



HIMACHAL PRADESH ELECTRICITY REGULATORY COMMISSION  
Keonthal Commercial Complex, Khalini, Shimla-171002  
Tel.No.0177-2627978, 2627263, 2627907, 2627908 Fax.No.0177-2627162  
E-mail: [hperc@rediffmail.com](mailto:hperc@rediffmail.com) Website: [www.hperc.org](http://www.hperc.org)

No. HPERC/PPA/2014-15-  
To

3234-43

Dated:

27-12-14

The Managing Director,  
HPSEB Ltd., Vidyut Bhawan,  
Shimla-4.

Subject: Guidelines for providing interconnection points for SHPs.

Reference: Office letter No. HPSEBL/CE(SO&P)/PHT-II/DB-65(A)NP/2014-5116-17 dated 04.12.2014, from Chief Engineer (SO&P).

Sir,

Please refer to office letter under reference, wherein clarification has been sought on the item No.16 of the H.P. Hydro Policy, 2006 as amended by the Government of H.P. vide notification No.MPP-F(1)2/2005-VIII dated 04.03.2014, on the recommendation of the Committee headed by the Chairman, HPERC.

2. In this connection, it is observed that the above referred notification which has been issued by H.P. Govt. pursuant to the report submitted by the Committee on expeditious harnessing on small hydro power potential in Himachal Pradesh, does not envisage interconnection of the SHP with grid system at 33 kV through solid tap. The option for interconnection of SHPs upto 2 MW through solid tap is to be provided upto 22kV voltage only and that too with appropriate protection and loss adjustment, if any, without any facility of deemed generation. Moreover, the applicability clause of the aforesaid report as well as the notification also clearly provide that in case of ongoing projects, all the NOCs, approval and clearances already obtained shall be valid and to that extent new provision will not apply.

3. The Commission finds the following merits in restricting the solid tap upto 22kV level:-

- i) In case of solid tap at distribution voltages of 11 kV and 22 kV upto certain limited capacities, there can be chances of absorption of this power within the local system, atleast for some part of the day. The chances of absorption in local distribution system, in case of solid tap at 33 kV, will not be there except for situations where some 33 kV loads may exist.
- ii) In case of the disruptions, the quantum of disrupted load/generation shall be much smaller in case of interconnection at 11 kV or 22 kV as compared to the same in case of 33 kV system.
- iii) Since the command area of 11 kV and 22 kV lines would generally be less than that for 33 kV, the number of SHPs seeking such solid tap in case of 11 kV and 22 kV lines would generally be lesser as compared to 33 kV.

4. Accordingly, the Commission agrees in principles to the recommendations made by the Committee, including the policy changes notified by the Govt. vide the aforesaid notification, with regard to option of solid tap connection for projects upto 2 MW capacity with appropriate protection and loss adjustment, if any, without any facility of deemed generation.

Revised to PHT  
Section

HPSEB/PPA/2014-15-3234-43  
CE(SO&P)

SEPH&T/RGGVY  
SEPR&ALDC/IS  
Under Secretary  
Sr. XEN (PSP)

PS

29/12/2014

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5. The Commission has, in order to address the situations requiring interim arrangements for evacuation of power, also already made a specific provision under Article 4 of the model PPA for SHPs as under:-

**"4.4 INTERIM ARRANGEMENT FOR EVACUATION OF POWER"**

*In case power cannot be evacuated from the Project at the Interconnection Point due to non commissioning of the Project Line, non availability of evacuation system beyond the Interconnection Point or any other technical constraints, the Parties may mutually agree to an interim arrangement, alongwith the terms and conditions thereof, for evacuation of power from the Project till such time the same can be evacuated under the regular arrangement envisaged in the Agreement. However, the Deemed Generation benefit under Section 6.4 or any other provisions of the Agreement shall not be available to the Company for the period during which power is evacuated under such interim arrangement."*

This provision shall be extended, in principle, in case of SHPs availing open access.

6. In view of above, the Commission lays down the following guidelines for deciding the location of Interconnection Point in case of SHPs:-

- (A) Under the regular arrangement, the Interconnection Point has to be allotted at the Control Sub-Station.
- (B) In case of SHPs with capacity upto 2 MW, an option for the interconnection on permanent basis with a line having nominal voltage of not more than 22 kV shall be available, subject to the following conditions :-
  - i) The capacity of SHP does not exceed 2 MW.
  - ii) The developer opts for interconnection through solid tap with line upto 22 kV level if it is technically feasible.
  - iii) The developer shall provide adequate protection for interconnection.
  - iv) The developer shall not be entitled to the benefit of the deemed generation.
  - v) The metering shall be done at the interconnection point. However, in cases where it is not feasible to do so and the meter is installed at some other point, the energy so recorded shall be reduced by the percentage loss estimated on the basis, actual data of line length, conductor size and loading conditions etc. However, in case the distance between the metering point and the interconnection point exceeds 30 meters, the losses shall be deducted at a minimum rate of 0.7 percent of the recorded energy.
- (C) In cases where interim interconnection arrangement is to be made in accordance with para 5 above, the interconnection may be allowed at some Control Sub-Station, other than that at which interconnection has been allotted on regular basis or through LIFO arrangement. However, in cases where it is not feasible to do so, the licensee may consider allowing interconnection with an electric line having nominal voltage of not more than 33 kV, subject to the following conditions:-
  - i) Sufficient capacity is available in the electric line and such interconnection shall not adversely affect the voltage regulation beyond the permissible limits, in the time frame in which such interim



- arrangement is proposed, after duly taking into account the additional flows on the line due to commissioning of other projects in the area.
- ii) The capacity of the project does not exceed 5 MW.
  - iii) Maximum of only two SHPs with aggregate capacity not exceeding 7MW (i.e. about 50% of the normal average capacity of 33 kV line) be interconnected with a line under such interim arrangement.
  - iv) The interconnection point assigned for the project under the regular arrangement shall remain unchanged and the interim arrangement shall normally be allowed for a maximum period of two years unless the situation demands otherwise.
  - v) The benefit of deemed generation, normally available under the PPA in case of sale of power to HPSEBL, shall not be available for the period in which such interim arrangement remains in force.
  - vi) Auto Re-closers shall be provided, operated and maintained on all the three branches at the T- point at the cost of the developer in case where such interim interconnection is to be allowed with 33 kV line.
  - vii) In case the implementation of the joint dedicated project line under the regular arrangement is held up due to delay in construction of the other projects forming a part of the joint dedicated system, the other projects in the vicinity shall be included as a part of joint dedicated system duly taking into account the master plan evolved by the Distribution Licensee/STU for evacuation of power from the SHPs etc. However, this shall not entitle the developer to seek change in the interconnection point already allotted to him.
  - viii) The metering shall be done at the interim interconnection point. However, in cases where it is not feasible to do so and the meter is installed at some other point, the energy so recorded shall be reduced by the percentage loss estimated on the basis actual data of line length, conductor size and loading conditions etc. However, in case the distance between the metering point and the interim interconnection point exceeds 30 meters, the losses shall be deducted at a minimum rate of 0.7 percent of the recorded energy.
  - ix) In case where the interim arrangement is to be allowed due to the non-commissioning of the project line and the same causes the additional losses on the HPSEBL's system beyond the interconnection point, as allotted as an interim measure, the parties may mutually agree for the loss compensation on this account while deciding the terms and conditions for the interim arrangement in accordance with the provisions discussed under para 5 above.

7. The guidelines as per part (A) and (B) of para 6 above shall be followed as a general policy. However, deviations, if necessary, may be made in exceptional cases where the availability of grid is normally very erratic due to climatic and other conditions and most of the generation capacity, say above 60%, sought to be connected in deviation of such guidelines is expected to be absorbed in the local area itself on yearly basis. However, the total capacity of SHPs to be connected under such arrangement shall not exceed 5 MW in the area concerned.

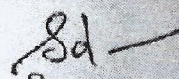
8. These guidelines shall also be applicable, in principle, in case of interconnection for the Projects based on other Renewable Energy Technologies.



The Technical Standards for construction of electrical plants, electric lines and for connectivity to the grid as well as the Measures relating to Safety as specified by the Central Electricity Authority, and relevant provisions as per other Codes/Regulations shall be followed meticulously and these guidelines shall, in no way be construed as a relaxation of any of such provisions.


It is requested that above guidelines/findings be duly taken in to account while deciding such matters. As regards the specific case mentioned in letter under reference, the same has also to be dealt accordingly based on the facts and merits of the case.

Yours faithfully,

  
Secretary

Copy forwarded for information and necessary action to the following:-

- 1) The Principal Secretary (Power) to the Govt of H.P., H.P. Secretariat, Shimla-2 with particular reference to notification No. MPP-F(1)2/2005-VIII dated 04.03.2014.
- 2) The Managing Director, HPPTCL, Barowalia House, Khalini, Shimla-2.
- 3) The Director, Directorate of Energy, Shanti Bhawan, Phase-III, New Shimla.
- 4) The Director, HIMURJA, SDA Complex, Kasumpti, Shimla-9.
- 5) The Chief Engineer (SO&P), HPSEBL, Vidyut Bhawan, Shimla-4.
- 6) The Himalaya Power Producer Association, Himurja, SDA Complex, Block No.8-A, Kasumpti, Shimla-9.
- 7) The Bonafide Himachali's Hydro Power Developers Association, Shanti Bhawan, Sector-IV, Phase-II, New Shimla-9.
- 8) The Himachal Small Hydro Power Association, Grover Cottage, Opposite Brockhurst Cottage, Shimla-2.
- 9) The RC(IT), HPERC, Shimla-2 for uploading on HPERC website.

  
Secretary



**F.No.7-25/2012-FC**  
Government of India  
Ministry of Environment, Forest and Climate Change  
(Forest Conservation Division)

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Indira Paryavaran Bhawan  
Aliganj, Jorbagh Road  
New Delhi - 110 003  
Dated: 24<sup>th</sup> October, 2016

To

**The Principal Secretary (Forests),**  
All States/ Union Territories.

*Sub:* Guidelines for diversion of forest land for non-forest purposes under the Forest (Conservation) Act, 1980- Guidelines for laying transmission lines through forest areas - *reg.*

Sir,

In continuation of this Ministry's letter of even number dated 5th May 2016 on the above-mentioned subject where under this Ministry sent a copy of revised guidelines for laying transmission lines through forest areas, I am directed to say as below:

- (i) The norms/ standard for laying underground insulated cables through forest areas shall be as below:

Line voltage	Trench width	Trench depth
33 KV	600 mm	1200 mm
11 KV	300 mm	900 mm

- (ii) For laying double circuit (D/C) underground cables through forest areas trench width shall be twice the afore-mentioned width stipulated for the single circuit cable.
- (iii) The following shall be ensured while laying and maintenance of 11 KV and 33 KV transmission and distribution lines in areas critical from wildlife point of view:
- Laying/maintenance of lines shall conform to IS 5613, Rural Electrification Corporation Limited (REC) Construction Standards and applicable guidelines of Central Board of Irrigation and Power;
  - Suitable guard spikes may be provided on 400 Volts, 11 KV and 33 KV poles at height of 4 ft. and 7 ft. toward off animals coming close to poles and likely to damage it by rubbing against them;
  - Tower accessories as stipulated in Indian Electricity Rules, 1956 shall be provided on all the towers;
  - Concerned Electricity Department should undertake rigorous exercise to inspect the lines so as to ensure that mandatory ground clearances are not



violated as stipulated in the Indian Electricity Rules, 1956. Lines should be inspected periodically, say, at least once in a year by electricity Department officials and corrective actions shall be taken in this regard. Maintenance of the minimum ground clearance and periodical inspection should be certified by an officer not below the rank of an Executive Engineer;

- (e) Joint inspection of every transmission/distribution line by officials of Electricity Department and Forest Department may be undertaken twice in a year, say, once before onset of monsoon and once after monsoon so as to identify any need for lopping of trees and ensuring necessary action in this regard;
  - (f) Every tripping of an Electric line should be investigated by the owners of such line and they should take suitable measures to avoid recurrence of the same;
  - (g) Forest Department shall inform the concerned power supplier/line owner of the area about every electrical accident occurring in and around forest area involving human/animals which in turn shall submit an accident report in Performa as given at Annexure-XIII of Indian Electricity Rules, 1956 duly completed in all respects to Electrical Inspector of the State. All electrical accidents should be investigated by Electrical Inspector and suitable measures should be taken as proposed in the investigation report.
- (iv) In case of the demand for **reduction in the width of right of way (RoW) of transmission lines in forest areas in the cases where ABC cables are used in place of overhead lines**, it is clarified that as per definitions in Measures relating to Safety and Electric Supply, Regulations, 2010, conductor is defined as bare or insulated and as such the vertical & horizontal clearance specified in Regulation 61 have to be maintained for both bare and insulated conductors like ABC etc.
- (v) To prevent death of animals like elephant etc. in the forest areas due to electrocution by the distribution lines, in the forest area the distribution companies shall preferably use ABC or underground cable. In case of the overhead lines, the clearance above ground of the lower conductor of 11 KV and 33 KV overhead lines should be as per the CEA regulation 58(3) and 58(4) or above maximum trunk height of the elephant, which ever higher.

Yours faithfully,

(Nisheet Saxena)

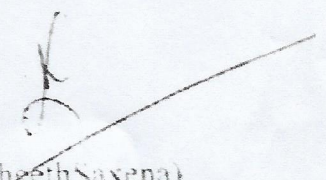
Sr. Assistant Inspector General of Forests

Copy to:-

1. Prime Minister's Office (*Kind attn.:* Shri Ajeet Kumar, Deputy Secretary), South Block, New Delhi.



2. Secretary, Ministry of Power, Government of India, Shram Shakti Bhawan, New Delhi.
3. Principal Chief Conservator of Forests, all States/Union territories.
4. Nodal Officer, the Forest (Conservation) Act, 1980, all States/Union territories.
5. All Regional Offices, Ministry of Environment, Forest and Climate Change (MoEFCC), Government of India (GoI).
6. Joint Secretary in-charge, Impact Assessment Division, MoEF&CC, GoI.
7. All Assistant Inspector General of Forests/ Director in the Forest Conservation Division, MoEF&CC, GoI.
8. Deputy Secretary (ROHQ) Division, MoEF&CC, GoI.
9. Sr. Director (Technical), NIC, MoEF&CC, GoI with a request to place a copy of the letter on website of this Ministry.
10. Sr. PPS to the Secretary, Ministry of Environment, Forest and Climate Change, GoI.
11. PPS to the Director General of Forests & Special Secretary, MoEF&CC, GoI.
12. PPS to the Addl. Director General of Forests (Forest Conservation), MoEF&CC, GoI.
13. PPS to the Inspector General of Forests (Forest Conservation), MoEF&CC, GoI.
14. Guard File.

  
(Nisheet Saxena)  
Sr. Assistant Inspector General of Forests