

**BEFORE THE HON'BLE SIKKIM STATE ELECTRICITY REGULATORY  
COMMISSION, GANGTOK, SIKKIM**

File No: \_\_\_\_\_

Case No: \_\_\_\_\_

**IN THE MATTER OF:**            Petition for Approval of Power Purchase  
Agreement under Section 86 (1) (b) read with  
Sections 61, 62 and 64 of the Electricity Act,  
2003

**AND**

**IN THE MATTER OF:**

**Hanuman Ganga Hydroprojects Private Limited  
2nd Floor, Masker Fuel, Near Metro Point Tadong  
Gangtok, East Sikkim - 737102**

**... Petitioner**

**V/s**

**The Power Department, Government of Sikkim  
Diesel Power House, Arithang  
Gangtok, Sikkim - 737101**

**... Respondent**

**Hanuman Ganga Hydroprojects Private Limited (hereinafter referred as  
HGHPL/Petitioner) files this petition for Approval of Power Purchase Agreement  
under Section 86 (1) (b) read with Sections 61, 62 and 64 of the Electricity Act,  
2003**

**Through**

*Naman Mittal*

**Shardul Amarchand Mangaldas & Co.**

Advocates for the Petitioner

Amarchand Towers, 216

Okhla Industrial Estate Phase III

New Delhi - 110020

Email: [shashwat.kumar@AMSShardul.com](mailto:shashwat.kumar@AMSShardul.com)

Phone No.: +91 7428238330

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**INDEX**

S.No.	Particulars	Page No.
1.	Affidavit	1-2
2.	Petition under Section 86 (1) (b) read with Sections 61, 62 and 64 of the Electricity Act, 2003	3-7
3.	<b>Annexure A:</b> Power Purchase Agreement dated 04.03.2021 between Governor of Sikkim through the Principal Chief Engineer cum Secretary to the Government of Sikkim and Hanuman Ganga Hydroprojects Private Limited	8-48
4.	<b>Annexure B:</b> Expression of interest and request for proposal for selection of a Technical Partner for "renovate, operate, maintain and transfer (ROMT)" of seven Hydro Electric Power Projects in the state of Sikkim issued by Sikkim Power Department vide notice dated 26.08.2020	49-78
5.	<b>Annexure C:</b> Letter of Award dated 07.12.2020 issued by the Sikkim Power Department	79
6.	<b>Annexure D:</b> Financial Offer submitted by the Petitioner on 05.01.2020	80-95
7.	<b>Annexure E:</b> Letter of Award dated 24.02.2020 issued by the Sikkim Power Department	96-133

8.	<b>Annexure F:</b> Order dated 21.07.2020 in Petition No. 13/SM/2020 (Suo Motu) issued by Hon'ble Central Electricity Regulatory Commission	134-357
9.	<b>Annexure G:</b> Power Department's letter dated 15.09.2021	358
10.	Vakalatnama and Authorization Letter	359-360
11.	Bank Statement evidencing payment of Petition Fee	361-362

Through

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Advocates for the Petitioner

Amarchand Towers, 216

Okhla Industrial Estate Phase III

New Delhi - 110020

Email: [shashwat.kumar@AMSShardul.com](mailto:shashwat.kumar@AMSShardul.com)

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## AFFIDAVIT

BEFORE THE HON'BLE SIKKIM STATE ELECTRICITY REGULATORY  
COMMISSION, GANGTOK, SIKKIM

File No: \_\_\_\_\_

Case No: \_\_\_\_\_

**IN THE MATTER OF:** Petition for Approval of Power Purchase Agreement under Section 86 (1) (b) read with Sections 61, 62 and 64 of the Electricity Act, 2003

AND

**IN THE MATTER OF:****Hanuman Ganga Hydroprojects Private Limited**

... Petitioner

V/s

**The Power Department, Government of Sikkim**

... Respondent

## Affidavit

I, Shri Vishnu Kumar Bhargava, son of Late Shri Bhagwan Das Bhargava, aged about 59 years, Project Head (Commercial) of **M/s Hanuman Ganga Hydroprojects Private Limited**, 2<sup>nd</sup> Floor, Masker Fuel, Near Metro Point Tadong, Gangtok, East Sikkim - 737102, the Deponent named above do hereby solemnly affirm and state on oath as under:

1. That the Deponent is the Project Head (Commercial) of **M/s Hanuman Ganga Hydroprojects Private Limited**, who is authorised and is acquainted with the facts deposed here below.
2. I, the Deponent named above, do hereby verify that the contents of the affidavit and those of the accompanying petition are based on the records of Hanuman Ganga Hydroprojects Private Limited maintained in the ordinary course of business and believed by them to be true. The contents of the accompanying Petition are based on the legal advice which I believe to be true and verify that no part of this affidavit is false and no material has been concealed.
3. The seven Hydro Electric Projects (as described herein below), under ideal conditions are estimated to generate 126231600 units (KWH) at 95% plant availability with an annual PLF between 55% to 60%.

Deponent

**Details of enclosures:**

- a. Proposal for approval of Power Purchase Agreement; and
- b. Petition Fee: INR 4,20,000 (Indian Rupees Four Lakhs Twenty Thousand) paid in favour of this Hon'ble Commission through a bank transfer on 22.09.2021 and the NEFT number for the said transaction is NEFT DR-UTIB0000112-

SIKKIM STATE ELECTRICITY REGULATORY COMMISSION-JANPATH-  
N265211645773136. We have enclosed the bank statement evidencing the  
payment of the Petition Fee along with the Petition.

**Hanuman Ganga Hydroprojects Private Limited**  
**Petitioner**

Place: Gangtok

Dated: \_\_\_\_\_

We, Advocates at Shardul Amarchand Mangaldas & Co. (including Mr. Shashwat Kumar, Mr. Rahul Chouhan, and Mr. Naman Mittal, Advocates), do hereby declare that the person making this affidavit is known to us through the perusal of records and we are satisfied that he is the same person alleging to be the Deponent himself.

Advocates

*Naman Mittal*  
\_\_\_\_\_  
(NAMAN MITTAL)  
D/742A/2018

Solemnly affirmed before me on this [date] day of [month] 2021 at [time] by the Deponent who has been identified by the aforesaid Advocate. I have satisfied myself by examining the Deponent that he understood the contents of the affidavit that has been read over and explained to him. He has also been explained about Section 193 of the Indian Penal Code that whoever intentionally gives false evidence in any of the proceedings of the Commission or fabricates evidence for purpose of being used in any of the proceedings shall be liable for punishment as per law.

*Naman Mittal*  
\_\_\_\_\_  
(Naman Mittal)  
D/742A/2018

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**AND**

**IN THE MATTER OF:**

**Hanuman Ganga Hydroprojects Private Limited**

**... Petitioner**

**V/s**

**The Power Department, Government of Sikkim**

**... Respondent**

**PETITIONER, UNDER SECTION 86 (1) (b) READ WITH SECTIONS 61, 62 AND 64 OF THE ELECTRICITY ACT, 2003, FILES FOR INITIATION OF PROCEEDINGS BY THE HON'BLE COMMISSION FOR DECIDING ON THE MATTERS CONCERNING THE APPROVAL OF POWER PURCHASE AGREEMENT**

**HANUMAN GANGA HYDROPROJECTS PRIVATE LIMITED RESPECTFULLY SUBMITS:**

1. That M/s Hanuman Ganga Hydroprojects Private Limited (**HGHPL/Petitioner**) has been allowed to renovate, operate, maintain, augment (on site maximum capacity) and transfer seven Hydro Electric Projects (**HEPs**) on "As is Where is" basis in the State of Sikkim, by the Power Department, Government of Sikkim (**Power Department**) and accordingly has entered into a Power Purchase Agreement with the Governor of Sikkim through the Principal Chief Engineer cum Secretary to the Government of Sikkim on 04.03.2021 (**PPA**) with a levelised tariff. The present petition is being filed to obtain approval of this Hon'ble Commission on the said PPA under Section 86 (1) (b) read with Sections 61, 62 and 64 of the Electricity Act, 2003 (**Electricity Act**). The copy of the PPA is annexed herewith and marked as **Annexure - A**.

**Brief Facts:**

2. The Sikkim State Government had resolved to lease out seven HEPs with total generating capacity as 26.2 MW on "renovate, operate, maintain and transfer (ROMT)" basis in accordance with the terms and conditions to be set forth in an agreement to be entered in accordance with the provisions of the Electricity Act. Consequently, the Power Department received approval for outsourcing of seven HEPs under its charge.
3. The Sikkim Power Department vide notice dated 26.08.2020 invited expression of interest and request for proposal for selection of a Technical Partner for "renovate, operate, maintain and transfer (ROMT)" of seven Hydro Electric Power Projects in the state of Sikkim (**Expression of Interest and Request for Proposal**). The bids were invited in accordance with the guidelines of the Government of Sikkim and the Power Department had prescribed certain technical terms and conditions by its Expression of Interest and Request for Proposal. A copy of the Expression of Interest and Request for Proposal is annexed herewith and marked as **Annexure - B**.

4. The Petitioner along with other bidders participated in the above-mentioned Expression of Interest and Request for Proposal and submitted their bids. After evaluation of the bids that were received, the Power Department selected the Petitioner as a 'Technical Partner' and subsequently, issued a Letter of Award dated 07.12.2020 declaring the Petitioner as the selected Technical Partner and requiring the Petitioner to submit a financial offer within thirty days of the issue of the said Letter of Award. A copy of the Letter of Award dated 07.12.2020 is annexed herewith and marked as **Annexure - C**.
5. The Petitioner submitted the project plan and the financial offer to the Power Department on 05.01.2020. A copy of the Financial Offer is annexed herewith and marked as **Annexure - D**.
6. The Power Department after the evaluation of the submitted project plan and financial offer, issued another Letter of Award dated 24.02.2021 awarding the seven HEPs to the Petitioner on "renovate, operate, maintain and transfer (ROMT)" basis and requiring it to execute a power purchase agreement within fifteen days with the Government of Sikkim. A copy of the Letter of Award dated 24.02.2021 is annexed herewith and marked as **Annexure - E**.
7. Thereafter, the Governor of Sikkim through the Principal Chief Engineer cum Secretary to the Government of Sikkim entered into the PPA with the Petitioner on 04.03.2021.
8. The details of the seven HEPs set up at different locations in the state of Sikkim covered under the PPA are provided in the table below. The seven HEPs shall be registered with the SLDC/RLDC as the projects of Power Department of Sikkim/Government Project/State Entity Projects.

#	Name	Capacity (MW)	Year of Commissioning	Location District	Current status
1	Rimbi Stage I HEP	0.6	1970	West	Closed
2	Kalez Khola HEP	2.0	1995	West	Partially Closed
3	Jali Power House HEP	2.2	1965	East	Partially Closed
4	Rongni Chu Stage II HEP	2.5	1989	East	Closed
5	Lower Lagyap HEP	12.0	1978	East	Partially closed
6	Meyong Chu HEP	4.0	1993	North	Partially Operational
7	Rabom Chu HEP	3.0	2003	North	Partially Operational.

The PPA shall remain in full force and effect from the date of the PPA until thirty-five (35) years from the respective Commercial Operation Date of the HEPs unless mutually extended (**Term of the PPA**).

9. The HEPs under the PPA are all mini / small hydro projects and fall within the definition of renewable energy projects. Section 61 (h) of the Electricity Act allows the Appropriate Commission to specify the terms and conditions for determination of tariff and while doing so, the Appropriate Commission is



required to ensure the promotion of co-generation and generation of electricity from the renewable sources of energy. Accordingly, the Commission is requested to adopt an approach for the approval of the PPA and tariff which is in the interest of promotion of renewable sources of energy.

10. As per the PPA, tariff for the HEPs shall be Rs. 3.91/kWh for the Term of the PPA (**Tariff**). This Tariff shall be revised on achieving Commercial Operation Date (**COD**) in accordance with Clause [6] of Central Electricity Regulatory Commission (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2020. Accordingly, for units achieving COD by 31.03.2022, the Tariff shall be Rs. 3.91/kWh for the entire Term of the PPA and for units achieving COD after 31.03.2022, the Tariff shall be 81 (eighty one) paisa less than tariff determined by CERC for renewable energy power (hydro power) for units with generating capacity 5 MW to 25 MW and 125 (one hundred and twenty five) paisa less than tariff determined by CERC for renewable energy power for units with generating capacity less than 5 MW for the entire Term of the PPA prevailing at the time of achieving COD.
11. It is submitted that the Tariff for the power being supplied under the PPA has been arrived at on the basis of the Generic Tariff for Small Hydropower Projects for the North Eastern States for Financial Year 2020-2021 issued by the Hon'ble Central Electricity Regulatory Commission (**CERC**) through its Order dated 21.07.2020 in Petition No. 13/SM/2020 (Suo Motu). A copy of the CERC's Order dated 21.07.2020 is annexed herewith and marked as **Annexure - F**. It is also humbly submitted before the Hon'ble Commission that as per Section 61 (a) of the Electricity Act, the Appropriate Commission is required to specify the terms and conditions for determination of tariff and while doing so, the Appropriate Commission shall be guided by the principles and methodologies specified by the Central Commission for determination of tariff applicable to generating companies and transmission licenses. Accordingly, the principles set forth by the Hon'ble CERC in the above-mentioned order, may be adopted by this Hon'ble Commission for the purposes of the present PPA.
12. For the determination of the Tariff, the parties have also taken into consideration the following facts:
  - a) that out of the seven HEPs, five HEPs are partially/completely shut down and are not operational and remaining two HEPs are only partially operational;
  - b) that these HEPs were commissioned more than 15 to 35 years ago and therefore, will require considerable amount of investment by the Petitioner in order to re-start/commence commercial operations of these HEPs.

Therefore, keeping this in mind, the salvage value of each HEP was calculated on the basis of residual life as per the Central Electricity Regulatory Commission (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2020 and the tariff determined by CERC was adjusted on the basis of this salvage value. The Tariff was further revised on the basis of the free power being provided to the Power Department details of which are provided in Paragraph 13 of this Petition.

13. As per the PPA, the Power Department shall be entitled to get the following power as free power/energy at no cost from the Petitioner:
  - a) twelve percent (12%) of the total energy for first 10 (ten) years from COD;
  - b) fifteen percent (15%) of the total energy from 11th (Eleventh) to 20th (Twentieth) years from COD; and

- c) eighteen percent (18%) of the total energy from 21st (twenty first) to 35th (Thirty Fifth) years from COD.

Total energy will be calculated on the energy generated on the basis of the installed capacity and it shall be calculated monthly.

14. It is further submitted that as per the PPA, the Petitioner is allowed to re-design, re-construct and augment the capacity of the HEPs, wherever it may be necessary and possible, subject to prior intimation to the Power Department. The parties have agreed that if the Petitioner requests an increase in Tariff for the augmented capacity in relation to CERC generic tariff (i.e. increase in Tariff in addition to the Tariff arrived according to Paragraph 11 of this petition) basis the increase in costs incurred, then the Power Department shall consider the request of the Petitioner on merit. Further, in the event the Petitioner is able to increase the capacity of any of the HEPs beyond the present capacity, then the Petitioner shall provide five percent (5%) of the energy generated (for entire period of thirty five (35) years from COD) from such enhanced capacity of the respective HEP to the Power Department at no cost instead of free power mentioned at Paragraph 13 of this petition.
15. Pursuant to the Electricity Act, 2003, an approval of this PPA is required from the Hon'ble Commission as per the provisions outlined in Section 86 (1) (b) read with Sections 61, 62 and 64 of Electricity Act, 2003, and the governing regulations thereof. The Power Department, vide letter dated 15.09.2021, authorised the Petitioner to appear, represent, file petition and submit the supporting documents related to the matters pertaining to the approval of the PPA with this Hon'ble Commission. A copy of Power Department's letter dated 15.09.2021 is annexed herewith and marked as **Annexure - F**.
16. In view thereof, the present petition for approval of PPA in accordance with Section 86 (1) (b) read with Sections 61, 62 and 64 of Electricity Act, 2003 is being filed before the Hon'ble Commission.
17. The Petitioner prays before the Hon'ble Commission to admit and allow the petition for approval of PPA and would like to submit that:

**PRAYERS BEFORE THE HON'BLE COMMISSION:**

1. The Petition provides, inter alia, the Petitioner's approach for formulating the present Petition, summary of the proposals and copy of the PPA, which is being presented for approval of the Hon'ble Commission.
2. In order to align the intent and principles behind this Petition for approval of the PPA, the Petitioner respectfully seeks an opportunity to present their case before the Hon'ble Commission.
3. The Petitioner may also be permitted to propose suitable changes to the Petition prior to the final approval by the Hon'ble Commission as the Hon'ble Commission may desire.

In view of the above, the Petitioner respectfully prays that the Hon'ble Commission may:

- a) Allow the Petition;
- b) Approve of the Power Purchase Agreement dated 04.03.2021 executed between Power Department, Government of Sikkim and the Petitioner;

- c) Approve the tariff for the Power Purchase Agreement dated 04.03.2021 as provided under Paragraph 10 of this Petition;
- d) Condone any inadvertent delay/omissions/errors/rounding off differences/shortcomings and the Petitioner may please be permitted to add/change/modify/alter the petition;
- e) Pass such further and other orders, as the Hon'ble Commission may deem fit and proper, keeping in view the facts and circumstances of the case.

Place: Gangtok, Sikkim

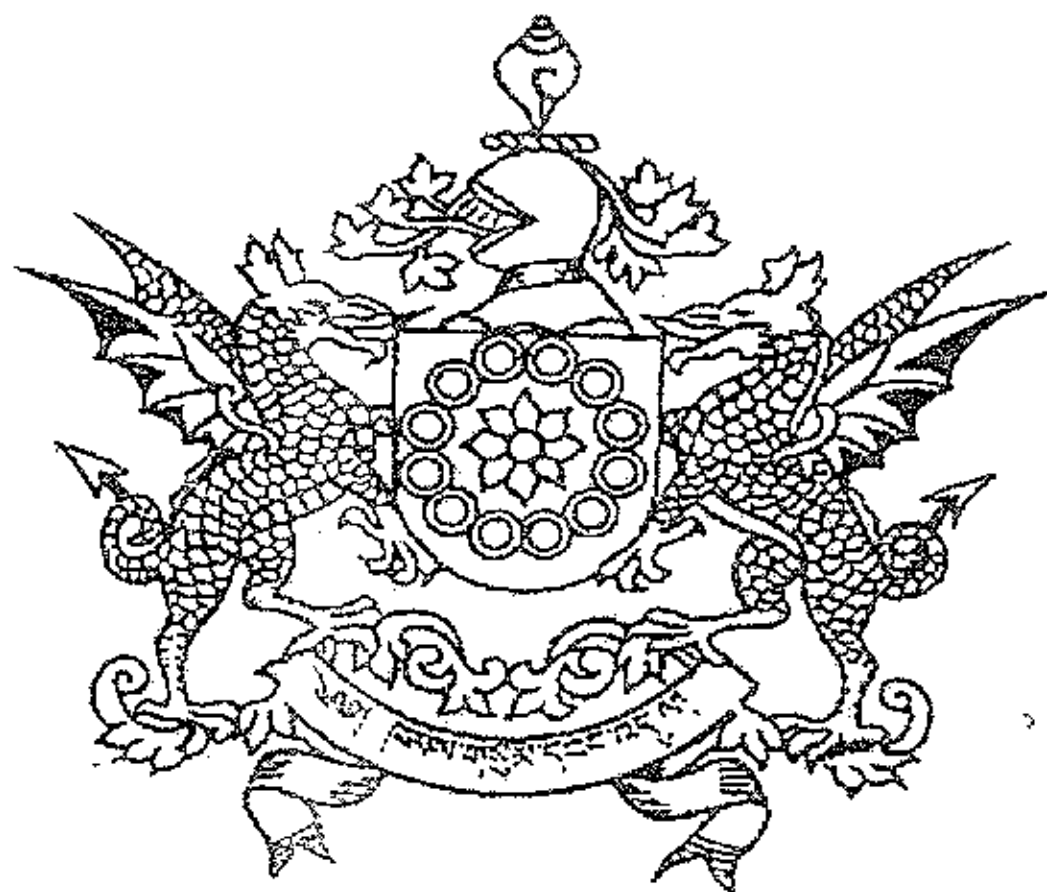
Dated: \_\_\_\_\_

Hanuman Ganga Hydroproject  
Private Limited (Petitioner)

Through,

*Naman Mittal*

Advocates for the Petitioner  
Shardul Amarchand Mangaldas & Co.



Power Purchase Agreement  
between  
The Power Department  
Government of Sikkim  
and  
Hanuman Ganga Hydroprojects  
Private Limited

<u>Table of Contents</u>	<u>Page</u>
Preamble	1
Clause 1 General Terms and Conditions	2
Clause 2 Scope of Project and Project Up gradation	7
Clause 3 Operation and Maintenance of the Project	10
Clause 4 Incentives for Power Generation	15
Clause 5 Deliverable Energy / Saleable Energy and Project Potential	15
Clause 6 Sale and Purchase of Energy	15
Clause 7 Metering, Billing & Invoicing	16
Clause 8 Billing Procedure to Department and Records	17
Clause 9 Plant Operation	17
Clause 10 Statutory Clearances	18
Clause 11 Liaison with Department	18
Clause 12 Temporary interruptions in Delivery of Energy	18
Clause 13 Manpower Deployment by Technical Partner	19
Clause 14 Spare Parts and Consumables	19
Clause 15 Tools and Tackles and Measuring Instruments	20
Clause 16 Insurance and Communication facility	20
Clause 17 Disputes and Alternate Resolution	21
Clause 18 Indemnification	21
Clause 19 Green Attributes	22
Clause 20 Deemed Generation Benefit	22
Clause 21 Billing, Invoicing, terms of payment and payment security	22
Clause 22 Rights of Ownership of Property	25
Clause 23 Events of Default	26
Clause 24 Force Majeure	27
Clause 25 Obligations of the Department	28
Clause 26 Obligations of the Generator	29
Clause 27 Change in Law	30
Clause 28 Assignment And Charges	31
Clause 29 Disclaimer	32
Clause 30 Tariff	32
Clause 31 Back Handing of Power Project by Generator to Department	33
Clause 32 Performance Security	33
Clause 33 Construction Period	35
Clause 34 Miscellaneous	36
Clause 35 Term of Agreement	37
Annexure A Monthly Injection Report	39

ONE HUNDRED RUPEES

एक सय रुपैया



एक सय रुपैया

NON-JUDICIAL

₹ 100

Sl.No. B 133090

**PREAMBLE**

This Power Purchase Agreement is made on this <sup>th</sup> 4 day of March 2021 (Two Thousand and Twenty One) at Gangtok Sikkim.

**BETWEEN**

The Governor of Sikkim through the Principal Chief Engineer cum Secretary to the Government of Sikkim having its principal office at Sonam Tshering Marg, Gangtok, Sikkim-737101 (hereinafter referred to as the "Department" which expression shall, unless repugnant to the context or meaning thereof, include its administrators, successors and assigns) of FIRST PART;


**AND**

Hanuman Ganga Hydroprojects Private Limited, a company incorporated under the provisions of the Companies Act, 1956/2013 and having its registered office at Flat No. 1103, 11th Floor, Surya Kran Building, 19-Kasturba Gandhi Marg, New Delhi - 110001, hereinafter referred to as the "Technical Partner"/"Generator" which expression shall, unless repugnant to the context or meaning thereof, shall be deemed to mean and include its successors and permitted assigns and substitutes) of the SECOND PART.

**WHEREAS:**

Whereas the State Government had resolved to lease out Hydro Electric projects with total generating capacity of 26.2 MW on Renovate, Operate, Maintain and Transfer ("ROMT") basis in accordance with the terms and conditions to be set forth in an agreement to be entered into under and in accordance with the provisions of the Electricity Act 2003.



  
Principal Chief Engineer cum Secretary  
Government of Sikkim

And whereas the Department had accordingly invited proposals by its Request for Proposals dated 26/08/2020 (the "Request for Proposals" or "RFP") for pre-qualification of Bidders who own / operate power generating stations and supply electricity, and had pre-qualified the selected technical partner,

And whereas the Department had prescribed the technical terms and conditions by its Request for Proposal dated 26/08/2020 (the "Request for Proposals" or "RFP"), and invited Bids in accordance with the Guidelines of the Government of Sikkim.

And whereas after evaluation of the Bids received, the Department had accepted the Bid of the selected Bidder, i.e. Hanuman Ganga Hydroprojects Private Limited, and issued its Letter of Award No. "Secy/Power/GOS/2019/TDB/03" dated 07/12/2020 (hereinafter called the "LOA (1)") to declaring Hanuman Ganga Hydro Projects Private Limited as the selected Technical Partner requiring, inter alia, for the Technical Partner to inspect the projects and submit a Project Plan and offer Financial Offer within 30 (Thirty) days of the date of issue of LOA (1).

And whereas after evaluation of the Project Plan and Financial Offer, the Department issued a Letter of Award with Issue No. Secy/Power/GOS/2019/TDB/09 Dated: 24/02/2021 (hereinafter called the "LOA") to the selected Technical Partner requiring, inter alia, for the execution of this Power purchase Agreement within 15 (Fifteen) days of the date of issue of this agreement document.

And whereas In pursuance of the approval of the State Government and negotiations thereafter, the Parties have agreed to enter into this Power Purchase Agreement on the terms and conditions set forth hereinafter.

**NOW, THEREFORE,** in consideration of the foregoing and the respective covenants and agreements set forth in this Agreement, the receipt and sufficiency of which is hereby acknowledged, and intending to be legally bound it is hereby agreed by and between the parties hereto as under:-

## **1. General Terms and Conditions**

### **(1) Definitions**

The terms have the following meanings unless the context otherwise requires:-

- (a) **"Battery Limit"** mean or includes from the Diversion-point to the Plant Switchyard including, the Fore-bay, Penstock and the Power House and facilities for operation and maintenance of the Projects. This excludes the overhead Transmission Lines;
- (b) **"Control gates"** mean all control gates, intake gates, wicket gates, guide gates, stop logs, and emergency bye pass channel of the power plant;
- (c) **"Applicable Permits"** mean any permissions, clearances, concessions, authorisations, consents, licenses, permits, etc. that are required to be obtained by the Parties from time to time in connection with the Projects;
- (d) **"Control weir and gates"** collectively means Control and operative structure(s) and gates, constructed and along with erected equipment, hoist controls at the plant site, which control the flow of water to the plant, and to the bypass channel, when the project is operative/inoperative accordingly and prevent the overflows outside the canal when gates are closed;

2  
Power Department  
Sikkim



- (e) **"Control weirs and gates Site"** means Foot Bridge, hoisting bridge, rails, platforms etc. To facilitate operation and maintenance of main canal gates, by pass channel gates, stop logs on the upstream and downstream of the power plant and trash rack etc;
- (f) **"Deliverable Energy"** means the energy to be supplied to the Department from each of the HEP, after auxiliary consumption and free power as per Article 2.13 of this Agreement, and to be delivered/injected to the State Grid at the Interconnection point which is for offtake by the Saleable Energy;
- (g) **"Designed Energy"** means the energy computation at the interconnection point on the basis of past available discharge data with the Department of Power, Government of Sikkim and exceedance curves based on 10 daily basis averages after taking into account efficiencies of various equipment and auxiliary consumption;
- (h) **"Forced Outage"** means an interruption of the generating capacity of the Project that is not the result of (i) a request by the Department or by the Board (ii) a Scheduled Outage or a Maintenance Outage (iii) an event or occurrence of Force Majeure, or (iv) a condition solely by Department or by the grid system/hydrology;
- (i) **"GoS"** means Government of Sikkim and its permitted successors and assigns, who is the rightful owner of the Hydro Electric Power Projects;
- (j) **"Interconnection Point"** means the metering point at which Interconnection is made between Department and Generator;
- (k) **"period"** means the period of validity of this Agreement;
- (l) **"Project(s)" or "Power Plant" or "the Plant(s)" or "Power House" or "Power Station" or "HEP"** means ALL Hydro Electric Projects in the ROMT tender dated 26/08/2020 including project land, project civil structures, power house building, entire equipment /system of the Plant including electrical, mechanical and hydro-mechanical parts and equipment dedicated, control weir and gates site, components, appurtenance, communications, spares, consumables, tools and tackles and services provided for successful generation from the Project;
- (m) **"properties"** means the Plant/ the Project;
- (n) **"Prudent Utility Practices"** means those practices, methods, techniques and standards, as adopted from time to time, that are generally accepted for use in electric utility engineering and operations to design, engineer, construct, test operate and maintain equipment lawfully, safely, efficiently and economically as applicable to power stations of the size, service and type of the project, and that generally conform to manufacturer's operation and maintenance guidelines;
- (o) **"Reserved Outage"** means shutdown of a generating unit on instructions of Department or any other statutory authority for reasons not attributable to the Generator;
- (p) **"Saleable Energy"** means the net energy available from the Project after auxiliary consumption /the energy injected to the Grid, which is measured at Meter Installed in the Power House, which shall also be the Metering Point vis-à-vis the Interconnection Point;
- (q) **"Maintenance Outage"** means an interruption or reduction of the generating capability of the Project for the purpose of performing work on specific components which in the opinion of the Generator and the Department could not be postponed until the next Scheduled Outage and shall be scheduled by the Generator and allowed by Department;
- (r) **"Scheduled Outage"** means a planned interruption of the generating capacity of the Project that is scheduled for inspection, routine and preventive maintenance, corrective maintenance, repairs, replacement or improvement and is not a Maintenance Outage or Forced Outage;



PCR-cum-Secretary  
Power Deptt.  
Gangtok, Sikkim



- (s) "taxes" mean any taxes, Indian taxes, whether direct or indirect, including levies, imposts, cess, duties and other forms of taxation imposed by any Government Authority;
- (t) "Water Level" means that level of water in the Hydro-electric Projects' river upstream, the Control weir and gates established or, if not so established, that level of water in the Hydroelectric Projects' river above the Control weir and gates, referenced to the gauge now existing on the upstream side of the Control weir and gates and to the gauge existing on the downstream of the control weir, sensors, water depths as may be specified;
- (u) "At No Cost or at no cost" means Energy in Kwh that is provided without charge;

## (2) Interpretation

- (a) In this Agreement, unless the context otherwise requires,

- (i) The Department and the Generator shall collectively be referred to as the "Parties" and individually as a "Party".
- (ii) references to any legislation or any provision thereof shall include amendment or re-enactment or consolidation of such legislation or any provision thereof so far as such amendment or re-enactment or consolidation applies or is capable of applying to any transaction entered into hereunder;
- (iii) references to laws of the State, laws of India or Indian law or regulation having the force of law shall include the laws, acts, ordinances, rules, regulations, bye laws or notifications which have the force of law in the territory of India and as from time to time may be amended, modified, supplemented, extended or re-enacted;
- (iv) references to a "person" and words denoting a natural person shall be construed as a reference to any individual, firm, company, corporation, society, trust, government, state or agency of a state or any association or partnership (whether or not having separate legal personality) of two or more of the above and shall include successors and assigns;
- (v) the table of contents, headings or sub-headings in this Agreement are for convenience of reference only and shall not be used in, and shall not affect, the construction or interpretation of this Agreement;
- (vi) the words "include" and "including" are to be construed without limitation and shall be deemed to be followed by "without limitation" or "but not limited to" whether or not they are followed by such phrases;
- (vii) references to "construction" or "building" include, unless the context otherwise requires, investigation, design, engineering, procurement, delivery, transportation, installation, processing, fabrication, testing, commissioning and other activities incidental to the construction, and "construct" or "build" shall be construed accordingly;
- (viii) references to "development" include, unless the context otherwise requires, construction, renovation, refurbishing, augmentation, up-gradation and other activities incidental thereto, and "develop" shall be construed accordingly;
- (ix) any reference to any period of time shall mean a reference to that according to Indian Standard Time;
- (x) any reference to "hour" shall mean a period of 60 (sixty) minutes commencing either on the hour or on the half hour of the clock, which by way of illustration means 5.00 (five), 6.00 (six), 7.00 (seven) and so on



- being hours on the hour of the clock and 5.30 (five thirty), 6.30 (six thirty), 7.30 (seven thirty) and so on being hours on the half hour of the clock;
- (xi) any reference to day shall mean a reference to a calendar day;
  - (xii) reference to a "business day" shall be construed as reference to a day (other than a Sunday) on which banks in the State where the Power Station is situated are generally open for business;
  - (xiii) Any reference to month shall mean a reference to a calendar month as per the Gregorian calendar;
  - (xiv) References to any date, period or Project Milestone shall mean and include such date, period or Project Milestone as may be extended pursuant to this Agreement;
  - (xv) any reference to any period commencing "from" a specified day or date and "till" or "until" a specified day or date shall include both such days or dates; provided that if the last day of any period computed under this Agreement is not a business day, then the period shall run until the end of the next business day;
  - (xvi) the words importing singular shall include plural and vice versa;
  - (xvii) references to any gender shall include the other and the neutral gender;
  - (xviii) "Kwh/KwH/KWH/kWh" shall mean kilowatt hour
  - (xix) "lakh" shall mean a hundred thousand (100,000) and "crore" shall mean ten million (10,000,000);
  - (xx) "Indebtedness" shall be construed so as to include any obligation (whether incurred as principal or surety) for the payment or repayment of money, whether present or future, actual or contingent;
  - (xxi) references to the "winding-up", "dissolution", "insolvency", or "reorganisation" of a company or corporation shall be construed so as to include any equivalent or analogous proceedings under the law for the time being enforced in the state of Sikkim the jurisdiction in which such company or corporation is incorporated or any jurisdiction in which such company or corporation carries on business including the seeking of liquidation, winding-up, reorganisation, dissolution, arrangement, protection or relief of debtors;
  - (xxii) save and except as otherwise provided in this Agreement, any reference, at any time, to any agreement, deed, instrument, licence or document of any description shall be construed as reference to that agreement, deed, instrument, licence or other document as amended, varied, supplemented, modified or suspended at the time of such reference; provided that this Sub-clause (u) shall not operate so as to increase liabilities or obligations of the Department hereunder or pursuant hereto in any manner whatsoever;
  - (xxiii) any agreement, consent, approval, authorisation, notice, communication, information or report required under or pursuant to this Agreement from or by any Party shall be valid and effective only if it is in writing under the hand of a duly authorised representative of such Party, as the case may be, in this behalf and not otherwise;
  - (xxiv) The Schedules and Recitals to this Agreement form an integral part of this Agreement and will be in full force and effect as though they were expressly set out in the body of this Agreement;
  - (xxv) references to Recitals, Articles, Clauses, Sub-clauses, Provisos or Schedules in this Agreement shall, except where the context otherwise requires, mean references to Recitals, Articles, Clauses, Sub-clauses, Provisos and Schedules of or to this Agreement; reference to an Annex shall, subject to anything to the contrary specified therein, be construed as a reference to an Annex to the Schedule in which such reference occurs;



- and reference to a Paragraph shall, subject to anything to the contrary specified therein, be construed as a reference to a Paragraph of the Schedule or Annex, as the case may be, in which such reference appears;
- (xxvi) the damages payable by either Party to the other of them, as set forth in this Agreement, whether on / or otherwise, are mutually agreed genuine pre-estimated loss and damage likely to be suffered and incurred by the Party entitled to receive the same and are not by way of penalty (the "Damages");
- (xxvii) time shall be of the essence in the performance of the Parties' respective obligations. If any time period specified herein is extended, such extended time shall also be of the essence; and
- (xxviii) terms used in the Agreement, but not defined herein, shall have the meaning ascribed to such terms in the Electricity Act, 2003.
- (b) Unless expressly provided otherwise in this Agreement, any Documentation required to be provided or furnished by the Generator to the Department shall be provided free of cost and in three copies, and if the Department is required to return any such Documentation with their comments and/or approval, they shall be entitled to retain two copies thereof.
- (c) The rule of construction, if any, that a contract should be interpreted against the parties responsible for the drafting and preparation thereof, shall not apply.
- (d) Any word or expression used in this Agreement shall, unless otherwise defined or construed in this Agreement, bear its ordinary English meaning and, for these purposes, the General Clauses Act, 1897 shall not apply.

**(3) Measurements and arithmetic conventions**

All measurements and calculations shall be in the metric system and calculations done to 2 (two) decimal places, with the third digit of 5 (five) or above being rounded up and below 5 (five) being rounded down.

**(4) Provisions which respect to each HEP**

The Agreement has been entered into in relation to the Hydro Electric Projects which are set up at different locations in the State of Sikkim and such Hydro Electric Projects may have different attributes including construction period, performance security amount, Tariff and operations period. Accordingly, the Parties have agreed that this Agreement has to be read independently for each such Hydro Electric Projects unless the context required otherwise. For sake of clarity, the following Articles shall be read independently for each of the Hydro Electric Projects (this is an indicative list and is not exhaustive):

- (a) Clause 7 – Metering, Billing and Invoicing;  
 (b) Clause 17- Disputes and Alternate Resolution;  
 (c) Clause 21 – Billing, Invoicing, terms of payment and payment security;  
 (d) Clause 23 – Events of Default;  
 Clause 24 – Force Majeure;  
 (f) Clause 30 – Tariff;  
 Clause 32 – Performance Security.



*[Signature]*

For the Department of Hydroelectricity  
 Government of Sikkim

**(5) Priority of Agreements, Clauses and Schedules**

(a) This Agreement, and all other agreements and documents forming part of or referred to in this Agreement are to be taken as mutually explanatory and, unless otherwise expressly provided elsewhere in this Agreement. The priority of this Agreement and other documents and agreements forming part hereof or referred to herein shall, in the event of any conflict between them, be in the following order:

- (i) This Agreement; and
- (ii) All other agreements and documents forming part hereof or referred to herein,

i.e., the Agreement at (i) above shall prevail over the agreements and documents at (ii) above.

(b) Subject to the provisions of Clause (5)(a), in case of ambiguities or discrepancies within this Agreement, the following shall apply:

- (i) between two or more Clauses of this Agreement, the provisions of a specific Clause relevant to the issue under consideration shall prevail over those in other Clauses;
- (ii) between the Clauses of this Agreement and the Schedules, the Clauses shall prevail and between Schedules and Annexes, the Schedules shall prevail;
- (iii) between any two Schedules, the Schedule relevant to the issue shall prevail;
- (iv) between the written description on the drawings and the Specifications and Standards, the latter shall prevail;
- (v) between the dimension scaled from the drawing and its specific written dimension, the latter shall prevail; and
- (vi) between any value written in numerals and that in words, the latter shall prevail.

**2. Scope of the Project, Free Power, and Project Up-gradation and Commissioning for Commercial Operation**

**(1) Scope of the Project**

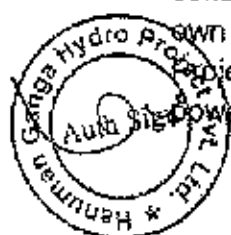
- (a) during the Term:
  - (i) Construction, operation and maintenance of the Power Station in accordance with the provisions of this Agreement;
  - (ii) Supply of electricity to the Department in accordance with the provisions of this Agreement.



(b) Sign Performance and fulfilment of all other obligations of the Generator in accordance with the provisions of this Agreement and matters incidental

thereof or necessary for the performance of any or all of the obligations of the Generator under this Agreement.

- (2) Generator shall re-design and re-construct and augment the capacity of the Projects, wherever it may be necessary and possible, in accordance with the Prudent Utility Practices, relevant technical standards and specification, and shall be in accordance with the design requirement of the Projects. It is clarified that the Generator shall have the right to increase the capacity of any of the HEPs. Subject to the prior intimation to the Department.
- (3) The signing of this Agreement by Department indicates that all approvals for the Project from the Government have been accorded. Generator shall achieve Commercial Operation of the Project at the earliest and ensure that the Project is capable of being Dispatched delivering Active and Reactive Power as per Dispatch Instructions and of being operated in parallel with the Grid System. Generator shall also ensure delivery of power at the Interconnection Point in a safe and reliable manner so as to avoid fluctuations and disturbances to the Grid System due to parallel operation.
- (4) For the purpose of this Clause, the construction period means a period beginning with financial close and end with date of achieving Commercial Operations Date ("COD"). Explanation: If mutually agreed construction period is 24(Twenty-Four) months but if the Unit achieves COD in 18(Eighteen) months, then all clauses for construction period will be invalid and all clauses for COD will take effect.
- (5) Generator shall inform the Department in writing six (6) months prior to COD for the Interconnection Facilities at the Interconnection / Metering Point to be available along with details.
- (6) Generator shall arrange suitable Power Evacuation Facility at the Interconnection Point of the Project, at its cost, compatible with the Grid System, for parallel operation with the Grid System. The evacuation facility will be capable of automatic isolation of the Project from the Grid System in the event of any fault on the Grid System and ensure that no damage is caused to the Project.
- (7) Department agree to provide adequate protection at the Interconnection Point, as a part of the Interconnection Facilities, to ensure that no damage is done to its system due to paralleling of the Station. For proper and prompt co-ordination and efficient load management, Generator shall provide and maintain adequate and reliable communication system between the Station and 220/132/66/33/11 kV Sub Station of the Department.
- (8) Department agree to provide adequate construction power to the Project as required for construction, erection, and testing, commissioning and Initial start-up. Department agree to charge for the power supply at the bulk supply tariff as applicable from time to time. Department shall, however, not be liable to pay any damage/ compensation to Generator in the event of non-supply of construction power for reasons beyond its control. Generator shall make its own standby arrangements for meeting the power requirements of the Project during the periods when Department is not in a position supply



- (9) Generator shall update Department from time to time and co-ordinate the renovation / construction progress of the Project. Department shall be responsible to provide with necessary road permits, certifications etc., as may be required by Generator for the purpose of smooth implementation of the Project and availing duty benefits and exemptions and subsidies as per the requirement of Competent Authorities.
- (10) By way of signing of this Agreement it is deemed that Department have accorded all its approvals, as required to set-up this Project including increase of the capacity of the Project(s) in accordance with sub clause (2) of Clause 2 of this Agreement.
- (11) Generator shall declare the Project to be ready for synchronization with the Grid System, when:
- a) it has been installed in accordance with the required technical specifications and Prudent Utility Practices;
  - b) it meets all related conditions prescribed in applicable Indian Standard(s)/Code(s), then in effect and otherwise meets the provisions of the Electricity Act, 2003 and the rules framed thereunder and the Electricity Rules, 1956 or any other requirements for Synchronization to the Grid System; and
  - c) it is capable of being operated safely and Generator has obtained the approval of the Chief Electrical Inspector of the Government.
- (12) Generator shall give the Department at least sixty (60) days advance written notice of the date it intends to synchronize the Project with the Grid System, the date being not earlier than the Scheduled Synchronization Date for the Unit, unless otherwise agreed to by the Department.

The Department, and/or its authorized representative(s) shall inspect any Unit, which Generator intends to Synchronize with the Grid System within five (5) days after being notified in writing by Generator, to determine whether all the requirements have been met. Generator shall provide the Department with such access to the Station as is reasonably required to make such determination.

If the Department is satisfied that the Unit is ready to be Synchronized in accordance, it shall within three days of the completion of the inspection of the Unit(s) notify Generator to that effect and provide Generator with all reasonable assistance in Synchronizing the Unit and also for conducting Commissioning Test(s).

**(13) Free Power (At No Cost)**

- (a) The Department shall be entitled to get Twelve percent (12%) of the total energy for first 10 years from COD, Fifteen percent (15%) of the total energy from (Eleventh) 11<sup>th</sup> to (Twentieth) 20<sup>th</sup> Years from COD and Eighteen percent (18%) of the total energy from (twenty first) 21<sup>st</sup> to (Thirty Fifth) 35<sup>th</sup> years from COD, as free power/Energy At No Cost from the Generator for the entire Term of this Agreement. total energy will be calculated as per



PCE-  
Power  
Contract

present installed capacity and total energy will be calculated monthly. This shall be indicated on the Invoice raised on monthly basis to Department.

- (b) In the event, the Generator is able to increase the capacity of any of the HEPs beyond the present capacity, then the share of free power/energy At No Cost allocated to the Department from such enhanced capacity, of the respective HEP, shall be (5%) five percent. This shall be indicated on the Invoice raised on monthly basis to Department

### 3: Operation and Maintenance of the Project

Unless the context otherwise requires, the provisions of this Clause 3 are to be followed for each of the HEPs separately.

#### (1) Operation and Maintenance of Civil Works

##### (a) Operation of Water ways

The operation of canal shall be carried out in accordance with Relevant Safety standards. Operation of Canal means the regulation of flow and maintaining of water level by operation of gates and stop logs in coordination with operation of turbines of the Power Project.

##### (b) Regulation of Water Level

Generator, during the Lease period, shall use its best efforts to operate the Properties on a run-of-the-river basis and to regulate the flow of water. Safeguarding the uniform flow of water under all exigencies is to be maintained. Operation of regulating mechanism must ensure that minimum surges are encountered and flow regime remains un-disturbed with variation in discharge not exceeding  $\pm 3\%$ . The upstream and downstream surges on full load rejection/acceptance should not exceed required cubic meters. The regulating mechanism shall be operated to ensure that flow regime is maintained without disturbing the upstream and downstream levels, stipulated discharge regulation and surges etc. within the above limits.

However, the Generator shall not be responsible for failure to maintain such water level due to conditions which are not attributable to them but shall, in any such instance, take such measures as shall, in Generator's opinion, be reasonably necessary to promptly restore the water level.

The regulation of water at the Project is to be ensured by gated releases in the bye pass channel or through the Main Canal Gates as the situation warrants. These Gates will be operated when Plant machine(s) are closed for any reason or when water flows exceed the required designed discharge or the situation warrants for it. These Gates, therefore, shall be kept operative and functional at all times. Dry trials may be carried out periodically, manually and automatically for these controlling Gates of the Project by the Generator and should be recorded in the Maintenance registers.

##### (c) Method of Regulation of Water Level

The Generator shall, in connection with the maintenance and operation of the Gates and regulation of the Water Level and the flow of water, be responsible





for diversion of the water flows into the Plants and operation of the turbines and Generators and appurtenant equipment and bye-pass and main canal gates provided, however, the Generator may operate the Control weir and Gates as required for the maintenance or repair of the Project to alleviate any emergency condition, which may develop during periodic flushing of silt.

The flushing of the silt shall be carried out by the Generator at required intervals by operation of the main canal and Bye-Pass Gates.

(d) Maintenance of Civil Structures

The civil works of the Project have been executed to standard design and to a quality, which may require upgrading. It is not expected that the civil structures/works will require any special treatment/attention for repairs. These works however, will be maintained and up-graded, wherever deemed necessary by the Generator in good condition by regular inspection, maintenance, dusting, washing, cleaning up and painting and polishing. Standard Practices shall be followed.

Maintenance of the entire Power Plant within the Battery Limits of the Project, shall be carried out by Generator at its own expense for effective generation.

The silt in the channels/spiral/canal upstream and downstream of the Plant shall be cleaned and physically removed (de-silting) during lean /maintenance closure period or as and when required. De-silting upstream of the main gates and bye pass gates, intake, head race and tail race channel including dewatering of stagnated/trapped water in the aforesaid areas and draft tubes shall be carried out by the Generator at its own expenses.

Generator shall, at his own cost, repair, maintain and procure all materials to keep all the civil structures and all water ways in good repaired and in the same operating condition as it exists. The landscaping of lawns, gardens and greenery in the Project area shall be provided, developed and properly maintained in a regular manner by the Generator at his own expense to improve the environment at the HEPs as a whole.

The Generator shall periodically check the Gates of Bye-pass Channel and Forebay area regularly for electrical, mechanical and hydraulic failures, to ensure Fail Safe Operation of the Gates.

The Generator shall prepare a schedule of routine, preventive and capital (special) maintenance plan of the plant and equipment and of all civil structures and canal including de-silting. The maintenance schedules are meant for the guidance and are not limited to final maintenance schedules.

(e) Safety of the Water Conductor System

By way of operation of the Gates, the Generator shall regulate discharge flow/discharge of water, which has to be maintained under all contingencies. The Generator shall perform periodic inspections regularly and checking of operation of Gates, condition of embankments and possible blockage of discharge flowing channels through the water conductor system.



PCU, Ganga Hydro Project  
Powerhouse  
Govt of Sikkim, Gangtok



(2) **Operation and Maintenance of Equipment:**

Round the clock operation and maintenance of the plant and equipment shall be carried out by the Generator in accordance with manufacturer's instructions, relevant safety codes, Indian Electricity Act, Indian Electricity Rules, Department's instructions, if any, and Prudent Utility Practices etc., to minimize the down time and to optimize the quality of power generation from the Project.

(a) **Operation of the Plant**

Round the clock operation of the Plants shall generate power and the quality of the electricity generated/delivered by the HEPs shall be ensured by a continuous monitoring of instrumented data. The kWh (units) generated from the Plants (kilo watt hours, represents the quantum of energy generated), which shall be recorded by instrumented panels/Meters and also in the log sheets manually. The total quantum of energy from 00.00 hrs of 1<sup>st</sup> April of any year to 24.00 hrs of 31<sup>st</sup> March of the following year (*Financial year*) will form the basis of aggregated energy outputs in the annual cycle of the unit operation in the Plants. For an incomplete year, the total quantum of energy from the time and date on which a particular power plant is handed over to the Generator up to the following 24.00 hrs of 31<sup>st</sup> March or from 00.00 hrs of 1<sup>st</sup> April to the following time and date on which the power plants are handed over back to Department, will form the basis of aggregated energy output. The energy from all the units in the Project will represent the aggregated energy output. The monthly outputs will be reckoned in the same manner based on English calendar months.

The Generator shall also continuously monitor and record on hourly basis records of all important parameters from time to time such as, water levels upstream and downstream of the power plants, discharge of water and through readings of kW, kVA, KVAR, kWh, voltage, current, power factor and frequency of each generating Unit, turbine, draft tube/vane guide, opening/closing positions, pressures and temperatures of equipment, readings of export and import energy at main and check meters installed at the Interconnection Point and tripping etc.

The Generator shall furnish the daily, monthly and yearly Performance formats of data sheets/ log-sheets for recording important parameters for information and approval of the Department. These formats duly completed in all respect shall be made available by the Generator to the Department for perusal and records.

The Generator shall maintain a proper logbook at the Project site /office for recording readings of various instruments/gauges etc. and for recording all operations as and when they occur including scheduled outages, maintenance outages, forced outages, tripping and temporary interruptions/ Isolations in delivery of energy and reasons thereof. All the Project data sheets/Log sheets shall be inspected for record by the Department at the end of each year.

The Generator shall arrange all required stationery, log books, formats etc. at his own cost. Should the level of fluctuations of electricity supply in the Project exceed the limits for an excessively long period the Generator shall study the issue to evolve suitable solution with Department and action will be



taken accordingly by Department to minimize the Grid non-availability, without any delay and on priority.

However, the safety of the generating plant and equipment shall be the responsibility of Generator.

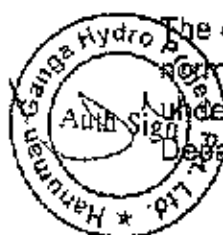
(b) Maintenance of Plant:

Generator shall commence round-the-clock maintenance (routine, preventive, break-down and capital maintenance) of the Plant and Equipment, including hydro-mechanical Gates, including disposal of trash shall be carried out by Generator in accordance with manufacturer's instructions, manufacturer's procedures, relevant safety codes, Electricity Supply Act 1948, Indian Electricity Rules 1956 and Electricity Act 2003, Department's instructions or any other laws for the time being enforced in the state of Sikkim if any, prudent utility practices etc.

Generator shall carry out only routine maintenance round the clock till such time plant is handed over for Generation *vis-à-vis* validity of this Agreement. The routine maintenance shall include cleaning and checks of the HEP's equipment /components and as well as preventive and breakdown maintenance.

(c) Routine, Preventive, Breakdown and Capital Maintenance:

- (i) **Routine and preventive maintenance** shall include such cleaning checks and maintenance activities round the clock on hourly, shift wise, daily, weekly, monthly, quarterly, half yearly, and yearly basis, which are required to be carried out on all the components, equipment and systems including testing and calibration of meters and instruments of the Power Project to minimize breakdowns proper recording of data including testing and calibration of meters and instruments and to ensure smooth and trouble free running of the HEPs. The Generator shall also carry out routine and preventive maintenance and replacement of oils of each and every component / equipment of the HEPs and shall provide all labour, material, consumables etc. for routine and preventive maintenance at its own cost.
- (ii) **Breakdown maintenance** shall mean the maintenance activity including repairs and replacement of any component or equipment of the HEPs, which is required to be carried out round the clock as a result of sudden failure/breakdown of that particular component or equipment while the Plant are running. The Generator shall carry out breakdown maintenance of each and every component of the Power Project and shall provide the required manpower, materials, consumables, components or equipment etc. for attending to such breakdown maintenance at its own cost irrespective of the reasons of the breakdown/failure.
- (iii) **Capital maintenance** shall mean the major overhaul of any component or equipment of the HEPs, which is not covered by routine, preventive and breakdown maintenance and may become necessary on account of excessive wear and tear, erosion of underwater parts, cavitation and ageing. The capital maintenance of Power Plant equipment and all civil structures will normally be planned to be carried out during Planned Annual Shut-down for under water components. For this purpose, a joint inspection of the Department and Generator may be carried out of all the major components of



the HEPs about two months in advance for under water components in order to ascertain as to which components of the Power Project require capital maintenance. In this regard, decision of the Generator will be final and binding. However, if the condition of the Project and components warrants its capital maintenance at any other time, a joint inspection of the Department and Generator shall be carried out immediately on occurrence of such situation and capital maintenance shall be carried out by arranging the shutdown of the Plant /part of the Plant and the decision of the Generator shall be final and binding. The capital maintenance of the Power Project shall be carried out by Generator at its own expenses. Generator shall be free to take expert opinion of the manufacturers of Plant and equipment during joint inspection in order to ascertain the quantum and nature of the said capital maintenance. Department shall also be free to obtain the supervision for capital maintenance from manufacturers of the plant and equipment, at its own cost. At least one capital maintenance of the Project shall be essentially carried out by the Generator before handing over the Plant to Department before expiry of this Agreement. However, the repair of damages to Power Plant due to floods, earthquakes, civil commotion, riots, terrorist's activities, and natural calamities etc. shall be carried by the Generator and claim for insurance and adjust actual expenses, wherever applicable. The manufacturers Operation and Maintenance manuals of major plant and equipment, which are available in Department's office, shall be handed over to the Generator for reference and safe keep, which shall be recorded.

- (d) The Generator shall use all reasonable efforts to give advance notice to the Department to the extent possible of any unscheduled /scheduled outage of the Plant as soon as possible before/after the outage and shall provide the Department with an estimated duration for such outage. The scope of such outage shall also be intimated telephonically followed by a letter/fax.

The Generator shall carry out regular maintenance and overhauls of the Plants as per recommended schedules and procedures of the equipment suppliers and as per approved schedules by the Department. The schedule of maintenance and overhauls, which require Plant Shut-down shall however be intimated to the Department via the Load Despatch Centre to which the Plant is attached. For scheduled maintenance and overhauls the Generator will take prior approval from Department.

- (e) The Generator shall be responsible to disposal of the trash dumped at trash pit at a suitable place as approved by competent authority of the Department.
- (f) The Generator shall maintain Inspection books at the Project for recording of instructions given by Department during inspections.
- (g) The Generator, if intends setting up of a data transmitting and real time information facilities for monitoring Operation and Maintenance of the Project from a Centralized Station, is allowed to do so.
- (h) The generation from the HEPs shall maintain within the design limits.



In case Department observes any shortfall in Generation or in the maintenance and operation of the HEPs or response of the Generator including inadequacy of staff or their capacity to perform, then Department on its discretion, has right to record the same in the inspection book or issue

Instructions/notice for rectification of the same by the Generator, which shall be complied by the Generator the earliest, possible to the satisfaction of the Department.

- (j) All maintenance works carried out by the Generator shall be recorded in Maintenance Registers and shall be made available to Department during inspections

#### 4. Incentives for Power Generation

- (1) Department is not required to pay to Generator any incentives for energy generated and metered at "interconnection point" (Delivered Energy) at the Project in the Power House during any calendar year (from 0.00 hrs. of 1st April of a particular year up to 24.00 hrs. of 31st March of the following year).
- (2) The designed projected energy shall not form any basis for eligibility to incentives irrespective of any reasons of interruptions/curtailment of power generation.

#### 5. Deliverable Energy / Saleable Energy and Project Potential

- (1) Deliverable energy shall be the energy delivered by Generator from the Project at the "Interconnection point" and as measured by the export /import energy meter installed at the "Interconnection points / Metering Point".
- (2) The deliverable energy shall mean the electrical energy generated from the Project, as measured at Generator terminals less the summation of the following:
- (a) Actual auxiliary consumption for the bona-fide use of the auxiliaries, lighting and ventilation in the Power Station.
  - (b) Transformation losses (from generation voltage to transmission voltage) of the step-up transformer installed in the Plant Switchyard.
  - (c) Free power At No Cost provided to the Department as per Clause 2 (13) of this Agreement.
- (3) In case Generator uses the energy generated in the power stations for its personal use such as residential premises etc., the same shall be payable by Generator to the Department at the rate as applicable from time to time as per the applicable tariff structure of Department on per kWh basis.
- (4) For this purpose, readings of Energy Meters installed at each auxiliary panel for residential feeder, Generator terminal and export and import check and main energy meters installed at "Interconnection Points" at generation facility and Department grid shall be taken on monthly basis jointly by Department and the Generator.

#### 6. Sale and Purchase of Energy

- (1) From the Date of Synchronization of the first Unit of the Project, Generator shall supply the entire electrical energy after Auxiliary consumption, at the Interconnection/Metering Point to the Department.



PGE, Secy.  
Power Department  
Govt. of Haryana, Gurgaon

- (2) Generator shall sell and the Department shall purchase the entire energy at the Interconnection Point, which is the Net Saleable Energy i.e., the total energy received from the Project at the Interconnection Point, the Net Saleable Energy shall be injected into the State Grid.
- (3) Monthly Invoices shall be raised on the basis of the energy injected into the grid, the Net Saleable Energy in kWh generated from the Project by Generator. The purchase price of the energy "Tariff", as provided in Clause 30, is the negotiated tariff in view of the existing Infrastructure of Department made available for revival of the Project.
- (4) Department agree to pay for the Net Saleable Energy delivered at the Interconnection Point at the rate per kWh excluding statutory taxes and duties, if applicable, as per Clause 30, which shall be indicated on the Invoice raised on monthly basis to Department.

#### 7. Metering, Billing and Invoicing

- (1) Energy Meters, (export and import) of 0.5 accuracy class having kWh, kVAh and kVARh recording facility have been installed at Interconnection Point by the Department (hereinafter referred to as Main Meter). The meters are, capable of recording and storing half hour averages of all the Electrical Parameters for 70 days. Similar meters (export and import) of the same accuracy class have been installed by Department at Grid Substation where power is injected from the Project (hereinafter referred to as Check Meter).
- (2) All the Meters, CTs and PTs described above shall be jointly inspected and sealed by the Generator and Department and these shall not be interfered with neither by the Generator or Department, except in the presence of representatives of both the Parties herein. For testing and calibration of meters, a notice of at least seven (7) days shall be given by the Generator or Department for testing to enable the authorized representatives of both the Parties to be present. All meters, CTs and PTs shall be checked for accuracy once in every twelve (12) months by both the Parties and shall be treated as working satisfactorily so long as the errors are within the limits prescribed for such meters.
- (3) Meter readings of the Main Meters (for export of power to Department / Meter installed at Interconnection Point) and Check Meter (For import of power by the Department) will form the basis of billing/invoicing by the Generator to Department. If either of the meters is found to be defective during these checks they will be immediately tested/ calibrated/ repaired/ replaced by the Generator at his own cost.
- (4) Where the half yearly check indicates errors in the Main Meters beyond the prescribed limit but no such error is noticed in the Check Meters, billing for the month up to the date and time of such test check will be done on the basis of Check Meter by the Generator and the Main Meters will be re-calibrated immediately. The Generator may maintain one set of meters and metering equipment as spare for replacement of the defective meters and metering equipment and to ensure correct metering at all time. If during the half yearly checks, both the Main meters and the Check Meters are found to be beyond permissible limits of error, the meters shall be immediately re-calibrated and the correction shall be applied to the consumption registered



by the Main Meters to arrive at the correct consumption of energy for billing/invoicing purposes for the period of the month up-to the time of such check. Billing for the period thereafter till the next monthly meter reading shall be measured by re-calibrated Main Meters.

- (5) Corrections in billing/invoicing, whenever necessary, shall be applicable to the period between date and time of the previous test calibration and the date and time of the test calibration in the current month when the error is observed and this correction shall be for the full value of the absolute error. For the purpose of the correction to be applied, the meter shall be tested at 100, 75, 50, 25 and 10 percent load at unity, 0.85 and 0.75 lagging power factors. Of these fifteen values, the error at the load and power factor nearest the average monthly load served at the point during the period shall be taken as the error to be applied for correction.
- (6) The billing/invoicing shall be normally done on the basis of readings recorded by the meters installed at Interconnection Point (Main Meters). In case, the metering equipment of Interconnection Point becomes defective, the billing to Department / Invoicing to Department by the Generator shall be done on the basis of meter readings / energy injected into the grid of the meters installed at Department Grid Substation. If both the Energy Meters located at Interconnection Point and Department Grid Substation fail to record the Electricity supplied then the Electricity supplied will be computed from the log sheets maintained at Department's Grid Substation/Department's Power Station for that period of defect, which shall be final and binding on the Generator and Department, subject to immediate notice by Generator for such occurrence of defect in Main and Check meters.
- (7) For the purpose of test and calibration, the substandard meter shall be calibrated and sealed from a reputed testing Laboratory. This meter shall be calibrated once in every two (2) years.

#### 8. Billing Procedure to Department and Records

- (1) The designated representatives of Generator and Department shall take readings of the meters at the Interconnection Point. On the first day, of every calendar month. Readings shall be recorded for the energy injected from the Project to the Grid and shall prepare to submit monthly bills, in triplicate, for release of payments and one original shall be for record of Generator.
- (2) Each of Generator and Department shall keep and maintain complete accurate records and all other data required by each of them for the purposes of proper administration of the Agreement. Department shall certify monthly Energy Injection Report, as required by competent authorities.

#### 9. Plant Operation

- (1) Generator shall run/operate the Project to generate power in parallel with the grid and shall inject three phase 50 Hz. (nominal) AC supply into Department's system at 11 KV.



matters relating to Grid operations and load despatch, the directions of the State Load Despatch Centre ("SLDC") or the officer who may be authorized by the Department shall be strictly complied with by the Generator. Any dispute

on this account shall be referred to Department and to the Chief Engineer-In-charge, System Operation Organization of Department, whose decision shall be settled by mutual discussion between the Generator and the Department falling which the Generator shall have the option to approach Sikkim State Electricity Regulatory Commission.

#### 10. Statutory Clearances

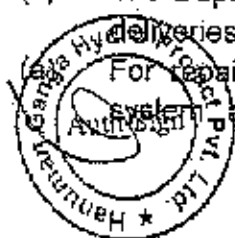
- (1) It is agreed that all required clearances, permissions and approvals have already been obtained by the Department. The Generator will not be responsible for obtaining subsequent/periodic permits/clearances as per statutory/obligatory provisions. The Generator shall comply with the stipulations of the permits/clearances and shall agree that such permits/clearances are kept in force throughout the Period. It is further agreed that necessary clearances of accuracy of meters/metering equipment, protection system, correct installations of equipment, safety provision etc. required from Department, Chief Electrical Inspector, Department of Telecommunication for Wireless System and other Competent Authorities shall also be obtained by Department or authorize case wise to the Generator.
- (2) The Generator also at his own expense shall ensure that the Power Project is operated and maintained in accordance with all legal requirements including the terms of all consents/clearances/ permits and Prudent Utility Practices within the acceptable technical limits so as not to have an adverse effect on the Department's Grid System and environment. Personnel employed by the Generator shall meet Applicable Laws, rules, regulations and requirements in force from time to time in the State of Sikkim /Union of India.
- (3) In the event the Generator enhances the capacity of any of the HEPs as per Clause 2 (2) above, the Department shall procure the necessary Applicable Permits from the Government of Sikkim and shall also facilitate obtaining such Applicable Permits from the Central Government, as may be required.

#### 11. Liaison with Department

- (1) The Generator shall closely liaise with all concerned departments including SLDC and/or other designated officers/officials and other concerned offices during the Period.
- (2) During the Period of this Agreement in force the Generator shall give seven (7) days prior intimation of its annual maintenance program to Department.
- (3) The Generator will also furnish, in the last week of every month, supply plan indicating the total quantum of electricity likely to be delivered during the next three (3) months.

#### 12. Temporary Interruptions in Delivery of Energy

- (1) The Department may require the Generator to temporarily curtail or interrupt deliveries of energy when necessary, in the following circumstances:  
For repair, replacement and removal of the equipment or any part of its system associated with the Department's facility. However, as far as





practicable, such an event shall be scheduled during the annual shut down period of the generation facilities;

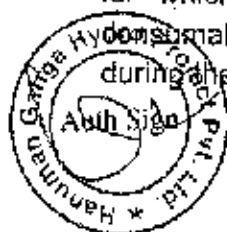
- (b) Load crash in the Grid System due to wide spread rains, cyclones or typhoons;
- (c) Conditions leading to over-loading of interconnecting transformers, transmission lines and switch-gears due to outage of some equipment at Department power system;
- (d) If Department determines that the continued operation of the Generator's generation facility may endanger the safety of personnel or integrity of the Department's electric system or have an adverse effect of the electric service to the Department's other customers;
- (e) Under Force-Majeure Conditions ;
- (f) Instructions for the disconnection of Generator's generation facility from the Department's system notified by the designated Load Despatch Centre for the period/duration indicated by it. However, Department shall agree to take all reasonable steps to minimize the number and duration of such interruptions, curtailments or reductions.

### 13. Manpower Deployment by Generator

- (1) The Generator shall deploy the required experienced, competent and qualified manpower as per Prudent Utility Practices for round the clock efficient generation from the HEPs,
- (2) The Generator when required shall supplement additional manpower, for the manpower so employed by the Generation, preference shall be given to Local Certificate of Identification Holders.

### 14. Spare Parts and Consumables

- (1) The standby spares/ motors/components (other than spares/ stores) available with Department shall be handed over to Generator for replacement during breakdowns to minimize the breakdown time of the Plant. However, these spares/motors shall always be kept in good working condition through immediate repairs/ replacement of defective spares and their Maintenance of unused spares by Generator to minimize the Plant's downtime. The list of such motors/spares shall be prepared and verified at the time of handing over of the Project. Generator shall build up sufficient inventory of standby items, normal and capital spares of its own over and above the spares available, which is required to minimize the down time of the Plant. However, extra standby spares/motors/components/ equipment, if required, to minimize the down time shall be arranged by Generator at its own cost. Notwithstanding the above, Generator shall be responsible for providing all routine, preventive breakdown, capital maintenance spares and consumables for which Generator shall build up his own inventory of spares and consumables including standby provisions based on likely replacements during the Period.



*[Signature]*  
 PCD, Gen. Secy.  
 Power Dept., Govt.  
 of Karnataka



- (2) All expenses on replacement/ repair are to be borne by Generator including labour and technical supervision, which may be required. Generator shall contact the vendors/manufacturers on its own for purchase of spare parts from Original Equipment Manufacturers (OEMs. Department may facilitate, if required, to Generator for the purpose of procurement of these spares expeditiously. In case these spares from OEMs are not available, then Generator will explore the possibilities of purchasing the required spare parts from other suitable manufacturers of the same specifications. Sufficient spare parts and consumables will be stored at the Project sites by Generator at all times to minimize breakdown time and consequent generation loss.
- (3) The standby items and spare parts for maintenance of the Project including building shall require following types of inventory and record to be kept by Generator:
  - (a) Consumables;
  - (b) Routine Maintenance spares;
  - (c) Breakdown Maintenance spares;
  - (d) Capital spares; and
  - (e) Standby Items.
- (4) Generator may take insurance cover for burglary and theft for his stores at its own cost, if so desired.

#### 15. Tools and Tackles and Measuring Instruments

- (1) Immediately after handing over of the Project to Generator, Department will hand over all such tools and tackles and measuring instruments, which have been supplied with the Project and equipment by the manufacturers. A list of these tools and tackles and measuring instruments shall be prepared at the time of handing over of the Project
- (2) These tools and tackles and measuring instruments shall be properly maintained and repaired and shall always be kept in good condition by Generator at its own expense. All these tools and tackles and measuring instruments shall be returned in good condition by Generator to Department after the expiry of the Period.
- (3) All other tools and tackles and measuring instruments required for generation from the Plant and its operation and maintenance shall be provided by Generator at its own expense.

#### 16. Insurance and Communication facility

##### (1) INSURANCE

- (a) The Generator shall effect and maintain at its own cost, during the Construction Period and the operation period, such insurances for such maximum sums as may be required under the financing agreements and Applicable Laws, and such insurances as may be necessary or prudent in accordance with Good Industry Practice. The Generator shall also effect and maintain such insurances as may be necessary for mitigating the risks which shall automatically devolve on the Department as a consequence of any act or omission of the Generator during the Term.



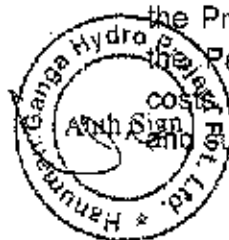
- (b) Insurance Cover, without prejudice to the provisions contained in Clause 16 (1) (b), the Generator shall, during the Operations Period, procure and maintain Insurance Cover including but not limited to the following:
- (i) Loss, damage or destruction of the Project Assets at replacement value;
  - (ii) Comprehensive third-party liability insurance including Injury to or death of personnel of the Department or others caused by the Project;
  - (iii) Liability to third parties for goods or property damage;
  - (iv) Workmen's compensation insurance;
  - (v) Any other insurance that may be necessary to protect the Generator and its employees, including all Force Majeure Events that are insurable at commercially reasonable premiums and not otherwise covered in items (i) to (iv) above.
- (2) The Generator shall maintain and avail all existing communication facilities such as telephones and wireless systems provided at the Project at its own cost and will pay the bills/license fees regularly to avoid disconnection.

#### 17. Disputes and Alternate Resolution:

- (1) Both the Parties herein shall comply with the provisions of the Agreement and discharge their respective obligations. In the event of a disagreement and if the issue is unresolved, a meeting shall be held by designated representatives of the Department and Generator to resolve the issue. In case the issue is still unresolved then the provision of this clause 17 shall apply.
- (2) In the event of any dispute and difference that may arise, with the mutual consent of both the parties, the matter will first be referred to arbitrator for settlement under the provisions of the Indian Arbitration and conciliation Act 1996. The Venue of Arbitration shall be at Gangtok. There shall be an arbitral tribunal comprising three arbitrators, of whom each party shall select one, and the third arbitrator shall be appointed by the two arbitrators so selected, and in the event of disagreement between the two arbitrators, the appointment shall be made in accordance with the Rules
- (3) However if the matter is not arrived at mutual consent to refer the matter to arbitrator, In such event the party shall be at liberty to seek appropriate remedy in appropriate forum as provided under section 89 of the code of Civil Procedure 1908 but aggrieved party does not precluded to seek remedies in civil court bearing appointed jurisdiction with the State of Sikkim.
- (4) Till the arbitration award passed by the arbitral tribunal attains finality, the parties shall continue to perform their obligations under this agreement.

#### 18. Indemnification

- (1) Generator shall indemnify and keep indemnified Department against all losses and claims for death, injuries or damage to any person or any property whatsoever, which may arise out of or in consequence of the generation from the Project and repairs or maintenance of the Project and structures during the Period and also against all claims, demands, proceedings, damages, costs, charges and expenses whatsoever in respect of or in relation thereto, and such liabilities shall include claims/compensations of third party.



### 19. Green Attributes

- (1) The purchase of energy is a negotiated rate, which is not a preferential tariff and since Generator is responsible for the operation, maintenance, insurance, prevention of loss, damage and upkeep of the Projects at its own costs and therefore, Generator is liable to pay taxes, interest, penalty or other sum upon notice of demand and if for reasons, if a refund is receivable from the State Government, Generator shall be entitled to receive such refunds on account of the Project. Subject to approval of the State Government.
- (2) Generator may also apply at its own costs with any competent authorities for any viable gap funding through green asset management as well as sustainable development program pertaining to the project for which Generator shall be fully responsible financially and may receive such benefits without any liabilities of the State Government all the green attributes shall be of Generator.
- (3) The Generator may sell power to the third party if the Department defaults in paying for the power being procured as per Clause 21(4). The benefits receivable by Generator from sale of power to a third party or any other green attribute available to Generator at any time during the Term of the Power Purchase Agreement shall be of the Generator.
- (4) The Department shall provide all required documents for the accreditation of the Generator for the issuance of the Renewable Energy Certificate on account of the sale of Deliverable Energy to the third party.

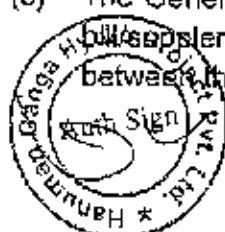
### 20. Deemed Generation Benefit

- (1) Generator shall be eligible for deemed generation benefit for each of the HEP, calculated at the rate of Tariff, in case the power from the Project is available but discharge of power is not available or grid is not available for more than One Thousand (1000) hours in a year.

### 21. Billing, Invoicing, terms of payment and payment security

#### (1) Billing:

- (a) The Department agrees to pay the amount payable under the monthly bill/supplementary bill/invoice raised by the Generator within Thirty (30) days. The said monthly bill/supplementary bill/invoice will be raised as per the Energy Injection Report, provided at Annexure A for each of the HEP.
- (b) From the commencement of supply of power, the Department agree to pay to the Generator the monthly Tariff payments subject to the adjustments as per provisions of this Agreement.
- (c) The Generator shall issue to the Department hard copy of a signed monthly bill/supplementary bill for the immediately preceding month/relevant period between the 5th day and up to the 15th day of the month.



- (d) Each monthly bill shall include all charges as per this Agreement for the Deliverable Energy supplied for the relevant month based on Energy Inspection Report which shall be binding on both the Parties. The monthly bill amount shall be the product of the Deliverable Energy as per Energy Inspection Report and the Applicable Tariff.
- (e) The Department agree to sign the monthly bill/supplementary bill within a period of 15 (fifteen) days from the receipt of the monthly bill/supplementary bill and may present the signed bill to the Generator. If the Department requires any clarification/corrections in the said monthly bill/supplementary bill/invoice, it shall do so within 7 (seven) days of receipt of such monthly bill/supplementary bill/invoice and the Generator will reply within a period of 7 (Seven) days thereafter.
- (f) Such signed monthly bill/supplementary bill/invoice shall be submitted to the scheduled Bank of the Department for release of payment to the Generator within 7 (seven) days of submission of such monthly bill/supplementary bill/invoice to the scheduled Bank by the Generator.

**(2) Late Payment Surcharge:**

In the event of delay in payment of a monthly bill by the Department beyond the Due Date, a Late Payment Surcharge shall be payable by the Department to the Generator at the rate of 0.5 % per month. The Late Payment Surcharge shall be claimed by the Generator through the supplementary bill.

### (3) Delay in Achieving COD

If the generator fail to operate/execute the listed Hydro Electric projects within the stipulated period created by covenant, the State Department reserve the right to forfeit the bank guarantee by the Generator. The maximum allowable period for achieving COD shall be 72 (Seventy Two) calendar months from the date of signing of this agreement. After which this penalty clause 24 (3) shall be applicable.

**(4) Sale of Deliverable Energy to Third Party:**

- (a) In the event the Generator is unable to recover the amount payable by the Department as per monthly bill/supplementary bill through the Letter of Credit and if such monthly bill/supplementary bills or part thereof remains unpaid for a period of 60 (sixty) days from the Due Date, then notwithstanding anything to the contrary contained in this Agreement, the Generator shall give a notice to the Department requesting to pay the outstanding amount within a period of Thirty (30) days. If the Department fails to pay the outstanding amount within a period of thirty (30) days, the Generator shall have the right to sell the whole or part of the Deliverable Energy to any third party.
- (b) Generator has an option to sell the power to the third party within the state or outside the state, and no open access charges till Sikkim periphery shall be payable to the department/any licensee/any other entity of the state.

in case of sale or deliverable energy to the third parties in accordance with the article 21 (4) of this agreement, the department shall, at the request of the generator, be liable for the accreditation from state Nodal agency as



required under regulation 5 of the CERC (Terms and conditions of recognition and issuance of REC for Renewable energy generation, Regulation 2010 (CERC "REC Regulation") within 30 (thirty) days from the date of such request. There shall be no limit on the number of times such accreditation is to be obtained and provided by the department under this agreement. The department through the state nodal agency shall also assist the generator in obtaining the de-accreditation from the Central Agency appointed under CERC REC Regulations.

- (d) Notwithstanding anything contained under this agreement, the parties expressly agree that the generator shall be entitled to appropriate the revenues from such third party sales and generator shall have the following rights :
  - (i) Non supply of power by the generator to the department and, or, sale to the third party as per the article 21(4) (a) due to delay in payment by the department, shall not give the right to the department to cancel/terminate this agreement.
  - (ii) In case of sale of Power to third party by the generator pursuant to Article 21(4)(a) then the free power offered as per article 2 (13) above, may be sold by the generator to the third party and the revenue earned by selling such free power as per article 2.13 above shall be adjusted against the monthly bill(s) outstanding and receivable from the department.
  - (iii) In case of supply to the third party in open access, if there is under injection/ over injection, penalty as prescribed in state DSM regulations will not be applicable and it is deemed approved that no such penalty/additional penalty is leviable.
  - (iv) The generator is allowed to give schedule of energy generation consolidated of all/any of the 7 projects to SLDC for flow of power.
  - (v) The generator shall have an option, at its sole discretion, to commence supplying deliverable energy to the department any time after serving one month notice to department. The generator can avail this option any number of times during term of this agreement

**(5) Disputed Bill**

- (a) If the Department does not dispute a monthly bill/supplementary bill raised by the Generator within 15 days of receipt of such bill, such bill shall be an undisputed and conclusive Bill.
- (b) If the Department disputes the amount payable (partly or fully) under a monthly bill, the Parties shall try to resolve the dispute amicably. If the Parties fail to amicably resolve the dispute within fifteen (15) days of receipt of bill disagreement notice, the matter shall be referred to Dispute resolution in accordance with Article 17 of this Agreement.

**(6) Terms of Payment and payment security**

- (a) Payment for generation from the Project shall be made by Department to Generator, against monthly Billings / Invoices as per Clause 21 based on the Energy Injection Report as per Annexure A, enclosed herewith.



Payment Mechanism. The Department, agree to establish and maintain a Letter of Credit in favour of the Generator on any schedule Bank where it has revenue account, for an amount equivalent to 3 (three) months average

invoice/expected energy to be injected into the grid. Every Invoice/bill shall be countersigned by designated officer of Department and Generator, which shall be submitted to the scheduled Bank for release of payment to the Generator within (Fifteen) 15 days of submission of technically and commercially clear of claims by Generator.

## 22. Rights and Ownership of Property

- (1) The Power Project including its land, civil structure and plant and equipment are the property of State Government and the same is being provided to the Generator on "as is where basis is". In the event, any part of the land or property on such land is not encumbrance free / vacant, then the Generator shall have the right to remove any such illegal encroachment, squatting etc. on the Project land or property on such land. The Department may facilitate in such removal of illegal encroachment of its land in accordance with the Laws for the time being enforced in the state of Sikkim. The Generator shall be allowed to use the Project land as per the Laws for the time being enforced in the State of Sikkim.
- (2) The Project may be handed over to the Generator within Ninety (90) days from the Execution Date. All the existing employees / labourers / contractors, whether temporary / permanent / contractual or any other type, shall cease to work / occupy the Project(s) prior to such handover to the Generator. Any existing contractor(s) of the Department engaged for the purposes of the operations and maintenance, supply of spares etc. for the purposes of the Project(s) shall continue at the sole discretion of the Generator. The Department and such contractor(s) shall have no authority to bind the Generator to retain any such contractor(s).
- (3) **Right of ownership of Power Generated:**  
  
If the Payment to the Generator is clear as per Clause 21 (1), Department shall have the absolute right on the energy generated from the Project(s). However, In case the Letter of Credit as per Clause 21(6)(b) is exhausted and payment of Generator remains unpaid, the Generator will have the rights as per Clause 21(4).
- (4) **Signs and Barriers:**  
The Generator shall install and display warning signs or barriers at the Properties / Project, provided such signs and barriers are reasonable in their content and size and may remove the same upon termination of this Agreement. Provided, however, that upon removing the same, the Generator shall restore the Properties / Project to the condition it was prior to the installation of such signs or barriers.
- (5) **Department's Right of Access to the Properties:**  
The Generator agrees that Department and its authorized representatives shall have the rights to access and inspect and comment upon the Project at all reasonable times necessary for the maintenance and operation of the Project for generation.



### Geological and archaeological finds:

It is expressly agreed that mining, geological or archaeological rights do not form part of the licence granted to the Generator under this Agreement and

the Generator hereby acknowledges that it shall not have any mining rights or interest in the underlying minerals, fossils, antiquities, structures or other remnants or things either of particular geological or archaeological interest and that such rights, interest and property on or under the Station Premises shall vest in and belong to the Department or the concerned Government Instrumentality. The Generator shall take all reasonable precautions to prevent its workmen or any other person from removing or damaging such interest or property and shall inform the Department forthwith of the discovery thereof and comply with such instructions as the Department.

**23. Events of Default**

**(1) Events of Default Defined**

The following shall be "Events of Default" under this Agreement and the terms of "Event of Default" or "Default" shall mean, whenever they are used in this Agreement, anyone or more of the following events:

**(a) Events of Default of the Generator**

The occurrence and the continuation of any of the following events, unless any such event occurs as a result of a Force Majeure Event obligations under this Agreement, shall constitute the Event of Default on the part of defaulting Generator:

- (i) Unable to rectify the defaults pursuant to various Clauses of this Agreement;
- (ii) Becoming insolvent and an order has been passed for liquidation after the corporate insolvency resolution process under Insolvency and Bankruptcy Code, 2016, as amended;
- (iii) Admitting in writing its inability, to pay its debts as they mature.

**(b) Procedure for bases of Event of Default:**

- (i) Upon the occurrence of an Event of Default as set out in Clause 23(1)(a) above, the affected Party may deliver a notice to the defaulting Party in writing which shall specify in reasonable detail the Event of Default giving rise such notice, and calling upon the defaulting Party to remedy the same within a period of sixty (60) days ("Defaulting Notice").
- (ii) In case of Event of Default as set out in Clause 23(1)(a) above, before the expiry of sixty (60) days, the defaulting Party may request for further extension on reasonable grounds and the affected Party shall provide such extension for curing the default.
- (iii) At the expiry of sixty (60) days from the delivery of the Default Notice or such extended time period as per Clause 23(1)(b)(ii) above and unless the Parties have agreed otherwise, or the Event of Default giving rise to the Default Notice has been remedied, the affected Party may refer as per Clause 17 of this Agreement.
- (iv) Till the parties come to a solution, the Parties shall continue to perform their obligations under this Agreement and the Generator shall have the right to sell Deliverable Energy to any third party within or outside the state as mentioned Clause 21(4) of this Agreement, and no open access charges till Sikkim peninsula shall be payable to the Department/any licensee/any other entity of the State.



*[Handwritten signature]*  
 POKHARA  
 07/08/2018



## 24. Force Majeure

### (1) Force Majeure Event

- (a) In this Agreement, "Force Majeure" means occurrence of an event, which prevents the Party from performing its obligations under this Agreement and which act or event:
  - (i) is beyond the reasonable control of and not arising out of the fault of the Affected Party;
  - (ii) the Affected Party has been unable to prevent by the exercise of due diligence and reasonable efforts, skill and care, including through expenditure of reasonable sum of money; and
  - (iii) has a materially adverse effect on the Projects

### (2) Force Majeure Events

The Force Majeure Events shall mean one or more of the following acts or events;

- (a) Acts of God or events beyond the reasonable control of the affected Party, which could not reasonably have been expected to occur such as extreme adverse weather, pandemic, epidemic such as plague/COVID-19 etc., lightning, heavy rains, cyclones, tempest, whirlwind, landslides, storms, floods, volcanic eruptions or fire (to the extent originating from a source external to the site or not designed for in construction works);
- (b) Radioactive contamination or ionizing radiation;
- (c) An act of war (whether declared or undeclared), invasion, armed conflict or act of foreign enemy, unexpected call up of armed forces, blockade, embargo, blockade, rebellion, riot, religious strife, bombs or civil commotion, sabotage, terrorism;
- (d) Any judgment or order of any court of competent jurisdiction or statutory authority in India made against Generator in any proceedings for the reason failure of Generator to comply with any Applicable Law or Clearances or on account of breach thereof, or of any contract, or enforcement of this Agreement or exercise of any of its rights under this Agreement by;
- (e) Any other event or circumstance of a nature or an act of God analogous to the foregoing.
- (f) Strikes, work to rules, go-slows which are widespread, State-wide and are of political nature;
- (g) Unfeasibility/inability to access project site during construction period of projects due to restrictions placed by the state government or otherwise, disturbances caused due to encroachers etc.





**(3) Notification obligations**

- (a) Except as otherwise expressly provided in the Agreement, all notices or other communications which are required or permitted hereunder shall be in writing and considered as adequately served if delivered personally (under acknowledgement) or sent by registered or certified mail, email, facsimile, telex or telegram addressed as follows

Principal Chief Engineer cum Secretary Power Department Sonam Tshering Marg Gangtok Sikkim-737101  Email: secypower.sikkim@gmail.com	Director Hanuman Ganga Hydroprojects Private Limited Flat No. 1103, 11th Floor, Surya Kiran Building, 19-Kasturba Gandhi Marg NEW DELHI -110001  Email: hanumanganga@kundanenergy.com
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**(4) Obligations of Parties in case of Force Majeure event**

- (a) All notices or communications given by registered or certified mail, email, facsimile, telex or telegram shall be confirmed by delivering confirmation letter by hand or by registered mail to the respective address or by return email. All notices shall be deemed delivered upon receipt.
- (i) The Parties heron shall co-operate and discuss in good faith and will develop the proposal for remedial measures and reasonable alternative measures to remove / remedy Force Majeure event to enable the Performance of the effected Party. Provided however that no Party shall be required under this provision to settle strike or other labour dispute.
- (ii) Upon the occurrence and during the subsistence of any Force Majeure event, none of the Parties shall be relieved of their liabilities / obligations.

**25. Obligations of the Department**

- (1) The Department agreed to, at its own cost and expense, undertake, comply with and perform all its obligations set out in this Agreement or arising hereunder.
- (2) The Department agrees to provide support to the Generator and undertakes to observe, comply with and perform, subject to and in accordance with the provisions of this Agreement and Applicable Laws, the following:
- (a) upon written request from the Generator, and subject to the Generator complying with Applicable Laws, provide reasonable support and assistance to the Generator in procuring the Applicable Permits, including environmental or forest clearances, required from any Government Instrumentality for implementation and operation of the Project;
- (b) upon written request from the Generator, provide reasonable assistance to the Generator in obtaining access to all necessary infrastructure facilities,





- (v) Ensure and procure that its Contractors comply with all Applicable Permits and Applicable Laws in the performance by them of any of the Generator obligations under this Agreement;
- (vi) Always act in a manner consistent with the provisions of this Agreement and not cause or fail to do any act, deed or thing, whether intentionally or otherwise, which may in any manner be violative of any of the provisions of this Agreement or Applicable Laws;
- (vii) procure that all equipment and facilities comprising the Power Station are operated and maintained in accordance with the Specifications and Standards, Maintenance Requirements, Safety Requirements and Good Industry Practice;
- (viii) Support, cooperate with and facilitate the Department in the implementation of this Agreement;
- (ix) Comply with the directions of the Commission issued from time to time under the Act.

**(2) Obligations relating to taxes**

The Generator shall pay, at all times during the subsistence of this Agreement, all Taxes, levies, duties, cesses and all other statutory charges payable in respect of the Power Station. Any additional Taxes and duties shall be dealt with as per the Change in Law provision under Clause 27 of this Agreement or imposed by the state government from time to time as the case may be.

**27. Change in Law**

**(1) Definition**

"Change in Law" means the occurrence of any of the following events in India, subsequent to the date of the RFP, and such event(s) has/have an impact on the Projects or on any of the rights and/or obligations of the Parties under any of the agreements:

- (a) the modification, amendment, variation, alteration or repeal of any existing Applicable Law;
- (b) the enactment of any new Applicable Law or the imposition, adoption or issuance of any new Applicable Law by any Government Authority;
- (c) changes in the interpretation, application or enforcement of any Applicable Law by any Government Authority;
- (d) the introduction of a requirement for the Generator to obtain any new Applicable Permit, or any modification to the prevailing conditions prescribed for obtaining an Applicable Permit not owing to any default of the Generator; or
- (e) the modification, amendment, variation, introduction, enactment or repeal of any Tax, resulting in a change in the incidence of Tax liability.

*It is clarified that for the purposes of Change in Law, Taxes shall not include taxes on corporate income, any withholding tax on dividends distributed to the shareholders of the Generator or income tax.*



PCF, Govt. of Odisha  
Power Department  
Govt. of Odisha, Bhubaneswar

**(2) Relief for Change in Law**

- (a) In case Change in Law on account of Clause 27 (1) (a) to (d) above results in the Generator's costs directly attributable to the Project being decreased or increased, during the construction period, or by one percent (1%) of the estimated revenue from the electricity for the Contract Year for which such cost becomes applicable or more, during operation period, the Tariff payment to the Generator shall be appropriately increased or decreased with due approval of Sikkim State Electricity Regulatory Commission and State Government.
- (b) In case of Change in Law on account of Clause 27 (1) (e) above, the Generator shall be allowed an increase / decrease in Tariff of 1 paise / unit for every increase / decrease of Rs. 2 Lakh per MW, pro-rated for amount less than Rs. 2 Lakh per MW, in the Project Cost incurred up to the Commercial Operation Date (COD) upon submission of proof of payment made by the Generator to the concerned Authority and with due approval of Sikkim State Electricity Regulatory Commission and State Government.
- (c) The Department or the Generator, as the case may be, shall provide the other Party with a certificate stating that the adjustment in the Tariff payment is directly as a result of the Change in Law and shall provide supporting documents to substantiate the same and such certificate shall correctly reflect the increase or decrease in costs.
- (d) The revised tariff shall be effective from the date of such Change in Law as approved by Sikkim State Electricity Regulatory Commission, the Parties hereto have caused this Agreement to be executed by their fully authorised officers, and copies delivered to each Party, as of the day and year first above stated.

**28. Assignment and Charges**

**(1) Assignments**

- (a) This Agreement shall be binding upon, and to the benefit of the Parties and their respective successors and permitted assigns. This Agreement shall not be assigned by any Party other than by mutual consent between the Parties to be evidenced in writing.
- (b) Notwithstanding anything contained in clause 28 (1) (a) above, the Generator shall, with written intimation to the Department, create an Encumbrance over the Project(s) and / or transfer or assign its rights, benefits and interests in this Agreement in favour of banks or financial institutions providing financing for the Project(s), provided that, the Generator shall not be released from liability hereunder as a result of any such Encumbrance / assignment in favour of the lender(s) with the prior approval of the state government,

**(2) Permitted Charges**

Generator shall not create or permit to subsist any encumbrance over all or any of its rights and benefits under this Agreement, other than as set forth in Clause



*[Signature]*  
 PCB-Gen-Secretary,  
 Govt of Sikkim  
 Gangtokh

## 29. Disclaimer

- (1) The Generator acknowledges that prior to the execution of this Agreement, the Generator has, after a complete and careful examination, made an independent evaluation of the, Request for Proposals, Scope of the Project, specifications and standards, site, existing structures, local conditions, physical qualities of ground, subsoil and geology, and any information provided by the Department or obtained, procured or gathered otherwise, and has determined to its satisfaction the accuracy or otherwise thereof and the nature and extent of difficulties, risks and hazards as are likely to arise or may be faced by it in the course of performance of its obligations hereunder. The Department makes no representation whatsoever, express, implicit or otherwise, regarding the accuracy, adequacy, correctness, reliability and/or completeness of any assessment, assumption, statement or information provided by it and the Generator confirms that it shall have no claim whatsoever against the Department in this regard.
- (2) The Generator acknowledges and hereby accepts the risk of inadequacy, mistake or error in or relating to any of the matters set forth in Clause 29 (1) above and hereby acknowledges and agrees that the Department shall not be liable for the same in any manner whatsoever to the Generator, and its Associates or any person claiming through or under any of them.
- (3) The Parties agree that any unintentional mistake or human error in or relating to any of the matters set forth in Clause 29 (1) above shall not vitiate this Agreement, or render it voidable.
- (4) In the event that either Party becomes aware of any mistake or error relating to any of the matters set forth in Clause 29 (1) above, that Party shall immediately notify the other Party, specifying the mistake or error. Provided, however, that a failure on part of the Department to give any notice pursuant to this Clause 29 (4) shall not prejudice the disclaimer of the Department contained in Clause 29 (1) and shall not in any manner shift to the Department any risks assumed by the Generator pursuant to this Agreement.
- (5) Except as otherwise provided in this Agreement, all risks relating to the Project shall be borne by the Generator and the Department shall not be liable in any manner for such risks or the consequences thereof.

## 30. Tariff

- (1) The Tariff for the Projects shall be the negotiated levelised tariff of ₹ 3.91/kWh ("Tariff") for the Term of this Agreement. This Tariff has been arrived at, based on the Generic Tariff for Small Hydropower Projects for the North Eastern States for Financial Year 2020-2021 (₹ 5.16/kWh for HEPs below 5 MW and ₹ 4.72/kWh for HEPs between 5 MW to 25 MW) issued by the Central Electricity Regulatory Commission ("CERC") through their Order dated 21st July 2020 in Petition No. 13/St/2020 (Suo-Motu).
- (2) Tariff shall be revised on achieving Commercial Operation Date (COD) in accordance with Clause (6) of CERC, RE tariff regulations 2020.

**Explanation:** for units achieving COD by March 31<sup>st</sup> 2022 the tariff shall be ₹ 3.91/kWh for the entire term as in Clause 35 of this agreement, for units achieving COD after March 31<sup>st</sup> 2022 tariff shall be paisa 81 (eighty one) less



than CERC rate for RE power for units with generating capacity 5 MW to 25 MW and Paisa 125 (one hundred and twenty five) less than CERC rate for RE power for units with generating capacity less than 5 MW. Tariff thus achieved shall be for the entire term as in Clause 35 of this agreement

**Example:** if COD is achieved in 2025 and CERC rate is ₹ 7 /kWh for a unit with generating capacity less than 5 MW the tariff shall be  $(7 - 1.25 = ₹ 5.75)$  similarly for unit with generating capacity 5 MW to 25 MW tariff shall be  $(7 - 0.81) = ₹ 6.19$  if CERC rate is ₹ 7 /kWh

- (3) Any change(s) to the terms of this Agreement, as agreed between the Department and Generator, approved by the Sikkim State Electricity Regulatory Commission requiring a change in the agreed and negotiated Tariff or any revision thereof pursuant to Clause 30(1), Generator will have the option to propose a modified tariff
- (4) The Parties agree that the Tariff provided at Clause 30 (1) has been negotiated considering the incentives / reimbursements / benefits under applicable schemes of the State / Central Government relating to development of small hydropower projects and shall not undergo any change basis such incentives / reimbursements / benefits being availed by the Generator.
- (5) The Parties agree that the Tariff for, **Augmented Capacity** as per Article 2 (2) read along with Article 2 (13) (b), if the Generator wants an increase in tariff relating to CERC generic tariff, then at the request of the Generator the Department shall consider the request of the Generator on merit.

### 31. Back Handing over of HEPs by Generator to Department

- (1) From commencement to completion of this Agreement as a whole i.e., up to the time the Power Project are back handed over to the Department or taken over by Department, the Generator shall take full responsibility for the care thereof and for taking precautions to prevent loss or damage.
- (2) Department's plant and equipment, materials, civil structures etc. shall always be kept in good working order and condition in every respect to the highest accepted industry standard. During Handing over the systems should be in working order and all liabilities cleared

### 32. Performance Security

- (1) Deposit.
- (a) The Generator shall, for the performance of its obligations hereunder, provide to the Department no later than 60 (sixty) days from the date of this Agreement, an irrevocable and unconditional guarantee from a Bank for a sum Total equivalent to Rs: 5.0/- Crores (Rupees Five Crores). The Generator may provide a Performance Security hereunder for a period equivalent to 60 days more than the proposed construction period mutually agreed, and shall, no later than 60 (sixty) days prior to the expiry thereof, substitute it by a like Performance Security. The Breakup of Performance Security for each project is as follows.



*[Signature]*  
 PGE-Gen-Secretary  
 Power & P&T  
 Govt. of Sikkim

Sl	Name	Capacity MW	Performance Security Amount Rs	Performance Security Validity in Months
1	Rimbi Stage I HEP	0.6	15,00,000/-	36 months
2	Kalez Khola HEP	2.0	40,00,000/-	36 months
3	Jali Power House HEP	2.1	40,00,000/-	36 months
4	Rongnichu Stage II HEP	2.5	45,00,000/-	36 months
5	Lower Lagyap HEP	12.0	2,30,00,000	36 months
6	Meyong Chu HEP	4.0	75,00,000	36 months
7	Rabom Chu HEP	3.0	55,00,000	36 months

Performance Security for each HEP named above has to be provided separately as above. A sum Total equivalent to Rs.(Five) 5.0/- Crores unconditional guarantee from a Bank.

- (b) Until such time the Performance Security is provided by the Generator pursuant hereto and the same comes into effect, the Bid Security shall remain in force and effect, and upon such provision of the Performance Security pursuant hereto, the Department shall release the Bid Security to the Generator.
- (c) Notwithstanding anything to the contrary contained in this Agreement, in the event Performance Security is not provided by the Generator within a period of 60 (sixty) days from the date of this Agreement, the Department may encash the Bid Security and appropriate the proceeds thereof as Damages, and thereupon all rights, privileges, claims and entitlements of the Generator under or arising out of this Agreement shall be deemed to have been waived by, and to have ceased and this Agreement, shall be deemed to have been terminated.

**(2) Release of Performance Security**

- (a) The Performance Security shall remain in force and effect until expiry of 3 (three) months after Commercial Operation Date, Project by project Basis and shall be released upon the Performance Guarantee taking effect in accordance with the provisions of Clause 32 (3) Until such time the Performance Guarantee comes into effect, the Performance Security shall remain in force and effect, and upon the Performance Guarantee coming into effect pursuant hereto, the Department shall release the Performance Security to the Generator.

**(3) Performance Guarantee**

- (a) The Generator shall, for the performance of its obligations hereunder during the operation period, be deemed to provide to the Department upon occurrence of COD, an irrevocable and unconditional guarantee pursuant to the provisions of this Article 32 (3), for each of the HEP, Performance Guarantee for a sum approximately equivalent to the amount due and payable by the Department to the Generator for injection of Deliverable Energy in respect of a period of 15 (Fifteen) days from the respective HEP, in accordance with the provisions of this Agreement. The Performance Guarantee shall constitute the first and exclusive charge on all amounts due and payable by the Generator to the Department, and the Department shall be entitled to enforce the Performance Guarantee by making a deduction from the amounts due and payable to it by the Generator.





The Parties agree that no amounts shall be earmarked, frozen or withheld for securing payment of any potential Damages that may fall due at a subsequent date, and only the amounts which shall have become due and payable by the Generator upon occurrence of Generator's Event of Default shall be liable to appropriation hereunder. The Breakup of Performance Guarantee for each of the Project is as follows:

Sl	Name	Capacity MW	Performance Guarantee Amount Rs @60%PLF.
1	Rimbi Stage I HEP	0.6	4,46,000
2	Kalez Khola HEP	2.0	14,87,000
3	Jali Power House HEP	2.1	15,61,000
4	Rongnichu Stage II HEP	2.5	18,59,000
5	Lower Lagyap HEP	12.0	89,19,000
6	Meyang Chu HEP	4.0	29,73,000
7	Rabom Chu HEP	3.0	22,30,000

- (b) The Department shall provide advance notice to the Generator before invocation of the Performance Guarantee informing about the reasons for invocation and shall allow the Generator to cure such breach with the period of sixty (60) days from the date of issue of such notice. If the Generator does not cure such breach as required under this Agreement, within a period of sixty (60) days from the date of issue of such notice or within such extended period as requested by Generator, the Department may encash the Performance Guarantee up to the amount due and payable by the Generator.

### 33. Construction Period.

- (1) The Construction period shall be as per the project plan extendable up to 36 (Thirty Six) Months, without notice, from date of handing over of the project.
- (2) The Construction period can be further extended for a period of 12 (Twelve) Months for valid Non Force Majeure causes, extension will be granted on request and after verification of facts.
- (3) An equivalent time will be added to the Construction period if delay is caused due to Force Majeure causes. That is, if one week is lost due to force majeure causes one week will be added to the Construction period. Read along with Clause 24 - Force Majeure
- (4) If the Generator after detailed investigation of the projects and after having invested money and manpower and after trying its best, is not able to revive one or more projects, within the initially agreed construction period. Then on request of the Technical Partner with justifications, The State Government shall remove of the said HEP/s from this agreement without any liability to the Technical Partner
- (5) During the Term of this agreement and after signing of this agreement, The Department on request of the Technical Partner shall help the Technical Partner in providing protection to the HEPs. The owner (As per Clause 22 (1) of this agreement) will help provide protection to all its assets.



PCE  
PCE  
PCE



### 34. MISCELLANEOUS

#### (1) Governing law and jurisdiction

This Agreement shall be construed and interpreted in accordance with and governed by the laws for the time being enforced in the State of Sikkim, and the courts in the State of Sikkim shall have exclusive jurisdiction over matters arising out of or relating to this Agreement.

#### (2) Depreciation

For the purposes of depreciation under Applicable Laws, the property representing the capital investment made by the Generator in the Project Assets shall be deemed to be acquired and owned by the Generator. For the avoidance of doubt, the Department shall not in any manner be liable in respect of any claims for depreciation to be made by the Generator under Applicable Laws.

#### (3) Waiver

Waiver, including partial or conditional waiver, by either Party of any default by the other Party in the observance and performance of any provision of or obligations under this Agreement:

- (a) Shall not operate or be construed as a waiver of any other or subsequent default hereto or of other provisions of or obligations under this Agreement;
- (b) Shall not be effective unless it is in writing and executed by a duly authorised representative of the Party; and
- (c) Shall not affect the validity or enforceability of this Agreement in any manner.

Neither the failure by either Party to insist on any occasion upon the performance of the terms, conditions and provisions of this Agreement or any obligation thereunder nor time or other indulgence granted by a Party to the other Party shall be treated or deemed as waiver of such breach or acceptance of any variation or the relinquishment of any such right hereunder.

#### (4) Entire Agreement

This Agreement and the Schedules together constitute a complete and exclusive statement of the terms of the agreement between the Parties on the subject hereof, and no amendment or modification hereto shall be valid and effective unless such modification or amendment is agreed to in writing by the Parties and duly executed by persons especially empowered in this behalf by the respective Parties. All prior written or oral understandings, offers or other communications of every kind pertaining to this Agreement are abrogated and withdrawn. For the avoidance of doubt, the Parties hereto agree that any obligations of the Generator arising from the Request for Qualification or Request for Proposals, as the case may be, shall be deemed to form part of this Agreement and treated as such.

#### (5) Severability

If for any reason whatsoever, any provision of this Agreement is or becomes invalid, illegal or unenforceable or is declared by any court of competent jurisdiction or any other instrumentality to be invalid, illegal or unenforceable, the validity, legality or enforceability of the remaining provisions shall not be affected in any manner, and the Parties will negotiate in good faith with a view to agreeing to one or more provisions which may be substituted for such



invalid, unenforceable or illegal provisions, as nearly as is practicable to such invalid, illegal or unenforceable provision.

**(6) No partnership**

This Agreement shall not be interpreted or construed to create an association, joint venture or partnership between the Parties, or to impose any partnership obligation or liability upon either Party, and neither Party shall have any right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, the other Party.

**(7) Successors and assigns**

This Agreement shall be binding upon, and inure to the benefit of the Parties and their respective successors and permitted assigns.

**(8) Notices**

Any notice or other communication to be given by any Party to the other Party under or in connection with the matters contemplated by this Agreement shall be in writing.

**(9) Language**

All notices required to be given by one Party to the other Party and all other communications, Documentation and proceedings which are in any way relevant to this Agreement shall be in writing and in English language.

**(10) Counterparts**

This Agreement may be executed in two or more counterparts, each of which, when executed and delivered, shall constitute an original of this Agreement.

**35. Term of Agreement**

**(1) Term**

- (a) Subject to early termination of this Agreement in accordance with its terms, this Agreement shall remain in full force and effect from the date of this Agreement till thirty-five (35) years from the respective Commercial Operation Date of the Projects, unless mutually extended in accordance with the terms of this Agreement of the HEPs ("Term")

**(2) Extension of Term**

- (a) Notwithstanding anything to the contrary contained in this Agreement, the Parties agree that upon expiry of the Term, if the Generator performs all the obligations under this Agreement, the Term of all of the Projects may be extended on mutual consent for an equivalent period, subject to the prior approval of the State Government



*[Signature]*  
PCH-Gen-Secretary  
Power India Ltd.



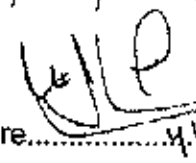
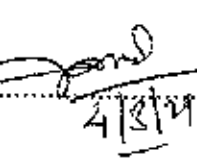
(b) In the event of the exhaustion of Term of this Agreement, it is agreed that the Technical Partner shall have the first right of refusal to Renovate or Operate or Maintain of the Hydro Power Projects under this agreement.

(c) For the avoidance of doubt, the Parties agree that in the event of an extension hereunder, a fresh agreement shall be entered into, in a set of terms and conditions as agreed by the parties and agreed by the State Government.

(3) **Power Supply Terms**

The State Government agree to pay the Tariff for the Deliverable Energy delivered at the Interconnection Point excluding statutory taxes and duties if applicable, which shall be indicated on the invoice raised on monthly basis to the Department in accordance with this Agreement

THIS AGREEMENT HAS BEEN PREPARED IN DUPLICATE IN THE ENGLISH LANGUAGE AND IS SIGNED ON THIS 4<sup>th</sup> day of March 2021 BY THE AUTHORIZED REPRESENTATIVES OF THE PARTIES.

For and on behalf of: Hanuman Ganga Hydroprojects Private Limited	Principal Chief Engineer Cum Secretary to the Government of Sikkim In the Power Department. For and on behalf of: The Governor of Sikkim
	
Authorized Signatory Name: <u>V K BHARUNAVA</u> Designation: <u>PROJECT HEAD</u> Dated: <u>4/3/2021</u>	Authorized Signatory Name: <u>Phigu Tsering Bhutia</u> Designation: <u>PCE Cum Secretary</u> Dated: <u>04/03/2021</u>
Witnessed By:  Name: <u>Yogendra Sharma (PCE Mechanical)</u>	Signature:  <u>4/3/21</u>
Name: <u>Tsering Tshering Bhutia</u>	Signature:  <u>4/3/21</u>
Dated: <u>4<sup>th</sup> March 2021</u> Place: <u>Gangtok East Sikkim</u>	

**Annexure A**  
**ENERGY INJECTION REPORT**

Connected to Grid at:

DETAILS:

a. Energy Injection Period:	
b. Date of Energy Injection Report:	
c. Quantum of Energy sold under negotiated Tariff:	
d. Opening Balance:	
e. Total Quantity of Energy Injected (MWh) into the Grid:	
i. Total Energy Generated: MWh	
ii. Auxiliary Consumption: MWh	
f. Quantum of Energy eligible for REC [(d+e) - c] (MWh):	
g. Quantum of Energy (MWh) for which REC is requested:	
h. Quantum of Balance Energy (MWh) eligible for REC [f - g]:	

**MONTHLY GENERATION REPORT**

HEP:	
Meter Number:	
Meter Reading Initial:	
Meter Reading final:	
Unit Advanced:	
Total Energy generated in kWh	
Auxiliary Consumption in kWh	
Net Energy injected to the grid in kWh	

DAILY GENERATION and AUXILIARY CONSUMPTION REPORT HEP:

DATE	MWh Generated	TOTAL UNIT ADVANCED [MWh]	AUXILIARY METER READING [kWh]

Total Energy Generated in kWh =

Auxiliary Consumption in kWh = (MF=10)

Net Energy injected to the grid in kWh =



*[Signature]*  
PCE (M)



**Power Department  
Government of Sikkim**

**Expression Of Interest  
and  
Request for Proposal**

For selection of Technical Partner for implementation of  
"RENOVATE, OPERATE, MAINTAIN AND TRANSFER" (ROMT) of  
Seven Hydro Electric Power Projects in the State of Sikkim

#### Disclaimer

The information contained in this document is confidential in nature. The bidders shall not share this information with any other party not connected with responding to this Request for Proposal (RFP). The information contained in this RFP or subsequently provided to Bidder(s) whether verbally or in writing by or on behalf of Power Department Government of Sikkim Gangtok shall be subject to the terms and conditions set out in this RFP and any other terms and conditions subject to when such Information is provided.

This RFP is not an agreement and is not an offer or invitation by Power Department to any party other than the one that qualifies to submit the Bid. The purpose of this RFP is to provide information to the potential bidders to assist them in responding to this RFP. Though this RFP has been prepared with sufficient care to provide all required information to the potential bidders, they may need more information than what has been provided. In such cases, the potential bidder is solely responsible to seek the information required from Power Department Government of Sikkim Gangtok. Power Department Government of Sikkim Gangtok reserves the right to provide such additional information at its sole discretion.

Power Department Government of Sikkim Gangtok makes no representation or warranty and shall incur no liability under any law, statute, rules or regulations on any claim the potential bidder may make in case of failure to understand the requirement and respond to the RFP. Power Department may, in its absolute discretion, but without being under any obligation to do so, update, amend or supplement the information in This RFP anytime before the final bid submission.



**POWER DEPARTMENT  
GOVERNMENT OF SIKKIM**

**NOTICE INVITING EXPRESSION OF INTEREST and REQUEST FOR PROPOSAL**

Reference No: secy/power/GOS/2019/317/002

Dated: 26/08/2020

1. The Power Department has received approval for outsourcing of 7 (seven) Hydro electric Power Projects under its charge
2. The Power Department now invites Expression of Interest and Request for Proposal in 2 parts; For selection of "Technical Partner" for "RENOVATE, OPERATE, MAINTAIN AND TRANSFER" (ROMT) of Seven Hydro Electric Power Projects in the State of Sikkim  
 Part 1: Pre-Qualification Bid  
 Part 2: Technical Bid  
 Bids must be valid for a period of 180 days, from the last date of submission of bids.
3. Interested eligible Bidders may obtain any information from Principal Chief Engineer (Mechanical), Power Department, Gangtok from 11 AM to 2 PM during Working Days. From Date. 16/09/2020 to 23/09/2020.  
 Email pce\_mech@outlook.com. Phone: 8918882643.
4. Bidding document can be viewed and downloaded directly from the website <https://power.sikkim.gov.in> From Date. 16/09/2020 to 23/09/2020  
 Downloaded bid documents will have to be submitted along with Bank Demand Draft of Rs 50,000/-
5. The submission and opening of bids will be through hard copies only.
6. The Bids must be submitted on or before 1.00 PM on 07/10/2020 at the address given below. Late or incomplete bids will be rejected. The Bids will be opened in the presence of the Bidder or their authorized representatives who choose to attend at the address given below at 2.00 PM on 07/10/2020.

Address : Office of Principal Chief Engineer (I),  
 Power Department  
 Sonam Tsering Marg ( Kazi Road)  
 Gangtok 737101 East Sikkim.

**Important :**

Commencement of sale of RFP Document:	16/09/2020 11 Am
End of sale of RFP Document :	23/09/2020 2 Pm
Last Date and Time of submission of Bid	07/10/2020 1 Pm
Cost of RFP Document, payable by way of Bank Demand Draft. Drawn in favor of Director Finance and Accounts, Power Department, Gangtok. Payable at Gangtok	Rs 50,000/-

PCE (Mechanical)  
 Power Department

## Important Information

<b>Request for Proposal (RFP) Document for for outsourcing of 7 (seven) Hydro electric Power Projects of the Power Department, Government of Sikkim</b>	
Reference No:	Power Department/
Dated:	
Mode of Submission:	Hard Copies at Power Department Office of Principal Chief Engineer (II),
Tendering authority :	PCE cum Secretary (Power) Power Department, Government of Sikkim, Gangtok
Commencement of sale of tender Document:	16/09/2020 11 AM
End of sale of tender Document :	23/09/2020 2 PM
Date and Time of Pre Bid Meeting:	1/10/2020 11 AM
Date and Time of submission of Bid	
Hard Copy of the Bid Start:	07/10/2020 11 AM
End Date and Time:	07/10/2020 1 PM
Date and Time of Bid Opening:	07/10/2020 2 PM
Cost of RFP Document:	Rs. 50,000/-

## BIDDER INFORMATION

Name of Bidder Firm:	
Authorized Bid Signatory:	
Address for Correspondence and Contact Details:	

## Acceptor CONTACT DETAIL

Tender In-charge:	PCE Cum Chief Secretary (Power) Power Department Sonam Tsering Marg (Kazi Road) Gangtok Pin- 737101 East Sikkim.
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### CONTENTS OF THE RFP DOCUMENT

This document contains the following information that may be useful to anyone wishing to submit a proposal:

- (a) General information on the bidding process.
- (b) Procedure and Information regarding Bid Evaluation.
- (c) Templates for Bid Submission.

#### Abbreviations.

CEA: Central Electricity Authority of India

SERC: State Electricity Regulatory Commission

CERC: Central Electricity Regulatory Commission

ERPC: Eastern Regional Power Committee

EPC: Engineering, Procurement and Construction

O&M: Operations and Maintenance

COD: Commercial Operation Date



## INSTRUCTION TO BIDDERS

### 1.1 SCOPE OF BID

The Power Department Government of Sikkim invites bids for **"RENOVATE, OPERATE, MAINTAIN AND TRANSFER"** (ROMT) of 7 (seven) Hydro electric Power Projects as described in this Bidding Document. The project is offered on **"As is Where is basis"**. The Projects shall be developed on **"RENOVATE, OPERATE, MAINTAIN AND TRANSFER"** (ROMT) basis. The Government of Sikkim will not make any investment of any kind in the projects.

Note:

- (a) An incomplete and/or ambiguous and/or conditional and/or late bid is liable to be ignored/ summarily rejected.
- (b) The bidder must attest with seal the original bid document as an acceptance of the BID terms and conditions and submit the same along with the response. In case of noncompliance the bid is liable to be ignored/ summarily rejected.
- (c) The submission and opening of bids will be through hard copies. Bid document can be viewed and downloaded directly from the website <https://power.sikkim.gov.in/>
- (d) Bidders are advised to study this BID document carefully before submitting their proposals in response to the Notice. Submission of a proposal in response to this notice shall be deemed to have been done after careful study and examination of this document with full understanding of its terms, conditions and implications.

### 1.2 INSTRUCTIONS FOR BID SUBMISSION

#### 1.2.1 PREPARATION OF BID DOCUMENTS

- a) Intending Bidder should take into account any corrigendum published on the tender document before submitting their bids.
- b) Please go through the advertisement and the **BID** document carefully to understand the documents required to be submitted as part of the bid. Please note the number of covers in which the bid documents have to be submitted, the number of documents - including the names and content of each of the document that need to be submitted. Any deviations from these may lead to rejection of the bid.

#### 1.2.2 SUBMISSION OF BIDS

- a) Intending Bidder should arrive well in advance for bid submission so that he/she can submit the bid in time that is. Within the prescribed submission time.



- b) Intending Bidder should prepare the Bid Security/EMD (Earnest Money Deposit) of Rs 5/-(Five) Crores as a Fixed Deposit Receipt (FDR), in the Name of The PCE Cum Secretary Power Department Government of Sikkim. The original should be given in person to the Tender Committee, latest by the last date of bid submission. The details of the FDR physically deposited, should tally with copies if any.

### 1.2.3 ASSISTANCE TO BIDDER

Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority

Email: pce\_mech@outlook.com

### 1.3 FRAUD AND CORRUPTION

- (a) It is the Power Department's policy to require Bidders, Contractors, Suppliers and Consultants to observe the highest standard of ethics during the procurement and execution of such contracts. In pursuit of this policy, the Power Department defines, for the purposes of this provision, the terms set forth below as follows:
- (i) "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value to influence the action of a public official in the procurement process or in contract execution; and
  - (ii) "fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the Department, and includes collusive practices among Bidders (prior to or after bid submission) designed to establish bid prices at artificial, noncompetitive levels and to deprive the Department of the benefits of free and open competition;
- (b) The Power Department will reject a proposal for award if it determines that the Bidder recommended for award has engaged in corrupt or fraudulent practices in competing for the Contract.
- (c) The Power Department will declare a firm ineligible, either indefinitely or for a stated period of time, to be awarded a contract if it at any time determines that the firm has engaged in corrupt or fraudulent practices in competing for, or in executing, a contract.
- (d) By signing the Bid Form, the Bidder represents that it either is the owner of the Intellectual Property Rights in the hardware, software or materials offered, or that it has proper authorization and/or license to offer them from the owner of such rights. Willful misrepresentation of these facts shall be considered a fraudulent practice.

#### 1.4 ELIGIBILITY CRITERIA PART A

The following are the conditions, which are to be necessarily fulfilled, to be eligible for technical evaluation of the proposed solution. Only those interested bidders who satisfy the following eligibility criteria should respond to this RFP:

- (a) The Bidders should be Indian Individual/Company(s) registered under the Indian Companies Act-1956, Companies Act-2013 or Sikkim Companies Act.
- (b) Bidder should submit the documents as per Pre Qualification, Technical Bid Compliance Sheet provided in this RFP document.
- (c) A bidding firm should be a corporation/company or consortium of companies/ corporations. In case of a consortium the same shall be formed under a duly stamped consortium agreement. In the event of a consortium, one of the partners shall be designated as a "Prime Bidder". The Prime bidder and consortium partners must be Hydro Electric Power Developers.
- (d) The bidders who want to form consortium for this project, it is to be noted that only two consortium members including prime bidder is allowed. The bidder has to define their roles and responsibilities for smooth functioning of the project. An original copy of the agreement between consortium members should be submitted. However, Power Department will communicate only with the "Prime Bidder". The Prime bidder and consortium partner must be Hydro Electric Power Developers
- (e) A bidding entity cannot be a member of any other consortium that is also participating in this bidding process, otherwise both the bids shall be disqualified.
- (f) In case of consortium, the eligibility criteria shall have to be fulfilled jointly or severally by consortium members.
- (g) The bidder/consortium must have minimum average net worth of Rs.200 (Two Hundred) Crores and minimum average turnover of Rs. 1000 Crores for the financial years 2017-18, and 2018-19. The net worth of both the consortium members should be positive. A Chartered Accountant's certificate to this effect must be submitted along with The Bid. Certified audited copies of Balance Sheets/Profit & Loss Accounts/Annual Reports for the financial years 2017-18, and 2018-19. Must also be submitted along with The Bids. Debt Equity ratio of the Bidder shall be maximum 2:1 as per last audited balance sheet.
- (h) The Bidder/Consortium should have an experience of having executed/ongoing Hydro Electric Power projects, related to development, renovation, operation and management of Power Projects. Work orders and/or a certificate regarding, Projects that have been successfully & satisfactorily executed' from client should be submitted along with bid.



- (i) The bidder must have on its payroll technically qualified professionals in Hydro Electric Power Generation, Maintenance, operation and management for at least since last 24(Twenty Four) months, affidavit from Bidder's HR department has to be submitted.
- (j) The bidder must have minimum sum of Rs. 50 Crores available in its Bank Account as on the date of submission of bid. The bidder shall produce proof (Certified Bank Account Statement, etc) in support of this requirement or produce a Sanction Letter of minimum Rs. 50 Crores from any Scheduled Bank for executing the subject "Hydro Power Projects."
- (k) The bidder must have acquired Stalled Hydro Power Projects having a combined capacity of not less than 40 MW from Government entities / PSUs / Courts / Financial Institutions within Three Years preceding the date of this Tender. The bidder should have experience successful turnaround of minimum one non-commissioned stalled hydro project of at least 20 MW during last 3 years. Turnaround time should not be more than One Year (i.e, from date of take over till achieving COD). Stalled project should be acquired under IBC/SARFAESI/through tender/auction conducted by State Govt. /PSU/Financial Institution. Certificates /work orders will have to be submitted as proof of having met these criteria  
For the purpose of this clause, 'Stalled project' means an under-construction project stopped during construction stage and stalled since at least three years due to financial stress or any other reason and/or a commissioned project which was heavily damaged & stalled at least for two years and requires major repairs/renovation to restart. Further, the bidder must have acquired the projects as a Developer. The experience, if any, gained on EPC/O&M basis will not be eligible or considered for bidding as per this clause.

#### ELIGIBILITY CRITERIA PART B

- (a) The bidder and consortium members should not be declared bankrupt by any court. In this regard an affidavit must be submitted duly attested by the notary, by the bidder and each member of the consortium.
- (b) The bidder and consortium members should not have been Black-Listed by any Corporation/Board or State/Central Government in India. In this regard an affidavit must be submitted duly attested by the notary, by the bidder and each member of the consortium.
- (c) The Bidder shall give an undertaking for successful completion of the project. In case of Consortium the Prime Bidder and the members shall give an undertaking for successful completion of the project. In case of any issues. Prime bidder shall be responsible for all the penalties/compensation. The agreement between the prime bidder and the consortium partner should be for the entire project period and same has to be submitted along with the Technical Bid.
- (d) Agreements of the consortium members should clearly mention their exclusive association for this bid and joint responsibility for the respective scope. Roles and responsibilities of each consortium member must also be spelled out in the agreement.



- (e) The Prime Bidder and consortium member (if any) must submit documentary evidence in support of their claim for fulfilling the criteria and they should submit an undertaking on their letterheads to the fairness of these documents in support of their claim while submitting the Bids. The Bids received without documentary evidence will be outright rejected.
- (f) The bidder/consortium should have a local support office at Gangtok and provide the supporting documents in the bid. If the bidder does not have any local support office at the time of bidding then they must submit an undertaking on their letter head that if selected then they shall open a local support office at Gangtok within fifteen (15) days from the date of award of contract.
- (g) Documentary evidence for compliance to each of the eligibility criteria must be enclosed along with the bid, together with the references as required in this RFP.
- (h) Relevant portions, in the documents submitted in pursuance of eligibility criterion mentioned above, shall be highlighted and all pages of the bid document should be serially numbered.
- (i) If the bid is not accompanied by all the above-mentioned documents, the same would be rejected.
- (j) Undertaking for subsequent submission of any of the above document will not be entertained under any circumstances. However, Power Department reserves the right to seek fresh set of documents or seek clarifications on the already submitted documents.
- (k) Each page of this document must be signed along with seal of the organization indicating the name and designation of the authorized signatory of the organization.
- (l) If any document submitted by the organization is not readable, it may be treated as if the Intending Bidder has not submitted the same.

For the purpose of eligibility criteria mentioned in Clause 1.4, Bidder shall be entitled to use credentials of its Group/Affiliate/Subsidiary Companies (irrespective of numbers) having majority common shareholding (shares held directly or through relative as per Companies Act) and/or Partnership Firms having majority common ownership. The shareholding/ ownership will be seen as per the last audited balance sheet.

#### 1.5 NON - TRANSFERABLE RFP

This Request for Proposal (RFP) is not transferable.



### 1.6 PURPOSE AND CONDITIONS

The Government of Sikkim has decided to renovate, modernize and upgrade closed /damaged Hydro Electric Power Projects under the charge of the Power Department Government of Sikkim, by way of out sourcing to financially sound and technically experienced entities. The project is offered on "**As is Where is**" basis.

Power Department Government of Sikkim is now looking for a **Technical Partner** who is willing to invest in the following Hydro Electric Power Projects.

Sl	Name	Capacity MW	Year of Commissioning	Location District	Current Status
1	Rimbi Stage I HEP	0.6	1970	West	Closed
2	Kalez Khola HEP	2.0	1995	West	Partially Closed
3	Jali Power House HEP	2.1	1985	East	Partially Closed
4	Rongni chu Stage II HEP	2.5	1989	EAST	Closed
5	Lower Lagyap HEP	12.0	1978	EAST	Partially Closed
6	Meyong Chu HEP	4.0	1993	NORTH	Partially Operational
7	Rabom Chu HEP	3.0	2003	NORTH	Partially Operational

The Government of Sikkim, will not make any investment of any kind in the above projects, The **Technical Partner** selected by this process will have to finance all aspects of the contract on its own.

**Technical Partner** will take over the above mentioned Projects in an "**As is where is**" basis and Renovate, Operate, Maintain, Augment (on site maximum capacity) and Transfer the projects and will act as required to achieve the following objectives:

Renovate, Operate, maintain and Transfer to the Government of Sikkim the Projects after completion of mutually agreed the Lease period.

Renovate and maintain the power plants in the Projects in order to keep the same in excellent working condition at all times during the lease period.

Re-develop and maintain the civil components of the Projects, viz. intake, de-silting, water conductor system, fore bay, penstock, tail race, tail race outfall, power house building, including office and residential buildings, transmission lines etc, handed over



over by the Government of Sikkim in excellent condition at all times during the Lease period.

Augment the capacity of the Projects, to optimize the potential with latest technology, required modifications and additions in the existing Civil, Hydro-Mechanical and Electro-Mechanical components. Minimize plant down-time and tripping etc. and optimize power generation in the Projects, and ensure good quality, uninterrupted power generation.

Adhere to all applicable laws, rules and regulations, instructions and safety measures in accordance with the existing laws and utility practices & standards.

The Projects shall be developed on **"RENOVATE, OPERATE, MAINTAIN AND TRANSFER" (ROMT)** basis on a long term lease. The successful bidder will fully observe environment, social, safety, Labour laws and other regulations in force and obtain all necessary applicable authorizations and adhere to all applicable Local laws of the State of Sikkim.

### 1.7 PREPARATION OF BID

The Bid in sealed envelope should be deposited in the Office of Principal Chief (I) Power Department on 07/10/2020 by 1:00 PM. The bid should be valid for a period of 180 days from the date of submission of bids for this tender.

Envelope – 1		
Sl. No.	TYPES	Content
1	EMD	The original copy of EMD as per Clause 1.2.2 b read along with clause 1.15
2	Cost of-Bid Document	The original copy of the paid Demand Draft as Cost of Bid Document is to be submitted.
Envelope – 2		
Sl. No.	TYPES	Content
1	Pre Qualification Bid	The certified copies of all required documents as required for this Bid
Envelope – 3		
Sl. No.	TYPES	Content
1	Technical Bid	The certified copies of documents as required for this Bid

### 1.8 SIGNING OF BID DOCUMENT

A representative of the bidder, who is authorized to commit the bidder to contractual obligations, must sign with the bidder's name and seal on all pages of the proposal.





Including the tender/RFP document. All obligations committed by such signatories must be fulfilled.

### **1.9 ACKNOWLEDGEMENT OF UNDERSTANDING OF TERMS**

By submitting a proposal, each bidder shall be deemed to have acknowledged that he/she has carefully read all parts of this RFP, including all forms, schedules and annexure hereto, and has fully agreed to it.

### **1.10 MODIFICATION OR WITHDRAWAL OF OFFERS**

Responses to this RFP may be modified or withdrawn any time before the due date. Proposals shall not be withdrawn after the proposal due date and time has passed.

Modification to or withdrawal of a proposal received by the Power Department after the exact hour and date specified for receipt of proposals will not be considered as an acceptable proposal. If it becomes necessary to revise any part of this RFP or if additional data is necessary for an exact interpretation of provisions of this RFP prior to the due date for proposals, a supplement will be issued. If such addenda issuance is necessary, Power Department reserves the right to extend the due date and time of proposals to accommodate such interpretations or additional requirements.

### **1.11 PROPOSAL LIFE**

All proposals made in response to this RFP must remain open and in effect for a period of not less than 180 days after the date for proposals. Any proposal accepted by Power Department for the purpose of contract negotiations shall remain valid until superseded by a contract or until rejected by Power Department.

### **1.12 SUBMISSION AND OPENING OF BID**

- (a) A hard copy addressed to the Principle Chief Engineer (I), Power Department, Gangtok-737101 should be submitted to the said Officer in his Office during regular office hours on all working days, latest by the date and time mentioned in this RFP document as per the procedure mentioned in clause 1.7 "PREPARATION OF BID". Power Department does not own any liability if the response is submitted somewhere else and not reached to the addressee within due date and time.
- (b) The bids shall be opened at the Office of Principal Chief Engineer (I), Power Department, Gangtok 737101 on 07/10/2020 at 2.00 PM, in the presence of bidders who choose to be present.
- (c) Power Department reserves the right to accept or reject any or all bids at its sole discretion without assigning any reason whatsoever.
- (d) The bidder shall bear all costs associated with the preparation and submission of its b.d, and Power Department will in no case be responsible or liable for these costs, regardless of the conduct or the outcome of the Tender process.



### 1.13 IMPORTANT INFORMATION REGARDING BID SUBMISSION

1	Issuer	Power Department Gangtok, East Sikkim
2	Place of Execution	Gangtok, Sikkim
3	Cost of RFP Document	Rs. 50,000/-
4	Place of Pre Bid Conference	Office of Principal Chief Engineer(I), Power Department, Gangtok
5	Place of opening of Pre-Qualification Bid	Office of Principal Chief Engineer(I), Power Department, Gangtok
6	Place of Opening of Technical Bid	Office of Principal Chief Engineer(I), Power Department, Gangtok
7	EMD in the form of FDR	Rs. 5,00,00,000/-
8	Bid Validity Period	180 Days

### 1.14 Schedule

Commencement of RFP sale:	16/09/2020 at 11:00 AM.
End of RFP sale:	23/09/2020 at 2:00 PM.
Date and Time of Pre Bid Meeting:	01/10/2020 at 11:00 AM
Date and Time of submission of Bid	
Bid Start Date and Time:	07/10/2020 at 11:00 AM.
Bid End Date and Time:	07/10/2020 at 1:00 PM.
Date and Time of Bid Opening:	07/10/2020 at 2:00 PM



#### 1.15 Bid Security /EMD (Earnest Money Deposit)

Intending Bidder should prepare the Bid Security/EMD (Earnest Money Deposit) of Rs 5/- (Five) Crores as a Fixed Deposit Receipt FRD, in the Name of The PCE Cum Secretary Power Department Government of Sikkim. The Address of the firm submitting the RFP has to be furnished on reverse of the EMD. Failure to submit the RFP form along with the EMD shall result in disqualification of the RFP. Unsuccessful Bidder's EMD will be returned as promptly as possible after the award of the contract to the successful bidder. Successful Bidder's EMD will be returned only after signing on Final contract after fulfillment of all security deposit formalities.

The EMD deposit shall be retained by Power Department

No interest will be payable by the Power Department on the amount of the EMD.

The EMD shall be forfeited:

- (a) If a bidder withdraws his bid during the period of bid validity or its extended period, if any; or
- (b) In the case of a successful bidder, if the bidder fails to sign the contract within the stipulated time period.

#### 1.16 BID CURRENCY

Indian Rupees.

#### 1.17 NON-CONFORMING PROPOSALS

Any proposal may be construed as a non-conforming proposal and ineligible for consideration if it does not comply with the requirements of this RFP. The failure to comply with the technical requirements, and non-acknowledgment of receipt of amendments, are common causes for holding proposals as nonconforming.

#### 1.18 LANGUAGE OF PROPOSALS

The proposal and all correspondence and documents shall be written in English. All proposals and accompanying documentation will become the property of the Power Department and will not be returned. The hardcopy version will be considered as the official proposal.

#### 1.19 COST OF BID

The Bidder shall bear all costs associated with the preparation and submission of its Bid, and the Power Department shall not be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.



### 1.20 CORRECTION OF ERRORS

The Bidder is advised to take adequate care in quoting the rates. No excuse for corrections in the quoted rate will be entertained afterwards. The corrections or overwriting in RFP should be initialed by person signing the proposal form.

### 1.21 CORRECTIONS OF ARITHMETIC ERRORS

In case of discrepancy between the amounts mentioned in figures and in words, the amount in words shall govern. The amount stated in the proposal form, adjusted in accordance with the above procedure, shall be considered as binding.

### 1.22 DISQUALIFICATION

The proposal from the bidders is liable to be disqualified in the following cases:

- (a) Proposal not submitted in accordance with the RFP.
- (b) The bidder submits the bid with his own conditions.
- (c) Proposal is received in incomplete form.
- (d) Proposal is received after due date and time.
- (e) Proposal is not accompanied by all requisite supporting documents
- (f) Information submitted in technical proposal is found to be misrepresented, incorrect or false, accidentally, unwittingly or otherwise, at any time during the processing of the contract (no matter at what stage) or during the tenure of the contract including the extension period if any.
- (g) Bidder has given the letter of acceptance of the contract with his conditions.
- (h) Not fulfilling of any conditions / terms of RFP by bidder.

### 1.23 CONTRACT OBLIGATIONS

Power Department anticipates that any Bidder submitting a proposal will provide all the required portions of the services as requested. The Bidder is responsible for the performance of any obligations that may result from this RFP and shall not be relieved by the non-performance of any other entity; the Bidder shall obtain any/all clearances required for fulfilling the contract, such as (but not limiting to) clearances from CEA, SERC, CERC, ERPC, Ministry of Forest and Environment, Pollution control board etc.

#### 1.23.1 CONFIDENTIAL INFORMATION

Bidders are advised that materials contained in proposals are subject to the RTI Act of 2005 after the contract award and may be viewed and copied by any member of the public, including news, media and competitors. Bidders claiming a statutory exception to this Act must state "Confidential" and must indicate in the transmission



letter while submitting bid. Power Department reserves the right to make determinations of confidentiality. Power Department will not consider prices to be confidential information.

#### 1.23.2

#### EVACUATION

The bidder shall be responsible for Evacuation of power generated from the power plants to the State Grid. The selected Technical Partner shall have the right to sell the power Generated.

#### 1.24 IMPORTANT CONDITIONS

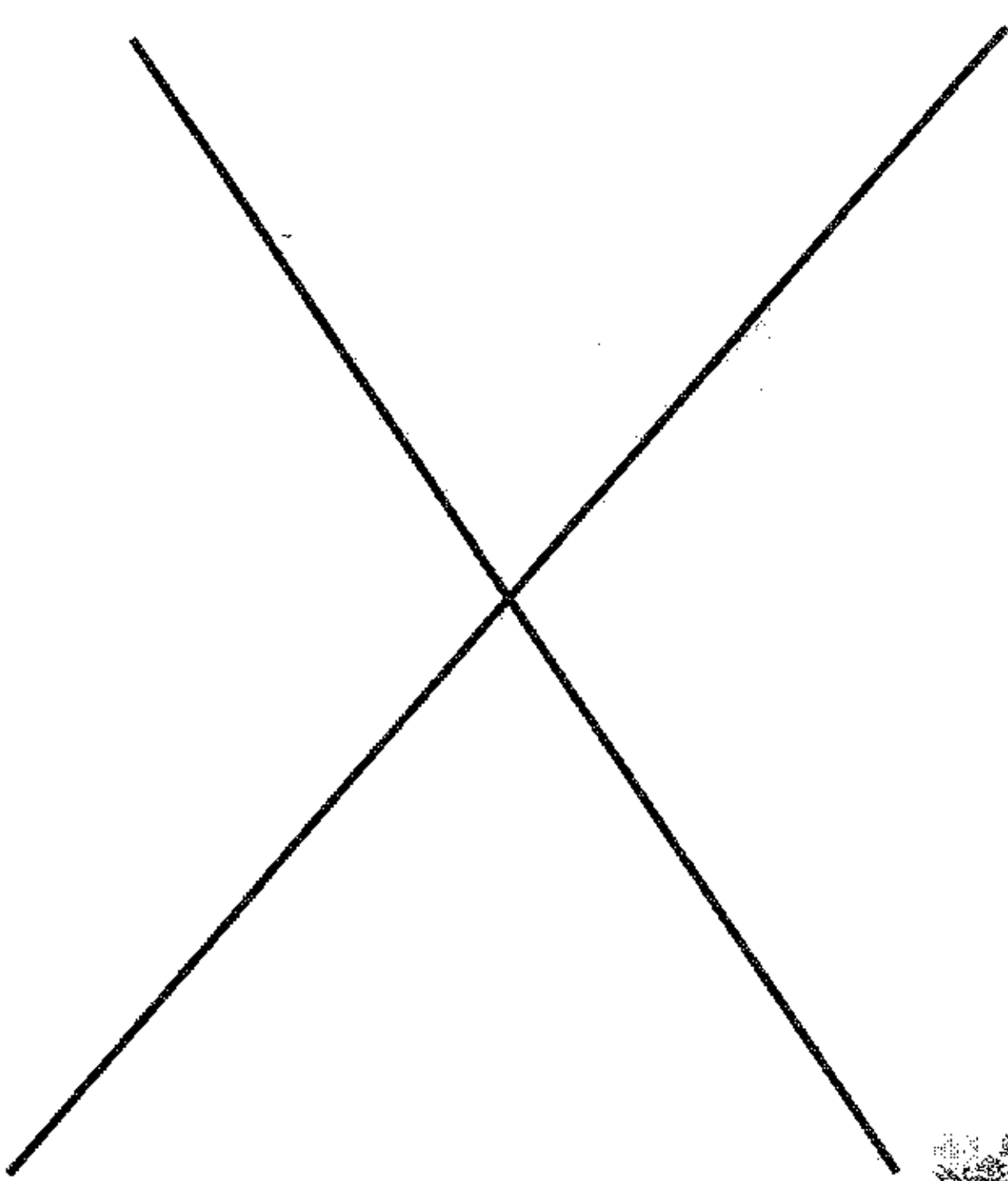
The following terms are applicable to this RFP and the bidder's proposal:

- (a) This RFP does not commit Power Department to enter into an agreement or similar undertaking with the bidder or any other organization and Power Department shall have the right to reject or accept any proposal or offer, or any part thereof (e.g., any component of any proposed solution) without assigning any reason whatsoever.
- (b) Each bidder shall make the following representations and warranty in its proposal cover letter, the falsity of which shall result in rejection of its proposal:  

"The information contained in this proposal or any part thereof, including its exhibits, schedules, and other documents and instruments delivered or to be delivered to Power Department, are true, accurate, and complete. This proposal includes all information necessary to ensure that the statements therein do not in whole or in part mislead the Power Department as to any material fact."
- (c) The Power Department is not restricted in its rights to use or disclose any or all of the information contained in the proposal, and can do so without compensation to the bidder. Power Department shall not be bound by any language in the proposal indicating the confidentiality of the proposal or any other restriction on its use or disclosure.
- (d) Any work whether acceptable or unacceptable, developed under a contract awarded as a result of this RFP shall be the sole property of the Power Department unless stated otherwise in the contract agreement.
- (e) Timing and sequence of events resulting from this RFP shall be determined by Power Department.
- (f) No oral conversations or agreements with any official, agent, or employee of Power Department shall affect or modify any terms of this RFP, and any alleged oral agreement or arrangement made by a bidder with any department, intending Bidder, official or employee of the Power Department shall be superseded by the Contract Agreement that results from this RFP.

process. Oral communications by Power Department to bidders shall not be considered binding on Power Department, nor shall any written materials provided by any person other than Project In-Charge of Power Department or any other officer so authorized . .

- (g) Proposals are subject to rejection if they limit or modify any of the terms and conditions or specifications of this RFP.



## 2 BID EVALUATION

### 2.1 INQUIRIES ABOUT THE RFP

All inquiries and requests for information affecting this RFP must be submitted in writing to: E-mail: pce\_mech@outlook.com. Inquiries should be submitted no later than 2:00 pm on 30/09/2020. Power Department reserves the right to decide whether any questions are appropriate to answer. Responses, if any, shall be provided, in writing, by Power Department. Copies of the written responses will be made available to all prospective Bidders. No negotiations, decisions or actions shall be initiated by any Bidder as a result of any verbal discussion with any representative of Power Department or employee. Inquiries are not to be directed to any consultant or staff member of Power Department. Such action may disqualify Bidder from further consideration for a contract as a result of this RFP

#### PRE BID CONFERENCE AND INSPECTION of Sites

- (a) A Pre-Bid Conference will be held on date, place and time mentioned above at Power Department. All queries/clarifications received up to one day prior to the pre-bid conference will be deliberated upon during the pre-bid conference. Bidders should bring original draft of Rs 50000/- for entry to conference room.
- (b) Relevant queries/clarifications up to Pre-Bid Conference will be deliberated by Power Department, at its discretion.
- (c) Any clarifications/ Corrigendum/ Addendums etc. subsequent to pre-bid conference will be available in hard copies.
- (d) The clarifications/ Corrigendum/ Addendums etc. thus communicated will form an integral part of the RFP and succeed the relevant clauses for future reference.
- (e) Any irrelevant/ ambiguous/ mischievous clarification as determined by Power Department at its sole discretion will not be entertained and may not be clarified and/or deliberated.
- (f) Inspection, will be allowed only to bidders who qualify to be Technical Partner. Sufficient Time will be given to selected Bidders for Inspection of project Sites before Financial bid.

### 2.2 BID OPENING

- a) Bids (complete in all respect) received along with EMD (received physically) will be opened on the scheduled Date and Time as mentioned in "Clause 1.14 Schedule", in presence of Bidder's representative if available. Bid received Without EMD will be rejected straight way.
- b) Pre Qualification Bids of only those Bidders, whose EMD Instruments are found to be in order; will be opened afterwards in the same bid opening session, in the presence of the Bidder's representative.



### 2.3 PRE QUALIFICATION BID EVALUATION

- (a) Power Department will examine the bids to determine whether they are complete, whether any computational errors have been made, whether required sureties have been furnished, whether the documents have been properly signed, and whether the bids are generally in order.
- (b) Bids without proper authorization from the Company shall be treated as nonresponsive. A bid determined as non-responsive will be rejected by Power Department and may not subsequently be made responsive by the bidder by correction of the non-conformity.
- (c) Reference checks would be conducted by Power Department either by itself or through any third party at the sole discretion of the department. The decision of Power Department in this regard shall be final.
- (d) Power Department may waive any minor informality, nonconformity or irregularity in a bid that does not constitute a material deviation, provided such waiver does not prejudice or affect the relative ranking of any Bidder. The decision of Power Department shall be final and binding.
- (e) The Bids received without required Earnest Money Deposit (EMD) shall be rejected.

### 2.4 TECHNICAL BID EVALUATION

- (a) Only the bids of those firms who fulfill all the conditions for Pre Qualification as mentioned in **Clause 1.4 "ELIGIBILITY CRITERIA Parts A and B"** will be considered for Technical Evaluation.
- (b) Each qualified bidder (If required) will be given an opportunity to make a presentation of their proposal on the day of the Bid Opening.
- (c) Technical evaluation team of Power Department will scrutinize the Bidders' responses including evaluation criteria and technical responses to Request for Proposal.
- (d) The evaluation criteria for the Technical evaluation of the bids are as follows:
  - (i) Experience in terms of Clause 1.4 (both in terms of number of Projects and the Project values) and in handling the contracts covering work similar to the scope of work mentioned in this RFP.
  - (ii) Adequacy of the proposal: Coverage of the functionalities and processes, Project plan and methodology, overall work plan including but not limited to timelines, methodology, appropriateness, compliance/ deviations, quality assurance and project management, tasks and milestones, roles and responsibilities), Change Management, Training strategy and Action Plan etc.
  - (iii) Technical presentation before the Evaluation Committee.





- (iv) Qualifications and competence of the Key Professionals who have been proposed by the Bidder to be a part of the implementation team. Please attach a detailed technical proposal as per the formats specified.

The points to be given under each evaluation criteria are as follows:

Sl. No	Item	Points
1	Specific experience of the Bidder for implementation relevant to this assignment	20
2	Hydro Power Projects acquired by the Bidder from Government entities / PSUs / Courts / Financial Institutions in the last 3 years preceding the date of this Tender	20
3	Stalled Hydro Power Projects turned around and commissioned by the Bidder, within one year after acquiring these project(s)	20
4	Adequacy of the proposal including the technical presentation before the evaluation committee	20
5	Team Structure & Competency of Implementation specific to this Assignment	20
	Total	100

The final technical score would be calculated as follows:

The Technical Scores of other Technical Bids will be computed relative to the highest evaluated Technical Bid. The Technical Score for a proposal will be computed as follows:

$$\text{Technical Score T} = (\text{Company's Score} / \text{Highest Score}) * 100$$

## 2.5 Financial Bid

After recommendation of the Tender Committee and approval of The Government of Sikkim, Three Best, Technical Score T, Bidders will be empanelled as "Technical Partner" by the Power Department Government of Sikkim. Financial Bids will be called, only from these Technical Partners.



## 2.6 PRE QUALIFICATION BID

## PRE QUALIFICATION BID COMPLIANCE SHEET

Bidder Should Mark Page No. on Enclosures Submitted in Evidence of Eligibility Criteria

Sl No	Criteria / Documents to be Submitted	Mention Enclosure Page No	Fill Compliance (Y/N)	
			Prime Bidder	Consortium Partner
1	Bid Authorization Letter if any (The letter of authorization shall be indicated by written Power of attorney accompanying the bid).			
2	Original DD payable at Gangtok of Rs. 50000/- (Rs. Fifty Thousand Only) towards price of RFP document.			
3	The Bidder Bid Security of Rs.5,00,00,000/- (Rupees Five Crores Only) as FDR.			
4	Bidder/Prime Bidder shall provide an attested copy of –			
	Pan Card			
	Company Registration Certificate			
	Valid Tax Registration Certificate			
	Valid Service Tax registration Certificate			
	GST Tax Returns			
	Income Tax Return			
	Certified Audited Copies of Balance Sheets/Profit & Loss Accounts/ Annual Reports.			
5	Documentary proof regarding prime bidder and consortium partner should be a Hydro Electric Power Developer			
6	In case of consortium, an original copy of the Agreement/MoU between consortium members, which define their roles and responsibilities for smooth functioning of the project, should be submitted. The agreement between the prime bidder and the consortium partner should be for the			



Sl. No	Criteria / Documents to be Submitted	Mention Enclosure Page No	Fill Compliance (Y/N)	
			Prime Bidder	Consortium Partner
	entire project period.			
7	Documentary proofs from bidder and consortium partner regarding having minimum net worth of Rs. 200 crores in financial years given below. In case the bidder is using the credentials of its group/affiliate/subsidiary companies or partnerships, then supporting documents shall be filed			
	Net Worth for the financial year 2017 - 2018			
	Net Worth for the financial year 2018 - 2019			
8	Documentary proofs from bidder and consortium partner regarding having minimum turnover of Rs. 1000 Crores in financial years given below.			
	Turnover for the financial year 2017-18			
	Turnover for the financial year 2018-19			
9	Documentary proof from the Prime bidder for having on its payroll technically qualified employees since last 24(twenty four) months.			
10	Work orders and/or a certificate regarding 'Project has been successfully & satisfactorily executed' from client Documentary Proof in support of Eligibility Criteria mentioned in Clause 1.4			
11	Documentary Proof of Bank balance of Rs. 50 Crores or Sanction Letter of Rs. 50 Crores from Bank for executing Hydro Power Project			
12	An affidavit duly attested by the notary			



Sl No.	Criteria / Documents to be Submitted	Mention Enclosure Page No	Fill Compliance (Y/N)	
			Prime Bidder	Consortium Partner
	that The bidder and consortium member has not been declared bankrupt by any court in India.			
13	An affidavit duly attested by the notary that the Prime Bidder and Consortium Partner not have been Black listed by any Corporation/Board or State/Central Government in India			
14	An undertaking from the Prime Bidder and Consortium Partner on company letterhead to the fairness of these documents in support of their claim while submitting the Bids			
15	An undertaking from Prime Bidder that he would be fully responsible for successful completion of the project.			
16	The Prime Bidder and Consortium Partner should submit the affidavit stating that they or their employees should not ask for employment in Government of Sikkim.			



## 2. 6.1 COVERING LETTER FOR PRE QUALIFICATION BID

PCE cum Secretary (Power)  
Power Department,  
Gangtok – 737101, Sikkim.  
Sir,

Having examined the RFP Document the receipt of which is hereby duly acknowledged, I/we, the undersigned, do hereby make this bid offer for .....Power Department as required and outlined in the RFP.

I/We agree to abide by this bid for a period of 180 days after the date fixed for bid opening and it shall remain binding upon us and may be accepted at any time before the expiry of that period. Until a formal contract is prepared and executed, this bid, together with your written acceptance thereof and your notification of award shall constitute a binding Contract between us. We understand that you are not bound to accept the lowest or any bid you may receive. We agree to the terms & conditions mentioned in the RFP document.

We are enclosing herewith all the necessary documents duly signed with Company's seal,

Dated this            day of

Signature (in the capacity of)

Duly authorized to sign Bid for and on behalf of

Seal of the Company



**2.6.2 BIDDER'S PROFILE**

1.	Name & Address of The Bidder	
2.	Location of Corporate Head Quarters	
3.	Date & Country of Incorporation	
4.	Details of Contact person (Name, designation, address etc.) Telephone Number, Fax Number, e-mail	
5.	Is the firm a registered company? If yes, submit documentary proof. Year and Place of the establishment of the Company.	
6.	Is the firm registered with tax department? If Yes, submit valid tax registration certificate.	
7.	Number of offices in Sikkim and in India	
8.	Submit details of the consortium (if any) including name and address of the consortium members, contact details, roles and responsibilities to be performed by prime bidder and its consortium members with legal authentication	

Authorized Signatory

<Name>

Seal

*Please Note that providing inadequate or incorrect information could lead to disqualification of the bid.*



## 2.7 COVERING LETTER FOR TECHNICAL BID

To,  
PCE cum Secretary (Power)  
Power Department,

Gangtok – 737101, Sikkim.

Dear Sir,

Having examined the RFP Document the receipt of which is hereby duly acknowledged, I/we, the undersigned, offer to and Express our Interest.

(Please detail your offer here)

We undertake, if our proposal is accepted, to adhere to the implementation plan or Project schedule for providing Services in System Study, Documentation, Design, Development, Procurement, Installation, Implementation and Maintenance of project put forward in this RFP or such adjusted plan as may subsequently be mutually agreed between us and Power Department.

It is hereby confirmed that I/We are entitled to act on behalf of our corporation/company/firm/organization and empowered to sign this document as well as such other documents, which may be required in this connection.

Dated this                      Day of

(Signature) (In the capacity of)

Duly authorized to sign the Bid Response for and on behalf of.

(Name and Address of Company) Seal/Stamp of bidder



## 3.0 TECHNICAL SOLUTION

Sl No	Technical Detail	Presentation Requirement
1	Bidders understanding of the Project Scope	Describe your understanding of the project scope.
2	Description of the Project Details	Describe your methodology in details of the technology, architecture, modules and solutions that would be used.
3	Project Plan	Share a detailed project plan including but not limited to Timelines, Important milestones, Resource plan, etc.
4	Roles and Responsibilities Matrix	List out the Roles and responsibilities of the project team members
5	Effort Estimation	Please share the details on the effort estimation divided by Modules.
6	Resources and Responsibilities expected from Power Department	Please include the resources and responsibilities as expected from Power Department.
7	Documentation Coverage	Describe all the relevant system documentation that you will provide supported by sample documentation/ manual.
8	commissioning plan	Please include the details of the go-live plan
9	Testing Plan	Please include details of all the testing that are to be done for the successful implementation of the project
10	Support Plan	Please include the details of the support during the post go- live onsite handholding and support phase and AMC separately including but not limited to the time spent, kind of resources deputed etc.
11	Change Management Plan	Describe your plan to cover any change management issues being faced during the implementation of the project including workshops to be conducted for the same
12	Quality Plan	Proposed quality plan setting out for controlling quality at different stages of the project and





Sl No	Technical Detail	Presentation Requirement
		proposed inspection schedule should be described
15	Problem resolution and escalation mechanism	Describe the problem escalation mechanism with the name, designation and contact details.
16	Change Request Management Plan	Include the plan to handle any change requests that may be needed during the course of the project including but not limited to details of the process to approve and handle such request
17	Project Team Details	Include the details of the proposed project team. Please include the resumes of the relevant team members. The identified consultants will have to be a part of the project throughout the duration of the project unless and otherwise specific permission is taken from Power Department to replace the identified resources.





# Annexure - C

79



## GOVERNMENT OF SIKKIM POWER DEPARTMENT

10, Sikkim Government Secretariat, Gangtok

20/10/2020

### Letter of Acceptance of DA as a Technical Partner

To: Notice inviting Expression of Interest and Request for Proposal Reference No. SPS/Gen/GDS/2019/ST/002 dated 28/08/2020 For Renewal, Design, Installation and Transfer (ROMT) of Seven Hydro Electric Power Projects in the State.

Name: Hanuman Ganga Hydroproject Private Limited  
Floor No. 103, 11th Floor, Surya Kran Building  
19, Khasiha Gang, Gangtok, NEW DELHI - 11001

This is to notify you that your Bid dated 7 October 2020 for the execution of the Works, Renewal, General, Maintain and Transfer (ROMT) of Seven Hydro Electric Power Projects in the State. In accordance with the RFP, The technical Bid submitted, is hereby accepted by the Government of Sikkim. You are now selected as a Technical Partner.  
(a) Please confirm your acceptance of this Letter of Acceptance by signing and dating, and returning one copy to us no later than Seven (7) days from the date hereof.  
and  
(b) Please forward the enclosed Financial Offer Document, along with your offer in the prescribed format no later than Twenty (20) days from the date hereof.

Thanking You

Principal Chief Engineer (Mechanical)  
Power Department

Government of Sikkim  
Chief Engineer and  
Secretary  
Gangtok

For Information of P.O. cum Secretary Power for kind information



## **Annexure - D**

80

**HANUMAN GANGA HYDROPROJECTS PRIVATE LIMITED**

05th January 2021

To,  
Principal CE (Mechanical)  
Power Department,  
Gangtok - 737101, Sikkim.

**Sub: Financial Offer Document**

Dear Sir,

Please refer to your letter Ref No. Secy./Power/GOS/2019/TDB/03 dated 07th Dec 2020. We have certain observations in the financial offer Document which are enclosed in Annexure A. Our Offer is enclosed in Annexure B. Please find the enclosed Financial Offer Document duly signed.

It is further submitted that we are ready for negotiation.


Further we request you to please provide Draft Agreement so that we can analyze the same at our end and if there is any observation, the same can be discussed at the time of final negotiation.

Thanks

For HANUMAN GANGA HYDROPROJECTS PVT LTD

  
AUTH.SIGN (Auth Sign)  
Encl.: a.a



*Received*  


## FINANCIAL OFFER FORMS

- F-1: Financial Offer Compliance form
- F-2: Covering Letter for Financial Offer
- F-3: Financial Offer



A large, stylized handwritten signature is located in the center-right area of the page.

**F2- COVERING LETTER FOR FINANCIAL OFFER**

To,  
2021

Dated this 05<sup>th</sup> Day of January

Principal CE (Mechanical)  
Power Department,  
Gangtok - 737101, Sikkim,

Dear Sir,

Having examined the Document the receipt of which is hereby duly acknowledged, I/we, the undersigned, offer to:-

- (a) We accept the financial offer document subject to the amendments mentioned in Annexure - A. The said amendments shall have overriding effect over anything contained in the Financial Offer.
- (b) Our offer is mentioned at Annexure -- B
- (c) We are ready to negotiate the above mentioned A&B

We undertake, if our proposal is accepted, to adhere to the implementation plan or Project schedule. If our proposal is accepted, we will deposit/submit Security Deposit and Performance Bank Guarantee as per terms and conditions.

We agree that if we are unable to provide service as per the contract for whatever reason, Power Department would forfeit security deposit and/or would invoke the Performance Bank Guarantee(s) with them. Notwithstanding and without prejudice to any rights Power Department may forfeit security deposit and/or may invoke Performance Bank Guarantees with them as compensation for any loss resulting from our failure to perform/ comply its obligations under the contract.


We agree that Power Department shall also be entitled to make recoveries from our bank guarantee,

We agree for unconditional acceptance of all the terms and conditions in the Document and also agree to abide by this offer for a period of 360 Days from, date ..... and it shall remain binding upon us, until within this period a formal contract is prepared and executed, this response, together with your written acceptance thereof in your notification of award, shall constitute a binding contract between us.


We confirm that the information contained in this offer or any part thereof, including its exhibits, schedules, and other documents and instruments delivered or to be delivered to the Power Department is true, accurate, and complete. This offer includes all information necessary to ensure that the statements therein do not in whole or in part mislead Power Department as to any material fact.


We agree that you are not bound to accept the offer you may receive. We also agree that you reserve the right in absolute sense to reject the offer without assigning any reason whatsoever.

It is hereby confirmed that I/We are entitled to act on behalf of our corporation/company/firm/organization and empowered to sign this document as well as such other documents, which may be required in this connection.





Dated this 05<sup>th</sup> Day of January 2021

  
(Signature) (In the capacity of)  
**AUTHORISED SIGNATORY**



Duly authorized to sign the Bid Response for and on behalf of:  
For HANUMAN GANGA HYDROPROJECTS PVT. LTD.

  
(Authorised Signatory)




**Corporate Office:** 1103, 11<sup>th</sup> Floor, Surya Kiran Building, Kasturba Gandhi Marg, New Delhi-110001

**Branch Office:** Gairi Gaon, Opp. Govt College Tadong, 3<sup>rd</sup> Floor Above ICICI Prudential Office, Near Durga Mandir, Tadong, East Sikkim-737102.

## F3- FINANCIAL OFFER.

S. No.	Particulars	Quote	Unit.
1	Share of Generated Electricity, Provided to the Power Department at no cost	As per Annexure B	As percentage of Power generated in Mega Watt
2	Power purchase Agreement desired at Unit (Kwh) Cost	As per Annexure B	Unit cost of power in Kilo watt Hour. Rate in (rupees)
3	Expected Lease Period	40	In years/month/days.

*Signature*





### Annexure A

It is submitted that we have certain observations (listed below) with respect to clauses contained in Financial Offer Document. We accept the Financial Offer Document subject to below mentioned changes as follows:

Following clauses of Financial Offer Document should be read as under instead of existing:

Clause No. 2.7 (b): Resolution of Disputes: If during the subsistence of the contractual period or thereafter, any dispute between the Parties hereto arising out of or in connection with the validity, interpretation, implementation, material breach or any alleged material breach of any provision of this contract or regarding any question, including as to whether the termination of this contract by one Party hereto has been legitimate, the Parties hereto are not able to settle such dispute amicably as stated in (a) above the matter shall be referred to the Arbitrator who will be mutually decided by both the parties. The seat & venue of the arbitration will be Sikkim. The arbitration shall be conducted in accordance with the provisions of the Indian Arbitration and Reconciliation Act 1996 as amended from time to time.

Clause No. 2.9 (a): TECHNICAL PARTNERS OBLIGATION: The Technical Partner is obliged to work closely with the Power Department, act within its own authority.

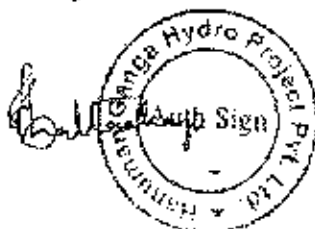
Clause No. 2.11.1 Performance Security:

- (a) The technical partner shall, for the performance of its obligations hereunder, provide to the department no later than 60 (sixty) days from the date of the agreement, an irrevocable and unconditional guarantee from a bank amounting to Rs. 5 Crores (cumulative for all the 7 projects having combined capacity of 26.2 MW). The Technical Partner is free to calculate & submit the Bank Guarantee project wise i.e., a project having capacity 2.5 MW shall have BG amount Rs 0.47 crores ( $500 \times 2.5 / 26.2$ ).
- (b) The Performance security shall be in form of bank guarantee, from a Nationalized Bank.
- (c) The said bank guarantees shall be released to Technical partner upon achieving COD project wise, i.e., if Technical Partner achieved COD for a projects having capacity like 0.60 MW, then their proportionate BG shall be released amounting Rs 0.11 crores ( $500 \times 0.60 / 26.2$ ).

Clause No. 2.12: Taxes and duties: The Taxes and Duties, if and where applicable, shall paid by the Technical Partner as per the law in force at the time of execution of contract. Any additional taxes and duties shall be dealt with as per Clause 2.21 below.

Clause No. 2.21: Change in Laws and Regulations: Unless otherwise specified in the Contract, if after the date of the acceptance of the bid, any law, regulation, ordinance, order or bylaw having the force of law is enacted, promulgated, abrogated, or changed in Sikkim/ India (which shall be deemed to include any change in interpretation or application by the competent authorities) that subsequently affects the Delivery Date and/or results in an increase in expenditure (one time or recurring) of the Technical Partner, / or the Contract Price, then such Delivery Date and/ or Contract Price shall be correspondingly increased or decreased, to the extent that the Supplier has thereby been affected in the performance of any of its obligations under the BID and Contract and any increase in cost will be reimbursed by the Power Department.

Clause No. 2.23: Force Majeure: The Force Majeure circumstances and events shall include the following events to the extent that such events or their consequences fit being understood that if a



causing event is within the reasonable control of the affected party, the direct consequences shall also be deemed to be within such party's reasonable control) satisfy the appropriate definition as per this agreement. Without limitation to the generality of the foregoing, Force Majeure Event shall include the following classes of natural events and circumstances and their effects:

- (a) Any material effect on the natural elements, including lightning, fire, earthquake, cyclone,
- (b) flood, landslide, storm, tornado, or typhoon;
- (c) Explosion or chemical contamination (other than resulting from an act of war);
- (d) Epidemic such as plague/COVID-19;
- (e) Any event or circumstance of a nature analogous to any of the foregoing;
- (f) Other Events ("Political Events") to the extent that they satisfy the foregoing requirements including:
- (g) Act of war (whether declared or undeclared), invasion, armed conflict or act of foreign enemy, blockade, embargo, revolution, riot, insurrection, civil commotion, act of terrorism or sabotage;
- (h) Strikes, work to rules, go-slows which are widespread, nation-wide, or State-wide and are of political nature;
- (i) Any event or circumstance of a nature analogous to any of the foregoing.
- (j) *Unfeasibility to access project site during construction period of HEP.*

**Clause No. 2.25.3: Termination for convenience:** The said clause to be deleted in entirety.

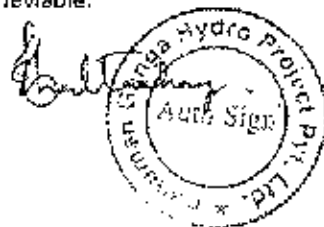


### Annexure B

We offer Rs 4.43 per kWh as a levelized tariff for 40 years (of all the 7 projects having combined capacity 26.2 MW) considering 5% Free Power to Sikkim State and on the assumption that COP shall be achieved during FY 2021-22

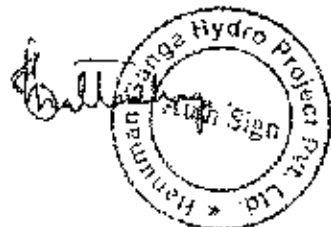
#### Justification/Clarification for Tariff Offer:

- The Technical Partner has offered a financial bid considering the life of the project (40 years) in accordance with the CERC Generic Tariff Order for Fiscal Year 2020-21 for North Eastern Region, although in State regulatory tariff order, Hydro Project Life has been considered only 35 years, that means we are considering the additional life of 5 years for each project and that extra benefit been added in the salvage value of the project.
- As most of the projects are completely closed and damaged, and require huge investment to restart. So salvage value is calculated of each project on the basis of residual life as per CERC guidelines (Referring Depreciation and useful life of the project). Thereafter CERC tariff is adjusted basis Salvage value of each project and tariff is determined on the basis of 5% free power to Sikkim State. (Detailed sheet, calculating tariff is enclosed as Appendix -1)
- During Calendar year 2020, Cement prices have been increased more than 23% and steel prices have increased more than 45% since the beginning of the year. In January 2020, cement price was around Rs. 349 per 50-kilogram bag, which has increased to Rs. 420-430 per bag in December 2020. Further At the beginning of 2020, the per ton rate of steel was at Rs. 40,000 and has rocketed to Rs. 58,000 in December 2020, this means that new CERC generic tariff for FY 2021-22 will spike drastically. We have offered our Tariff, basis 2020-21 CERC Tariff (Which is calculated by CERC on the basis of project cost prevailing at the time of April 2020) and not on the basis of 2021-22 CERC Tariff, though our entire project cost will be incurred in the year 2021-22.
- Technical partner expects to commission the seven projects as per schedule given in the Appendix- 2.
- Technical partner reserves the right to sell the Power to third party in case payment default by the procurer for more than 90 days. In this case generator have following options;
  - i. Late Payment Surcharge (LPS) bills will be raised to Power department of Sikkim @15% per annum.
  - ii. Technical Partner has an option to sell the power to the third party within the state or outside the state; and no open access charges will be payable to the power department of Sikkim/Discom/any other entity of the state.
  - iii. Technical Partner has an option at his sole discretion, to come again anytime by serving one week notice to Power department of Sikkim and restart power supplying to Sikkim Discom in continuation of the PPA.
  - iv. Non supply to the state government due to delay in payment shall not give the right to discom/power department to cancel/terminate the present PPA.
  - v. In case of sale to third party, then 5% free power offered will not be given to power department of Sikkim and technical partner is free to sell 100% generated power to third party in open access.
  - vi. In case of supply to the third party in open access, if there is under injection/ over injection, Penalty/additional penalty as prescribed in state DSM regulations will not be applicable and it is deemed approved that no such penalty/additional penalty is leviable.



Page 7 of 13

- Technical Partner shall made their effort to enhance the capacity about 50% on an average of the project individually/collectively i.e. from 26.2 MW to 39.3 MW. Since It is a completely additional investment, in that case the additional capacity tariff will be without any salvage value benefit and additional free power agreed / to be agreed during negotiation. But the additional capacity shall be enhanced by the Ministry of Power, without any additional license/security fee.
- The tariff has been offered basis considering COD is achieved for all the projects within FY 2021-22. In case if COD is achieved in subsequent years (which are there) than any increase / decrease in the CERC tariff will be proportionally adjusted in the tariff offered project wise.
- Procurer is required to obtain necessary approval from SSERC regarding PPA approval within one month from the date of signing of agreement.
- Our propose investment in Sikkim is beneficial to State in many ways and some of these benefits are listed in Appendix-3

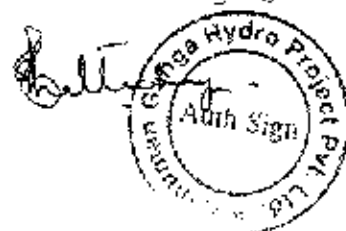


S. No.	Project	Year of Commissioning	Capacity (MW)	CERC Tariff FY 20-21 (Rs./kWh)	CERC Tariff Considering 5% free Power FY 20-21 (Rs./kWh)	Tariff after considering Salvage Value (Rs./kWh)	Tariff with 5% free Power to Sikkim (Rs./kWh)
	(A)	(B)	(C)	(D)	(E)	(F)	(G)
1	Bimbi Stage I HEP	1970	0.6	5.16	5.43	4.64	4.89
2	Kalez Khola HEP	1995	2.0	5.16	5.43	4.07	4.28
3	Jali Power House HEP	1965	2.1	5.16	5.43	4.64	4.89
4	Rongni Chu Stage II HEP	1989	2.5	5.16	5.43	4.31	4.54
5	Lower Lagyap HEP	1978	12.0	4.72	4.97	4.25	4.47
6	Meyong Chu HEP	1993	4.0	5.16	5.43	4.15	4.37
7	Rabom Chu HEP	2003	3.0	5.16	5.43	3.74	3.93
Weighted Average Tariff					5.22		4.43


Appendix -1Note:

1. CERC determines their tariff on the basis of NIL free Power.
2. We have recalculated CERC tariff on the basis of 5% free power to home state as described in Column No. E of Appendix -1.
3. We have recalculated CERC tariff on the basis of salvage value of each project considering their life of 40 years (As per CERC Regulations 2020, Terms and Conditions for Tariff determination from Renewable Energy Sources) mentioned in column F of Appendix -1.
4. Again tariff is recalculated basis 5% free power to home state as mentioned in Column G of Appendix -1.
5. There is effective discount of more than 15% in the CERC generic tariff considering the salvage and residual life of each project as per CERC regulations.
6. We would like to apprise you that in state of Uttarakhand the generic tariff for FY 20-21 is Rs. 5.54 (considering 5% free power to home state). On comparing this, Technical Partner's offer is at discount of more than 32% in comparison to UERC Generic Tariff. (CERC & UERC Tariff enclosed for your kind perusal please). Discounts offered are tabulated below.



Generic Tariff after considering 5% free power to the state

Central/ State	Generic Tariff considering 5% free power to state (Rs./kWh)	Technical Partner Offer (Rs./kWh)	Discount To Sikkim State
CERC	5.22	4.43	15.13%
UERC	6.54	4.43	32.26%



## Appendix-2

S. No.	Project Name	Capacity (MW)	Expected to be Commissioned (Financial Year)***
1	Rongni Chu Stage II HEP	2.5	FY23-24
2	Rimbi Stage I HEP	0.6	
3	Kalez Khola HEP	2	FY22-23
4	Jali Power House HEP	2.1	
5	Lower Lagyap HEP	12	FY21-22
6	Meyong Chu HEP	4	
7	Rabom Chu HEP	3	

\*\*\* If project is not gets commissioned in time/get delayed due to hindrance by any local people/authorities/ whatsoever reason beyond the control of Technical Partner, it shall not be treated as default of the Technical Partner.

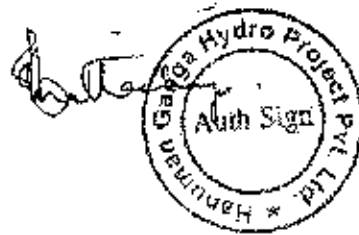
- i. During the time of the execution of the project any hindrance caused by local community/people/individual/political party or their workers etc. same shall be resolved by the Power department of Sikkim.
- ii. Power Department of Sikkim/the competent authority shall arrange to resolve and shall arrange to maintain the well law and order for the smooth functioning to execute the contract as earlier.





Appendix -3Benefits to the State of Sikkim on proposed investment:

- The project investment will increase the state GST income and open the door to local employment.
- Good impact on ancillary industries in the state.
- Closed assets of Sikkim government since number of years will restart and start generating energy for the state.
- Increase in power generation will reduce load shedding in the state and further the state will have the option of bank surplus electricity during the summer / monsoon season and get back in winter to reduce deficit of power.
- The increase in generation will also lead to the development of new industries, Infrastructure and digitization in the state, which also gives a boost to the local people of the state.



Companies Act, 1956) has been compared with depreciation as per Income Tax Act i.e. 40% of the written down value method. Moreover, additional 20% depreciation in the initial year is proposed to be extended to new assets acquired by power generation companies vide amendment in the section 32, sub-section (1) clause (ia) of the Income Tax Act.

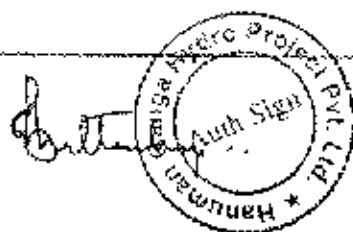
57. Depreciation for the first year has been calculated at the rate of 50% of accelerated depreciation (40%) and 50% of additional depreciation (20%) (as project is capitalized during the second half of the financial year as per proviso to sub regulation (1) of Regulation 22). Income tax benefits of accelerated depreciation and additional depreciation, have been worked out as per normal tax rate on the net depreciation benefit. Per unit levelised accelerated depreciation benefit has been computed considering the post-tax weighted average cost of capital as discount factor. Accelerated depreciation benefit has been computed as per existing provisions of Income Tax Act.

58. In the light of the discussion made in the preceding paragraphs, the generic tariffs of different RE projects for the financial year 2020-21 have been arrived as follows:

#### GENERIC TARIFF FOR RE TECHNOLOGIES FOR FY 2020-21

59. The Generic Tariff for RE Technologies computed for FY 2020-21 is shown in the subsequent Tables:

Particulars	Levelling Total Tariff (FY 2020-21) (Rs/kWh)
<b>Small Hydro Power Project</b>	
Himachal Pradesh, Uttarakhand, West Bengal, North Eastern States and Union Territories of Jammu and Kashmir & Ladakh, (Below 5 MW)	5.16
Himachal Pradesh, Uttarakhand, West Bengal, North Eastern States and Union Territories of Jammu and Kashmir & Ladakh, (5 MW to 25 MW)	4.72
Others States (Below 5 MW)	5.74
Others States (5 MW to 25 MW)	5.71



Annexure-1

1. Levelised rate of Fixed Charges (RFC) in Rs./kWh for Solar (upto 25 MW) based projects on or after 01.04.2016:

Particulars	Upto 5 MW	Above 5 MW & upto 15 MW	Above 15 MW & upto 25 MW
Gross Tariff (CUF @ 40%)	6.33	6.08	5.70
Gross Tariff (CUF @ 45%)	5.63	5.40	5.07

2. Levelised rate of Fixed Charges (RFC) in Rs./kWh for Municipal Solid Waste (MSW) based Power Projects:

Particular	Rate of Fixed Charges (Rs./kWh)
Gross Tariff	6.89
Less: Acc. Dep. Benefit	0.20
Net Tariff	6.59

3. Levelised rate of Fixed Charges (RFC) & Variable Charges in Rs./kWh for Refuse Derived Fuel (RDF) based Power Projects:

Particular	Rate of Fixed Charges (Rs./kWh)
Gross Tariff	4.44
Less: Acc. Dep. Benefit	0.17
Net Tariff	4.27

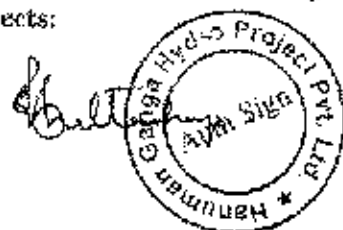
Variable Charges below 1-year	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
in year of commissioning (Rs./kWh)	3.36	3.74	3.92	4.12	4.32	4.54	4.77	5.01	5.26	5.52	5.80	6.08	6.30	6.51	6.74	7.34	7.77	8.15	8.50	8.84

4. Levelised rate of Fixed Charges (RFC) & Variable Charges in Rs./kWh for Non-Fossil fuel based Co-generation Projects:

Particular	Rate of Fixed Charges (Rs./kWh)
Gross Tariff	3.67
Less: Acc. Dep. Benefit	0.15
Net Tariff	3.52

Variable Charges below 1-year	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
in year of commissioning (Rs./kWh)	3.42	3.59	3.77	3.96	4.15	4.36	4.58	4.81	5.05	5.30	5.57	5.84	6.14	6.44	6.77	7.10	7.44	7.80	8.22	8.63

5. Levelised rate of Fixed Charges (RFC) & Variable Charges in Rs./kWh for Biomass Gasifier Projects:



## Annexure - E

96



2 (1)

### GOVERNMENT OF SIKKIM POWER DEPARTMENT

No Secy/Power/GOS/2019/TDB/

Dated /02/2021

#### Letter of Award (LOA)

For Notice Inviting, Expression of Interest and Request for Proposal, Reference No. Secy/Power/ GOS/ 2019/317/002 Dated: 26/08/2020, For "Renovate, Operate, Maintain and Transfer" (ROMT) Of Seven Hydro Electric Power Projects in the State

To:

Name : Hanuman Ganga Hydroprojects Private Limited .  
Flat No. 1103, 11th Floor, Surya Kiran Building,  
19-Kasturba Gandhi Marg NEW DELHI -110001

This is to notify you that your Bid dated 7-October-2020 for the execution of the Works "Renovate, Operate, Maintain and Transfer" (ROMT) Of Seven Hydro Electric Power projects in the state has been accepted and approved by the state cabinet in accordance to the RFP and Consequent Financial Offer and Project Plan, and the subsequent negotiations. You are here by awarded the work "Renovate, Operate, Maintain and Transfer" (ROMT) Of Seven Hydro Electric Power Projects in the State

(a) Please confirm your acceptance of this Letter of Award by signing and dating and returning one copy to us no later than Seven (7) days from the date hereof; and

(b) Please forward the enclosed Agreement Document signed by authorized signatory, no later than Fifteen (15) days from the date hereof.

The following non negotiable terms and conditions take precedence to all terms and conditions relating to this tender, including the contract agreement.

#### Non Negotiable Terms And Conditions

##### **1. Construction Period.**

- (1) The Construction period shall be 36 (Thirty Six ) Months from date of handing over of the project.
- (2) The Construction period can be further extended for a period of 12 (Twelve) Months for valid Non Force Majeure causes.
- (3) An equivalent time will be added to the Construction period if delay is caused due to Force Majeure causes. That is, if one week is lost due to force majeure causes one week will be added to the Construction period.

**PREAMBLE**

This Power Purchase Agreement is made on this \_\_\_\_ day of \_\_\_\_\_, 2021 (Two Thousand and Twenty One) at Gangtok Sikkim.

**BETWEEN**

The Governor of Sikkim through its Principal Chief Engineer cum Secretary to the Government of Sikkim having its principal office at Sonam Tshering Marg, Gangtok, Sikkim-737101 (hereinafter referred to as the "Department" which expression shall, unless repugnant to the context or meaning thereof, include its administrators successors and assigns) of FIRST PART;

**AND**

Hanuman Ganga Hydroprojects Private Limited, a company incorporated under the provisions of the Companies Act, 1956/2013 and having its registered office at Flat No. 1103, 11th Floor, Surya Kiran Building, 19-Kasturba Gandhi Marg, New Delhi - 110001, hereinafter referred to as the "Technical Partner"/"Generator" which expression shall, unless repugnant to the context or meaning thereof, shall be deemed to mean and include its successors and permitted assigns and substitutes) of the SECOND PART.

**WHEREAS**

Whereas the State Government had resolved to lease out Hydro Electric projects with total generating capacity of 26.2 MW on Renovate, Operate, Maintain and Transfer ("ROMT") basis in accordance with the terms and conditions to be set forth in an agreement to be entered into under and in accordance with the provisions of the Electricity Act.

And whereas the Department had accordingly invited proposals by its Request for Proposals dated 28/08/2020 (the "Request for Proposals" or "RFP") for pre-qualification of Bidders who own / operate power generating stations and supply electricity, and had pre-qualified the selected technical partner.

And whereas the Department had prescribed the technical terms and conditions by its Request for Proposal dated 28/08/2020 (the "Request for Proposals" or "RFP"), and invited Bids in accordance with the Guidelines of the Government of Sikkim.

And whereas after evaluation of the Bids received, the Department had accepted the Bid of the selected Bidder, i.e. Hanuman Ganga Hydroprojects Private Limited, and issued its Letter of Award No. "Secy/Power/GOS/2019/TDB/03" dated 07/12/2020 (hereinafter called the "LOA (1)") to declaring Hanuman Ganga Hydro Projects Private Limited as the selected Technical Partner requiring, inter alia, for the Technical Partner to inspect the projects and submit a Project Plan and offer Financial Offer within 30 (Thirty) days of the date of issue of LOA (1).

And whereas after evaluation of the Project Plan and Financial Offer, the Department issued a Letter of Award No. "....." Dated ..... (hereinafter called the "LOA") to the selected Technical Partner requiring, inter alia, for the execution of this Power purchase Agreement within 15 (Fifteen) days of the date of issue of this agreement document.

And Whereas In pursuance of the LOA and acceptance of commercial terms and conditions, by its Financial Offer dated 05/01/2021 and Submission of a Project Plan and negotiations thereafter, the Parties have agreed to enter into this Power Supply Purchase Agreement on the terms and conditions set forth hereinafter.

NOW, THEREFORE, in consideration of the foregoing and the respective covenants and agreements set forth in this Agreement, the receipt and sufficiency of which is hereby acknowledged, and intending to be legally bound it is hereby agreed by and between the parties hereto as under:-

## 1. General Terms and Conditions

### (1) Definitions

The terms have the following meanings unless the context otherwise requires:-

- (a) **"Battery Limit"** mean or includes from the Diversion-point to the Plant Switchyard including, the Forebay, Penstock and the Power House and facilities for operation and maintenance of the Projects. This excludes the overhead Transmission Lines;
- (b) **"Control gates"** mean all control gates, intake gates, wicket gates, guide gates, stop logs, and emergency bye pass channel of the power plant;
- (c) **"Applicable Permits"** mean any permissions, clearances, concessions, authorisations, consents, licenses, permits, etc. that are required to be obtained by the Parties from time to time in connection with the Projects;
- (d) **"Control weir and gates"** collectively means Control and operative structure(s) and gates, constructed and along with erected equipment, hoist controls at the plant site, which control the flow of water to the plant, and to the bypass channel, when the project is operative/inoperative accordingly and prevent the overflows outside the canal when gates are closed;
- (e) **"Control weirs and gates Site"** means Foot Bridge, hoisting bridge, rails, platforms etc. To facilitate operation and maintenance of main canal gates, by pass channel gates, stop logs on the upstream and downstream of the power plant and trash rack etc.
- (f) **"Deliverable Energy"** means the energy to be supplied to the Department from each of the HEP, after auxiliary consumption and free power as per Article 2.13 of this Agreement, and to be delivered/injected to the State Grid at the Interconnection point which is for offtake by the Saleable Energy;
- (g) **"Designed Energy"** means the energy computation at the interconnection point on the basis of past available discharge data with the Department of Power, Government of Sikkim and exceedance curves based on 10 daily basis averages after taking into account efficiencies of various equipment and auxiliary consumption;
- (h) **"Forced Outage"** means an interruption of the generating capacity of the Project that is not the result of (i) a request by the Department or by the Board (ii) a Scheduled Outage or a Maintenance Outage (iii) an event or occurrence of Force Majeure, or (iv) a condition solely by Department or by the grid system/hydrology;
- (i) **"GoS"** means Government of Sikkim and its permitted successors and assigns, who is the rightful owner of the Hydro Electric Power Projects;
- (j) **"Interconnection Point"** means the metering point at which interconnection is made between Department and Generator;
- (k) **"period"** means the period of validity of this Agreement;

- (l) "Project(s)" or "Power Plant" or "the Plant(s)" or "Power House" or "Power Station" or "HEP" means ALL Hydro Electric Projects in the ROMT tender dated 26/08/2020 including project land, project civil structures, power house building, entire equipment /system of the Plant including electrical, mechanical and hydro-mechanical parts and equipment dedicated, control weir and gates site, components, appurtenance, communications, spares, consumables, tools and tackles and services provided for successful generation from the Project;
- (m) "properties" means the Plant/ the Project;
- (n) "Prudent Utility Practices" means those practices, methods, techniques and standards, as adopted from time to time, that are generally accepted for use in electric utility engineering and operations to design, engineer, construct, test operate and maintain equipment lawfully, safely, efficiently and economically as applicable to power stations of the size, service and type of the project, and that generally conform to manufacturer's operation and maintenance guidelines;
- (o) "Reserved Outage" means shutdown of a generating unit on instructions of Department or any other statutory authority for reasons not attributable to the Generator;
- (p) "Saleable Energy" means the net energy available from the Project after auxiliary consumption /the energy injected to the Grid, which is measured at Meter Installed in the Power House, which shall also be the Metering Point vis-a-vis the Interconnection Point;
- (q) "Maintenance Outage" means an interruption or reduction of the generating capability of the Project for the purpose of performing work on specific components which in the opinion of the Generator and the Department could not be postponed until the next Scheduled Outage and shall be scheduled by the Generator and allowed by Department;
- (r) "Scheduled Outage" means a planned interruption of the generating capacity of the Project that is scheduled for inspection, routine and preventive maintenance, corrective maintenance, repairs, replacement or improvement and is not a Maintenance Outage or Forced Outage;
- (s) "taxes" mean any taxes, Indian taxes, whether direct or indirect, including levies, imposts, cess, duties and other forms of taxation imposed by any Government Authority;
- (t) "Water Level" means that level of water in the Hydro-electric Projects' river upstream, the Control weir and gates established or, if not so established, that level of water in the Hydroelectric Projects' river above the Control weir and gates, referenced to the gauge now existing on the upstream side of the Control weir and gates and to the gauge existing on the downstream of the control weir, sensors, water depths as may be specified;
- (u) "At No Cost or at no cost" means Energy in Kwh that is provided without charge;

## (2) Interpretation

- (a) In this Agreement, unless the context otherwise requires,
  - (i) The Department and the Generator shall collectively be referred to as the "Parties" and individually as a "Party".
  - (ii) references to any legislation or any provision thereof shall include amendment or re-enactment or consolidation of such legislation or any provision thereof so far as such amendment or re-enactment or consolidation applies or is capable of applying to any transaction entered into hereunder;

- (iii) references to laws of the State, laws of India or Indian law or regulation having the force of law shall include the laws, acts, ordinances, rules, regulations, bye laws or notifications which have the force of law in the territory of India and as from time to time may be amended, modified, supplemented, extended or re-enacted;
- (iv) references to a "person" and words denoting a natural person shall be construed as a reference to any individual, firm, company, corporation, society, trust, government, state or agency of a state or any association or partnership (whether or not having separate legal personality) of two or more of the above and shall include successors and assigns;
- (v) the table of contents, headings or sub-headings in this Agreement are for convenience of reference only and shall not be used in, and shall not affect, the construction or interpretation of this Agreement;
- (vi) the words "include" and "including" are to be construed without limitation and shall be deemed to be followed by "without limitation" or "but not limited to" whether or not they are followed by such phrases;
- (vii) references to "construction" or "building" include, unless the context otherwise requires, investigation, design, engineering, procurement, delivery, transportation, installation, processing, fabrication, testing, commissioning and other activities incidental to the construction, and "construct" or "build" shall be construed accordingly;
- (viii) references to "development" include, unless the context otherwise requires, construction, renovation, refurbishing, augmentation, up-gradation and other activities incidental thereto, and "develop" shall be construed accordingly;
- (ix) any reference to any period of time shall mean a reference to that according to Indian Standard Time;
- (x) any reference to "hour" shall mean a period of 60 (sixty) minutes commencing either on the hour or on the half hour of the clock, which by way of illustration means 5.00 (five), 6.00 (six), 7.00 (seven) and so on being hours on the hour of the clock and 5.30 (five thirty), 6.30 (six thirty), 7.30 (seven thirty) and so on being hours on the half hour of the clock;
- (xi) any reference to day shall mean a reference to a calendar day;
- (xii) reference to a "business day" shall be construed as reference to a day (other than a Sunday) on which banks in the State where the Power Station is situated are generally open for business;
- (xiii) Any reference to month shall mean a reference to a calendar month as per the Gregorian calendar;
- (xiv) References to any date, period or Project Milestone shall mean and include such date, period or Project Milestone as may be extended pursuant to this Agreement;
- (xv) any reference to any period commencing "from" a specified day or date and "till" or "until" a specified day or date shall include both such days or dates; provided that if the last day of any period computed under this Agreement is not a business day, then the period shall run until the end of the next business day;
- (xvi) the words importing singular shall include plural and vice versa;
- (xvii) references to any gender shall include the other and the neutral gender;
- (xviii) "Kwh/Kwh/KWH/kWh" shall mean kilowatt hour
- (xix) "lakh" shall mean a hundred thousand (100,000) and "crore" shall mean ten million (10,000,000);



- (xx) "Indebtedness" shall be construed so as to include any obligation (whether incurred as principal or surety) for the payment or repayment of money, whether present or future, actual or contingent;
  - (xxi) references to the "winding-up", "dissolution", "insolvency", or "reorganisation" of a company or corporation shall be construed so as to include any equivalent or analogous proceedings under the law for the time being enforced in the state of Sikkim, the jurisdiction in which such company or corporation is incorporated or any jurisdiction in which such company or corporation carries on business including the seeking of liquidation, winding-up, reorganisation, dissolution, arrangement, protection or relief of debtors;
  - (xxii) save and except as otherwise provided in this Agreement, any reference, at any time, to any agreement, deed, instrument, licence or document of any description shall be construed as reference to that agreement, deed, instrument, licence or other document as amended, varied, supplemented, modified or suspended at the time of such reference; provided that this Sub-clause (u) shall not operate so as to increase liabilities or obligations of the Department hereunder or pursuant hereto in any manner whatsoever;
  - (xxiii) any agreement, consent, approval, authorisation, notice, communication, information or report required under or pursuant to this Agreement from or by any Party shall be valid and effective only if it is in writing under the hand of a duly authorised representative of such Party, as the case may be, in this behalf and not otherwise;
  - (xxiv) The Schedules and Recitals to this Agreement form an integral part of this Agreement and will be in full force and effect as though they were expressly set out in the body of this Agreement;
  - (xxv) references to Recitals, Articles, Clauses, Sub-clauses, Provisos or Schedules in this Agreement shall, except where the context otherwise requires, mean references to Recitals, Articles, Clauses, Sub-clauses, Provisos and Schedules of or to this Agreement, reference to an Annex shall, subject to anything to the contrary specified therein, be construed as a reference to an Annex to the Schedule in which such reference occurs; and reference to a Paragraph shall, subject to anything to the contrary specified therein, be construed as a reference to a Paragraph of the Schedule or Annex, as the case may be, in which such reference appears;
  - (xxvi) the damages payable by either Party to the other of them, as set forth in this Agreement, whether on / or otherwise, are mutually agreed genuine pre-estimated loss and damage likely to be suffered and incurred by the Party entitled to receive the same and are not by way of penalty (the "Damages");
  - (xxvii) time shall be of the essence in the performance of the Parties' respective obligations. If any time period specified herein is extended, such extended time shall also be of the essence; and
  - (xxviii) terms used in the Agreement, but not defined herein, shall have the meaning ascribed to such terms in the Electricity Act, 2003.
- (b) Unless expressly provided otherwise in this Agreement, any Documentation required to be provided or furnished by the Generator to the Department shall be provided free of cost and in three copies, and if the Department is required to return any such Documentation with their comments and/or approval, they shall be entitled to retain two copies thereof.

- (c) The rule of construction, if any, that a contract should be interpreted against the parties responsible for the drafting and preparation thereof, shall not apply.
- (d) Any word or expression used in this Agreement shall, unless otherwise defined or construed in this Agreement, bear its ordinary English meaning and, for these purposes, the General Clauses Act, 1897 shall not apply.

**(3) Measurements and arithmetic conventions**

All measurements and calculations shall be in the metric system and calculations done to 2 (two) decimal places, with the third digit of 5 (five) or above being rounded up and below 5 (five) being rounded down.

**(4) Provisions which respect to each HEP**

The Agreement has been entered into in relation to the Hydro Electric Projects which are set up at different locations in the State of Sikkim and such Hydro Electric Projects may have different attributes including construction period, performance security amount, Tariff and operations period. Accordingly, the Parties have agreed that this Agreement has to be read independently for each such Hydro Electric Projects unless the context required otherwise. For sake of clarity, the following Articles shall be read independently for each of the Hydro Electric Projects (this is an indicative list and is not exhaustive):

- (a) Clause 7 – Metering, Billing and Invoicing;
- (b) Clause 17- Disputes and Arbitration.
- (c) Clause 21 – Billing, Invoicing, terms of payment and payment security;
- (d) Clause 23 – Events of Default;
- (d) Clause 24 - Force Majeure;
- (e) Clause 30 – Tariff.
- (f) Clause 32 – Performance Security.

**(5) Priority of Agreements, Clauses and Schedules**

- (a) This Agreement, and all other agreements and documents forming part of or referred to in this Agreement are to be taken as mutually explanatory and, unless otherwise expressly provided elsewhere in this Agreement. The priority of this Agreement and other documents and agreements forming part hereof or referred to herein shall, in the event of any conflict between them, be in the following order.
  - (i) This Agreement; and
  - (ii) All other agreements and documents forming part hereof or referred to herein.

i.e., the Agreement at (a) above shall prevail over the agreements and documents at (b) above

- (b) Subject to the provisions of Clause (1), in case of ambiguities or discrepancies within this Agreement, the following shall apply:

- (i) between two or more Clauses of this Agreement, the provisions of a specific Clause relevant to the issue under consideration shall prevail over those in other Clauses;
- (ii) between the Clauses of this Agreement and the Schedules, the Clauses shall prevail and between Schedules and Annexes, the Schedules shall prevail;
- (iii) between any two Schedules, the Schedule relevant to the issue shall prevail;
- (iv) between the written description on the drawings and the Specifications and Standards, the latter shall prevail;
- (v) between the dimension scaled from the drawing and its specific written dimension, the latter shall prevail; and
- (vi) between any value written in numerals and that in words, the latter shall prevail.

**2: Scope of the Project, Free Power, and Project Up-gradation and Commissioning for Commercial Operation**

**(1) Scope of the Project**

- (a) during the Term:
    - (i) Construction, operation and maintenance of the Power Station in accordance with the provisions of this Agreement;
    - (ii) Supply of electricity to the Department in accordance with the provisions of this Agreement
  - (b) Performance and fulfilment of all other obligations of the Generator in accordance with the provisions of this Agreement and matters incidental thereto or necessary for the performance of any or all of the obligations of the Generator under this Agreement.
- (2) Generator shall re-design and re-construct and augment the capacity of the Projects, wherever it may be necessary and possible, in accordance with the Prudent Utility Practices, relevant technical standards and specification, and shall be in accordance with the design requirement of the Projects. It is clarified that the Generator shall have the right to increase the capacity of any of the HEPs as a Mini Hydro Power Project. Subject to the prior intimation to the Department.
- (3) The signing of this Agreement by Department indicates that all approvals for the Project from the Government have been accorded. Generator shall achieve Commercial Operation of the Project at the earliest and ensure that the Project is capable of being Dispatched delivering Active and Reactive Power as per Dispatch Instructions and of being operated in parallel with the Grid System. Generator shall also ensure delivery of power at the Interconnection Point in a safe and reliable manner so as to avoid fluctuations and disturbances to the Grid System due to parallel operation.
- (4) For the purpose of this Clause, the construction period means a period beginning with financial close and end with date of achieving Commercial Operations Date ("COD"). Explanation: If mutually agreed construction period is 24(Twenty-Four) months but if the Unit achieves COD in 18(Eighteen) months, then all clauses for construction period will be invalid and all clauses for COD will take effect.
- (5) Generator shall inform the Department in writing six (6) months prior to COD for the Interconnection Facilities at the Interconnection / Metering Point to be available along with details.

- (6) Generator shall arrange suitable Power Evacuation Facility at the Interconnection Point of the Project, at its cost, compatible with the Grid System, for parallel operation with the Grid System. The evacuation facility will be capable of automatic isolation of the Project from the Grid System in the event of any fault on the Grid System and ensure that no damage is caused to the Project.
- (7) Department agree to provide adequate protection at the Interconnection Point, as a part of the Interconnection Facilities, to ensure that no damage is done to its system due to paralleling of the Station. For proper and prompt co-ordination and efficient load management, Generator shall provide and maintain adequate and reliable communication system between the Station and 220/132/66/33/11 kV Sub Station of the Department.
- (8) Department agree to provide adequate construction power to the Project as required for construction, erection, and testing, commissioning and initial start-up. Department agree to charge for the power supply at the bulk supply tariff as applicable from time to time. Department shall however, not be liable to pay any damage/ compensation to Generator in the event of non-supply of construction power for reasons beyond its control. Generator shall make its own standby arrangements for meeting the power requirements of the Project during the periods when Department is not in a position supply power.
- (9) Generator shall update Department from time to time and co-ordinate the renovation / construction progress of the Project. Department shall be responsible to provide with necessary road permits, certifications etc., as may be required by Generator for the purpose of smooth implementation of the Project and availing duty benefits and exemptions and subsidies as per the requirement of Competent Authorities.
- (10) By way of signing of this Agreement it is deemed that Department have accorded all its approvals, as required to set-up this Project including increase of the capacity of the Project(s) in accordance with Article sub clause (2) of Clause 2 of this Agreement.
- (11) Generator shall declare the Project to be ready for synchronization with the Grid System, when:
  - a) it has been installed in accordance with the required technical specifications and Prudent Utility Practices;
  - b) it meets all related conditions prescribed in applicable Indian Standard(s)/Code(s), then in effect and otherwise meets the provisions of the Electricity Act, 2003 and the rules framed thereunder and the Electricity Rules, 1956 or any other requirements for Synchronization to the Grid System; and
  - c) it is capable of being operated safely and Generator has obtained the approval of the Chief Electrical Inspector of the Government.
- (12) Generator shall give the Department at least sixty (60) days advance written notice of the date it intends to synchronize the Project with the Grid System, the date being not

earlier than the Scheduled Synchronization Date for the Unit, unless otherwise agreed to by the Department.

The Department, and/or its authorized representative(s) shall inspect any Unit, which Generator intends to Synchronize with the Grid System within five (5) days after being notified in writing by Generator, to determine whether all the requirements have been met. Generator shall provide the Department with such access to the Station as is reasonably required to make such determination.

If the Department is satisfied that the Unit is ready to be Synchronized in accordance, it shall within three days of the completion of the inspection of the Unit(s) notify Generator to that effect and provide Generator with all reasonable assistance in Synchronizing the Unit and also for conducting Commissioning Test(s).

**(13) Free Power (At No Cost)**

- (a) The Department shall be entitled to get Twelve percent (12%) of the total energy for first 10 years from COD, Fifteen percent (15%) of the total energy from (Eleventh) 11<sup>th</sup> to (Twentieth) 20<sup>th</sup> Years from COD and Eighteen percent (18%) of the total energy from (twenty first) 21<sup>st</sup> to (Thirty Fifth) 35<sup>th</sup> years from COD, as free power/Energy At No Cost from the Generator for the entire Term of this Agreement, which shall be indicated on the Invoice raised on monthly basis to Department.

- (c) In the event, the Generator is able to increase the capacity of any of the HEPs beyond the present capacity, then the share of free power/energy At No Cost allocated to the Department from such enhanced capacity, of the respective HEP, shall be (5%) five percent, which shall be indicated on the Invoice raised on monthly basis to Department.

**3: Operation and Maintenance of the Project**

Unless the context otherwise requires, the provisions of this Clause 3 are to be followed for each of the HEPs separately.

**(1) Operation and Maintenance of Civil Works**

**(a) Operation of Water ways**

The operation of canal shall be carried out in accordance with Relevant Safety standards. Operation of Canal means the regulation of flow and maintaining of water level by operation of gates and stop logs in coordination with operation of turbines of the Power Project.

**(b) Regulation of Water Level**

Generator, during the Lease period, shall use its best efforts to operate the Properties on a run-of-the-river basis and to regulate the flow of water. Safeguarding the uniform flow of water under all exigencies is to be maintained. Operation of regulating mechanism must ensure that minimum surges are encountered and flow regime remains un-disturbed with variation in discharge not exceeding  $\pm 3\%$ . The upstream and

downstream surges on full load rejection/acceptance should not exceed required cubic meters. The regulating mechanism shall be operated to ensure that flow regime is maintained without disturbing the upstream and downstream levels, stipulated discharge regulation and surges etc. within the above limits.

However, the Generator shall not be responsible for failure to maintain such water level due to conditions which are not attributable to them but shall, in any such instance, take such measures as shall, in Generator's opinion, be reasonably necessary to promptly restore the water level.

The regulation of water at the Project is to be ensured by gated releases in the bye pass channel or through the Main Canal Gates as the situation warrants. These Gates will be operated when Plant machine(s) are closed for any reason or when water flows exceed the required designed discharge or the situation warrants for it. These Gates, therefore, shall be kept operative and functional at all times. Dry trials may be carried out periodically, manually and automatically for these controlling Gates of the Project by the Generator and should be recorded in the Maintenance registers.

**(c) Method of Regulation of Water Level**

The Generator shall, in connection with the maintenance and operation of the Gates and regulation of the Water Level and the flow of water, be responsible for diversion of the water flows into the Plants and operation of the turbines and Generators and appurtenant equipment and bye-pass and main canal gates provided, however, the Generator may operate the Control weir and Gates as required for the maintenance or repair of the Project to alleviate any emergency condition, which may develop during periodic flushing of silt.

The flushing of the silt shall be carried out by the Generator at required intervals by operation of the main canal and Bye-Pass Gates.

**(d) Maintenance of Civil Structures**

The civil works of the Project have been executed to standard design and to a quality, which may require upgrading. It is not expected that the civil structures/works will require any special treatment/attention for repairs. These works however, will be maintained and up-graded, wherever deemed necessary by the Generator in good condition by regular inspection, maintenance, dusting, washing, cleaning up and painting and polishing. Standard Practices shall be followed.

Maintenance of the entire Power Plant within the Battery Limits of the Project, shall be carried out by Generator at its own expense for effective generation.

The silt in the channels/spiral/canal upstream and downstream of the Plant shall be cleaned and physically removed (de-silting) during lean /maintenance closure period or as and when required. De-silting upstream of the main gates and bye pass gates, intake, head race and tail race channel including dewatering of stagnated/trapped water in the aforesaid areas and draft tubes shall be carried out by the Generator at its own expenses.

Generator shall, at his own cost, repair, maintain and procure all materials to keep all the civil structures and all water ways in good repaired and in the same operating condition as it exists. The landscaping of lawns, gardens and greenery in the Project area shall be provided, developed and properly maintained in a regular manner by the Generator at his own expense to improve the environment at the HEPs as a whole.

The Generator shall periodically check the Gates of Bye-pass Channel and Forebay area regularly for electrical, mechanical and hydraulic failures, to ensure Fail Safe Operation of the Gates.

The Generator shall prepare a schedule of routine, preventive and capital (special) maintenance plan of the plant and equipment and of all civil structures and canal including de-silting. The maintenance schedules are meant for the guidance and are not limited to final maintenance schedules.

(e) **Safety of the Water Conductor System**

By way of operation of the Gates, the Generator shall regulate discharge flow/discharge of water, which has to be maintained under all contingencies. The Generator shall perform periodic inspections regularly and checking of operation of Gates, condition of embankments and possible blockage of discharge flowing channels through the water conductor system.

(2) **Operation and Maintenance of Equipment:**

Round the clock operation and maintenance of the plant and equipment shall be carried out by the Generator in accordance with manufacturer's instructions, relevant safety codes, Indian Electricity Act, Indian Electricity Rules, Department's instructions, if any, and Prudent Utility Practices etc., to minimize the down time and to optimize the quality of power generation from the Project.

(a) **Operation of the Plant**

Round the clock operation of the Plants shall generate power and the quality of the electricity generated/delivered by the HEPs shall be ensured by a continuous monitoring of instrumented data. The kWh (units) generated from the Plants (kilo watt hours, represents the quantum of energy generated), which shall be recorded by instrumented panels/Meters and also in the log sheets manually. The total quantum of energy from 00.00 hrs of 1<sup>st</sup> April of any year to 24.00 hrs of 31<sup>st</sup> March of the following year (*Financial year*) will form the basis of aggregated energy outputs in the annual cycle of the unit operation in the Plants. For an incomplete year, the total quantum of energy from the time and date on which a particular power plant is handed over to the Generator up to the following 24.00 hrs of 31<sup>st</sup> March or from 00.00 hrs of 1<sup>st</sup> April to the following time and date on which the power plants are handed over back to Department, will form the basis of aggregated energy output. The energy from all the units in the Project will represent the aggregated energy output. The monthly outputs will be reckoned in the same manner based on English calendar months.

The Generator shall also continuously monitor and record on hourly basis records of all important parameters from time to time such as, water levels upstream and



downstream of the power plants, discharge of water and through readings of kW, kVA, kVAR, kWh, voltage, current, power factor and frequency of each generating Unit, turbine, draft tube/vane guide, opening/closing positions, pressures and temperatures of equipment, readings of export and import energy at main and check meters installed at the Interconnection Point and tripping etc.

The Generator shall furnish the daily, monthly and yearly Performa /formats of data sheets/ log-sheets for recording important parameters for information and approval of the Department. These formats duly completed in all respect shall be made available by the Generator to the Department for perusal and records.

The Generator shall maintain a proper logbook at the Project site /office for recording readings of various instruments/gauges etc. and for recording all operations as and when they occur including scheduled outages, maintenance outages, forced outages, tripping and temporary interruptions/ Isolations in delivery of energy and reasons thereof. All the Project data sheets/Log sheets shall be inspected for record by the Department at the end of each year.

The Generator shall arrange all required stationery, log books, formats etc. at his own cost. Should the level of fluctuations of electricity supply in the Grid exceed the limits for an excessively long period the Generator shall study the issue to evolve suitable solution with Department and action will be taken accordingly by Department to minimize the Grid non-availability, without any delay and on priority.

However, the safety of the generating plant and equipment shall be the responsibility of Generator.

**(b) Maintenance of Plant**

Generator shall commence round-the-clock maintenance (routine, preventive, breakdown and capital maintenance) of the Plant and Equipment, including hydro-mechanical Gates, including disposal of trash shall be carried out by Generator in accordance with manufacturer's instructions, manufacturer's procedures, relevant safety codes, Electricity Supply Act 1948, Indian Electricity Rules 1956 and Electricity Act 2003, Department's instructions or any other laws for the time being enforced in the state of Sikkim if any, prudent utility practices etc.

Generator shall carry out only routine maintenance round the clock till such time plant is handed over for Generation vis-à-vis validity of this Agreement. The routine maintenance shall include cleaning and checks of the HEP's equipment /components and as well as preventive and breakdown maintenance.

**(c) Routine, Preventive, Breakdown and Capital Maintenance:**

- (i) Routine and preventive maintenance shall include such cleaning checks and maintenance activities round the clock on hourly, shift wise, daily, weekly, monthly, quarterly, half yearly, and yearly basis, which are required to be carried out on all the components, equipment and systems including testing and calibration of meters and instruments of the Power Project to minimize breakdowns proper recording of data including testing and calibration of meters and instruments and to ensure



smooth and trouble free running of the HEPs. The Generator shall also carry out routine and preventive maintenance and replacement of oils of each and every component / equipment of the HEPs and shall provide all labour, material, consumables etc. for routine and preventive maintenance at its own cost.

- (ii) **Breakdown maintenance** shall mean the maintenance activity including repairs and replacement of any component or equipment of the HEPs, which is required to be carried out round the clock as a result of sudden failure/breakdown of that particular component or equipment while the Plant are running. The Generator shall carry out breakdown maintenance of each and every component of the Power Project and shall provide the required manpower, materials, consumables, components or equipment etc. for attending to such breakdown maintenance at its own cost irrespective of the reasons of the breakdown/failure.
- (iii) **Capital maintenance** shall mean the major overhaul of any component or equipment of the HEPs, which is not covered by routine, preventive and breakdown maintenance and may become necessary on account of excessive wear and tear, erosion of underwater parts, cavitation and ageing. The capital maintenance of Power Plant equipment and all civil structures will normally be planned to be carried out during Planned Annual Shut-down for under water components. For this purpose, a joint inspection of the Department and Generator may be carried out of all the major components of the HEPs about two months in advance for under water components in order to ascertain as to which components of the Power Project require capital maintenance. In this regard, decision of the Generator will be final and binding. However, if the condition of the Project and components warrants its capital maintenance at any other time, a joint inspection of the Department and Generator shall be carried out immediately on occurrence of such situation and capital maintenance shall be carried out by arranging the shutdown of the Plant /part of the Plant and the decision of the Generator shall be final and binding. The capital maintenance of the Power Project shall be carried out by Generator at its own expenses. Generator shall be free to take expert opinion of the manufacturers of Plant and equipment during joint inspection in order to ascertain the quantum and nature of the said capital maintenance. Department shall also be free to obtain the supervision for capital maintenance from manufacturers of the plant and equipment, at its own cost. At least one capital maintenance of the Project shall be essentially carried out by the Generator before handing over the Plant to Department before expiry of this Agreement. However, the repair of damages to Power Plant due to floods, earthquakes, civil commotion, riots, terrorist's activities, and natural calamities etc. shall be carried by the Generator and claim for Insurance and adjust actual expenses, wherever applicable. The manufacturers Operation and Maintenance manuals of major plant and equipment, which are available in Department's office, shall be handed over to the Generator for reference and safe keep, which shall be recorded.

- (d) The Generator shall use all reasonable efforts to give advance notice to the Department to the extent possible of any unscheduled /scheduled outage of the Plant as soon as possible before/after the outage and shall provide the Department with an estimated duration for such outage. The scope of such outage shall also be intimated telephonically followed by a letter/fax.

The Generator shall carry out regular maintenance and overhauls of the Plants as per recommended schedules and procedures of the equipment suppliers and as per

approved schedules by the Department. The schedule of maintenance and overhauls, which require Plant Shut-down shall however be intimated to the Department via the Load Despatch Centre to which the Plant is attached. For scheduled maintenance and overhauls the Generator will take prior approval from Department.

- (e) The Generator shall be responsible to disposal of the trash dumped at trash pit at a suitable place as approved by competent authority of the Department.
- (f) The Generator shall maintain inspection books at the Project for recording of instructions given by Department during inspections.
- (g) The Generator, if intends setting up of a data transmitting and real time information facilities for monitoring Operation and Maintenance of the Project from a Centralized Station, is allowed to do so.
- (h) The generation from the HEPs shall maintain within the design limits.
- (i) In case Department observes any shortfall in Generation or in the maintenance and operation of the HEPs or response of the Generator including inadequacy of staff or their capacity to perform, then Department on its discretion, has right to record the same in the inspection book or issue instructions/notice for rectification of the same by the Generator, which shall be complied by the Generator the earliest, possible to the satisfaction of the Department.
- (j) All maintenance works carried out by the Generator shall be recorded in Maintenance Registers and shall be made available to Department during inspections.

#### **4: Incentives for Power Generation**

- (1) Department is not required to pay to Generator any incentives for energy generated and metered at "interconnection point" (Delivered Energy) at the Project in the Power House during any calendar year (from 0.00 hrs. of 1st April of a particular year up to 24.00 hrs. of 31st March of the following year).
- (2) The designed projected energy shall not form any basis for eligibility to incentives irrespective of any reasons of interruptions/curtailment of power generation.

#### **5: Deliverable Energy / Saleable Energy and Project Potential**

- (1) Deliverable energy shall be the energy delivered by Generator from the Project at the "Interconnection point" and as measured by the export /import energy meter installed at the "Interconnection points / Metering Point".
- (2) The deliverable energy shall mean the electrical energy generated from the Project, as measured at Generator terminals less the summation of the following:
  - (a) Actual auxiliary consumption for the bona-fide use of the auxiliaries, lighting and ventilation in the Power Station.
  - (b) Transformation losses (from generation voltage to transmission voltage) of the step-up transformer installed in the Plant Switchyard.

(c) Free power At No Cost provided to the Department as per Clause 2 (13) of this Agreement.

- (3) In case Generator uses the energy generated in the power stations for its personal use such as residential premises etc., the same shall be payable by Generator to the Department at the rate as applicable from time to time as per the applicable tariff structure of Department on per kWh basis.
- (4) For this purpose, readings of Energy Meters installed at each auxiliary panel for residential feeder, Generator terminal and export and import check and main energy meters installed at "Interconnection Points" at generation facility and Department grid shall be taken on monthly basis jointly by Department and the Generator.

#### 6: Sale and Purchase of Energy

- (1) From the Date of Synchronization of the first Unit of the Project, Generator shall supply the entire electrical energy after Auxiliary consumption, at the Interconnection/Metering Point to the Department.
- (2) Generator shall sell and the Department shall purchase the entire energy at the Interconnection Point, which is the Net Saleable Energy i.e. the total energy received from the Project at the Interconnection Point. the Net Saleable Energy shall be injected into the State Grid.
- (3) Monthly Invoices shall be raised on the basis of the energy injected into the grid, the Net Saleable Energy in kWh generated from the Project by Generator.

The purchase price of the energy "Tariff", as provided in Clause 30, is the negotiated tariff in view of the existing infrastructure of Department made available for revival of the Project.

- (4) Department agree to pay for the Net Saleable Energy delivered at the Interconnection Point at the rate per kWh excluding statutory taxes and duties, if applicable, as per Clause 30, which shall be indicated on the Invoice raised on monthly basis to Department.

#### 7. Metering, Billing and Invoicing

- (1) Energy Meters, (export and import) of 0.5 accuracy class having kWh, kVAh and kVARh recording facility have been installed at Interconnection Point by the Department (hereinafter referred to as Main Meter). The meters are, capable of recording and storing half hour averages of all the Electrical Parameters for 70 days. Similar meters (export and import) of the same accuracy class have been installed by Department at Grid Substation where power is injected from the Project (hereinafter referred to as Check Meter).
- (2) All the Meters, CTs and PTs described above shall be jointly inspected and sealed by the Generator and Department and these shall not be interfered with neither by the Generator or Department, except in the presence of representatives of both the Parties herein. For testing and calibration of meters,

a notice of at least seven (7) days shall be given by the Generator or Department for testing to enable the authorized representatives of both the Parties to be present. All meters, CTs and PTs shall be checked for accuracy once in every twelve (12) months by both the Parties and shall be treated as working satisfactorily so long as the errors are within the limits prescribed for such meters.

- (3) Meter readings of the Main Meters (for export of power to Department / Meter installed at Interconnection Point) and Check Meter (For import of power by the Department) will form the basis of billing/invoicing by the Generator to Department. If either of the meters is found to be defective during these checks they will be immediately tested/ calibrated/ repaired/ replaced by the Generator at his own cost.
- (4) Where the half yearly check indicates errors in the Main Meters beyond the prescribed limit but no such error is noticed in the Check Meters, billing for the month up to the date and time of such test check will be done on the basis of Check Meter by the Generator and the Main Meters will be re-calibrated immediately. The Generator may maintain one set of meters and metering equipment as spare for replacement of the defective meters and metering equipment and to ensure correct metering at all time. If during the half yearly checks, both the Main meters and the Check Meters are found to be beyond permissible limits of error, the meters shall be immediately re-calibrated and the correction shall be applied to the consumption registered by the Main Meters to arrive at the correct consumption of energy for billing/invoicing purposes for the period of the month up to the time of such check. Billing for the period thereafter till the next monthly meter reading shall be measured by re-calibrated Main Meters.
- (5) Corrections in billing/invoicing, whenever necessary, shall be applicable to the period between date and time of the previous test calibration and the date and time of the test calibration in the current month when the error is observed and this correction shall be for the full value of the absolute error. For the purpose of the correction to be applied, the meter shall be tested at 100, 75, 50, 25 and 10 percent load at unity, 0.85 and 0.75 lagging power factors. Of these fifteen values, the error at the load and power factor nearest the average monthly load served at the point during the period shall be taken as the error to be applied for correction.
- (6) The billing/invoicing shall be normally done on the basis of readings recorded by the meters installed at Interconnection Point (Main Meters). In case, the metering equipment of Interconnection Point becomes defective, the billing to Department / invoicing to Department by the Generator shall be done on the basis of meter readings / energy injected into the grid of the meters installed at Department Grid Substation. If both the Energy Meters located at Interconnection Point and Department Grid Substation fail to record the Electricity supplied then the Electricity supplied will be computed from the log sheets maintained at Department's Grid Substation/Department's Power Station for that period of defect, which shall be final and binding on the Generator and Department, subject to immediate notice by Generator for such occurrence of defect in Main and Check meters.
- (7) For the purpose of test and calibration, the substandard meter shall be calibrated and sealed from a reputed testing Laboratory. This meter shall be calibrated once in every two (2) years.

#### 8: Billing Procedure to Department and Records

- (1) The designated representatives of Generator and Department shall take readings of the meters at the Interconnection Point. On the first day, of every calendar month. Readings shall be recorded for the energy injected from the Project to the Grid and shall prepare to submit monthly bills, in triplicate, for release of payments and one original shall be for record of Generator.
- (2) Each of Generator and Department shall keep and maintain complete accurate records and all other data required by each of them for the purposes of proper administration of the Agreement. Department shall certify monthly Energy Injection Report, as required by competent authorities.

#### 9: Plant Operation

- (1) Generator shall run/operate the Project to generate power in parallel with the grid and shall inject three phase 50 Hz. (nominal) AC supply into Department's system at 11 KV.
- (2) In matters relating to Grid operations and load despatch, the directions of the State Load Despatch Centre ("SLDC") or the officer who may be authorized by Department shall be strictly complied with by the Generator. Any dispute on this account shall be referred to Department and to the Chief Engineer-In-charge, System Operation Organization of Department, whose decision shall be settled by mutual discussion between the Generator and the Department failing which the Generator shall have the option to approach Sikkim State Electricity Regulatory Commission.

#### 10: Statutory Clearances

- (1) It is agreed that all required clearances, permissions and approvals have already been obtained by the Department. The Generator will not be responsible for obtaining subsequent/periodic permits/clearances as per statutory/obligatory provisions. The Generator shall comply with the stipulations of the permits/clearances and shall agree that such permits/clearances are kept in force throughout the Period. It is further agreed that necessary clearances of accuracy of meters/metering equipment, protection system, correct installations of equipment, safety provision etc. required from Department, Chief Electrical Inspector, Department of Telecommunication for Wireless System and other Competent Authorities shall also be obtained by Department or authorize case wise to the Generator.
- (2) The Generator also at his own expense shall ensure that the Power Project is operated and maintained in accordance with all legal requirements including the terms of all consents/clearances/ permits and Prudent Utility Practices within the acceptable technical limits so as not to have an adverse effect on the Department's Grid System and environment. Personnel employed by the Generator shall meet Applicable Laws, rules, regulations and requirements in force from time to time in the State of Sikkim /Union of India.
- (3) In the event the Generator enhances the capacity of any of the HEPs as per Clause 2 (2) above, the Department shall procure the necessary Applicable Permits from the

Government of Sikkim and shall also facilitate obtaining such Applicable Permits from the Central Government, as may be required.

**11: Liaison with Department**

- (1) The Generator shall closely liaise with all concerned departments including SLDC and/or other designated officers/officials and other concerned offices during the Period.
- (2) During the Period of this Agreement in force the Generator shall give seven (7) days prior intimation of its annual maintenance program to Department.
- (3) The Generator will also furnish, in the last week of every month, supply plan indicating the total quantum of electricity likely to be delivered during the next three (3) months.

**12: Temporary Interruptions in Delivery of Energy**

- (1) The Department may require the Generator to temporarily curtail or interrupt deliveries of energy when necessary, in the following circumstances:
  - (a) For repair, replacement and removal of the equipment or any part of its system associated with the Department's facility. However, as far as practicable, such an event shall be scheduled during the annual shut down period of the generation facilities;
  - (b) Load crash in the Grid System due to wide spread rains, cyclones or typhoons;
  - (c) Conditions leading to over-loading of interconnecting transformers, transmission lines and switch-gears due to outage of some equipment at Department power system;
  - (d) If Department determines that the continued operation of the Generator's generation facility may endanger the safety of personnel or integrity of the Department's electric system or have an adverse effect of the electric service to the Department's other customers;
  - (e) Under Force-Majeure Conditions of Department or otherwise;
  - (f) Instructions for the disconnection of Generator's generation facility from the Department's system notified by the designated Load Despatch Centre for the period/duration indicated by it. However, Department shall agree to take all reasonable steps to minimize the number and duration of such interruptions, curtailments or reductions.

**13: Manpower Deployment by Generator**

- (1) The Generator shall deploy the required experienced, competent and qualified manpower as per Prudent Utility Practices for round the clock efficient generation from the HEPs.
- (2) The Generator when required shall supplement additional manpower, for the manpower so employed by the Generation, preference shall be given to Local Certificate of Identification Holders.

**14: Spare Parts and Consumables**

- (1) The standby spares/ motors/components (other than spares/ stores) available with Department shall be handed over to Generator for replacement during breakdowns to

minimize the breakdown time of the Plant. However, these spares/motors shall always be kept in good working condition through immediate repairs/ replacement of defective spares and their Maintenance of unused spares by Generator to minimize the Plant's downtime. The list of such motors/spares shall be prepared and verified at the time of handing over of the Project. Generator shall build up sufficient inventory of standby items, normal and capital spares of its own over and above the spares available, which is required to minimize the down time of the Plant.

However, extra standby spares/motors/components/ equipment, if required, to minimize the down time shall be arranged by Generator at its own cost. Notwithstanding the above, Generator shall be responsible for providing all routine, preventive breakdown, capital maintenance spares and consumables for which Generator shall build up his own inventory of spares and consumables including standby provisions based on likely replacements during the Period.

- (2) All expenses on replacement/ repair are to be borne by Generator including labour and technical supervision, which may be required. Generator shall contact the vendors/manufacturers on its own for purchase of spare parts from Original Equipment Manufacturers (OEMs. Department may facilitate, if required, to Generator for the purpose of procurement of these spares expeditiously. In case these spares from OEMs are not available, then Generator will explore the possibilities of purchasing the required spare parts from other suitable manufacturers of the same specifications. Sufficient spare parts and consumables will be stored at the Project sites by Generator at all times to minimize breakdown time and consequent generation loss.
- (3) The standby items and spare parts for maintenance of the Project including building shall require following types of inventory and record to be kept by Generator:
  - (a) Consumables;
  - (b) Routine Maintenance spares;
  - (c) Breakdown Maintenance spares;
  - (d) Capital spares; and
  - (e) Standby items.
- (4) Generator may take insurance cover for burglary and theft for his stores at its own cost, if so desired.

#### 15: Tools and Tackles and Measuring Instruments

- (1) Immediately after handing over of the Project to Generator, Department will hand over all such tools and tackles and measuring instruments, which have been supplied with the Project and equipment by the manufacturers. A list of these tools and tackles and measuring instruments shall be prepared at the time of handing over of the Project.
- (2) These tools and tackles and measuring instruments shall be properly maintained and repaired and shall always be kept in good condition by Generator at its own expense. All these tools and tackles and measuring instruments shall be returned in good condition by Generator to Department after the expiry of the Period.
- (3) All other tools and tackles and measuring instruments required for generation from the Plant and its operation and maintenance shall be provided by Generator at its own expense.



**16: Insurance and Communication facility****(1) INSURANCE**

- (a) The Generator shall effect and maintain at its own cost, during the Construction Period and the operation period, such insurances for such maximum sums as may be required under the financing agreements and Applicable Laws, and such insurances as may be necessary or prudent in accordance with Good Industry Practice. The Generator shall also effect and maintain such insurances as may be necessary for mitigating the risks which shall automatically devolve on the Department as a consequence of any act or omission of the Generator during the Term.
- (b) Insurance Cover, without prejudice to the provisions contained in Clause 16 (1) (b), the Generator shall, during the Operations Period, procure and maintain Insurance Cover including but not limited to the following:
  - (i) Loss, damage or destruction of the Project Assets at replacement value;
  - (ii) Comprehensive third-party liability insurance including injury to or death of personnel of the Department or others caused by the Project;
  - (iii) Liability to third parties for goods or property damage;
  - (iv) Workmen's compensation insurance;
  - (v) Any other insurance that may be necessary to protect the Generator and its employees, including all Force Majeure Events that are insurable at commercially reasonable premiums and not otherwise covered in items (a) to (d) above.

16.2 The Generator shall maintain and avail all existing communication facilities such as telephones and wireless systems provided at the Project at its own cost and will pay the bills/license fees regularly to avoid disconnection.

**17: Disputes and Alternate Resolution:**

- (1) Both the Parties herein shall comply with the provisions of the Agreement and discharge their respective obligations. In the event of a disagreement and if the issue is unresolved, a meeting shall be held by designated representatives of the Department and Generator to resolve the issue. In case the issue is still unresolved and/or
- (2) In the event of any dispute and difference that may arise, with the mutual consent of both the parties, the matter will first be referred to arbitrator for settlement under the provisions of the Indian Arbitration and conciliation Act 1996. The Venue of Arbitration shall be at Gangtok. There shall be an arbitral tribunal comprising three arbitrators, of whom each party shall select one, and the third arbitrator shall be appointed by the two arbitrators so selected, and in the event of disagreement between the two arbitrators, the appointment shall be made in accordance with the Rules
- (3) However if the matter is not arrived at mutual consent to refer the matter to arbitrator, in such event the party shall be at liberty to seek appropriate remedy in appropriate forum as provided under section 89 of the code of Civil Procedure 1908 but aggrieved party does not precluded to seek remedies in civil court bearing appointed jurisdiction with the State of Sikkim.
- (4) Till the arbitration award passed by the arbitral tribunal attains finality, the parties shall continue to perform their obligations under this agreement.



**18: Indemnification**

- (1) Generator shall indemnify and keep indemnified Department against all losses and claims for death, injuries or damage to any person or any property whatsoever, which may arise out of or in consequence of the generation from the Project and repairs or maintenance of the Project and structures during the Period and also against all claims, demands, proceedings, damages, costs, charges and expenses whatsoever in respect of or in relation thereto, and such liabilities shall include claims/compensations of third party.

**19: Green Attributes**

- (1) The purchase of energy is a negotiated rate, which is not a preferential tariff and since Generator is responsible for the operation, maintenance, insurance, prevention of loss, damage and upkeep of the Projects at its own costs and therefore, Generator is liable to pay taxes, interest, penalty or other sum upon notice of demand and if for reasons, if a refund is receivable from the State Government, Generator shall be entitled to receive such refunds on account of the Project. Subject to approval of the State Government.
- (2) Generator may also apply at its own costs with any competent authorities for any viable gap funding through green asset management as well as sustainable development program pertaining to the project for which Generator shall be fully responsible financially and may receive such benefits without any liabilities of the State Government. All the green attributes shall be of Generator.
- (3) The Generator may sell power to the third party if the Department defaults in paying for the power being procured as per Clause 21(3). The benefits receivable by Generator from sale of power to a third party or any other green attribute available to Generator at any time during the Term of the Power Purchase Agreement shall be of the Generator.
- (5) The Department shall provide all required documents for the accreditation of the Generator for the issuance of the Renewable Energy Certificate on account of the sale of Deliverable Energy to the third party.

**20: Deemed Generation Benefit**

- (1) Generator shall be eligible for deemed generation benefit for each of the HEP, calculated at the rate of Tariff, in case the power from the Project is available but discharge of power is not available or grid is not available for more than One Thousand (1000) hours in a year.

**21: Billing, Invoicing, terms of payment and payment security****(1) Billing:**

- (a) The Department agree to pay the amount payable under the monthly bill/supplementary bill/invoice raised by the Generator within Thirty (30) days. The said monthly bill/supplementary bill/invoice will be raised as per the Energy Injection Report, provided at Annexure A for each of the HEP.

- (b) From the commencement of supply of power the Department agree to pay to the Generator the monthly Tariff payments subject to the adjustments as per provisions of this Agreement.
  - (c) The Generator shall issue to the Department hard copy of a signed monthly bill/supplementary bill for the immediately preceding month/relevant period between the 5th day and up to the 15th day of the month.
  - (d) Each monthly bill shall include all charges as per this Agreement for the Deliverable Energy supplied for the relevant month based on Energy Inspection Report which shall be binding on both the Parties. The monthly bill amount shall be the product of the Deliverable Energy as per Energy Inspection Report and the Applicable Tariff.
  - (e) The Department agree to sign the monthly bill/supplementary bill within a period of 15 (fifteen) days from the receipt of the monthly bill/supplementary bill and may present the signed bill to the Generator. If the Department requires any clarification/corrections in the said monthly bill/supplementary bill/invoice, it shall do so within 7 (seven) days of receipt of such monthly bill/supplementary bill/invoice and the Generator will reply within a period of 7 (Seven) days thereafter.
  - (f) Such signed monthly bill/supplementary bill/invoice shall be submitted to the scheduled Bank of the Department for release of payment to the Generator within 7 (seven) days of submission of such monthly bill/supplementary bill/invoice to the scheduled Bank by the Generator.
  - (g) The Generator shall have the option to set-off any outstanding amount due to the Generator against free power provided to the Power Department as per Clause 2 (13) of this Agreement, subject to prior notice to the department.
- (2) Late Payment Surcharge:**
- In the event of delay in payment of a monthly bill by the Department beyond the Due Date, a Late Payment Surcharge shall be payable by the Department to the Generator at the rate of 0.5 % per month. The Late Payment Surcharge shall be claimed by the Generator through the supplementary bill.
- (3) Delay in Achieving COD**
- If the generator fail to operate/execute the listed Hydro Electric projects within the stipulated period created by covenant, the State Department reserve the right to forfeit the bank guarantee by the Generator.
- (4) Sale of Deliverable Energy to Third Party:**
- (a) In the event the Generator is unable to recover the amount payable by the Department as per monthly bill/supplementary bill through the Letter of Credit and if such monthly bill/supplementary bills or part thereof remains unpaid for a period of 60 (sixty) days from the Due Date, then notwithstanding anything to the contrary contained in this Agreement, the Generator shall give a notice to the Department requesting to pay the outstanding amount within a period of Thirty (30) days. If the Department fails to pay

- the outstanding amount within a period of thirty (30) days, the Generator shall have the right to sell the whole or part of the Deliverable Energy to any third party.
- (b) Generator has an option to sell the power to the third party within the state or outside the state, and no open access charges till Sikkim periphery shall be payable to the department/any licensee/any other entity of the state.
- (c) In case of sale of deliverable energy to the third parties in accordance with the article 21.4 of this agreement, the department shall, at the request of the generator, be liable for the accreditation from state Nodal agency as required under regulation 5 of the CERC (Terms and conditions of recognition and Issuance of REC for Renewable energy generation, Regulation 2010 (CERC "REC Regulation") within 30 (thirty) days from the date of such request. There shall be no limit on the number of times such accreditation is to be obtained and provided by the department under this agreement. The department through the state nodal agency, shall also assist the generator in obtaining the de-accreditation from the Central Agency appointed under CERC REC Regulations.
- (d) (Notwithstanding anything contained under this agreement, the parties expressly agree that the generator shall be entitled to appropriate the revenues from such third party sales and generator shall have the following rights :
- (i) Non supply of power by the generator to the department and, or , sale to the third party as per the article 21.4a due to delay in payment by the department, shall not give the right to the department to cancel/terminate this agreement.
  - (ii) In case of sale of Power to third party by the generator pursuant to Article 21.4a then the free power offered as per article 2 (13) above, may be sold by the generator to the third party and the revenue earned by selling such free power as per article 2.13 above shall be adjusted against the monthly bill(s) outstanding and receivable from the department.
  - (iii) In case of supply to the third party in open access, if there is under injection/ over injection, penalty as prescribed in state DSM regulations will not be applicable and it is deemed approved that no such penalty/additional penalty is leviable.
  - (iv) The generator is allowed to give schedule of energy generation consolidated of all/any of the 7 projects to SLDC for flow of power.
  - (v) The generator shall have an option, at its sole discretion, to commence supplying deliverable energy to the department any time after serving one month notice to department. The generator can avail this option any number of times during term of this agreement

#### (5) Disputed Bill

- (a) If the Department does not dispute a monthly bill/supplementary bill raised by the Generator within 15 days of receipt of such bill, such bill shall be an undisputed and conclusive Bill.
- (b) If the Department disputes the amount payable (partly or fully) under a monthly bill, the Parties shall try to resolve the dispute amicably. If the Parties fail to amicably resolve the dispute within fifteen (15) days of receipt of bill disagreement notice, the matter shall be referred to Dispute resolution in accordance with Article 17 of this Agreement.

**(6) Terms of Payment and payment security**

- (a) Payment for generation from the Project shall be made by Department to Generator, against monthly Billings / Invoices as per Clause 21 based on the Energy Injection Report as per Annexure A, enclosed herewith.
- (b) **Payment Mechanism.** The Department, agree to establish and maintain a Letter of Credit in favour of the Generator on any schedule Bank where it has a revenue account, for an amount equivalent to 3 (three) months average invoice/expected energy to be injected into the grid. Every Invoice/bill shall be countersigned by designated officer of Department and Generator, which shall be submitted to the scheduled Bank for release of payment to the Generator within (Fifteen) 15 days of submission of technically and commercially clear of claims by Generator.

**22: Rights and Ownership of Property**

- (1) The Power Project including its land, civil structure and plant and equipment are the property of State Government and the same is being provided to the Generator on "as is where basis is". In the event, any part of the land or property on such land is not encumbrance free / vacant, then the Generator shall have the right to remove any such illegal encroachment, squatting etc. on the Project land or property on such land. The Department may facilitate in such removal of illegal encroachment of its land in accordance with the Laws for the time being enforced in the state of Sikkim. The Generator shall be allowed to use the Project land as per the Laws for the time being enforced in the State of Sikkim.
- (2) The Project may be handed over to the Generator within fifteen (15) days from the Execution Date. All the existing employees / labourers / contractors, whether temporary / permanent / contractual or any other type, shall cease to work / occupy the Project(s) prior to such handover to the Generator. Any existing contractor(s) of the Department engaged for the purposes of the operations and maintenance, supply of spares etc. for the purposes of the Project(s) shall continue at the sole discretion of the Generator and Department and such contractor(s) shall have no authority to bind the Generator to retain any such contractor(s).
- (3) **Right of ownership of Power Generated:**  
If the Payment to the Generator is clear as per Clause 21 (1), Department shall have the absolute right on the energy generated from the Project(s). However, in case the Letter of Credit as per Clause 21(2) is exhausted and payment of Generator remains unpaid, the Generator will have the rights as per Clause 21(3)
- (4) **Signs and Barriers:**  
The Generator shall install and display warning signs or barriers at the Properties / Project, provided such signs and barriers are reasonable in their content and size and may remove the same upon termination of this Agreement. Provided, however, that upon removing the same, the Generator shall restore the Properties / Project to the condition it was prior to the installation of such signs or barriers.

**(5) Department's Right of Access to the Properties:**

The Generator agrees that Department and its authorized representatives shall have the rights to access and inspect and comment upon the Project at all reasonable times necessary for the maintenance and operation of the Project for generation.

**(6) Geological and archaeological finds:**

It is expressly agreed that mining, geological or archaeological rights do not form part of the licence granted to the Generator under this Agreement and the Generator hereby acknowledges that it shall not have any mining rights or interest in the underlying minerals, fossils, antiquities, structures or other remnants or things either of particular geological or archaeological interest and that such rights, interest and property on or under the Station Premises shall vest in and belong to the Department or the concerned Government Instrumentality. The Generator shall take all reasonable precautions to prevent its workmen or any other person from removing or damaging such interest or property and shall inform the Department forthwith of the discovery thereof and comply with such instructions as the Department.

**23: Events of Default**

**(f) Events of Default Defined**

The following shall be "Events of Default" under this Agreement and the terms of "Event of Default" or "Default" shall mean, whenever they are used in this Agreement, anyone or more of the following events:

**(a) Events of Default of the Generator**

The occurrence and the continuation of any of the following events, unless any such event occurs as a result of a Force Majeure Event obligations under this Agreement, shall constitute the Event of Default on the part of defaulting Generator:

- (i) Unable to rectify the defaults pursuant to various Clauses of this Agreement;
  - (ii) Becoming insolvent and an order has been passed for liquidation after the corporate insolvency resolution process under Insolvency and Bankruptcy Code, 2016, as amended;
  - (iii) Admitting in writing its inability, to pay its debts as they mature.
- (b) Procedure for cases of Event of Default:**

- (i) Upon the occurrence of an Event of Default as set out in Clause 23(1)(a) above, the affected Party may deliver a notice to the defaulting Party in writing which shall specify in reasonable detail the Event of Default giving rise such notice, and calling upon the defaulting Party to remedy the same within a period of sixty (60) days ("Defaulting Notice").
- (ii) In case of Event of Default as set out in Clause 23(1)(a) above, before the expiry of sixty (60) days, the defaulting Party may request for further extension on reasonable grounds and the affected Party shall provide such extension for curing the default.
- (iii) At the expiry of sixty (60) days from the delivery of the Default Notice or such extended time period as per Clause 23(1)(a) above and unless the Parties have

agreed otherwise, or the Event of Default giving rise to the Default Notice has been remedied, the affected Party may refer as per Clause 17 of this Agreement.

- (iv) Till the parties come to a solution, the Parties shall continue to perform their obligations under this Agreement and the Generator shall have the right to sell Deliverable Energy to any third party within or outside the state as mentioned in Article 21.3 of this Agreement, and no open access charges till Sikkim periphery shall be payable to the Department/any licensee/any other entity of the State.

#### **24: Force Majeure**

##### **(1) Force Majeure Event**

- (a) In this Agreement, "Force Majeure" means occurrence of an event, which prevents the Party from performing its obligations under this Agreement and which act or event:
- (i) is beyond the reasonable control of and not arising out of the fault of the Affected Party;
  - (ii) the Affected Party has been unable to prevent by the exercise of due diligence and reasonable efforts, skill and care, including through expenditure of reasonable sum of money; and
  - (iii) has a materially adverse effect on the Project.

##### **(2) Force Majeure Events**

The Force Majeure Events shall mean one or more of the following acts or events:

- (a) Acts of God or events beyond the reasonable control of the affected Party which could not reasonably have been expected to occur such as extreme adverse weather, pandemic, epidemic such as plague/COVID-19 etc., lightning, heavy rains, cyclones, tempest, whirlwind, landslides, storms, floods, volcanic eruptions or fire (to the extent originating from a source external to the site or not designed for in construction works);
- (b) Radioactive contamination or ionizing radiation;
- (c) An act of war (whether declared or undeclared), invasion, armed conflict or act of foreign enemy, unexpected call up of armed forces, blockade, embargo, blockade, rebellion, riot, religious strife, bombs or civil commotion, sabotage, terrorism;
- (d) Any judgment or order of any court of competent jurisdiction or statutory authority in India made against Generator in any proceedings for the reason failure of Generator to comply with any Applicable Law or Clearances or on account of breach thereof, or of any contract, or enforcement of this Agreement or exercise of any of its rights under this Agreement by;
- (e) Any other event or circumstance of a nature or an act of God analogous to the foregoing.

- (f) Strikes, work to rules, go-slows which are widespread, State-wide and are of political nature;
- (g) Unfeasibility/inability to access project site during construction period of projects due to restrictions placed by the state government or otherwise, disturbances caused due to encroachers etc.

**(3) Notification obligations**

- (a) Except as otherwise expressly provided in the Agreement, all notices or other communications which are required or permitted hereunder shall be in writing and considered as adequately served if delivered personally (under acknowledgement) or sent by registered or certified mail, email, facsimile, telex or telegram addressed as follows

Principal Chief Engineer cum Secretary Power Department Sonam Tshering Marg Gangtok Sikkim-737101	Director Hanuman Ganga Hydroprojects Private Limited Flat No. 1103, 11th Floor, Surya Kiran Building, 19-Kasturba Gandhi Marg NEW DELHI -110001
Email: _____ Ph.: _____	Email: _____ Ph.: _____

**(4) Obligations of Parties in case of Force Majeure event**

- (a) All notices or communications given by registered or certified mail, email, facsimile, telex or telegram shall be confirmed by delivering confirmation letter by hand or by registered mail to the respective address or by return email. All notices shall be deemed delivered upon receipt.
  - (i) The Parties herein shall co-operate and discuss in good faith and will develop the proposal for remedial measures and reasonable alternative measures to remove / remedy Force Majeure event to enable the Performance of the effected Party. Provided however that no Party shall be required under this provision to settle strike or other labour dispute.
  - (ii) Upon the occurrence and during the subsistence of any Force Majeure event, none of the Parties shall be relieved of their liabilities / obligations.

**25: Obligations of the Department**

- (1) The Department agree to, at its own cost and expense, undertake, comply with and perform all its obligations set out in this Agreement or arising hereunder.
- (2) The Department agrees to provide support to the Generator and undertakes to observe, comply with and perform, subject to and in accordance with the provisions of this Agreement and Applicable Laws, the following:

- (a) upon written request from the Generator, and subject to the Generator complying with Applicable Laws, provide reasonable support and assistance to the Generator in procuring the Applicable Permits, including environmental or forest clearances, required from any Government Instrumentality for implementation and operation of the Project;
  - (b) upon written request from the Generator, provide reasonable assistance to the Generator in obtaining access to all necessary infrastructure facilities, including water and electricity at rates and on terms no less favourable to the Generator than those generally available to commercial customers receiving substantially equivalent services;
  - (c) undertake rehabilitation and resettlement of persons affected by construction/operation of the Power Station, save and except as otherwise provided in this Agreement;
  - (c) Support, cooperate with and facilitate the Generator in the implementation and operation of the Project in accordance with the provisions of this Agreement and Laws for the time being enforced in the State of Sikkim.
- (3) During the time of the execution of the Project any hindrance caused by local community/people/individual/political party or their workers etc. shall be resolved with the help of the Department in an expeditious manner in view of the timelines under this Agreement.
- (4) The Department agree to provide and facilitate as per applicable laws, open access to its network for enabling the Generator to supply electricity to Buyers

## **26: Obligations of the Generator**

### **(1) General Obligations**

- (a) Subject to and on the terms and conditions of this Agreement, the Generator shall at its own cost and expense, procure finance for and undertake the design, engineering, procurement, construction, operation and maintenance of the Power Station and observe, fulfil, comply with and perform all its obligations set out in this Agreement or arising hereunder.
- (b) The Generator shall comply with all Applicable Laws/rules/directions/order etc. and other Applicable Permits (including renewals as required) in the performance of its obligations under this Agreement.
- (c) Save and except as otherwise provided in this Agreement or Applicable Laws, as the case may be, the Generator shall, in discharge of all its obligations under this Agreement, conform with and adhere to Good Industry Practice at all times
- (d) The Generator shall, at its own cost and expense, in addition to and not in derogation of its obligations elsewhere set out in this Agreement:
  - (i) make, or cause to be made, necessary applications to the relevant Government Authorities with such particulars as may be required for obtaining Applicable



- Permits, and obtain and keep in force and effect such Applicable Permits in conformity with Applicable Laws;
- (ii) procure, as required, the appropriate proprietary rights, licences, agreements and permissions for materials, methods, processes, know-how and systems used or incorporated into the Power Station;
  - (iii) Perform and fulfil its obligations under the financing agreements;
  - (iv) Make reasonable efforts to maintain harmony and good industrial relations among the personnel employed by it or its Contractors in connection with the performance of its obligations under this Agreement;
  - (v) Ensure and procure that its Contractors comply with all Applicable Permits and Applicable Laws in the performance by them of any of the Generator obligations under this Agreement;
  - (vi) Always act in a manner consistent with the provisions of this Agreement and not cause or fail to do any act, deed or thing, whether intentionally or otherwise, which may in any manner be violative of any of the provisions of this Agreement or Applicable Laws;
  - (vii) procure that all equipment and facilities comprising the Power Station are operated and maintained in accordance with the Specifications and Standards, Maintenance Requirements, Safety Requirements and Good Industry Practice;
  - (viii) Support, cooperate with and facilitate the Department in the implementation of this Agreement;
  - (ix) Comply with the directions of the Commission issued from time to time under the Act.

**(2) Obligations relating to taxes**

The Generator shall pay, at all times during the subsistence of this Agreement, all Taxes, levies, duties, cesses and all other statutory charges payable in respect of the Power Station. Any additional Taxes and duties shall be dealt with as per the Change in Law provision under Clause 27 of this Agreement or imposed by the state government from time to time as the case may be.

**27: Change in Law**

**(1) Definition**

"Change in Law" means the occurrence of any of the following events in India, subsequent to the date of the RFP, and such event(s) has/have an impact on the Projects or on any of the rights and/or obligations of the Parties under any of the agreements:

- (a) the modification, amendment, variation, alteration or repeal of any existing Applicable Law;
- (b) the enactment of any new Applicable Law or the imposition, adoption or issuance of any new Applicable Law by any Government Authority;
- (c) changes in the interpretation, application or enforcement of any Applicable Law by any Government Authority;

- (d) the introduction of a requirement for the Generator to obtain any new Applicable Permit, or any modification to the prevailing conditions prescribed for obtaining an Applicable Permit not owing to any default of the Generator; or
- (e) the modification, amendment, variation, introduction, enactment or repeal of any Tax, resulting in a change in the incidence of Tax liability.

It is clarified that for the purposes of Change in Law, Taxes shall not include taxes on corporate income, any withholding tax on dividends distributed to the shareholders of the Generator or income tax.

**(2) Relief for Change in Law**

- (a) in case Change in Law on account of Clause 27 (1) (a) to (d) above results in the Generator's costs directly attributable to the Project being decreased or increased, during the construction period, or by one percent (1%) of the estimated revenue from the electricity for the Contract Year for which such cost becomes applicable or more, during operation period, the Tariff payment to the Generator shall be appropriately increased or decreased with due approval of Sikkim State Electricity Regulatory Commission and State Government.
- (b) in case of Change in Law on account of Clause 27 (1) (e) above, the Generator shall be allowed an increase / decrease in Tariff of 1 paise / unit for every increase / decrease of Rs. 2 Lakh per MW, pro-rated for amount less than Rs. 2 Lakh per MW, in the Project Cost incurred up to the Commercial Operation Date (COD) upon submission of proof of payment made by the Generator to the concerned Authority and with due approval of Sikkim State Electricity Regulatory Commission and State Government.
- (c) The Department or the Generator, as the case may be, shall provide the other Party with a certificate stating that the adjustment in the Tariff payment is directly as a result of the Change in Law and shall provide supporting documents to substantiate the same and such certificate shall correctly reflect the increase or decrease in costs.
- (d) The revised tariff shall be effective from the date of such Change in Law as approved by Sikkim State Electricity Regulatory Commission, the Parties hereto have caused this Agreement to be executed by their fully authorised officers, and copies delivered to each Party, as of the day and year first above stated.

**28: Assignment and Charges**

**(1) Assignments**

- (a) This Agreement shall be binding upon, and to the benefit of the Parties and their respective successors and permitted assigns. This Agreement shall not be assigned by any Party other than by mutual consent between the Parties to be evidenced in writing.
- (b) Notwithstanding anything contained in clause 28 (1) (a) above, the Generator shall, with written intimation to the Department, create an Encumbrance over the Project(s) and / or transfer or assign its rights, benefits and interests in this Agreement in favour of banks or financial institutions providing financing for the Project(s), provided that, the

Generator shall not be released from liability hereunder as a result of any such Encumbrance / assignment in favour of the lender(s) with the prior approval of the state government.

**(2) Permitted Charges**

Generator shall not create or permit to subsist any encumbrance over all or any of its rights and benefits under this Agreement, other than as set forth in Clause 28 (1)

**29: Disclaimer**

- (1) The Generator acknowledges that prior to the execution of this Agreement, the Generator has, after a complete and careful examination, made an independent evaluation of the, Request for Proposals, Scope of the Project, specifications and standards, site, existing structures, local conditions, physical qualities of ground, subsoil and geology, and any information provided by the Department or obtained, procured or gathered otherwise, and has determined to its satisfaction the accuracy or otherwise thereof and the nature and extent of difficulties, risks and hazards as are likely to arise or may be faced by it in the course of performance of its obligations hereunder. The Department makes no representation whatsoever, express, implicit or otherwise, regarding the accuracy, adequacy, correctness, reliability and/or completeness of any assessment, assumption, statement or information provided by it and the Generator confirms that it shall have no claim whatsoever against the Department in this regard.
- (2) The Generator acknowledges and hereby accepts the risk of inadequacy, mistake or error in or relating to any of the matters set forth in Clause 29 (1) above and hereby acknowledges and agrees that the Department shall not be liable for the same in any manner whatsoever to the Generator, and its Associates or any person claiming through or under any of them.
- (3) The Parties agree that any unintentional mistake or human error in or relating to any of the matters set forth in Clause 29 (1) above shall not vitiate this Agreement, or render it voidable.
- (4) In the event that either Party becomes aware of any mistake or error relating to any of the matters set forth in Clause 29 (1) above, that Party shall immediately notify the other Party, specifying the mistake or error. Provided, however, that a failure on part of the Department to give any notice pursuant to this Clause 29.(4) shall not prejudice the disclaimer of the Department contained in Clause 29 (1) and shall not in any manner shift to the Department any risks assumed by the Generator pursuant to this Agreement.
- (6) Except as otherwise provided in this Agreement, all risks relating to the Project shall be borne by the Generator and the Department shall not be liable in any manner for such risks or the consequences thereof.

**Article 30: Tariff**

- (1) The Tariff for the Projects shall be the negotiated levelised tariff of ₹ 3.91/kWh ("Tariff") for the Term of this Agreement. This Tariff has been arrived at based on the Generic Tariff for Small Hydropower Projects for the North Eastern States for Financial Year 2020-2021 (₹ 5.16/kWh for HEPs below 5 MW and ₹ 4.72/kWh for HEPs

between 5 MW to 25 MW) issued by the Central Electricity Regulatory Commission ("CERC") through their Order dated 21st July 2020 in Petition No. 13/SM/2020 (Suo-Motu). Tariff shall be revised on achieving Commercial Operation Date (COD) in accordance with the wholesale price index (WPI) of electricity in the Country.

**Explanation:** The Tariff determined in accordance with the provisions of Clause 30 (1) shall be revised on achieving COD to reflect 30% (thirty per cent) of the variation in WPI occurring between January 31 immediately preceding the Bid Date and January 31 immediately preceding achieving of COD (the Tariff For the avoidance of doubt and by way of illustration, if (a) the Bid Date occurs in February 2015; (b) COD occurs in May 2019; and (c) WPI increases by 20% (twenty per cent) between January 31, 2015 and January 31, 2019, the Tariff fixed from April 1, 2019 shall be 106% (one hundred and six per cent) of the Present tariff of ₹ 3.91/kWh).

- (2) Any change(s) to the terms of this Agreement, as agreed between the Department and Generator, approved by the Sikkim State Electricity Regulatory Commission requiring a change in the agreed and negotiated Tariff or any revision thereof pursuant to Clause 30(1), Generator will have the option to propose a modified tariff
- (3) The Parties agree that the Tariff provided at Clause 30 (1) has been negotiated considering the incentives / reimbursements / benefits under applicable schemes of the State / Central Government relating to development of small hydropower projects and shall not undergo any change basis such incentives / reimbursements / benefits being availed by the Generator.

### **31: Back Handing over of Power Project by Generator to Department**

- (1) From commencement to completion of this Agreement as a whole i.e., up to the time the Power Project are back handed over to the Department or taken over by Department, the Generator shall take full responsibility for the care thereof and for taking precautions to prevent loss or damage.
- (2) Department's plant and equipment, materials, civil structures etc. shall always be kept in good working order and condition in every respect to the highest accepted industry standard. During Handing over the systems should be in working order and all liabilities cleared

### **32: Performance Security**

- (1) Deposit.
  - (a) The Generator shall, for the performance of its obligations hereunder, provide to the Department no later than 60 (sixty) days from the date of this Agreement, an irrevocable and unconditional guarantee from a Bank for a sum Total equivalent to Rs. 5.0/- Crores (Rupees Five Crores). The Generator may provide a Performance Security hereunder for a period equivalent to 60 days more than the proposed construction period mutually agreed, and shall, no later than 60 (sixty) days prior to the expiry thereof, substitute it by a like Performance Security. The Breakup of Performance Security for each project is as follows.

Sl	Name	Capacity MW	Performance Security Amount Rs	Performance Security Validity in Months
1	Rimbi Stage I HEP	0.6	15,00,000/-	36 months
2	Katez Khoia HEP	2.0	40,00,000/-	36 months
3	Jali Power House HEP	2.1	40,00,000/-	36 months
4	Rongrichu Stage II HEP	2.5	45,00,000/-	36 months
5	Lower Lagyap HEP	12.0	2,30,00,000	36 months
6	Meyong Chu HEP	4.0	75,00,000	36 months
7	Rabom Chu HEP	3.0	55,00,000	36 months

Performance Security for each HEP named above has to be provided separately as above. A sum Total equivalent to Rs.(Five) 5.0/- Crores unconditional guarantee from a Bank.

- (b) Until such time the Performance Security is provided by the Generator pursuant hereto and the same comes into effect, the Bid Security shall remain in force and effect, and upon such provision of the Performance Security pursuant hereto, the Department shall release the Bid Security to the Generator.
- (c) Notwithstanding anything to the contrary contained in this Agreement, in the event Performance Security is not provided by the Generator within a period of 60 (sixty) days from the date of this Agreement, the Department may encash the Bid Security and appropriate the proceeds thereof as Damages, and thereupon all rights, privileges, claims and entitlements of the Generator under or arising out of this Agreement shall be deemed to have been waived by, and to have ceased, and this Agreement, shall be deemed to have been terminated.

**(2) Release of Performance Security**

- (a) The Performance Security shall remain in force and effect until expiry of 3 (three) months after Commercial Operation Date, Project by project Basis and shall be released upon the Performance Guarantee taking effect in accordance with the provisions of Clause 32 (1) (c) Until such time the Performance Guarantee comes into effect, the Performance Security shall remain in force and effect, and upon the Performance Guarantee coming into effect pursuant hereto, the Department shall release the Performance Security to the Generator.

**(3) Performance Guarantee**

- (a) The Generator shall, for the performance of its obligations hereunder during the operation period, be deemed to provide to the Department upon occurrence of COD, an irrevocable and unconditional guarantee pursuant to the provisions of this Article 32 (3), for each of the HEP, Performance Guarantee for a sum approximately equivalent to the amount due and payable by the Department to the Generator for injection of Deliverable Energy in respect of a period of 15 (Fifteen) days from the respective HEP, in accordance with the provisions of this Agreement. The Performance Guarantee shall constitute the first and exclusive charge on all amounts due and payable by the Department to the Generator, and the Department shall be entitled to enforce the Performance Guarantee by making a deduction from the amounts due and

payable by it to the Generator. The Parties agree that no amounts shall be earmarked, frozen or withheld for securing payment of any potential Damages that may fall due at a subsequent date, and only the amounts which shall have become due and payable by the Generator upon occurrence of Generator's Event of Default shall be liable to appropriation hereunder. The Breakup of Performance Guarantee for each of the Project is as follows:

Sl	Name	Capacity MW	Performance Guarantee Amount Rs @60%PLF
1	Rimbi Stage I HEP	0.6	4,31,000
2	Kalez Khola HEP	2.0	14,36,000
3	Jali Power House HEP	2.1	15,08,000
4	Rongnichu Stage II HEP	2.5	17,97,000
5	Lower Lagyap HEP	12.0	86,16,000
6	Meyong Chu HEP	4.0	28,72,000
7	Rabom Chu HEP	3.0	21,54,000

- (b) The Department shall provide advance notice to the Generator before invocation of the Performance Guarantee informing about the reasons for invocation and shall allow the Generator to cure such breach with the period of sixty (60) days from the date of issue of such notice. If the Generator does not cure such breach as required under this Agreement, within a period of sixty (60) days from the date of issue of such notice or within such extended period as requested by Generator, the Department may encash the Performance Guarantee up to the amount due and payable by the Generator.

### 33: MISCELLANEOUS

#### (1) Governing law and jurisdiction

This Agreement shall be construed and interpreted in accordance with and governed by the laws for the time being enforced in the State of Sikkim, and the courts in the State of Sikkim shall have exclusive jurisdiction over matters arising out of or relating to this Agreement.

#### (2) Depreciation

For the purposes of depreciation under Applicable Laws, the property representing the capital investment made by the Generator in the Project Assets shall be deemed to be acquired and owned by the Generator. For the avoidance of doubt, the Department shall not in any manner be liable in respect of any claims for depreciation to be made by the Generator under Applicable Laws.

#### (3) Waiver

Waiver, including partial or conditional waiver, by either Party of any default by the other Party in the observance and performance of any provision of or obligations under this Agreement:

- (a) Shall not operate or be construed as a waiver of any other or subsequent default hereof or of other provisions of or obligations under this Agreement;

(b) Shall not be effective unless it is in writing and executed by a duly authorised representative of the Party; and

(c) Shall not affect the validity or enforceability of this Agreement in any manner.

Neither the failure by either Party to insist on any occasion upon the performance of the terms, conditions and provisions of this Agreement or any obligation there-under nor time or other indulgence granted by a Party to the other Party shall be treated or deemed as waiver of such breach or acceptance of any variation or the relinquishment of any such right hereunder.

**(4) Entire Agreement**

This Agreement and the Schedules together constitute a complete and exclusive statement of the terms of the agreement between the Parties on the subject hereof, and no amendment or modification hereto shall be valid and effective unless such modification or amendment is agreed to in writing by the Parties and duly executed by persons especially empowered in this behalf by the respective Parties. All prior written or oral understandings, offers or other communications of every kind pertaining to this Agreement are abrogated and withdrawn. For the avoidance of doubt, the Parties hereto agree that any obligations of the Generator arising from the Request for Qualification or Request for Proposals, as the case may be, shall be deemed to form part of this Agreement and treated as such.

**(5) Severability**

If for any reason whatsoever, any provision of this Agreement is or becomes invalid, illegal or unenforceable or is declared by any court of competent jurisdiction or any other instrumentality to be invalid, illegal or unenforceable, the validity, legality or enforceability of the remaining provisions shall not be affected in any manner, and the Parties will negotiate in good faith with a view to agreeing to one or more provisions which may be substituted for such invalid, unenforceable or illegal provisions, as nearly as is practicable to such invalid, illegal or unenforceable provision.

**(6) No partnership**

This Agreement shall not be interpreted or construed to create an association, joint venture or partnership between the Parties, or to impose any partnership obligation or liability upon either Party, and neither Party shall have any right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, the other Party.

**(7) Successors and assigns**

This Agreement shall be binding upon, and inure to the benefit of the Parties and their respective successors and permitted assigns.

**(8) Notices**

Any notice or other communication to be given by any Party to the other Party under or in connection with the matters contemplated by this Agreement shall be in writing.

**(9) Language**

All notices required to be given by one Party to the other Party and all other communications, Documentation and proceedings which are in any way relevant to this Agreement shall be in writing and in English language

**(10) Counterparts**

This Agreement may be executed in three counterparts, each of which, when executed and delivered, shall constitute an original of this Agreement

### 34: Term of Agreement

#### (1) Term

34.1.1 Subject to early termination of this Agreement in accordance with its terms, this Agreement shall remain in full force and effect from the date of this Agreement till ~~thirty-five (35) years~~ from the respective Commercial Operation Date of the Projects, unless mutually extended in accordance with the terms of this Agreement of the HEPs ("Term").

#### (2) Extension of Term

(a) Notwithstanding anything to the contrary contained in this Agreement, the Parties agree that upon expiry of the Term, if the Generator performs all the obligations under this Agreement, the Term of all of the Projects may be extended on mutual consent for an equivalent period, subject to the prior approval of the State Government

(b) In the event of the exhaustion of Term of this Agreement, it is agreed that the Technical Partner shall have the first right of refusal to Renovate or Operate or Maintain of the Hydro Power Projects under this agreement.

(c) For the avoidance of doubt, the Parties agree that in the event of an extension hereunder, a fresh agreement shall be entered into, in a set of terms and conditions as agreed by the parties and agreed by the State Government.

#### (3) Power Supply Terms

The State Government agree to pay the Tariff for the Deliverable Energy delivered at the Interconnection Point excluding statutory taxes and duties if applicable, which shall be indicated on the invoice raised on monthly basis to the Department in accordance with this Agreement



THIS AGREEMENT HAS BEEN PREPARED IN TRIPPLICATE IN ENGLISH LANGUAGE  
AND IS SIGNED ON THIS .....2021 BY THEIR DULY  
AUTHORIZED REPRESENTATIVES OF THE PARTIES.

For and on behalf of: Hanuman Ganga Hydroprojects Private Limited	Principal Chief Engineer Cum Secretary to the Government of Sikkim in the Power Department. For and on behalf of: The Governor of Sikkim
Authorized Signatory Name: Designation: Date:	Authorized Signatory Name: Designation: PCE Cum Secretary Date:
Witnessed By	
Name: ..... Signature: .....	
Name: ..... Signature: .....	
Date: ..... Place: .....	

## **Annexure - F**

CERC RE Tariff Order FY 2020-21

134

### **CENTRAL ELECTRICITY REGULATORY COMMISSION NEW DELHI**

**Petition No. 13/SM/2020 (Suo-Motu)**

**Coram: 1. Shri P.K. Pujari, Chairperson  
2. Shri J.S. Jha, Member  
3. Shri Arun Goyal, Member**

**Date of Order: July 21<sup>st</sup>, 2020**

**IN THE MATTER OF**

**Determination of levellised generic tariff for FY 2020-21 under Regulation 8 of the Central Electricity Regulatory Commission (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2020.**

#### **ORDER**

1. The Commission issued the Central Electricity Regulatory Commission (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2020, on 24.06.2020 (hereinafter referred to as "the RE Tariff Regulations"), which provide for terms and conditions and the procedure for determination of tariff of the following categories of Renewable Energy (RE) generating stations:

- a. Small Hydro Projects;
- b. Biomass Power Projects with Rankine Cycle technology;
- c. Non-fossil fuel-based co-generation Project;
- d. Biomass Gasifier based Power Projects;
- e. Biogas based Power Projects

2. As per Regulation 7 of the RE Tariff Regulations, the Commission shall determine project specific tariff for the following RE technologies:

- a. Solar PV power projects, floating solar projects and solar thermal power projects;
- b. Wind power projects (both on-shore and off-shore);

- c. Biomass gasifier-based power projects and biogas based power projects – if a project developer opts for project specific tariff;
- d. Municipal solid waste-based power projects and refuse derived fuel based power projects;
- e. Renewable hybrid energy projects;
- f. Renewable energy with storage projects; and
- g. Any other project based on new renewable energy sources or technologies approved by MNRE.

3. Further, Regulation 8(1) of the RE Tariff Regulations provides as under:

*"8. Petition and proceedings for determination of tariff*

*1) In case of renewable energy projects for which generic tariff has to be determined as per these regulations, the Commission shall determine such generic tariff through a Generic Tariff Order at least one month before the commencement of year for each year of the Control Period:*

*Provided that for first year of Control Period i.e., from 1.7.2020 to 31.3.2021, the Generic Tariff Order shall be determined upon issuance of these regulations."*

4. The Commission, in due discharge of the mandate under Regulation 8(1) of the RE Tariff Regulations, is required to determine the generic tariff of the RE projects for the first year of control period (i.e. FY 2020-21) .

5. For this purpose, the Commission issued a Public Notice on June 28, 2020 along with a proposal for "Determination of levelised generic tariff for FY 2020-21 under Regulation 8 of the Central Electricity Regulatory Commission (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2020, dated June 28, 2020 and invited comments/suggestions from the stakeholders. The last date for submission of comments/suggestions as July 12, 2020.

6. In response this public notice, written comments/suggestions were received from the following stakeholders:

- a) Venika Hydro Projects Pvt. Ltd.
- b) Shree Bhavani Power Projects Pvt. Ltd.

c) Gujarat Biomass Energy Developers Association (GBEDA)

7. The Commission has considered the views/comments/suggestions of the stakeholders and the analysis/decisions of the Commission thereon is presented as under:

**COMMENTS /SUGGESTION RECEIVED AND COMMISSION'S DECISION THERON**

**8. Applicability of Tariff**

**Commission's Proposal**

As regards the applicability of Tariff, Regulation 8 of RE Tariff Regulations specified as under:

***"8. Petition and proceedings for determination of tariff***

*1) In case of renewable energy projects for which generic tariff has to be determined as per these regulations, the Commission shall determine such generic tariff through a Generic Tariff Order at least one month before the commencement of year for each year of the Control Period:*

*Provided that for first year of Control Period i.e., from 1.7.2020 to 31.3.2021, the Generic Tariff Order shall be determined upon issuance of these regulations."*

**Comments Received**

8.1 GBEDA submitted that, in order to encourage sustained development of the RE projects and mitigate uncertainty and safe guard the development of the RE project, it is suggested that applicability of the tariff should sustain for the RE Generating plants, who have attained financial closure for the project, have signed Power Purchase agreement with the utility, and have commenced construction work of the RE Project during the Tariff Period rather than linking it with the commissioning of the project.

**Analysis and Decision**

8.2 As per present RE Tariff Regulations, the applicability of tariff is linked to commissioning of the project, not with financial closure and commencement of construction of the project. Any change in the applicability of tariff will tantamount to amendment in the RE Tariff Regulations and is therefore outside the scope of the present exercise of determination of levelised generic tariff for FY 2020-21.

In view of the above, the Commission continues with the existing approach of linking the applicability of tariff with commissioning of the project in line with the RE Tariff Regulations.

9. **Debt Equity ratio**

Commission's Proposal

As regards Debt Equity Ratio, Regulation 13 (1) of the RE Tariff Regulations, as stipulated below, specifies debt-equity ratio of 70:30 for determination of generic tariff

Comments Received

9.1 GBEDA submitted that, in case the ratio of equity is increased more than 30% for RE Project, the RE Project Developer shall be entitled for higher tariff and the RE Project Developer shall have liberty to approach the Commission for determination of tariff.

Analysis and Decision

9.2 The Commission has approved normative debt equity ratio of 70:30 in line with approach adopted in Tariff Regulations for conventional generators. Further, the generic tariff is determined on normative parameters. The actual equity or debt is relevant only for project specific tariff. As such, the suggestion made is beyond the scope of the present dispensation of generic tariff determination.

10. **Return on Equity**

Commission's Proposal

As regards Rate of Return on Equity, Regulation 16 (2) of the RE Tariff Regulations specifies as under:

**"16. Return on Equity**

*... (2) The normative Return on Equity shall be 14%. The normative Return on Equity shall be grossed up by the latest available notified Minimum Alternate Tax (MAT) rate for the first 20 years of the Tariff Period and by the latest available notified Corporate Tax rate for the remaining Tariff Period."*

For computation of Rate of Return on Equity, MAT Rate of 17.47% and Corporate Tax Rate of 34.94% has been considered. Accordingly, Rate of Return has been computed as 16.96% for first 20 years and 21.52% after 20 years of useful life.

Comments Received

10.1 Venika Hydro Projects Pvt. Ltd. has suggested to consider the Return on Equity of 16% to be grossed up by Minimum Alternate Tax (MAT) Rate.

Analysis and Decision

10.2 The Return on Equity considered for generic tariff determination is as per the RE Tariff Regulations. Any change in the Return of Equity, is outside the scope of the present exercise of determination of levelled generic tariff. In view of the above, the Commission has continued with the rate of return on equity as per provisions of RE Tariff Regulations.

**11. Interest on Loan Capital**Commission's Proposal

Regulation 14(1) of the RE Regulations specifies the rate of interest as equivalent to SBI MCLR (one-year tenor) prevalent during the last available six months plus 200 basis points, for the purpose of determination of generic and project specific tariff for RE projects. The relevant extract of RE Tariff Regulations is reproduced as under:

- "(a) The loans arrived at in the manner indicated in Regulation 13 shall be considered as gross normative loan for calculation for interest on loan.....*  
*(b) For the purpose of computation of tariff, normative interest rate of two hundred (200) basis points above the average State Bank of India Marginal Cost of Funds based Lending Rate (MCLR) (one-year tenor) prevalent during the last available six months shall be considered.*  
*(c) Notwithstanding any moratorium period availed by project developer, the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the annual depreciation allowed."*

Accordingly, the Commission has considered the rate of interest of 9.67% for determination generic tariff for RE projects for FY 2020-21.

Comments Received

11.1 Venika Hydro Projects Pvt. Ltd. and Shree Bhavani Power Projects Pvt Ltd. has suggested to consider the rate of interest as per interest rates stipulated by Indian Renewable Energy Development Agency (IREDA).

Analysis and Decision

11.2 The Rate of Interest considered for generic tariff determination is as per the RE Tariff Regulations. Any change in the Rate of Interest, is outside the scope of the present exercise of determination of levelled generic tariff. In view of the above, the Commission has continued with the rate of interest as per provisions of RE Tariff Regulations.

**12. Interest on Working Capital**Commission's Proposal

Regulation 17 of the RE Tariff Regulations specifies for the working capital requirements of the RE projects as under:

*"(1) The Working Capital requirement in respect of wind power projects, small hydro projects, solar PV power projects, floating solar projects, solar thermal power projects, and renewable energy with storage projects shall be computed in accordance with the following:*

- (a) Operation & Maintenance expenses for one month*
- (b) Receivables equivalent to 45 days of tariff for sale of electricity calculated on normative Capacity Utilisation Factor or Plant Load Factor, as the case may be and*
- (c) Maintenance spares equivalent to 15% of Operation and Maintenance expenses.*

*(2) The Working Capital requirement in respect of biomass power projects with Rankine cycle technology, biogas power projects, biomass gasifier based power projects, non-fossil fuel based co-generation projects, municipal solid waste based power projects and refuse derived fuel based power projects shall be computed in accordance with the following*

- (a) Fuel costs for four months equivalent to normative Plant Load Factor;*
- (b) Operation and Maintenance expense for one month;*
- (c) Receivables equivalent to 45 days of tariff for sale of electricity calculated on the plant load factor; and*
- (d) Maintenance spares equivalent to 15% of Operation and Maintenance expenses.*

*(3) In case of renewable hybrid energy projects, the Working Capital requirement shall be sum of the Working Capital requirement determined as per norms applicable for renewable energy sources, in proportion to their rated capacity in the project*

*(4) Interest on Working Capital shall be at interest rate equivalent to the normative interest rate of three hundred and fifty (350) basis points above the average State Bank of India Marginal Cost of Funds based Lending Rate (MCLR) (one-year tenor) prevalent during the last available six months."*

Receivables equivalent to forty-five (45) days of tariff for sale of electricity calculated on the plant load factor and four months of fuel cost, (as applicable

for biomass power, non-fossil fuel-based co-generation, biomass gasifier and biogas power) have been considered.

Interest rate has been computed as average of State Bank of India MCLR (One Year Tenor) prevalent during the last available six months plus 350 basis points (equivalent to interest rate of 11.17%).

The parameters considered for computation of the interest on working capital are stipulated in following table:

Details	Small Hydro	Biomass Based (Rankine Cycle), Non-Fossil Fuel Generation, Biomass Gasifier and Biogas.
<i>For Fixed Charge</i>		
O&M Expenses (Month)	1 month	1 month
Maintenance Spares (%) of O&M Expenses	15%	15%
Receivables (Days)	45 Days	45 Days
<i>For Variable Charge</i>		
Biomass/Bagasse Stock (Months)	-	4 months
Rate of Interest (%)	11.17%	11.17%

#### Comments Received

12.1 Venika Hydro Projects Pvt. Ltd. has suggested to consider the interest rate as per Indian Renewable Energy Development Agency (IREDA) norms.

#### Analysis and Decision

12.2 The Interest on Working Capital considered for generic tariff determination is as per the RE Tariff Regulations. Any change in the Interest Rate, is outside the scope of the present exercise of determination of levelised generic tariff. In view of the above, the Commission has continued with the rate of interest on working capital as per provisions of RE Tariff Regulations.

### 13. Operation and Maintenance (O&M) Expenses

#### Commission's Proposal

Regulation 19 of the RE Tariff Regulations specifies for O&M expenses in respect of RE projects as following



**"19. Operation and Maintenance Expenses**

(1) *Operation and Maintenance expenses shall be determined for the Tariff Period of the project based on normative O&M expenses specified in these regulations for the first year of the Control Period.*

(2) *Normative O&M expenses allowed during first year of the Control Period i.e., financial year 2020-21 under these Regulations shall be escalated at the rate of 3.84% per annum over the Tariff Period.*

The normative O&M expenses for various RE technologies specified under the relevant provisions of the RE Tariff Regulations are as under:

- (a) **Small Hydro:** Regulation 30 of RE Regulations provide for the normative O&M expenses for small hydro projects for the first year of the Control Period (FY 2020-21), which shall be escalated at the rate of 3.84% per annum over the tariff period for determination of the levelled tariff. Accordingly, the table below represents the O&M cost for SHP as specified by the Commission for FY 2020-21:

Region	Project Size	O&M Expenses FY 2020-21 (Rs Lakh/ MW)
Himachal Pradesh, Uttarakhand, West Bengal, Union Territory of Jammu and Kashmir, Union Territory of Ladakh and North Eastern States	Below 5 MW	41.78
	5 MW to 25 MW	31.34
Other States	Below 5 MW	33.66
	5 MW to 25 MW	24.37

- (b) **Biomass Based:** Regulation 35 of RE Tariff Regulations provides that the normative O&M expenses for Biomass-based projects for first year of the Control Period (FY 2020-21) shall be Rs. 46.42 Lakh per MW
- (c) **Non-Fossil Fuel Cogeneration:** As per Regulation 45 of RE Tariff Regulations, the normative O&M expenses for non-fossil fuel co-generation projects for the first year of the Control Period (FY 2020-21) shall be Rs. 24.52 Lakh per MW.
- (d) **Biomass Gasifier:** As per Regulation 54 of the RE Tariff Regulations, normative O&M expenses for Biomass Gasifier power projects shall be Rs. 61.31 lakh/MW for the first year of Control Period (FY 2020-21).
- (e) **Biogas:** As per Regulation 59 of the RE Tariff Regulations, normative

O&M expenses for biogas shall be Rs. 61.31 Lakh/MW for the first year of Control Period (FY2020-21).

The Commission has considered the normative O&M Expenses as specified in RE Tariff Regulations for different RE technologies as stated above.

Comments Received

13.1 Venika Hydro Projects Pvt. Ltd. has suggested to consider O&M Charges for Other States (5MW – 25MW) as Rs. 35 Lakh/MW at 5% escalation rate as increase in the prices for goods such as Diesel, Cement, Steel, labour etc. due to COVID -19.

Shree Bhavani Power Projects Pvt Ltd. has suggested to analyse inflation data of the past 15 years for determination of escalation rate as consideration of past 5 years data for projection for next 25 years will lead to correlation variation. Further, due to COVID-19, cost of labour will increase. Therefore, it has been suggested to increase the escalation rate or else continue the same escalation rate of 5.72% as in the previous regulations.

Analysis and Decision

13.2 The O&M expenses and the escalation rate for O&M expenses considered for generic tariff determination are as per the RE Tariff Regulations. Any change in this regard is outside the scope of the present exercise of determination of levellised generic tariff. Accordingly, the Commission decides to apply the normative O&M Expenses and escalation rate for O&M expenses as specified in RE Tariff Regulations for different RE technologies.

**14. Gross Calorific Value and Station Heat Rate for Biomass based (rankine cycle) RE Projects**

Commission's Proposal

Regulation 37 of RE Tariff Regulations specifies the calorific value for biomass fuel used as 3100 kcal/kg.

Also, Regulation 34 of RE Tariff Regulations specifies Station Heat Rate of 4200 kcal/kwh for projects using travelling grate boilers and 4125 kcal/kwh for projects with AFBC boilers.

Comments Received

14.1 GBEDA submitted that the value of the calorific value and Station Heat Rate for biomass based plants should be at par with those in individual states. It has been suggested to clearly state that the calorific value and Station Heat Rate determined will be applicable for all the states in the country, specifically for the state of Gujarat as well.

Analysis and Decision

14.2 While determining the generic tariff for the Biomass projects covered within the jurisdiction of the Commission, the Commission has considered the same calorific value and station heat rate for all States as per Regulation 37 and 34 of RE Tariff Regulations.

15. Other comments received on issues of Open Access Charges, Waiver of contract demand and Deviation settlement mechanism are beyond the scope of this Tariff Order. Hence, these suggestions have not been considered by the commission in the present exercise of determination of levellised generic tariff for FY 2020-21.

16. No other comment on any other parameter has been received. Hence, the Commission determines the levellised generic tariff for RE based generating stations for FY 2020-21 as enclosed in Annexure – I to this Order.

Sd/-  
[Arun Goyal]  
MEMBER

Sd/-  
[Indu Shekhar Jha]  
MEMBER

Sd/-  
[P.K. Pujari]  
CHAIRPERSON

New Delhi, 21<sup>st</sup> July 2020

## ANNEXURE I

**LEVELLISED GENERIC TARIFF FOR VARIOUS RENEWABLE ENERGY TECHNOLOGIES FOR FY 2020-21**

1. The levellised generic tariffs for Small Hydro projects, Biomass with Rankine Cycle, Non-fossil fuel-based co-generation, Biomass Gasifier and Biogas based projects, for FY 2020-21 are discussed below.
2. For Solar PV, Floating Solar, Solar Thermal, Wind (onshore and offshore), MSW/RDF, Renewable hybrid energy projects, Renewable energy with storage projects and other emerging renewable energy technologies, the tariff will be project specific. The separate petition is required to be filed for determination of project specific tariff as per Regulation 8 of RE Tariff Regulations.

**A. Useful Life**

3. The clause (hh) of sub-Regulation (1) of Regulation 2 of the RE Tariff Regulations defines 'useful life' in relation to project, including dedicated evacuation system, from the date of commercial operation (COD) of such project, shall mean the following:

Renewable Energy Projects	Years
Small Hydro	40
Biomass power project with Rankine Cycle technology	25
Non-fossil fuel-based co-generation	25
Biomass Gasifier	25
Biogas	25

**B. Control Period**

4. Regulation 5 of the RE Tariff Regulations specifies that the Control Period for determination of tariff for renewable energy projects (RE projects) shall be from 01.07.2020 to 31.03.2023. The provision to Regulation 5 specifies that the tariff determined for the RE projects commissioned during the control period, shall remain valid for the tariff period (Useful life of the project). Accordingly, the tariff determined is for the first year of the control period, which shall be applicable for the Projects commissioned during the period from July 1, 2020 till March 31, 2021.

**C. Tariff Structure**

5. Regulation 9 of the RE Regulations stipulates that the tariff for renewable energy sources shall consist of the following components:
  - a. Return on equity;
  - b. Interest on loan capital;
  - c. Depreciation;
  - d. Interest on working capital; and
  - e. Operation and Maintenance expenses
6. For renewable energy technologies having fuel cost component, like biomass power projects with rankine cycle technology, non-fossil fuel based cogeneration, biomass gasifier based projects and biogas based power project, single part tariff with two components i.e. fixed cost component and fuel cost component, is to be determined.

**D. Tariff Design**

7. In terms of Regulation 10 of the RE Tariff Regulations, the tariff design for renewable energy generating stations is as under:

*"(1) The generic tariff shall be determined, on levelled basis, considering the year of commissioning of the project, for the tariff period of the project:*

*Provided that for renewable energy projects having single part tariff with two components, fixed cost component shall be determined on levelled basis considering the year of commissioning of the project while fuel cost component shall be determined on year of operation basis in the Tariff Order to be issued by the Commission."*

**E. Levelled Tariff**

8. Levelled Tariff is to be calculated by carrying out levellisation for 'useful life' of each technology considering the discount factor for time value of money.

**F. Discount Factor**

9. Regulations 10 (2) specify methodology to calculate discount factor for the

purpose of levelled tariff computation as under:

**"10. Tariff Design**

.....

(2) *For the purpose of levelled tariff computation, discount factor equivalent to post-tax weighted average cost of capital shall be considered."*

10. Accordingly, the discount factor considered for this exercise is equal to the post tax weighted average cost of capital on the basis of normative debt equity ratio (70:30) specified in the Regulations. Considering the normative debt equity ratio and weighted average of the post-tax rates for debt and equity component, the discount factor is calculated.

11. Interest Rate considered for the loan component (i.e., 70% of capital cost) is 9.67%. For equity component (i.e., 30% of capital cost), the rate of Return on Equity (ROE) is considered at post-tax rate of 14%. Further, Corporate tax rate has been considered as 34.94%<sup>1</sup>. Accordingly, the discount factor derived by this method for all technologies is 8.61%  $[(9.67\% \times 0.70) \times (1 - 34.94\%)] + (14.0\% \times 0.30)]$

**G. Capital Cost**

12. Regulation 12 of the RE Tariff Regulations specifies as under:

**"12. Capital Cost**

*Norms for capital cost, as specified in relevant chapters of these regulations, shall be inclusive of land cost, pre-development expenses, all capital work including plant & machinery, civil work, erection, commissioning, financing cost, interest during construction, and evacuation infrastructure up to inter-connection point."*

13. The Commission has considered the normative capital cost as specified in RE Tariff Regulations, applicable for the first year of control period i.e. FY 2020-21, for various RE technologies viz. Small Hydro Power, Biomass Power based on Rankine cycle, Non-Fossil Fuel based Cogeneration, Biomass Gasifier and Biogas based power projects. The RE Technology specific capital cost of RE projects is discussed as under:

<sup>1</sup> Income Tax rate of 30% + 12% surcharge on IT rate + 4% Health and Education cess on IT rate and Surcharge

**Capital cost of Small Hydro Projects (SHP)**

14. Small Hydro Projects for the purpose of the RE Tariff Regulations cover those projects which are located at the sites approved by the State Nodal Agencies/State Governments using new plant and machinery and with installed power plant capacity lower than or equal to 25 MW.
15. The Commission has specified the normative capital cost for small hydro projects for FY 2020-21 in accordance to Regulation 27 (1) as under:

Region	Projects Size	Capital Cost (Rs.Lakh/MW)
Himachal Pradesh, Uttarakhand, West Bengal, Union Territory of Jammu and Kashmir, Union Territory of Ladakh and North Eastern States	Below 5 MW	1100
	5 MW to 25 MW	1100
Others States	Below 5 MW	780
	5 MW to 25 MW	900

**Capital cost of Biomass based Power Projects**

16. The Commission, under Regulation 31 of the RE Tariff Regulations has specified the normative capital cost for Biomass based Power Projects for FY 2020-21, as under:

Biomass Rankine Cycle Projects	Capital Cost (Rs lakh/ MW)
Project [other than rice straw and Juliflora (plantation) based project] with water cooled condenser	559
Project [other than rice straw and Juliflora (plantation) based project] with air cooled condenser	600
For rice straw and Juliflora (plantation) based project with water cooled condenser	611
For rice straw and Juliflora (plantation) based project with air cooled condenser	652

**Capital cost of Non-fossil fuel based Cogeneration Projects**

17. Non-fossil based cogeneration has been defined as the process in which more than one form of energy is produced in a sequential manner by using

biomass. As per Regulation 4(d) of the RE Tariff Regulations, a project to qualify as non-fossil based co-generation project must be using new plant and machinery with topping cycle mode of operation which uses the non-fossil fuel input for power generation and utilizes the thermal energy generated for useful heat applications in other industrial activities simultaneously, and where the sum of useful power output and half of useful thermal output is greater than 45% of the plant's energy consumption during the season.

18. The Commission, under Regulation 39, has specified normative capital cost for the Non-Fossil Fuel Based Cogeneration Projects as Rs. 492 lakh/MW for FY 2020-21. After taking into account the capital subsidy of Rs. 25 Lakh/MW, net project cost works out to be Rs. 467 lakh/MW for FY 2020-21.

**Capital cost of Biomass Gasifier Power Projects**

19. The Commission, under Regulation 50, has specified the normative capital cost for Biomass Gasifier power projects as Rs. 593 lakh/MW for FY 2020-21. After taking into account the capital subsidy of Rs. 150.00 lakh/MW (by Ministry of New and Renewable Energy), net project cost works out to be Rs. 443 lakh/MW for FY 2020-21.

**Capital cost of Biogas based Power Projects**

20. The Commission, under Regulation 56, has specified the normative capital cost for Biogas based power projects as Rs. 1186 lakh/MW for FY 2020-21. After taking into account the capital subsidy of Rs. 300 lakh/MW (by Ministry of New and Renewable Energy), net project cost works out to be Rs. 886 lakh/MW for FY 2020-21.
21. The capital cost for FY 2020-21 in respect of the renewable energy power generating stations is summarized as following:



Renewable Energy Projects	Net Capital Cost Norm for FY 2020- 21 (Rs. lakh/MW)
<b>Small Hydro</b>	
Himachal Pradesh, Uttarakhand, West Bengal, Union Territory of Jammu and Kashmir, Union Territory of Ladakh and North Eastern States (Below 5 MW)	1100
Himachal Pradesh, Uttarakhand, West Bengal, Union Territory of Jammu and Kashmir, Union Territory of Ladakh and North Eastern States (5 MW to 25 MW)	1100
Other States (Below 5 MW)	780
Other States (5 MW to 25 MW)	900
<b>Biomass Based</b>	
Project [other than rice straw and Juliflora (plantation) based project] with water cooled condenser	559
Project [other than rice straw and Juliflora (plantation) based project] with air cooled condenser	600
Rice straw and Juliflora (plantation) based project with water cooled condenser	611
Rice straw and Juliflora (plantation) based project with air cooled condenser	652
<b>Non-fossil fuel co-generation</b>	467
<b>Biomass Gasifier based Power Projects</b>	443
<b>Biogas based Power Projects</b>	886

#### H. Debt-Equity Ratio

22. Sub-Regulation (1) of Regulation 13 of the RE Tariff Regulations, as stipulated below, specifies debt-equity ratio of 70:30 for determination of generic tariff based on suo-motu petition.

23. Based on the debt equity ratio of 70:30, the debt and equity components of the normative-capital cost for determination of tariff for the RE projects have been worked out as following:

Renewable Energy Projects	Debt Amount (Rs. Lakh)	Equity Amount (Rs. Lakh)	Net Capital Cost (Rs. Lakh)
<b>Small Hydro</b>			
Himachal Pradesh, Uttarakhand, West Bengal, Union Territory of Jammu and Kashmir, Union Territory of Ladakh and North Eastern States. (Below 5 MW)	770.00	330.00	1,100.00
Himachal Pradesh, Uttarakhand, West Bengal, Union Territory of Jammu and Kashmir, Union Territory of Ladakh and North Eastern States. ( 5 MW to 25 MW)	770.00	330.00	1,100.00
Other States (Below 5 MW)	546.00	234.00	780.00
Other States (5 MW to 25 MW)	630.00	270.00	900.00
<b>Biomass Based</b>	-	-	
Project [other than rice straw and Juliflora (plantation) based project] with water cooled condenser	391.30	167.70	559.00
Project [other than rice straw and Juliflora (plantation) based project] with air cooled condenser	420.00	180.00	600.00
Rice straw and Juliflora (plantation) based project with water cooled condenser	427.70	183.30	611.00
Rice straw and Juliflora (plantation) based project with air cooled condenser	456.40	195.60	652.00
<b>Non-fossil fuel co-generation</b>	<b>326.90</b>	<b>140.10</b>	<b>467.00</b>
<b>Biomass Gasifier based Power Projects</b>	<b>310.10</b>	<b>132.90</b>	<b>443.00</b>
<b>Biogas based Power Projects</b>	<b>620.20</b>	<b>265.80</b>	<b>886.00</b>

**I Return on Equity**

24. As regards Rate of Return on Equity, sub-Regulation (2) of Regulation 16 of the RE Tariff Regulations specifies as under:

**"16. Return on Equity**

*(2) The normative Return on Equity shall be 14%. The normative Return on Equity shall be grossed up by the latest available notified Minimum Alternate Tax (MAT) rate for the first 20 years of the Tariff Period and by the latest available notified Corporate Tax rate for the remaining Tariff Period."*

25. For computation of Rate of Return on Equity, MAT Rate of 17.47% and Corporate Tax Rate of 34.94% has been considered. Accordingly, Rate of Return has been computed as 16.96% for first 20 years and 21.52% after 20 years of useful life.

**J. Interest on Loan**

26. Sub-Regulation (1) of Regulation 14 of the RE Regulations specifies the loan tenure of 15 years for the purpose of determination of generic and project specific tariff for RE projects, which is reproduced as under:

*"(a) The loans arrived at in the manner indicated in Regulation 13 shall be considered as gross normative loan for calculation for interest on loan.....*

*(b) For the purpose of computation of tariff, normative interest rate of two hundred (200) basis points above the average State Bank of India Marginal Cost of Funds based Lending Rate (MCLR) (one-year tenor) prevalent during the last available six months shall be considered.*

*(c) Notwithstanding any moratorium period availed by project developer, the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the annual depreciation allowed."*

27. The monthly data of MCLR for the last available six months from State Bank of India and the average MCLR is shown in following table:

Effective Date	One (1) Year Tenor MCLR rates <sup>2</sup>
10.12.2019 to 09.01.2020	7.90%
10.01.2020 to 09.02.2020	7.90%
10.02.2020 to 09.03.2020	7.85%
10.03.2020 to 09.04.2020	7.75%
10.04.2020 to 09.05.2020	7.40%
10.05.2020 to 09.06.2020	7.25%
Avg. for last Available 6 months	7.67%

<sup>2</sup> Source: <https://www.sbi.co.in/web/interest-rates/interest-rates/mclr-historical-data>

28. Accordingly, interest rate for loan component is determined as 9.67%.

#### K. Depreciation

29. Regulation 15 of the RE Tariff Regulations specifies for computation of depreciation in the following manner:

*"(1) The value base for the purpose of depreciation shall be the capital cost of the project admitted by the Commission. The salvage value of the project shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the capital cost of the project"*

*Provided that, no depreciation shall be allowed to the extent of grant or capital subsidy received for the project.*

*"(2) Depreciation rate of 4.67% per annum shall be considered for the first 15 years and remaining depreciation shall be evenly spread during remaining Useful Life of the project"*

*"(3) Depreciation shall be computed from the first year of commercial operation:*

*Provided, that for determination of project specific tariff, in case of commercial operation of the project for part of the year, depreciation shall be computed on pro rata basis."*

30. In accordance with the above, the rate of depreciation for the first 15 years is specified as 4.67% and the rate of depreciation from the 16<sup>th</sup> year onwards is to be spread over the balance useful life of the RE project as under:

Details	Small Hydro	Biomass based	Non-Fossil Fuel cogeneration	Biomass Gasifier	Biogas
Useful Life (in years)	40	25	25	25	25
Rate of depreciation for 15 years (%)	4.67	4.67	4.67	4.67	4.67
Rate of depreciation from 16 <sup>th</sup> year onwards (%)	0.80%	2.00%	2.00%	2.00%	2.00%

#### L. Interest on Working Capital

31. Regulation 17 of the RE Tariff Regulations specifies for the working capital requirements of the RE projects as under:

*"(1) The Working Capital requirement in respect of wind power projects, small hydro projects, solar PV power projects, floating solar projects, solar thermal power projects, and renewable energy with storage projects shall be computed in accordance with the following:*

*(d) Operation & Maintenance expenses for one month*

*(e) Receivables equivalent to 45 days of tariff for sale of electricity*

*calculated on normative Capacity Utilisation Factor or Plant Load Factor, as the case may be and*

- (f) Maintenance spares equivalent to 15% of Operation and Maintenance expenses.*

*(2) The Working Capital requirement in respect of biomass power projects with Rankine cycle technology, biogas power projects, biomass gasifier based power projects, non-fossil fuel based co-generation projects, municipal solid waste based power projects and refuse derived fuel based power projects shall be computed in accordance with the following*

- (e) Fuel costs for four months equivalent to normative Plant Load Factor;*  
*(f) Operation and Maintenance expense for one month;*  
*(g) Receivables equivalent to 45 days of tariff for sale of electricity calculated on the plant load factor; and*  
*(h) Maintenance spares equivalent to 15% of Operation and Maintenance expenses.*

*(3) In case of renewable hybrid energy projects, the Working Capital requirement shall be sum of the Working Capital requirement determined as per norms applicable for renewable energy sources, in proportion to their rated capacity in the project*

*(4) Interest on Working Capital shall be at interest rate equivalent to the normative interest rate of three hundred and fifty (350) basis points above the average State Bank of India Marginal Cost of Funds based Lending Rate (MCLR) (one-year tenor) prevalent during the last available six months."*

32. Receivables equivalent to forty five (45) days of tariff for sale of electricity calculated on the plant load factor and four months of fuel cost, (as applicable for biomass power, non-fossil fuel based co-generation, biomass gasifier and biogas power) have been considered.

33. Interest rate has been computed as average of State Bank of India MCLR (One Year Tenor) prevalent during the last available six months plus 350 basis points (equivalent to interest rate of 11.17%).

34. The parameters considered for computation of the interest on working capital are stipulated in following table:

Details	Small Hydro	Biomass Based (Rankine Cycle), Non-Fossil Fuel Generation, Biomass Gasifier and Biogas.
<b>For Fixed Charge</b>		
O&M Expenses (Month)	1 month	1 month
Maintenance Spares (%) of O&M Expenses	15%	15%
Receivables (Days)	45 Days	45 Days
<b>For Variable Charge</b>		
Biomass/Bagasse Stock (Months)	-	4 months
Rate of Interest (%)	11.17%	11.17%

#### M. Operation and Maintenance Expenses

35. Regulation 19 of the RE Tariff Regulations specifies for Operation and Maintenance Expenses (O&M expenses) in respect of RE projects as following

##### "19. Operation and Maintenance Expenses

(1) Operation and Maintenance expenses shall be determined for the Tariff Period of the project based on normative O&M expenses specified in these regulations for the first year of the Control Period."

(2) Normative O&M expenses allowed during first year of the Control Period i.e., financial year 2020-21 under these Regulations shall be escalated at the rate of 3.84% per annum over the Tariff Period."

36. The normative O&M expenses for various RE technologies specified under the relevant provisions of the RE Tariff Regulations are as under:

(f) **Small Hydro:** Regulation 30 of RE Regulations provide for the normative O&M expenses for small hydro projects for the first year of the Control Period (FY 2020-21), which shall be escalated at the rate of 3.84% per annum over the tariff period for determination of the levellised tariff. Accordingly, the table below represents the O&M cost for SHP as specified by the Commission for FY 2020-21:

Region	Project Size	O&M Expenses FY 2020-21 (Rs Lakh/ MW)
Himachal Pradesh, Uttarakhand, West Bengal, Union Territory of Jammu and Kashmir, Union Territory of Ladakh and North Eastern States	Below 5 MW	41.78
	5 MW to 25 MW	31.34
Other States	Below 5 MW	33.66
	5 MW to 25 MW	24.37

- (g) **Biomass Based:** Regulation 35 of RE Tariff Regulations provides that the normative O&M expenses for Biomass-based projects for first year of the Control Period (FY 2020-21) shall be Rs. 46.42 Lakh per MW
- (h) **Non-Fossil Fuel Cogeneration:** As per Regulation 45 of RE Tariff Regulations, the normative O&M expenses for non-fossil fuel co-generation projects for the first year of the Control Period (FY 2020-21) shall be Rs. 24.52 Lakh per MW.
- (i) **Biomass Gasifier:** As per Regulation 54 of the RE Tariff Regulations, normative O&M expenses for Biomass Gasifier power projects shall be Rs. 61.31 lakh/MW for the first year of Control Period (FY 2020-21).
- (j) **Biogas:** As per Regulation 59 of the RE Tariff Regulations, normative O&M expenses for biogas shall be Rs. 61.31 Lakh/MW for the first year of Control Period (FY2020-21).

37. The Commission has considered the normative O&M Expenses as specified in RE Tariff Regulations for different RE technologies as stated above.

#### **N. Capacity Utilisation factor (CUF)/Plant Load Factor (PLF)**

38. Regulation 18 of the RE Tariff Regulations, as defined below, specifies number of hours for calculation of CUF/PLF as 8766.

*"The number of hours in a year for calculation of capacity utilization factor and plant load factor, as the case may be, shall be considered as 8766."*

39. Regulation 28 of the RE Tariff Regulations specifies the norms for Capacity

Utilization Factor (CUF) of units generated in a year in respect of the Small Hydro generating stations as per the details given in the table below:

Renewable Energy Projects	CUF (%)
Small Hydro	
(i) Himachal Pradesh, Uttarakhand, West Bengal, Union Territory of Jammu and Kashmir, Union Territory of Ladakh and North Eastern States.	45%
(ii) Other States	30%

40. In the present Order, the Commission has considered the CUF for small hydro projects as shown in the above Table.

41. Further, the Commission has considered the Plant Load Factor (PLF) for Biomass (Rankine Cycle), Biomass Gasifier, and Biogas based renewable energy generating stations as specified in Regulations 32, 51 and 57 of the RE Tariff Regulations, which are given in the following table:

Renewable Energy Projects	PLF (%)
(i) Biomass Based (Rankine Cycle)	80%
(ii) Biomass Gasifier	85%
(iii) Biogas	90%

42. Further, as regards Non-fossil Fuel based Co-generation projects, the Commission has considered PLF as specified in Regulation 40, which is given in the following Table:

States	PLF (%)
(i) Uttar Pradesh & Andhra Pradesh	45%
(ii) Tamil Nadu & Maharashtra	60%
(iii) Other States	53%

#### O. Auxillary Consumption

43. The Commission has considered the Auxillary Consumption as specified



Regulations 29, 33, 41, 52 and 58 of the RE Tariff Regulations, which is shown in the following Table:

Renewable Energy Projects	Auxiliary Consumption (%)
(i) Small Hydro	1.00%
(ii) Biomass Based Projects	
a) Using Water Cooled Condenser	10.00%
b) Using Air Cooled Condenser	12.00%
(iii) Non-Fossil Fuel Generation	8.50%
(iv) Biomass Gasifier	10.00%
(v) Biogas based	12.00%

**P. Station Heat Rate**

44. The Station Heat Rates (SHR) specified under Regulations 34 and 42 of the RE Tariff Regulations for biomass and non-fossil fuel based co-generation projects are as under:

Renewable Energy Projects	SHR (kcal/Kwh)
Biomass based	(a) 4200: For projects using travelling grate boilers (b) 4125: For Projects using AFBC boilers
Non-Fossil Fuel based Cogeneration	3600

**Q. Fuel Parameters**

**(a) Fuel Mix**

45. Regulation 53 of the RE Tariff Regulations specifies that the normative specific fuel consumption shall be 1.25 kg per kWh for Biomass Gasifier based power project.

46. Also, Regulation 60 of the RE Tariff Regulations specifies that the normative

specific fuel consumption shall be 3 kg of substrate mix per kWh for Biogas based power project.

47. The Commission has considered the fuel mix for Biomass Gasifier based power project and Biogas based power projects as specified above.

**(b) Calorific Value**

48. The Commission has considered the calorific value for biomass fuel used as 3100 kcal/kg as per Regulation 37 of the RE Tariff Regulations.

49. Also, the gross calorific value for bagasse in case of non-fossil fuel co-generation projects has been considered as 2250 kCal/kg as per Regulation 43 of RE Tariff Regulations, and for the use of biomass fuels other than bagasse, the calorific value as specified in above Para shall be applicable.

**(c) Fuel Cost**

50. The Commission, as per Regulation 38 of the RE Tariff Regulations, has specified the Biomass fuel price for first year of the Control Period (i.e. FY 2020-21) in the table below:

<b>States</b>	<b>Biomass Price for FY 2020-21 (Rs/ MT)</b>
Andhra Pradesh	3,326
Haryana	3,786
Maharashtra	3,872
Punjab	3,960
Rajasthan	3,305
Tamil Nadu	3,272
Telangana	3,326
Uttar Pradesh	3,384
Other States	3,557

51. The Commission, as per Regulation 44 (1) of the RE Tariff Regulations, has specified the Bagasse fuel price during first year of the Control Period (i.e. FY 2020-21) in the following table:

<b>States</b>	<b>Bagasse Price for FY 2020-21 (Rs/ MT)</b>
Andhra Pradesh	1,878
Haryana	2,671
Maharashtra	2,632

States	Bagasse Price for FY 2020-21 (Rs/ MT)
Punjab	2,351
Tamil Nadu	2,023
Telangana	1,677
Uttar Pradesh	2,095
Other States	2,274

52. As per Regulation 55 of the RE Tariff Regulations, the biomass fuel price for Biomass gasifier based power projects applicable for FY 2020-21 shall be the same as for biomass based power projects (Rankine cycle), as determined in accordance with Regulation 38 and as mentioned in Clause 50 of this Order

53. The Commission, as per Regulation 61 of the RE Tariff Regulations, has specified the feed stock price for Biogas based power projects during first year of the Control Period (FY 2020-21) at Rs.1422/MT.

#### **R. Subsidy or Incentives by State/Central Government**

54. Regulation 22 (1) of the RE Tariff Regulations provides as under:

*"The Commission shall take into consideration any incentive, grant or subsidy from the Central or State Government, including accelerated depreciation benefit if availed by the project while determining the tariff under these Regulations.*

*Provided that the following principles shall be considered for ascertaining income tax benefit on account of accelerated depreciation, if availed, for the purpose of tariff determination:"*

*"1) Assessment of benefit shall be based on normative capital cost, accelerated depreciation rate and corporate income tax rate as per relevant provisions under Income Tax Act as amended from time to time*

*2) Capitalization of Renewable energy projects during second half of the fiscal year*

*3) Per unit benefit shall be derived on levelised basis at discount factor equivalent to weighted average cost of capital"*

55. Capital subsidy provided by the Government as per prevailing scheme/policy has already been considered, while considering the capital cost of the project.

56. In terms of the above regulation, for the projects availing the benefit of accelerated depreciation, an applicable Corporate tax rate of 34.94% has been considered. For the purpose of determining net depreciation benefits, depreciation @ 5.28% as per straight line method (Book depreciation as per

Companies Act, 1956) has been compared with depreciation as per Income Tax Act i.e. 40% of the written down value method. Moreover, additional 20% depreciation in the initial year is proposed to be extended to new assets acquired by power generation companies vide amendment in the section 32, sub-section (1) clause (iia) of the Income Tax Act.

57. Depreciation for the first year has been calculated at the rate of 50% of accelerated depreciation (40%) and 50% of additional depreciation (20%) (as project is capitalized during the second half of the financial year as per proviso to sub regulation (1) of Regulation 22). Income tax benefits of accelerated depreciation and additional depreciation, have been worked out as per normal tax rate on the net depreciation benefit. Per unit levelised accelerated depreciation benefit has been computed considering the post-tax weighted average cost of capital as discount factor. Accelerated depreciation benefit has been computed as per existing provisions of Income Tax Act.

58. In the light of the discussion made in the preceding paragraphs, the generic tariffs of different RE projects for the financial year 2020-21 have been arrived as follows:

#### **GENERIC TARIFF FOR RE TECHNOLOGIES FOR FY 2020-21**

59. The Generic Tariff for RE Technologies computed for FY 2020-21 is shown in the subsequent Tables:

Particulars	Levelised Total Tariff (FY 2020-21) (Rs/kWh)
<b>Small Hydro Power Project</b>	
Himachal Pradesh, Uttarakhand, West Bengal, North Eastern States and Union Territories of Jammu and Kashmir & Ladakh. (Below 5 MW)	5.16
Himachal Pradesh, Uttarakhand, West Bengal, North Eastern States and Union Territories of Jammu and Kashmir & Ladakh. (5 MW to 25 MW)	4.72
Others States (Below 5 MW)	5.74
Others States (5 MW to 25 MW)	5.71

State	Levelling Fixed Cost	Variable Cost (FY 2020-21)	Applicable Tariff Rates (FY 2020-21)	Benefit of Accelerated Depreciation (if availed)	Net levelled tariff (upon adjusting for Accelerated Depreciation Benefit) (if availed)
	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)
<b>Biomass Power Projects [other than Rice Straw and Juliflora (plantation) based project] with Water Cooled Condenser and travelling grate boiler</b>					
AP	2.61	5.01	7.62	0.12	7.50
Haryana	2.57	5.70	8.37	0.12	8.25
Maharashtra	2.68	5.83	8.51	0.12	8.39
Punjab	2.69	5.96	8.65	0.12	8.53
Rajasthan	2.61	4.98	7.58	0.12	7.47
Tamil Nadu	2.60	4.93	7.53	0.12	7.41
Telangana	2.61	5.01	7.62	0.12	7.50
UP	2.62	5.09	7.71	0.12	7.60
Others	2.64	5.35	7.99	0.12	7.88

State	Levelling Fixed Cost	Variable Cost (FY 2020-21)	Applicable Tariff Rates (FY 2020-21)	Benefit of Accelerated Depreciation (if availed)	Net levelled tariff (upon adjusting for Accelerated Depreciation Benefit) (if availed)
	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)
<b>Biomass Power Projects [other than Rice Straw and Juliflora (plantation) based project] with Air Cooled Condenser and travelling grate boiler</b>					
AP	2.75	5.12	7.88	0.13	7.75
Haryana	2.81	5.83	8.64	0.13	8.51
Maharashtra	2.82	5.96	8.78	0.13	8.65
Punjab	2.83	6.10	8.93	0.13	8.80
Rajasthan	2.75	5.09	7.84	0.13	7.71
Tamil Nadu	2.75	5.04	7.79	0.13	7.66
Telangana	2.75	5.12	7.88	0.13	7.75
UP	2.76	5.21	7.97	0.13	7.84
Others	2.78	5.48	8.26	0.13	8.13

State	Levelling Fixed Cost	Variable Cost (FY 2020-21)	Applicable Tariff Rates (FY 2020-21)	Benefit of Accelerated Depreciation (if availed)	Net levelled tariff (upon adjusting for Accelerated Depreciation Benefit) (if availed)
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State	Levelling Fixed Cost	Variable Cost (FY 2020-21)	Applicable Tariff Rates (FY 2020-21)	Benefit of Accelerated Depreciation (if availed)	Net levellised tariff (upon adjusting for Accelerated Depreciation Benefit) (if availed)
	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)
<b>Biomass Power Projects [Rice Straw and Juliflora (plantation) based project] with Water Cooled Condenser and travelling grate boiler</b>					
AP	2.72	5.01	7.72	0.13	7.60
Haryana	2.77	5.70	8.47	0.13	8.34
Maharashtra	2.78	5.83	8.61	0.13	8.48
Punjab	2.79	5.96	8.75	0.13	8.63
Rajasthan	2.71	4.98	7.69	0.13	7.56
Tamil Nadu	2.71	4.93	7.63	0.13	7.51
Telangana	2.72	5.01	7.72	0.13	7.60
UP	2.72	5.09	7.82	0.13	7.69
Others	2.74	5.35	8.10	0.13	7.97

State	Levelling Fixed Cost	Variable Cost (FY 2020-21)	Applicable Tariff Rates (FY 2020-21)	Benefit of Accelerated Depreciation (if availed)	Net levellised tariff (upon adjusting for Accelerated Depreciation Benefit) (if availed)
	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)
<b>Biomass Power Projects [Rice Straw and Juliflora (plantation) based project] with Air Cooled Condenser and travelling grate boiler</b>					
AP	2.86	5.12	7.98	0.14	7.85
Haryana	2.92	5.83	8.75	0.14	8.61
Maharashtra	2.93	5.96	8.89	0.14	8.75
Punjab	2.94	6.10	9.04	0.14	8.90
Rajasthan	2.86	5.09	7.95	0.14	7.81
Tamil Nadu	2.86	5.04	7.89	0.14	7.76
Telangana	2.86	6.12	7.98	0.14	7.85
UP	2.87	5.21	8.08	0.14	7.94
Others	2.89	5.48	8.37	0.14	8.23

State	Levelling Fixed Cost	Variable Cost (FY 2020-21)	Applicable Tariff Rates (FY 2020-21)	Benefit of Accelerated Depreciation (if availed)	Net levellised tariff (upon adjusting for Accelerated Depreciation Benefit) (if availed)
	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)
<b>Biomass Power Projects [other than Rice Straw and Julliflora (plantation) based project] with Water Cooled Condenser and AFBC boiler</b>					
AP	2.60	4.92	7.52	0.12	7.40
Haryana	2.66	5.60	8.26	0.12	8.14
Maharashtra	2.67	5.72	8.39	0.12	8.28
Punjab	2.68	5.85	8.53	0.12	8.42
Rajasthan	2.60	4.89	7.49	0.12	7.37
Tamil Nadu	2.60	4.84	7.43	0.12	7.32
Telangana	2.60	4.92	7.52	0.12	7.40
UP	2.81	5.00	7.81	0.12	7.50
Others	2.63	5.26	7.89	0.12	7.77

State	Levelling Fixed Cost	Variable Cost (FY 2020-21)	Applicable Tariff Rates (FY 2020-21)	Benefit of Accelerated Depreciation (if availed)	Net levellised tariff (upon adjusting for Accelerated Depreciation Benefit) (if availed)
	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)
<b>Biomass Power Projects [other than Rice Straw and Julliflora (plantation) based project] with Air Cooled Condenser and AFBC boiler</b>					
AP	2.75	5.03	7.78	0.13	7.65
Haryana	2.80	5.72	8.53	0.13	8.40
Maharashtra	2.81	5.85	8.67	0.13	8.54
Punjab	2.82	5.99	8.81	0.13	8.69
Rajasthan	2.74	5.00	7.74	0.13	7.62
Tamil Nadu	2.74	4.95	7.69	0.13	7.56
Telangana	2.75	5.03	7.78	0.13	7.65
UP	2.75	5.12	7.87	0.13	7.74
Others	2.78	5.38	8.15	0.13	8.03

State	Levelling Fixed Cost	Variable Cost (FY 2020-21)	Applicable Tariff Rates (FY 2020-21)	Benefit of Accelerated Depreciation (if availed)	Net levelled tariff (upon adjusting for Accelerated Depreciation Benefit) (if availed)
	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)
<b>Biomass Power Projects [Rice Straw and Julliflora (plantation) based project] with Water Cooled Condenser and AFBC boiler</b>					
AP	2.71	4.92	7.63	0.13	7.50
Haryana	2.76	5.60	8.36	0.13	8.23
Maharashtra	2.77	5.72	8.50	0.13	8.37
Punjab	2.78	5.85	8.64	0.13	8.51
Rajasthan	2.71	4.89	7.59	0.13	7.47
Tamil Nadu	2.70	4.84	7.54	0.13	7.41
Telangana	2.71	4.92	7.63	0.13	7.50
UP	2.72	5.00	7.72	0.13	7.59
Others	2.74	5.26	8.00	0.13	7.87

State	Levelling Fixed Cost	Variable Cost (FY 2020-21)	Applicable Tariff Rates (FY 2020-21)	Benefit of Accelerated Depreciation (if availed)	Net levelled tariff (upon adjusting for Accelerated Depreciation Benefit) (if availed)
	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)
<b>Biomass Power Projects [Rice Straw and Julliflora (plantation) based project] with Air Cooled Condenser and AFBC boiler</b>					
AP	2.86	5.03	7.88	0.14	7.75
Haryana	2.91	5.72	8.64	0.14	8.50
Maharashtra	2.92	5.85	8.78	0.14	8.64
Punjab	2.93	5.99	8.92	0.14	8.78
Rajasthan	2.85	5.00	7.85	0.14	7.71
Tamil Nadu	2.85	4.95	7.80	0.14	7.66
Telangana	2.86	5.03	7.88	0.14	7.75
UP	2.85	5.12	7.98	0.14	7.84
Others	2.88	5.38	8.26	0.14	8.12



State	Levelling Fixed Cost	Variable Cost (FY 2020-21)	Applicable Tariff Rates (FY 2020-21)	Benefit of Accelerated Depreciation (if availed)	Net levellised tariff (upon adjusting for Accelerated Depreciation Benefit) (if availed)
	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)
<b>Bagasse Based Co-generation Project</b>					
AP	2.91	3.28	6.20	0.17	6.03
Haryana	2.63	4.67	7.30	0.14	7.15
Maharashtra	2.36	4.60	6.96	0.13	6.83
Punjab	2.58	4.11	6.69	0.14	6.55
Tamil Nadu	2.27	3.54	5.81	0.13	5.68
Telangana	2.51	3.26	5.80	0.14	5.65
UP	2.94	3.66	6.61	0.17	6.44
Others	2.57	3.98	6.55	0.14	6.40

State	Levelling Fixed Cost	Variable Cost (FY 2020-21)	Applicable Tariff Rates (FY 2020-21)	Benefit of Accelerated Depreciation (if availed)	Net levellised tariff (upon adjusting for Accelerated Depreciation Benefit) (if availed)
	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)	(Rs/kWh)
<b>Biomass Gasifier Power Project</b>					
AP	2.55	4.62	7.17	0.09	7.08
Haryana	2.60	5.28	7.86	0.09	7.77
Maharashtra	2.61	5.38	7.99	0.09	7.90
Punjab	2.62	5.50	8.12	0.09	8.03
Rajasthan	2.55	4.59	7.14	0.09	7.05
Tamil Nadu	2.54	4.54	7.09	0.09	7.00
Telangana	2.55	4.62	7.17	0.09	7.08
UP	2.56	4.70	7.26	0.09	7.17
Others	2.58	4.94	7.52	0.09	7.43
<b>Biogas based generation</b>					
Biogas	3.31	4.85	8.16	0.17	7.99

60. The detailed computations for the generic tariff for various RE technologies have been enclosed with this draft Order as per the details given hereunder:

Sl. No.	Renewable Energy Projects	Annexure
A	<b>Small Hydro Power Projects</b>	
	<i>Projects Less than 5 MW for HP, Uttarakhand, West Bengal, Jammu and Kashmir, Ladakh and NE States</i>	Annexure 1A
	<i>Projects between 5 MW and 25 MW for HP, Uttarakhand, West Bengal, Jammu and Kashmir, Ladakh and NE States</i>	Annexure 1B
	<i>Projects less than 5 MW for other States</i>	Annexure 1C
	<i>Projects between 5 MW and 25 MW for other states</i>	Annexure 1D
B.1	<b>Biomass Power Projects [other than Rice Straw and Juliflora (plantation) based project] with Water Cooled Condenser and using Travelling Grate</b>	
	Andhra Pradesh	Annexure 2.1A
	Haryana	Annexure 2.1B
	Maharashtra	Annexure 2.1C
	Punjab	Annexure 2.1D
	Rajasthan	Annexure 2.1E
	Tamil Nadu	Annexure 2.1F
	Telangana	Annexure 2.1G
	Uttar Pradesh	Annexure 2.1H
	Others	Annexure 2.1I
B.2	<b>Biomass Power Projects [other than Rice Straw and Juliflora (plantation) based project] with Air Cooled Condenser and using Travelling Grate boiler</b>	
	Andhra Pradesh	Annexure 2.2A
	Haryana	Annexure 2.2B
	Maharashtra	Annexure 2.2C
	Punjab	Annexure 2.2D
	Rajasthan	Annexure 2.2E
	Tamil Nadu	Annexure 2.2F
	Telangana	Annexure 2.2G
	Uttar Pradesh	Annexure 2.2H
	Others	Annexure 2.2I

Sl. No.	Renewable Energy Projects	Annexure
B.3	<b>Biomass Power Projects [Rice Straw and Juliflora (plantation) based project] with Water Cooled Condenser and using Travelling Grate boiler</b>	
	Andhra Pradesh	Annexure 2.3A
	Haryana	Annexure 2.3B
	Maharashtra	Annexure 2.3C
	Punjab	Annexure 2.3D
	Rajasthan	Annexure 2.3E
	Tamil Nadu	Annexure 2.3F
	Telangana	Annexure 2.3G
	Uttar Pradesh	Annexure 2.3H
	Others	Annexure 2.3I
B.4	<b>Biomass Power Projects [Rice Straw and Juliflora (plantation) based project] with Air Cooled Condenser and using Travelling Grate boiler</b>	
	Andhra Pradesh	Annexure 2.4A
	Haryana	Annexure 2.4B
	Maharashtra	Annexure 2.4C
	Punjab	Annexure 2.4D
	Rajasthan	Annexure 2.4E
	Tamil Nadu	Annexure 2.4F
	Telangana	Annexure 2.4G
	Uttar Pradesh	Annexure 2.4H
	Others	Annexure 2.4I
B.5	<b>Biomass Power Projects [other than Rice Straw and Juliflora (plantation) based project] with Water Cooled Condenser and using AFBC boiler</b>	
	Andhra Pradesh	Annexure 2.5A
	Haryana	Annexure 2.5B
	Maharashtra	Annexure 2.5C
	Punjab	Annexure 2.5D
	Rajasthan	Annexure 2.5E
	Tamil Nadu	Annexure 2.5F
	Telangana	Annexure 2.5G
	Uttar Pradesh	Annexure 2.5H
	Others	Annexure 2.5I
B.6	<b>Biomass Power Projects [other than Rice Straw and Juliflora (plantation) based project] with Air</b>	

Sl. No.	Renewable Energy Projects	Annexure
	<b>Cooled Condenser and using AFBC</b>	
	Andhra Pradesh	Annexure 2.6A
	Haryana	Annexure 2.6B
	Maharashtra	Annexure 2.6C
	Punjab	Annexure 2.6D
	Rajasthan	Annexure 2.6E
	Tamil Nadu	Annexure 2.6F
	Telangana	Annexure 2.6G
	Uttar Pradesh	Annexure 2.6H
	Others	Annexure 2.6I
B.7	<b>Biomass Power Projects [Rice Straw and Julliflora (plantation) based project] with Water Cooled Condenser and using AFBC boiler</b>	
	Andhra Pradesh	Annexure 2.7A
	Haryana	Annexure 2.7B
	Maharashtra	Annexure 2.7C
	Punjab	Annexure 2.7D
	Rajasthan	Annexure 2.7E
	Tamil Nadu	Annexure 2.7F
	Telangana	Annexure 2.7G
	Uttar Pradesh	Annexure 2.7H
	Others	Annexure 2.7I
B.8	<b>Biomass Power Projects [Rice Straw and Juliflora (plantation) based project] with Air Cooled Condenser and using AFBC boiler</b>	
	Andhra Pradesh	Annexure 2.8A
	Haryana	Annexure 2.8B
	Maharashtra	Annexure 2.8C
	Punjab	Annexure 2.8D
	Rajasthan	Annexure 2.8E
	Tamil Nadu	Annexure 2.8F
	Telangana	Annexure 2.8G
	Uttar Pradesh	Annexure 2.8H
	Others	Annexure 2.8I
C	<b>Non-Fossil Fuel Based Cogeneration</b>	
	Andhra Pradesh	Annexure 3A
	Haryana	Annexure 3B

<b>Sl. No.</b>	<b>Renewable Energy Projects</b>	<b>Annexure</b>
	<i>Maharashtra</i>	<i>Annexure 3C</i>
	<i>Punjab</i>	<i>Annexure 3D</i>
	<i>Tamil Nadu</i>	<i>Annexure 3E</i>
	<i>Telangana</i>	<i>Annexure 3F</i>
	<i>Uttar Pradesh</i>	<i>Annexure 3G</i>
	<i>Others</i>	<i>Annexure 3H</i>
<b>D</b>	<b>Biomass Gasifier Power Projects</b>	
	<i>Andhra Pradesh</i>	<i>Annexure 4A</i>
	<i>Haryana</i>	<i>Annexure 4B</i>
	<i>Maharashtra</i>	<i>Annexure 4C</i>
	<i>Punjab</i>	<i>Annexure 4D</i>
	<i>Rajasthan</i>	<i>Annexure 4E</i>
	<i>Tamil Nadu</i>	<i>Annexure 4F</i>
	<i>Telangana</i>	<i>Annexure 4G</i>
	<i>Uttar Pradesh</i>	<i>Annexure 4H</i>
	<i>Others</i>	<i>Annexure 4I</i>
<b>E</b>	<b>Biogas Power Projects</b>	<i>Annexure 5A</i>

Assumption for Small Hydro based Project Parameters			Himachal Pradesh, Uttarakhand, WB, UT of J&K, Ladakh, North Eastern States - <=5MW		
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameter
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1
			Aux Consumption	%	1.00%
			Capacity Utilization Factor	%	45%
			Useful Life	Years	40
2	Project Cost	Capital Cost	Normative Capital Cost	Rs. Lakh/MW	1100.00
			Capital Cost	Rs. Lakh	1100
			Capital Subsidy	Rs. Lakh	0
			Net Capital Cost	Rs. Lakh	1100.00
3	Financial Assumption	Debt Equity	Tariff Period	Years	40
			Debt	%	70%
			Equity	%	30%
		Debt Component	Total Debt Amount	Rs. Lakh	770.00
			Total Equity Amount	Rs. Lakh	330.00
			Loan Amount	Rs. Lakh	770.00
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.87%
		Equity Component	Equity Amount	Rs. Lakh	330.00
			Return on Equity for First 20 years	% p.a	16.96%
			Return on Equity after 20 years	% p.a	21.52%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
		Depreciation	Depreciation Rate for 1st 15 years	%	4.67%
			Depreciation Rate 16th years onwards	%	0.80%
4	O&M Expenses	Normative O&M expense		Rs. Lakh/MW	41.78
		O&M expenses p.a		Rs. Lakh	41.78
		Escalation factor		%	3.84%
5	Working Capital	O&M expenses p.a		Month	1
		Maintenance Spares	% of O&M expenses	%	15.00%
		Receivables		Days	15
		Interest on Working Capital		% per annum	11.17%
6	Generation and Sale of Power	Number of Hours		Hours	8768.00

CERC RE Tariff Order FY 2020-21

Under the Tariff Order

Sl. No.	Category	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100		
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Sl. No.	Category	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100		

Under the Tariff Order

Sl. No.	Category	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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Under the Tariff Order

Sl. No.	Category	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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## Annexure 1B

Assumption for Small Hydro based Project Parameters			Himachal Pradesh, Uttarakhand, WB, UT of J&K, Ladakh, North Eastern States - >5 MW upto 25MW		
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameter
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1
			Aux Consumption	%	1.00%
			Capacity Utilization Factor	%	45%
			Useful Life	Years	40
2	Project Cost	Capital Cost	Normative Capital Cost	Rs. Lakh/MW	1100.00
			Capital Cost	Rs. Lakh	1100
			Capital Subsidy	Rs. Lakh	0
			Net Capital Cost	Rs. Lakh	1100.00
3	Financial Assumption	Debt Equity	Tariff Period	Years	40
			Debt	%	70%
			Equity	%	30%
		Debt Component	Total Debt Amount	Rs. Lakh	770.00
			Total Equity Amount	Rs. Lakh	330.00
			Loan Amount	Rs. Lakh	770.00
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	Equity Amount	Rs. Lakh	330.00
			Return on Equity for First 20 years	% p.a	16.96%
			Return on Equity after 20 years	% p.a	21.52%
			Discount Rate	%	8.51%
		Tax Rate	Corporate Tax Rate	%	34.54%
			MAT Rate	%	17.47%
		Depreciation	Depreciation Rate for 1st 15 years	%	4.67%
			Depreciation Rate 16th years onwards	%	0.60%
4	O&M Expenses	Normative O&M expense		Rs. Lakh/MW	31.34
		O&M expenses p.a		Rs. Lakh	31.34
		Escalation factor		%	3.64%
5	Working Capital	O&M expenses p.a		Month	1
		Maintenance Spares	% of O&M expenses	%	15.00%
		Receivables		Days	15
		Interest on Working Capital		% per annum	11.17%
6	Generation and Sale of Power	Number of Hours		Hours	8766.00





Annexure 1C

Assumption for Small Hydro based Project Parameters Other States - <= 5 MW					
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameter
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1
			Aux Consumption	%	1.00%
			Capacity Utilization Factor	%	30%
			Useful Life	Years	40
2	Project Cost	Capital Cost	Normative Capital Cost	Rs. Lakh/MW	780.00
			Capital Cost	Rs. Lakh	780
			Capital Subsidy	Rs. Lakh	0
			Net Capital Cost	Rs. Lakh	780.00
3	Financial Assumption	Capl Equity	Tariff Period	Years	40
			Debt	%	70%
			Equity	%	30%
		Debt Component	Total Debt Amount	Rs. Lakh	546.00
			Total Equity Amount	Rs. Lakh	234.00
			Loan Amount	Rs. Lakh	546.00
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
		Equity Component	Interest Rate	%	9.67%
			Equity Amount	Rs. Lakh	234.00
			Return on Equity for First 20 years	% p.a	16.98%
			Return on Equity after 20 years	% p.a	21.52%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			VAT Rate	%	17.47%
		Depreciation	Depreciation Rate for 1st 15 years	%	4.67%
			Depreciation Rate 16th years onwards	%	0.80%
4	O&M Expenses	Normative O&M expense		Rs. Lakh/MW	33.66
		O&M expenses p.a		Rs. Lakh	33.66
		Escalation factor		%	3.64%
5	Working Capital	O&M expenses p.a		Month	1
		Maintenance Spares	% of O&M expenses	%	15.00%
		Receivables		Days	1.5
		Interest on Working Capital		% per annum	11.17%
6	Generation and Sale of Power	Number of Hours		Hours	8766.00



Annexure 1D

Assumption for Small Hydro based Project Parameters			Other States - >5 MW upto 25MW		
S. No	Assumption Head	Sub-Head	Sub-Head (2)	Unit	Parameter
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1
			Aux Consumption	%	1.00%
			Capacity Utilization Factor	%	30%
			Useful Life	Years	40
2	Project Cost	Capital Cost	Normative Capital Cost	Rs. Lakh/MW	900.00
			Capital Cost	Rs. Lakh	900
			Capital Subsidy	Rs. Lakh	0
			Net Capital Cost	Rs. Lakh	900.00
3	Financial Assumption	Debt Equity	Tariff Period	Years	40
			Debt	%	70%
			Equity	%	30%
		Debt Component	Total Debt Amount	Rs. Lakh	630.00
			Total Equity Amount	Rs. Lakh	270.00
			Loan Amount	Rs. Lakh	630.00
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	10
			Interest Rate	%	9.67%
		Equity Component	Equity Amount	Rs. Lakh	270.00
			Return on Equity for First 20 years	% p.a	16.96%
			Return on Equity after 20 years	% p.a	21.52%
			Discount Rate	%	8.51%
		Tax Rate	Corporate Tax Rate	%	34.84%
			MAT Rate	%	17.47%
4	O&M Expenses	Normative O&M expense		Rs. Lakh/MW	24.37
			O&M expenses p.a	Rs. Lakh	24.37
		Escalation factor		%	3.64%
			O&M expenses p.a	Month	-
5	Working Capital	Maintenance Spares	% of O&M expenses	%	15.00%
		Receivables		Days	1.5
		Interest on Working Capital		% per annum	11.17%
6	Generation and Sale of Power	Number of Hours		Hours	8768.00

## CERC RE Tariff Order FY 2020-21

Name		Age		Sex		Religion		Marital Status		Education		Occupation		Income		Assets		Liabilities		Net Worth	
First	Last	Yr.	Mo.	M.	F.	C.	O.	S.	M.	H.	D.	Gr.	Prof.	Sal.	Div.	Int.	Real	Per.	Deb.	Equ.	
John	Doe	1950	01	35	M	C	M	Mar.	HS	Mgr.	\$12,000	\$5,000	\$100,000	\$20,000	\$10,000	\$150,000	\$50,000	\$10,000	\$140,000		
Jane	Doe	1952	03	33	F	C	M	Mar.	HS	Hom.	\$8,000	\$3,000	\$80,000	\$15,000	\$8,000	\$120,000	\$40,000	\$8,000	\$112,000		
Robert	Smith	1948	07	39	M	C	M	Mar.	HS	Eng.	\$15,000	\$6,000	\$120,000	\$25,000	\$12,000	\$160,000	\$60,000	\$12,000	\$148,000		
Mary	Smith	1951	09	36	F	C	M	Mar.	HS	Teach.	\$10,000	\$4,000	\$90,000	\$18,000	\$9,000	\$110,000	\$35,000	\$9,000	\$101,000		
William	Johnson	1945	12	44	M	C	M	Mar.	HS	Exec.	\$18,000	\$7,000	\$130,000	\$30,000	\$15,000	\$170,000	\$70,000	\$15,000	\$155,000		
Elizabeth	Johnson	1947	05	42	F	C	M	Mar.	HS	Lib.	\$9,000	\$3,500	\$85,000	\$16,000	\$9,000	\$110,000	\$38,000	\$9,000	\$101,000		
Charles	Williams	1953	02	31	M	C	M	Mar.	HS	Sales	\$11,000	\$4,500	\$95,000	\$19,000	\$10,000	\$115,000	\$40,000	\$10,000	\$105,000		
Patricia	Williams	1955	04	29	F	C	M	Mar.	HS	Off.	\$7,000	\$2,500	\$75,000	\$14,000	\$7,000	\$90,000	\$30,000	\$7,000	\$83,000		
David	Miller	1949	08	40	M	C	M	Mar.	HS	Arch.	\$14,000	\$5,500	\$110,000	\$22,000	\$13,000	\$135,000	\$55,000	\$13,000	\$122,000		
Linda	Miller	1954	11	35	F	C	M	Mar.	HS	Adm.	\$6,000	\$2,000	\$70,000	\$13,000	\$6,000	\$85,000	\$25,000	\$6,000	\$79,000		
Thomas	Anderson	1946	06	43	M	C	M	Mar.	HS	Phys.	\$16,000	\$6,500	\$125,000	\$28,000	\$16,000	\$155,000	\$75,000	\$16,000	\$139,000		
Barbara	Anderson	1948	10	41	F	C	M	Mar.	HS	Ret.	\$5,000	\$1,500	\$65,000	\$12,000	\$5,000	\$80,000	\$20,000	\$5,000	\$75,000		
James	Thompson	1956	01	28	M	C	M	Mar.	HS	Comp.	\$13,000	\$5,000	\$100,000	\$20,000	\$14,000	\$115,000	\$50,000	\$14,000	\$101,000		
Susan	Thompson	1958	03	26	F	C	M	Mar.	HS	Comm.	\$8,000	\$3,000	\$80,000	\$15,000	\$8,000	\$95,000	\$35,000	\$8,000	\$87,000		
Michael	White	1950	05	34	M	C	M	Mar.	HS	Law	\$17,000	\$7,000	\$135,000	\$32,000	\$17,000	\$165,000	\$80,000	\$17,000	\$148,000		
Karen	White	1952	07	32	F	C	M	Mar.	HS	Wrt.	\$9,000	\$3,500	\$85,000	\$17,000	\$9,000	\$110,000	\$40,000	\$9,000	\$101,000		
Christopher	Black	1954	09	30	M	C	M	Mar.	HS	Bus.	\$12,000	\$4,500	\$95,000	\$19,000	\$12,000	\$115,000	\$45,000	\$12,000	\$103,000		
Nicole	Black	1956	11	28	F	C	M	Mar.	HS	Design	\$7,000	\$2,500	\$75,000	\$14,000	\$7,000	\$90,000	\$30,000	\$7,000	\$83,000		
Gregory	Green	1947	02	41	M	C	M	Mar.	HS	Gen.	\$15,000	\$6,000	\$120,000	\$25,000	\$15,000	\$140,000	\$65,000	\$15,000	\$125,000		
Heather	Green	1949	04	39	F	C	M	Mar.	HS	Pharm.	\$10,000	\$4,000	\$90,000	\$18,000	\$10,000	\$110,000	\$35,000	\$10,000	\$100,000		
Andrew	Black	1951	06	37	M	C	M	Mar.	HS	Inv.	\$14,000	\$5,500	\$110,000	\$22,000	\$14,000	\$135,000	\$55,000	\$14,000	\$121,000		
Stephanie	Black	1953	08	35	F	C	M	Mar.	HS	Comm.	\$9,000	\$3,500	\$85,000	\$17,000	\$9,000	\$110,000	\$38,000	\$9,000	\$101,000		
Benjamin	White	1955	10	33	M	C	M	Mar.	HS	Arch.	\$13,000	\$5,000	\$100,000	\$20,000	\$13,000	\$115,000	\$45,000	\$13,000	\$102,000		
Emily	White	1957	12	31	F	C	M	Mar.	HS	Off.	\$8,000	\$3,000	\$80,000	\$15,000	\$8,000	\$95,000	\$35,000	\$8,000	\$87,000		
Jonathan	Green	1959	01	29	M	C	M	Mar.	HS	Comp.	\$12,000	\$4,500	\$95,000	\$19,000	\$12,000	\$115,000	\$45,000	\$12,000	\$103,000		
Sarah	Green	1961	03	27	F	C	M	Mar.	HS	Comm.	\$7,000	\$2,500	\$75,000	\$14,000	\$7,000	\$90,000	\$30,000	\$7,000	\$83,000		
Christopher	Black	1963	05	25	M	C	M	Mar.	HS	Bus.	\$11,000	\$4,500	\$95,000	\$19,000	\$11,000	\$115,000	\$40,000	\$11,000	\$104,000		
Nicole	Black	1965	07	23	F	C	M	Mar.	HS	Design	\$6,000	\$2,000	\$70,000	\$13,000	\$6,000	\$85,000	\$25,000	\$6,000	\$79,000		
Gregory	Green	1967	09	21	M	C	M	Mar.	HS	Gen.	\$10,000	\$4,000	\$90,000	\$18,000	\$10,000	\$110,000	\$35,000	\$10,000	\$100,000		
Heather	Green	1969	11	19	F	C	M	Mar.	HS	Pharm.	\$9,000	\$3,500	\$85,000	\$17,000	\$9,000	\$110,000	\$38,000	\$9,000	\$101,000		
Andrew	Black	1971	01	17	M	C	M	Mar.	HS	Inv.	\$12,000	\$4,500	\$95,000	\$19,000	\$12,000	\$115,000	\$45,000	\$12,000	\$103,000		
Stephanie	Black	1973	03	15	F	C	M	Mar.	HS	Comm.	\$7,000	\$2,500	\$75,000	\$14,000	\$7,000	\$90,000	\$30,000	\$7,000	\$83,000		
Benjamin	White	1975	05	13	M	C	M	Mar.	HS	Arch.	\$11,000	\$4,500	\$95,000	\$19,000	\$11,000	\$115,000	\$40,000	\$11,000	\$104,000		
Emily	White	1977	07	11	F	C	M	Mar.	HS	Off.	\$6,000	\$2,000	\$70,000	\$13,000	\$6,000	\$85,000	\$25,000	\$6,000	\$79,000		
Jonathan	Green	1979	09	9	M	C	M	Mar.	HS	Comp.	\$10,000	\$4,000	\$90,000	\$18,000	\$10,000	\$110,000	\$35,000	\$10,000	\$100,000		
Sarah	Green	1981	11	7	F	C	M	Mar.	HS	Comm.	\$9,000	\$3,500	\$85,000	\$17,000	\$9,000	\$110,000	\$38,000	\$9,000	\$101,000		
Christopher	Black	1983	01	5	M	C	M	Mar.	HS	Bus.	\$12,000	\$4,500	\$95,000	\$19,000	\$12,000	\$115,000	\$45,000	\$12,000	\$103,000		
Nicole	Black	1985	03	3	F	C	M	Mar.	HS	Design	\$7,000	\$2,500	\$75,000	\$14,000	\$7,000	\$90,000	\$30,000	\$7,000	\$83,000		
Gregory	Green	1987	05	1	M	C	M	Mar.	HS	Gen.	\$11,000	\$4,500	\$95,000	\$19,000	\$11,000	\$115,000	\$40,000	\$11,000	\$104,000		
Heather	Green	1989	07	11	F	C	M	Mar.	HS	Pharm.	\$10,000	\$4,000	\$90,000	\$18,000	\$10,000	\$110,000	\$35,000	\$10,000	\$100,000		
Andrew	Black	1991	09	9	M	C	M	Mar.	HS	Inv.	\$12,000	\$4,500	\$95,000	\$19,000	\$12,000	\$115,000	\$45,000	\$12,000	\$103,000		
Stephanie	Black	1993	11	7	F	C	M	Mar.	HS	Comm.	\$7,000	\$2,500	\$75,000	\$14,000	\$7,000	\$90,000	\$30,000	\$7,000	\$83,000		
Benjamin	White	1995	01	5	M	C	M	Mar.	HS	Arch.	\$11,000	\$4,500	\$95,000	\$19,000	\$11,000	\$115,000	\$40,000	\$11,000	\$104,000		
Emily	White	1997	03	3	F	C	M	Mar.	HS	Off.	\$6,000	\$2,000	\$70,000	\$13,000	\$6,000	\$85,000	\$25,000	\$6,000	\$79,000		
Jonathan	Green	1999	05	1	M	C	M	Mar.	HS	Comp.	\$10,000	\$4,000	\$90,000	\$18,000	\$10,000	\$110,000	\$35,000	\$10,000	\$100,000		
Sarah	Green	2001	07	11	F	C	M	Mar.	HS	Comm.	\$9,000	\$3,500	\$85,000	\$17,000	\$9,000	\$110,000	\$38,000	\$9,000	\$101,000		
Christopher	Black	2003	09	13	M	C	M	Mar.	HS	Bus.	\$12,000	\$4,500	\$95,000	\$19,000	\$12,000	\$115,000	\$45,000	\$12,000	\$103,000		
Nicole	Black	2005	11	15	F	C	M	Mar.	HS	Design	\$7,000	\$2,500	\$75,000	\$14,000	\$7,000	\$90,000	\$30,000	\$7,000	\$83,000		
Gregory	Green	2007	01	17	M	C	M	Mar.	HS	Gen.	\$11,000	\$4,500	\$95,000	\$19,000	\$11,000	\$115,000	\$40,000	\$11,000	\$104,000		
Heather	Green	2009	03	19	F	C	M	Mar.	HS	Pharm.	\$10,000	\$4,000	\$90,000	\$18,000	\$10,000	\$110,000	\$35,000	\$10,000	\$100,000		
Andrew	Black	2011	05	21	M	C	M	Mar.	HS	Inv.	\$12,000	\$4,500	\$95,000	\$19,000	\$12,000	\$115,000	\$45,000	\$12,000	\$103,000		
Stephanie	Black	2013	07	23	F	C	M	Mar.	HS	Comm.	\$7,000	\$2,500	\$75,000	\$14,000	\$7,000	\$90,000	\$30,000	\$7,000	\$83,000		
Benjamin	White	2015	09	25	M	C	M	Mar.	HS	Arch.	\$11,000	\$4,500	\$95,000	\$19,000	\$11,000	\$115,000	\$40,000	\$11,000	\$104,000		
Emily	White	2017	11	27	F	C	M	Mar.	HS	Off.	\$6,000	\$2,000	\$70,000	\$13,000	\$6,000	\$85,000	\$25,000	\$6,000	\$79,000		
Jonathan	Green	2019	01	29	M	C	M	Mar.	HS	Comp.	\$10,000	\$4,000	\$90,000	\$18,000	\$10,000	\$110,000	\$35,000	\$10,000	\$100,000		
Sarah	Green	2021	03	31	F	C	M	Mar.	HS	Comm.	\$9,000	\$3,500	\$85,000	\$17,000	\$9,000	\$110,000	\$38,000	\$9,000	\$101,000		
Christopher	Black	2023	05	33	M	C	M	Mar.	HS	Bus.	\$12,000	\$4,500	\$95,000	\$19,000	\$12,000	\$115,000	\$45,000	\$12,000	\$103,000		
Nicole	Black	2025	07	35	F	C	M	Mar.	HS	Design	\$7,000	\$2,500	\$75,000	\$14,000	\$7,000	\$90,000	\$30,000	\$7,000	\$83,000		
Gregory	Green	2027	09	37	M	C	M	Mar.	HS	Gen.	\$11,000	\$4,500	\$95,000	\$19,000	\$11,000	\$115,000	\$40,000	\$11,000	\$104,000		
Heather	Green	2029	11	39	F	C	M	Mar.	HS	Pharm.	\$10,000	\$4,000	\$90,000	\$18,000	\$10,000	\$110,000	\$35,000	\$10,000	\$100,000		
Andrew	Black	2031	01	41	M	C	M	Mar.	HS	Inv.	\$12,000	\$4,500	\$95,000	\$19,000	\$12,000	\$115,000	\$45,000	\$12,000	\$103,000		
Stephanie	Black	2033	03	43	F	C	M	Mar.	HS	Comm.	\$7,000	\$2,500	\$75,000	\$14,000	\$7,000	\$90,000	\$30,000	\$7,000	\$83,000		
Benjamin	White	2035	05	45	M	C	M	Mar.	HS	Arch.	\$11,000	\$4,500	\$95,000	\$19,000	\$11,000	\$115,000	\$40,000	\$11,000	\$104,000		
Emily	White	2037	07	47	F	C	M	Mar.	HS	Off.	\$6,000	\$2,000	\$70,000	\$13,000	\$6,000	\$85,000	\$25,000	\$6,000	\$79,000		
Jonathan	Green	2039	09	49	M	C	M	Mar.	HS	Comp.	\$10,000	\$4,000	\$90,000	\$18,000	\$10,000	\$110,000	\$35,000	\$10,000	\$100,000		
Sarah	Green	2041	11	51	F	C	M	Mar.	HS	Comm.	\$9,000	\$3,500	\$85,000	\$17,000	\$9,000	\$110,000	\$38,000	\$9,000	\$101,000		
Christopher	Black	2043	01	53	M	C	M	Mar.	HS	Bus.	\$12,000	\$4,500	\$95,000	\$19,000	\$12,000	\$115,000	\$45,000	\$12,000	\$103,000		
Nicole	Black	2045	03	55	F	C	M	Mar.	HS	Design	\$7,000	\$2,500	\$75,000	\$14,000	\$7,000	\$90,000	\$30,000	\$7,000	\$83,000		
Gregory	Green	2047	05	57	M	C	M	Mar.	HS	Gen.	\$11,000	\$4,500	\$95,000	\$19,000	\$11,000	\$115,000	\$40,000	\$11,000	\$104,000		
Heather	Green	2049	07	59	F	C	M	Mar.	HS	Pharm.	\$10,000	\$4,000	\$90,000	\$18,000	\$10,000	\$110,000	\$35,000	\$10,000	\$100,000		
Andrew	Black	2051	09	61	M	C	M	Mar.	HS	Inv.	\$12,000	\$4,500	\$95,000	\$19,000	\$12,000	\$115,000	\$45,000	\$12,000	\$103,000		
Stephanie	Black	2053	1																		

Assumption for Biomass Based Rankine Cycle Project Parameters					Annexure 2.1A
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	State Andhra Pradesh Parameter
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1
			Aux Consumption	%	10.00%
			Plant Load Factor	%	80.00%
			Useful Life	Years	25
2	Project Cost	Capital Cost	Normative Capital Cost	Rs. Lakh/MW	559.00
			Capital Cost	Rs. Lakh	559.00
			Capital Subsidy	Rs. Lakh	0
			Net Capital Cost	Rs. Lakh	559.00
3	Financial Assumption	Debt Equity	Tariff Period	Years	25
			Debt	%	70%
			Equity	%	30%
		Debt Component	Total Debt Amount	Rs. Lakh	391.30
			Total Equity Amount	Rs. Lakh	167.70
			Loan Amount	Rs. Lakh	391.30
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
			Interest Rate	%	9.67%
		Equity Component	Equity Amount	Rs. Lakh	167.70
			Return on Equity for First 20 years	% p.a	16.96%
			Return on Equity after 20 years	% p.a	21.52%
			Discount Rate	%	8.61%
		Tax Rate	Corporate Tax Rate	%	34.94%
			MAT Rate	%	17.47%
4	O&M Expenses	Normative O&M expense		Rs. Lakh/MW	45.42
			O&M expenses p.a	Rs. Lakh	45.42
			Escalation factor	%	3.84%
5	Working Capital		O&M expenses p.a	Month	-
			Maintenance Spares	% of O&M expenses	15.00%
			Receivables	Days	15
			Interest on Working Capital	% per annum	11.17%
6	Fuel Related Assumptions	Biomass	Heat Rate	Kcal/kWh	4200.00
			Fuel Price	Rs./MT	3325.00
			GCV Biomass	kcal/kg	3100.00
			Biomass price escalation factor	%	5.00%
7	Generation and Sale of Power	Number of hours		Hours	8766.00

CERC RE Tariff Order FY 2020-21

Particulars of Tariff Component		Amount (Rs. Lakhs)		% of Total		Tariff Component		Amount (Rs. Lakhs)		% of Total	
1. Demand		100.00		100.00		2. Demand		100.00		100.00	
a. Fixed		10.00		10.00		b. Variable		90.00		90.00	
i. Fixed		10.00		10.00		ii. Variable		90.00		90.00	
j. Variable		90.00		90.00		k. Fixed		10.00		10.00	
l. Variable		90.00		90.00		m. Fixed		10.00		10.00	
n. Variable		90.00		90.00		o. Fixed		10.00		10.00	
p. Variable		90.00		90.00		q. Fixed		10.00		10.00	
r. Variable		90.00		90.00		s. Fixed		10.00		10.00	
t. Variable		90.00		90.00		u. Fixed		10.00		10.00	
v. Variable		90.00		90.00		w. Fixed		10.00		10.00	
x. Variable		90.00		90.00		y. Fixed		10.00		10.00	
z. Variable		90.00		90.00		aa. Fixed		10.00		10.00	
ab. Variable		90.00		90.00		ac. Fixed		10.00		10.00	
ad. Variable		90.00		90.00		ae. Fixed		10.00		10.00	
af. Variable		90.00		90.00		ag. Fixed		10.00		10.00	
ah. Variable		90.00		90.00		ai. Fixed		10.00		10.00	
aj. Variable		90.00		90.00		ak. Fixed		10.00		10.00	
al. Variable		90.00		90.00		am. Fixed		10.00		10.00	
an. Variable		90.00		90.00		ao. Fixed		10.00		10.00	
ap. Variable		90.00		90.00		aq. Fixed		10.00		10.00	
ar. Variable		90.00		90.00		as. Fixed		10.00		10.00	
at. Variable		90.00		90.00		au. Fixed		10.00		10.00	
av. Variable		90.00		90.00		aw. Fixed		10.00		10.00	
ax. Variable		90.00		90.00		ay. Fixed		10.00		10.00	
az. Variable		90.00		90.00		ba. Fixed		10.00		10.00	
bb. Variable		90.00		90.00		bc. Fixed		10.00		10.00	
bd. Variable		90.00		90.00		be. Fixed		10.00		10.00	
bf. Variable		90.00		90.00		bg. Fixed		10.00		10.00	
bh. Variable		90.00		90.00		bi. Fixed		10.00		10.00	
bj. Variable		90.00		90.00		bk. Fixed		10.00		10.00	
bl. Variable		90.00		90.00		bm. Fixed		10.00		10.00	
bn. Variable		90.00		90.00		bo. Fixed		10.00		10.00	
bp. Variable		90.00		90.00		bq. Fixed		10.00		10.00	
br. Variable		90.00		90.00		bs. Fixed		10.00		10.00	
bt. Variable		90.00		90.00		bu. Fixed		10.00		10.00	
bv. Variable		90.00		90.00		bw. Fixed		10.00		10.00	
bx. Variable		90.00		90.00		by. Fixed		10.00		10.00	
bz. Variable		90.00		90.00		ca. Fixed		10.00		10.00	
cb. Variable		90.00		90.00		cc. Fixed		10.00		10.00	
cd. Variable		90.00		90.00		ce. Fixed		10.00		10.00	
cf. Variable		90.00		90.00		cg. Fixed		10.00		10.00	
ch. Variable		90.00		90.00		ci. Fixed		10.00		10.00	
cj. Variable		90.00		90.00		ck. Fixed		10.00		10.00	
cl. Variable		90.00		90.00		cm. Fixed		10.00		10.00	
cn. Variable		90.00		90.00		co. Fixed		10.00		10.00	
cp. Variable		90.00		90.00		cq. Fixed		10.00		10.00	
cr. Variable		90.00		90.00		cs. Fixed		10.00		10.00	
ct. Variable		90.00		90.00		cu. Fixed		10.00		10.00	
cv. Variable		90.00		90.00		cw. Fixed		10.00		10.00	
cx. Variable		90.00		90.00		cy. Fixed		10.00		10.00	
cz. Variable		90.00		90.00		da. Fixed		10.00		10.00	
db. Variable		90.00		90.00		dc. Fixed		10.00		10.00	
dd. Variable		90.00		90.00		de. Fixed		10.00		10.00	
df. Variable		90.00		90.00		dg. Fixed		10.00		10.00	
dh. Variable		90.00		90.00		di. Fixed		10.00		10.00	
dj. Variable		90.00		90.00		dk. Fixed		10.00		10.00	
dl. Variable		90.00		90.00		dm. Fixed		10.00		10.00	
dn. Variable		90.00		90.00		do. Fixed		10.00		10.00	
dp. Variable		90.00		90.00		dq. Fixed		10.00		10.00	
dr. Variable		90.00		90.00		ds. Fixed		10.00		10.00	
dt. Variable		90.00		90.00		du. Fixed		10.00		10.00	
dv. Variable		90.00		90.00		dw. Fixed		10.00		10.00	
dx. Variable		90.00		90.00		dy. Fixed		10.00		10.00	
dz. Variable		90.00		90.00		ea. Fixed		10.00		10.00	
eb. Variable		90.00		90.00		ec. Fixed		10.00		10.00	
ed. Variable		90.00		90.00		ee. Fixed		10.00		10.00	
ef. Variable		90.00		90.00		eg. Fixed		10.00		10.00	
eh. Variable		90.00		90.00		ei. Fixed		10.00		10.00	
ej. Variable		90.00		90.00		ek. Fixed		10.00		10.00	
el. Variable		90.00		90.00		em. Fixed		10.00		10.00	
en. Variable		90.00		90.00		eo. Fixed		10.00		10.00	
ep. Variable		90.00		90.00		eq. Fixed		10.00		10.00	

Assumption for Biomass Based Rankine Cycle Project Parameters					Annexure 2.1B
S. No.	Assumption Head	Sub-Head	Sub-Head (2)	Unit	State Haryana Parameter
1	Power Generation	Capacity	Installed Power Generation Capacity	MW	1
			Aux Consumption	%	10.00%
			Plant Load Factor	%	90.00%
			Useful Life	Years	25
2	Project Cost	Capital Cost	Normative Capital Cost	Rs. Lakh/MW	559.00
			Capital Cost	Rs. Lakh	559.00
			Capital Subsidy	Rs. Lakh	0
			Net Capital Cost	Rs. Lakh	559.00
3	Financial Assumption	Debt Equity	Tariff Period	Years	25
			Debt	%	70%
			Equity	%	30%
			Total Debt Amount	Rs. Lakh	391.30
		Debt Component	Total Equity Amount	Rs. Lakh	167.70
			Loan Amount	Rs. Lakh	391.30
			Moratorium Period	Years	0
			Repayment Period (including Moratorium)	Years	15
		Equity Component	Interest Rate	%	9.67%
			Equity Amount	Rs. Lakh	157.70
			Return on Equity for First 20 years	% p.a.	16.96%
			Return on Equity after 20 years	% p.a.	21.62%
		Tax Rate	Discount Rate	%	8.61%
			Corporate Tax Rate	%	34.54%
4	O&M Expenses	Normative O&M expense	MAT Rate	%	17.47%
			Depreciation		
			Depreciation Rate for 1st 15 years	%	4.67%
			Depreciation Rate 16th years onwards	%	2.00%
5	Working Capital	O&M expenses p.a	Escalation factor	%	3.84%
			O&M expenses p.a	Rs. Lakh	46.42
			Maintenance Spares	% of O&M expenses	15.00%
			Receivables	Days	1.5
6	Fuel Related Assumptions	Biomass	Interest on Working Capital	% per annum	11.17%
			Heat Rate	Kcal/kWh	4200.00
			Fuel Price	Rs./MT	3785.00
			GCV Biomass	kcal/kg	3100.00
7	Generation and Sale of Power	Number of Hours	Biomass price escalation factor	%	5.00%
				Hours	8768.00