects for FY 2016-17.

In the matter of: Biomass Power Producers Association, Regd. Office: H.No. 870, Phase 3B-2, Mohali (Punjab)160059.

... Review Petitioner

Versus

1. Punjab Energy Development Agency (PEDA), Plot No.1 & 2, Sector 33-D, Chandigarh.
2. Punjab State Power Corporation Limited (PSPCL), The Mall, Patiala.

....Respondents

ORDER

Biomass Power Producers Association (BPPA) filed the present review petition seeking review of para 13 of the Commission's Order dated 23.11.2016 in petition no. 55 of 2016 (Suo-Motu) wherein

levellised generic tariff for biomass and 100% rice straw based power projects for FY 2016-17 was determined by the Commission.

2. The Commission admitted the review petition on 09.03.2017 and PSPCL & PEDDA were impleaded as respondents. Vide Order dated 16.03.2017, notice was issued to both the respondents and the petitioner was directed to supply a copy of the petition to the respondents. PEDDA and PSPCL were directed to file the respective replies by 31.03.2017 with a copy to the petitioner. Next date of hearing was fixed as 27.04.2017.

PEDDA and PSPCL filed their respective replies. Vide Order dated 16.03.2017, the Commission directed the petitioner to file rejoinder to the replies by 04.05.2017. Next date of hearing was fixed as 18.05.2017.

After hearing the parties on 18.05.2017, the Commission vide Order dated 23.05.2017 reserved the Order.

3. The petitioner's submissions in brief, are as hereunder:

i) Para 13 of the Commission's Order dated 23.11.2016 in petition no. 55 of 2016 (Suo-Motu) for determination/fixation of levellised generic tariff for various renewable energy technologies/projects for the year 2016-17 reads as under:

"PEDDA is directed to ensure that the developer(s) enter into Fuel Supply Agreement(s) directly with the farmers of the State of Punjab on the lines of 'The Punjab Contract Farming Act, 2013' such that supply of fuel to Biomass/100% Rice Straw based Power Projects is ensured to achieve minimum 80% PLF. In case the developer avails the services of an agent for arrangement of fuel, the developer shall be fully responsible for the acts of his agent. PSPCL, on its part, shall ensure that a Fuel Supply Agreement clause on the above lines is incorporated in the PPA(s) to be signed with the developer(s)

alongwith the provision that the project will achieve 80% PLF for supply of power to PSPCL.”

- ii) Punjab has abundant agricultural waste being predominantly agrarian State. Due to increasing mechanization of agricultural operations and handling of agriwaste with enhanced logistics, sourcing of biomass is no more a handicap/limiting factor for maximizing the power generation from biomass and 100% rice straw based power plants.
- iii) The problems linked with biomass power plants were examined by an expert committee constituted by CERC on 11.10.2012 under the chairmanship of Secretary, CERC. The committee deliberated and collected information/data from various stake holders and visited biomass based power plants. In its report submitted to CERC on 16.07.2013, the committee observed that the quality of biomass deteriorated over prolonged storage due to weather conditions/moisture content affecting boiler efficiency and power generation and the operations were affected due to outages on account of high corrosion & erosion in the boilers requiring periodic repair and maintenance.
- iv) The other factors which affect the performance of biomass power plants are as under:
 - a) Due to seasonal/unseasonal rains, biomass fuel absorbs moisture, being highly hygroscopic and is rendered unusable causing longer duration outages.
 - b) As most of the plants evacuate power through 66 kV transmission line/grid sub-stations, planned/unplanned outages affect the performance of biomass power plants.

- v) The Commission had been adopting CERC (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations for deciding tariff for RE projects in the State. For calculating remunerative tariff for biomass power projects, PLF is taken as 80% from 2nd year onwards. No generating plant would operate below benchmark PLF considering that operation below 80% shall be un-remunerative. However, due to above mentioned reasons, it is highly unlikely that biomass and 100% rice straw based power projects shall be able to achieve 80% PLF on annual basis.
- vi) The said Regulations do not stipulate that biomass based power projects shall achieve 80% PLF on annual basis. As per generation data obtained from PEDDA, average PLF of biomass power plants operating in the State is 52.71% and 56.12% for FY 2014-15 and FY 2015-16 respectively.
- vii) As per data available on website of Ministry of Power, Govt. of India, even average PLF of conventional power sources having established and proven technology (thermal+hydro+nuclear) for FY 2016-17 (upto December 2016) is marginally above 50%. All India PLF data for biomass sector is not available yet even with MNRE.
- viii) Technology-wise, biomass and 100% rice straw based power projects are considered difficult to operate. The stipulation of 80% PLF may be interpreted to levy penalties on such plants failing to achieve 80% PLF on annual basis.
- ix) It is prayed to the Commission to delete the reference to achieving 80% PLF in para 13 of the Order dated 23.11.2016 in petition no.55 of 2016 (Suo-Motu).

4. PEDA's submissions in reply to the petition are summarized as under:

- i) PEDA, in line with the Order dated 23.11.2016 passed by the Commission, incorporated the stipulation of achieving 80% PLF on annual basis in the Implementation Agreements signed with the developers.
- ii) CERC vide its Order dated 29.04.2016 in petition no. SM/03/2016 (Suo-Motu), determined levelled generic tariff for FY 2016-17 for renewable energy projects as per the CERC RE Tariff Regulations which provide that PLF during first 6 months of stabilization period would be 60%, during next 6 months in the first year after stabilization period as 70% and 80% from 2nd year onwards.
- iii) The power generation from biomass fuel is dependent on various external factors such as biomass sourcing, fuel collection, transportation and storage etc. which requires support at the time of stabilization. Accordingly, in line with the parameters stipulated by CERC, the Commission may consider to allow the same.

5. PSPCL's submissions in reply to the petition are summarized as under:

- i) The grounds pleaded for review are quality of biomass affecting the boilers of the generating stations and evacuation issues. The petitioner contended that the said grounds have not been considered by the Commission in the Order.
- ii) The Commission while determining tariff for biomass including 100% rice straw based power projects in the State, has been adopting the norms specified by the CERC from time to time.

CERC has taken the normative PLF as 60% for the first six months of operation (stabilization period), 70% during the remaining 6 months of the first year of the operation and 80% from 2nd year onwards. Accordingly, the Commission has adopted the same PLF for biomass power projects in the State while determining the tariff. The operation norms including PLF have been fixed by CERC after undertaking study of biomass power plants operating in various States and after taking into account the comments/suggestions/objections from various stakeholders. The same have thus rightly been adopted by the Commission in tariff proceedings where once again the stakeholders have been duly consulted. The same cannot therefore be faulted with, more so when the petitioner has not shown any grounds for deviation from the same.

- iii) The plea for reducing the normative PLF of 80% for biomass based power projects was rejected by the Commission in its Order dated 06.12.2016 in petition no. 53 of 2016 filed by Sukhbir Agro Energy Ltd., a 100% rice straw based power developer.

Like the present review petitioner, the contention made by the petitioner was that the biomass power plants in the region had not been able to achieve more than 75% PLF. The rice straw quality deteriorated faster during storage due to change in weather conditions and on account of moisture content. PSPCL had submitted in that petition also that the same may not be agreed to as the rice straw was now stored in modern storage facilities and upgraded boiler technology was being used for power generation.

iv) Now due to technology upgradation over the past few years, boilers have been specifically designed keeping in mind the chemical composition of the biomass being used. This reduces the frequent repair and maintenance issues pleaded by the petitioner. Also, the collection and storage methodology for biomass fuel has improved such that deterioration in quality of biomass due to moisture content has reduced. The improved technology is duly reflected in the capital cost of biomass power projects. CERC has, accordingly, deemed it appropriate to provide the normative PLF for biomass based power with 80% PLF from the 2nd year of operation.

As biomass power generators are allowed appropriate capital cost for improved technology, it cannot be pleaded that they would not be able to operate the power plants on normative PLF of 80% on account of quality deterioration of stored biomass/rice straw or outages due to high corrosion and high erosion in the biomass based boilers.

Therefore, the contentions of the petitioner in this regard are not tenable and liable to be rejected.

v) The generation data of Malwa Power Pvt. Ltd. for the last three years reveals that PLF of 83.37%, 78.31% and 87.20% was achieved during FY 2014-15, FY 2015-16 and FY 2016-17 (for 11 months). Evidently, 80% PLF has been achieved by biomass power plants with efficient operations and working on sound commercial principles. Thus, the petitioner's contention that 80% PLF is not achievable is incorrect. Reduced PLF is bound to result in increased tariff, thus burdening the consumers in the State on

whom the power purchase cost of a distribution licensee is a pass through.

As such, deviation from the normative PLF cannot be permitted as the biomass power plants are mandated to achieve the said normative PLF.

vi) Viaton Energy Pvt. Ltd intimated PSPCL regarding failure of 66 kV grid sub-station, Mansa for 23.39 hours on various dates during the month of December, 2016. It was advised to take suitable precaution to avoid tripping. Thereafter, no incident of tripping was reported to PSPCL till filing of this reply by the concerned biomass generator. Due to the said failure, the PLF was impacted by mere 0.27%.

vii) Most of the biomass based power projects evacuate power through 66 kV transmission lines/grid sub-stations. The incidents of grid failure at 66 kV are rare. Minor trippings in the system can not be ruled out, but the effect of the same is negligible.

viii) There is no error apparent in Order dated 23.11.2016 passed by the Commission, which requires any review as sought by the petitioner. The petition is liable to be dismissed being devoid of any merit.

6. In the rejoinder to the reply of PSPCL, BPPA, while reiterating its earlier submissions, further submitted as hereunder:

i) BPPA denied having pleaded for revision of tariff by lowering the benchmark percentage PLF as specified in CERC Regulations adopted by the Commission. BPPA in reply to the Staff Paper pleaded to adopt CERC RE (First Amendment) Regulations, 2014

for determining the generic tariff for biomass/100% rice straw based power projects to be commissioned in FY 2016-17.

- ii) A biomass power project operating below 80% PLF would cause loss to plant owner only without any tariff burden on PSPCL.
- iii) PSPCL can not deny the impact of grid failure on the performance of biomass power projects. Single grid failure can cause a generation loss of many hours requiring additional fuel for starting the plants.

Commission's Observations, Findings and Decision

7. The petitioner prayed to review and delete the reference in para 13 of the Commission's Order dated 23.11.2016 in petition no.55 of 2016 (Suo-Motu) pertaining to achieving 80% PLF on annual basis by biomass and 100% rice straw based power projects.

The Commission has carefully gone through the review petition, replies thereto by the respondents and rejoinder filed by the petitioner. **The Commission opines that the petitioner is not entitled to relief as prayed as detailed below:**

- i) The CERC RE Tariff Regulations, 2012 adopted by the Commission, in Regulation 40 (2), provide that the biomass power generating companies shall ensure adequate availability of fuel to meet the respective project requirements. Similar provision exists in the CERC RE Tariff Regulations, 2017.**
- ii) CERC, after the due process, while determining the tariff as per the CERC RE Tariff Regulations considers the PLF of 60% for the first 6 months of operation (stabilization period), 70%**

during the remaining period of 6 months of the first year (after stabilization) and 80% from 2nd year onwards. The Commission also, after due process, adopted the said CERC RE Tariff Regulations and determined the tariff for RE projects similarly.

- iii) The Commission has already considered similar plea for not stipulating 80% PLF in petition no.53 of 2016 filed by Sukhbir Agro Energy Ltd. in its Order dated 06.12.2016 and not agreed to the same.
- iv) As submitted by the petitioner that Punjab has abundant agricultural waste being predominantly agrarian State. Due to increasing mechanization of agricultural operations and handling of agriwaste with enhanced logistics, sourcing of biomass is no more a handicap/limiting factor for maximizing the power generation from biomass and 100% rice straw based power plants.
- v) The improved technology for fuel handling and boilers resulted in higher capital cost being considered by the Commission in the RE Regulations and thus the developers can not argue not to strive to achieve 80% PLF for biomass and 100% rice straw based projects.
- vi) Older plants like Malwa Power Pvt. Ltd. have been able to achieve PLF above 80% or near about consistently for the last atleast 3 years for which data was made available to the Commission by PSPCL.

- vii) Increased generation with 80% PLF will improve the financial health of generating company with higher inflow of funds and help PSPCL to fulfill the non-solar RPO fully.**
- viii)The impact of outages in the 66 kV transmission system as per data submitted by the petitioner and PSPCL appears to have insignificant adverse effect on PLF.**
- ix)The stipulation of achieving 80% PLF on annual basis by biomass and 100% rice straw based power projects has been incorporated by PEDDA in the Implementation Agreements signed with the developers.**
- x) The petitioner's plea that even the power plants operating on conventional fuel achieve only 50% PLF on average pan India is not tenable as such plants are subject to merit order dispatch and the distribution licensee has to pay fixed charges in the event of scheduling power less than the stipulated PLF of 80 or 85% as the case may be whereas the renewable energy plants in Punjab are 'must run' plants and PSPCL is obliged to purchase all power offered to it by such plants. be.**
- xi)The petition is based on mere apprehensions that the stipulation of 80% PLF may be interpreted to levy penalties on such plants failing to achieve the same.**

In view of the above, the relief as prayed to review para 13 of Commission's Order dated 23.11.2016 in petition no. 55 of 2016 (Suo-Motu) for deleting the reference to achieving 80% PLF for biomass and 100% rice straw based projects is not allowed.

However, as suggested by PEDA, the projects may achieve PLF of 60% for the first 6 months of operation (stabilization period), 70% during the remaining period of 6 months of the first year (after stabilization) and 80% from 2nd year onwards. While the plant is in operation, in case the developers experience genuine difficulty in achieving 80% PLF from 2nd year onwards, they are free to approach the Commission with hard facts and factual data for seeking relief on merits.

The review petition is disposed of in terms of above.

Sd/-

(S.S. Sarna)
Member

Sd/-

(D.S. Bains)
Chairman

Chandigarh
Dated : 09.08.2017