

**HARYANA ELECTRICITY REGULATORY COMMISSION  
BAYS NO. 33-36, SECTOR – 4, PANCHKULA – 134113, HARYANA**

**Date of Hearing: 06.04.2011**

**Date of order : 04.07.2011**

**IN THE MATTER OF:**

Petition for amendment of clause 12.2 of Power Purchase Agreement dated 20.08.2010 between Selected Solar PV Power Developers under RPSSGP Scheme of MNRE/ IREDA in the state of Haryana and Haryana Power Purchase Centre on behalf of Uttar Haryana Bijli Vitran Nigam Ltd. and Dakshin Haryana Bijli Vitran Nigam Ltd.

- (1) M/S Reliable Manpower Solutions Limited, Delhi.
- (2) M/S SDS Solar Private Limited, New Delhi.
- (3) M/S HR Minerals & Alloys Pvt. Limited.

Petitioners

V/S

- (1) Haryana Power Purchase Centre, Shakti Bhawan, Sector-6, Panchkula through its Chief Engineer.
- (2) Dakshin Haryana Bijli Vitran Nigam Limited, Vidyut Nagar, Vidyut Sadan, Hisar through its Managing Director.
- (3) Uttar Haryana Bijli Vitran Nigam Limited, Vidyut Sadan, Plot No. C16, Sector-6, Panchkula through its Managing Director.
- (4) Renewable Energy Department, Haryana & HAREDA, SCO- 48, Sector-26, Chandigarh.

Respondents

**PRESENT:**

Sh. Manish Gupta, Director Reliable Manpower Solutions Limited, Delhi.

Sh. Krishan Kumar, Director, SDS Solar Private Ltd. New Delhi.

Sh. J. S. Ahluwalia on behalf of Petitioner No. 3.

AND

Sh. A.K. Viridi, S.E. on behalf of Respondents No. 1 to 3.

None for Respondent No. 4

**Quorum**

Shri Bhaskar Chatterjee, Chairman

Shri Rohtash Dahiya, Member

Shri Ram Pal, Member

## ORDER

The present order disposes of the instant petition filed by the petitioners seeking amendment to clause 12.2 of the Power Purchase Agreements dated 20.8.2010 entered into between the petitioners and Haryana Power Purchase Centre wherein it has been provided that the capacity utilization factor (CUF) of the petitioners' solar plants shall be as per CERC Regulations i.e. not more than 19%.

Brief background of the case is that HPPC, the nodal agency for power purchase for the distribution licensees in Haryana, vide its Memo No. Ch-Loose File/Solar dated 13.08.2010 had approached the Commission for approval of the draft PPA for rooftop PV and small solar power plant which was approved by the Commission vide its Memo No. 1481/HERC/PPA/Solar/SV/10 dated 13.08.2010 with certain observations. However, subsequent to the approval, the project developers including the petitioners pointed out some discrepancies in the draft PPA whereupon after hearing the parties, the Commission vide its Memo No. HERC/PPA/Solar/SV/10/1558 dated 20.08.2010 directed the HPPC to rectify certain discrepancies in the PPA. Again the Solar PV Power Developers under the Rooftop PV Small Solar Generation Programme (RPSSGP) of MNRE/ IREDA in Haryana filed petition dated 15.10.2010 seeking certain further amendments in the PPA which were partly allowed by the Commission vide its order dated 24.12.2010.

Now once again the petitioners have filed the instant petition seeking amendment/ deletion of clause 12. 2 of the PPA as mentioned above on the following grounds:

- i) CERC has nowhere passed any directions that the CUF shall not be more than 19%.
- ii) CERC in its order passed in Petition No. 13 of 2010 ( SUO MOTO) in the matter of Benchmark Capital Cost Norm for Solar PV power projects to be commissioned during FY 2010-11, 2011-12 and Benchmark Capital Cost Norm for Solar Thermal Power Projects commissioned during 2010-11, 2011-12 & 2012-13 while dealing with the CUF has observed in para 15. 4 of the Order that 'the CUF shall depend on insolation level which varies from state to state across various locations and that in the absence of more scientific assessment of solar radiation data, it may not be appropriate to undertake zone-wise classification of CUF across India at this stage, as has been

undertaken in case of wind zone mapping based on wind energy atlas prepared by Centre for Wind Energy Technology (C-WET).’

- iii) Once the plant of stipulated capacity is installed, there is little that the developer can do for increasing or decreasing the capacity utilization except by way of proper maintenance. HAREDA or any other authority or any person for that matter can only check the installed capacity of the plant whether it is 1 MW or less, but the total generation of the plant at the end of the year will work out to what the Nature spells out during that year. Nobody can exactly predict what the CUF will work out to be at the end of the year.
- iv) PPAs of Rajasthan, Punjab and Uttar Pradesh do not carry any such clause restricting the CUF to 19%.

The petitioners have, accordingly, prayed that clause 12.2 of the PPA in question, restricting the CUF to 19%, may be dropped.

Consequent upon notice dated 16.03.2011 issued by the commission to the parties for the hearing scheduled on 06.04.2011, the respondent no.3 i.e. UHBVNL vide its memo no. Ch.-9 /GM/RA/N/F-102/Vol-IV(4) dated 05.04.2011 furnished its comments/reply opposing the plea taken by the petitioners . It has been pointed out that the CERC (Terms and Conditions for Tariff Determination from Renewable Energy Sources) Regulations, 2009 clearly specify that the CUF for Solar PV projects shall be 19% and that HERC vide its notification dated 03.02.2011 has also specified that the CUF for Solar PV projects shall be 19%. It has further been submitted that an analysis of Regulations and Tariff Orders notified by various SERCs in India, such as Maharashtra ERC, Tamil Nadu ERC, Kerla ERC, Karnatka ERC and Jharkhand SERC shows that these SERCs have also adhered to the CERC Tariff Regulations for operational norms and guidelines laid down for tariff determination for Solar Power Plants.

The respondent concluded that the CUF norm of 19% specified for solar PV Plant in Haryana is more than adequate and prayed for dismissal of the present petitions.

In response, the petitioners filed their rejoinder dated 18.04.2011. It was submitted that ‘the figures adopted by CERC for arriving at CUF value. i.e. number of clear sunny days or global solar radiation are average figures and the average figures adopted for calculating CUF cannot lead to a fixed value of 19% in all cases and somewhere the CUF can be more than 19%; Moreover, the CUF figure arrived at by

CERC is with regard to plants based on crystalline silicon technology which requires direct sun rays for generation of electric energy and not with regard to the projects based on thin film technology which require only sun light to generate power & may generate electricity even when there are clouds and also even before/after sunrise/ sun set, resulting into higher CUF; If CUF of 19% is difficult to be achieved, as observed by the CERC, then the purpose behind clause 12.2 of the PPA will be fully served even when the said clause is not there or even if it carries higher CUF value.' The petitioners, therefore, have prayed that clause 12.2 of the PPA may either be dropped and in the alternative, the CUF may be enhanced to 21% in the said clause.

The Commission have heard the contentions of both the parties at length during the hearing held on 06.04.2011. After going through the pleading of both parties and documents placed on record, the only issue which emerges for decision by the Commission is that 'whether clause 12.2 of the PPA in question need to be deleted or modified as prayed for by the petitioners or not?' At the outset, the Commission finds that the instant petition has been filed by the petitioners only because they apprehend that generation of energy over and above 19% CUF will get dumped into the system and go unrewarded. However, after going through the Preamble and various clauses of the PPA, the Commission finds that the above apprehension of the petitioners is uncalled for. For instance, as per Preamble of the PPA, each of the petitioners is to design, construct, own, operate & maintain a Solar PV Project with an aggregate capacity of One (1) MW and HPPC is to purchase the entire solar electric energy generated on base load in the project. Other relevant clauses of the PPA which should dispel this apprehension of the petitioners are as under:-

Clause 2.1.9. "Contracted Energy is the contracted electrical output, at the delivery point calculated on annual basis (1 MW) (including captive consumption of Solar Power Plant)."

Clause 2.1.10-- "contracted capacity shall mean 1 MW of Power contracted with HPPC for supply by the solar power generator to HPPC at Delivery point from solar power project

Clause 4.1.1-- "The HPPC shall purchase and accept all energy made available at the delivery point from the company's facility ..... The IPP shall deliver the entire contracted energy barring forced outage of the unit/ plant or Force Majeure conditions described separately under Article 17."

Clause 7.3.1--- “ subject to the terms and conditions of this agreement, the company undertakes to sell to HPPC and HPPC undertakes to pay Tariff as determined by HERC for all energy generated from the Contracted Capacity and metered at the Delivery Point.”

Clause 7.4.1.--- “Subject to the provisions of this Agreement, the entire Contracted Capacity in any Financial year shall be for the exclusive benefit of HPPC and HPPC shall have the exclusive right to purchase such energy from the company.”

Clause13.8. --- “Third party sale, banking and wheeling of power is not permitted while availing generation-based incentive.”

Perusal of all the above clauses of the PPA read with its Preamble clearly brings out that the entire electrical energy generated by the petitioners shall be purchased by HPPC and their apprehension in this regard appears to be misconceived.

The main apprehension of the petitioners appears to be originating from the possible generation of solar energy from their plant exceeding 19% CUF through use of thin film technology. This is a new technology in the process of being introduced which would be a departure from the existing crystalline silicon technology presently being used in the country. In that eventuality the petitioners feel that the excess energy so generated may go waste since HPCC may refuse to buy the same. It was argued before the Commission by the petitioners that apart from causing personal financial loss, it would also be a big loss to the nation when green energy has been given so much priority at all levels. It would be relevant to mention here that thin film technology is a newly developed technology in the country and its results are not yet fully tested at national level. Hence, to expect that CUF higher than 19 % is achievable by the user of such technology, will be quite presumptive at present. Obviously the Commission cannot base its order on a hypothetical assumption. At the same time the Commission would not like the solar power, if generated beyond the stipulated limit, to go waste because of non availability of any buyer. The Commission observes that adequate safeguards have already been provided in the PPA and the petitioners need not be apprehensive at this stage. Hence, keeping in view the facts and circumstances of the case, the Commission feels it appropriate to order that let the petitioners generate energy after installation of their Solar PV plant with a direction to HPCC that they should purchase whatever energy is generated by them and pay them as per tariff fixed for such power. After six months of the operation of the plant from the date of its Commercial Operation, both HPCC and petitioners can file details before the

Commission to bring to its notice if any excess generation beyond 19 % CUF has been achieved and seek directions as to how the same is to be treated. The Commission would take a call at that point of time and pass appropriate order about the treatment of such additional energy after hearing all the stakeholders including all the signatories of the PPAs. Hence, the Commission decides that there is no necessity at present to delete clause 12.2 of the PPA as prayed by the petitioners.

The petitions are disposed of accordingly.

This order is signed, dated and issued by the Haryana Electricity Regulatory Commission on 04.07.2011.

Date: 04.07.2011  
Place: Panchkula

( Ram Pal )  
Member

(Rohtash Dahiya )  
Member

( Bhaskar Chatterjee )  
Chairman