

## GUJARAT SMALL HYDEL POLICY- 2016

**Government of Gujarat**  
**Energy and Petrochemicals Department**  
**GR No.MMH-11-2015-1342-B**  
**Sachivalaya, Gandhinagar**  
**Dt:- 28-03-2016**

### **PREAMBLE:-**

Gujarat has rivers, streams and large canal network which could be used for generation of clean and renewable power through small, mini and micro hydro-electricity (hydel) projects, hereinafter referred to as 'Small Hydel Project'. However, only a small portion of the potentials in the State have so far been tapped. Construction of small hydel projects and generation of power could be done without causing damage to the environment. The Government of Gujarat desired to promote investments to harness maximum possible clean and renewable energy from these rivers, streams and canals. Therefore, Government of Gujarat introduces "*Gujarat Small Hydel Policy - 2016*" to provide framework for the State Government and its agencies to promote, support, facilitate and incentivize investments in small hydel projects in the State.

### **OBJECTIVES**

The objectives of the "Gujarat Small Hydel Policy-2016" are:-

- (1). To promote renewable and clean source of electricity to reduce carbon emissions through Small Hydel Projects;
- (2). To promote setting up of Small hydel projects on canal system, rivers and streams to harness untapped clean energy;
- (3). To reduce dependency on depleting fossil fuel reserves for energy security and sustainability;
- (4). To promote investment, employment generation & skill enhancement in Renewable Energy Sector;
- (5). To encourage research and development and innovative technologies in Small Hydel Projects;
- (6) . To create environmental consciousness among citizens.

### **RESOLUTION:-**

#### **1. TITLE**

This policy shall be called the "Gujarat Small Hydel Policy-2016".

## **2. OPERATIVE PERIOD**

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

The Small Hydel Projects installed and commissioned during the Operative Period shall become eligible for the benefits and incentives declared under this Policy for a period of 35 years from the date of commissioning or for the lifespan of the Small Hydel Projects, whichever is earlier.

## **3. INSTALLED CAPACITY**

(1) The Government of Gujarat anticipates participation from Investors in setting up Micro Hydel Projects of up to 100 KW station capacity, Mini Hydel Projects ranging from 101 KW to 2000 KW (unit size of upto 1 MW) and Small Hydel Projects of 2 MW to 25 MW (unit size of up to 5 MW). These small, mini and micro hydel projects are referred to as 'small hydel projects' in this policy.

(2) The developers may set up Small Hydel Projects for captive use (self consumption), for third party sale and sale of power to obligated entities to meet their Renewable Power Purchase Obligation (RPO) as specified by the Gujarat Electricity Regulatory Commission (GERC).

## **4. ELIGIBLE UNIT**

Any individual, company or body corporate or association or body of individuals, whether incorporated or not, or artificial juridical person will be eligible for setting up of Small Hydel Projects either for the purpose of captive use or for sale the electricity to Obligated Entities i.e. Distribution Licensees or to any other Third Party.

## **5. SUITABLE SITE & LAND**

(1) Prospective Developer of Small Hydel Project may select suitable sites in consultation with the concerned authorities like Revenue Department, Narmada, Water Resources, Water Supply & Kalpsar Department, Sardar Sarovar Narmada Nigam Ltd etc as the case may be. He will prepare the Detailed Project Report (DPR) taking into account ***the detailed study of past record for availability of water from the reservoir/ canal and feasibility of site location for the project*** and submit the proposal to the concerned authority for the allotment of the site. The concerned authority may allot the site(s) as per the relevant provisions of the Gujarat Infrastructure Development Act, 1999.

(2) Alternatively, Narmada, Water Resources, Water Supply & Kalpsar Department or such other Government authority having control over Canals, rivers, streams etc. may identify such suitable sites/locations, and prepare DPR and offer the same to the Developers through competitive bidding.

(3) The party for developing small Hydel Project on such suitable sites at sub-clauses (i) and (ii) above shall be selected in accordance with the provisions of Gujarat Infrastructure Development Act, 1999. All required bidding in this

regard will be done in a totally transparent manner, giving fullest publicity. The terms and conditions of the allotment of sites by the competent authorities will remain binding to the project Developer. 'Copies of such approvals shall be given to Gujarat Energy Development Authority (GEDA).

## **6. STATE GOVERNMENT FACILITATION & NODAL AGENCY**

Gujarat Energy Developer Agency (GEDA) shall be the State Government Nodal Agency for facilitation and implementation of the Gujarat Small Hydel Policy-2015. All Small Hydel Projects in the State shall be registered with GEDA by the developer. The nodal agency will facilitate and assist the project developers to undertake the following activities in achieving the objectives of the Policy.

- (1) Registration of projects;
- (2) Respond to queries and problems of Developers of Small Hydel Projects; and
- (3) Accreditation and recommending the Small Hydel Projects for registering with Central Agency under REC mechanism.

## **7. GRID INTEGRATION & SUPPORT FROM STATE UTILITIES**

(1) Grid stability and security is of prime importance. Since the penetration of electricity from such small hydel projects may endanger grid security, adequate protection measures are necessary.

(2) 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 Small / Mini / Micro Hydel Projects.

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

Project Capacity (C)	Interconnection Specification
6 kW < C < 100 kW	415 V, 3φ, 50 Hz
100 kW < C < 4 MW	11 kV, 3φ, 50 Hz
C >4 MW	66 KV & above, 3φ, 50 Hz

## **8. GRID CONNECTIVITY AND EVACUATION FACILITIES**

The appropriate voltage for injection of power by Small Hydel Projects shall be as per the GERC Supply Code and amendment thereof. The evacuation facility shall be initially approved by GETCO / DISCOM after carrying out System Studies. The developer of Small Hydel Projects shall establish dedicated transmission lines for evacuation of power upto nearest GETCO Substation /

Discom's network, install RTUs, other equipment as may be determined by GETCO/DISCOM etc at their own cost.

## **9. METERING & ENERGY RECORDING / ELECTRICITY ARRANGEMENTS**

Electricity generated from Small Hydel Projects, shall be metered on 15-minute time block by STU / DISCOM / SLDC / ALDC at the receiving end of GETCO - STU substation / 11 KV system of DISCOM as the case may be. For the purpose of energy accounting, Small / Mini / Micro Hydel 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 / DISCOM shall stipulate specifications in this regard.

## **10. SALE OF ELECTRICITY TO OBLIGATED ENTITIES**

(1) Obligated Entities may purchase power from Small Hydel Projects to fulfill their RPO at the tariff as determined by GERC or rate determined through competitive bidding. The terms and conditions for supply of power shall be as per the Power Purchase Agreement signed between Small / Mini / Micro Hydel Project developer and obligated entity.

(2) Upon entering into PPA with Obligated Entities (entities obligated to fulfill the RPO as prescribed by GERC from time to time), the Developer of Small Hydel Projects 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.

## **11. WHEELING OF ELECTRICITY:**

### **For Captive Consumption:**

#### **(1) Wheeling of power to consumption site at 66 kV voltage level and above:**

The wheeling of electricity generated from Small Hydel 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.

#### **(2) Wheeling of power to consumption site below 66 KV voltage level:**

In case injection is at 66 KV or above and drawl 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.

#### **(3) 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 area, the user shall pay 50% of wheeling

Charges and 50% of wheeling losses of the energy fed to the grid as applicable to normal open access consumers.

- (b) In case the points of injection and drawl at 11 kV or below voltage level lie in areas of different distribution licensees, 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 Licensee. In addition, transmission charges and transmission losses as applicable to normal Open Access Consumer shall be payable.

**(4) For third party sale:**

- (a) Wheeling of power for third party from Small Hydel Project shall be allowed on payment of transmission charges, wheeling Charges and losses of the energy fed to the grid, as applicable to normal open access consumers.
- (b) 50% of Cross Subsidy Surcharge and Additional Surcharge, as applicable to normal open access consumers, shall be applicable.

**(5) Wheeling more than one locations**

Small Hydel Project owners, who desire to wheel electricity for captive use/ third party sale, to more than one location, 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 loses, as applicable.

**(6) Wheeling below 100 KW.**

For the captive use and third party sale, wheeling of electricity below 100 KW will be allowed only within the same distribution licensee area where plant is located.

**12. ENERGY ACCOUNTING:**

Energy accounting shall be as follows:

**(1) Case 1:**

- (a) If the Consumer does not take renewable attribute of hydel energy for meeting its RPO, energy generated by hydel project shall be set off against the consumption during the Consumer's billing cycle.
- (b) 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.
- (c) 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.

(d) The entire generation shall be considered for fulfilling RPO of Distribution Company.

**(2) Case 2:**

- (a) If the Consumer takes renewable attributes of hydel energy consumed for meeting its RPO, then energy accounting shall be based on 15 minute time block-basis.
- (b) 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.
- (c) 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.
- (d) The surplus energy purchased shall be considered for fulfilling RPO of Distribution Company.

**(3) Case 3:**

- (a) If registered under REC mechanism: Energy accounting shall be based on 15 minute time block-basis.
- (b) 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.
- (c) 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.

**13. CONCESSIONAL BENEFITS & EXEMPTIONS**

- (1) 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.
- (2) Exemption from demand cut to the extent of 50% of installed capacity of Small Hydel Project in case of captive consumption and third party sale within the State.

#### **14. PROJECTS UNDER REC MECHANISM**

Small Hydel Projects 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.

#### **15. RENEWABLE POWER PURCHASE OBLIGATION (RPO)**

Obligated Entities have to abide by the GERC Regulations and Orders from time to time and GERC has been deciding the overall RPO and sub-category wise procurement of Renewable Energy Power from each Renewable energy Source. Obligated Entities may fulfill their RPO by purchasing hydel power at the tariff determined by GERC or tariff determined through competitive bidding process keeping in view the interest of consumers.

#### **16. FORECASTING SCHEDULING**

These power projects shall give their forecast and scheduled for day to day operations.

#### **17. REACTIVE POWER**

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

#### **18. OPERATION & MAINTENANCE**

The Operation and Maintenance of dedicated evacuation line shall be carried out at the cost of the Developers of Small / Mini / Micro Hydel Projects as per applicable technical standards and best practices.

#### **19. RESTRICTIONS**

- (1) Only New Plant & Machinery shall be eligible for installation under this Policy.
- (2) The release of water in canals shall be controlled by the Narmada, Water Resources, Water Supply & Kalpsar Department or SSNNL, as the case may be, and the availability of canal water for hydro-electricity generation shall be solely incidental to the requirement of water for drinking, irrigation etc. The hydel project developer shall have no right to claim release of water in the canal, river or stream for the purpose of hydel generation.

#### **20. SHARING OF Clean Development Mechanism (CDM) BENEFITS**

- (1) In case, Discom purchase power on Feed-in-Tariff, 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.

- (2) In case of purchase of power by Discom through competitive bidding, the same shall be as per terms and conditions of bid documents.

## **21. REGULATION**

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

## **22. 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.

## **23. 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.

## **24. 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 the Energy & Petrochemicals Department, Government of Gujarat shall be final and binding to all concerned.

This issues with the concurrence of the Climate Change Department, N W R and K Department and Finance Department dated 3-12-2015 , 4-12-2015, 8-2-2016 and 28-2-2016 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, Climate Change Department, Sachivalaya, Gandhinagar
  - The Principal Secretary, Narmada, Water Resources, Water Supply and Kalpsar 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
  - The Managing Director, Gujarat Paguthan Energy Corporation Pvt. Ltd., Ashram Road, Ahmedabad
- \*By Letter