

GUJARAT WASTE TO ENERGY POLICY – 2016.

Government of Gujarat
Energy and Petrochemicals Department
G. R. No.REN-11-2015-1343-B
Sachivalaya, Gandhinagar
Date :-28-3-2016

PREAMBLE:-

- 1.1 Management of Municipal Solid Waste (MSW) has always been a challenge for Urban Local Bodies (ULBs) in the Country. Multi pronged efforts are required to improve collection and disposal of MSW. Utilization of MSW for generation of electricity could be one of such efforts.
- 1.2 Though MSW has potential to be a source of renewable energy, it has not been harnessed or exploited systematically on a significant scale. It is estimated that the MSW of Gujarat State could support Waste to Energy plant of approximately 100 MW. Using MSW as fuel for generation of electricity could increase efficiency of collection and also help in more environment friendly disposal of MSW. Therefore, Waste to Energy projects could contribute significantly to the implementation of the State Action Plan on Climate Change (SAPCC) as also “Swachh Bharat Abhiyan”.
- 1.3 Government of Gujarat recognized that electricity generated from MSW could be more expensive than those generated from conventional sources like coal-based power plants as the generating plants would be small in size and would not have the efficiency of big sized conventional power plants; the MSW are not homogenous, have low specific heating value and have high seasonal fluctuation in net calorific value. However, the cost of electricity generation could be reduced if suitable mechanism is worked out whereby ULBs make the MSW available to the generators at designated locations free of cost, lands for waste to energy projects are given free of cost to developers, and waste to energy projects are exempted from taxes/ duties/levies of ULBs etc. The power distribution companies do not levy cross subsidy surcharge on renewable energy as per the provision of Electricity Act 2003. Thus, all the major stakeholders will have to take facilitation measures for Waste to Energy projects to come up successfully.
- 1.4 Therefore, this Waste to Energy Policy-2016 is intended to facilitate and promote utilization of Municipal Solid Wastes for generation of electricity at affordable cost in a sustainable manner, and in the process contribute to Swachh Bharat Abhiyan.



OBJECTIVES

Gujarat has 8 Municipal Corporations and 162 Municipalities and the solid wastes generated in these urban areas could support power plants of around 100 MW capacity. Therefore, the State Government introduces the 'Gujarat Waste to Energy Policy - 2016' with the following objectives:

- 2.1 To facilitate and promote utilization of MSW as renewable resource for generation of electricity;
- 2.2 To facilitate and promote disposal of MSW in more environment friendly manner;
- 2.3 To help improve efficiency and effectiveness of collection and disposal of MSW, thereby contributing to Swachh Bharat Abhiyan;
- 2.4 To reduce the requirement of lands for disposal of MSW, thereby saving precious public resource for alternative public purpose.

RESOLUTION:-

1. TITLE

This Policy shall be known as the 'Gujarat Waste to Energy Policy-2016'.

2. DEFINITIONS

- (i) ULB means Urban Local Body, which includes Municipal Corporation, Municipality etc.
- (ii) UDA means Urban Development Authority.
- (iii) MSW means Municipal Solid Waste and would include industrial nonhazardous waste if such waste is provided to the ULB/UDA with the consent of such ULB/UDA concerned.
- (iv) "Municipal Solid Waste (MSW) based power project" means power project using new plant and machinery and MSW as fuel.
- (v) Meaning of any term not defined here shall have the meaning as defined in the Electricity Act, 2003 and Electricity Rules, 2005 & amendments thereto.

3. OPERATIVE PERIOD

This policy will come into effect from the date of its notification and shall remain in operation for a period of 5 years.

Projects based on generation of energy from MSW that are commissioned during the Operative Period shall become eligible for the benefits and incentives declared under this Policy for a period of 25 years from their date of commercial operation or for the life span of such Projects, whichever is less.



4. PROJECT

The developers may set up Power Plants utilizing Municipal Solid Waste for their captive use (self consumption), for sale of electricity to third party or to obligated entities to meet their Renewable Power Purchase Obligation (RPO) as specified by the Gujarat Electricity Regulatory Commission (GERC) from time to time.

5. ELIGIBLE UNIT

Any individual, company or body corporate or association or body of individuals, Urban Local Bodies/Urban Development Authorities whether incorporated or not, or artificial juridical person will be eligible for setting up Power Plants utilizing Municipal Solid Waste either for the purpose of captive use or for sale to Obligated Entities i.e. Distribution Licensees or to any other Third Party, including Urban Local Bodies/Urban Development Authorities.

Only New Plant & Machinery shall be eligible for installation under this Policy.

6. ELIGIBLE SITE & LAND

(i) The Developer of Power Projects, based on MSW, may select eligible site in proximity to the landfill sites or any other suitable land, in consultation with the concerned Authorities like Urban Development and Urban Housing Department, Gujarat Urban Development Company, Municipal Corporations, Urban Development Authorities, Municipalities etc. as the case may be. For this purpose, concerned authorities shall provide land at token lease rent of Re. 1 (rupee one) per annum for setting up the power project for a period of 25 years or life of the project or term of power purchase/wheeling agreement, whichever is earlier.

(ii) The urban local body shall not charge any tax, cess, royalty, levies or any other charges on the MSW based power project such as stamp duty, land allotments charges etc. Stamp Duty payable to Government, if any, on the lease/development agreement will have to be borne by the ULB concerned.

(iii) The developer may prepare and submit Pre-feasibility reports / Detailed Project Report (DPR) to concerned Urban Body for its techno-commercial appraisal / approvals. Alternatively, UDD/ ULB may have DPR prepared for a particular MSW based power project. Based on such DPR, UDD/ULB may have Request for Proposal (RFP) document prepared for the purpose of inviting competitive bids for selection of developer by following relevant provisions of Gujarat Infrastructure Development (GID) Act, 1999.

7. URBAN LOCAL BODIES TO PROVIDE WASTE FREE OF COST

ULBs shall provide MSW to the power plant developer at power plant site without charging any cost.

8. TARIFF AND VGF SUBSIDY

(i) For determining the tariff in respect of such projects, GERC shall fix a generic tariff for Waste to Energy Projects in the State. While fixing such tariff, GERC will take into account the fact that the land will be made available to the project developer at token lease rent of Re 1/- per annum and MSW to be used as fuel shall be delivered by the ULB/concern authority free of cost to the developer at the power project site.

(ii) Based on the generic tariff fixed by GERC, competitive bids shall be invited for development of waste to energy projects by Urban Development Department/ULBs for Viability Gap Funding (VGF) to be quoted by the bidders per unit of electricity (kwh) to be supplied to the buyer. The basis for selection of the developer shall be the lowest VGF per kwh. This output based per unit VGF subsidy shall be paid to the generator/developer by the UDD/ULB within 30 days from the date of receipt of monthly invoice from the generator.

Provided that if any Subsidy/VGF/Financial support in any form is sanctioned by UDD or ULB to Waste to Energy Project after determination of project specific tariff by the GERC, the project developer shall file revision petition to GERC for redetermination of tariff taking into account such financial benefits.

Provided further that clause 8(i) and 8(ii) shall not be applicable to the Waste to Energy Projects which are already awarded to developers by UDD/ULB based on competitive bids before notification of this policy.

9. STATE GOVERNMENT FACILITATION & NODAL AGENCY

Gujarat Energy Developer Agency (GEDA) shall be the State Government Nodal Agency for facilitation and implementation of the Policy for Waste to Energy utilizing Municipal Solid Waste (MSW). The nodal agency will facilitate and assist the Project Developers to undertake the activities like registration of projects; responding to queries and problems of Developers of Power Projects, etc.

10. MANAGEMENT OF MUNICIPAL SOLID WASTE

Since the management and handling of MSW is to be as per the provisions of the MSW Rules, 2000, the Waste to Energy projects shall comply with the MSW Rules, 2000, and relevant provisions of Environment related Acts, Rules & Regulations as amended from time to time.

11. GRID INTEGRATION & SUPPORT FROM STATE UTILITIES

Grid stability and security is of prime importance. Since the penetration of Renewable Energy may affect grid stability, adequate protection measures are necessary.

The Central Electricity Authority (CEA), Gol has published a Gazette Notification No 12/X/STD/CONN/GM/CEA dated October 15, 2013 known as the Central Electricity Authority (Technical Standards for connectivity to the Grid) Amendment Regulations, 2013, specifying various technical requirements for grid connection



of renewable energy sources. These regulations and provisions of Grid Code shall be binding to the Power Projects.

Interconnection voltages shall be governed as per Gujarat Electricity Grid Code-2013 and GERC's orders, as amended from time to time.

12. GRID CONNECTIVITY & EVACUATION FACILITIES

The appropriate voltage for injection of power by Power Projects shall be as per the GERC Supply Code and amendment thereof. The evacuation facility shall be initially approved by Gujarat Energy Transmission Corporation Limited (GETCO) / Distribution Licensees after carrying out System Studies. The developer of Power Projects based on USW shall establish dedicated evacuation lines for evacuation of power upto nearest GETCO Substation / Distribution Licensee's network, install RTUs, etc at their own cost.

13. METERING & ENERGY RECORDING

Electricity generated from Power Projects based on USW, shall be metered on 15-minute time block by State Transmission Utility (STU) / Distribution Licensee / State Load Dispatch Centre (SLDC) / Area Load Dispatch Centre (ALDC) at the receiving end of GETCO - STU substation / 11 KV system of Distribution Licensee as the case may be. For the purpose of energy accounting, such Projects shall provide ABT-compliant meters at the interface points. Interface metering shall conform to the Central Electricity Authority (Installation and Operation of Meters) Regulations 2014 and amendment thereto. GETCO / Distribution Licensee shall stipulate specifications in this regard.

14. SALE OF ELECTRICITY TO OBLIGATED ENTITIES

The project developer may use power for self consumption or sell power to third party or to Obligated Entities for meeting their RPO.

In case of sale to Distribution Licensees as obligated entities, the project developer shall sell power to the Government Nominated Agency (namely, Gujarat Urja Vikas Nigam Limited) on long term basis. The Nominated Agency shall purchase power either at the rate determined by GERC or at the rate determined through competitive bidding process. The costs and the renewable attributes of the power purchased by Nominated agency shall be apportioned to all Distribution Licensees (including private distribution licensees) in the State in proportion to their power consumption of previous year. Detailed procedure for implementation of proportionate apportionment of power shall be as follows

- a. The Long Term Power Purchase Agreement shall be executed by Government Nominated Agency Namely, Gujarat Urja Vikas Nigam Limited (GUVNL). The project developer shall deal with GUVNL and payment towards bill shall be settled by GUVNL.



- b. The electrical component of power shall be utilized by local distribution company where the USW based power plant is located. Such power shall be charged to Local Distribution Company at Average Power Purchase Pooled Cost (APPC) of GUVNL for the year of commissioning of the USW based power project. APPC means power purchased at generator bus excluding renewable power purchase, transmission cost and power purchased for sale other than consumers.
- c. The difference between the power purchase rate (either at the rate determined by GERC or at the rate determined through competitive bidding process) from USW power project as mentioned in the PPA and APPC charged to Local Distribution Company shall be considered as cost of Renewable Attribute. On payment of this cost, the Distribution Company shall be eligible for allotment of equivalent number of units of Renewable Attribute.
- d. On monthly basis such Renewable Attribute units and their cost shall be apportioned by nominated agency to all Distribution companies (including Private Distribution Licensees, Distribution Licensees/ Deemed Distribution Licensees supplying power in SEZs area etc) in proportion to their power consumption of previous year. GUVNL will raise two separate bills to Distribution Companies (i) for supply of electrical component of power as mentioned at point –b above, & (ii) for renewable attributes as mentioned in point-c above. Distribution Companies are required to make payment to GUVNL within 7 days from issuance of bill failing which Distribution company shall be liable to pay delayed payment charges as per terms of the Power Purchase Agreement.
- e. So apportioned Renewable Attribute units shall be considered for meeting RPO for the respective distribution company.
- f. Transmission charges and losses, wheeling Charges and losses shall be borne by the concerned local distribution company which uses the electrical component.

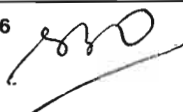
For entering into PPA with Obligated Entities (entities obligated to fulfill the RPO as prescribed by GERC from time to time), the Developer of Power Projects based on USW shall be required to provide Bank Guarantee at Rs. 5 lakhs per MW or part thereof. The bank guarantee shall be refunded, if the developers achieve commercial operation within time period mentioned in Power Purchase Agreement. In case Developer fails to achieve commercial operation as specified in the PPA, the bank guarantee shall be forfeited.

15. WHEELING OF ELECTRICITY

CAPTIVE CONSUMPTION/THIRD PARTY SALE

- a. **Wheeling of power to consumption site at 66 kV voltage level and above –**

The wheeling of electricity generated from Project to the desired location(s) within the State shall be allowed on payment of



transmission charges and transmission losses applicable to normal Open Access Consumer.

b. Wheeling of power to consumption site below 66 KV voltage level

i. In case injection or drawl is at 66 KV and drawl or injection is at 11 KV, wheeling of electricity generated from Power Project to the desired location(s) within the State, shall be allowed on payment of transmission charges and transmission losses, applicable to normal Open Access Consumer and 50% of wheeling Charges and 50% of Distribution losses of the energy fed to the grid as applicable to normal open access consumers.

ii. Injection at 11 kV and drawl at 11 kV and below voltage level:

(a) When the point of injection and drawl at 11 kV or below voltage level lies within the same distribution company, the user shall pay 50% of wheeling Charges and 50% of losses of the energy fed to the grid, as applicable to normal open access consumers.

(b) In case the point of injection and drawl at 11 kV or below voltage level lies in different distribution area, the user shall pay 50% of wheeling Charges and 50% of losses of the energy fed to the grid, as applicable to normal open access consumers for each Distribution Company. Moreover, transmission charges and transmission losses as applicable to normal Open Access Consumer shall also be levied.

iii. Waste to energy Project owners who desire to wheel electricity to two or more locations, shall pay 5 paise per unit on energy fed in the grid to the Distribution Company concerned in whose area power is consumed in addition to above mentioned transmission charges and losses, as applicable.

c. Cross Subsidy Surcharge:

No Cross Subsidy Surcharge and Additional Surcharge shall be applicable in case of third party sale also.

16. ENERGY ACCOUNTING

Energy accounting shall be as follows:

A. For Distribution Licensees:

The energy accounting in case of distribution licensees shall be on 15 minutes basis as stated in para 11 above.

B. For Captive and Third Party:

(i) Case 1: If the Consumer does not take renewable attribute of waste to energy for meeting its RPO, such energy generated shall be set off against the consumption during the Consumer's billing cycle.

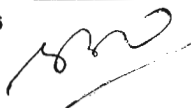
- a. For net import of power, Distribution Company will charge applicable tariff of respective category to the consumer including fixed/ demand charge, energy charges, peak charge, other charges / penalty etc as applicable to other consumers.
- b. Surplus power, after giving set off, shall be purchased by Distribution Company at Average Pooled Power Purchase Cost (APPC) of the year of commissioning of the project. Fixed/ demand charge, peak charge, other charges / penalty etc shall be applicable to as applicable to other consumers.
- c. The entire generation shall be considered for fulfilling RPO of Distribution Company.

(ii) Case 2 (A) : If the Consumer takes renewable attributes of waste to energy consumed for meeting its RPO, then energy accounting shall be based on 15 minute time block-basis.

- a. For net import of power, Distribution Company will charge applicable tariff of respective category to the consumer including fixed/ demand charge, energy charges, peak charge, other charges / penalty etc as applicable to other consumers.
- b. Surplus power, after giving set off, shall be purchased by Distribution Company at Average Pooled Power Purchase Cost (APPC) of the year of commissioning of the project. Fixed/ demand charge, peak charge, other charges / penalty etc shall be applicable to as applicable to other consumers.
- c. The surplus energy purchased shall be considered for fulfilling RPO of Distribution Company.

(iii) Case 2 (B) If registered under REC mechanism: Energy accounting shall be based on 15 minute time block-basis.

- a. For net import of power, Distribution Company will charge applicable tariff of respective category to the consumer including fixed/ demand charge, energy charges, peak charge, other charges / penalty etc as applicable to other consumers.



- b. Surplus power, after giving set off, shall be purchased by Distribution Company at 85% of Average Pooled Power Purchase Cost (APPC) of the year of commissioning of the project. Fixed/ demand charge, peak charge, other charges / penalty etc shall be applicable to as applicable to other consumers.

17. CONCESSIONAL BENEFITS & EXEMPTIONS

- Electricity generated and consumed for self consumption / sale to third party within the State shall be exempted from payment of electricity duty in accordance with the provisions of the Gujarat Electricity Duty Act 1958 and its amendments from time to time.
- Exemption from demand cut to the extent of 50% of installed capacity of the Power Project based on USW in case of captive consumption and third party sale within the State.

18. PROJECTS UNDER REC MECHANISM

Power Projects based on USW availing open access for captive use / third-party sale under REC mechanism shall be governed as per CERC REC Regulations. Such projects shall be allowed to wheel the electricity on payment of applicable transmission charges/ losses, wheeling charges / losses and other charges as applicable to other normal open access consumers. Further. Cross Subsidy Surcharge and Additional Surcharge shall be applicable as applicable to normal open access consumers.

19. RENEWABLE POWER PURCHASE OBLIGATION (RPO)

Obligated Entities have to abide by the GERC Regulations and Orders from time to time. GERC has been deciding the overall RPO and sub-category wise procurement of Renewable energy Power from each Renewable energy Source.

20. FORECASTING & SCHEDULING

The Power Projects based on USW shall give their forecast and schedule for day to day operations.

21. POWER PURCHASE AGREEMENT (PPA)

If the project developer opts to sale the power to GUVNL from waste to energy project, then the PPA shall be signed by the GUVNL at the tariff fixed by the GERC.

22. REACTIVE POWER

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

23. OPERATION & MAINTENANCE

The Operation and Maintenance of dedicated evacuation line shall be carried out at the cost of the Developers of Power Project based on USW as per applicable technical standards and best practices.

24. SHARING OF CLEAN DEVELOPMENT MECHANISM

In case, power is purchased at tariff determined by GERC, Clean Development Mechanism (CDM) benefits shall be shared on net proceeds, starting from 100% to power producer in the first year after commissioning, and thereafter reducing by 10% every year till the sharing becomes equal (50:50) between the power producer and the power procurer, in the sixth year. Thereafter, the sharing of CDM benefits shall remain equal till the time that benefit accrues.

In case of purchase of power at tariff determined through competitive bidding, the same shall be as per terms and conditions of bid documents.

25. RESTRICTIONS

The power project shall not use fossil fuel in excess of ceiling provided by Ministry of New and Renewable Energy (MNRE) / GERC.

26. REGULATION

The Gujarat Electricity Regulatory Commission shall be guided by this Policy while framing its rules, regulations and orders.

27. MID TERM REVIEW

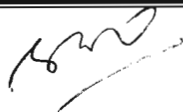
State Government may undertake a mid-term review of this policy after a period of 2 years or as and when the need arise in view of any technological breakthrough or to remove any difficulties or inconsistency with Electricity Act, 2003 as amended from time to time.

28. POWER TO REMOVE DIFFICULTIES

If any difficulty arises in giving effect to this policy, the State Government may issue clarification / interpretation to remove such difficulties either on its own motion or based on representations from stakeholders.

29. POWER TO INTERPRET

If there is any confusion or dispute about the meaning, intent or purpose of any provision of this Policy, the interpretations given by energy & Petrochemicals Department, Government of Gujarat shall be final and binding to all concerned.



This issues with the concurrence of the Climate Change Department, Urban Development Department, Forest & Environment Department, Revenue Department and Finance Department dated 11-2-2016, 15-2-2016, 25-02-2016 and 13-3-2016 respectively on the Department's file of even number.

By order and in the name of the Governor of Gujarat



(Shobhana Desai)

Additional Secretary to the Government of Gujarat
Energy & Petrochemicals Department.

Copy to:

- *The Principal Secretary to H.E. The Governor of Gujarat, Raj Bhavan, Gandhinagar.
- The Secretary, Ministry of Power, Gol, Shram Shakti Bhavan, New Delhi
- The Secretary, Ministry of New & Renewable Energy, CGO Complex, New Delhi
- The Principal Secretary to the Hon'ble Chief Minister, Sachivalaya, Gandhinagar
- The P.S. to Hon. Minister (E&P), Sachivalaya, Gandhinagar.
- The P.S. to Hon. MOS (E&P), Sachivalaya, Gandhinagar
- *The Secretary, CERC, New Delhi
- The Chairman, Central Electricity Authority, New Delhi
- The Deputy Secretary to the Chief Secretary, Sachivalaya, Gandhinagar
- *The Secretary, GERC, Gift City, Gandhinagar
- *The Registrar, Gujarat High Court, Ahmedabad
- *The Secretary, Vigilance Commission, Gandhinagar
- The Principal Secretary, Finance Department, Sachivalaya, Gandhinagar
- The Principal Secretary, Urban Development Department, Sachivalaya, Gandhinagar
- The Principal Secretary, Forest & Environment Department, Sachivalaya, Gandhinagar
- The Principal Secretary, Climate Change Department, Sachivalaya, Gandhinagar
- The Principal Secretary, Revenue Department, Sachivalaya, Gandhinagar
- The Resident Commissioner, Gujarat State, New Delhi
- *The Secretary, Gujarat Legislature Secretariat, Sachivalaya, Gandhinagar
- All Departments of Secretariat, Sachivalaya, Gandhinagar
- All Branches of Energy & Petrochemicals Department
- The Chairman, Power Finance Corporation Limited, New Delhi
- The Chairman & Managing Director, Gujarat Power Corporation Ltd. Gandhinagar
- The Chairman, Gujarat Urja Vikas Nigam Limited, Vadodara
- The Managing Director, Paschim Gujarat Vij Company Limited, Rajkot
- The Managing Director, Gujarat State Electricity Corporation Limited, Vadodara
- The Managing Director, Gujarat State Generation Limited, Gandhinagar
- The Managing Director, Uttar Gujarat Vij Company Limited, Mehsana
- The Managing Director, Madhya Gujarat Vij Company Limited, Vadodara
- The Managing Director, Dakshin Gujarat Vij Company Limited, Surat
- The Managing Director, Gujarat Energy Transmission Corporation Limited, Vadodara
- The Director, Gujarat Energy Development Agency, Gandhinagar
- The Chief Executive Officer, Torrent Power Limited, LalDarwaja, Ahmedabad
- *By Letter