



SCOPE OF WORK FOR DESIGN, SUPPLY, ERECTION, TESTING AND COMMISSIONING INCLUDING COMPREHENSIVE OPERATION & MAINTENANCE OF GRID-CONNECTED RENEWABLE ENRGY FOR GGL COCO CNG STATIONS AND OFFICES OF GUJARAT GAS LTD. OPERATING IN THE STATE OF GUJARAT UNDER GROUP CAPTIVE MODEL

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Open e-TENDER ID - Main Tender ID 153053

Sub Tender	SoR Group
Sub Tender ID <u>153056</u>	Location falling under control of utility company-DGVCL operation
Sub Tender ID <u>153057</u>	Location falling under control of utility company-MGVCL operation
Sub Tender ID <u>153058</u>	Location falling under control of utility company-PGVCL operation
Sub Tender ID <u>153060</u>	Location falling under control of utility company-UGVCL operation

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1 Introduction :

Gujarat Gas Limited (A GSPC Group Company – Government of Gujarat Undertaking) is India's largest City Gas Distribution Company in terms of sales volume operating in 44 districts in 6 states of Gujarat, Maharashtra, Rajasthan, Haryana, Punjab & Madhya Pradesh and 1 Union territory of Dadra & Nagar Haveli.

GGL continues to hold the leadership position in CGD industry in terms of size and scale of operation. The Company has a successful track record of providing uninterrupted services for over 3 decades through a network of more than 39,300 kms. of Natural Gas pipeline, distributing approx. 9.7 mmcmd of Natural Gas. The Company operates 808 CNG stations and has connected more than 21.15 lakh households, over 15,200 commercial customers and more than 4,390 industrial customers. GGL provides less polluting fuel for vehicles, & contributing a large in reducing vehicle born emission and thus improving in air quality in highly populated city areas as well as on highways.

Gujarat Gas Ltd is planning to expand its footprint in renewable energy segment & planning to establish a renewable energy plant at a suitable location anywhere in Gujarat to generate green energy for its CNG stations through regulations of Group captive mechanism .This document covers generic scope of work for setting up of solar power plant. Bidder to read the scope and other relevant tender documents while quoting for the job to be executed.

2 Definition :

Definitions of the terms used in this bid document, (unless the context otherwise requires), shall have the same meaning as respectively assigned hereunder:-

- a. **"Client"/ "Owner"** shall mean the GUJARAT GAS LTD, who has invited quote for the job to execute the project.
- b. **"Bidder"** designates the individual or legal entity which has made a proposal, a tender or a bid with the aim of concluding a Contract with the Owner.
- c. **"Consultant" / "Architect"** shall mean the person or firm or body corporate appointed by the Owner/Bidder for the purpose of providing services as determined by him in connection with this project.
- d. **"Contractor"** shall mean the person or persons, firm or company, who as a successful Bidder has agreed to carry out the job as mentioned herein to Owner and includes its legal representative(s), its successors(s) and assign(s)
- e. **"Contract" / "Work Order" / "Service Order"** shall mean the agreement and all other documents between the Owner and the Successful Bidder for providing the services mentioned Herein.
- f. **"KWH"** shall mean kWh or Unit shall mean one kilowatt-hour or 1000-watt hours of electrical energy. One (1) kWh shall mean and be construed as a Unit.

- g. **"Delivery Point"** shall mean point where energy generated shall be injected into 11kV substation
- h. **"Metering point"** shall mean the place where proper electricity meters are installed and maintained at the internal pooling substation of the Project.
- i. **"Generator"** will develop, build, own and operate the Project and supply energy thus generated to the Off-Taker under SPV model.
- j. **"Off - Taker"** will purchase & consume 100% of the energy generated from the Project under an energy supply agreement to be entered into between the Off-Taker and the Generator ("ESA").
- k. **"Drawing"** shall mean and include Engineering drawings, sketches showing plans, sections and elevations in relation to the Contract together with modifications and/or revisions thereto.
- l. **"Engineer-in-Charge" (EIC) / Project Owner** shall mean the person designated from time to time by off-taker and shall include those who are expressly authorized by him to act for and on his Behalf for operation of this contract.
- m. **"Construction Supervisor Engineer" (CSE)** shall mean the person deployed at site for supervision & quality control of the work, as per the Scope of work mentioned and to receive instructions from Engineer-in-Charge appointed by Owner or his representative or Architect / consultant.
- n. **"Parties"** means the entities under the ESA shall be the Off-Taker and Generator (hereinafter also individually referred to as "Party" and collectively as "Parties").
- o. **"Captive generating plant"** means set up by any person, co-operative society or an association of persons (including companies) for generating electricity primarily for self-consumption.
- p. **"SPV"** means a commercial venture created by one or more organizations to undertake a specific purpose, such as implementing a renewable electricity project. SPVs have legal status as an independent entity, usually with their own assets and liabilities separate from their parent organizations

3 General Scope of Work :

Supply of renewable energy to designated GGL CNG stations & offices of GGL in state of Gujarat as per GGL requirements on flat tariff, ensuring compliance with all applicable regulatory and technical standard consists supply of designing , Procurement of materials, manpower, Civil construction, fabrication ,Installation / Execution, supervision ,operation & maintenance in accordance with established codes and standards, accepted engineering practices, manufacturer's recommendations , all applicable regulatory and technical standards for the complete execution of the renewable energy project.

The bidder to submit detailed report including financial model for arriving cost including CAPEX, debt funding assumptions, margin etc.

The scope of work mainly consists of:

3.1 Detailed Site Survey

The bidder must conduct a thorough site survey to assess the feasibility of the project, including topographical, geological, and environmental considerations if any required for the project. This will help determine the optimal placement of the renewable energy plant to maximize efficiency and minimize environmental impact.

3.2 Land Procurement and Arrangements for 25 Years

- a. The bidder will be responsible for procuring or arranging land for the installation of the renewable power plant, securing ownership or lease rights for a period of 25 years.
- b. The land should be located within a 4-kilometer radius of the nearest 11 KV substation to minimize transmission losses.
- c. The bidder must also secure necessary Right of Way (ROW) clearances for the construction of the 11 KV electrical line from the plant to the substation.
- d. The finalized land documents must be submitted before the commissioning of the project, ensuring complete legal compliance.

3.3 Renewable Power Plant construction & Installation

- a. The bidder will be responsible for designing, supplying, and installing the renewable power plant in accordance with guidelines from the Ministry of New and Renewable Energy (MNRE) and relevant state guidelines. The plant design must focus on maximizing energy production while adhering to safety and environmental standards.
- b. Bidder shall obtain and maintain the relevant regulatory and statutory approvals and permits required to install and operate the Project for the supply of power to the Delivery Point.
- c. Bidder shall depute his own supervising engineer at site to supervise execution of work and to coordinate with his various agencies and suppliers. Bidder to report GGL for progress of work in format and on frequency as agreed by both the parties.

3.4 Supply and Erection of 11 KV Line

- a. The bidder will handle the supply and erection of the associated 11 KV transmission line connecting the renewable energy plant to the nearest substation.
- b. This will include installing all required components such as bays, breakers, and metering systems etc. And ensuring compliance with the specifications of the local Distribution Company (DISCOM), Gujarat Energy Transmission Corporation (GETCO), MNRE, and Central Electricity Authority (CEA).

- c. If an existing 11 KV line owned by the bidder or another renewable energy developer is available, it may be shared for grid termination, as per prevailing rules and regulations.
- d. GGL's CNG station are connected to 11 kV/22 kV/ 0.415 kV network of various DISCOMs in state of Gujarat, hence it is recommended for injection voltage at 11 kV at generator's end and wheeling and transmission at same voltage level to avoid transmission losses and transmission cost.

3.5 Testing and Commissioning

The plant and the 11 KV transmission line must be pre-commissioned & checked as per the SOP & best industry practices before commissioning in the presence of designated officials from GGL, ensuring that all systems are fully functional and compliant with regulatory standards.

3.6 Operation & Maintenance (O&M)

- a. The bidder will be responsible for the operation and maintenance of both the renewable energy plant and the 11 KV transmission line, including the bay at the GETCO substation and the ABT (Availability Based Tariff) meters at both ends, and any other facilities to generate and consume renewable energy for a period of 25 years from the date of commercial operation (COD).
- b. This O&M responsibility may be extended beyond 25 years if both parties agree for a definite period.
- c. Bidder shall bear all expenses related to operation of the Project and no price escalation will be allowed in any case.

3.7 Licensed Electrical Contractor Requirement

The installation and commissioning of the renewable energy plant, as well as the ongoing O&M activities, must be conducted by the bidder with a licensed electrical contractor registered in Gujarat.

3.8 Power Supply to GGL CNG Stations

- a. The renewable energy plant will supply power to GGL's designated CNG stations, offices and other facilities as specified in Appendix-01 of the tender document.
- b. The power will be supplied at the quoted fixed tariff (in Rs. per kWh, inclusive of applicable taxes) for 25 years, with the plant meeting the guaranteed Capacity Utilization Factor (CUF).

3.9 Remote Monitoring System

The bidder will install, operate, and maintain a remote monitoring system for the renewable energy plant. This system must be in place for the full 25-year contract period, providing real-time data to ensure efficient operation and performance tracking.

3.10 Additional Equipment and Material Requirements

- a. Any additional materials or equipment that are not specifically mentioned in the tender document but are necessary for the construction or O&M of the plant and associated 11 KV line must be provided by the bidder without any extra cost to GGL.
- b. The bidder is responsible for ensuring that the project is completed within the scheduled timeframe, and that all additional requirements for efficient construction and O&M activities are met.

3.11 Site office & Store at Site

- a. Bidder has to set up site office at their own cost for their or contract employees and to store site documents and tools and tackles etc. as required.
- b. The Bidder shall provide and maintain an office at the site for the accommodation of his Engineer and staff and such office shall be open at all reasonable hours to receive instructions, notice or other communications.
- c. The Bidder shall provide and maintain stores at site with sufficient covered area and lock & key arrangement for receiving, proper stocking of all required material and tools & tackles under their scope of work
- d. Bidder shall arrange and provide table , chair and any other required furniture for their supervisor / engineer and his own engineer seating arrangements.

3.12 Progress Report / MIS

Bidder to report through his official email id & keep records of:

- To submit project milestone plan within a week time from award of contract before start of work.
- Daily & weekly progress report & through official email id.
- To submit daily report of generated units and other parameters as per agreed format and frequency.
- To submit reconciliation statement for unit generated and consumption as per the agreed format and frequency with reference to DISCOM billing to GGL on billing cycle.

4 Contract Period :

The contract shall have a term of 25 (twenty-five) and Lock - in 15 years from the commercial Operation date.

Bidder to mention terms and conditions for lock in period and exit options along with bid. It shall include the options of exit before after the lock in period for both the parties.

5 Technical and Regulatory Requirements for Renewable Power Plant Installation and Power Supply :

5.1 Conformance to Standards and Specifications

- a. All components used in the installation of renewable power plants must adhere to applicable BIS (Bureau of Indian Standards) and MNRE (Ministry of New and Renewable Energy) specifications, and comply with quality control guidelines issued by MNRE and the Government of Gujarat (GoG).
- b. The bidder is allowed to use non-DCR (Domestic Content Requirement) solar modules for the solar plant installation, while striving to maximize the use of products manufactured in India as part of the Make in India initiative.
- c. Upon request, the bidder must provide GGL with a detailed Bill of Materials (BoM) listing the components to be used in the renewable energy plants.

5.2 Approved Technology and Models

- a. The technology adopted by the bidder must conform to MNRE's list of Approved Models and Manufacturers for Solar PV Modules and Wind Turbine Generators.
- b. Any orders or clarifications issued by MNRE regarding technology, equipment, or standards will apply and must be followed during the project implementation.

5.3 Fixed Tariff and PPA Terms

The bidder shall supply power to GGL at the fixed tariff quoted in the bid. This tariff will remain unchanged throughout the 25-year term of the Power Purchase Agreement (PPA), except in the event of "Change in Law" conditions as specified in the PPA.

5.4 Permits, Approvals, and Clearances

- a. The bidder is responsible for obtaining all necessary approvals, permits, and clearances for setting up the renewable energy project and the associated 11 KV transmission line. This includes clearances from state government authorities and local bodies.
- b. All costs associated with acquiring these approvals and permits will be borne by the bidder.
- c. The bidder shall comply with the GERC / CERC regulations on Forecasting, Scheduling and Deviation Settlement mechanism, as applicable and shall be responsible for the same.

5.5 Installation Capacity and Power Generation Guarantee

- a. It is the bidder's responsibility to install renewable power plants of appropriate capacity, regardless of the capacity mentioned by GGL to meet the electricity requirements of GGL's various CNG stations, offices and other facilities as specified in Appendix-02 of the tender document.
- b. The bidder must guarantee electricity generation for the entire 25-year duration of the PPA, as outlined in Annexure-02 of the tender document. In case of underperformance or failure to meet the guaranteed generation, pre-agreed damages will apply as per the terms specified in the tender.
- c. To ensure accurate power generation, the bidder must conduct its own study and investigation of key factors such as Global Horizontal Irradiation (GHI), wind patterns, and other site-specific conditions that may affect the quantum of electricity generation.
- d. **Minimum Generation Guarantee :** The Generator will make available a minimum supply of 90 % of the Irradiance linked Expected Generation during each period of three Contract Year after the first Contract Year, ("Minimum Generation"). If the generator fails to supply the minimum guaranteed power supply, then any deficit shall be compensated by the Generator at loss in savings for the shortfall in the supply. Loss in Savings shall be the difference between the Grid Tariff (excluding Fixed Charges) and the Landed Cost of Solar.
- e. In the event of any under-consumption or due to reasons attributable to the Off-Taker, the Generator may be required to reduce generation from the Project to protect its Captive Status. Upon occurrence of such an event, the Off-Taker shall be billed for Deemed Generation. Deemed Generation for a given month will be equal to the average monthly generation in the previous year ("**Deemed Generation**").

6 Metering, Grid Connectivity, and Statutory Permissions :

6.1 Metering and Grid Connectivity

- a. The bidder is solely responsible for ensuring metering and grid connectivity from GETCO or DISCOM (Distribution Company), as well as obtaining any required statutory permissions from the relevant government departments or authorities for the project. This includes meters required if any for consumption end (i.e. at GGL's CNG stations, offices and other facilities)
- b. While GGL will provide support in facilitating the process, the full responsibility and associated costs will be borne by the bidder, in line with prevailing guidelines and practices.

6.2 Metering Equipment and Testing

- a. The specifications for meters and metering equipment, including CT-PT sets (Current Transformer - Potential Transformer), must comply with the metering regulations set forth by the Central Electricity Authority (CEA).

- b. These meters must be tested in accordance with the Gujarat Electricity Regulatory Commission (GERC) orders and directives, and as per IS 14697 standards.
- c. Testing must be carried out at the bidder's expense at a facility accredited by NABL (National Accreditation Board for Testing and Calibration Laboratories), CPRI (Central Power Research Institute), or a distribution licensee's lab.
- d. All meters and associated equipment must be properly sealed in the presence of designated authorities from GGL or relevant government bodies during installation to ensure compliance and accuracy.

7 Insurance :

The bidder must obtain third-party liability insurance that covers potential losses, including:

- Loss of human life,
- Injuries or fatality of engineers, workmen, and other personnel,
- Risks related to damage, theft, or loss of materials, equipment, and property during and after the completion of the work throughout the contract period.

Prior to the commencement of any work, the bidder must ensure that all its employees and representatives are adequately insured against any damage, loss, injury, or death resulting from the execution of the project.

Any liabilities arising from liquidation, death, bankruptcy, or similar events will be solely the responsibility of the bidder.

8 Commissioning Period :

The design, survey, supply, installation, testing, and commissioning of the renewable power plant, along with the associated 11 KV transmission line connecting the plant to the designated substation, must be completed within 10 months from the date of receiving Renewable Energy Connectivity permission from GETCO/DISCOM, as per the terms and conditions of this tender.

9 Project Milestones and Timeline :

S. No.	Milestone	Timeline
1	Issuance of Letter of Award (LoI) / Work order to the successful bidder	T1
2	Signing of Power Purchase Agreement between Bidder and GGL	T1 + 10 days
3	Submission of Contract Bank Guarantee to GGL by bidder	T1 + 15 days
4	Formation of Special Purpose Vehicle (SPV) Company as per prevailing rules and regulations of Group Captive Mechanism	T2 = T1 + 30 Days

5	Identifying land locations, acquisition of land on long term lease / purchase of Land	T2 + 45 Days
6	Renewable Energy Connectivity Submission to GETCO / DISCOM (Stage- I and Stage – II)	T2 + 60 Days
7	Renewable Connectivity Approval from GETCO / DISCOM	T3
8	Completion of design, supply, installation, testing and commissioning of the renewable energy plant and associated 11KV transmission line for connecting renewable power plant with concerned substation along with Submission of the final land documents for the entire required land duly registered by appropriate revenue authority to GGL	T3 + 12 Months
9	Operation and maintenance of power plant and associated 11kV Transmission line, Bay at GETCO substation including meters at both end	25 years from DOC (Date of Commissioning) (unless extended by both the parties on mutual agreement)

10 Billing & Payment :

- Subject to the terms of the contract , the Off-Taker will be required to receive and pay for, and the Generator will be required to supply 100% (one hundred percent) of the Delivered Energy (as measured at the Delivery Point) in each settlement period, which will be 1 (one) calendar month (“Settlement Period”). “Delivered Energy” refers to quantum of energy (calculated at the Delivery Point) generated from the Project.
- For each Settlement Period, the Generator will raise monthly invoices (“Monthly Bill”) on the Off-Taker as per the agreed Tariff. The Off-Taker will make payment against all invoices, to the Generator within 30 (thirty) business days from the date of receiving the invoice with all supporting documents (“Due Date”).
- Off-Taker shall pay for the Delivered Energy during the Settlement Period. In case the Off-Taker fails to consume the Delivered Energy, it will be liable to compensate the Generator for an amount equivalent to the tariff of such shortfall in consumption calculated at the Tariff mentioned herein.

11 Contract Bank Guarantee (CBG):

- Contractor shall submit Contract Bank Guarantee (CBG) equivalent to the amount derived for twice the annual estimated RE units required to cater GGL CNG Assets as mentioned in scope of work (S.N. 1 to 4) for the respective DISCOM.
- Contract Bank Guarantee shall be valid till the 18 months from the date of signing of Power Purchase Agreement and 3 months for claim lodgement period.

- The CBG will be return to contractor on successful completion of project as per schedule as mentioned in clause- 10- “Project milestone and timeline”.
- **Penalty:** If the contractor fails to achieve the commercial operation of the project by the Scheduled Commercial Operation Date (SCOD), which is no later than 12 months from the date of receiving Renewable Energy Connectivity permission from GETCO/DISCOM, GGL will encash the Performance Bank Guarantee (PBG) as liquidated damages (LD) as follows:
 - **Delay up to three months:** LD will be levied on a per-day basis, proportionate to the CBG. For the purpose of LD calculation, a "month" will be considered as 30 days.
 - **Delay beyond three months:** The entire CBG amount will be encashed.

In the event that the commissioning is delayed due to force majeure circumstances as defined in the Power Purchase Agreement (PPA), GGL may, upon being satisfied with the documentary evidence provided by the bidder, extend the commissioning date in writing without imposing any financial penalties.

12 Contract-Cum-Performance Bank Guarantee (CPBG):

- Contractor shall submit Contract-cum-performance-Bank Guarantee equivalent to the amount in INR of the estimated RE units (annually) required to cater GGL CNG Assets as mentioned in SOR (S.N. 1 to 4) for the respective DISCOM.
- Contract-cum-performance Bank Guarantee shall be valid throughout the contract period on rolling basis.
- If the contractor fails to submit the CPBG, the equivalent amount will be deducted from the monthly invoices generated for the energy consumed by GGL during invoice period.
- The CPBG will be return to contractor on successful completion of contract period and 3 months for claim lodgments period.
- **Penalty:** If the contractor fails to achieve the monthly guarantee generation, the equivalent amount of shortfall units calculated as per agreed tariff in the contract and same shall be deducted from the monthly invoice and/or from the CPBG.

13 Labour Compliance:

- a. Bidder to apply for required legal compliance documents and policies on award of WO for Project execution as applicable.
- b. Bidder to get approved all applicable licenses/ registration before completion of Mobilization time / before start of work whichever comes earlier.
- c. If they required more time to get it approved, they shall give undertaking that they are in process to take various applicable license / registration as applicable and are starting work at their own risk and cost.
- d. GGL will not be responsible and liable if any non-compliance found and applicable Penalty / charges shall bear by Bidder only.

14 Total estimated RE units (Annually) required to cater GGL CNG Assets :

- The Owner intends to purchase the Qty. in DISCOM-wise however, for the purpose of clarity, Bidder to note that the below quantities are indicative for evaluation purpose and not a commitment.
- The Owner reserves the right to increase/ decrease the total number of Units at the time of award of Contract and/ or during Contract tenure based on operational requirements at its sole discretion.

Sr. No.	Sub Tender ID	Description	Total estimated RE units (Annually) required to cater GGL CNG Assets
1	153056	Location falling under control of utility company-DGVCL operation	47,31,990
2	153057	Location falling under control of utility company-MGVCL operation	49,48,376
3	153058	Location falling under control of utility company-PGVCL operation	85,71,149
4	153060	Location falling under control of utility company-UGVCL operation	22,18,789