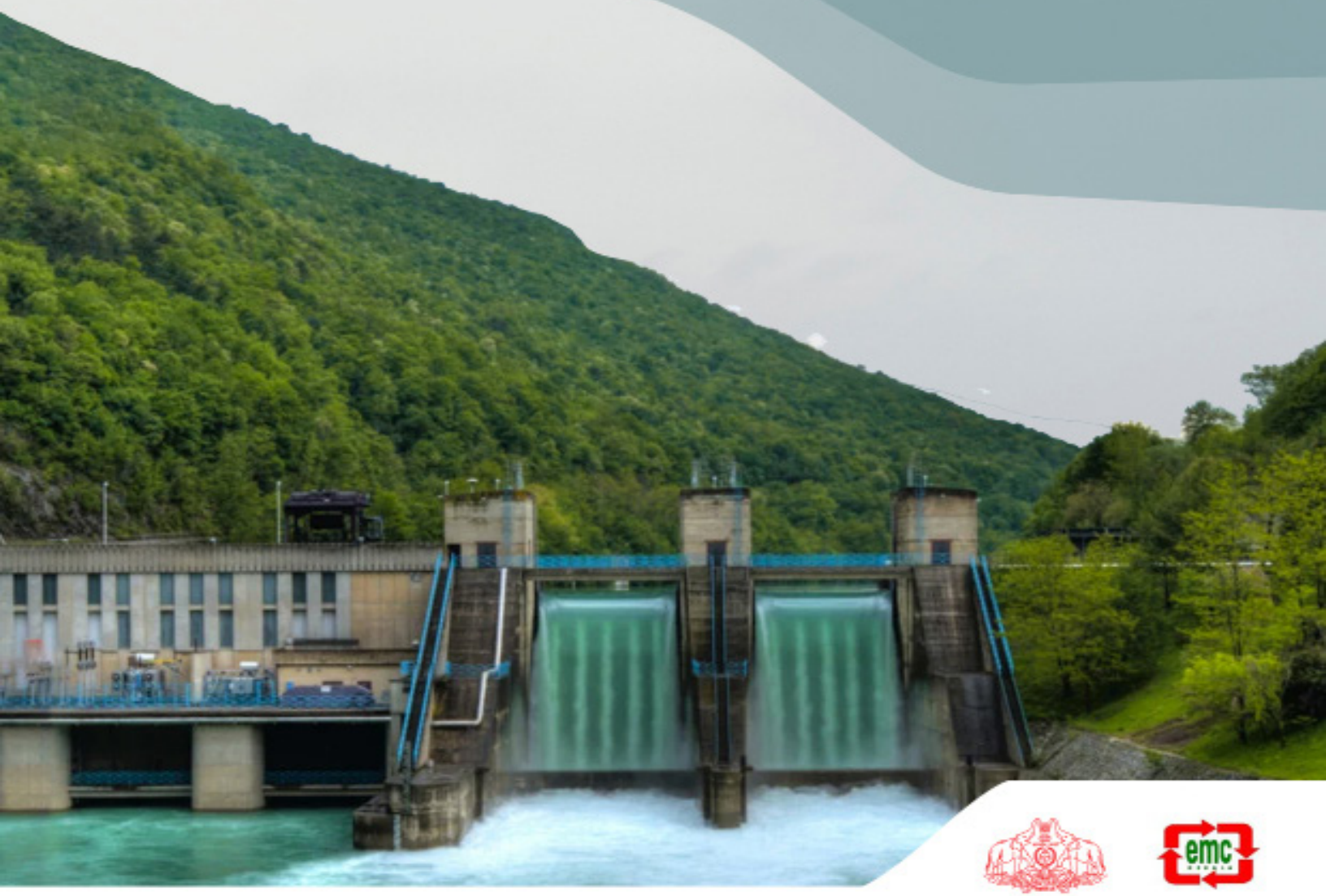
REQUEST FOR QUALIFICATION (RFQ)

FOR SMALL/MINI HYDEL PROJECTS AS INDEPENDENT POWER PROJECTS (IPPs) & CAPTIVE POWER PROJECTS (CPPs)



GOVERNMENT OF KERALA

ENERGY MANAGEMENT CENTRE KERALA

POWER DEPARTMENT
GOVERNMENT OF KERALA

REQUEST FOR QUALIFICATION (RFQ)

ALLOTMENT OF SMALL / MINI HYDEL PROJECTS AS
INDEPENDENT POWER PROJECTS (IPPs)
AND
CAPTIVE POWER PROJECTS (CPPs)

May 2022

TABLE OF CONTENTS

Disclaimer

The information contained in this Request for Qualification (RFQ) document or subsequently provided to Applicant(s) in documentary form by or on behalf of the Principal Secretary, Power Department, Government of Kerala (Government Representatives) or any of its employees or advisors, is provided to Applicant(s) on the terms and conditions set out in this RFQ document and any other terms and conditions subject to which such information is provided.

This RFQ document is not an agreement and is not an offer or invitation by the Government Representatives to any other party. The purpose of this RFQ document is to provide interested parties with information to assist the formulation of their Application for Qualification. This RFQ document does not purport to contain all the information each applicant may require. This RFQ document may not be appropriate for all persons, and it is not possible for the Government Representatives, their employees or advisors to consider the investment objectives, financial situation and particular needs of each party who reads or uses this RFQ document. Certain Applicants may have a better knowledge of the proposed project than others. Each Applicant should conduct its own investigations and analysis and should check the accuracy, reliability and completeness of the information in this RFQ document and obtain independent advice from appropriate sources. The Government Representatives, their employees and advisors make no representation or warranty and shall incur no liability under any law, statute, rules or regulations as to the accuracy, reliability or completeness of the RFQ document.

The Government Representatives may in their absolute discretion, but without being under any obligation to do so, update, amend or supplement the information in this RFQ document.

INVITATION FOR DEVELOPMENT OF SMALL HYDRO PROJECTS

Tender Notice No. SHPC/RFQ 1/22 25-05-2022

Sealed pre-qualification applications are invited from Captive Power Producers / Independent Power Producers / Entrepreneurs for setting up sixty eight Small /Mini Hydro Power Projects for which DPR/DIR/PIR/Identified Sites are available and is opened up for private participation based on the Small Hydro Policy 2012 of Government of Kerala vide GO(P) No. 25/2012/PD dated 03.10.2012. The basic criterion for allotment for CPP and IPP is the quoted upfront premium.

The Request for Qualification (RFQ) document containing the available project profile, instructions and other details can be obtained from the EMC web site: www.**keralaenergy.gov.in.**

Cost of RFQ document **Rs 5,000** (Rupees Five Thousand only)

RFQ Processing Fee **Rs. 35,000** (Rupees Thirty Five Thousand only)

Period of issuing of RFQ documents : **26th May 2022 to 20th August, 2022**

Last date for submission : **16:00 hrs on 25th August, 2022**

The DD towards the cost of RFQ document and the RFQ processing fee should be submitted along with the application in the form of a crossed DD (non-refundable) drawn in favour of the **Small Hydro Promotion Cell**, **Energy Management Centre** payable at **Thiruvananthapuram 17.**

Those who have obtained the RFQ document from EMC are requested to provide their name and contact details to the office of the SHP Cell to facilitate further communication, if any.

The under signed reserves the right to modify the time frames, cancel or reject any bid or to annul the bidding process any time without any liability or any obligation for such rejection or annulment, without assigning any reason thereof. Power Department will not be responsible for any delay, loss or non-receipt of the RFQ document sent by post/courier.

Sd/-

Director & Head – SHP Cell

Energy Management Centre-Kerala

Note

1. This RFQ document is common for all the sixty eight Small/Mini Hydel Projects. It may be noted, however, that for all intents and purposes each of these projects is independent of each other and is to be bid separately at the proposal stage (RFP) and shall be implemented in accordance with Implementation and Power Purchase Agreements / Wheeling Agreement.
2. Instructions to Applicants, Criteria for Evaluation, Individual Profiles of the few Small / Mini Hydel Projects and Formats of Application are provided in subsequent sections of this RFQ.
3. If the RFQ document is downloaded from the website, an intimation to this effect together with details of address for communication, telephone and fax numbers should be sent to The Small Hydro Promotion Cell, C/o Director, Energy Management Centre, Sreekrishna Nagar, Sreekariyam P.O Thiruvananthapuram – 695 017 and by email to emck@keralaenergy.gov.in
4. An Applicant needs to submit a single RFQ application for all the sixty eight Small / Mini Hydel Projects. An Applicant's proposal for a project (which the Applicant may submit later at the RFP stage) would be considered only if it has been qualified for the project in the RFQ application stage. An Applicant who qualifies for a particular capacity would also automatically be deemed qualified for other projects with same or lower capacity in MW terms.
5. Companies may apply for qualification for any project, either as a stand-alone Applicant or as part of one or more Consortium(s). In case of Consortium, each Consortium would be treated as a separate Applicant for purpose of qualification.
6. Each Applicant shall submit the RFQ application along with a covering letter indicating the projects which he/she is interested in, whether for development as an IPP or CPP and in case of Consortium, with the necessary authorizations and Letters of support from the Consortium members.

1. INTRODUCTION

1.1 Background

1.1.1 In pursuance of the policy of the Government of India (GoI) regarding participation of the private sector in development of renewable energy projects, the Government of Kerala (GoK) has proposed to encourage and facilitate the development of small / mini hydro projects as captive and independent power projects (CPPs and IPPs) to exploit the hydel potential and develop low cost generation sources within the state. Identified small hydro power projects located in various districts of Kerala will be allotted on a 'Build Own Operate & Transfer' (BOOT) basis for a period of 30 years, through a competitive bidding process under the Kerala Small Hydro Power Policy 2012 issued vide GO (P) 25/2012/PD dated 03-10-2012 (enclosed in Annexure-1 of this document) including subsequent amendments, if any, made until the final date of submission of RFP stage of this tender.

1.1.2 Power Department, Government of Kerala considers it necessary to invite pre-qualification Applications in order to select those Applicants who have sufficient financial capability to implement these projects within a reasonable timeframe. The Government of Kerala have opened up sixty eight small / mini hydel projects for captive/ independent power producers for which detailed projects reports or detailed investigation reports or preliminary investigation reports or identified sites are available.

1.1.3 Power Department, Government of Kerala shall provide available information on salient features of the project in which details are available depicting therein, a general idea about each project, especially its location, access, construction period, head, hydrology, geology and other features related to the project, approximate cost of project and evacuation facilities, rated capacity and average generation potential (for the rated capacity) to assist entrepreneurs in making a preliminary assessment of these projects. The details provided about the project may not be conclusive

1.1.4 Kerala State Electricity Board Limited (KSEBL) under Power Department, Government of Kerala has prepared detailed project reports (DPR), detailed investigation reports (DIR), Preliminary Investigation Reports for some of the

projects. The reports have been prepared during the periods prior to 2012. These documents shall be available to all successful pre–qualified Applicants as part of the Request for Proposal (FRP) document, which would be made available at the next stage of the project allotment process.

1.1.5 The preparation of Detailed Project Reports/Techno Economic Feasibility Reports after furnishing a scheme for the project with broad details of location of weir, water conductor system, power house including reduced levels and submergence details, Design & related drawings of various components associated with the project including construction / maintenance of transmission line and any up gradation of existing lines / substations if required, are the responsibilities of the Applicant. The guidelines issued by the Government of Kerala vide G.O cited above and attached herewith, as Annexure -1 will be binding on all Applicants on all matters. A brief profile of the some of the projects is given in Annexure - 2.

1.1.6 The developer shall obtain all statutory and other clearances as required from the State Government/ other agencies for the execution of this project. State Government/ EMC/ KSEBL may extend all possible co-operation for obtaining these clearances. A typical list of critical (but not necessarily exhaustive) approvals required is enclosed in Annexure - 3.

1.1.7 CPPs shall be permitted to supply power for the entire duration of the BOOT period only to one of the identified consumers of KSEBL, who shall be identified as the Captive Consumer prior to the Application for Qualification, subject to extant guidelines for CPPs. KSEBL shall be given first right to purchase the surplus power from Captive power plant at the tariff rate approved by the Kerala State Regulatory Commission.

1.1.8 Change of the identified Captive Consumer for an Applicant for a CPP shall not be permitted at any stage of the bidding process or during the BOOT period.

1.1.9 For allotment of projects (at the RFP stage) where bids are received for development of the project as both CPPs as well as IPPs, the allotment would be considered on the basis of the best bid. If among Proposals received for CPPs/IPPs, more than one bid qualifies as the best bid (tie), then Government will go for auction among from the best bids received for the project. Allotment will be made to the one who offer highest premium for a given project.

1.1.10 Qualification criteria will take into account Bidder's financial soundness. In case of CPPs the captive consumer should not have any undisputed dues to KSEB for the invoices raised on the consumer for power charges.

1.2 Brief Description of Bidding Process

1.2.1 Power Department, Government of Kerala intends to follow a two stage process for allotment of the Project(s). The first stage of the process involves Qualification of Eligible Applicants (as defined in Clause 2.2 of this RFQ document).

1.2.2 During the first stage (Qualification stage), Applicants would be required to furnish the information as specified in this RFQ document

1.2.3 The RFQ deals with the Qualification stage and at the end of this stage, Power Department, Government of Kerala expects to announce a shortlist of suitable Applicants for the next stage (Proposal Stage) who would then be invited to submit detailed Proposal(s) for the respective Project(s) in accordance with the Request for Proposal (RFP) document.

1.2.4 All qualified Applicants shall be intimated by post/e-mail about the same by The Small Hydro Promotion Cell, C/o Director, Energy Management Centre, Sreekrishna Nagar, Sreekariyam P.O, Thiruvananthapuram – 695 017. Applicants who do not receive any intimation in this regard by end of June, 2022, may verify the status of their qualification on their own from the aforesaid office. The Power Department and its agencies shall not be responsible for any postal delays or losses.

1.2.5 Following the qualification process, the Power Department, Government of Kerala would issue a Request for Proposal (RFP) document for each project calling for proposals from among the qualified Applicants. DPR / DIR for each project, as the case may be, would be issued along with RFP document. A nominal fee of **Rs. 15,000/-** is charged towards reference copy for each DPR/TEFR, **Rs. 10,000/-** towards reference copy of each DIR and **Rs.5,000/-** towards reference copy of each PIR while issuing along with the RFP document to Pre-qualified applicants. However, advance copy of these documents, if available, can be made available to interested applicants after remitting required charges (non-refundable) by way of crossed Demand Draft drawn in favour of **Small Hydro Promotion Cell** payable at Trivandrum after giving sufficient

notice.

1.2.6 An Applicant would be required to submit a separate proposal (including a bid) for each project at the Proposal (RFP) stage.

1.2.7 During the Proposal stage, short listed Applicants would be expected to examine the Project(s) in further detail, and to carry out such studies as may be required to submit their Proposal(s) for the implementation of the Project(s).

1.2.8 Further details of the process to be followed at the Proposal Stage would be spelt out in the RFP Document (to be provided to short listed Applicants only).

2. INSTRUCTIONS TO APPLICANTS

A. GENERAL

2.1 Scope of the Application

2.1.1 Power Department, Government of Kerala wishes to receive Applications for qualification to shortlist experienced and capable Applicants for the RFP stage.

2.1.2 Qualified Applicants would be subsequently invited to submit their Proposal(s) in respect of the Project(s) they have been qualified for.

2.2. Eligible Applicants

For IPPs

2.2.1 The applicant may be a single entity (Company registered under Companies Act (1956) or a Firm registered in India or abroad) or a group of Companies, coming together to bring in the requisite technical and financial capabilities to implement the Project (hereinafter referred to as “Consortium”). The term Applicant used hereinafter would therefore apply to both a single entity and a Consortium.

2.2.2 Upon award of a project to an Applicant (Company, Firm or Consortium), the Project shall be implemented only by a Company registered under the Companies Act 1956 (hereinafter referred to as the “Project Company”).

2.2.3 The Applicant should submit a Power of Attorney as per the format enclosed at Appendix 2, authorizing the signatory of the Application to commit the Applicant.

2.2.4 In case of an Application by a Consortium all members of the Consortium shall be collectively evaluated for the Qualification Stage. For the purpose of making and submitting the Application (RFQ), a firm letter of support from all Consortium members will have to be enclosed along with the RFQ.

2.2.5 The Applicant would designate and authorize one of its members as the ‘Lead

Member' to act on behalf of the Applicant.

2.2.6 The Lead Member of a Consortium would be required to hold and maintain 26% of the total equity paid up or 10% of the incurred project cost, whichever is higher, as his minimum equity holding in the Project Company, at all times starting from the signing of the Implementation Agreement and until the project is fully commissioned.

2.2.7 Any entity which is barred by Government of Kerala/ KSEBL from participating in power projects or who have not completed any projects allotted to them in the earlier allotment by Government of Kerala / KSEBL, would not be eligible to participate in bid, either individually or as a member of any Consortium.

2.2.8 An entity may choose to apply for qualification for a particular project as a member of more than one Consortium. However, an entity can be a Lead member in only one consortium.

2.2.9 Each Consortium would be deemed as a separate Applicant, if there is any difference in the composition of the consortium or the roles/ responsibilities of the respective members.

2.2.10 The Project Company may either be the Applicant itself or one of the Consortium members or a new Company created by the Applicant, provided that the Project Company shall have the same credentials and experience as the originally qualified Applicant.

2.2.11 The Project Company shall enter into all agreements / commitments with the Power Department, Government of Kerala, pertaining to the award of the project.

For CPPs

2.2.12 The applicant shall be any person as defined in Electricity Act, 2003 who intends to setup captive power plant for its own consumption within the State of Kerala. The term Applicant, in case of a CPP, would therefore apply to the Captive Consumer of KSEB.

2.2.13 A power plant designated as a Captive Generating plant if the captive

consumer holds not less than twenty six percent of the ownership in the special purpose vehicle formed for such generating station and not less than fifty one percent of the aggregate electricity generated in such plant, determined on an annual basis, is consumed for the captive use.

2.2.14 Upon award of a project to an Captive applicant, the project shall be implemented only by a company registered under the Companies Act 1956 after forming a Special Purpose Vehicle for the project.

2.2.15 The Applicant should designate and authorise captive consumer as the “Lead member” in the case of consortium to act on behalf of the Applicant.

2.2.16 The Captive Consumer is required to hold and maintain a minimum of 26% of the total equity paid up as his equity holding in the project company, at all times starting from the signing of the implementation agreement and until the project is fully commissioned.

2.2.17 A captive consumer can choose to apply for qualification for a particular project as a member of one consortium. Change of captive consumer is not permitted during the process of allotment, after allotment, during implementation. Captive consumer cannot be a member for more than one consortium.

2.2.18 Subject to restrictions on allotment of CPPs as per the existing policy guidelines, a Captive Consumer is permitted to setup more than one CPP.

2.2.19 The project company may either be the Captive Consumer itself or a new company created by the captive consumer, provided that the project company shall have the same credentials as the originally qualified applicant.

2.2.20 The Captive Consumer shall enter into all agreements / commitments with the Power Department, Government of Kerala, pertaining to the award of the project.

2.3. Special Instructions to Consortium (for IPP & CPP)

2.3.1 For each Application, every member of the Consortium should provide all the information sought in the RFQ.

2.3.2 The Application must describe the qualification, experience and responsibilities of each member of the Consortium and the commitment each member has made to the Project development, construction and financing in the Letter of Application. The Applicant shall specify in the Letter of Application, the Consortium members who will be responsible for the following:-

- Lead Member for Development (In case of CPP, captive consumer)
- Project implementation (Technical partner)
- Equity Investors

2.3.3 Any member of the Consortium, in order to be considered for Financial Evaluation, would be required to satisfy the criteria pertaining to minimum equity holding in the Project Company of 26% of the total equity paid up or 10% of the incurred project cost, whichever is higher, at all times starting from the signing of the Implementation Agreement and until the project is fully commissioned. All such members of the Consortium shall hereinafter be referred to as Financing Member.

2.3.4 For the purpose of making and submitting the Application, a letter of support from all Consortium members, shall have to be enclosed along with the RFQ Application, which would state the following:

- That the entire RFQ has been reviewed by the member
- That each key element of the Application is agreed to by the member and any substantive exception or caveat is addressed in this letter.
- Acknowledge one of the Consortium members as the Lead Member
- Affirm the roles and responsibility of the member in the Consortium
- Lead member of the Consortium shall be the same for all the member participants

Explanation: The lead member of the participating team from one among them shall be same. For example, if A, B and C are the participating members and the lead members is intended to be A, B and C shall specify that A is their lead member.

2.3.5 All members of the Consortium shall enter into a Memorandum of Understanding (MoU) for the purpose of making and submitting a Proposal(s) in the event of the Consortium being qualified for a project. The MoU should, inter alia:

i) State that the members of the Consortium will agree upon and form, if required, a Company to implement the Project awarded to the Consortium prior to signing the Implementation Agreement, while ensuring that the credentials and experience of this Project Company would remain the same as that of the Consortium.

ii) Convey the intent of the concerned Consortium Members to enter into suitable long–term Agreements for Technical Service Support and a Shareholders Agreement, subsequently carry out all the responsibilities of a successful bidder in terms of the Implementation Agreement and/ or Power Purchase Agreement, in case the Project(s) is awarded to the Consortium.

iii) Clearly outline the proposed roles and responsibilities of the respective members.

iv) Include a statement to the effect that all members of the consortium shall be liable jointly and severally for the implementation of the Project(s) in accordance with the terms of the Implementation and Power Purchase Agreements.

v) Clearly refer to the Project(s) for which the arrangement is proposed.

vi) Upon an award of a Project to a Consortium, prior to signing of the Implementation Agreement, its members shall form the Project Company and enter into suitable Shareholders' Agreement and the Project Company shall enter into a suitable Technical Service Agreement with the technical member of the Consortium, thereby binding the respective members to their technical/financial commitments towards the Project.

2.3.6 Full pertinent information that may affect the performance or the responsibilities of any consortium members such as ongoing litigation, financial constraints / problems or any other distress must be disclosed.

2.4. Change in Composition of Consortium

2.4.1 Change in composition of a qualified Consortium may be permitted by Power Department after the Qualification stage prior to the Proposal Stage, only if:

a) the modified Consortium would continue to meet the Qualification criteria ;

b) the new Consortium expressly adopts the commitments made by the Consortium in the Application for Qualification already submitted, as if it were a party to it originally

2.4.2 In the case of captive consortium, change in composition except for the captive consumer may be permitted after qualification stage as per the conditions stated under 2.4.1 above.

2.4.3 Change in composition, responsibilities, equity contribution of Consortium members may be permitted against written permission by the Power Department, Government of Kerala. Such change may be permitted after (i) submission of Proposal or (ii) after allotment of Project or (iii) after signing of the Implementation Agreement for a Project, subject to the following conditions:

a) The changes do not adversely impact the capabilities/qualification of the Consortium in completion of the Project.

b) The new Consortium also accedes to the terms of any existing agreements entered into / conditions already accepted by the original Consortium as if it were a party to them originally.

c) The modified Consortium would be required to submit a revised Memorandum of Understanding and/or Technical Service Contract, Shareholders Agreement. However, the clause 1.1.8 shall prevail in the case of captive consumer for an applicant for a CPP who will not be permitted at any stage of the bidding process or during the BOOT period.

2.4.4 The Power Department, Government of Kerala, shall evaluate any such requests and its permission/rejection in this regard would be at its sole discretion.

2.4.5 A processing fee of Rs.1 lakh per request would be charged by the Power Department for processing any such request irrespective of the decision of the Power Department.

2.5. RFQ Processing Fee

2.5.1 The Applicant shall remit an amount of **Rs 35,000** (Rupees Thirty Five Thousand only) in the form of a crossed demand draft (non-refundable) drawn in favour of "Small Hydro Promotion Cell", on any scheduled bank, payable at Thiruvananthapuram.

2.5.2 If the RFQ document is downloaded from the website **www.keralaenergy.gov.in**, a demand draft for Rs. 40,000 (Rupees Forty Thousand Only) shall be enclosed along with the Application.

2.6. Number of Applications

2.6.1 Each Applicant shall submit only one (1) Application for all projects that the Applicant is interested in bidding for, in response to this RFQ.

2.6.2 If the same Applicant desires to be considered for pre-qualification for both IPPs as well as CPPs, the necessary information for both needs to be submitted as part of the same application.

2.6.3 No member of the Consortium, other than the Lead Member is precluded from being a part of more than one application (at the RFQ stage) or more than one proposal (at the RFP stage) for the same project.

2.6.4 A qualified Applicant, if qualified for IPP and CPP, is also permitted at the RFP stage to bid for a project as a CPP as well as IPP, but through separate Proposals.

2.6.5 At the RFP stage, a qualified Applicant may submit only one proposal per project under each category (CPP or IPP).

2.7. Application Preparation costs

The Applicant shall be responsible and shall pay for all the costs associated with the preparation of its application and its participation in the Qualification

process. Power Department will not be responsible or in any way liable for such costs, regardless of the conduct or outcome of the Qualification process.

2.8. Project Inspection and Visit to the Project Areas

2.8.1 It will be imperative for each Applicant to be fully conversant about all local conditions and factors, which may have any direct or indirect effect on the execution of the projects covered under this bid.

2.8.2 It would be deemed that by submitting the application for qualification, the Applicant has made a complete and careful examination of the RFQ, and received all relevant clarifications requested from Power Department.

2.8.3 The Power Department shall not be liable for the veracity or adequacy of the information supplied to the Applicant relating to Hydrological/ Geological/ topographical or other aspects of these fifty five projects and shall not compensate any Applicant for any consequences thereof.

2.9. Right to Accept or Reject any of the Applications

2.9.1 Notwithstanding anything contained in this RFQ, Power Department reserves the right to accept or reject any Application or to annul the bidding process or reject all Applications/Proposals, at any time without any liability or any obligation for such rejection or annulment, without assigning any reasons.

2.9.2 Notwithstanding the generality of the above clause, Power Department also reserves the right to reject any application if:

a) at any time, a material misrepresentation is made or discovered, or

b) the Applicant does not respond promptly and diligently to requests for supplementary information required for the evaluation of the Application/proposal.

2.9.3 Rejection of the application by Power Department on behalf of Government of Kerala as aforesaid would lead to the disqualification of the Applicant. If the Applicant is a Consortium, then the entire Consortium would be disqualified/ rejected.

2.9.4 If a Proposal (at RFP stage) has been opened and the best Proposal subsequently gets disqualified/rejected, then Power Department on behalf of Government of Kerala reserves the right to take any such measure as may be deemed fit in the sole discretion of Power Department, Government of Kerala,

including but not limited to annulment of the bidding process or calling for fresh bids or invite the next Applicant to match the proposals submitted by the best bidder.

B. DOCUMENTS

2.10. Amendment of RFQ

2.10.1 At any time prior to the last date of submission of the RFQ document, the Power Department on behalf of Government of Kerala may, for any reason, whether at its own initiative or in response to clarifications requested by an Applicants, modify the RFQ document by the issuance of an Addenda. Such Addenda would be posted on the website www.keralaenergy.gov.in.

2.10.2 Any addendum so issued will also be sent in writing to all those who have purchased the bid document and to those who have downloaded the RFQ Document from the website and have duly intimated this to Power Department giving their contact details.

2.10.3 In order to provide the Applicants a reasonable time to examine the Addendum, or for any other reason, Power Department on behalf of Government of Kerala may, at its own discretion, extend the last date of submission (Application Due Date) of the RFQ bid documents.

2.11. Clarification

Power Department welcomes any query/request for additional information /clarification from prospective Applicants in writing or by e-mail at**; The Small Hydro Promotion Cell, C/o Director, Energy Management Centre, Sreekariyam P.O, Thiruvananthapuram – 695 017, e-mail – emck@keralaenergy.gov.in.** Such additional information if furnished will be disseminated to all the buyers of this document after concealing the identity of the person seeking clarification. Request for additional information and questions concerning this RFQ bid shall be submitted in writing within the **Last date for receiving queries** mentioned in the Schedule of Bidding Process.

C. PREPARATION AND SUBMISSION OF APPLICATION

2.12. Language

The Application and all related correspondence and documents should be written in the English language. Supporting documents and printed literature furnished by the Applicant with the Application may be in any other language provided that these are accompanied by appropriate translations of the pertinent passages in the English language. Supporting material, which are not translated into English, may not be considered. For the purpose of interpretation and evaluation of the Application, the English language translation shall prevail.

2.13. Currency

The currency for the purpose of the Bid document shall be the Indian Rupee (INR).

2.14. Validity of Application

The Application shall remain valid for a period not less than nine (9) months (Application Validity period) from the Application Due Date. The Power Department reserves the right to reject any Application, which does not meet this requirement.

2.15. Extension of Validity of Application

If found necessary, Power Department may seek extension of the Application Validity Period for a specified additional period. Applicants not extending the Application Validity Period when so requested would automatically be disqualified.

2.16. Format and Signing of Application

2.16.1 Complete answers must be provided as per the enclosed formats. If necessary, additional sheets may be attached. Failure of the applicant to submit complete information as requested by the Power Department may lead to rejection of the Application.

2.16.2 Each page of the Application submitted by the prospective Applicant shall be

duly signed by an authorized representative of the Applicant. Necessary Power of Attorney/ Board Resolution in favour of the representative, who has signed shall be attached with Application as per the format enclosed.

2.16.3 The Application and its copy shall be typed or written in indelible ink. All the alterations, omissions, additions, or any other amendments made to the Application shall be initialled by the person(s) signing the Application.

2.16.4 The Applicants should submit one original of the documents comprising the Application and clearly marked “ORIGINAL”. In addition two (2) copies of the Application clearly marked “COPY” shall also be submitted on or before the due date. If any discrepancy is found, the text in the “ORIGINAL” shall prevail

2.17. Sealing, Marking and Contents of Application

2.17.1 The Applicant shall seal the original and each copy of the Application in separate envelopes, duly marking the envelopes as “ORGINAL” and “COPY”. The envelopes shall then be sealed in an outer envelope.

2.17.2 Each envelope shall contain the following

1. Demand draft for Rs 35,000 as RFQ processing fee and additional Rs 5000/- towards cost of RFQ application.
2. Letter of Application duly signed by the Authorised signatory of the Applicant.
3. Board resolution or Power of Attorney suitably authorizing the Authorised Signatory of the Applicant.
4. In case of Consortium, Letter of Support from each member to the Applicant Company.
5. Details of Applicant (in case of Consortium, this would need to be provided by all members of the Consortium)
6. Experience of the Applicant (in case of Consortium, experience of the relevant members of the Consortium).
7. Financial Capability of the Applicant (in case of the Consortium, Financial Capability of the Lead Member and other Financing Members).

8. In case of Consortium, Power of Attorney in favour of the Lead Member from each other member and confirmation of the Lead Member to act as the Lead Member

9. Support documents like Audited Annual Reports, Statutory Auditor's certificates, etc. as may be applicable.

2.17.3 The Applicant may submit the Application by registered post or in person. The envelopes shall then be sealed in an outer cover envelope. The envelopes and the outer envelope shall clearly bear the following identification:

"Application for Qualification (RFQ):

Small /Mini Hydro Power Projects in Kerala –

To be opened by Tender Opening Committee only".

And

"Submitted by: Name, Address and Contact Phone No. of the Applicant"

Category – CPP/IPP (Tick (√) against the applied category/categories)

2.17.4 The envelope shall be addressed to:

THE SMALL HYDRO PROMOTION CELL

C/o Director, Energy Management Centre,

Sreekrishnanagar, Sreekariyam. P.O,

Thiruvananthapuram – 695 017, Kerala State.

Phone: (0471) –2594922 & 2594921 Fax: (0471) –2594923

E-mail: emck@keralaenergy.gov.in

2.17.5 If the envelope is not sealed and marked as instructed above, Power Department assumes no responsibility for the misplacement or premature opening of the documents and contents of the Application submitted and such Application is liable to be rejected by Power Department on behalf of Government of Kerala.

2.18. Application Due Date

2.18.1 Application should reach the office of the SHPC before 1600 hours IST on the Application Due Date mentioned in the Schedule of Bidding Process the manner and form as detailed in this RFQ. Applications submitted by either facsimile transmission or telex will not be acceptable

2.18.2 The Power Department shall not be responsible for any kind of postal delay or non- delivery of documents sent by the Applicants.

2.18.3 The Power Department may, in exceptional circumstances and at its sole discretion, extend the Application Due Date by issuing an Addendum in accordance with clause 2.9, uniformly for all Applicants.

2.19 Late Application

2.19.1 The Power Department shall not accept any Application received after the Application Due Date.

2.20 Withdrawal/ Substitutions of Application.

2.20.1 The Applicant may withdraw or substitute its Application after submission, provided that written notice of withdrawal or the substitute Application is received by Power Department by the Application Due Date. No Application shall be substituted or withdrawn by the Applicant after the Application Due date.

D. EVALUATION OF APPLICATION

2.21 Opening and Examination of Applications

2.21.1 Power Department would open the Application on any working day after Application due date for the purpose of evaluation.

2.21.2 Application for which an acceptable notice of withdrawal has been submitted in accordance with Clause 2.20.1 shall not be opened.

2.21.3 The Power Department would subsequently examine and evaluate Application in accordance with the criteria set out in Section 3.

2.21.4 The Power Department reserves the right to reject any Application, if:

a. At any time, a material misrepresentation is made or discovered; or

b. the applicant does not respond promptly and diligently to request for supplemental information required for the evaluation of the Application

2.21.5. (a) It is the Government of Kerala's policy that the applicants observe the highest standard of ethics during the selection and execution of the projects. In pursuance of this policy, the power department defines for the purposes of this provision, the terms set forth below:

i) " corrupt practice" means the offering, giving, receiving, or soliciting of anything of value to influence the action of an official in the selection process or in contract execution ; and

ii) "fraudulent practice" means a misrepresentation of facts in order to influence a selection process or the execution of a contract to the detriment of the Power Department and includes collusive practices among the Applicants (prior to or after submission of RFQ& RFP) designed to establish prices at artificial, non-competitive levels and to deprive the Power Department of the benefits of free and open competition.

(b) The Power Department will reject a proposal for award if it determines that the Applicant recommended for award has engaged in corrupt or fraudulent activities in competing for the contract in question

(c) Will declare an Applicant ineligible, either indefinitely or for a stated period of time by Government of Kerala if any time determines that the Applicant has engaged in corrupt or fraudulent practices in competing for or in executing the project

2.22. Confidentiality

2.22.1 Information relating to the examination, clarification, evaluation and recommendation for the short-listed Applicants shall not be disclosed to any person not officially concerned with the process. The Power Department will treat all information submitted as part of the Application in confidence and would require all those who have access to such material to treat the same in confidence.

2.22.2 The Power Department will not divulge any such information unless it is ordered

to do so by any authority pursuant to applicable law or order of a competent court or tribunal, which requires its disclosure.

2.23. Test of Responsiveness

2.23.1 Prior to evaluation of the Applications, the Power Department on behalf of Government of Kerala will determine whether each bid document is responsive to the requirements of the RFQ. A bid document shall be considered responsive if the Applications conform to the stipulations of this RFQ documents with regard to the following:

a. is received /deemed to be received by the Application Due Date including any extension thereof

b. is signed, sealed and marked as stipulated

c. contains all the information and documents as set out and in the formats indicated

d. mentions the validity period of application

e. is accompanied by payment towards cost of RFQ document & processing fee

2.23.2 The Power Department reserves the right to reject any bid document which is non- responsive and no request for alteration, modification, substitution or withdrawal shall be entertained in respect of such Applications.

2.24. Clarification

To facilitate evaluation of Applications, the Power Department, at its sole discretion, may seek clarifications in writing from any Applicant regarding its Application. The Power Department reserves the right to ascertain the genuineness of the Applicants' information and references for the purpose of pre-qualification.

2.25. Qualification and Notification

2.25.1 After the evaluation of Applications, the Power Department would announce a list of successful Applicants (Qualified Applicants) who meet the Qualification Criteria in respect of each project. At the same time, the Power Department would notify the other Applicants that their Applications have been unsuccessful. Applicants, who do not receive any intimation in this regard, may verify the status of their

qualification on their own from the office of the SHP Cell. The Power Department and its agencies shall not be responsible for any postal delays or losses.

2.25.2 The qualified Applicants would then be requested to submit a detailed Proposal(s) in the form and manner to be set out in the RFP document.

E. OTHER INSTRUCTIONS TO APPLICANTS

2.26 General Instructions

2.26.1 Criteria for Evaluation, individual profiles of the project(s) and formats of Application are provided in subsequent sections of this RFQ.

2.26.2 The Letter of Application should make a clear reference to the Project(s) of interest to the Applicant.

2.26.3 The Power Department shall render all possible assistance to the company in expediting various statutory /non-statutory clearances, required for the implementation of the Projects from Central/ State Governments or the Board. The responsibility of obtaining these clearances shall, however rest with the bidder only.

3. CRITERIA FOR EVALUATION

3.1. EVALUATION PARAMETERS

3.1.1 The Applicant's capability and competence is proposed to be established by the following parameters:

a) Financial capability in terms of

(i) Net Worth

b) The Applicant and /or all members of a Consortium should have no default on undisputed dues to KSEBL.

3.1.2 The Applicant needs to qualify on the above criterion ie. Financial capability, & no dues requirement (in case of CPP only).

4.2. FINANCIAL CAPABILITY (applicable for both CPPs and IPPs)

3.2.1 The Applicant and /or all the financial members of a consortium shall have positive net worth for the last three years consecutively as at the end of the latest full financial year.

3.2.2 This will be based on assessment of the Applicant's Net worth as at the end of the latest full financial year. In case of a Consortium, the above parameters would be considered for the Financing Members. The aggregate Net worth of such members would be considered for the financial evaluation.

3.2.3 Information on the above should be provided on the basis of audited annual accounts at the end of the latest financial year i.e., 2020-21.

3.2.4 The Audited Annual Reports of the Applicant/ Lead Member/ Financing Member should be enclosed with the Application.

3.2.5 In case the annual accounts for the latest financial year are not audited and therefore the Applicant could not make it available, the Applicant shall give an undertaking to this effect and the statutory auditor shall certify the same. In such case, the Applicant shall provide the un-audited Annual Accounts (with Schedules) for the latest financial year including the latest financial year for which statutory audit is completed, duly certified by the Statutory Auditor as well as Audited Annual Report for one year preceding the latest financial year.

3.3. EVALUATION CRITERIA FOR FINANCIAL CAPABILITY (applicable for both CPPs and IPPs)

3.3.1 For the purpose of qualification, an Applicant and/or Financing Members (ie. all those Consortium Members who commit to satisfy the minimum equity shareholding requirement in the Project Company, as stipulated for the Lead Member) would be required to demonstrate Financial Capability on each of the following criteria:

a) Applicant shall have positive Net worth for the last three years as at the end of latest financial year. In the case of Consortium, the lead member and financing partner should have positive net worth for the last three years consecutively.

(b) Net worth as at the end of the latest full financial year shall be at least equal to 15% of the estimated total cost of the project applied for. The project cost to be considered for this purpose would be the current costs estimated by KSERC and would include the estimated cost of the evacuation line and other infrastructure facilities that the project company would need to incur.

In case of a Consortium, the above parameters would be considered for the Lead Member and the other Financing Partners and the aggregate Net Worth of such members would be considered for the financial evaluation.

3.2. Payment Record to KSEBL (applicable for both CPPs and IPPs)

The credentials of the Applicant and/or Consortium members with regard to payment of undisputed invoices raised by Kerala State Electricity Board for power consumed would be considered. Only those with nil outstanding on the date of submission of the Application, towards the undisputed dues as on 31st May 2022 would be eligible for qualification.

3.3. Other Criteria

3.3.1 Based on criteria under **Section – 3**, the Power Department reserves the right to evolve any criterion, financial, to fully assess, evaluate and grade the Applicant.

4. SCHEDULE OF BIDDING PROCESS

4.1 The Power Department would endeavour to adhere to the following Schedule

Sl. No	Event Description	Date
	Qualification Stage	
1.	Pre- Bid meeting (Online /Offline at EMC) Hybrid mode *Google Meet Link → https://meet.google.com/jso-cser-hcu*	16.07.2022 – 3.30PM
2.	Last Date for receiving queries	20.07.2022
3.	SHPC Response to queries latest by	30.07.2022
4.	Application due date	25.08.2022
5.	Announcement of short listed applicants	15.09.2022
	Proposal Stage (Tentative)	
1.	Issue of RFP to short listed applicants	November 2022
2	Last date for receiving queries	December 2022
3.	Pre-Bid meeting	January 2023
4.	Proposal due date	February 2023
5.	Opening of Bids	February 2023
6.	Declaration of successful bidders	March 2023

Applicants are requested to keep themselves updated with the website ***www.keralaenergy.gov.in*** on a regular basis for any addition / deletion / modification / clarification / notification in respect of this.

ANNEXURES

Annexure 1 (A)

SHP Policy Guidelines of GoK for CPPs & IPPs

GOVERNMENT OF KERALA

GO (P) No.25/2012/PD dated 03-10-2012

GOVERNMENT OF KERALA

Abstract

Power Department- Kerala Small Hydro Power Policy 2012- Approved- Orders issued.

- -

POWER (B) DEPARTMENT

G.O.(P) No. 25/2012/PD Dated, Thiruvananthapuram, 03.10.2012.

- -

Read:-1. G.O (MS) 7/2007/PD dated 11.05.2007.
2. Letters No. EMC/SHPC/policy/2011 dated 21.01.2012, 29.02.2012, 29.03.2012, 16.04.2012 and 23.05.2012 from the Director, Energy Management Centre, Thiruvananthapuram.
3. Minutes of the Small Hydro Power Investor's Meet held at Thiruvananthapuram on 10.04.2012.

O R D E R

The Government of Kerala have issued several guidelines from time to time, for the development of Small Hydro Power Projects in the State, since 1992, which encouraged private investment to harness 'green energy' from natural resources. With the enactment of Electricity Act 2003 and notification of National Electricity Policy in 2005 and Tariff Policy in 2006, under section 3 of the Electricity Act 2003, it was necessary to formulate a policy for the promotion and development of Small Hydro Power Projects in the State. Accordingly, the Director, Energy Management Centre (EMC) submitted draft “Kerala Small Hydro Policy 2012”, for the consideration and approval of Government. The draft policy was published in the website of EMC for suggestions from the general public and presented before the prospective investors and IPP/CPP allottees of SHPs, in their meeting held at Thiruvananthapuram on 10.04.2012. The draft policy was also reviewed in the meeting held on 26.07.2012, with the

(...2)

Representatives of the Departments of Forest and Wild Life, Revenue, Finance, Water Resources, Local Self Government, Law, Chief Electrical Inspectorate and KSEB.

2) The suggestions/ comments proposed in the above meetings were taken into consideration and suitable modifications have been made in the draft policy. Government are now pleased to approve 'Kerala Small Hydro Policy 2012', as appended to this order.

By Order of the Governor,
ELIAS GEORGE,
Additional Chief Secretary to Government.

To.

The Director, Energy Management Centre, Thiruvananthapuram.
The Chairman, KSEB, Pattom, Thiruvananthapuram.
The Director, ANERT, Thiruvananthapuram.
The Chief Electrical Inspector, Thiruvananthapuram.
The Secretary, KSERC, Thiruvananthapuram.
The Secretary, Kerala Legislature Secretariat, Thiruvananthapuram.
The Principal Accountant General (Audit), Kerala, Thiruvananthapuram.
The Accountant General (A&E), Kerala, Thiruvananthapuram.
The General Administration (SC) Department. (Vide item No. 2308 dated 26.09.2012).
The Forest and Wild Life/ Revenue/ Finance/ Water Resources/ Local Self Government Departments.
The Director, Information and Public Relations (for wide publicity).
Stock File / Office Copy.

(...3)

Copy to:

The PS to Chief Minister.

The PS to Minister (Power & Transport).

The CA to Additional Chief Secretary (Power & Transport).

The CA to Additional Secretary (Power & Transport).

Forwarded/ By Order

Section Officer.

KERALA SMALL HYDRO POWER POLICY-2012

1. Preamble

Kerala is endowed with vast small hydro power potential to the tune of about 700 MW. Government of Kerala has issued several guidelines from time to time for the development of small hydro power project since 1992. The measures have encouraged private investment to harness green energy from natural resources. Till the end of December 2011, 19 Small Hydro Power projects with an installed capacity of 145.65 MW have been commissioned in the State. The State needs to evaluate the experience with them and to fine-tune policy so as to speed up investments in the area.

The Central Government has enacted the Electricity Act in 2003, and notified the National Electricity Policy in 2005 and Tariff Policy in 2006 under Section 3 of the Electricity Act, 2003. Both the policies provide for measures to undertake the development of Renewable Energy sources, including Small Hydro Power Projects. The Ministry of New and Renewable Energy (MNRE), Government of India has formulated legal, financial and administrative framework for promotion of investments in this sector and has advised the State Governments to formulate appropriate promotional policies.

Section 3 of the Kerala Irrigation and Water Conservation Act, 2003 (Act 31 of 2003) stipulates that all water courses and all water in such courses throughout the State shall be the property of Government and further as per Section 5 of the said Act no person or local authority shall construct any structure across any water course except with previous sanction of Government. Section 57 of the said enactment, a Dam Safety Authority has been constituted and mandated that all dams would be subjected to its surveillance, inspection and advice.

The Kerala Electricity Regulatory Commission (KSERC) has issued guidelines for purchase of electricity from Renewable Energy sources including SHPs, making it mandatory for the

distribution licensees to source a certain percentage of their power purchases from Renewable Energy sources.

The present Policy is issued against these developments and backdrop. This Policy is directed towards a greater thrust on overall development and promotion of Small Hydro Power Projects.

2. Title and Enforcement

This Policy will be known as Kerala Small Hydro Power Policy, 2012 and will be applicable to projects with installed capacity upto 25 MW. The Policy will come into operation with effect from the date of its publication in the Official Gazette of the State.

This Policy shall supersede all the policy guidelines /instructions issued in this behalf till date.
This Policy will be applicable to all the Small Hydro Power Projects in the process of development as per the earlier allotments.

3. Vision

The Vision under this Policy shall be to harness green and clean natural resource in the State for environmental benefits and energy security.

4. Mission

The Mission under this Policy shall be to

1. Enhance the contribution of environmentally benign natural resources to the socio-economic development of the State and to supplement rural energy needs through speedy and expeditious commissioning of Small Hydro Power Projects.
2. Create an environment conducive to public /private /community participation and investment in Small Hydro Power Projects.
3. Enhance the contribution of Small Hydro Power Projects in the total installed capacity of the State from 145 MW to about 295 MW by 2017 through private participation.

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3. Enhance the contribution of Small Hydro Power Projects in the total installed capacity of the State from 145 MW to about 295 MW by 2017 through private participation.

5. Proposed Targets for Small Hydro Generation for the period 2012-2017.

Presently Renewable Energy (RE) sources contribute about 556 Mu of energy per annum (2.94 %) of the total consumption of 18926 Mu during 2011-12 in the state. The energy consumption anticipated during 2016-17 is 26,584 Mu per annum and the renewable energy purchase obligation shall be 1411 Mu and the additional requirement shall be 855 Mu. Considering average plant load factor of 25% from renewable energy sources, this necessitates an addition of 390 MW by 2017.

This Policy sets a goal of commissioning 150 MW additional capacity from Small Hydro Power Projects by 2017 through private participation.

6. Approvals for Small Hydro Power Projects

6.1 Technical Approval for developing Small Hydro Power Projects in the State shall be given by Government.

6.2 The sanction orders in this regard shall be issued by the Power Department. The Small Hydro Promotion Cell in the Energy Management Centre will be the secretariat for the processing of applications and monitoring of approved projects.

6.3 While according Technical approval, water utilization for the project shall be given after considering the issues germane to the Kerala Irrigation and Water Conservation Act, 2003 (Act 31 of 2003), and particularly that the proposed project(s) does not infringe with the drinking and irrigation rights of the local inhabitants.

6.4 The Small Hydro Promotion Cell, functioning in EMC under the Chairmanship of the Principal Secretary (Power), Govt. of Kerala will assist Government for issuing technical clearance for the projects and administration of implementation agreements executed with Government..

6.5 The Technical Committee shall look into all aspects of development of the projects, evacuation arrangements for the power generated, effective utilization of

natural resources, interference if any with upstream and downstream existing and proposed projects implemented /being implemented by different agencies etc. The cost aspects shall be examined by KSERC while finalizing the tariff.

6.6 All Small Hydro Power Projects identified by Kerala State Electricity Board and not set apart for private participation, including all dam-toe power and cluster power projects of existing dams, and also Small Hydro Power Projects utilizing the controlled release of water from the existing hydro and/ or irrigation projects shall be reserved for development by Kerala State Electricity Board.

6.7 Small Hydro Power Projects below 25 MW will be assigned for development by Government to developers through competitive bidding.

6.8 LSGs will be generally given preference for development of Mini and Micro Projects upto 500 kW

7. Methods of assigning Small Hydro Power Projects for development

7.1 Small Hydro Power Projects identified by the Government or State sponsored agencies such as KSEB, ANERT, Energy Management Centre etc. and not reserved for development by Kerala State Electricity Board shall be assigned to private developers as independent power projects or captive power project only through the competitive bidding route on Build Own Operate Transfer mode for 30 years from date of allotment.

7.1.1 Upon the expiry of BOOT period, the Developer shall transfer the project with its facilities to the Government free of cost.

7.2 Total period of allotment of any project, including period of construction, will be limited to thirty years from the date of allotment,

7.3 Small Hydro Power Projects identified by private persons on their own land will be assigned to the owner of the land subject to payment of the upfront premium specified below.

7.4 Small Hydro Power Projects will be assigned to the Local Body where the project is located without competitive bidding if there is unanimity among the three tiers of

the Local Bodies regarding the assignment of the project.

7.4.1 However where such projects are taken up for development by an SPV of the Local Body with private sector participation, such private participant in the SPV shall be identified through competitive bidding.

7.5 The Chief Electrical Inspector shall accord necessary permission for the power being developed by the developer to be connected to the State grid duly complying with electrical safety precautions and grid standards.

7.6 Any failure to tap the available power potential as envisaged in the approved DPR is liable for penalization.

8. Statutory Clearances

8.1 Clearances for the Small Hydro Power Project shall be required from (a) Local Body where the project is located,(b) the Revenue Department in case the land involved is Government land, (c) the Forest Department in case forest land is involved, and (d) a No Objection Certificate from Irrigation Department.

8.2 Where the Small Hydro Power Project falls in forest land, the case will be processed and considered by the Kerala Forest Department under the provisions of the Forest Conservation Act, 1980 subject to Ministry of Environment and Forest guidelines.

8.3 Where the Small Hydro Power Project is located on Government land the developer will be given the land on license for 30 years from the date of assignment of project to him subject to payment of license fee as fixed by Government from time to time. Government shall give permissive sanction for utilization of land coming under Kerala Land Conservancy Act 1957 for development of Power by Private Developers.

8.4 Where the development of the Small Hydro Power Project requires land owned by other private individuals, it shall be the responsibility of the developer to accomplish purchase of such land. Such land is also to be transferred to the Government at the end of the BOOT period.

8.4.1 If 75% or more of the land required for the Small Hydro Project has been purchased by the developer, Government may assist the developer through action under the Land Acquisition Act.

8.5 It shall be the responsibility of the developer to secure all the clearances required under the various statutes.

8.6 However, Government will provide all possible assistance for the same including single window clearance functioning in KSIDC under the Kerala State Single Window Clearance Boards and Industrial Township Area Development Act, 1999 for expediting clearances.

9. Eligibility

9.1 Any Company or body Corporate or association or body of individuals, whether incorporated or not, shall be eligible to apply for development of a Small Hydro Power Project through Private participation.

9.2 In case of a Small Hydro Power Project being developed as a captive unit, any person as defined in the Electricity Act, 2003 who intends to setup a captive power plant for its own consumption within the State of Kerala shall be eligible to apply under Captive project.

10. Applicability of Water Cess to Small Hydro Power Projects

As no permanent water extraction from water courses is envisaged in Small Hydro Power Projects, such projects shall not attract levy of water cess under the Kerala Irrigation and Water Conservation Act, 2003 (Act 31 of 2003).

11. Procedure for Allotment

11.1 The allotment process shall be done in two stages. In the first stage, bidders will submit request for qualification (RFQ), which will be evaluated based on their financial strength. In the second stage, the short-listed applicants will be requested

for proposals and bids. For each project, the short-listed applicant will be required to quote for a premium per MW, payable upfront, to the Government.

Evaluation parameters of Financial Capability (applicable for both IPP&CPP)

For the purpose of financial qualification, an Applicant and /or Financing members (ie all those consortium members who commit to satisfy the minimum equity share holding requirement in the project company, as stipulated for the lead member) would be required to demonstrate financial capability on the following criteria:

a) Networth at the end of the latest financial year should be at least equal to 15**%** of the estimated cost of the project applied for. The project cost to be considered for the purpose would be current cost estimated including cost of the evacuation and other infrastructure that the project company would need to incur.

11.2 The minimum threshold premium shall be Rs.**15** Lakhs per MW.

11.3 Projects will be allotted to the bidder making highest bids.

11.4 There will not be any preference of CPP bidders over IPP bidders in the allotment of the Project.

11.5 During implementation, transfer of ownership would be permitted if transferee satisfies pre-qualification requirements subject to the prior approval of Government of Kerala.

11.6 Free transfer of shares will be permitted in the developer company as per the procedure laid down in the bid document after project implementation.

12. Sale of power generated by Small Hydro Power Projects

12.1 The State Transmission Utility / Kerala State Electricity Board shall have the first right of purchase the power generated by IPPs and surplus of power from CPPs at a tariff and other terms and conditions set forth by the Kerala State Electricity Regulatory Commission.

12.2 If KSEB or it successor entity is not intending to purchase the power, Kerala

State Electricity Regulatory Commission will permit non-discriminatory open access within the State of Kerala to sell the power to any entity within Kerala. Kerala State Electricity Regulatory Commission may permit open access for sale of power outside Kerala duly complying with the Section 11 of EA 2003.

12.3 For open access, the Rules framed by KSERC shall be applicable.

13. Technical Clearance: Government will form a technical committee to recommend technical clearance of TEFR (Techno-Economic Feasibility Report) as well as to address all matters related with sanctioning of TEFR and quality control and monitoring of the implementation of the project by the Private developer. The Committee shall include eminent Engineers in the field of Hydro power development either in service or accredited hydro power consultant, KSEB representative, Government Officials and Director, EMC as Convener. Based on the recommendation of Technical Clearance Committee, Government shall accord Technical Clearance**.**

14. Fee for Technical Approval

14.1 The fees payable for scrutiny and approval of technical clearance will be as follows:

14.1.1 For projects less than 1 MW developed by Private agencies in private land and Projects developed by Local Bodies - An application fee of Rs.10,000/- to give clearance for proceeding with the project and then Rs.50 per kW for scrutiny and approval of DPR and for technical clearance.

14.1.2 For project of 1 MW or greater than 1 MW capacity identified and developed by private agencies - Technical scrutiny fee of Rs. 100 per kW will be charged subject to a minimum of Rs. 1 lakh.

14.1.3 Separate fee will be chargeable for the technical services rendered by KSEB such as load flow studies, scrutiny of drawings, power potential study, relays and protection system etc.

15. Evacuation Arrangement

15.1 The transmission facilities upto the inter-connection point shall be constructed by the developer through STU/KSEB as a deposit work at the cost and responsibility of the developer.

15.2 Interfacing including transformers, panels, protection, metering, as well as maintenance shall be undertaken by developer as per the specification and requirement of KSEB for which the developer shall bear the entire cost.

15.3 Any modification / up-gradation of the substation of the KSEB, which draws power from the project and line strengthening beyond inter – connection point, shall be carried out by the KSEB at the cost of the developer and can be considered towards the project cost.

15.4 The line constructed by the developer up to sub-station shall be vested with KSEB to transmit power through this transmission line.

16. **Banking Facilities:** KSEB will permit banking facility during a financial year subject to availability of Grid and the rights for banking the energy with the KSEB and charges applicable for the same shall be determined by the regulation in force from time to time.

17. Milestones for development of Project by Private Developers

17.1 It is mandatory for the developer to complete the project in all respects and Commission the project with grid synchronization within a period of 60 months from the date of allotment. The developer shall execute an implementation agreement with the Government after furnishing necessary implementation guarantee as specified in 17.12 below.

17.2 The Developer shall furnish a scheme for the project with broad details such as location of weir, water conductor system, power house including reduced levels and submergence details and get it approved by Government before conducting detailed survey for the preparation of DPR.

17.3 The Developer shall submit DPR as per CBIP guidelines for SHP Development

within 18 months incorporating all the salient levels, layouts, location and installed capacity after allotment after taking gauge observation for a minimum period of 12 months and power potential studies for a minimum period of five years. If DPR is not submitted, allotment shall be cancelled.

17.3.1 The maximum grace period for submission of DPR will be 3 months if the developer submits valid reasons for the delay.

17.4 The developer shall take up investigation and preparation of DPR on their own by engaging consultants in the private sector or through Government agencies. In the case of investigation and preparation of DPR by Government agencies, the developer should meet the cost. The data considered by the developer shall be based on the survey conducted by them through their consultant. Government will not take any responsibility for the data considered by the developer while formulating DPR.

17.5 On getting DPR technically approved, the developer shall obtain the clearance within 6 months through Single Window clearance mechanism.

17.6 A further 6 months will be given to the developer for achieving financial closure.

17.7 The projects shall be made operational within 36 months from the date of financial closure.

17.8 If the project is not commenced within 9 months after obtaining all clearances, the allotment shall be cancelled and forfeiture of Implementation guarantee.

17.9 Failure to reach any of the two milestones in 17.3 and 17.5 above result in forfeiture of implementation guarantee and cancellation of allotment. No compensation would be payable to the IPPs or CPPs in such instance.

17.10 Failure to reach the milestone as in 17.7 above would make the developer liable to liquidated damages.

17.11 The developer may surrender the allotment back to Government if on completion of DPR within the time frame the developer and Government are convinced that the project is techno-economically unviable. However, the DPR prepared by developer will become property of the Government.

17.12 The developer shall furnish a bank guarantee from a scheduled bank in favour of Government valid up to the date of commercial operation of the Small Hydro Power Project as a token of his earnestness in implementing the project.

18. **Regulatory Matters:** The following facilities will be extended to all the SHPs developed as per this policy.

18.1 **Renewable Energy Obligation:** All distribution licensees and KSEB shall follow the renewable energy purchase obligation as decided by the Kerala State Electricity Regulatory Commission.

18.2 **Feed in Tariff:** KSEB and other Distribution licensee may procure power from the Small Hydro Power Projects at the tariff fixed by the KSERC.

18.3 **Transmission & Wheeling Charges of Electricity:** Wheeling charges as per the rate fixed by KSERC from time to time will be levied from the developer. T&D losses in the Transmission & wheeling of energy from generating station to the consumption point for captive producers shall be fixed by KSERC and governed by the regulation in force from time to time.

18.4 **Metering:** Necessary Main and Check meters having import–export registering facility and allied equipments as prescribed by KSEB shall be installed at the inter-connection point at the cost of the developer. All the meters will be under the custody of KSEB. Cost of installing and maintaining meters, CT, PT protective equipments etc. including their replacements / repair whenever necessary shall be borne by the developer.

18.5 **Power Purchase Agreement:** In the case the KSEB/ Distribution Licensee intending to purchase power, the power producer has to execute PPA with the KSEB in a time-bound manner as approved by KSERC. The tariff shall be determined by KSERC in accordance with provisions of the Electricity Act, 2003. All dispute arising shall be settled by the KSERC.

18.6 **Settlements:** All transactions related to the procurement of power by

KSEB/Distribution licenses from the Developer Company shall be settled on monthly basis.

18.7 All the directions/ controls/ regulations/ rectifications issued by CERC/ CEA/ Central Bodies/Southern Regional Electricity Power Committee / SLDC from time to time as adopted by Government /KSERC shall be binding on the developer.

18.8 Relief on Maximum Demand Charges:

KSEB will provide a relief in demand charges to HT/EHT captive consumers for continuously operating their captive power plant for a minimum of 15 days during a month limited to 50% of the value arrived as per the formula given below.

The maximum relief in KVA

$$= 50\% \text{ of } \frac{\text{Units of energy fed into the KSEB grid in a month}}{24 \times 30 \times \text{kWh recorded in the month / kVAh recorded in the month}}$$

where 24 is the number of hours in a day and 30 is the number of days in a month. The readings recorded by the meters installed at the generation stations of the company shall be taken for the purpose of the above calculations. The number of days shall be taken as 30 for all the months for working out the relief in maximum demand. The relief so granted shall not exceed the recorded maximum demand of the company in all its factories and their associates or 50% of the contract demand whichever is higher. The company shall generate power continuously but due to unavoidable reasons, if there is no generation in any day, such days shall be excluded to work out the maximum demand relief. However if there is no generation continuously for a period exceeding 15 days, no relief in maximum demand for that month shall be granted.

During the period of power cut and /or other restrictions, if there is any cut and/or restriction in maximum demand, the quota of maximum demand for the

company and their associates shall be worked out on the same principles as applicable to other consumers during such periods and the maximum demand quota from the KSEB grid allotted accordingly. The company and their associates shall be permitted to utilise the maximum demand in excess of the quota limiting to the maximum demand by virtue of its contribution of power generation and supply to KSEB grid which will be worked out on the formula indicated above. Any further additionality shall be supplied subject to availability and terms applicable to other consumers during such periods. No relief in maximum demand shall be permitted during such occasions.

A separate agreement in this regard has to be executed by the captive consumer with KSEB'.

19. Financial Incentives

19.1 **Government of India Incentives:** The various concession and incentives allowed by MNRE/Government of India for detailed survey & investigation /detailed project report preparation, generation based incentive etc. will continue to be passed on by the State Government to the developer through ANERT. AHEC (Roorkee) is mandated for performance testing to avail capital subsidy from MNRE.

20 Safety Measures: The developer shall be responsible for the quality, soundness, durability, safety and other project requirements notwithstanding the appointment by it of consultants/ contractor(s) to implement and /or operate and maintain the project facilities.

20.1 Technical Committee shall have the right to ensure the quality and to insist on compliance with the designs as per standard specification. The broad details of layout and the detailed design and drawing of the hydraulic structures shall be approved by Technical Committee. Design safety Certificate shall be given by the Design Consultant of the Developer to the Technical Committee /Government and quality standards shall

be certified by the agency supervising the works and countersigned by the Developer.

21 **Development of appropriate standards and design for Small Hydro Power Projects:** Government will facilitate through its agencies as well as through approved consultants of the Ministry of New & Renewable Energy, such as the Alternate Hydro Energy Centre (AHEC) of IIT Roorkee, the development of appropriate standards and design for Small Hydro Power Projects and cost-effective designs to obtain power from such natural resources and by cluster-based development of sites with standardized Electro-mechanical equipments.

22 **Facilitation:** SHP Cell functioning in EMC under Power Department will be facilitating agency for the promotion of this policy. SHP Cell will develop the data base on potential Small Hydro sites in the State and also create development models to harness the targeted capacities during the ensuing years.

23 **Environmental Issues:** The SHP developer has to make suitable financial provisions for mitigation of adverse impacts as per the approved environmental impact assessment plan. Environment Management Plan, measures for mitigation of degradation of environment, watershed area management, Afforestation, and soil moisture conservation due to disturbance of eco-system, and rehabilitation & resettlement package, should be incorporated in the project cost. Adequate care should be exercised in dealing with environmental-related issues such as disposal of blasting muck and soil.

24 **Corporate Social Responsibility and Local Area Development:** Developers will be expected to adopt Corporate Social responsibility (CSR) in project implementation. They will be urged to provide funds to adopt local people to provide job-oriented training programmes available in the locality and to provide funds for furnishing government educational and other institutions. The Government may constitute a Local Area Development Committee to provide assistance to the developer for speedy implementation and to monitor CSR.

25 Monitoring: A high level inter-departmental review committee will be constituted to regularly monitor implementation of all provision of this policy. This Committee will also ensure issue of necessary Government Orders by various departments in relation to this policy without loss of any time for mid-course correction, if required for the smooth implementation of the policy.

26 Cancellation and takeover of assigned project

26.1 In case the developer leaves the project incomplete, or closes the industry or abandons the project, or violates any conditions of allotment, the Government reserves the right to take over the project without any compensation and free from encumbrances.

26.2 On completion of BOOT period, the entire project components including land and transmission system shall be transferred by the developer to the Government in proper working condition, free of cost and free of all encumbrances.

26.3 The Government will not have any liability to take over the employees engaged in the project by the developer.

26.4 In case the Government does not extend the BOOT period and the developer does not transfer the project components as specified above, the Government/ Board on being authorized by the Government, shall have the right to recover the property with all the project components.

26.5 In case, there is any subsisting liability the developer shall be personally liable for the same.

27 Other Conditions: The Generating companies have to operate the station as per the instruction of State Load Dispatch Centre (SLDC). In case if the generation has to be regulated due to constraints in the power system, the generation from the scheme will have to be regulated /stopped as directed by the Load Dispatch Centre. The Generating Company will not be compensated for the shortfall in revenue due to intervention by

SLDC. In extraordinary circumstances arising out of threat to security of the State, public order or a natural calamity or such circumstances arising out of the public interest, the developer will have to operate the generating station in accordance with the directives of the State Government. In case of shutdown, no claim on account of loss of generation will be entertained.

28 Inspection by Dam Safety authorities: The Dam Safety Authority may inspect the dam site of all commissioned projects and examine the operation and maintenance of the dam and other appurtenant structures and may suggest remedial measures to improve the general condition of the dams and other appurtenant structures from the point of view of safety. Safety monitoring as well as safety aspects of the structures shall be made transparent. Safety audit shall be compulsory for all commissioned projects to ensure periodical evaluation and prescribe the corrective measures.

29 Amendments /Relaxation / Interpretation of Policy: Government of Kerala will have powers to amend /relax/interpret any of the provisions under this Policy.

Annexure 1 (B)
GO for tendering of 68SHP Schemes

G.O. (MS) No.6/2022/PD dated 10-05-2022

GOVERNMENT OF KERALA

Abstract

Power Department – Tendering of 68 Small Hydro Electric Projects for assignment to private developers on BOOT basis through Competitive Bidding process-sanctioned - Orders issued.

POWER (B) DEPARTMENT

G.O.(Ms)No.6/2022/PD **Dated, Thiruvananthapuram, 10/05/2022.**

Read:- 1. G.O (P)No.25/2012/PD dated 03/10/2012.
2. G.O (Ms)No.2/2016/PD dated 09/02/2016.
3. Letter No.EMC/519/2021-ETB-5 dated 14/02/2022 from the Director, Energy Management Centre, Thiruvananthapuram.

ORDER

As per Government Order read as 1st paper above, Government have formulated Kerala Small Hydro Power Policy 2012 for the promotion and development of Small Hydro Power Projects in the State through private participation.

2. As per para 7 of the said policy, Hydro Power Projects identified by the Government or State sponsored agencies such as KSEBL, ANERT, Energy Management Centre etc., and not reserved for development by Kerala State Electricity Board Limited shall be assigned to private developers as independent power projects or captive power projects only through the competitive bidding route on Build Own Operate Transfer mode for 30 years from the date of allotment and subject to the conditions and procedures specified in the Small Hydro Power Policy.

3. The Director, Energy Management Centre, as per his letter read as 3rd paper above, has requested Government sanction for tendering a total of 68 Small Hydro Projects in an upfront premium based bidding route to find out eligible private developers.

4. Government have examined the matter in detail and are pleased to accord sanction to the Director, Energy Management Centre for the tendering process of 68 Small Hydro Projects (listed as Appendix-A) in an upfront premium based competitive bidding route on Build Own Operate Transfer mode to find out eligible private developers and subject to the terms and conditions stipulated in the existing Small Hydro Power Policy 2012.

By Order of the Governor,

Rajesh Kumar Sinha
Principal Secretary

To

The Director, Energy Management Centre, Thiruvananthapuram.
The Accountant General (A&E), Kerala, Thiruvananthapuram.
The Principal Accountant General (Audit), Kerala, Thiruvananthapuram.
The Information and Public Relations Department (Web and new media division).
Stock File/Office Copy.

Forwarded / By Order

Section Officer

Annexure – A for G.O.(MS)No. 6/2022/PD, Dated,10/05/2022

Sl No	Name Of Report	DPR/DIR/PFR	Installed Capacity (MW)	Annual Energy in MU	District	River Basin
	GROUP A					
1.	Chathamala MHP	DPR	1	2.08	Kannur	Valapattanam
2.	Kakkadampoyil Stage 2 SHP	DIR	3	NA	Kozhikode	Chaliyar
3.	Kokkamullu SHP	DPR	2.5	7	Kannur	Valapattanam
4.	Kozhichal SHP	DPR	1	1.91	Kannur	Kariyamkode
5.	Madatharuvi MHP	DPR	1	2.15	Pathanamthitta	Pamba
6.	Malothy I SHP	DPR	2	4	Kasargod	Malothipuzha
7.	Malothy II MHP	DPR	0.8	1.5	Kasargod	Malothipuzha
8.	Parathodu MHP	DPR	0.3	0.86	Pathanamthitta	Manimala Ar
9.	Haritheerthakkara MHP	DIR	0.1	0.25	Kannur	Peruvamba
10.	Malothy III SHP	DIR	0.45	0.92	Kasargod	Malothipuzha
11.	Pilachikkara MHP	DIR	0.35	1.004	Kasargod	Pilachikkara
12.	Randamkadavu MHP	DIR	0.5	0.985	Kannur	Randam kadavu
13.	Thanniyadi MHP	DIR	0.5	1.02	Kasargod	Chandragiri
14.	Balanthodu #	DIR	0.25	1.2	Ernakulam	Muvattupuzha
15.	Edathanalkuthu #	DIR	0.5	2.73	Ernakulam	Muvattupuzha
16.	Peruva #	DPR	2	NA	Kannur	Peruva
	GROUP-B					
17.	Kalithattumpara MHP	PFR	0.7	6.579	Kannur	Randam kadavu
18.	Kilikkalthodu MHP	FR	0.2	0.716	Idukki	Karinthiri/Periyar
19.	Murikkasseri MHP	PFR	0.25	0.8	Idukki	Murikasseri Thodu
20.	Pattathipara MHP	PFR	0.2	0.62	Thrissur	Karuvannur

21.	Perumpala MHP	PFR	0.8	1.568	Kannur	Perumpuzha
	GROUP-C					
22.	Aruvikkal MHP	Identified	0.5	1.36	Ernakulam	Moovattupuzha
23.	Aruvikkuzhipara /Marangattupally MHP	Identified	0.3	1.32	Kottayam	Meenachil
24.	Enathu MHP	Identified	2	4.7	Pathanamthitta	Kallada
25.	Irumpupalam MHP	Identified	0.5	1.35	Thiruvananthapuram	Vamanapuram
26.	Padappamon MHP	Identified	0.4	1.13	Thiruvananthapuram	Vamanapuram
27.	Anavilasam MHP	Identified	0.3	1.15	Idukki	Periyar
28.	Bavalipuzha I MHP	Identified	1.5	NA	Kannur	Valapattanam
29.	Peruthody MHP	Identified	0.85	1.95	Kasargod	Chandragiri
30.	Bavalipuzha II MHP	Identified	1.5	NA	Kannur	Valapattanam
31.	Cheedikuzhy MHP	Identified	1	NA	Kozhikode	Korapuzha
32.	Chemmannar MHP	Identified	1	2.62	Idukki	Chemmannur
33.	Cheruvakkilchola MHP	Identified	0.74	NA	Thrissur	Mangad
34.	Edapuzha Mini	Identified	0.35	NA	Kannur	Valapattanam
35.	Ezhamthala MHP	Identified	3.5	16.47	Pathanamthitta	Pamba/Kallar
36.	Karimpuzha MHP	Identified	0.9	NA	Malappuram	Karimpuzha
37.	Karuvarakundu MHP	Identified	0.5	NA	Palakkad	Kallampuzha
38.	Lakkom MHP	Identified	1	NA	Idukki	Pambar
39.	Melekkadavu Thampurankavu MHP	Identified	0.2	0.515	Thiruvananthapuram	Karamana
40.	Moorikadavu	Identified	2	5.92	Kannur	Kuppam
41.	Mundakayam MHP	Identified	1.25	3.08	Kottayam/Idukki	Manimala Ar
42.	Paloorkotta MHP	Identified	2	NA	Malappuram	Kadalundi
43.	Pampanal	Identified	1	3	Kottayam	Meenachal
44.	Perunthenaruvi SHEP (stage II)	Identified	4	16	Pathanamthitta	Pamba
45.	Poolakutty I	Identified	0.4	1.00	Kannur	Valapattanam
46.	Pottenthoud I Mini HES	Identified	0.8	2.00	Kannur	Valapattanam/ Bavelipuzha
47.	Pottenthoud II Mini HES	Identified	0.4	1.00	Kannur	Valapattanam/ Bavelipuzha
48.	Upper Cheedikuzhy MHP	Identified	1	NA	Kozhikode	Kuttiady

49.	Urumbikkara SHP	Identified	3	NA	Kottayam	Manimalayar
50.	Yaranipuzha/Moonnam kadavu SHP	Identified	2	8.6	Kasargod	Chandragiri
51.	Kurudipuzha MHP	Identified	1	NA	Malappuram	Kurudipuzha
52.	Olikkathodu MHP	Identified	0.5	NA	Malappuram	Chaliyar
53.	Odanpuzha MHP	Identified	0.3	0.98	Kannur	Bavali
54.	Cherupuzha Mini HEP #	Identified	0.6	NA	Malappuram	Chaliyar
55.	Furlongkara #	Identified	0.35	NA	Kannur	Killikalthodu/Kuppam
56.	Kanjirapuzha #	Identified	1	2.8	Palakkad	
57.	Killikkallu SHEP #	Identified	3	NA	Kozhikode	Chaliyar
58.	Kuliramutty #	Identified	3	NA	Kozhikode	Perumboola
59.	Manthanpotti #	Identified	3	NA	Palakkad	Bharathapuzha
60.	Mullaringadu #	Identified	0.15	0.7	Idukki/Ernakulam	Muvattupuzha
61.	Onipuzha #	Identified	1.5	NA	Kozhikode	Onipuzha
62.	Pazhukkakkanam #	Identified	2	NA	Idukki	Meenachal
63.	Uruttipuzha #	Identified	1	NA	Kannur	Cheruthipuzha
64.	Valanthodu Stage - II (Lower Valanthodu) SHEP #	Identified	3	NA	Malappuram	Kurumanpuzha
65.	Uppar SHEP	Identified	3	9.41	Idukki	Periyar
66.	Upper Poozhithodu SHEP	Identified	3.6	7.84	Kozhikode	Kuttiyadi
67.	Urumi Stage III SHEP	Identified	2.4	5.43	Kozhikode	Chaliyar
68.	Aruvikuzhy	Identified	4	13.68	Idukki	Periyar

PS:
NA: refers to Not Available
#: Subject to release of earlier allotted projects.

Annexure 2

Profile of Projects

Based on GO for tendering of 68 SHP Schemes

G.O. (MS) No.6/2022/PD dated 10-05-2022

(Tentative details for tender – for reference only.

Details if any of other project will be issued during RFP stage)

ANX A (1) CHATHAMALA MHP - GROUP A

Present Status of the Project:	DPR Ready/ Detailed Investigation completed/Preliminary Investigation completed/Feasibility study conducted	DPR
River basin	Valapattanam basin	
District	Kannur	
Access to site	About 55 km from Kannur	
Latitude / Longitude (near)	12°08'53.0" N / 75°33'57.0" E	
Nearest KSEB investigation field office		Investigation Field Division, Padinjarathara Investigation Circle, North, Vydyuthi Bhavanam, Thrissur
Main project components viz.		
a. Dam/ weir with dimensions (approx)		Diversion weir 41m long and 5m height.
b. Water conductor system with dimensions (approx)		Power channel 720m long bottom width – 40cm and depth – 2.0m, side slope 1:1, circular forebay, 10m dia. Penstock 1 no. – 127m length, 0.8m dia., feeder pipes – 2nos. 0.7m dia. 10m length
c. Power house with No. of machines and capacity		1MW (2 x 500kw) 2 nos.
d. Annual average generation potential		2.08Mu
e. Evacuation details		Alignment of transmission line will be surveyed and finalized by KSEB at the cost of the developer. Evacuation Scheme shall be prepared by developer and get it approved from KSEB.11kv line 3 km from the project site, (tentative).
f. Design Head		63m
Land particulars(excluding right of way for transmission line)		
a. Extent of Forest land required (approx)		Nil
b. Extent of Private land required (approx)		3Ha
c. Extent of Government land required (approx)		
Particulars of any upstream/ downstream structures from the proposed scheme (existing / proposed)		
Rehabilitation / resettlement issues, if any, with details		Approx. 5 families

ANX A (2) Kakkadampoil SHP Stage II – 3 MW – GROUP A

Present Status of the Project:	DPR Ready/ Detailed Investigation completed/Preliminary Investigation completed/Feasibility study conducted	DPR
River basin	Perumpilavupuzha River basin	
District	Kozhikkode	
Access to site	From Kozhikode– Via Omassery	
Latitude / Longitude (near)	11°22'N - 11°25'N / 76°05'E - 76°08'E	
Nearest KSEB investigation field office	NA	
Main project components viz.		
a. Dam/ weir with dimensions (approx)	Concrete gravity type weir 66m long and 21.5m length of spillway	
b. Water conductor system with dimensions (approx)	0.9m dia. Penstock 2 no. –578m length.	
c. Power house with No. of machines and capacity	3MW (2×1.5MW)	
d. Annual average generation potential	6.34 Mu	
e. Evacuation details	The units will generate power at 11kV and run in parallel with KSEB grids at 110kV	
f. Design Head	200m	
Land particulars(excluding right of way for transmission line)		
a. Extent of Forest land required (approx)	0.5Ha	
b. Extent of Private land required (approx)	10Ha	
c. Extent of Government land required (approx)		
Particulars of any upstream/ downstream structures from the proposed scheme (existing / proposed)		
Rehabilitation / resettlement issues, if any, with details		

ANX A (3) KOKKAMULLU SHP – GROUP A

Present Status of the Project:	DPR Ready/ Detailed Investigation completed/Preliminary Investigation completed/Feasibility study conducted	DPR
River basin	Kokkamullu river, Valapattanam basin	
District	Kannur	
Access to site	About 34 km from Thaliparamba to Kutianmala	
Latitude / Longitude (near)	12°07'56.0" N / 75°33'29.0" E	
Nearest KSEB investigation field office	NA	
Main project components viz.		
a. Dam/ weir with dimensions (approx)	Diversion ungated weir 114m long and 4.5m height.	
b. Water conductor system with dimensions (approx)	Tail race channel 200m length, 1m height, 5m bed width, Side slope 1:1, 1.8m dia. Penstock 1 no. –670m length.	
c. Power house with No. of machines and capacity	2.5MW (2×1250kW)	
d. Annual average generation potential	7Mu	
e. Evacuation details	Power generated will be transmitted through 11 KV line for 9km length	
f. Design Head	50m	
Land particulars(excluding right of way for transmission line)		
a. Extent of Forest land required (approx)	Nil	
b. Extent of Private land required (approx)	The various structures forming part of the scheme are coming under Private land.	
c. Extent of Government land required (approx)		
Particulars of any upstream/ downstream structures from the proposed scheme (existing / proposed)		
Rehabilitation / resettlement issues, if any, with details		
Litigations or any other issues including previous agreements etc.		

ANX A (4) KOZHICHAL SHP – GROUP A

Present Status of the Project:	DPR Ready/ Detailed Investigation completed/Preliminary Investigation completed/Feasibility study conducted	DPR
River basin	Kattappally thodu, Kariamgodu basin	
District	Kannur	
Access to site	About 2 km East of Kozhichal	
Latitude / Longitude (near)	12°17'00" N / 75°27'30" E	
Nearest KSEB investigation field office	NA	
Main project components viz.		
a. Dam/ weir with dimensions (approx)	Concrete gravity type weir 30.65m long and river bed level of 585m.	
b. Water conductor system with dimensions (approx)	Power channel 892m length, 0.75m dia., Side slope 1:1, 0.6m dia. Penstock 1 no. –382m length.	
c. Power house with No. of machines and capacity	1MW	
d. Annual average generation potential	1.91Mu	
e. Evacuation details	Power generated will be transmitted through 11 KV line for 1.5km length	
f. Design Head	140m	
Land particulars (excluding right of way for transmission line)		
a. Extent of Forest land required (approx)	Nil	
b. Extent of Private land required (approx)	Nil	
c. Extent of Government land required (approx)		
Particulars of any upstream/ downstream structures from the proposed scheme (existing / proposed)		
Rehabilitation / resettlement issues, if any, with details		
Litigations or any other issues including previous agreements etc.		

ANX A (5) MADATHARUVI MHP – GROUP A

Present Status of the Project:	DPR Ready/ Detailed Investigation completed/Preliminary Investigation completed/Feasibility study conducted	DPR
River basin	Madatharuvi valiathodu, Pamba river basin	
District	Pathanamthitta	
Access to site	About 6km from Ranny towards North	
Latitude / Longitude (near)	9°25‘00" N / 76°48‘31" E	
Nearest KSEB investigation field office	NA	
Main project components viz.		
a. Dam/ weir with dimensions (approx)	Concrete gravity ungated type weir 41.65m long and 6m height.	
b. Water conductor system with dimensions (approx)	Tail race channel 10m length (approx), 2.9m height, 1.1m bed width, bed slope 1:1500, 1.2m dia. Penstock 1 no. –121.68m length.	
c. Power house with No. of machines and capacity	1MW	
d. Annual average generation potential	2.15Mu	
e. Evacuation details	Power generated will be transmitted through 11 KV line for 6km length	
f. Design Head	37.86m	
Land particulars(excluding right of way for transmission line)		
a. Extent of Forest land required (approx)	Nil	
b. Extent of Private land required (approx)	1.76Ha	
c. Extent of Government land required (approx)		
Particulars of any upstream/ downstream structures from the proposed scheme (existing / proposed)		
Rehabilitation / resettlement issues, if any, with details		
Litigations or any other issues including previous agreements etc.		

ANX A (6) MALOTHI I SHP – GROUP A

Present Status of the Project:	DPR Ready/ Detailed Investigation completed/Preliminary Investigation completed/Feasibility study conducted	DPR
River basin	Kariangod basin, Malothipuzha river	
District	Kasargode	
Access to site	About 5 km from Vallikadavu via Malom-Kottancheri- Coorg Border Rd and konnakkad local Rd	
Latitude / Longitude (near)	12°22'16" N / 75°23'04" E	
Nearest KSEB investigation field office	NA	
Main project components viz.		
a. Dam/ weir with dimensions (approx)	Gravity type broad crested weir 94.85m long and non overflow portion 8.65m on right bank, 12.60m on left bank and 50m earthen bund.	
b. Water conductor system with dimensions (approx)	On the left bank of weir, circular pipe 1.85m dia. Steel, Sill level EL 301.00m. Length of water conductor pipe up to surge shaft is 1045m. 1.55m dia. Penstock 1 no. –180 m length.	
c. Power house with No. of machines and capacity	2MW (2×1MW)	
d. Annual average generation potential	4 Mu	
e. Evacuation details	Power generated will be transmitted through 11 KV line for 1km length	
f. Design Head	34m	
Land particulars(excluding right of way for transmission line)		
a. Extent of Forest land required (approx)	Nil	
b. Extent of Private land required (approx)	2.36Ha	
c. Extent of Government land required (approx)		
Particulars of any upstream/ downstream structures from the proposed scheme (existing / proposed)		
Rehabilitation / resettlement issues, if any, with details		
Litigations or any other issues including previous agreements etc.		

ANX A (7) MALOTHI II MHP - GROUPA

Present Status of the Project:	DPR Ready/ Detailed Investigation completed/Preliminary Investigation completed/Feasibility study conducted	DPR under preparation
River basin	Malothipuzha river	
District	Kasargod	
Access to site	About 55km away from Payyannoor via Neeleswaram	
Latitude / Longitude (near)	12°21‘25" N / 75°22‘42" E	
Nearest KSEB investigation field office	Investigation Field Division Padinjarethara Investigation Circle North, V. B, Thrissur	
Main project components viz.		
a. Dam/ weir with dimensions (approx)	A diversion weir of 49m length and 5m height,	
b. Water conductor system with dimensions (approx)	A power channel 1060m length, 1.2m bottom width, 1.3m depth, 1:1 side slope, a circular forebay tank – 12.5m dia.	
c. Power house with No. of machines and capacity	800kw (2 x 400kw)	
d. Annual average generation potential	1.5Mu	
e. Evacuation details	Alignment of transmission line will be surveyed and finalized by KSEB at the cost of the developer. Evacuation Scheme shall be prepared by developer and get it approved from KSEB.11 kV line 1 km length, (tentative).	
f. Design Head	32m	
Land particulars(excluding right of way clearance for transmission line)		
a. Extent of Forest land required (approx)	Nil	
b. Extent of Private land required (approx)	4Ha	
c. Extent of Government land required (approx)		
Particulars of any upstream/ downstream structures from the proposed scheme (existing / proposed)		
Rehabilitation / resettlement issues, if any, with details		
Litigations or any other issues including previous agreements etc.		

ANX A (8) PARATHODU MHP – GROUP A

Present Status of the Project:	DPR Ready/ Detailed Investigation completed/Preliminary Investigation completed/Feasibility study conducted	DPR
River basin	Manimala basin	
District	Pathanamthitta	
Access to site	About 22km North East of Thiruvalla	
Latitude / Longitude (near)	9°26'05.9" N / 76°42'10.5" E	
Nearest KSEB investigation field office	NA	

Main project components viz.	
a. Dam/ weir with dimensions (approx)	A gravity ungated weir of about 32m length and 3.6m height.
b. Water conductor system with dimensions (approx)	Power channel 103m length, 1.5m height, 1.2m bottom width, bed slope 1 in 2000, rectangular forebay, 0.80m dia. Penstock 1 no. –115m length.
c. Power house with No. of machines and capacity	300kW (2×150kW)
d. Annual average generation potential	0.86Mu
e. Evacuation details	Power generated will be transmitted through 11 KV line for 1km length
f. Design Head	24.5m
Land particulars	
a. Extent of Forest land required (approx)	Nil
b. Extent of Private land required (approx)	NA
c. Extent of Government land required (approx)	
Particulars of any upstream/ downstream structures from the proposed scheme (existing / proposed)	
Rehabilitation / resettlement issues, if any, with details	
Litigations or any other issues including previous agreements etc.	

ANX A (9) HARITHEERTHAKKARA MHP – GROUP A

Present Status of the Project:	DPR Ready/ Detailed Investigation completed/Preliminary Investigation completed/Feasibility study conducted	Detailed investigation report
River basin	Peruvamba river basin Hariyilthodu	
District	Kannur	
Access to site	About 20km north east of Payyannoor town	
Nearest KSEB investigation field office		Investigation Field Division Padinjarethara Investigation Circle, North, V. B, Thrissur
Latitude / Longitude (near)		12°12'43.6" N / 75°15'48.6" E
Main project components viz.		
a. Dam/ weir with dimensions (approx)		Trench type diversion weir.
b. Water conductor system with dimensions (approx)		Desilting chamber, Trapezoidal power channel to lead water from desilting chamber to forebay, circular forebay 7m dia. Penstock 50cm dia. 35m length
c. Power house with No. of machines and capacity		2 x 50kw Horizontal shaft Francis turbine = 100kw
d. Annual average generation potential		0.251Mu
e. Evacuation details		Alignment of transmission line will be surveyed and finalized by KSEB at the cost of the developer. Evacuation Scheme shall be prepared by developer and get it approved from KSEB.11kv line up to Chooral nearly 1km from project site, (tentative).
f. Design Head		Net head 13.50m
Land particulars		
a. Extent of Forest land required (approx)		Nil
b. Extent of Private land required (approx)		2Ha
c. Extent of Government land required (approx)		Nil
Particulars of any upstream/ downstream structures from the proposed scheme (existing / proposed)		
Rehabilitation / resettlement issues, if any, with details		

ANX A (10) MALOTHI III SHP – GROUP A

Present Status of the Project:	DPR Ready/ Detailed Investigation completed/Preliminary Investigation completed/Feasibility study conducted	Detailed investigation report
River basin	Kariangode river basin	
District	Kasargode	
Access to site	About 68kms away from Payyannur town via Nileswaram	
Nearest KSEB investigation field office	NA	
Latitude / Longitude (near)	12°23'00" N / 75°21'04" E	
Main project components viz.		
a. Dam/ weir with dimensions (approx)	Overflow type, concrete gravity type weir of about 47m length and 6.35m height.	
b. Water conductor system with dimensions (approx)	Power channel 340m length, 1.75m height with a freeboard of 0.25m, 1.24m bottom width, side slope of 1:1, 1.20m dia. Penstock 1 no. –25m length.	
c. Power house with No. of machines and capacity	450kW(1×100kW+1×150kW+1×200kW)	
d. Annual average generation potential	0.9203Mu	
e. Evacuation details	Power generated will be transmitted through 11 KV line for 1km length	
f. Design Head	Gross head 9.37m	
Land particulars		
a. Extent of Forest land required (approx)	Nil	
b. Extent of Private land required (approx)	3Ha	
c. Extent of Government land required (approx)		
Particulars of any upstream/ downstream structures from the proposed scheme (existing / proposed)		
Rehabilitation / resettlement issues, if any, with details		

ANX A (11) PILACHIKKARA MHP – GROUP A

Present Status of the Project:	DPR Ready/ Detailed Investigation completed/Preliminary Investigation completed/Feasibility study conducted	Detailed investigation report
River basin	Pilachikkarama, Karangot river basin	
District	Kasargod	
Access to site	Project site is near Bheemanadi which is about 67 km from Thaliparamba	
Latitude / Longitude (near)	12°17‘26" N / 75°19‘35" E	
Nearest KSEB investigation field office (Address and Telephone No.)	Investigation Field Division Padinjarethara Phone 0493 – 693507 Investigation Circle North, V. B, Thrissur Phone : 0487 –380343	
Main project components viz.		
a. Dam/ weir with dimensions (approx)	Concrete gravity weir, overflow type, height 5m length 34m	
b. Water conductor system with dimensions (approx)	Desilting chamber 50m length, conduit channel 3m dia. 198m length forebay tank 15m dia. and 10.6m height, penstock 1.4m dia. 40m length	
c. Power house with No. of machines and capacity	1 x 250kw +1 x 100kw =350kw	
d. Annual average generation potential	1.004Mu	
e. Evacuation details	Alignment of transmission line will be surveyed and finalized by KSEB at the cost of the developer. Evacuation Scheme shall be prepared by developer and get it approved from KSEB.11kv line at Bheemanadi, (tentative).	
f. Design Head	6m	
Land particulars		
a. Extent of Forest land required (approx)	Nil	
b. Extent of Private land required (approx)	3Ha	
c. Extent of Government land required (approx)	Nil	
Particulars of any upstream/ downstream structures from the proposed scheme (existing / proposed)		
Rehabilitation / resettlement issues, if any, with details		
Litigations or any other issues including previous agreements etc.	Nil	

ANX A (12) RANDAM KADAVU MHP – GROUP A

Present Status of the Project:	DPR Ready/ Detailed Investigation completed/Preliminary Investigation completed/Feasibility study conducted	Detailed investigation report
River basin	Valapattanam basin	
District	Kannur	
Access to site	About 55km From Thalasseri or Kannur Iritty Edoor	
Latitude / Longitude (near)	12°02'53" N / 75°46'06" E	
Nearest KSEB investigation field office	Investigation Field Division – Padinjarathara Investigation Circle, North, V. B Thrissur	
Main project components viz.		
a. Dam/ weir with dimensions (approx)	Diversion weir – gravity type 5m height	
b. Water conductor system with dimensions (approx)	Power channel length 400m	
c. Power house with No. of machines and capacity	Overground 1 x 200kW, 1 x 100kW	
d. Annual average generation potential	0.985Mu	
e. Evacuation details	Alignment of transmission line will be surveyed and finalized by KSEB at the cost of the developer. Evacuation Scheme shall be prepared by developer and get it approved from KSEB.11kv line from Chavasseri Substation is available (tentative).	
f. Design Head	18.50m	
Land particulars(excluding right of way for transmission)		
a. Extent of Forest land required (approx)		
b. Extent of Private land required (approx)	1.90Ha	
c. Extent of Government land required (approx)		
Particulars of any upstream/ downstream structures from the proposed scheme (existing / proposed)		
Rehabilitation / resettlement issues, if any, with details		
Litigations or any other issues including previous agreements etc.		

ANX A (13) THANNIYADI MHP – GROUP A

Present Status of the Project:	DPR Ready/ Detailed Investigation completed/Preliminary Investigation completed/Feasibility study conducted	Detailed investigation report
River basin	Kuyangad thodu / Chandragiri basin	
District	Kasargod	
Access to site	The site is approximately 25km – east of Kanhangad near Eriya in Kanhangad - Iriya road	
Latitude / Longitude (near)	12°24'40" N / 75°10'17" E	
Nearest KSEB investigation field office	Investigation Field Division Padinjarethara Investigation Circle, North, V. B, Thrissur	
Main project components viz.		
a. Dam/ weir with dimensions (approx)	Overflow type concrete gravity weir of Height 5.0m length 36.0m	
b. Water conductor system with dimensions (approx)	Desilting chamber 40m long size 3.50 x 3.50m power channel – length 1005m bottom width 1.5m, forebay 19m dia. circular height 3.5m, penstock length 36m, 1.2m dia.	
c. Power house with No. of machines and capacity	Power house 450kw (200+150+100kw)	
d. Annual average generation potential	1.57Mu	
e. Evacuation details	Alignment of transmission line will be surveyed and finalized by KSEB at the cost of the developer. Evacuation Scheme shall be prepared by developer and get it approved from KSEB. Power produced can be linked to the existing 11kv line at Thanniyadi, (tentative).	
f. Design Head	10.5m	
Land particulars(excluding right of way for transmission line)		
a. Extent of Forest land required (approx)		
b. Extent of Private land required (approx)	12Ha	
c. Extent of Government land required (approx)		
Particulars of any upstream/ downstream structures from the proposed scheme (existing / proposed)		
Rehabilitation / resettlement issues, if any, with details		

ANX A (14) BALANTHODU MHP – GROUP A

Present Status of the Project:	DPR Ready/ Detailed Investigation completed/Preliminary Investigation completed/Feasibility study conducted	Detailed investigation report
River basin	Muvattupuzha basin	
District	Ernakulam	
Access to site	30 km to Mullaringkadu from Thodupuzha, then 3 km jeep road to PH site	
Latitude / Longitude (near)	9°59.5' N, 76°49.5' E	
Nearest KSEB investigation field office		
Main project components viz.		
a. Dam/ weir with dimensions (approx)	Gravity Weir with un-gated overflow portion 30 m lenth	
b. Water conductor system with dimensions (approx)	Low pressure pipe circular, 0.60m dia 150 m (Length), forebay R.C.C rectangular tank with compartments 8 x 4 x 4.50 (L x B x D), penstock length 0.50m dia & 600 m long	
c. Power house with No. of machines and capacity	Power house 250 kW	
d. Annual average generation potential	1.198Mu	
e. Evacuation details	Power Generated will be transmitted through 11kV line for 2 km length. Approximately 2km of L T line	
f. Design Head	107 m	
Land particulars(excluding right of way for transmission line)		

ANX A (15) EDATHANALKUTHU MHP – GROUP A

Present Status of the Project:	DPR Ready/ Detailed Investigation completed/Preliminary Investigation completed/Feasibility study conducted	Detailed investigation report
River basin	Muvattupuzha	
District	Ernakulam	
Access to site	30 km to Mullaringkadu from Thodupuzha, then 3 km jeep road to PH site	
Latitude / Longitude (near)	9°59.5' N, 76°49.5' E	
Nearest KSEB investigation field office	NA	
Main project components viz.		
a. Dam/ weir with dimensions (approx)	Gravity Weir with un-gated overflow portion 30m length	
b. Water conductor system with dimensions (approx)	Main penstock line 0.40m dia & 850 m long bifurcating at PH end to feed 2 turbines (2 Nos. 30cm dia)	
c. Power house with No. of machines and capacity	Power house 250 kW	
d. Annual average generation potential	2.733 Mu	
e. Evacuation details	Power Generated will be transmitted through 11kV line for 2 km length. Approximately 2km of L T line (tentative).	
f. Design Head	377 m	

ANX A (16) PERUVA SHP – GROUP A

Present Status of the Project:	DPR Ready/ Detailed Investigation completed/Preliminary Investigation completed/Feasibility study conducted	Detailed investigation report
River basin	Anjarakandy basin	
District	Kannur	
Access to site	30 km along	
Latitude / Longitude (near)	11°49.5‴ N / 74°44.5‘ E	
Nearest KSEB investigation field office		Investigation Field Division Padinjarethara Investigation Circle, North, V. B, Thrissur
Main project components viz.		
a. Dam/ weir with dimensions (approx)		2 concrete gravity Ogee weir of Height 5.0m length 29.0m & 43 m respectively
b. Water conductor system with dimensions (approx)		Canal type
c. Power house with No. of machines and capacity		Power house 2 MW Francis Turbine
d. Annual average generation potential		5 Mu
e. Evacuation details		
f. Design Head		74.6 m
Land particulars(excluding right of way for transmission line)		
a. Extent of Forest land required (approx)		10.5 Ha
b. Extent of Private land required (approx)		
c. Extent of Government land required (approx)		
Particulars of any upstream/ downstream structures from the proposed scheme (existing / proposed)		
Rehabilitation / resettlement issues, if any, with details		

ANX A (17) KALITHATTUMPARA MHP- GROUP B

Present Status of the Project:	DPR Ready/ Detailed Investigation completed/Preliminary Investigation completed/Feasibility study conducted	Pre-feasibility report
River basin	Valapattanam basin	
District	Kannur	
Access to site	About 60km From Thalasseri	
Latitude / Longitude (near)	12°02'40.0" N / 75°14'07.0" E	
Nearest KSEB investigation field office	NA	
Main project components viz.		
a. Dam/ weir with dimensions (approx)	Trench weir, height 2.6m, length 21m,	
b. Water conductor system with dimensions (approx)	Power channel 1405m, penstock 1.2m dia. and length 285m, forebay tank circular 15m dia. height 8.94m	
c. Power house with No. of machines and capacity	Over ground type, 18m x 7m size, no. of machines3,capacity 3000kw (1500+1000+500)	
d. Annual average generation potential	6.579Mu	
e. Evacuation details	Alignment of transmission line will be surveyed and finalized by KSEB at the cost of the developer. Evacuation Scheme shall be prepared by developer and get it approved from KSEB. Power can be evacuated through 11kv line to a centrally oriented switching station near Koodaranhi, (tentative).	
f. Design Head	70m (net head)	
Land particulars		
a. Extent of Forest land required (approx.)		
b. Extent of Private land required (approx.)	Private land	
c. Extent of Government land required (approx.)		
Particulars of any upstream/ downstream structures from the proposed scheme (existing / proposed)		
Rehabilitation / resettlement issues, if any, with details		
Litigations or any other issues including previous agreements etc.		

ANX A (18) KILLIKALTHODU MHP- GROUP B

Present Status of the Project:	DPR Ready/ Detailed Investigation completed/Preliminary Investigation completed/Feasibility study conducted	Pre-feasibility report
River basin	Karinthiri/Periyar basin	
District	Idukki	
Access to site	15 km from Kallar near Mankulam	
Latitude / Longitude (near)	10°06'35.0" N / 76°57'55" E	
Nearest KSEB investigation field office	NA	
Main project components viz.		
a. Dam/ weir with dimensions (approx)	Gravity Weir 21m long	
b. Water conductor system with dimensions (approx)	Power channel rectangular 0.5 m wide, 190 m, forebay tank 8x6x4m	
c. Power house with No. of machines and capacity	Over ground type, 18m x 7m size, no. of machines3,capacity 3000kw (1500+1000+500)	
d. Annual average generation potential	0.716Mu	
e. Evacuation details	11 kV line for 2 km length	
f. Design Head	72m (net head)	
Land particulars		
a. Extent of Forest land required (approx.)	minimal	
b. Extent of Private land required (approx.)	0.4 Ha	
c. Extent of Government land required (approx.)		
Particulars of any upstream/ downstream structures from the proposed scheme (existing / proposed)		
Rehabilitation / resettlement issues, if any, with details		
Litigations or any other issues including previous agreements etc.		

ANX A (19) MURIKKASSERI MHP – GROUP B

Present Status of the Project:	DPR Ready/ Detailed Investigation completed/Preliminary Investigation completed/Feasibility study conducted	Pre-feasibility report
River basin	Periyar river basin	
District	Idukki	
Access to site	About 1.7km from Rajamudy	
Nearest KSEB investigation field office	NA	
Latitude / Longitude (near)	9°53'08.0" N / 77°01'53.0" E	
Main project components viz.		
a. Dam/ weir with dimensions (approx)	Gravity ungated overflow portion type weir of about 23m length and 3.5m depth.	
b. Water conductor system with dimensions (approx)	Penstock having 630mm dia. and 8mm thickness and having a length of 265m, bifurcated near to the powerhouse to feed the two turbines	
c. Power house with No. of machines and capacity	250kW(2×125kW)	
d. Annual average generation potential	0.8Mu	
e. Evacuation details	Power generated will be transmitted through 11 KV line for 1km length	
f. Design Head	Net head 45m	
Land particulars		
a. Extent of Forest land required (approx)	Nil	
b. Extent of Private land required (approx)	NA	
c. Extent of Government land required (approx)		
Particulars of any upstream/ downstream structures from the proposed scheme (existing / proposed)		
Rehabilitation / resettlement issues, if any, with details		

ANX A (20) PATTATHIPPARA MHP – GROUP B

Present Status of the Project:	DPR Ready/ Detailed Investigation completed/Preliminary Investigation completed/Feasibility study conducted	Pre-feasibility report
River basin	Karuvannur river basin	
District	Thrissur	
Access to site	About 13km from Thrissur	
Nearest KSEB investigation field office	NA	
Latitude / Longitude (near)	10°36' N / 76˚18' E	
Main project components viz.		
a. Dam/ weir with dimensions (approx)	Diversion weir of about 50m length and 5m height.	
b. Water conductor system with dimensions (approx)	Penstock having length 100m, size 80cm, thickness 6mm	
c. Power house with No. of machines and capacity	200kW(2×100kW)	
d. Annual average generation potential	0.62Mu	
e. Evacuation details	Power generated will be transmitted through 11 KV line for 3km length	
f. Design Head	Net head 50m	
Land particulars		
a. Extent of Forest land required (approx)	0.5Ha	
b. Extent of Private land required (approx)	1.5Ha	
c. Extent of Government land required (approx)		
Particulars of any upstream/ downstream structures from the proposed scheme (existing / proposed)		
Rehabilitation / resettlement issues, if any, with details		

ANX A (21) PERUMPALA MHP – GROUP B

Present Status of the Project:	DPR Ready/ Detailed Investigation completed/Preliminary Investigation completed/Feasibility study conducted	Pre-feasibility report
River basin	Perumpuzha	
District	Kannur	
Access to site	About 44km East of Thalipparamba via Manakkadavu by road, nearest Railway Kannur.	
Latitude / Longitude (near)	$12^0 11' 30'' N$ / $75^0 32' 30'' E$	
Nearest KSEB investigation field office	Investigation Field Division Padinjarethara Investigation Circle North, V. B, Thrissur	
Main project components viz.		
a. Dam/ weir with dimensions (approx)	Length 40m, height of overflow section 4m, desalting chamber 3.5 x 3.5.	
b. Water conductor system with dimensions (approx)	Power channel 750.75m trapezoidal bottom width 2.5m, depth 1.4m forebay tank 17m dia., circular. Penstock 1.2m dia., 45m long	
c. Power house with No. of machines and capacity	800kw (100+ 300+ 400kw)	
d. Annual average generation potential	1.935Mu	
e. Evacuation details	Alignment of transmission line will be surveyed and finalized by KSEB at the cost of the developer. Evacuation Scheme shall be prepared by developer and get it approved from KSEB. It is proposed to feed to substation at Sreekandapuram (tentative).	
f. Design Head	16m	
Land particulars(excluding right of way for transmission		

line)

a. Extent of Forest land required (approx)

b. Extent of Private land required (approx) 4Ha

c. Extent of Government land required (approx)

Particulars of any upstream/ downstream structures from the proposed scheme (existing / proposed)

Rehabilitation / resettlement issues, if any, with details

Litigations or any other issues including previous agreements etc.

ANX A (22) ARUVIKKAL MHP - GROUP C

Present Status of the Project:	DPR Ready/ Detailed Investigation completed/Preliminary Investigation completed/Feasibility study conducted	Identified
River basin	Valiathodu	
District	Ernakulam	
Access to site	14km from Muvattupuzha via Pambakuda	
Latitude / Longitude (near)	$9^0$55′00″N / $76^0$32′00″E	
Nearest KSEB investigation field office	Investigation Field Division – Idamalayar Investigation Circle, South, Kothamangalam	
Main project components viz.		
a. Dam/ weir with dimensions (approx)	Length of weir 12m and height 3.5m at Mavolimuttam and a weir of length 80m and 3m height at Aruvikkal	
b. Water conductor system with dimensions (approx)	Channel 215.7m from weir I to weir II, penstock pipe 110m length and 0.7m dia. from weir II	
c. Power house with No. of machines and capacity	500kw	
d. Annual average generation potential	1.36Mu	
e. Evacuation details	Alignment of transmission line will be surveyed and finalized by KSEB at the cost of the developer. Evacuation Scheme shall be prepared by developer and get it approved from KSEB.11kv line is available 100m away from P.H, (tentative).	
f. Design Head	40m	
Land particulars(excluding right of way clearance for transmission)		

a. Extent of Forest land required (approx)	
b. Extent of Private land required (approx)	5Ha
c. Extent of Government land required (approx)	
Particulars of any upstream/ downstream structures from the proposed scheme (existing / proposed)	
Rehabilitation / resettlement issues, if any, with details	
Litigations or any other issues including previous agreements etc.	

ANX A (23) ARUVIKUZHIPARA/ MARANGATTUPALLY MHP – GROUP C

Present Status of the Project:	DPR Ready/ Detailed Investigation completed/Preliminary Investigation completed/Feasibility study conducted	Identified
River basin	Meenachil river / Aruvekuzhy parathode	
District	Kottayam	
Access to site	About 32km from kurianad	
Latitude / Longitude (near)	$9^0 32' 30''$N / $76^0 53' 22''$E	
Nearest KSEB investigation field office	Investigation Field Division – Konni Investigation Circle, South, Kothamangalam	
Main project components viz.		
a. Dam/ weir with dimensions (approx)	Dam 3m, length at top 37m, bottom 11m	
b. Water conductor system with dimensions (approx)	Penstock 240m long, contour channel 200m and 50m long penstock	
c. Power house with No. of machines and capacity	Installed capacity 300kw	
d. Annual average generation potential	1.32Mu	
e. Evacuation details	Alignment of transmission line will be surveyed and finalized by KSEB at the cost of the developer. Evacuation Scheme shall be prepared by developer and get it approved from KSEB. Nearest Substation is at Kuthattukulam, (tentative)	
f. Design Head		
Land particulars(excluding right of way for transmission)		
a. Extent of Forest land required (approx)		
b. Extent of Private land required (approx)		
c. Extent of Government land required (approx)		
Particulars of any upstream/ downstream structures from the proposed scheme (existing / proposed)		
Rehabilitation / resettlement issues, if any, with details	Three/four permanently settled families	
Litigations or any other issues including previous agreements etc.		

ANX A (24) ENATHU MHP – GROUP C

Present Status of the Project:	DPR Ready/ Detailed Investigation completed/Preliminary Investigation completed/Feasibility study conducted	Identified
River basin	Kallada basin	
District	Pathanamthitta	
Access to site	About 15 km from Kottarakkara towards Adoor in MC Road	
Latitude / Longitude (near)	$9^0$06′00″N / $76^0$46′00″E	

ANX A (25) IRUMPUPALAM MHP – GROUP C

Present Status of the Project:	DPR Ready/ Detailed Investigation completed/Preliminary Investigation completed/Feasibility study conducted	Identified
River basin	Vamanapuram basin	
District	Thiruvananthapuram	
Access to site	Along the side of Thiruvananthapuram - Thenmala road at a distance of about 38km from Thambanoor, Thiruvananthapuram	
Latitude / Longitude (near)	8°45'13"N / 77°01'14"E	
Installed capacity	0.5 MW	

ANX A (26) PADAPPAMON MHP – GROUP C

Present Status of the Project:	DPR Ready/ Detailed Investigation completed/Preliminary Investigation completed/Feasibility study conducted	Identified
River basin	Vamanapuram basin	
District	Thiruvananthapuram	
Access to site	Kilimanoor police station – Anandhan mukku road at a distance of about 4km from Kilimanoor.	
Latitude / Longitude (near)	8°46'29"N / 76°54'47"E	
Installed capacity	0.4 MW	

ANX A (27) ANAVILASAM MHP – GROUP C

Present Status of the Project:	DPR Ready/ Detailed Investigation completed/Preliminary Investigation completed/Feasibility study conducted	Identified
River basin	Periyar basin	
District	Idukki	
Access to site	About 2km from Anavilasam town via NH185 and Anavilasam-Marykulam Rd	
Latitude / Longitude (near)	9°39'59.0"N / 77°05'15.7"E	
Installed capacity	0.3MW	

ANX A (28) BAVALIPUZHA I MHP – GROUP C

Present Status of the Project:	DPR Ready/ Detailed Investigation completed/Preliminary Investigation completed/Feasibility study conducted	Identified
River basin	Valapattanam basin	
District	Kannur	
Access to site	8 Km from Peravoor via Manathana to Site	
Latitude / Longitude (near)	$11^0$55′30″N $75^0$46′30″E	
Installed capacity	1.5MW	

ANX A (29) PERUTHODY MHP – GROUP C

Present Status of the Project:	DPR Ready/ Detailed Investigation completed/Preliminary Investigation completed/Feasibility study conducted	Identified
River basin	Chandragiri basin	
District	Kasargode	
Access to site	About 3.3km from Kallar town via Kanhangad - Panathoor Rd/Kanhangad - Rajapuram - Panathur Rd and Kuttikole-Malakkallu-Malom Rd	
Latitude / Longitude (near)	12°26'40.3"N / 75°15'38.3"E	
Installed capacity	0.85MW	

ANX A (30) BAVALIPUZHA II MHP – GROUP C

Present Status of the Project:	DPR Ready/ Detailed Investigation completed/Preliminary Investigation completed/Feasibility study conducted	Identified
River basin	Valapattanam basin	
District	Kannur	
Access to site	7Km from Peravoor via Manathana to PH	
Latitude / Longitude (near)	$11^0$56′00″N / $75^0$46′00″E	
Installed capacity	1.5MW	

ANX A (31) CHEEDIKUZHY MHP – GROUP C

Present Status of the Project:	DPR Ready/ Detailed Investigation completed/Preliminary Investigation completed/Feasibility study conducted	Identified
River basin	Korapuzha basin	
District	Kozhikode	
Access to site	About 2Km from Kallidukki to PH	
Latitude / Longitude (near)	$11^0$28′00″N / $75^0$51′38″E	
Installed capacity	1MW	

ANX A (32) CHEMMANNAR MHP – GROUP C

Present Status of the Project:	DPR Ready/ Detailed Investigation completed/Preliminary Investigation completed/Feasibility study conducted	Identified
River basin	Chemmannar basin	
District	Idukki	
Access to site	About 8.5 km from Rajakkad town via Rajakkad - Pooppara Rd	
Latitude / Longitude (near)	9°57'33.0"N / 77°09'10.0"E	
Installed capacity	1MW	

ANX A (33) CHERUVAKKILCHOLA MHP – GROUP C

Present Status of the Project:	DPR Ready/ Detailed Investigation completed/Preliminary Investigation completed/Feasibility study conducted	Identified
River basin	Mangad basin	
District	Thrissur	
Access to site	About 6 km from Kottapuram town via Chavakkad-Wadakkanjery road	
Latitude / Longitude (near)	10°41'11.4"N / 76°12'11.2"E	
Installed capacity	0.74MW	

ANX A (34) EDAPUZHA MHP – GROUP C

Present Status of the Project:	DPR Ready/ Detailed Investigation completed/Preliminary Investigation completed/Feasibility study conducted	Identified
River basin	Valapattanam basin	
District	Kannur	
Access to site	About 18 Km from Iritty via Edoor	
Latitude / Longitude (near)	$12^0$00′30″N / $75^0$48′00″E	
Installed capacity	0.35MW	

ANX A (35) EZHAMTHALA MHP – GROUP C

Present Status of the Project:	DPR Ready/ Detailed Investigation completed/Preliminary Investigation completed/Feasibility study conducted	Identified
River basin	Kallar basin	
District	Pathanamthitta	
Access to site	About 30 km from Murinjakkal town via SH8 and Konni - Thannithodu Road	
Latitude / Longitude (near)	9°14'03.2"N / 76°58'17.9"E	
Installed capacity	3.5MW	

ANX A (36) KARIMPUZHA MHP – GROUP C

Present Status of the Project:	DPR Ready/ Detailed Investigation completed/Preliminary Investigation completed/Feasibility study conducted	Identified
River basin	Karimpuzha basin	
District	Malappuram	
Access to site	About 1.8Km from Sreekrishnapuram	
Latitude / Longitude (near)	$11^0 21'00''$N / $76^0 31'00''$E	
Installed capacity	0.9MW	

ANX A (37) KARUVARAKUNDU MHP – GROUP C

Present Status of the Project:	DPR Ready/ Detailed Investigation completed/Preliminary Investigation completed/Feasibility study conducted	Identified
River basin	Kallampuzha basin	
District	Palakkad	
Access to site	kanjikode via Malampuzha-kava-Anakkalu Rd	
Latitude / Longitude (near)	10°52′00″N 76°42′00″E	
Installed capacity	0.5MW	

ANX A (38) LAKKOM MHP – GROUP C

Present Status of the Project:	DPR Ready/ Detailed Investigation completed/Preliminary Investigation completed/Feasibility study conducted	Identified
River basin	Pambar basin	
District	Idukki	
Access to site	About 2.8Km from Marayur National Sandal Reserve	
Latitude / Longitude (near)	$10^0$16′00″N / $77^0$09′00″E	
Installed capacity	1MW	

ANX A (39) MELEKADAVU MHP – GROUP C

Present Status of the Project:	DPR Ready/ Detailed Investigation completed/Preliminary Investigation completed/Feasibility study conducted	Identified
River basin	Karamana basin	
District	Thiruvananthapuram	
Access to site	About 14 km from Pappanamcode in Thiruvananthapuram – Pappanamcode Road	
Latitude / Longitude (near)	8°32'24.0" N / 77°00'27.0" E	
Installed capacity	200 KW	

ANX A (40) MOORIKADAVU MHP – GROUP C

Present Status of the Project:	DPR Ready/ Detailed Investigation completed/Preliminary Investigation completed/Feasibility study conducted	Identified
River basin	Kuppam basin	
District	Kannur	
Access to site	About 14 km from Karuvanchal	
Latitude / Longitude (near)	12°11.7' N / 75°32' E	
Installed capacity	2 MW	

ANX A (41) MUNDAKKAYAM MHP – GROUP C

Present Status of the Project:	DPR Ready/ Detailed Investigation completed/Preliminary Investigation completed/Feasibility study conducted	Identified
River basin	Manimala Ar basin	
District	Kottayam	
Access to site	About 2 km from Mundakkayam town via Bypass road	
Latitude / Longitude (near)	9°32'04 "N / 76°52'35"E	
Installed capacity	1.25MW	

ANX A (42) PALOORKOTTA MHP – GROUP C

Present Status of the Project:	DPR Ready/ Detailed Investigation completed/Preliminary Investigation completed/Feasibility study conducted	Identified
River basin	Kadalundi basin	
District	Malappuram	
Access to site	About 1.8Km from Puzhakkattiri via Paloor	
Latitude / Longitude (near)	$10^0$58′00″N / $76^0$08′30″E	
Installed capacity	2MW	

ANX A (43) PAMPANAL MHP – GROUP C

Present Status of the Project:	DPR Ready/ Detailed Investigation completed/Preliminary Investigation completed/Feasibility study conducted	Identified
River basin	Meenachal basin	
District	Kottayam	
Access to site	About 16 Km from Pala via Pala-Thodupuzha Rd	
Latitude / Longitude (near)	9°49'25.5"N 76°41'33.7"E	
Installed capacity	1 MW	

ANX A (44) PERUNTHENARUVI STAGE II SHP – GROUP C

Present Status of the Project:	DPR Ready/ Detailed Investigation completed/Preliminary Investigation completed/Feasibility study conducted	Identified
River basin	Pamba	
District	Pathanamthitta	
Access to site	About 12Km from Ranni	
Latitude / Longitude (near)	$9^0$24′3″N / $76^0$51′42″E	
Installed capacity	4 MW	

ANX A (45) POOLAKUTTY - I – GROUP C

Present Status of the Project:	DPR Ready/ Detailed Investigation completed/Preliminary Investigation completed/Feasibility study conducted	Identified
River basin	Valapattanam	
District	Kannur	
Access to site	About 26 Km from Iritty	
Latitude / Longitude (near)	11º52′00″N / 76º46′00″E	
Installed capacity	0.4 MW	

ANX A (46) POTTENTHOUD I MINI HES – GROUP C

Present Status of the Project:	DPR Ready/ Detailed Investigation completed/Preliminary Investigation completed/Feasibility study conducted	Identified
River basin	Valapattanam	
District	Kannur	
Access to site	About 26 Km from Iritty	
Latitude / Longitude (near)	$11^0$53′00″N / $75^0$49′00″E	
Installed capacity	0.4 MW	

ANX A (47) POTTENTHOUD II MINI HES – GROUP C

Present Status of the Project:	DPR Ready/ Detailed Investigation completed/Preliminary Investigation completed/Feasibility study conducted	Identified
River basin	Valapattanam	
District	Kannur	
Access to site	About 26 Km from Iritty	
Latitude / Longitude (near)	$11^0$53′00″N / $75^0$49′00″E	
Installed capacity	0.4 MW	

ANX A (48) UPPER CHEEDIKUZHY MHP – GROUP C

Present Status of the Project:	DPR Ready/ Detailed Investigation completed/Preliminary Investigation completed/Feasibility study conducted	Identified
River basin	Kuttyadi basin	
District	Kozhikkode	
Access to site	About 2Km from Kinalur	
Latitude / Longitude (near)	$11^0$28′00″N / $75^0$54′00″E	
Installed capacity	1MW	

ANX A (49) URUMBIKKARA SHP – GROUP C

Present Status of the Project:	DPR Ready/ Detailed Investigation completed/Preliminary Investigation completed/Feasibility study conducted	Identified
River basin	Manimala Ar basin	
District	Kottayam	
Access to site	About 2.5Km from Meloram via Vellappara Peruvanthanam Rd	
Latitude / Longitude (near)	$9^0$35′00″N / $76^0$55′00″E	
Installed capacity	3MW	

ANX A (50) YARANIPUZHA/MOONNAMKADAVU SHP – GROUP C

Present Status of the Project:	DPR Ready/ Detailed Investigation completed/Preliminary Investigation completed/Feasibility study conducted	Identified
River basin	Chandragiri basin	
District	Kasargode	
Access to site	About 2.5Km from Muthanadukkam via kundamkuzhi-moonamkadavu Rd	
Latitude / Longitude (near)	12°30'21.8"N / 75°10'17.1"E	
Installed capacity	2MW	

ANX A (51) KURUDIPUZHA MHP – GROUP C

Present Status of the Project:	DPR Ready/ Detailed Investigation completed/Preliminary Investigation completed/Feasibility study conducted	Identified
River basin	Chaliyar basin	
District	Malappuram	
Access to site	About 2.1Km to site from Vazhikkadavu to Marutha	
Latitude / Longitude (near)	$11^0$26′18″N / $76^0$19′38″E	
Installed capacity	1MW	

ANX A (52) OLIKKATHODU MHP – GROUP C

Present Status of the Project:	DPR Ready/ Detailed Investigation completed/Preliminary Investigation completed/Feasibility study conducted	Identified
River basin	Chaliyar basin	
District	Malappuram	
Access to site	About 7.3Km from Vazhikkadu	
Latitude / Longitude (near)	$11^0$23′51″N / $76^0$24′08″E	
Installed capacity	500kW	

ANX A (53) ODANPUZHA MHP – GROUP C

Present Status of the Project:	DPR Ready/ Detailed Investigation completed/Preliminary Investigation completed/Feasibility study conducted	Identified
River basin	Bavali river basin	
District	Kannur	
Access to site	About 4km from Manathana via Manathana-Odanthode Rd	
Latitude / Longitude (near)	11°55'51.1"N / 75°45'03.6"E	
Installed capacity	300kW	

ANX A (54) CHERUPUZHA MHP – GROUP C

Present Status of the Project:	DPR Ready/ Detailed Investigation completed/Preliminary Investigation completed/Feasibility study conducted	Identified
River basin	Chaliyar river basin	
District	Malappuram	
Access to site	About 11km from Nilambur via Karulai	
Latitude / Longitude (near)	11°17'22.2"N / 76°19'16.0"E (approx)	
Installed capacity	600kW	

ANX A (55) FURLONGKARA MHP – GROUP C

Present Status of the Project:	DPR Ready/ Detailed Investigation completed/Preliminary Investigation completed/Feasibility study conducted	Detailed investigation completed
River basin	Kilikattuthode / Kuppam basin	
District	Kannur	
Latitude / Longitude (near)	12°12.5'N / 75°31'E (approx)	
Access to site	The project site is approximately 30 km from Thaliparamba via Alakode. Nearest Railway Kannur	
Nearest KSEB investigation field office	Investigation Field Division Padinjarethara Investigation Circle North, V. B, Thrissur	
Main project components viz.		
a. Dam/ weir with dimensions (approx)	Length 37m, height 5m.	
b. Water conductor system with dimensions (approx)	Desilting chamber 3.5m wide and 2.5m deep, length 10m, Power channel 1342.50m size 0.7m bottom width 0.7m height forebay 7m dia height 6.25m penstock 137.5m long, 70cm dia	
c. Power house with No. of machines and capacity	Power house 350kw (1 x 200 + 1x 100 + 1x 50)	
d. Annual average generation potential	1.043Mu	
e. Evacuation details	Alignment of transmission line will be surveyed and finalised by KSEB at the cost of the developer. Evacuation Scheme shall be prepared by developer and get it approved from KSEB.The 11kv line now available at Alakode has to be extended by 4km to the project site, (tentative).	
f. Design Head	50.0m	
Land particulars		
a. Extent of Forest land required (approx)		
b. Extent of Private land required (approx)	3Ha	
c. Extent of Government land required (approx)		
Particulars of any upstream/ down stream structures from the proposed scheme (existing / proposed)		
Rehabilitation / resettlement issues, if any, with details		
Litigations or any other issues including previous agreements etc.		

ANX A (56) KANJIRAPUZHA SHP – GROUP C

Present Status of the Project:	DPR Ready/ Detailed Investigation completed/Preliminary Investigation completed/Feasibility study conducted	Identified
River basin	Bavali river basin	
District	Palakkad	
Access to site	About 15km from Mannarkad	
Latitude / Longitude (near)	10°59'52.3"N 76°33'39.3"E (approx)	
Installed capacity	1 MW	

ANX A (57) KILLIKALLU SHP – GROUP C

Present Status of the Project:	DPR Ready/ Detailed Investigation completed/Preliminary Investigation completed/Feasibility study conducted	Identified
River basin	Chaliyar river basin	
District	Kozhikode	
Access to site	About 18 km from Thiruvambady	
Latitude / Longitude (near)	11°26.5'N / 76°6.5'E	
Installed capacity	3 MW	

ANX A (58) KULIRAMUTTY SHP – GROUP C

Present Status of the Project:	DPR Ready/ Detailed Investigation completed/Preliminary Investigation completed/Feasibility study conducted	Preliminary investigation completed
River basin	Perumboola	
District	Kozhikode	
Access to site	43 km from Kozhikode to Perumboola via Koduvalli, Omassery, Thiruvanmbady and Karimutti junction to left bank of weir site	
Nearest KSEB investigation field office	Investigation Field Division Padinjarethara Investigation Circle, North, V. B, Thrissur	
Main project components viz.		
a. Dam/ weir with dimensions (approx)	Trench weir, height 2.6m, length 21m,	
b. Water conductor system with dimensions (approx)	Power channel 1405m, penstock 1.2m dia and length 285m, forebay tank circular 15m dia height 8.94m	
c. Power house with No. of machines and capacity	Over ground type, 18m x 7m size, no. of machines3,capacity 3000kw (1500+1000+500)	
d. Annual average generation potential	6.579Mu	
e. Evacuation details	Alignment of transmission line will be surveyed and finalised by KSEB at the cost of the developer. Evacuation Scheme shall be prepared by developer and get it approved from KSEB.Power can be evacuated through 11kv line to a centrally oriented switching station near Koodaranhi , (tentative).	
f. Design Head	70m (net head)	
Land particulars (excluding right of way for transmission line)		
a. Extent of Forest land required (apprx)		
b. Extent of Private land required (apprx)	Private land	
c. Extent of Government land required (apprx)		
Particulars of any upstream/ down stream structures from the proposed scheme (existing / proposed)		
Rehabilitation / resettlement issues, if any, with details		
Litigations or any other issues including previous agreements etc.		

ANX A (59) MANTHAMPOTTI SHP – GROUP C

Present Status of the Project:	DPR Ready/ Detailed Investigation completed/Preliminary Investigation completed/Feasibility study conducted	Identified
River basin	Bharathapuzha basin	
District	Palakkad	
Access to site	About 20km from Mannarkad via Mannarkkad – Anakkatti Rd	
Latitude / Longitude (near)	11°2'30"N / 76°32'28"E	
Installed capacity	3 MW	

ANX A (60) MULLARINGADU MHP – GROUP C

Present Status of the Project:	DPR Ready/ Detailed Investigation completed/Preliminary Investigation completed/Feasibility study conducted	Identified
River basin	Muvattupuzha basin	
District	Idukki/Ernakulam	
Access to site	About 25 km from Kothamangalam via Blathykavala - Thalakode Rd	
Latitude / Longitude (near)	10°00'24.3"N 76°48'47.8"E (approx)	
Installed capacity	150 kW	

ANX A (61) ONIPUZHA SHP – GROUP C

Present Status of the Project:	DPR Ready/ Detailed Investigation completed/Preliminary Investigation completed/Feasibility study conducted	DPR
River basin	Onipuzha	
District	Kozhikode	
Access to site	60 km from Kozhikode in Quilandy taluk	
Nearest KSEB investigation field office		Investigation Division, Padinjarathara Investigation Circle, Thrissur
Main project components viz.		
a. Dam/ weir with dimensions (approx)		Diversion weir 29m length, 4.6m height.
b. Water conductor system with dimensions (approx)		Power channel 515m length, 1.95m bottom width, 2.45m depth, side slope 1:1 forebay – 22m dia. ,Penstock – 65m long and 1.3m dia
c. Power house with No. of machines and capacity		1.5MW (3 x 500kw) 3 nos
d. Annual average generation potential		3.16Mu
e. Evacuation details		Alignment of transmission line will be surveyed and finalised by KSEB at the cost of the developer. Evacuation Scheme shall be prepared by developer and get it approved from KSEB.11kv line available near the P. H site (tentative).
f. Design Head		31.3m
Land particulars(excluding right of way for transmission line)		
a. Extent of Forest land required (approx)		Nil
b. Extent of Private land required (approx)		6Ha
c. Extent of Government land required (approx)		
Particulars of any upstream/ down stream structures from the proposed scheme (existing / proposed)		
Rehabilitation / resettlement issues, if any, with details		
Litigations or any other issues including previous agreements etc.		

ANX A (62) PAZHUKKAKANAM SHP – GROUP C

Present Status of the Project:	DPR Ready/ Detailed Investigation completed/Preliminary Investigation completed/Feasibility study conducted	Identified
River basin	Meenachal basin	
District	Idukki/Ernakulam	
Access to site	About 18km from Erattupetta via Moonnilavu - Mankompu Rd	
Latitude / Longitude (near)	9°46'32.0"N 76°48'31.5"E (approx.)	
Installed capacity	2 MW	

ANX A (63) URUTTIPUZHA SHP – GROUP C

Present Status of the Project:	DPR Ready/ Detailed Investigation completed/Preliminary Investigation completed/Feasibility study conducted	Identified
River basin	Cheruthipuzha basin	
District	Kannur	
Access to site	About 25km from Iritty via Aralam-Palappuzha Rd	
Latitude / Longitude (near)	11°58'N / 75°50'E (approx.)	
Installed capacity	1 MW	

ANX A (64) VALANTHODE STAGE II SHP – GROUP C

Present Status of the Project:	DPR Ready/ Detailed Investigation completed/Preliminary Investigation completed/Feasibility study conducted	Identified
River basin	Kurumanpuzha basin	
District	Malappuram	
Access to site	About 12km from Koodaranji via Koodaranji –Koombara Maranchatty Rd	
Latitude / Longitude (near)	11°21'13.6"N 76°06'28.0"E (approx.)	
Installed capacity	3 MW	

ANX A (65) UPPAR SHP – GROUP C

Present Status of the Project:	DPR Ready/ Detailed Investigation completed/Preliminary Investigation completed/Feasibility study conducted	Identified
River basin	Periyar basin	
District	Idukki	
Access to site	About 26 km from Adimali via Rajakkadu Rd	
Latitude / Longitude (near)	10°00'19.0"N 77°04'15.9"E 9approx)	
Installed capacity	3 MW	

ANX A (66) UPPER POOZHITHODU MHP – GROUP C

Present Status of the Project:	DPR Ready/ Detailed Investigation completed/Preliminary Investigation completed/Feasibility study conducted	Identified
River basin	Kuttiyadu basin	
District	Kozhikode	
Access to site	About 20 km from Kuttiyadi via Thottilpalam- Mullamkunnu Rd	
Latitude / Longitude (near)	11°39'18.6"N 75°51'57.3"E (approx.)	
Installed capacity	3.6 MW	

ANX A (67) URUMI STAGE III SHP – GROUP C

Present Status of the Project:	DPR Ready/ Detailed Investigation completed/Preliminary Investigation completed/Feasibility study conducted	Identified
River basin	Chaliyar basin	
District	Kozhikode	
Access to site	About 15 km from Iritty via Iritty - Nedumpoil Rd	
Latitude / Longitude (near)	11°22'08.1"N / 76°03'15"E	
Installed capacity	2.4 MW	

ANX A (68) ARUVIKUZHY SHP – GROUP C

Present Status of the Project:	DPR Ready/ Detailed Investigation completed/Preliminary Investigation completed/Feasibility study conducted	Identified
River basin	Periyar basin	
District	Peerumade in Idukki District, Periyakadathodu in Periyar Basin	
sInstalled capacity	4 MW	

Annexure III

KSERC (RE) Regulation 2020

KSERC Notification No. 1204/D(T)/2019/KSERC dated 07-02-2020

Regn.No. KERBIL/2012/45073
dated 05-09-2012 with RNI
Reg No.Kl/TV(N)/634/2018-20

കേരള ഗസറ്റ്
KERALA GAZETTE
അസാധാരണം
EXTRAORDINARY

ആധികാരികമായി പ്രസിദ്ധപ്പെടുത്തുന്നത്
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Thiruvananthapuram,
Friday

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05th June 2020
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No. 1345

KERALA STATE ELECTRICITY REGULATORY COMMISION

NOTIFICATION

No. 1204/D(T)/2019/KSERC *Dated, Thiruvananthapuram, 7 th February, 2020.*

Preamble,- In exercise of the powers conferred by sub-section (1) of Section 181 of the Electricity Act, 2003 (Central Act 36 of 2003) read with clause (e) of subsection (1) of Section 86 thereof and all other powers enabling it in this behalf and after previous publication, the Kerala State Electricity Regulatory Commission hereby makes the following Regulations, namely:-

Kerala State Electricity Regulatory Commission (Renewable Energy and Net Metering) Regulations, 2020

Chapter – I

Preliminary

1. **Short title, application, extent and commencement.-**

(1) These Regulations may be called the 'Kerala State Electricity Regulatory Commission (Renewable Energy and Net Metering) Regulations, 2020'.

(2) These Regulations shall apply to all the existing and new, Grid Interactive Renewable Energy Systems, consumers, prosumers, captive consumers, captive generating plants, generating companies, distribution licensees and obligated entities, in the matter of Determination of Tariff of Renewable Energy, Renewable Purchase Obligation, Net Metering, Banking, Generation Based Incentives and related matters.

(3) These Regulations shall extent to the whole State of Kerala.

(4) It shall come into force from the date of publication in the Official Gazette.

2. **Definitions and Interpretations.-**

(1) **Definitions,-**In these Regulations, unless the context otherwise requires,

(a) **'Act'** means the Electricity Act, 2003 (Central Act 36 of 2003);

(b) **'Application'** means a request for connectivity of Renewable Energy System to the State transmission and/or distribution grid, as the case may be and, as per the application form duly filled in all respect, as required by the distribution licensee, along with the copy of the receipt as proof of payment of necessary charges and accompanied by all necessary documents including copies of approvals from statutory or other authorities;

(c) **‘Application form’** means the application form complete in all respects in the appropriate format by the distribution licensee, before the payment of applicable charges;

(d) **'Auxiliary energy consumption' or 'AUX'** in relation to a period in case of a generating station means the quantum of energy consumed by auxiliary equipment of the generating station and transformer losses within the generating station, expressed as a percentage of the sum of gross energy generated at the generator terminals of each unit of the generating station;

(e) **‘Banking facility’** means such facility whereby the prosumer or the captive generator of Renewable Energy System injects energy into the grid during a time block or period and have a right to draw back the energy from the grid at a subsequent different time block or period, subject to the terms and conditions specified in these Regulations;

(f) **‘Beneficiary’** with respect to these Regulations means a licensee who has an agreement with a Renewable Energy Generator for purchase of power from the plant at the tariff approved by the Commission;

(g) **‘Billing period’** means the period as approved by the Commission for which electricity bills are regularly prepared by the licensee for different categories of consumers;

(h) **‘Capital cost’** means the capital cost as defined in the Regulations under Chapter V;

(i) **‘Captive consumer’** means a consumer owning and consuming electricity generated from a captive generating plant including from the captive renewable energy sources or captive co-generation, as the case may be;

(j) **‘Captive Generating Plant’** means a power plant including the renewable energy plant or co-generation plant, set up by any person to generate electricity primarily for his own use and includes a power plant set up by any co-operative society or association of persons for generating electricity primarily for use of its members

and as specified in Electricity Rules, 2005 published by the Government of India and amended from time to time**;**

(k) **'Central Agency'** means the agency operating the National Load Dispatch Centre or such other agency as the Central Commission may designate from time to time for the purpose of implementation of the scheme relating to issuance of renewable energy certificate and performance of other duties as assigned under the provisions of the Central Electricity Regulatory Commission (Terms and Conditions for Recognition and Issuance of Renewable Energy Certificate for Renewable Energy Generation) Regulations, 2010, as amended from time to time;

(l) **'Central Commission'** means the Central Electricity Regulatory Commission referred to in sub-section (1) of Section 76 of the Electricity Act, 2003;

(m) **'Certificate'** means the Renewable Energy Certificate issued by the Central Agency in accordance with the procedures approved under the provisions of the Central Electricity Regulatory Commission (Terms and Conditions for Recognition and Issuance of Renewable Energy Certificate for Renewable Energy Generation) Regulations, 2010, as amended from time to time;

(n) **'Co-generation'** means a process which simultaneously produces two or more forms of useful energy (including electricity);

(o) **'Commission'** means the Kerala State Electricity Regulatory Commission;

(p) **'Conduct of Business Regulations'** means the Kerala State Electricity Regulatory Commission (Conduct of Business) Regulations, 2003 as amended from time to time;

(q) **'Connected load'** expressed in kW or kVA means aggregate of the rated capacities of all energy consuming devices or apparatus which can be simultaneously used, excluding stand-by load if any, in the premises of the consumer, which are connected to the service line of the distribution licensee;

(r) **‘Connection agreement’** means an agreement between State Transmission Utility (STU), and / or distribution licensee and an eligible entity, for connecting the renewable energy system to the intra-state transmission system and / or distribution system, as per the provisions of the KSERC (Connectivity and Intra-state Open Access) Regulations, 2013;

(s) **‘Consumer’** means any person who is supplied with electricity for his own use by a licensee or the Government or by any other person engaged in the business of supplying electricity to the public under Electricity Act, 2003 or any other law for the time being in force and includes any person whose premises is, for the time being, connected for the purpose of receiving electricity with the works of a distribution licensee, the Government or such other person, as the case may be;

(t) **‘Contract Demand or Contracted Demand’** means the maximum demand in kW or kVA, agreed to be supplied by the distribution licensee and indicated in the agreement executed between such licensee and the consumer; or the contracted load or contract demand duly revised thereafter;

(u) **‘Control Period’ or ‘Review Period’** means the period during which the norms for determination of tariff for renewable energy specified under these Regulations shall remain valid;

(v) **“Eligible consumer”** means a consumer getting supply of electricity from the distribution licensee in its area of supply, who intends to use a grid connected Renewable Energy system installed in his premises to offset a part of or all of the consumer's own electrical energy requirements as per the provisions of these Regulations;

(w) **“Energy and Power’’.** ‘Energy’ is the ability to do work, where as the ‘Power’ is the rate of doing work. In SI units, the unit of Power is ‘watt’, ‘kilo watt’ or ‘Mega watt’ and the Energy is measured as ‘‘kilowatt hour (kWh)’;

(x) **'Financial Year'** means the period beginning from first of April in a Gregorian calendar year and ending on the thirty first of March of the next calendar year;

(y) **'Forbearance Price'** means the ceiling price for the Certificate for each category of renewable energy, as determined by the Central Commission in accordance with the REC Regulations, within which only, the certificate can be dealt in the power exchange;

(z) **'Generic tariff'** means the tariff determined in these Regulations for the electricity generated from the Renewable Energy Plants as per the norms and parameters specified in these Regulations;

(aa) **'Grid Interactive Renewable Energy System'** means a Renewable Energy System which is connected to the transmission or distribution system of the licensee, and is capable of injecting energy into such system;

(ab) **'Grid Support Charges'** means the charges to be paid by the prosumers, captive consumers and other users, but excludes consumers availing net metering facility having 'Grid Interactive Renewable Energy Systems', for facilitating energy injection into the transmission system and/or distribution system irrespective of their connected load or contract demand;

(ac) **'Gross calorific value' or 'GCV'** in relation to a fuel used in a generating station means the heat produced in kCal by complete combustion of one kilogram of solid fuel or one litre of liquid fuel or one standard cubic meter of gaseous fuel, as the case may be;

(ad) **'Gross station heat rate' or 'SHR'** means the heat energy input in kCal required to generate one kWh of electrical energy at the generator terminals of a thermal generating station;

(ae) **'Hybrid Solar Power Plant'** means the solar powerplant that uses other forms of energy input sources along with solar energy for electricity generation;

(af) '**Infirm Power'** means the power injected by a generation project into the grid before the Date of Commercial Operation (COD), for testing, trial run & commissioning of the project. Since power from

renewable energy sources is non firm in nature, the tariff fixed by the Commission post COD shall also be applicable for the power injected into the licensee system prior to CoD, subject to the condition that the RE generator enters into an agreement with the licensee to supply power from the RE plant at the tariff determined by the Commission**.**

Provided that, if energy injected into the system by the RE generator prior to CoD without identifying a buyer or if there is no agreement with the licensee regarding the sale of power, SLDC shall settle the transactions at the Deviation Settlement Rates**.**

(ag) **'Installed capacity' or 'IC'** means the summation of the name platecapacities of all the units of the generating station or the capacity of the generating station (reckoned at the generator terminals), approved by the Commission from time to time;

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

(i) the interface of the renewable energy system with the outgoing terminals of the meter/distribution licensee's cut-outs/ switch gear fixed in the premises of the prosumer.

(ii) In relation to wind energy projects and solar photovoltaic Projects, inter-connection point shall be line isolator on outgoing feeder on High Voltage side of the pooling substation;

(iii) In relation to small hydro power, biomass power and non fossil fuel based cogeneration power projects and solar thermal Power Projects the inter-connection point shall be line isolator on outgoing feeder on HV side of generator transformer;

(ai) **'Invoice'** means either a bill or a supplementary bill or an invoice or a supplementary invoice raised by the distribution licensee relating to the billing cycle or billing period;

(aj) **'kW'** means kiloWatt;

(ak) **'Licensee'** means a person who has been granted license under Section 14 of the Act and includes a person deemed to be a licensee under Section 14 of the Act;

(al) **'MNRE'** means the Ministry of New and Renewable Energy of the Government of India;

(am) **'Municipal solid waste' or 'MSW'** means and includes commercial and residential waste generated in municipal or notified areas in either solid or semi-solid form excluding industrial hazardous wastes but including treated bio-medical waste;

(an) **'Net meter'** means the bi-directional meter, along with allied metering equipment, to be installed and maintained by the licensee, for reading the net import or export of electrical energy by the prosumer from/ to the distribution system and the corresponding import/export of power from/to the distribution system, and shall be an integral part of the net metering system;

(ao) **"Net metering"** means an arrangement under which renewable energy system installed at the premise of the prosumer receives or delivers electricity, if any, to the distribution licensee, after off-setting the electricity supplied by distribution licensee during the applicable billing period;

(ap) **'Non fossil fuel based co-generation'** means the process in which more than one form of energy (such as steam and electricity) are produced in a sequential manner by use of biomass, provided the project may qualify to be a co-generation project if it fulfills the eligibility criteria as specified in these Regulations;

(aq) **'Non-firm power'** means the power generated from renewable sources, the hourly variation of which is dependent upon nature's phenomenon like sun, cloud, wind, etc., that cannot be accurately predicted;

(ar) 'Non-solar Certificate' means the certificate issued in respect of the electricity generated from renewable sources of energy other than solar source;

(as) 'Normal Hours or Normal Period' means the period from 06.00 hours to 18.00 hours on the same day;

(at) 'Obligated Entity' means the distribution licensee or the captive consumer or the open access consumer in the State of Kerala, who is mandated to fulfill renewable purchase obligation under these Regulations;

(au) 'Off-peak Hours or Off Peak Period' means the period from 22.00 hours to 06.00 hours on the next day;

(av) 'Open Access' means the non-discriminatory provision for the use of transmission lines or distribution system or associated facilities with such lines or system by any licensee or consumer or a person engaged in generation in accordance with the Regulations specified by the Appropriate Commission;

(aw) 'Operation and maintenance expenses' or 'O&M expenses' means the expenditure incurred on operation and maintenance of the renewable energy system or part thereof, and includes the expenditure on manpower, repairs, spares, consumables, insurance and overheads;

(ax) 'Peak Hours' means the period from 18:00 hours to 22:00 hours on the same day;

(ay) 'Power Exchange' means any licensed entity operating as an exchange for transaction of electricity in terms of the orders issued by the Central Commission;

(az) 'Preferential Tariff' or 'Feed in Tariff' means the tariff determined by the Commission for purchase of energy from a generating station using renewable energy sources by a distribution licensee;

(ba) **'Premises'** includes any land, building, structure or roof top or part or combination thereof; which is included in the details and sketches specified in the application or in the agreement for grant of electric connection or in such other records relating to revision of connected load or contract demand;

(bb) **'Project'** means a generating station and the evacuation system up to inter-connection point, as the case may be, and in case of a small hydro generating station, includes all components of generating facility such as dam, intake water conductor system, power generating station and generating units of the scheme as apportioned to power generation till the Date of Commercial Operation (COD) and shall be known as 'Station' after the declaration of COD;

(bc) **'Prosumer'** means a captive consumer, having a renewable energy system installed at the same premise of the consumer who generates and consumes the electricity generated from such renewable energy system and who can also inject the surplus power from the renewable energy system into the grid using the same network;

(bd) **'REC Regulations'** means the Central Electricity Regulatory Commission (Terms and Conditions for Recognition and Issuance of Renewable Energy Certificate for Renewable Energy Generation) Regulations, 2010, as amended from time to time;

(be) **'Renewable Energy'** means the electricity generated from any renewable sources of energy;

(bf) **'Renewable Energy Meter'** refers to a unidirectional energy meter, installed and used solely to record the renewable energy generation from renewable energy system installed at the consumer's premises;

(bg) **'Renewable Energy System'** means the power plant and connected systems other than the conventional power plant, generating grid quality electricity from renewable energy sources;

(bh) **'Renewable Purchase Obligation' or RPO** means the obligation of an entity to purchase electricity generated from a renewable source of energy as per these Regulations;

(bi) **'Renewable Source of Energy'** means the source for the generation of electricity from renewable sources such as small hydro, large hydro with capacity above 25 MW commissioned after 08.03.2019, wind, solar including its integration with combined cycle, biomass, bio fuel cogeneration, urban or municipal solid waste and such other sources approved by the MNRE as renewable source;

(bj) **'Seller Licensee'** means a distribution licensee which sells electricity to other licensees;

(bk) **'Settlement Period'** means, the periods for the purpose of accounting of electricity from the following categories of renewable sources,-

(i) from solar sources, the period from the first day of October in a Gregorian calendar year to the thirtieth day of September in the next calendar year; and

(ii) from non-solar sources, the period from the first day of April in a Gregorian calendar year to the thirty first day of March in the next calendar year;

(bl) **'Small Hydro'** means Hydro Power projects with a station capacity upto and including 25 MW;

(bm) **'Solar Certificate'** means the certificate issued in respect of electricity generated from solar source;

(bn) **'Solar Meter'** means a unidirectional energy meter installed as an integral part of the net metering system, at the point at which the electricity generated by the solar energy system is delivered to the main panel of the prosumer;

(bo) **'Solar PV power'** means the Solar Photo Voltaic power project that uses sunlight for direct conversion into electricity through Photo Voltaic technology;

(bp) **'State Agency'** means the agency in the State of Kerala designated by the Commission to act as the agency for accrediting and recommending the renewable energy system for registration and for undertaking the functions assigned by the Commission under these Regulations;

(bq) **'Supply Code'** means the 'Kerala Electricity Supply Code, 2014', as amended from time to time;

(br) **'Tariff Order'** in respect of a licensee means the order issued from time to time by the Commission, stipulating the rates to be charged by the licensee from various categories of consumers for supply of electrical energy and for other services;

(bs) **'Tariff Period'** means the period for which the tariff is determined by the Commission on the basis of the norms specified under these Regulations, for the sale of electricity from a renewable energy system. The Tariff period under these Regulations shall be determine with the useful life as defined in Regulation 2.1(bu).

(bt) **'Time block'** means the period/ duration in a day specified for the purposes of these Regulations.

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

(a) Wind energy power project	25 years
(b) Bio mass power project with Rankine cycle technology	20 years
(c) Non-fossil fuel cogeneration project	20 years
(d) Small Hydro Electric Plant	35 years
e) Municipal Solid Waste (MSW)/ and Refuse Derived Fuel (RDF) based Power project	20 years
f) Solar PV/Solar thermal power project	25 years

(2) **Interpretations,-**

(a) These Regulations shall be interpreted and implemented in accordance with, and not at variance from, the provisions of the Act and the Rules and Regulations made thereunder.

(b) Words, terms and expressions as defined in the Electricity Act, 2003 and in the Rules made thereunder by the Central Government, –Government of Kerala, Regulations issued by the Central Electricity Authority, the Central Electricity Regulatory Commission and the Commission which are used in these Regulations shall have and carry the same meanings as defined and assigned to them in the said Act, Rules and Regulations, unless it has been defined in this Regulation.

(c) In the interpretation of these Regulations, unless the context otherwise requires:-

(i) Words in the singular or plural term, as the case may be, shall also be deemed to include the plural or the singular term, respectively;

(ii) Reference to any Statute, Rule, Regulation or Guideline shall be construed as including all statutory provisions consolidating,

amending or replacing such Statute, Rule, Regulation or Guideline referred to, as the case may be;

(iii) terms “include” and “including” shall be deemed to be followed by“ without limitation” or “but not limited to”, regardless of whether such terms are followed by such phrases or words of like import.

Chapter - II

Renewable Purchase Obligation and Renewable Energy Certificates

3. **Obligation to purchase renewable energy.-**

Distribution licensees, Captive Consumer and Open access consumer in the State of Kerala shall have the obligation to generate and/or in the alternative to purchase the quantum of renewable energy as specified in the Table below;

Table-1

Financial Year	Quantum of generation and/or purchase from Renewable Energy Sources as a (%) of total consumption (in terms of energy in kWh)		
	Non Solar	Solar	Total
2019-20	8.00	4.00	12.00
2020-21	9.00	5.25	14.25
2021-22	10.25	6.75	17.00
2022-23	*	*	*
2023-24	*	*	*

*Will be notified by the Commission later.

4. **Renewable Purchase Obligation (RPO) of the Distribution licensee.-**

(i) Every distribution licensee shall meet the renewable energy obligation at the percentage specified in Table 1 above. For the purpose of computing the total energy consumption within the area of the distribution licensee, the quantum of energy met from large hydro sources of power with capacity above 25 MW, commissioned on or before 08.03.2019 shall be deducted.

Provided that the energy, if any, generated by the distribution licensee from the renewable sources of energy and supplied to its consumers shall be accounted towards its renewable purchase obligation.

Provided further that the solar energy generated or purchased in excess of solar renewable purchase obligation may be accounted towards meeting the non-solar renewable purchase obligation.

(ii) The quantum of electricity generated by a person who is not an obligated entity but utilizing the grid interactive renewable energy system of the distribution licensee shall be accounted towards the renewable purchase obligation of the distribution licensee, provided that the distribution licensee,-

(i) purchases such electricity at preferential tariff; or at a tariff discovered through competitive bidding process;

or

(ii) afford to such person the benefit of banking facility for the renewable energy generated by him.

(iii) The quantum of electricity generated by a person who is an obligated entity, using grid interactive renewable energy system and consumed by him in excess of his renewable purchase obligation, may be accounted towards the renewable purchase obligation of a distribution licensee, provided the distribution licensee affords to such person, the benefit of banking facility for such electricity.

(iv) Any purchase of renewable energy under the power purchase agreements entered into by the distribution licensee and approved by the Commission, shall not be terminated till the expiry of the validity of such power purchase agreements, on the ground that the total quantity of renewable energy purchased including the quantity of renewable energy purchased under such agreements exceeds the renewable purchase obligation of such distribution licensee.

(v) The distribution licensee shall submit to the Commission, the proposed quantum of purchase of renewable energy from the solar sources and from the non-solar sources, separately in its petition for the approval of the Aggregate Revenue Requirement and Expected Revenue from Charges, for

each financial year of the control period.

(vi) A distribution licensee which is engaged in bulk purchase of electricity from another licensee shall not have separate obligation for purchase of renewable energy if,-

(i) the seller licensee meets the renewable purchase obligation for the energy sold to the licensee or

(ii) The licensee reimburses to the seller licensee the additional cost incurred as approved by the Commission by the seller licensee for the generation or purchase of renewable energy to meet the renewable purchase obligation of the licensee.

5. **Renewable Purchase Obligation of the Captive consumer.-**

Every captive consumer who owns a captive generating plant based on conventional fossil fuel, (except the consumers having standby generating sets, having capacity of and below 100 kW, or having stand by generating sets with plant load factor less than 10% irrespective of capacity of generating set)shall meet the quantum of renewable energy not less than the percentage specified in Table 1 above, of its total captive consumption.

Provided that the renewable energy, if any, generated and consumed by the captive consumer shall be accounted towards its renewable purchase obligation.

Provided further that the solar energy generated and consumed by the captive consumer in excess of solar renewable purchase obligation may be accounted towards its non-solar renewable purchase obligation.

Provided also that a captive consumer who produces and consumes energy from his co-generation plant, is not required to meet their Renewable Purchase Obligation, for the quantum of energy generated and consumed from such co-generation plant.

6. **Renewable Purchase Obligation of the Open Access consumer.-**

(1) Every open access consumer shall meet the quantum of renewable energy not less than the percentage specified in Table 1 above, of the total energy availed by it through open access.

Provided that the renewable energy, if any, generated and consumed by the open access consumer shall be accounted towards its renewable purchase obligation.

Provided further that the solar energy, if any, generated and consumed by the open access consumer in excess of solar renewable purchase obligation may be accounted towards its non-solar renewable purchase obligation.

(2) The renewable purchase obligation of an open access consumer shall be based on the total energy purchased through open access including the energy purchased from renewable sources, if any. -

7. **Preference for the purchase from the renewable energy generating units within the State.-**

Every distribution licensee shall purchase the quantum of renewable energy required to meet its renewable purchase obligation preferentially from the renewable energy generating units within the State if available, with the prior approval of the Commission, and at the tariff approved by the Commission.

Provided that, considering the environmental concerns, the distribution licensee shall necessarily purchase the electricity generated from municipal solid waste, with the prior approval of the Commission at the tariff approved by the Commission.

8. **Purchase of Renewable Energy Certificates under the REC Regulations,-**

(1) If any obligated entity fails to satisfy its renewable purchase obligation during any financial year, it shall purchase Certificates to make good such short fall.Subject to the terms and conditions in these Regulations, the certificates shall be the valid instruments for the discharge of the mandatory renewable purchase obligation of an obligated entity.

(2) If the quantum of renewable energy generated or purchased from solar sources by an obligated entity falls short of its solar renewable purchase obligation during any financial year, such obligated entity shall purchase the solar certificates, to make good such shortfall.

(3) If the quantum of renewable energy generated or purchased by an obligated entity falls short of its non solar renewable purchase obligation, during any financial year, such obligated entity shall purchase non-solar certificates or solar certificates, to make good such short fall.

(4) Subject to such direction as the Commission may issue from time to time, the obligated entity shall be bound to act consistent with the provisions of the REC Regulations, for the procurement of the certificates for fulfillment of the renewable purchase obligation under these Regulations.

(5) The obligated entity, shall within two months after the end of every financial year, report the compliance of its Renewable Purchase Obligation of the respective year, including the details of the renewable energy certificates, if any, purchased for meeting the RPO and if directed by the Commission produce the same for verification and ascertaining the compliance.

9. **State Agency and its functions. -**

(1) A State Agency for accreditation and recommending the renewable energy projects for registration and for undertaking the functions under these Regulations shall be designated by the Commission.

(2) The State Agency shall function in accordance with the directions issued by the Commission and the procedures and Regulations specified by the Central Agency under the REC Regulations.

(3) The State Agency shall submit quarterly reports to the Commission in respect of compliance of renewable purchase obligation by the obligated entities in the format as approved by the Commission and may suggest to the Commission, appropriate action if any required, for the compliance of the renewable purchase obligation by the obligated entity.

(4) The Commission may from time to time fix the remuneration and charges payable to the State Agency for the discharge of its functions under these Regulations.

(5) If the Commission is satisfied that the State Agency is not able to discharge its functions efficiently, it may by order with reasons in writing, designate any other agency to function as the State Agency.

10. **Effect of default. -**

(1) In case any obligated entity who is a distribution licensee fails to comply with its renewable purchase obligation as provided in these Regulations during any financial year and fails to purchase the required number of certificates, the Commission may by order, direct such obligated entity to deposit into a separate fund, to be created and maintained by such entity in accordance with the directions issued by the Commission, such amount as the Commission may determine on the basis of the shortfall in the renewable purchase obligation and the forbearance price thereof.

Provided that in case of an obligated entity other than a distribution licensee, such entity shall deposit such amount in a fund to be maintained and administered by the State Agency or as may be directed by the Commission.

(2) The fund so created shall be utilized in such manner as may be directed by the Commission for the purchase of Certificates or for such other purposes for promoting the renewable energy within the State.

(3) The Commission may authorize the State Agency to procure, out of the amount in the fund, the required number of Certificates from the power exchange, to make good the shortfall in the renewable purchase obligation of such obligated entity.

11. Power to review the RPO and to grant permission to carry forward the short fall in renewable purchase obligation.-

(1) The Commission may review the renewable purchase obligation of the obligated entities and all matters incidental thereto periodically.

(2) The obligated entity which fails to meet its renewable purchase obligation in full in any financial year due to any genuine difficulty may apply to the Commission for permission to carry forward to the next financial year, the short fall in its renewable purchase obligation.

(3) The Commission shall issue appropriate orders on such application with reasons thereof and communicate the same to the obligated entity within a period of sixty days from the date of receipt of such application;

Provided that the application under Regulation 11.2 shall not be rejected without affording to the obligated entity, an opportunity of being heard.

(4) Where the Commission has granted permission to carry forward to the next financial year, the short fall in its renewable purchase obligation during that financial year, as per orders issued under Regulation 11.3 above, no proceedings for noncompliance of RPO under these Regulations shall be initiated against such Obligated Entity.

Chapter III

Grid Interactive Renewable Energy System under Net Metering Facility

12. **Scope and application.-**

(1) The Regulations under this Chapter are applicable to the following grid interactive renewable energy systems with net metering facility installed by a prosumer at his premise, subject to other conditions specified under Regulation 13.

(i) Grid interactive Distributed Solar Energy Systems.

(ii) Ground mounted solar energy systems.

(iii) Hybrid solar power plant.

(iv) Renewable energy system with battery storage facility.

(v) Any other Renewable Energy Systems, installed at the premises of a eligible consumer.

13. **General Conditions.-**

(1) The distribution licensee shall provide the net metering arrangement to the prosumer, who intends to install Grid Interactive Renewable Energy Systems at his premise on non-discriminatory and first come first serve basis, within 10 days from the date of submission of the approval of Renewable Energy System from the Electrical Inspector. In case the distribution licensee is not able to provide the net meters within the above mentioned 10 days, the eligible consumer after intimating the licensee can purchase the net meters at his own cost conforming to the specifications to be notified by the licensee at their website.

(2) The Grid Interactive Renewable Energy Systems, installed by a prosumer at his premise under this chapter shall be:

(a) of not less than one kW and not exceeding 1000 kW capacity on AC side of the invertor connected to the net meter of the distribution system, limited to the sanctioned connected load or contract demand as applicable to the prosumer, with the distribution licensee.

Provided that the domestic consumers with connected load up to 20 kW is permitted to install 'Renewable Energy System' of capacity up to 20 kW, irrespective of their connected load.

Provided further that the above limit of 20 kW connected load shall not apply in the case of group housing societies and residential flats, for common services such as lift, common lighting, club house, car parking, common areas etc.

Provided also that, prosumers including those prosumers mentioned above are also permitted to install Renewable Energy System in excess of their connected load or contract demand as applicable. However, the benefit of net metering shall not be allowed to such prosumers and such prosumers shall be treated at par with the prosumers having RE capacity more than 1 MW, as detailed in Chapter IV of these Regulations.

Provided also that, the Renewable Energy Systems installed by the prosumers under net metering as on the date of notification of these Regulations shall be allowed to continue irrespective of their contract demand or connected load.

(b) located within the premises of the prosumer;

(c) interconnected and operate safely in parallel with the distribution system of the licensee.

(3) The grid interactive renewable energy system under net metering installed at the premise of the eligible individual prosumer shall utilize the same service line and installation for injection of excess power into the grid.

Provided that, when a prosumer install Renewable Energy System in excess of the connected or contract demand as applicable, the expense for the augmentation of the distribution system required for connectivity shall be borne by the prosumer.

Provided also that the maximum capacity that can be installed by a single phase consumer shall be limited to 5 kW.

A prosumer having electric connections in different premises owned by him shall be eligible to install separate renewable energy system in each of such premises subject to the provisions of these Regulations.

(4) The specifications, capacity and output of the renewable energy system shall be in conformity with the provisions relating to the connected load or contract demand permissible at each voltage level as specified in the Kerala Electricity Supply Code, 2014, as amended from time to time.

14. **Connectivity.-**

(1) The distribution licensee shall, without any delay or discrimination, provide net metering arrangements to the prosumer, subject to other provisions and technical limits specified in these Regulations.

(2) The cumulative capacity of distributed energy systems allowed to be interconnected with the distribution network shall not exceed 75 % of the distribution transformer capacity as the case be.

Provided that the distribution licensee shall publish the individual transformer capacities and the Renewable Energy Systems connected to their respective transformers, section wise, not later than 5th of every month in the distribution licensees respective section offices and also in the licensee's website. The Commission may review these provisions after completion of two years from the date of notification of these Regulations.

15. **Inter connection with the Grid, technical Standards and Safety.-**

(1) The interconnection of the renewable energy system with the distribution system of the licensee shall conform to the specifications and standards as provided in the Central Electricity Authority (Technical Standards for connectivity of the Distributed Generation Resources) Regulations, 2013 and to the relevant provisions of the Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations, 2010, as amended from time to time;

(2) The Net meter and Renewable energy meter installed shall conform to the standards, specifications and accuracy class, as provided in the Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006, as amended from time to time and be installed in such a manner that they are accessible for reading.

(3) The licensee shall, while intimating the feasibility as per these Regulations, inform the prosumer, the specifications and such other details of the

components, if any, to be installed along with the renewable energy system as per the provisions of these Regulations.

(4) The prosumer shall comply with the specifications and standards as provided by the licensee and shall install manually operated isolating switch and grid-tied inverter/ associated equipment with sufficient safeguards to prevent injection of electricity from the renewable energy system to the distribution system of the licensee when the distribution system is de-energized.

16. **Metering arrangement.-**

(1) The net meter shall be installed at the interconnection point of the prosumer with the net work of the distribution licensee.

(2) All meters installed shall comply with the CEA (Installation and Operation of Meters) Regulations, 2006 and subsequent amendments thereof.

Provided that, consumers having ABT compliant meters with net metering facility shall not be required to install additional Net meter.

(3) The distribution licensee shall make available correct Net meter and Renewable energy meter to the eligible consumer who proposes to install a renewable energy system in his premises.

Provided that, if the eligible consumer elects to purchase the said meter(s), he may procure and present them to the distribution licensee for testing and installation.

Provided further that, the licensee shall complete the testing and installation of the renewable energy meter and the net meter purchased by the eligible consumer, within a period of 14 calendar days from the date of presentation of such meters for testing.

(4) The distribution licensee shall undertake the testing of meters before installation to ensure accuracy of the meter. The meter(s) shall be jointly inspected by both the eligible consumer and the distribution licensee, and shall

be sealed by the distribution licensee.

Provided that, the meters shall be tested, installed and sealed by the distribution licensee in accordance with the provisions of Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006, as amended from time to time, and also as per the procedure specified in the Electricity Supply Code.

(5) The licensee may collect from the eligible consumer, the security deposit and rent for the renewable energy meter and net meter, if provided by the licensee, at the rates approved by the Commission from time to time.

(6) The distribution licensee, shall within three months of the date of notification of these Regulations, modify its existing billing infrastructure to facilitate the metering arrangements as envisaged under these Regulations.

17. **Use of excess electricity generated from renewable sources in another premise.-**

(1) The prosumer shall have the right for wheeling the excess electricity during a billing period to another premises owned by him within the area of supply of the distribution licensee subject to the following conditions:-

(i) the right of wheeling and consumption of excess electricity shall be available to the prosumer irrespective of the category of tariff in the other premises;

(ii) such right for wheeling the excess electricity shall be available for the use in his second premises only after the prosumer meets his full demand in the premises, where the electricity is generated using renewable energy system;

(iii) The quantum of excess electricity wheeled shall be calculated based on sub-Regulation (5) below and accounted in subsequent bills of the other premise.

(2) The prosumer shall apply to the licensee for availing the wheeling facility as per the sub-Regulation (1) above, with necessary particulars of such other premises where, such excess electricity generated by the renewable energy system installed in one of his premises, is proposed to be used.

(3) The licensee shall after due verification of the application submitted under sub-Regulation (2) above and after satisfying about its genuineness, grant the permission to use the excess electricity in such other premises owned by the prosumer, within 7 calendar days of receipt of the application.

(4) The modifications, if any, required in the metering system in such other premises of the prosumer where the excess electricity is proposed to be used, shall be made by the distribution licensee at the cost of the prosumer. Alternatively the prosumer can make such modifications to the metering system at his own cost, subject to the compliance of the distribution licensee standards and technical specifications.

(5) The prosumer has to bear the applicable wheeling charges, and distribution losses, as approved by the Commission from time to time for the quantum of excess renewable energy wheeled from one of his premise to another premise.

(6) The electricity generated by a prosumer using the renewable energy system installed in his premises and wheeled to another premise under this Regulations, shall be exempted from payment of cross subsidy surcharges.

18. **Procedure for grant of feasibility certificate to the renewable energy system to be connected with the distribution system.**

(1) Any eligible consumer who proposes to install a renewable energy system in his premises shall apply in the form in Annexure-A to the local office of the distribution licensee, to issue feasibility certificate to connect the renewable energy system to the distribution system of the licensee along with the application fee as specified in the Schedule to these Regulations:

(2) The licensee shall acknowledge the receipt of the application form and register the applications immediately and shall process the application in the chronological order of its receipt.

(3) The distribution licensee shall maintain a separate Application Register for reference and records.

(4) On receipt of the application form for the feasibility certificate to connect the renewable energy system to the grid, the distribution licensee shall undertake technical feasibility within 15 days of the date of receipt of the application and intimate the applicant the feasibility or otherwise as the case may be.

(5) While intimating the feasibility for connecting the renewable energy system, the distribution licensee shall furnish to the applicant;

(i) the details of documents to be submitted by the applicant along with the scheme for installation of renewable energy system to the distribution system;

(ii) the technical specifications as well as other particulars of the grid-tied inverter/equipment and manually operated isolating switch to be installed by the applicant;

(iii) the technical specifications and other particulars of the Renewableenergy meter and Net meter.

19. **Procedure for grant of connectivity to the renewable energy system.-**

(1) The eligible consumer shall, within 30 days from the date of receipt of the intimation regarding feasibility and capacity of the RE system proposed to be connected to the distribution system, as specified in sub Regulations 18(4) and 18(5) above, submit a formal application in the format specified in Annexure-B for the registration of his scheme for installing the renewable energy system, along with the documents and technical specifications as stipulated in Regulation 18(5).

(2) The distribution licensee shall, within seven working days from the date of receipt of the application, scrutinize the documents and intimate the following:

(i) The particulars of defects, if any, in the application along with the instructions to cure such defects.

(ii) The fee for registration of the scheme for installation of the renewable energy system as specified in this Regulation.

(3) The distribution licensee shall, on receipt of the fee amount as per the sub Regulation (2) above and on curing the defects, if any, noticed in the application and the documents submitted under sub Regulation (1) above;

(i) Register the scheme and assign a Registration number with in seven days of receipt of completed application in all respect.

(ii) The registration given under clause (i) above shall be valid for a period of one year from the date of registration, unless the validity period is extended by the distribution licensee under clause (iii) below.

(iii) The distribution licensee may on application from an eligible consumer, for good and sufficient reasons beyond the control of the applicant, extend the validity of registration for a period not exceeding another six months, if no other application for connectivity is pending for want of the distribution transformer capacity or the feeder capacity, as the case may be.

(iv) The distribution licensee may allot to other applicants, based on the date of their application seniority and in accordance with the provisions of these Regulations, such capacity for connectivity of renewable energy system, if the eligible consumer whose scheme has been registered does not avail the connectivity within the period of validity of registration.

Provided that, the registration fee remitted in such cases shall not be refundable.

(v) The distribution licensee may, on receipt of a written request from the eligible consumer before the expiry of the validity of his registration, allow him to withdraw his application, on satisfaction of the condition that he is not able to install the renewable energy system within the period of validity of the registration, due to reasons beyond his control. In such a case the distribution licensee shall refund eighty percent of the registration fee to the applicant.

(vi) The registration fee shall be forfeited, if the applicant fails, to install the renewable energy system within the period of validity of his registration or to withdraw the application as per clause (v) above.

(vii) The distribution licensee shall refund to the eligible consumer eighty percent of the registration fee collected by it, if the eligible consumer has installed the renewable energy system within the period of

validity of the registration.

(4) The applicant shall, within the period of validity of registration, procure the renewable energy system conforming to the technical specifications and get it installed by a licensed Electrical Contractor.

(5) The eligible consumer shall obtain from the Electrical Inspector having jurisdiction over the area, necessary sanction for commissioning the renewable energy system, in accordance with the provisions of the Central Electricity Authority (Technical Standards for Connectivity of Distributed Generation Resources) Regulations, 2013 and produce the sanction to the distribution licensee.

(6) The Electrical Inspector, shall undertake the inspection and safety checks, within 10 working days from the submission of the work completion report, and issue safety certificate.

(7) The distribution licensee shall, within seven days from the date of submission of approval of the Electrical Inspector, test the renewable energy system in accordance with the provisions of the Central Electricity Authority (Technical Standards for Connectivity of Distributed Generation Resources) Regulations, 2013.

(8) On successful completion of the test as specified in sub Regulation (7) above, the distribution licensee and the eligible consumer shall execute a connection agreement in the format containing the general and specific conditions, as approved by the Commission, in accordance with the provisions of the Central Electricity Authority (Technical Standards for Connectivity of the Distributed Generation Resources) Regulations, 2013.

(9) The licensee shall, within seven days from the date of execution of the agreement as specified in Sub Regulation (8) above, connect the renewable energy system to the distribution system.

20. **Banking facility for prosumers.-**

(1) In case the energy injected by the prosumer from his renewable energy system exceeds the energy consumed by him from the distribution licensee during the billing period, such excess energy is allowed to be banked with the distribution licensee and to be carried forward to the subsequent billing periods of the settlement period.

(2) The distribution licensee is permitted to account the energy generated from above such renewable energy system installed by the prosumer towards its RPO.

21. **Net metering, Energy Accounting, Banking and Settlement.-**

(1) The distribution licensee shall take the meter reading of the 'renewable energy system' regularly for each 'billing period' and record the readings of both the renewable energy meter and the net meter.

(2) For each billing period, the distribution licensee shall make the following information available in its bill to the prosumer:

(i) Time period wise (normal hours, peak hours and off-peak hours) Renewable energy generation recorded in the energy meter for the prosumer with connected load above 20 kW, and total generation from the RE system for the prosumers with connected load 'of and below 20kW'.

(ii) Time period wise electricity consumption of the prosumer with connected load above 20 kW, and total consumption in the case of the prosumer with connected less than 20 kW.

(iii) Net billed electricity, if any, for which payment is to be made by the prosumer;

(iv) Excess energy brought forward from the last billing period;

(v) Excess energy carried forward to the next billing period.

(3) The energy accounting, banking and settlement of energy generated, drawn and injected by a prosumer with connected load of and below 20 kW shall be done as below**;**

(i) The distribution licensee, during a billing period shall extend the facility to the prosumer having connected load of and below 20 kW under net metering arrangements, to draw back from the grid, the electricity injected during a time block at a different time period without any restriction.

(ii) In case the electricity supplied by the distribution licensee during any billing period exceeds the electricity injected in to the grid by the prosumer from his renewable energy system, the distribution licensee shall raise a bill for the net electricity consumption at the prevailing tariff, after adjusting any excess electricity banked from the previous billing period;

(iii) In case the electricity injected by the prosumer's renewable energy system exceeds the electricity consumed from the distribution licensee during the billing period, such excess energy shall be allowed to be banked and be carried forward to the next billing period as specified under Regulation 20(1) above.

(4) Accounting and settlement of energy generated, drawn and injected by the prosumer having connected load above 20 kW;

(i) The electricity injected from the renewable energy system in a time period during a billing period shall be first set off against the electricity consumed during the same time period.

(ii) Any excess generation over consumption in that time period during the billing period shall thereafter be set-off against other time period, subject to the following.

(a) 80% of the net energy injected in time periods other than peak hours, be allowed to adjust against peak hour consumption.

(b) The net energy injected during peak hours shall be allowed to be adjusted 100% during the peak hour and the balance shall be allowed to be adjusted 120% during other time blocks.

(c) At all other time periods, except energy injection during peak hours, 100% of the net energy injected in any time periods will be allowed to adjust against the consumption, during the time period other than peak hours.

(iii) Any excess generation during a billing period, after adjusting against the consumption during the same billing period as per clause (i)&(ii) above shall be banked and carried forward, to the next billing period as specified under Regulation-20(1) above.

(iv) Such surplus energy carried forward to the next billing period after accounting for the banking charges specified therein shall be, accounted along with the renewable energy generation during the subsequent billing period, and the same shall be settled against the energy drawn in the subsequent billing period as per the procedures specified under clause (i) & (ii) above.

(v) If the electricity injected into the system by the prosumer as measured in the net meter, is less than the total electricity drawn from the licensee, during any billing period, the licensee shall recover from such prosumer, the electricity charges at the rates applicable as per the tariff order issued by the Commission, for the net quantum of electricity drawn by him from the distribution system, after taking into account any balance electricity banked in the previous billing period.

(5) The licensee shall pay to the prosumer for the net electricity balance in his account at the end of the settlement period, at the Average Power Purchase Cost (APPC) approved by the Commission;

Provided that, in case of delay in payment of the net amount due to the prosumer beyond 30 days from the settlement date, the licensee shall pay interest to the prosumer at the FBIL rate +200 base points prevailing on 1st April of the settlement year.

(6) The prosumer is exempted from the payment of transmission charges, wheeling charges, cross subsidy surcharges for the electricity generated and consumed at the same premises from the renewable energy system under net metering facility.

(7) The quantum of electricity generated from the renewable energy system of the prosumer, shall qualify for accounting towards the Renewable Purchase Obligation (RPO) of the distribution licensee, as specified elsewhere in these Regulation.

Chapter – IV

Prosumers having capacity more than 1 MW, Captive Consumers and Independent Power Producers

22. **Scope and applications.-**

(1) The provisions under the Regulations 22 to 29 are applicable to the following grid interactive renewable energy systems;

(i) A prosumer having Renewable Energy Systems with installed capacity more than 1 MW at his premise for his own use, including a prosumer not covered under net metering specified in Chapter-III of these Regulations.

(ii) Renewable Energy Systems installed by a Captive consumer, at a location different from the location of its usage, but within the State for his own use, and,

(iii) Renewable energy system installed by a Renewable Energy Generator as an Independent power producer, for third party sale using the transmission and/or distribution system of the utility.

(2) Prosumers and captive consumers including those prosumers mentioned in third proviso to sub Regulation (2) of Regulation 13 under these Regulations are permitted to install Renewable Energy Systems, irrespective of their connected load or contract demand as the case may be, to offset their energy consumption on annual basis, subject to the terms and conditions specified in this Chapter.

23. **Connectivity.-**

(1) The distribution licensee or the State transmission utility, as the case may be, shall on demand, provide connectivity for the renewable energy generation system, as per the provisions, specified in KSERC (Connectivity and Intra State Open Access) Regulations, 2013, as amended from time to time.

Provided that, if the distribution licensee delays granting connectivity with reference to the time lines specified in KSERC (Connectivity and Intra State Open Access) Regulations, 2013, as amended from time to time, the

Commission may take action against the licensee as per the provisions of the Electricity Act, 2003.

(2) The interconnection of the renewable energy system with the transmission and/or distribution system shall conform to the provisions under the Central Electricity Authority (Technical Standards for Connectivity of Distributed Generation Resources) Regulations, 2013 and Central Electricity Authority (Measures Relating to Safety and Electric Supply) Regulations, 2010, and other applicable regulations dealing with connectivity and safety, as amended from time to time.

24. **Metering system.-**

(1) The Renewable Energy Generator/ Captive Generating plant, the captive consumer and the open access customer as the case may be, shall install Special Energy Meters (SEM) as specified in the Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006 as amended from time to time, for accounting the quantum of energy generated, the quantum of energy injected into the transmission and/or distribution system and the quantum of energy consumed.

Provided that, if the RE generator/ consumer, elects to purchase his own special energy meter, he shall purchase the same from the firms empaneled by the STU/ distribution licensee, as specified in the Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006 as amended from time to time:

(2) Special Energy Meters installed shall be capable of measuring the 15 minutes time-block-wise 'active energy and reactive energy', in accordance with the Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006 as amended from time to time and the provisions of State Grid Code. The metering system shall have remote terminal unit (RTU) to facilitate real time monitoring by the SLDC as and when specified by the Commission.

(3) Special Energy Meters shall be open for inspection by any person authorized by the STU or the State Load Despatch Centre or the distribution licensee, as the case may be.

25. **Open Access.-**

(1) Any person generating electricity from renewable sources of energy, shall have the right for open access to the distribution system/ transmission system of the licensee/ STU in the State, for transmitting and/or wheeling the renewable energy, subject to the terms and conditions specified as follows,-

(i) Open Access shall be granted as per the provisions under KSERC (Connectivity and Intra State Open Access) Regulations, 2013.

(ii) Open Access charges such as application fee, SLDC/ NLDC charges, Transmission/ distribution losses, transmission/ wheeling charges, reactive energy charges, deviations and grid support charges, surcharges etc., as per Electricity Act, 2003/ Kerala State Electricity Regulatory Commission (Connectivity and Intra State Open Access) Regulations, 2013 and the Tariff orders issued by the Commission from time to time, as the case may be, applicable to the persons availing open access.

(2) The Renewable Energy Generator shall follow the Indian Electricity Grid Code 2010, Kerala State Grid Code and the relevant CERC/ KSERC Regulations and procedures for forecasting, scheduling and dispatch of renewable energy, as amended from time to time.

26. **General Conditions and charges applicable for the use of the transmission and distribution system by a prosumer, having a Renewable Energy System with capacity more than 1 MW at the same premise for his own use.-**

(1) 5% of the energy injected into the grid of the transmission and/or the distribution licensee shall be accounted towards 'grid support charges' and the balance 95% shall be treated as net energy.

(2) If the net energy during a time period (normal hours, peak hours and off-peak hours) in a billing period is fully consumed by the captive consumer during the same time period (normal hours, peak hours and off-peak hours) in that billing period itself, *for such quantum of renewable energy, the prosumer is exempted from the payment of transmission charges, wheeling charges and, losses in transmission system and distribution system approved by the Commission.*

(3) The prosumer is permitted to account the renewable energy injected in a time period (normal hours, peak hours and off-peak hours) during the billing period, against the consumption in a different time period during the same billing period, subject to the following conditions,-

(i) 80% of the net energy injected in time periods other than peak hours, be allowed to be adjusted against peak hour consumption.

(ii) The net energy injected during peak hours shall be allowed to be adjusted 100% during the peak hour and the balance shall be allowed to be adjusted at 120% during other time blocks.

(iii) At all other time periods, except energy injection during peak hours, 100% of the net energy injected in any time periods will be allowed to be adjusted against the consumption, during the time period other than peak hours.

(4) The excess energy, if any, available at the end of the billing period is allowed to be banked and carried forward to the subsequent billing period of the settlement period, subject to the following,-

(i) 95% of the energy so banked only will be allowed to be adjusted in the subsequent billing period of the settlement period and 5% of the banked energy shall be accounted towards banking charges of the distribution licensee.

(ii) Time period wise adjustment of the energy generated in a time period and accounted against the consumption in different time period during the billing period shall be followed as detailed under clause (3) above.

Note: The 5% banking charges on the energy banked at the end of billing period shall not be cumulative, i.e., once 5% energy is deducted as banking charges during a billing period, no further banking charges will be applicable for this excess energy, if any arising out of such banked quantum of energy in the subsequent billing periods.

Clarification: For example, in the month of April, 50000 units is the surplus energy with the prosumer after making the adjustments as detailed under Sub Regulation (3) above. The energy banked in the month of April after accounting for banking charges shall be (50000x0.95) 47500 units. Thereafter in the month of May, 20000 units is the surplus energy with the prosumer after making the adjustments as detailed under Sub Regulation (3) above. Here the energy banked in the month of May shall be (20000x 0.95) 19000 units, and the total energy so banked at the prosumer account at the end of the month May shall be 47500+19000 = 66500 unit.

(5) The licensee shall pay, within one month, for the net surplus energy available at the credit of the prosumer at the end of the settlement period as per sub Regulation (4) above, at the Average Pooled Power Purchase Cost (APPC) of the licensee approved by the Commission, from time to time.

(6) The prosumer, who installed the Renewable Energy System at the same premise is exempted from the payment of transmission charges, wheeling charges, transmission losses and distribution loss for the quantum of energy generated from the RE plant and adjusted against his consumption during the settlement period, in the same premises.

(7) The quantum of energy generated from the Renewable Energy System by a prosumer at his premise after meeting his renewable purchase obligation, if any, shall be permitted to be accounted towards the RPO of the distribution licensee, in accordance with the REC Regulations and its amendments from time to time.

27. **General Conditions and charges applicable, for the use of the transmission and distribution system by a Captive Consumer.-**

(1) Any captive consumer, using the transmission and/or distribution system of the licensee for wheeling the energy generated from the Renewable Energy System to a different location within the State, shall pay the following charges approved by the Commission from time to time,-

a. Transmission charges

b. Wheeling charges

c. Transmission losses and Distribution losses, and

d. Any other charges approved by the Commission.

(2) Captive consumers who maintain the contract demand with the distribution licensee are required to pay transmission charges only on per unit basis at the rates as approved by the Commission from time to time.

(3) Captive consumers under these Regulations are permitted to install

Renewable Energy System at their premise irrespective of their connected load or contract demand, to offset their energy consumption on annual basis, subject to the terms and conditions specified in these Regulations.

Provided that, as a promotional measure, such consumers are permitted to inject energy into the grid during any time period and to draw back the energy during any other time period subject to the condition specified in sub-Regulation (5) below and without enhancing the connected load/contract demand up to the RE capacity.

Provided further that such consumers shall be required to pay 5% of the energy injected into the grid from the RE plant as 'grid support charges'.

(4) If the net energy, after deducting the approved transmission and/or distribution loss, injected from the renewable energy system during a time period (normal hours, peak hours and off-peak hours) in a billing period is fully consumed by the captive consumer during the same time period (normal hours, peak hours and off-peak hours) in that billing period itself, for such quantum of electricity, the captive consumer is exempted from the banking charges.

(5) The captive consumer is permitted to consume the electricity injected from the Renewable Energy System during a time period (normal hours, peak hours and off-peak hours), in a different time period (normal hours, peak hours and off-peak hours) during the same billing period, subject to the following conditions,-

(i) 80% of the net energy injected in time periods other than peak hours, be allowed to adjust against peak hour consumption.

(ii) The net energy injected during peak hours shall be allowed to be adjusted 100% during the peak hour and the balance shall be allowed to be adjusted 120% during other time blocks.

(iii) At all other time periods, except energy injection during peak hours, 100% of the net energy injected in any time periods will be allowed to adjust against the consumption, during the time period other than peak hours.

(6) The excess energy, if any, available at the end of the billing period is allowed to be banked and carried forward to the subsequent billing period of the settlement period, subject to the following,-

(iii) 95% of the energy so banked only be allowed to be adjusted in the subsequent billing period of the settlement period and 5% of the banked energy shall be accounted towards banking charges of the distribution licensee.

(iv) Time period wise adjustment of the energy generated in a time period and accounted against the consumption in different time period during the billing period shall be followed as detailed under clause (5) above.

Note: The 5% banking charges on the energy banked at the end of billing period shall not be cumulative, i.e., once 5% energy is deducted as banking charges during a billing period, no further banking charges will be applicable for this excess energy, if any arising out of such banked quantum of energy in the subsequent billing periods.

Clarification: For example, in the month of April, 50000 units is the surplus energy with the prosumer after making the adjustments as detailed under Sub Regulation (3) above. The energy banked in the month of April after accounting for banking charges shall be (50000x0.95) 47500 units. Thereafter in the month of May, 20000 units is the surplus energy with the prosumer after making the adjustments as detailed under Sub Regulation (3) above. Here the energy banked in the month of May shall be (20000x 0.95) 19000 units, and the total energy so banked at the prosumer account at the end of the month May shall be 47500+19000 = 66500 unit.

(7) The licensee shall pay, within one month, for the net surplus energy available at the credit of the prosumer at the end of the settlement period as per sub Regulation (4) above, at the Average Pooled Power Purchase Cost (APPC)of the licensee approved by the Commission, from time to time.

(8) The quantum of energy from the Renewable Energy System generated and consumed by the captive consumer during the settlement period after accounting for its RPO, if any, shall be permitted to be accounted towards the RPO of the distribution licensee.

(9) The above accounting shall be valid only till the time intra state deviation settlement mechanism put in place.

28. **General Conditions and charges applicable, for usage of the transmission and distribution system by an independent renewable power generator/ open access consumer.-**

(1) A consumer purchasing power from an independent renewable power generator or a Renewable Power Generator supplying power to a third party by availing open access of the distribution system of a licensee shall pay to the licensee the following charges approved by the Commission from time to time,-

(i) Transmission charges;

(ii) Wheeling charges;

(iii) Cross subsidy surcharges;

(iv) Transmission losses and Distribution losses; and

(v) Any other charges approved by the Commission.

(2) All other terms and conditions specified in the KSERC (Connectivity and Intra State Open Access) Regulations, 2013 is applicable for the IPPs and open access consumers who intent to avail open access in the transmission system and/or distribution system of the licensee.

(3) The distribution licensee is not obliged to extend the time period wise adjustment, banking facilities or any such other facility under these Regulations for open access consumers and Independent Renewable Energy Generators.

29. **Accounting and settlement of Renewable Energy consumed by prosumer/ captive consumer under Regulation 26 and 27 above.-**

(1) For each billing period, the distribution licensee shall, record the reading at the 'renewable energy meter' and the 'consumer meter' regularly for each of the time period.

(2) For each billing period, the distribution licensee shall make the following information available on its bill to prosumer/ captive consumer under these Regulations,-

(i) Time period wise details of the electricity consumption of the prosumer/ captive consumer.

(ii) Time period wise details of the electricity injected from the

Renewable Energy System.

(iii) The net energy banked from the previous billing period (closing balance of the net surplus renewable energy if any available at the end of the previous billing period).

(iv) Detailed calculation statement of the time period wise adjustments, if any.

(v) Net billed electricity, if any, for which a payment is to be made by the prosumer/ captive consumer;

(vi) Excess electricity, if any, to be carried forward to the next billing period.

(3) In case the energy drawn by the prosumer/captive consumer is more than the net energy injected from the RE plant after the adjustments for charges specified in these Regulations, the distribution licensee shall raise a bill for the energy drawn from the grid at the prevailing tariff, after taking into account any excess electricity carried forward from the previous billing period;

(4) The licensee shall pay for the net electricity banked by the prosumer/ captive consumer at the end of the settlement period, at the Average Power Purchase Cost (APPC) approved by the Commission;

Provided that, in case of delay in payment of the net amount due to the consumer beyond 30 days from the settlement date, the licensee shall pay interest to the consumer at the FBIL + 200 base points for the period of delay.

(5) No carry forward of banked electricity shall be done beyond the settlement period.

(6) Captive consumers under these Regulations shall pay applicable transmission charges and/or wheeling charges, transmission losses and distribution losses and other levies, as approved by the Commission from time to time.

(7) Open access consumers and independent Renewable Power Generators shall be liable to pay transmission charges and/or wheeling charges, transmission losses and distribution losses, cross subsidy surcharges and other levies, as approved by the Commission from time to time.

(8) The distribution licensee/ STU/SLDC shall raise separate bill for

transmission charges, wheeling charges, transmission and distribution losses or any other charges payable by such consumers, as detailed under Regulations 26 and 27 above.

30. **Renewable Energy Certificate Scheme.-**

Any person generating electricity from renewable sources of energy is eligible for the benefits of 'Renewable Energy Certificate mechanism (REC)' as provided under REC Regulations.-

Chapter V

Determination of Tariff for the Electricity Generated from Renewable Energy Sources

31. **Scope and extent of application.-**

The provisions under these Regulations shall be applicable for determining the project specific tariff/ generic tariff as determined by the Commission for the electricity generated from Renewable Sources of Energy plants commissioned during the control period specified in these Regulations, under Section 62 read with Section 86 of the Electricity Act, 2003.

32. **Norms for determination of tariff.-**

(1) The principles, norms and parameters specified in these Regulations are applicable for determination of tariff for the electricity generated from the Renewable Source of Energy plants that have declared commercial operation during the control period specified in these Regulations.

Provided that, while determining the principles, norms and parameters for determination of tariff, the Commission have considered appropriate operational and financial parameters of each category of renewable source of energy and to the extent possible, provides an allowance, based on technology, fuel, market risk, social and environmental benefits and other relevant factors.

Provided further that, the Commission, while formulating and notifying the principles, norms and parameters for determination of tariff for the renewable energy from various categories of renewable source of energy, is guided by the National Electricity Policy and Tariff Policy published under Section 3 of the Act and the principles, norms and parameters specified by the Central Commission for this purpose.

Provided also that, until separate principles, norms and parameters are specified by the Commission for the control period, the principles, norms and parameters specified by the Central Commission for the purpose of determination of tariff for the electricity generated from various categories of renewable sources of energy, as specified in the Central Electricity Regulatory Commission (Terms and Conditions for Tariff Determination from Renewable

Energy Sources) Regulations, 2017, as amended from time to time, shall be adopted by the Commission for the purpose of determination of tariff under these Regulations.

(2) The norms and parameters specified in this Regulation shall be the ceiling norms and shall not prevent the generator and the distribution licensee from mutually agreeing for more economic norms than that specified in these Regulations.

33. **Control Period or Review Period.-**

(1) The Control Period or Review Period under these Regulations shall be for five (5) years, starting from the financial year 2019-20.

Provided that the tariff determined as per these Regulations for the Renewable Energy Projects commissioned during the Control Period, shall continue to be applicable for the entire duration of the Tariff Period as specified in Regulation 34 below.

(2) In case the Regulations for the next Control Period are not notified until the commencement of next Control Period, the Commission may provisionally adopt the principles, norms and parameters notified by the Central Commission for the period concerned.

Provided that if the principles, norms and parameters for the next control period are not notified until the commencement of the next control period by the Commission or by the Central Commission, the norms as applicable for the just concluded control period shall be provisionally adopted for determination of tariff.

Provided further that, as soon as the principles, norms and parameters are notified for the next control period, the Commission shall be firmed up the tariff for such renewable projects which have declared commercial operation in the next control period. The firmed up tariff shall be applicable from the date of commercial operation of such projects, for which provisional tariff is assigned as per the above proviso.

34. **Tariff Period.-**

(1) The Tariff Period for Renewable Energy power projects will be same as their Useful Life as defined in Regulation 2(1).

(2) Tariff period for a renewable energy generating station under these Regulations shall be applicable from the date of declaration of commercial operation (CoD) of the renewable energy generating stations. However considering the non firm nature of renewable energy, power injected into the grid prior to the CoD of a project shall also continue to be paid the same tariff as determined post CoD.

(3) Tariff determined for a Renewable Energy Project, which declared CoD during the current control period as mentioned in Regulation 33, shall be applicable for the entire Tariff period of the RE project.

35. **Generic Tariff for the Electricity Generated from Renewable Sources of Energy.-**

(1) The Commission may, if considered necessary determine, , the generic tariff for each financial year of the control period, for the electricity generated from the following categories of renewable sources of energy in accordance with the principles, norms and parameters specified or adopted by the Commission in these Regulations and considering the normative values of capital cost, rate of interest and other parameters notified under these Regulations, by an order published in the official Gazette.

(i) Solar Photo Voltaic (PV) of capacity of and below 5 MW at a location,

(ii) Wind Energy of capacity of and below 25 MW at a location,

(iii) Small Hydro Electric plants having capacity of and below 5 MW.

Provided that, the generic tariff so determined shall be the upper ceiling limit and shall not prevent the generator and distribution licensee from agreeing to a lower tariff than the generic tariff determined by the Commission.

Provided further that, the generic tariff so determined by the Commission as mentioned above shall not prevent the right of the generator to get a project specific tariff determined, if they so desire, by the Commission as per the provisions of these Regulations. However, the distribution licensee/ purchaser of electricity from RE sources under these Regulations shall pay only the lower of the 'generic tariff of the year of CoD or the project specific tariff' as determined by

the Commission.

Provided also that, the generic tariff determined by the Commission shall also not prevent the right of the distribution licensee to procure power from the renewable energy sources through competitive bidding route as per Section 63 of the Electricity Act, 2003.

(2) The generic tariff determined by the Commission for a financial year under these Regulation, shall be applicable to the renewable energy projects which declares commercial operation (COD) during that financial year.

Provided that the generic tariff determined by the Commission for a financial year shall be applicable provisionally to the renewable energy projects which are commissioned after the close of that financial year, till such time, the tariff is revised by the Commission:

Provided further that, as soon as the generic tariff is revised by the Commission for the financial year in which the renewable energy project is commissioned, the revised generic tariff shall be assigned to such renewable energy projects, for which provisional tariff is assigned as per the above proviso from the date of declaration of its Commercial Operation.

(3) For claiming the generic tariff applicable to the wind energy projects in a wind zone, the project developer shall submit necessary and sufficient details for classification of the project into a particular Capacity Utilization Factor (CUF) based on Annual Mean Wind Power Density (W/m^2) validated by the National Institute of Wind Energy.

(4) Notwithstanding anything to the contrary contained in these Regulations, the normative parameters and the generic tariff applicable to Small Hydro projects having capacity of and below 5 MW, Wind Energy having capacity of and below 25 MW and Solar PV plants having capacity of and below 5 MW, for the financial year 2019-20 is specified in Annexure I to III attached.

36. **Project Specific Tariff for the Electricity Generated from Renewable Sources of Energy.-**

(1) The Commission may, based on a petition for determination of tariff as per the provisions of Electricity Act 2003, determine by an order the project specific tariff, on a case to case basis, for the Renewable Energy projects. This shall be done in accordance with the principles, norms and parameters specified or adopted by the Commission as per these Regulations.

(2) Provided that the financial norms as specified under these Regulations, shall be ceiling norms while determining the project specific tariff for such Renewable projects.

(3) A petition for determination of project specific tariff shall be accompanied by such fee as may be determined by Regulations and be accompanied by:

a) Detailed Project Report outlining technical and operational details, site specific aspects, premise for capital cost, financing plan, project economic viability etc.;

b) Estimates of cost of all major components for the project with evidence to its reliability.

c) A statement indicating the project completion cost, evidence for all major expenditures incurred, sources of financing with its terms/ conditions etc for the period, for which tariff is to be determined;

d) A statement containing full details of any subsidy and incentive available, claimed and received, due or assumed to be due from the Central Government and/or the State Government;

e) Any other information as decided by the Commission, for determining the project specific tariff for the project.

(4) For the determination of project specific tariff, the generating company shall submit the break-up of all the capital cost items accompanied by relevant paid vouchers/ tax receipts and other verifiable documents with its petition in the manner specified above.

Provided that, the project specific tariff so determined shall be limited to the generic tariff determined by the Commission for the particular year of CoD, if it exceeds the generic tariff for that year and shall be based on the norms and parameters specified in these Regulations.

37. **Tariff Structure & Design.-**

(1) The tariff for renewable energy technologies shall be a single part tariff consisting of the following cost components:

(a) Return on equity; wherein maximum equity allowable for RoE shall be limited to 30% of the capital cost;

(b) Interest on loan capital;

(c) Depreciation;

(d) Interest on working capital;

(e) Operation and maintenance expenses.

(2) The generic tariff or the project specific tariff, as the case may be, shall be determined from the year of commercial operation of the project, on levelized basis.

Provided that, the levelisation shall be carried out over the 'useful life' of the Renewable Energy project, specified under these Regulations.

Provided further that, for the purpose of levellised tariff computation, the discounting factor equivalent to Pre Tax weighted average cost of capital shall be considered.

38. **Principles for the dispatch for Electricity Generated from Renewable Energy Sources.-**

(1) All the renewable energy power plants, unless and otherwise exempted, shall be treated as 'MUST RUN' power plants and shall not be subjected to 'Merit order Dispatch' principles.

(2) Scheduling of Renewable Energy plants shall be governed by KSERC (Forecasting, Scheduling, Deviation Settlement and Related Matters of Solar and Wind Generation Sources) Regulations, 2019 and its amendments from time to time.

Financial Principles

39. **Capital Cost.-**

The norms for the capital cost, specified in these Regulations, shall be inclusive of the costs for all capital works including plant and machinery, civil works, erection and commissioning charges, financing and interest costs during construction, and evacuation infrastructural costs up to the licensees inter-connection point.

40. **Debt Equity Ratio.-**

(1) For all renewable energy projects, the debt-equity ratio shall be 70:30 of the capital cost as approved by the Commission as on the date of commercial operation shall be considered for tariff determination.

Provided that, while determining the project specific tariff under these Regulations, if the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan:

Provided further that, if the equity actually deployed is less than 30% of the capital cost, the actual equity deployed shall be considered for determination of project specific tariff:

(2) The equity invested in foreign currency shall be designated in Indian Rupees on the date of each investment. The overnight MIBOR notified by FBIL for that particular date shall be exchange rate for such conversion to Indian Rupees.

41. **Loan and Finance Charges.-**

(1) **Loan Tenure :** A normative loan tenure of 13 years shall be considered for the purpose of determination of tariff under these Regulations.

(2) **Interest Rate:** (i) The loans arrived at under Regulation 40 shall be considered as the gross normative loan for calculation of interest on loan. The normative loan outstanding as on April 1st of every year shall be worked out by deducting the cumulative depreciation up to March 31st of previous year from the gross normative loan.

(ii) A normative interest rate of two hundred (200) basis points above the average State Bank of India Marginal Cost of Funds based Lending Rate prevalent during the last available six months shall be considered for allowing interest during loan tenure.

(i) Notwithstanding any moratorium period availed by the generating company, the repayment of loan shall be considered from the first year of date of commercial operation of the project.

42. **Depreciation.-**

(1) The Capital Cost of the asset approved by the Commission shall be the basis for calculation of depreciation. The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to a maximum of 90% of the capital cost of the asset.

(2) Depreciation rate of 5.28% per annum for first 13 years and remaining depreciation to be spread over the remaining useful life of the RE assets considering the salvage value of the project as 10% of project cost shall be considered.

(3) Depreciation shall be charged from the first year of commercial operation.

Provided that if the commercial operation of the asset was only for part of the first year of commercial operation, depreciation shall be charged on pro rata basis.

43. **Return on Equity.-**

The normative Return on Equity shall be 14% on the normative equity under Regulation 40 above. Income Tax/ Minimum Alternate Tax (MAT) on ROE if any, paid by the generator, shall be reimbursed separately by the distribution licensee on production of documentary evidence of remittance, annually for the entire useful life of the project.

44. **Interest on Working Capital.-**

(1) The Working Capital requirement in respect of Wind energy projects, Small Hydro Power, Solar PV and Solar thermal power projects, projects based on Municipal Solid Waste shall be computed in accordance with the following:

a) Normative Operation & Maintenance expenses for one month;

b) Receivables equivalent to two months energy charges for sale of electricity calculated on the normative Capacity Utilization Factor (CUF);

c) Maintenance spare @ 15% of operation and maintenance expenses.

(2) Interest on Working Capital shall be at interest rate equivalent to the normative interest rate of three hundred (300) basis points above the average State Bank of India MCLR (One Year Tenor) prevalent during the last available six months for the determination of tariff.

45. **Calculation of CUF/PLF .-**

The number of hours for calculation of CUF/PLF (wherever applicable) for various RE technologies shall be 8760 in an year.

46. **Operation and Maintenance Expenses.-**

(1) 'Operation and Maintenance or O&M expenses' shall comprise of, repair and maintenance (R&M), establishmentcosts including employee expenses and administrative and general expenses.

(2) Operation and maintenance expenses shall be determined for the Tariff Period based on normative O&M expenses specified by the Commission in these Regulations for the first Year of Control Period.

(3) Normative O&M expenses allowed during first year of the Control Period (i.e. FY **2019-20**) under these Regulations shall be escalated at the rate of 5.72% per annum over the Tariff Period.

47. **Rebate.-**

(1) If the payment of bills for charges payable under these Regulations is made by the distribution licensee to the renewable generator within five **calendar** days of presentation of bills by the renewable generator, a rebate of 2% shall be allowed to the licensee.

(2) Where payments are made by the distribution licensee to the RE generator within a period of one month of presentation of bills by the generating

company, a rebate of 1% shall be allowed to the licensee.

48. **Late payment surcharge.-**

In case the payment of any bill for charges payable under these Regulations is delayed beyond a period of 60 days from the date of billing, a late payment surcharge at the rate of 1.25% per month shall be levied by the renewable energy generator.

49. **Sharing of Clean Development Mechanism (CDM) Benefits.-**

(1) The proceeds of carbon credit from approved CDM project shall be shared between generating company and concerned beneficiaries in the following manner, namely:

a) 100% of the gross proceeds on account of CDM benefit to be retained by the project developer in the first year after the date of commercial operation of the generating station;

b) In the second year, 10% of the CDM benefit shall be shared with the beneficiaries and the balance 90% of the benefit shall be retained by the project developer.

c) In the third year onwards, the share of the beneficiaries shall be progressively increased by 10% every year till it reaches 50%, thereafter the proceeds shall be shared in equal proportion, by the generating company and the beneficiaries.

50. **Subsidy or Incentive by the Central / State Government.-**

(1) The Commission shall take into consideration any incentive or subsidy offered by the Central or State Government, including accelerated depreciation benefit if availed by the generating company, for the renewable energy power plants 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, for the purpose of tariff determination:

i) Assessment of benefit shall be based on the Commission approved capital cost, accelerated depreciation if availed by the developer at the rate as per relevant provisions under Income Tax Act and corporate income tax rate.

ii) Capitalization of RE Projects for the full financial year;

iii) Per unit benefit shall be derived on levellized basis at a discounting rate equivalent to weighted average cost of capital.

51. **Taxes and Duties.-**

Tariff determined under these Regulations shall be exclusive of taxes and duties as may be levied by the appropriate Government:

Provided that the taxes and duties levied by the appropriate Government shall be allowed as “pass through” on actual incurred basis, subject to proof of payment.

Technology Specific Parameters

52. **Wind Energy Project.-**

(1) Capital Cost, - The Commission shall determine the capital cost and tariff based on prevailing market trends for wind energy project of capacity of and below 25 MW at a location. The Commission has fixed the normative capital cost for wind projects of capacity of and below 25 MW which declares commercial operation for the first year of the control period at Rs 5.75 crore/MW,

(2) **Capacity Utilization Factor (CUF).** The normative CUF for the control period specified in this Regulation shall be as follows:

	Annual Mean Wind Power Density	CUF %
	(W/m^2)	
1	upto 220	22
2	221-275	24
3	276-330	28
4	331-440	33
5	> 440	35

Provided that, on completion of two years from the commercial operation date, if the actual CUF varies by (+) or (-) 5 % for that project, then the annual mean wind power density specified above shall be measured at 100 meter hubheight and the tariff shall be re-determined for the CUF corresponding to the measured wind power density.

Provided further that, for the purpose of classification of wind energy project into particular wind zone class, as per MNRE guidelines for wind measurement, wind mast either put-up by NIWE or a private developer and validated by NIWE, would normally be extended 10 km from the mast point in all directions for uniform terrain and limited to appropriate distance in complex terrain with regard to complexity of the site.

(3) **Operation and Maintenance (O&M) Expenses,-** The Commission shall determine the O&M Expenses based on the prevailing market information, and allowing an escalation rate of 5.72% over the previous year.

Normative O & M rates for the financial year 2019-20 is taken as Rs 8.00 lakh per MW, based on the prevailing market information.

The generic tariff applicable for the Wind projects of capacity of and below 25 MW for 2019-20 is given as Annexure-II.

53. **Small Hydro Project.-**

(1) **Capital Cost,-** The normative capital cost ceiling for small hydro projects during first year of the Control Period shall be as given below:

Project Size	Capital Cost (Rs. lakh/ MW)
Below 5 MW	779
5 MW to 25 MW	707

Provided further that, the Capital Cost for SHP as specified for first year of control period will remain valid for the entire duration of the control period, unless reviewed by the Commission.

(2) **Capacity Utilization Factor,-** The capacity utilization factor (CUF) for the small hydro projects shall be 30%.

Provided that, on completion of three years from commercial operation date, if the actual average CUF varies by (+) or (-) 10 % of the normative CUF, the Commission may revise the tariff at the actual average CUF on a petition filed by the RE generator of the distribution licensee with relevant supporting details.

(3) **Auxiliary Consumption:** Normative Auxiliary Consumption for the small hydro projects shall be 1%.

(4) **Operation and Maintenance Expenses,-**

(i) Normative O&M expenses for the first year of the Control period shall be as given below.

Project Size	O&M Expenses for the first year of the controlperiod (Rs. Lakh/MW)
Below 5 MW	32.41
5 MW to 25 MW	23.47

(ii) Normative O&M expenses of the first year of the control period as above shall be escalated at the rate of 5.72% per annum for the tariff

period for the purposes of tariff determination.

(iii) The generic tariff applicable for SHEP < 5 MW capacity for the FY 2019-20 is given as Annexure-I.

54. **Solar PV Power Project.-**

(1) **Technology Aspects,-** Norms for Solar Photovoltaic (PV) power projects under these Regulations shall be applicable for grid connected PV systems that directly convert solar energy into electricity and are based on technologies such as Crystalline Silicon, Thin Film etc. as may be approved by MNRE.

(2) **Capital Cost,-** The Commission shall determine capital cost and tariff, based on prevailing market trends for Solar PV projects of capacity of and below 5 MW at a location. The normative capital cost for Solar PV project commissioned during the control period shall be limited to Rs 4.00 crore/ MW.

(3) **Capacity Utilization Factor,-**The Capacity Utilisation Factor for Solar PV project shall be 19%.

(4) **Operation and Maintenance Expenses,-**The Commission shall determine O&M expenses based on prevailing market trends for Solar PV project, and allowing an escalation rate of 5.72% over the previous year.

Provided that, normative O & M rates for the first year of the control period specified in this Regulation is taken as Rs 6.00 lakh/MW.

(5) **Auxiliary Consumption,-**The auxiliary consumption factor shall be 0.25% of gross generation.

(6) The generic tariff for solar projects having capacity of and below 5 MW for the FY 2019-20 are provided in Annexure III

55. **Power Projects using Municipal Solid Waste/Refuse Derived Fuel and based on Ranking Cycle Technology.-**

(1) **Technology Aspect,-** The norms for tariff determination specified hereunder are for power projects which use Municipal Solid Waste (MSW) technologies for power generation.

(2) **Capital Cost,-** The Commission shall determine only project specific capital cost and tariff based on prevailing market trends for MSW projects.

(3) **Plant Load Factor,-** Threshold PLF for determining fixed charge component of tariff for the power projects which use MSW shall be:

	Particulars	**PLF**
a)	During the first year from the date of CoD	65%
c)	From 2nd year onwards	75%

Provided that, the stabilization period shall not be more than 6 months from the dateof commissioning of the project.

(4) **Auxiliary Consumption,-**The auxiliary power consumption for MSW/RDF based power projects shall be 15%.

(5) **Operation and Maintenance Expenses,-**The Commission shall determine only project specific O&M expenses based on prevailing market trends for MSW/RDF projects.

CHAPTER- VI

MISCELLANEOUS PROVISIONS

56. **Norms specified shall be ceiling norms.-**

The norms specified in these Regulations are the ceiling norms and shall not preclude the generating company and distribution licensees from agreeing to the improved norms other than the one specified in these Regulations. In case the improved norms results in better economy and lower tariffs are agreed to, such improved norms shall be applicable for determination of tariff.

57. **utility driven schemes.-**

These Regulations do not preclude the right of a Distribution licensee to undertake RE projects as per the schemes/ policies of the State and Central Government with the prior approval of the Commission.

58. **Generation based incentives for off-grid solar schemes.-**

Generation based incentives as per the order of the Commission dated 11.11.2019 is available to the off-grid captive solar plants upto 30.09.2021.

59. **Deviation from Norms.-**

(1) As stated above the tariff determined under these Regulations shall be a ceiling tariff. The renewable generator and the distribution licensee may mutually agree to charge a lower tariff than the tariff determined on the basis of norms and parameters specified in these Regulation, with the prior approval of the Commission.

60. **Renewable Energy Advisory Committee.-**

(1) In order to facilitate and encourage the implementation of Renewable Energy Systems in the State under these Regulations, the Commission shall, notify the Renewable Energy Advisory Committee with the following members, for discharging the functions detailed under sub Regulations (2) below;

(i) Secretary to the Commission, Chairman of the Committee;

Director (Technical) of the Commission;

(ii) Representative from the Power Department, in State Government;

(iii) Representative from the Chief Electrical Inspector;

(iv) Representative from State Transmission Utility;

(v) Representative from SLDC;

(vi) Chief Engineer RE cell KSEB Ltd;

(vii) Each zonal Distribution Chief Engineers of KSEB Ltd, as representative;

(viii) One representative among the small licensees on rotational basis;

(ix) Representative from ANERT as State Nodal Agency;

(x) One representative, each from representing domestic category, commercial category and Industrial category among their consumer associations, protesting consumer interests;

(xi) One representative from Renewable Energy Generators

(xii) One representative each from Small Scale Industries Associations, manufacturing RE companies, HT&EHT Electricity Industrial Consumers Associations and KREEPA..

(2) The Renewable Energy Committee constituted under sub Regulation (1) above, shall discharge the following functions, -

a) Address the various difficulties and issues concerning connectivity faced by the State Transmission Utility and/or distribution licensee(s) in the State.

b) Address and to develop common procedures for registering and processing the applications by the STU and /or distribution licensees.

c) Advise the distribution licensee(s) to develop consumer friendly procedures, billing systems etc.;

d) Develop technical standards for assessing the impact of the Renewable Energy in the Kerala power system.

e) Develop standards for data exchange between Renewable Energy System and the distribution licensee;

f) Promote cross-learning among the distribution licensees and other stakeholders;

g) Assist in developing common programs for facilitating Renewable Development by the incumbent distribution licensee.

61. **Renewable Energy Cell.-**

(1) The incumbent distribution licensee shall, within one month from the date of notification of these Regulations constitute an in-house RE Cell, to promote Renewable Energy deployment in the State, to execute the functions assigned to the Distribution Licensee under these Regulations.

(2) RE Cell shall be headed by an officer in the rank of Chief Engineer or equivalent.

(3) RE Cell shall be provided with necessary authority and resources so as to execute the functions assigned to the Distribution Licensee under these Regulations.

(4) The RE cell shall carry out the following functions on behalf of the distribution licensee.

a) Design interconnection processes and procedures;

b) Ensure and Manage web based application system for processing DRE applications;

c) Develop and monitor mechanism for online monitoring of RE Systems by the distribution licensee control centre;

d) Obtain regulatory approvals;

e) Guide persons desirous of setting up RE Systems in the State;

f) Facilitate training of field officers on RE;

g) Appraise field officials about the changes in processes and procedures;

h) Ensuring modifications billing procedures/ systems to account for provisions in theseRegulations;

i) Undertake monitoring and reporting as envisaged under these Regulations;

j) Coordinate with RE Advisory Committee and attend meetings of the same;

k) Prepare standard documents, such as expression of interest, RFP, energy purchase and energy sale agreement, tripartite agreement etc., if the distribution licensee decides to procure power under through competitive bidding;

l) Preparation of plan for procurement of energy from DRE sources;

m) Undertake analysis of data collected from DRE systems.

62. **Penalty or compensation for non compliance by the distribution licensee.-**

(1) In case of failure to meet timelines prescribed under these Regulations, penalty of Rs. 1000 per day for each day of delay shall be levied on the distribution licensee.

(2) The penalty accrued during the year under these Regulations will be deducted from the Return on Equity of the distribution licensee for that year.

63. **Procedure for getting approval of the detailed procedure for implementing the provisions of these Regulations.-**

(1) KSEB Ltd, as the incumbent distribution licensee, shall within one month from the date of notification of these Regulations in official Gazette, shall prepare and submit to the Commission, in co-ordination with STU the detailed procedure for implementing the provisions of these Regulations, including the following;

(i) procedure for getting feasibility certificate for getting connectivity for RE systems.

(ii) Filing applications for connectivity including format and fees to be remitted.

(iii) Procedure for availing banking facility including the draft banking agreement.

(iv) Billing procedure under net metering facility provided under Chapter-III,

(v) Accounting and billing procedures for prosumer having RE plant with capacity more than 1 MW and captive use specified under Chapter-IV.

64. **Power to give directions.-**

The Commission may from time to time issue such directions and orders as considered appropriate for implementation of these Regulations.

65. **Power to relax.-**

The Commission may by general or special order, for reasons to be recorded in writing, and after giving an opportunity of hearing to the parties likely to be affected, relax any of the provisions of these Regulations on its own motion or on an application made before it by an interested person.

66. **Power to amend.-**

The Commission may from time to time add, vary, alter, suspend, modify, amend or repeal any provisions of these Regulations.

67. **Power to remove difficulties.-**

If any difficulty arises in giving effect to any of the provisions of these Regulations, the Commission may, by an order, make such provisions, not inconsistent to the provision of the Act and these Regulations, as may appear to be necessary for removing the difficulty.

68. List of Annexure and Forms

Annexure	Details
A	Application for connectivity of Renewable Energy System
B	Application for the registration of the scheme for Renewable Energy System
I	Generic Tariff for SHEP having station capacity of and below 5 MW- for the FY 2019-20
II	Generic Tariff for Wind Energy Projects having capacity of and below 25 MW with CUF 24%- for the FY 2019-20 .
III	Generic Tariff Solar PV Projects having capacity of and below 5 MW –for FY 2019-20.

69. Repeal and Savings.-

(1) Save as otherwise provided in theseRegulations, the following Regulations are hereby repealed;

a. Kerala State Electricity Regulatory Commission (Renewable Energy) Regulations, 2015.

b. Kerala State Electricity Regulatory Commission (Renewable Energy) Amendment Regulations, 2017.

c. Kerala State Electricity Regulatory Commission (Grid Interactive Distributed Solar Energy Systems) Regulations, 2014.

d. Kerala State Electricity Regulatory Commission Grid Interactive Distributed Solar Energy Systems) Amendment Regulations, 2016.

(2) Notwithstanding such repeal, anything done or any action taken under the said Regulations shall be deemed to have been done or taken under the corresponding provisions of these Regulations.

By order of the Commission,

C. R. SATHEESH CHANDRAN,

Administrative Officer in-charge of Secretary.

Explanatory Note

(This does not form part of the Notification, but is intended to achieve its general purport).

Section 86(1)(e) of the Electricity Act, 2003 authorizes the State Electricity Regulatory Commission to promote co-generation and generation of electricity from Renewable Source of Energy by providing suitable measures for connectivity with the grid and sale of electricity to any person and specify for the purchase of electricity from such sources a percentage of the total consumption of electricity within the area of the distribution licensee. Accordingly Kerala State Electricity Regulatory Commission had, for achieving the above purposes issued various regulations viz. Kerala State Electricity Regulatory Commission (Grid Interactive Distribution Solar Energy System) Regulations, 2014 and Kerala State Electricity Regulatory Commission (Renewable Energy) Regulations, 2015. In the recent past, there are lot of developments, technological advancement in all type of renewable energy technologies to reduction of tariff. Further the capital cost of solar PV plants wind energy systems etc has reduced drastically. Due to reduction in capital cost of installation of renewable energy especially wind and solar and improved capacity utilization, tariff of these sources become much less, even less than electricity generated from conventional coal based power stations. Considering these aspects, the Commission has decided to issue a comprehensive regulation on the Renewable Energy in supersession of existing Regulations. Kerala State Electricity Regulatory Commission had formulated the draft Kerala State Electricity Regulatory Commission (Renewable Energy & Net Metering) Regulations, 2019 & had previously published in the website of the Commission on 14.08.2019 for eliciting the opinion and suggestions of general public. Further Commission had conducted the public hearing on the draft Regulation at Thiruvananthapuram on 24.01.2019 and at Ernakulam on 31.10.2019. After considering all suggestions and objections received directly and in the public hearing, the Commission approved the final Kerala State Electricity Regulatory Commission (Renewable Energy and Net Metering) Regulations, 2020 and decided to publish the same in the official gazette.

This Notification is intended to achieve the above purpose.

Annexure-A

APPLICATION TO SEEK CONNECTIVITY OF RENEWABLE ENERGY SYSTEM

[Regulation 18(1)]

1.	Name and Full Address of Consumer		
2.	Telephone No.	Res:	Mob:
3.	E-mail address		
4.	Consumer No. & Category		
5.	Sanctioned Connected Load/ Contract Demand		
6.	Whether the Consumer is under ToD billing system		
7.	Capacity of Renewable Energy System proposed to be connected		
8.	Type of Renewable Energy Systemproposed (Solar, Wind, Biomass etc.)		
9.	Location and address of proposed Renewable Energy System (roof top/ ground mounted/ any other).		
10.	Preferred mode of communication (Post/ By Hand/Electronic)		

Place:

Date: Signature of Consumer

Acknowledgement

Application Registration Number……..

Name..... Consumer No……

Date……. Time……

Application fee paid Rs……. by Cash/Cheque/DD/RTGS

RE Plant Capacity……. kW

Name of Officer Signature

Office Seal (Designation)

Annexure-B

APPLICATION FOR REGISTRATION OF THE SCHEME FOR RENEWABLE ENERGY SYSTEM [Regulation 19(1)]

1.	Name	
2.	Telephone No.	
3.	E-mail	
4.	Consumer No.	
5.	Connected Load/ Contract Demand of Consumer	
6.	Application No. & Date	
7.	Renewable Energy Source	
8.	Capacity of Renewable Energy System to be connected	
9.	Technical specifications and other particulars of Renewable Panel, Grid Tied Inverter and Interlocking System etc. proposed to be installed- whether attached	Yes/No
10.	Technical specifications and other particulars of Renewable energy meter and Net meter to be installed- whether attached.	Yes/No
11.	Whether consumer opts to purchase meter himself or from Distribution Licensee	
12.	Drawings for installing the Renewable Energy System- whether attached	Yes/No
13.	Proposed date of completion of the installation	

Place:

Date: Signature of consumer

Acknowledgement

Receivedthe applicationfor registrationofthe scheme forRenewableEnergySystem

Name&Address: ……

…….. Date ……

Registration Number: …… Consumer Number: ……

RenewablePlantCapacity&Type: …….....

Modeofpayment(Cheque/DD/NEFT/RTGS)……Amount Rs…….

Detailsof Cheque/DD/RTGS/NEFT……

Name ofOfficer Signature

Seal (Designation of Officer)

Annexure-I

Small Hydro Electric Projects having installed capacity of and below 5 MW (2019-20)					
Sl	Head	Sub Head	Detailed Head	Unit	Norm
1	Power	Capacity	(i) Installed Power Generation	MW	1
			(ii) Capacity Utilisation factor	%	30
			(iii) Auxiliary consumption	%	1
			(iv) Useful life	**Years**	35
2	Project cost	Capital	**Power plant cost**	**Rs .Cr**	7.79
3	Source of Fund		**Tariff period**	**Years**	35
		Debt- equity	Debt	%	70
			Equity	%	30
		Debt component	Loan amount/MW	Rs.Cr	5.45
			Moratorium	Years	0
			Repayment period (include moratorium)	Years	13
			Interest rate	(MCLR+2)%	10.41
		Equity component	Equity amount/ MW	Rs.Cr	2.34
			Normative RoE	%	14.00
4	Financial				
		Depreciation	Depreciation rate for first 13 years		5.28
			depreciation rate for next 22 years		0.97
5	Working capital	For Fixed charges	O&M charges	Months	1
			Maintenance spare	% of O&M expenses	15
			Receivable for debtors	Months	2
			Interest on working capital	(MCLR+3)%	11.41
6	Operation and Maintenance	O&M expenses	O&M 2019-20	Rs. Lakh/MW	32.41
			O&M expense escalation	**%**	5.72
			O&M expense for 2019-20	**Rs.**	32.41

				Lakh/MW	
Generic Tariff - for 35 years without the benefit of accelerated depreciation			5.91	Rs/unit	
Accelerated depreciation			0.38	Rs/unit	
Generic Tariff for 35 years with the benefit of accelerated depreciation			5.53	**Rs/unit**	

Annexure-II

Wind Energy Generation Projects located in wind zone with CUF 24% (capacity ≤ 25 MW at a location)(2019-20)					
Sl No	Head	Sub Head	Detailed Head	Unit	Norm
1	Power Generation	Capacity	(i) Installed Power Generation Capacity	MW	1
			(ii) Capacity Utilisation factor	%	24
			(iii) Auxiliary consumption	%	0
			(iv) Useful life	Years	25
2	Project cost	Capital cost /MW	**Power plant cost**	**Rs .Cr**	5.75
3	Source of Fund		**Tariff period**	**Years**	25
		Debt- equity	Debt	%	70
			Equity	%	30
		Debt component	Loan amount/MW	Rs.Cr	3.85
			Moratorium	Years	0
			Repayment period (include moratorium)	Years	13
			Interest rate	(MCLR+2)%	10.41
		Equity component	Equity amount/ MW	Rs. Cr	1.65
			Normative RoE	%	14.00
4	Financial Assumptions				
		Depreciation	Depreciation rate for first 13 years		5.28
			depreciation rate for next 12 years		1.78
5	Working capital	For Fixed charges	O&M charges	Months	1
			Maintenance spare	% of O&M expenses	15
			Receivable for debtors	Months	2
			Interest on working capital	(MCLR+3)%	11.41
6	Operation and	O&M	O&M 2019-20	Rs. Lakh/MW	8.00

	Maintenance	expenses			
			O&M expense escalation	**%**	5.72
			O&M 2019-20	**Rs. Lakh/MW**	8.00
Generic Tariff - for 25 years without the benefit of accelerated depreciation			4.10	Rs/unit	
Accelerated depreciation			0.35	Rs/unit	
Generic Tariff for 25 years with the benefit of accelerated depreciation			3.75	**Rs/unit**	

Annexure-III

Solar PV projects with capacity < 5 MW at a location

(2019-20)

Sl No	Head	Sub Head	Detailed Head	Unit	Norm
1	Power Generation	Capacity	(i) Installed Power Generation Capacity	MW	1
			(ii) Capacity Utilisation	%	19
			(iii) Auxiliary consumption	%	0.25
			(iv) Useful life	Years	25
2	Project cost	Capital cost /MW	**Power plant cost**	**Rs .Cr**	4.00
3	Source of Fund		**Tariff period**	**Years**	25
		Debt- equity	Debt	%	70
			Equity	%	30
		Debt component	Loan amount/MW	Rs.Cr	2.80
			Moratorium	Years	0
			Repayment period (include moratorium)	Years	13
			Interest rate	(MCLR+2)%	10.41
		Equity component	Equity amount/ MW	Rs. Cr	1.20
			Normative RoE	%	14.00
4	Financial Assumptions				
		Depreciation	Depreciation rate for first 13 years		5.28
			depreciation rate for next 12 years		1.78
5	Working capital	For Fixed charges	O&M charges	Months	1
			Maintenance spare	% of O&M expenses	15
			Receivable for debtors	Months	2
			Interest on working capital	(MCLR+3)%	11.41
6	Operation and Maintenance	O&M expenses	O&M expense 2019-20	Rs. Lakh/MW	6.00

			O&M expense escalation	**%**	5.72
			O&M expense for 2019-20	**Rs. Lakh/MW**	6.00
Generic Tariff - for 25 years without the benefit of accelerated depreciation			3.66	Rs/unit	
Accelerated depreciation			0.31	Rs/unit	
Generic Tariff for 25 years with the benefit of accelerated depreciation			3.35	**Rs/unit**	

SCHEDULE

(See Regulations 18.1 & 19.3)

Sl. No	Description	Amount
1	Application Fee	Rs1000.00
2	Registration Fee	Rs 1000/kW or part thereof

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Annexure 4

CLEARANCES/ PREREQUISITES REQUIRED BEFORE START OF EXECUTION OF SMALL HYDRO POWER PROJECT

In general the following clearances/ prerequisites are required before start of execution of the Small Hydro Project

1. Registration of the company under Companies Act, 1956. In case of Independent Power Producers/Special Purpose vehicles created for the project
2. Gazette Notification under Section 29(ii) of Electricity (Supply) Act 1948
3. Approval of Techno Economic Feasibility Report (T.E.F.R) & Designs submitted by the developer by the Government of Kerala.
4. Signing of Implementation Agreement with Power Department, Government of Kerala, for the Construction of the Project.
5. Signing of Power Purchase Agreement with Kerala State Electricity Board.
6. Land Acquisition. (Execution of lease agreements with Government of Kerala/ Kerala State Electricity Board/Local Bodies/other agencies if required), outright purchase of private land.
7. Approval from State Forest Department/ Ministry of Environment & Forests, if required.
8. Clearance from Kerala State Pollution Control Board, if required.
9. NOC from Kerala State Electricity Board, if required. Any other clearances as may be required by Central/ State Government/local bodies for the execution of these projects.

Note:

1. In case of change in statutory laws, respective changes come in effect as and when they come into effect upon being adopted by the Government of Kerala.
2. The developer shall be provided the opportunity to utilise the service of KSIDCs State Single Window Clearance Board or District Single Window Clearance Board as per its eligible investment stipulations to for facilitating various licences, clearances, and certificates among the services listed by KSIDC, as may be required for setting up the project.

Appendices

COVER PAGE

THE RFQ APPLICATION IS SUBMITTED FOR IMPLEMENTATION OF THE SMALL HYDRO POWER PROJECTS IN RESPECT OF PRIVATE PARTICIPATION IN SMALL HYDRO ELECTRIC PROJECTS AS MENTIONED IN TENDER NOTICE AND G.O (MS) No……/PD DATED ……..

AS (please put a Tick (√) mark in the box provided)

CAPTIVE POWER PRODUCER – CPP ☐

INDENPEDENT POWER PRODUCER- IPP ☐

Appendix 1

Format for Letter of Application

[On the letter head of the Applicant (in case of Single Applicant) or Lead Member (in case of a Consortium]

Date:

To

The Small Hydro Promotion Cell,
C/o Director,
Energy Management Centre,
Sreekrishna Nagar, Sreekariyam P.O,
Thiruvananthapuram - 695 017

Ref: Allotment of Small /Mini Hydro Projects in Kerala State to Captive Power Producers/Independent Power Producers: Reg

Sir,

Being duly authorized to represent and act on behalf of …….. (hereinafter referred to as "The Applicant"), and having reviewed and fully understood all of the qualification requirements and information provided, the undersigned hereby apply for qualification for the Small / Mini Hydro Projects in Kerala State to Captive Power Producers/ Independent Power Producers

We are enclosing our Application for Qualification in one original plus two (2) copies, with the details as per the requirements of the RFQ, for your evaluation.

Our Application is being made with the support of the following Consortium members:

Consortium Member		Registered Office

The Consortium members shall have the following responsibilities specifically assigned to them:

a) ———————— would be acting as the Lead Member of the Consortium.

b) ———————————— would be responsible for Project implementation.

c) ———————————— would be the Equity Investors.

We would like to make our Application for Qualification for the following Small /

Mini Hydro Projects in Kerala State to Captive Power Producers / Independent Power Producers

Sl. No	Name of Projects	Preference for Projects (Rank them in the order 1, 2,3……55)
1		
2		
3		
4		
5		
6		

We confirm that our Application is valid for a period of nine (9) months from …… (Application Validity Period).

———, a consumer of Kerala State Electricity Board Limited with consumer No……..., shall be the sole purchaser of the generated power from the projects as indicated above (only in the case of Captive Power Producers).

Yours faithfully,

……..

(Signature of Authorized signatory)

Appendix 2

Format for Power of Attorney for Signing of Application

(On a Stamp Paper of relevant value) Power of Attorney

Know all men by these presents, We…….. (name and address of the registered office) do hereby constitute, appoint and authorise Mr/Ms……(name and residential address) who is presently employed with us and holding the position of… ……..as our attorney, to do in our name and on our, behalf, all such acts, deeds and things necessary in connection with or incidental to our application for the project envisaging Build, Own , Operate and Transfer Small/Mini Hydel Projects …… (insert the relevant project name/ names) in the State of Kerala, including signing and submission of all documents and providing information /responses to Power Department/ Small Hydro Promotion Cell, representing us in all matters before Power Department / Small Hydro Promotion Cell, and generally dealing with Power Department / Small Hydro Promotion Cell in all matters in connection with our bid for the said project(s).

We hereby agree to ratify all acts, deeds and things done by our aforesaid attorney shall and shall always be deemed to have been done by us.

For

…….. (Signature) Accepted

…… (Signature)

(Name, Title and Address of the Attorney)

Signed in presence of

Witness

1). ……..

2). …….. Note:

- To be executed by the Lead Member in case of Consortium.
- The mode of execution of the Power of Attorney should be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the executants(s) and when it is so required the same should be under common seal affixed in accordance with the required procedure.
- In case the Application is signed by an authorised Director / Partner or Proprietor of the Applicant, a certified copy of the appropriate resolution / document conveying such authority may be enclosed in lieu of the Power of Attorney.

Appendix 3

Format for Power Of Attorney for Lead Member of Consortium

(On a stamp Paper of relevant value)

Whereas the Power Department / Small Hydro Promotion Cell, Government of Kerala has invited applications from interested parties to undertake the setting up of Small/ Mini Hydel projects ……..(insert the relevant project name/names) on a Build, Own, Operate and Transfer of in the State of Kerala,

Whereas, the members of the Consortium are interested in applying for the Project and implementing the Project in accordance with the terms and conditions of the Request for Qualification (RFQ) Document, Request for Proposal (RFP) Document and other connected documents (Implementation Agreement and Power Purchase Agreement etc) in respect of the Project(s), and

Whereas, it is necessary under the RFQ Document for the members of the Consortium to designate the Lead Member with all necessary power and authority to do for and on behalf of the Consortium, all acts, deeds and things as may be necessary in connection with the Consortium's application for the Project(s) who, acting jointly, would have all necessary power and authority to do all acts, deeds and things on behalf of the Consortium, as may be necessary in connection the Consortium's bid for the Project(s).

NOW THIS POWER OF ATTORNEY WITNESSETH THAT;

We, M/s …….(Lead Member), and M/s …….....…(Operator) (the respective names and addresses of the registered office) do hereby designate M/s……..being one of the members of the Consortium, as the Lead Member of the Consortium, to do on behalf of the Consortium, all or any of the acts, deeds or things necessary or incidental to the Consortium's bid for the Project(s), including submission of application/ proposal, participating in conferences, responding to queries, submission of information/documents and generally to represent the Consortium in all its dealings with Power Department / Small Hydro Promotion Cell, any other Government Agency or any person, in connection with the Project(s) until culmination of the process of bidding and thereafter till the Implementation Agreement(s) is entered in to with Power Department.

We hereby agree to ratify all acts, deeds and things lawfully done by Lead Member, our

said attorney pursuant to this Power of Attorney and that all acts, deeds and things done by our aforesaid attorney shall and shall always be deemed to have been done by us/Consortium.

Dated this the ……Day of ……...2022

…….. (Executants)

(To be executed by all the members of the Consortium)

Signed in presence of

Witness

1). ……..

2). ……...

Note: The mode of execution of the Power of attorney should be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the executant(s) and when it is so required the same should be under common seal affixed in accordance with the required procedure.

Appendix 4

FORMAT FOR DETAILS OF APPLICANT

1 Name

Country of incorporation

Address of the corporate headquarters and its branch office(s), if any, in India

Date of incorporation and /or commencement of business.

Consumer No of KSEB /Year

Contract Demand

Maximum Demand (2020-2021) (2019-2020) (2018-2019)

Defaulter against any invoices (undisputed) raised by KSEB: Yes/No

2 Brief description of the Applicant including details of its main lines of business and proposed role and responsibilities in this Project.

3 Details of the individual(s) who will serve as the point of contact/communication for Power Department / Small Hydro Promotion Cell within the company:

(a) Name :

(b) Designation:

(c) Address :

(d) Telephone Number and Mobile Number :

(e) E-Mail Address :

(f) Fax Number :

4 Name, Designation, Address and Phone Numbers of Authorised Signatory of the Applicant:

Name : Designation: Address :

Phone No.& Mobile No: Fax Number Email Address :

5. In case of Consortium, Provide in the table below the name and address of lead and associated firms to be involved in this project (to the extent known at this point)

Applicant's Team and Responsibilities

Table I

Member & Address	Roles in the Project	Equity Contribution (% of Total Project Equity)
Lead member		
Captive Consumer		
Technical Member		
Financial Partner		
Financial Partner		

Appendix 5

FINANCIAL STRENGTH

Table 1

in Rs Cr

	Year 1	Year 2	Year 3
Equity Share Capital			
Reserves and surplus			
Revaluation Reserves			
Miscellaneous Expenses Not Amortised			
Accumulated Losses			
Contingent liabilities			
Net worth			

General Instructions:

.

1. Net Worth

For Company = (Subscribed and Paid –up equity +Reserves) - (Revaluation reserves + Miscellaneous expenditure not written off+ contingent liabilities likely to materialize*)

* Provide a note on each contingent liability from the Management of the company and an opinion from the auditors.

For Partnership Firm = Aggregate of partner's capital account + Reserves – Aggregate of drawings by partners – Aggregate of Advances to partners

2. Year 1 shall be the Financial Year 2020-21. Year 2 shall be the FY 2019-2020 and Year 3 shall be FY 2018-2019.

3. The financial year would be the same as the one normally followed by the Applicant for its Annual Report.

4. The Applicant shall provide the audited annual financial statements as required for this RFQ. Failure to do so would be considered as a non-responsive bid.

Table 3

Lead Working Capital Bank details	
Name of the bank	
Contact person	
Address	

Appendix 6

FORMAT OF EXPERIENCE OF APPLICANT

Project development experience

1. Details of eligible project experience* i.e., Hydel or core sector projects developed or constructed to be provided separately for each member of the consortium

Consortium Member:

Sector / Type of project	Total Project Cost	Project location	Completed on	Billing of Applicant in the Project	Equity shareholding in Project on date of Project Commissioning

* Certificate from Statutory Auditors authenticating these data shall be furnished along with the Application

APPENDIX 7A

FOR CAPTIVE CONSUMER ONLY UNDERTAKING FROM THE PROSPECTIVE CAPTIVE CONSUMER

(THIS FORM NEEDS TO BE SUBMITTED BY THE CAPTIVE POWER CONSUMERS ONLY)

Rs 200/- NON-JUDICIAL STAMP PAPER

UNDERTAKING

This undertaking is executed at …… on this …… (Day).. of …… (month) of …….. (Year) …… by M/s …… (herein after referred to as the "Company".)., which expression shall, unless repugnant to the context of, include its permitted assignee and successor to the following effect:-

- That the Company is a ---------- consumer of KSEBL having a contract demand ….MVA and an average annual consumption of …..MU (based on past three year consumption).

- That the Company agrees to pay all charges determined by the Kerala

State Electricity Board from time to time in respect of the units consumed.

- That the Company agrees to compensate KSEB for damages if any accruing to KSEB

- That the Company is not in default to KSEB with respect to any undisputed dues as on the date of signing of this Application. .

In confirmation of the above, are set the signature and Seal of the Company as hereunder.

Authorized Signatory of the Company

Witness

1). ……..

2). ……..

S.L No	Consumer no and Billing Division	Sub Station from where power is received	Contract Demand and Supply Voltage

It is certified that information above is true and does not conceal any material facts which can render our application liable for rejection.

We understand that any contradiction found later should result into the outright cancellation of the application and any consent granted based on such information shall become automatically null and void.

Signature of authorized signatory:

Name:

Designation

Company:

Seal of the Company:

Date:

Place:

APPENDIX 7B

DETAILS OF CONSUMPTION PATTERN OF THE EXISTING POWER CONSUMING UNIT

(THIS FORM NEEDS TO BE SUBMITTED BY THE CAPTIVE POWER PRODUCERS ONLY)

(Details of the past three years is required)

Year/ Month	Connected Load (MW/MVA)	Peak Hour Demand (MW/ MVA)	Energy Consumed (kWh)	Unit Price (kWh)	Other Charges	Total Amount	Default/ remarks if any

If any existing captive generating unit(s) is in place then the details of energy exported to KSEB month/ year wise shall be furnished

APPENDIX 7C

ENERGY REQUIREMENTS FOR THE FUTURE EXPANSION PLANS IN HAND

(THIS FORM NEEDS TO BE SUBMITTED BY

THE CAPTIVE POWER PRODUCERS ONLY)

Anticipated year of expansion	Existing Connected Load (MW)	Present Energy Requirements (kWh)	Additional Connected Load (MW/ MVA)	Additional Energy Requirement (kWh)	Peak Hour Demand (MW/ MVA)

Note: Future Expansion Plans shall be considered only in cases where Power allocation permit shall be received from competent authority before Application due date and certified copy of the same shall be attached along with the application