Government of Uttarakhand,
Urban Development Department,
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Uttarakhand Waste to Energy Policy – 2019

CHAPTER -1

1. Policy Preamble :

1.1 The increasing industrialization, urbanization and changes in the pattern of life, which accompany the process of economic growth, give rise to generation of increasing quantities of wastes leading to increased threats to the environment. In recent years, technologies have been developed that not only help in generating substantial quantity of energy but also in reducing the quantity of waste for its safe disposal.

1.2 In developed countries, environmental concerns rather than energy recovery is the prime motivator for waste-to-energy facilities, which help in treating and disposing of wastes. Energy in the form of biogas, heat or power is seen as a bonus, which improves the viability of such projects. While incineration and bio-methanation are the most common technologies, pyrolysis and gasification are also emerging as preferred options. A common feature in most developed countries is that the entire waste management system is being handled as a profitable venture by private industry or non-government organizations with tipping fee for treatment of waste being one of the major revenue streams. The major Advantages for adopting technologies for recovery of energy from urban wastes is to reduce the quantity of waste and net reduction in environmental pollution, besides generation of substantial quantity of energy.

1.3 Uttarakhand state has 8 Municipal Corporations and 41 Municipal Council, 42 Nagar Panchayat and 09 Cantonment Boards. The Uttarakhand urban population across 100 urban local bodies produces approx. 1000 metric tons solid waste per day. The state is committed to become zero waste states by decomposing the waste in eco-friendly manner. The generation of energy from the waste is the best suitable solutions for decomposing the state by adopting various

available technologies. The Government of Uttarakhand wants to promote the harnessing of energy from the waste by the policy that endeavors to create an enabling environment to attract public & private investments in generation of waste to energy based projects. The Uttarakhand Waste to Energy Policy – 2019 aims to provide a comprehensive policy for promotion of waste to energy in the state of Uttarakhand.

CHAPTER -2

2. Fundamental Objectives of the Policy

The Uttarakhand Government introduces the Waste to Energy Policy – 2019 with the following objectives:

(a) To promote and facilitate utilization of MSW/RDF as alternate sources for generation of energy at affordable cost in a sustainable manner, and in the process contribute to Swachh Bharat Mission.

(b) To achieve high standards of cleanliness in the towns and cities of Uttarakhand for achieving healthy, hygienic and livable environment.

(c) Implementing waste hierarchy- 3R's Reduce, Reuse, Recycle

(d) Aims to target to set up 200 MW of waste to energy power plants by the year 2030.

(e) To create direct and indirect employment opportunities in the State.

(f) To create conducive conditions and environment, with fiscal and financial regime, to develop, demonstrate and disseminate utilization of wastes and residues for recovery of energy.

(g) To facilitate and promote disposal of MSW in more environment friendly manner

(h) To reduce requirement of lands for disposal of MSW, thereby saving precious public resource for alternative public purpose.

CHAPTER -3

3. Commencement:

The Uttarakhand Waste to Energy Policy, 2019 shall come into force with effect from its publication in the Gazette and shall remain in force until superseeded or modified or amended by another policy.

CHAPTER -4

4. Definitions

The defination of various expressions used in this policy are as follow :-

4.1 "Anaerobic digestion" means a controlled process involving microbial decomposition of organic matter in absence of oxygen;

4.2 "Applicant/Bidder" means any eligible units' intending to participate for the installation of waste to energy power project in the State of Uttarakhand under this policy;

4.3 "Biodegradable waste " means any organic material that can be degraded by micro-organisms into simpler stable compounds;

4.4 "Bio-methanation" means a process which entails enzymatic decomposition of the organic matter by microbial action to produce methane rich biogas;

4.5 "CERC" means the Central Electricity Regulatory Commission of India, constituted under sub-section (1) of Section 76 of the Electricity Act, 2003, or its successors;

4.6 "Combustible waste" means non-biodegradable, non-recyclable, non-reusable, non-hazardous solid waste having minimum calorific value exceeding 1500 kcal/kg and excluding chlorinated materials like plastic, wood pulp, etc;

4.7 "Composting" means a controlled process involving microbial decomposition of organic matter;

4.8 "Date of commercial operation or Commissioning (CoD)" Date of commercial operation or Commissioning (CoD) in relation to a unit means the date declared by the generator on achieving maximum continuous rating through a successful trial run and in relation to the generating station, the date of commercial operation means the date of commercial operation of the last unit or block of generating station and expression 'commissioning' shall be constructed accordingly.

4.9 "Developer" means the eligible unit who has been allotted the waste to energy power project in the state of Uttarakhand under this policy;

4.10 "DISCOM" means the licensee authorized to Operate and Maintain a distribution system for supplying electricity to the consumers of Uttarakhand;

4.11 "Disposal" means the final and safe disposal of post processed residual solid waste and inert street sweepings and silt from surface drains on land as specified in Schedule I to

prevent contamination of ground water, surface water, ambient air and attraction of animals or birds;

4.12 **"Dump sites"** means a land utilized by local body for disposal of solid waste without following the principles of sanitary land filling;

4.13 **"Government"** means Government of Uttarakhand;

4.14 **"Incineration"** means an engineered process involving burning or combustion of solid waste to thermally degrade waste materials at high temperatures;

4.15 **"Interconnection point"** shall mean interface point of line isolator on outgoing feeder on HV side of generator transformer in the switching year of renewable energy generating facility with the transmission system or distribution system as defined in UERC (Tariff and Other Terms for Supply of Electricity from Renewable Power Sources and non-fossil fuel based Co-generating Stations) Regulations, 2018 or as amended from time to time;

4.16 **"Land filling or Sanitary land filling"** means the final and safe disposal of residual solid waste and inert wastes on land in a facility designed with protective measures against pollution of ground water, surface water and fugitive air dust, wind-blown litter, bad odour, fire hazard, animal menace, bird menace, pests or rodents, greenhouse gas emissions, persistent organic pollutants slope instability and erosion;

4.17 **"Letter of Award (LOA)"** means letter of award for the project to be given by UDD (Urban Development Directorate) to the successful developer;

4.18 **"Local body"** means and includes the Municipal Corporation/ Nagar Nigam, Nagar Palika Parishad, Nagar Panchayat and town panchayat census towns, notified areas and notified industrial townships including rural local bodies i.e. Gram Panchayat with whatever name they are called in Uttarakhand state from time to time;

4.19 **"Non-biodegradable waste"** means any waste that cannot be degraded by micro organisms into simpler stable compounds;

4.20 **"PAC"** means Project Approval Committee constituted by the Government of Uttarakhand;

4.21 **"Policy"** means the Uttarakhand Waste to Energy Policy–2019, unless stated otherwise;

4.22 **"PPA"** means Power Purchase Agreement signed between Discom of Uttarakhand (Uttarakhand Power Corporation Ltd.) and the project developer;

4.23 **"Project site/area"** means the area in which the proposed project is located;

4.24 **"Refused derived fuel"**(RDF) means fuel derived from combustible waste fraction of solid waste like plastic, wood, pulp or organic waste, other than chlorinated materials, in the form of pellets or fluff produced by drying, shredding, dehydrating and compacting of solid waste ;

4.25 **"Segregation"** means sorting and separate storage of various components of solid waste namely biodegradable wastes including agriculture and dairy waste, non biodegradable wastes including recyclable waste, nonrecyclable combustible waste, sanitary waste and non recyclable inert waste, domestic hazardous wastes, and construction and demolition wastes;

4.26 **"Solid waste"** means and includes solid or semi-solid domestic waste, sanitary waste, commercial waste, institutional waste, catering and market waste and other non residential wastes, street sweepings, silt removed or collected from the surface drains, horticulture waste, agriculture and dairy waste, treated bio-medical waste excluding industrial waste, bio-medical waste and e-waste, battery waste, radio-active waste generated in the area under the local authorities and other entities;

4.27 **"Sorting"** means separating various components and categories of recyclables such as paper, plastic, cardboards, metal, glass, etc., from mixed waste as may be appropriate to facilitate recycling;

4.28 **"State"** means the State of Uttarakhand;

4.29 **"TAC"** means Technical Appraisal Committee constituted by the Government of Uttarakhand and consisting of technical, financial and social experts;

4.30 **"Tipping fee"** means a fee or support price determined by the local authorities or any state agency authorized by the State government to be paid to the concessionaire or operator of waste processing facility or for disposal of residual solid waste at the landfill;

4.31 **"Transfer station"** means a facility created to receive solid waste from collection areas and transport in bulk in covered vehicles or containers to waste processing and, or, disposal facilities;

4.32 **"Transportation"** means conveyance of solid waste, either treated, partly treated or untreated from a location to another location in an environmentally sound manner

through specially designed and covered transport system so as to prevent the foul odour, littering and unsightly conditions;

4.33 **"UERC"** means Uttarakhand Electricity Regulatory Commission, constituted under sub-section 1 of section 82 of the Electricity Act 2003, or its successors;

4.34 **"UREDA"** means the Uttarakhand Renewable Energy Development Agency, the designated State Nodal Agency of the Ministry of New & Renewable Power, Government of India that owns the mandate for implementation of all renewable power programmes in the state of Uttarakhand;

4.35 **"User fee"** means a fee imposed by the local body and any entity on the waste generator to cover full or part cost of providing solid waste collection, transportation, processing and disposal services.

CHAPTER-5

5. Nodal and Support Agency

5.1 Urban Development Directorate (UDD) shall act as the nodal agency for implementation of *"Uttarakhand Waste to Energy Policy – 2019"*

5.2 Uttarakhand Renewable Energy Development Agency (UREDA) shall provide support to UDD in all matters related to energy under this policy

CHAPTER-6

6. Eligible Units

All registered companies, firms, institutions, societies, central and state govt. power generation companies and public/private sector power project developers shall be eligible for setting up of Waste to Energy power project under this policy.

CHAPTER-7

7. Selection of Waste to Energy Project Developers

7.1 UK Gov./ UDD shall invite proposals from time to time for selection of Waste to Energy projects through "Combine Weightage Energy Generation and Land Requirement Score

(CWEGLRS)" based competitive bidding process (technical bid) followed by tariff based competitive bidding process (financial bid).

7.2 In the Request for Proposal (RfP), the following information shall be advertised:

(i). Type of availability of waste (MSW or RDF)

(ii). Quantity of waste available in Metric Ton per Day

(iii). Location of transfer station & landfill location

(iv). Levelised tariff/ Fixed tariff (as the case may be) specified by UERC

(v). Any other information as required to be in the RfP

7.3 The prospective developer shall submit their proposals for Stage I (Technical) and Stage-II (Financial) bid.

7.4 The technical bid shall be scrutinize/evaluated by Technical Appraisal Committee (TAC) based on the responsiveness check and technical evaluation parameter of the technical bid. The GoUK/UDD may take the services of technical expert agencies/institutions for responsiveness check and technical evaluation of the technical bids.

7.5 The list of technically shortlisted prospective bidders shall be published on the website of GoUK/UDD.

7.6 The financial bid of only technically shortlisted and qualified bidder(s) shall be open by Technical Appraisal Committee (TAC).

7.7 The evaluation of financial bid shall be done through tariff based competitive bidding process. The allotment of the project to the prospective bidders shall be done by the Project Approval Committee (PAC) on the basis of lowest quoted tariff.

7.8 UERC from time to time declares the levelised Rate of Fixed Charges for Municipal Solid Waste based power projects and levelised Rate of Fixed Charges & variable charges for the Refuse Derived Fuel based power projects. The tariff based competitive bidding process shall be carried on the levelised Rate of Fixed Charges as determined by UERC for Municipal Solid Waste and Refuse Derived Fuel based power projects. In case of RDF based power projects, the total tariff payable to the successful developer(s) shall be the sum of quoted levelised fixed tariff and variable tariff as determined by UERC.

CHAPTER-8

8. Qualification criterion of Technical bid

The bidders shall be technically evaluated on the basis of following:

8.1 Responsiveness Check of Technical bid

The bidders shall have to fulfill the following for Responsiveness Check:

(A). Technical capability: Applicants shall be required to submit the relevant documents of having technical tie-up with the suppliers of plant and machinery of proposed technology. The proof submitted by the applicants in this regard should have detailed information about the technology.

(B). Financial Capability: The bidder should have minimum net worth of Rs.2,00,000/- per MTPD of the available waste. The applicants shall be required to submit the proof of their financial capability from the Chartered Accountant regarding their net worth.

(C). Others: Submission of complete information on the prescribed format/forms along with the desired necessary documents/information. The cost of RFP document, earnest money (EMD) amount etc shall be according to the Uttarakhand Procurement Rules 2017.

The bidders who have qualified the requirement of technical responsiveness check shall be recommended for the technical evaluation parameter bid.

8.2 Technical evaluation parameter

The technical evaluation parameter bid of only those bidder(s) shall be open who are qualified in responsiveness check as mentioned in clause no. 8.1. The technical evaluation parameter bid shall be evaluated on "Combine Weightage Energy Generation and Land Requirement Score (CWEGLRS)" based competitive bidding process. For this, bidders should submit their best offer for maximum power generation in KWH/MT of waste and minimum land required for setting up of the waste to energy project. The CWPGLR Score shall be computed as per the following:

Stage-1: Evaluation of Energy generation score (70% Weightage)

The bidder shall quote the generated energy in KwH per metric Ton of waste that can be generated and injected into the grid by their tested technology. The bidder quoting the maximum

energy in KwH per MT that shall be injected into the grid after meeting out auxiliary consumption shall be preferred and evaluated on 70 point scale. The quote of the bidder shall be evaluated and verified by the technical evaluation committee.

Stage-2: Evaluation of Land requirement score (30% Weightage)

The bidder shall also be required to quote the land required for setting up of its proposed waste to energy power plant. The bidder that quote the minimum land required for setting up of it's proposed waste to energy power plant shall be preferred and evaluated on 30 point scale.

Stage-3: Evaluation of Combine Weightage Energy Generation and Land Requirement Score

The final CWEGLR Score shall be evaluated on 100 point scale by considering 70 point scale of power generation score and 30 point scale of land requirement score. The bidder(s) who scored equal or more than 60 point on 100 point score under CWEGLR Score bidding process shall be consider as technically shortlisted bidders.

CHAPTER-9

9. Evaluation of Financial Bid

9.1 The financial bid of only technically shortlisted and qualified bidders shall be open and evaluated on the basis of tariff based competitive bidding process.

9.2 Financial Bids (Envelope II) of the technically Qualified Bidders shall be opened and evaluate by Technical Appraisal Committee (TAC) and shall submit to Project Approval Committee (PAC) for approval.

9.3 The bidders shall quote the gross levelised tariff for 20 years(or such period as mentioned in the RFP) in case of Municipal Solid Waste (MSW) or levelised fixed tariff for 20 years (or such period mentioned in the RFP) in case of Refuse Derived Fuel (RDF). The availability of type of waste i.e. either MSW or RDF shall be advertised in the RFP.

9.4 The Bidder with the lowest gross Levelised Tariff/ levelised fixed tariff, as the case may be, for 20 years (or such period mentioned in RFP) shall be declared as the Successful Bidder for setting up of the waste to energy project. However, the quoted tariff shall not be more than the tarrif

specified by UERC (Tariff and Other Terms for Supply of Electricity from Renewable Energy Sources and non-fossil fuel based co-generating stations) Regulations, 2018 as amended from time to time.

CHAPTER-10

10. Allotment of Government land to the successful bidder

10.1 The land for Waste to energy plant shall be identified by the Urban Development Department in consultation with District Administration, Municipal Corporation/ Municipalities, UREDA and other revelant department. The successful bidder may select a suitable area as quoted by him in the technical bid, from the land so identified and the concerned authorities shall provide land area (as required and quoted by selected bidder in technical bid) at token lease rent of Rs. 1 (rupee one) per annum per Sq.m. for setting up the power project for a period of maximum 20 years or life of the project period as mentioned in RFP or the term of power purchase agreement.

10.2 In case the project is not initiated in the stipulated time as mentioned in RFP or if the land is used by bidder for purposes other than related to the project, the land use permission and lease agreement shall be cancelled with immediate effect and the land will automatically vest back in the Government.

10.3 The urban local body shall not charge any tax, cess, royalty, levies, tipping fees or any other charges on the W2E based power project such as stamp duty, land allotments charges etc. The stamp duty payable to Government, if any, on the lease/ development agreement shall have to be borne by the successful bidder/ firm/ company selected through competitive bidding process.

CHAPTER-11

11.Tariff

11.1 The Solid Waste Management Rules-2016 has mandated the compulsory purchase power generated from such waste to energy plants by Distribution Company. Accordingly, UERC under UERC (Tariff and other terms for supply of electricity from renewable energy sources and non-fossil fuel based co-generating stations) Regulations, 2018 has specified the gross generic tariff for purchase of power from municipal solid waste and refuse derived fuel.

11.2 The generated power from the waste to energy power plant shall be purchased by DISCOM of Uttarakhand on the levelised fixed tariff quoted by the successful developer plus variable tariff (as the case may be) as declared by UERC for the particular year. The Power Purchase Agreement will be executed between DISCOM of Uttarakhand and the successful bidders selected through tariff based competitive bidding process. The power purchased by DISCOM of Uttarakhand from the Waste to Energy Projects shall be used for meeting its Renewable Purchase Obligation as specified by UERC from time to time.

CHAPTER-12

12. Incentives/Benefits Available under the Policy

12.1 The waste to energy power generation units setup under the Uttarakhand Waste to Energy Policy-2019 shall be treated as an industry and would be entitled to the benefits prescribed under the prevailing Industrial Promotion Policy of Government of India and Uttarakhand micro, small, medium enterprise policy-2015, as and where applicable.

12.2 The developer shall be eligible as per for Central Financial Assistance as per the standing Guidelines of Ministry of New and Renewable Power (MNRE) Government of India.

12.3 All the statutory clearances/approvals shall be obtained by the developer and all clearances due from the state government will be facilitated through Single Window System.

12.4 The urban local body shall not charge any tax, cess, royalty, levies, tipping fees or any other charges on the W2E based power project.

12.5 The wastes shall be provided to the developer free of cost upto the transfer stations/land fill site. The transportation and other charges for collection and disposal of wastes at the transfer stations/land fill site shall be borne by the concerned urban/ rural local body(Gram Panchayat). However, the developer shall make its own arrangement for lifting and transportation of wastes to the power project site from the transfer stations/land fill site.

CHAPTER-13

13. Performance Guarantee

13.1 After the approval from PAC, UDD shall issue Letter of Intent (LoI) to the developer for performance guarantee deposit to UDD.

13.2 The successful developer shall be required to deposit Performance Bank Guarantee in accordance with the Uttarakhand Procurement Rules 2017.

13.3 After receiving Bank Guarantee from the successful developer and finalization of land, Project Allotment Letter shall be issued by UDD to the successful bidder along with permission of use of allotted land.

CHAPTER -14

14. Timelines for Achieving Commercial Operation of the Project

The time schedule for commercial operation of the waste to energy project shall be 18 months from the date of Project Allotment. The timeline for various activities starting from inviting applications till commencement of commercial operations of the projects shall be decided by the department and where ever necessary, in consultation with the successful bidder.

CHAPTER -15

15. Technical Appraisal Committee:

The Technical Appraisal Committee (TAC) shall consist of following members:-

1. Director, Urban Development Directorate (UDD)
2. Chief Project Officer, UREDA
3. Chief Engineer/Superitending Engineer (Commercial), UPCL
4. GM, District Industrial Centre (DIC), Uttarakhand Industrial Department
5. Superintending Engineer, Urban Development Directorate (UDD)
6. Municipal Commissioner/ Executive Officer of Concern Nagar Nigam/Nagar Palika Parishad/ Nagar Panchayat

CHAPTER -16

16. Project Approval Committee:

The Project Approval Committee (PAC) shall consist of following members:-

1. Chief Secretary, UK Gov. (Chairman).
2. Principal Secretary/Secretary, Urban Developemnt, UK Gov. (Member).
3. Principal Secretary/Secretary, Energy/Renewable Energy, UK Gov. (Memeber).
4. Principal Secretary/Secretary/Add. Secretary, Industrial Department, UK Gov. (Member).
5. Principal Secretary/Secretary/Additional Secretary, Finance Department, UK Gov. (Member).
6. Director, Uttarakhand Renewable Energy Development Agency, (Member).
7. Director, Urban Dvelopment Directorate, Uttarakhand (Member Secretary)
8. MD, Uttarakhand Power Corporation Limited, (Member)

CHAPTER -17
MISCELLANEOUS

17.1 Plant and Machinery

Only new Plant & Machinery shall be eligible for installation under this policy.

17.2 Ensurance

The execution and operation of the project allotted under this policy shall be insured by the successful developer at their own cost.

17.3 Metering of Electricity

Metering arrangement shall be made as per Central Electricity Authority (Installation & Operation of Meters) Regulations, 2006, the Grid Code, the metering Code and other relevant regulations issued by UERC/CERC in this regard.

17.4 Power Evacuation and Grid Interfacing Facility

Power evacuation and grid interfacing arrangement will be as per the regulation/procedures defined by CERC or UERC and as amended time to time.

17.5 Reactive Power Charges

The drawn of reactive power shall be charged as per the UERC order, as amended from time to time.

17.6 Clean Development Mechanism

The project developer shall pass on the benefits of Clean Development Mechanism as per the directions provided by CERC/UERC from time to time.

17.7 Power to remove Difficulties

If any difficulty arises in giving effect to this policy, Chief Secretary, UK Gov. is authorized to issue clarification as well as interpretation to such provisions, as may appear to be necessary for removing the difficulty either on its own motion or after hearing those parties who have represented for change in any provision .

CHAPTER -18
APPLICABILITY

18.1 The Policy shall be applicable to all Waste to Energy Technologies- based Power Projects which use Municipal Solid Waste (MSW) and Refused Derived Fuel (RDF) viz-a-viz Rankine Cycle Technology, combustion or incineration, bio methanation, pyrolsis high end gasifier technologies etc.

(Shailesh Bagoli)
Secretary