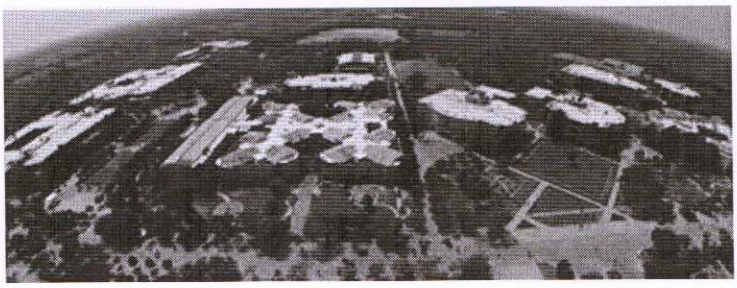
DETAIL PROJECT REPORT



270 KW ROOFTOP SOLAR PHOTOVOLTAIC GRID INTERACTIVE POWER PLANT

AT

GANPAT UNIVERSITY

THE MEHSANA DISTRICT EDUCATION TRUST, GANPAT VIDHYANAGAR, KHERVA, MEHSANA 396 120.

MAY 2017

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Glossary of Terms

A	Amp
AC	Alternating Current
°C	Degrees Centigrade
°	Degrees
DC	Direct Current
E	East
Hz	Frequency, Hertz
Isc	Short Circuit Current
IEC	International Electro technical Commission
kA	One Thousand Amps
km	One metric kilometre
kV	One thousand Volts
kVA	One thousand Volt Amps
kWp	One thousand Watts peak
kWh	One thousand Watt hours
LV	Low Voltage
m	Meters
m^2	Meters squared
mm	Millimetres
mm2	Millimetres squared
m/s	Meters per second
MPP	Maximum Power Point
MPPT	Maximum Power Point Tracking
MV	Medium Voltage
MW	One million Watts or Megawatt
MWp	Megawatt peak of Solar PV modules
N	North
NASA	National Aeronautics and Space Administration
O&M	Operations and Maintenance
ONAN	Oil Natural Air Natural

ONAF	Oil Natural Air Forced
%	Percentage
pc-Si	poly-crystalline Silicon
PV	Photovoltaic
STC	Standard Test Conditions
SWERA	Solar and Wind Energy Resource Assessment
TUV	TÜV Rheinland Group Testing and Standards Organisation.
V	Volts
Voc	Open Circuit Voltage
VT	Voltage Transformer
W/m2	Watts per metres squared
Wp	Watt peak
XLPE insulation	Cross-Linked Polyethylene insulation

1. Introduction

MNISTRY OF NEW AND RENEWABLE ENERGY

The Ministry of New and Renewable Energy (MNRE) is the nodal Ministry of the Government of India for all matters relating to new and renewable energy. The broad aim of the Ministry is to develop and deploy new and renewable energy for supplementing the energy requirements of the country. **Creation CASE and Ministry:**

1. Commission for Additional Sources of Energy (CASE) in 1981.
2. Department of Non-Conventional Energy Sources (DNES) in 1982.
3. Ministry of Non-Conventional Energy Sources (MNES) in 1992.
4. Ministry of Non-Conventional Energy Sources (MNES) renamed as Ministry of New and Renewable Energy (MNRE) in 2006.

The role of new and renewable energy has been assuming increasing significance in recent times with the growing concern for the country's energy security. Energy self-sufficiency was identified as the major driver for new and renewable energy in the country in the wake of the two oil shocks of the 1970s. The sudden increase in the price of oil, uncertainties associated with its supply and the adverse impact on the balance of payments position led to the establishment of the Commission for Additional Sources of Energy in the Department of Science & Technology in March 1981. The Commission was charged with the responsibility of formulating policies and their implementation, programs for development of new and renewable energy apart from coordinating and intensifying R&D in the sector. In 1982, a new department, i.e., Department of Non-conventional Energy Sources (DNES), that incorporated CASE, was created in the then Ministry of Energy. In 1992, DNES became the Ministry of Non-conventional Energy Sources. In October 2006, the Ministry was re-christened as the Ministry of New and Renewable Energy.

SOLAR GRID CONNECTED POWER PLANT

India is endowed with vast solar energy potential. About 5,000 trillion kWh per year energy is incident over India's land area with most parts receiving 4-7 kWh per sq. m per day. Hence both technology routes for conversion of solar radiation into heat and electricity, namely, solar thermal and solar photovoltaics, can effectively be harnessed providing huge scalability for solar in India. Solar also provides the ability to generate power on a distributed basis and enables rapid capacity addition with short lead times. Off-grid decentralized and low-temperature applications will be advantageous from a rural electrification perspective and meeting other energy needs for power and heating and cooling in both rural and urban areas. From an energy security perspective, solar is the most secure of all sources, since it is abundantly available. Theoretically, a small fraction of the total incident solar energy (if captured effectively) can meet the entire country's power requirements. It is also clear that given the large proportion of poor and energy un-served population in the country, every effort needs to be made to exploit the relatively abundant sources of energy available to the country. While, today, domestic coal based power generation is the cheapest electricity source, future scenarios suggest that this could well change.

http://mnre.gov.in/schemes/grid-connected/solar/

GUJARAT ENERGY DEVELOPMENT AGENCY

GEDA (Gujarat Energy Development Agency), one of the premier organizations and a forerunner in India has been working in the field of renewable energy development and energy conservation. GEDA is shouldering the responsibility of a state nodal agency (SNA) for the Ministry of New and Renewable Energy Sources (MNRE) and the state designated agency (SDA) for Bureau of Energy Efficiency (BEE).

GEDA has played a pioneering role in the development of a long-term renewable policy and implementing of sustainable energy programmers across the state. GEDA's challenge has been to make the renewable energy and energy efficient technologies economically and commercially viable. GEDA was catalytic in the formation of the Commission of Additional Sources of Energy (CASE) in 1981, which later became the Department of Non-conventional Energy Sources (DNES) in 1982 and a full-fledged Ministry- MNES (Ministry of Non-conventional Energy Sources) in 90s, which is now the MNRE (Ministry of New and Renewable Energy). The model was then replicated to establish similar state nodal agencies in other states throughout the country.

The renewable energy promotion and popularization programmers in the state have crossed the over 3 decades of untiring efforts and pioneered several sustainable initiatives; many of which are the country's first. GEDA has virtually been the crucible, the melting pot of ideas to 'check out' renewable sources of energy as alternatives to conventional fuels. The convenient green-n-clean actions in these direction and milestones achieved have set the pace for Renewable Energy Development in India.

http://geda.gujarat.gov.in/background.php

U R energy (India) Pvt Ltd

U R Energy started its journey in the solar industry in Australia in 2009 and within 6 years achieved a market leading position servicing 26,000+ residential and commercial customers across the Australian solar market. Inspired by the success in Australia, the company decided to expand globally and most recently began operations in India in 2015 and the United States of America in 2016. The company now procures, develops and installs solar power systems at economic prices for residential, commercial and utility scale customers across the world including Australia, United States of America, India, Dubai, Africa, and United Kingdom.

Quality is at the core of our business whether it be the solar products we source, our installation process or the service we provide to our customers. U R Energy is an ISO 9001, ISO 14001 and OHSAS 18001 accredited company and we source only the highest quality solar power systems from Tier 1, modern manufacturing facilities around the world.

The business was started with a single goal, to help accelerate the growth and adoption of solar power systems across the world not only for its obvious environmental benefits but also for the economic benefits available to our customers. That's why we offer the highest quality products at the best price available on the market today and as always, backed by our 5% price beat guarantee.

1.1 Executive Summary

The main purpose of this report to provide preliminary design basis report for 270 KW capacity grid connected rooftop solar photovoltaic power plant at Ganpat University, The Mehsana District Education Trust, Ganpat Vidhyanagar, Kherva, Mehsana Distrrict, Gujarat.

After the site evaluation and feasibility of the project, the project will be complete in three months. India has an ambitious plan to build large grid-connected solar power plants, with a cumulative installed capacity of 20,000 MWp by 2020, under the National Solar Mission. Hence, it is essential to document the performance of the grid-connected rooftop solar power photovoltaic power plant installed insocial organization / NGO. Here in this social organization will get benefit of 30% subsidy on capital investment of the project from MNRE.

In this report we discuss the performance of the photovoltaic solar power plant in Mehsana district during the thought year. The identified site is located at Kherva Village, Mehsana and site coordinates are *Lattitude 72°.27'53" E and Longitude 23°31'98" N* at an altitude of approximately 201 meter above mean sea level in the Indian state of Gujarat.

The project is 270 KW grid-connected rooftop solar photovoltaic power plant & it is due south fixed tilt power plant technology. The project uses 310Wp poly-crystalline PV panels and string inverters. Power evacuation of generated power for the plant will be at 0.415 KV internal grid of the Ganpat University.

The expected energy generation from the suggested PV power plant will be 1500 Kwh/annum/KW and Total generation will be 405000 Kwh/annum for capacity utilization factor (CUF) 18%.

The impact of temperature variation of modules on their performance is studied both on daily and yearly basis. It is observed that the efficiency of the plant is more sensitive to temperature than the solar insolation.

1.1.1 Innovative concept Cover the roof with solar arrays to....

- Save Land use (conventionally 5 acres /MW).
- Save CO2 emission – 220270 kgs/year.
- Generate clean and green power, eco-friendly power, strengthening energy security and mitigating huge amounts of carbon emissions.
- Reduction in temperature of the building.

1.1.2 Salient Features

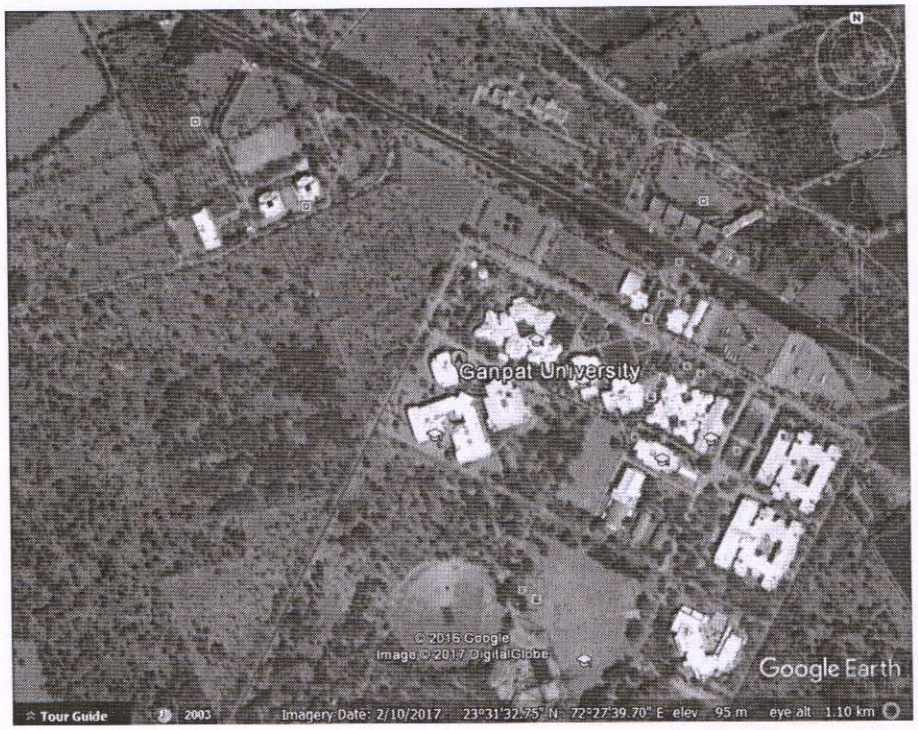
- A prototype structure was designed and installed at a separate site, it is essential and significant learning experience for the implementation team for rooftop project at various locations.
- Conceptualization, design, and manufacturing of the special structure with required strength and corrosion protection capabilities, keeping safety of rooftop on priority.
- The flow of wind is good at height level hence lowering the temperature of the solar panels; this further improves the efficiency of the rooftop solar plant and yields a higher electricity output.
- Minimization of the transmission loss leading to strengthening of the grid.

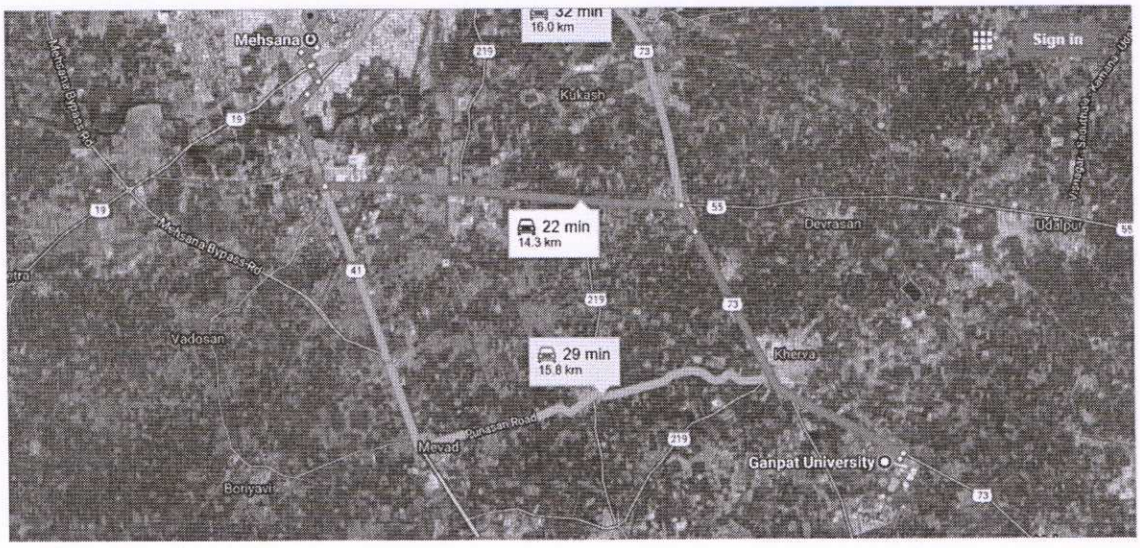
1.2 Site Overview

Ganpat University (Institute / Organization) intends to install the grid connected rooftop solar power plant on the New Building & Main office building at Ganpat University, The Mehsana District Education Trust, Ganpat Vidhyanagar, Kherva, Mehsana Distrrict, Gujarat. The identified building of Ganpat Univeristy is 3 floor high rised building and the roof of the same building is cement concrete & flat. The project is 270KW grid connected rooftop solar photo voltaic fixed tilt power plant technology. The roof has no undulations within its boundaries and no trees / high rised building in the surrounding that may cause shading.

Access to the site is understood to be suitable for transport of heavy equipment / machinery. The site is 15 Km away from Mehsana.

Figure illustrates the location of the site.





1.3 Solar resource

The annual energy yield of a PV plant is heavily dependent on the solar resource of the site. Since solar irradiation data has not been recorded at the proposed site, it is necessary to use other data sources to obtain estimates of the solar resource.

Meteonorm data used for energy yield prediction is shown inTable.

Meteonorm Irradiation Data for Ganpat University.	
Month	**Mean global daily irradiation on a horizontal plane kWh/m2/day**
January	4.67
February	5.52
March	6.46
April	6.99
May	7.10
June	6.13
July	4.42
August	4.20
September	5.29
October	5.45
November	4.73
December	4.33
Annual Mean	5.44

1.4 Energy Yield Overview

The energy yield analysis involved:

- Sourced average monthly horizontal irradiation, wind speed and temperature data from NASA and used in the energy yield simulation software.
- Calculated the global incident radiation on the collector plane, taking into account horizon shading.
- Calculated the losses, using inverter specifications, PV module characteristics and the site layout.

With the help of industry standard photovoltaic simulation software PVSYST 6.43 that simulates the energy yield using hourly time steps. The software takes as input detailed specifications of:

- The solar PV modules
- The inverter
- Electrical configuration including number of modules in series and parallel.

1.5 Radiation in the Plane of the Modules

Tilt angle of 21° has been selected for the preliminary designs of the plant. The tilt angle may be refined during the detail design phase of the project. PV modeling software PVSYST 6.43 is used to calculate the incident global irradiation on the collector plane from the irradiation in the horizontal plane.

1.6 Corrections and Losses

Data obtained for irradiation on collector plane, PV module and inverter specifications and plant configuration are inputs to the PV modeling software to calculate DC energy generated from the modules in hourly time steps throughout the year. This direct current is converted into alternating current by inverter.

A number of losses occur during the process of converting irradiated solar energy into AC electricity fed to the grid. Table shows the yield loss factors used in the energy yield analysis.

Yield Loss Factors for Solar PV Plant	
Losses	**Percentage (%)**
Shading	3.0
Low irradiance	3.0
Module temperature	11.0
Module quality	0.7
Module mismatch	1.0
DC ohmic	1.2

1.7 Yield Prediction

Table summarizes the energy yield of 270kW solar PV plant, the available resource, the losses and the first year yield.

Energy Yield Prediction for 270kW Solar PV Power Plant	
PV modules	310 WP
Peak power of module (Wp)	310
Modules per plant	880
Peak power of plant (kWp)	272.8
Modelled efficiency at STC[1] (%)	15.7%
Solar Resource (based on NASA data)	
Annual global horizontal irradiation (kWh/m^2)	5.44
First Year Energy Yield (MWh/annum)	488.5

[1]Standard Test Conditions, which are defined as follows: irradiance of $1000W/m^2$ at a spectral density of AM 15 (ASTM E892) and cell temperature of 25°C.

Energy Yield Prediction for 270kW Solar PV Power Plant	
First Year AC Specific Yield (kWh/kWp)	1500
Performance Ratio (PR) (%)	75
Capacity Utilization Factor (CUF) (%)	18

2. Rooftop Solar Power Generation System description

India has an abundance of sunshine and the trend of depletion of fossil fuels is compelling Energy Planners to examine the feasibility of using renewable source of energy like Solar, Wind etc.

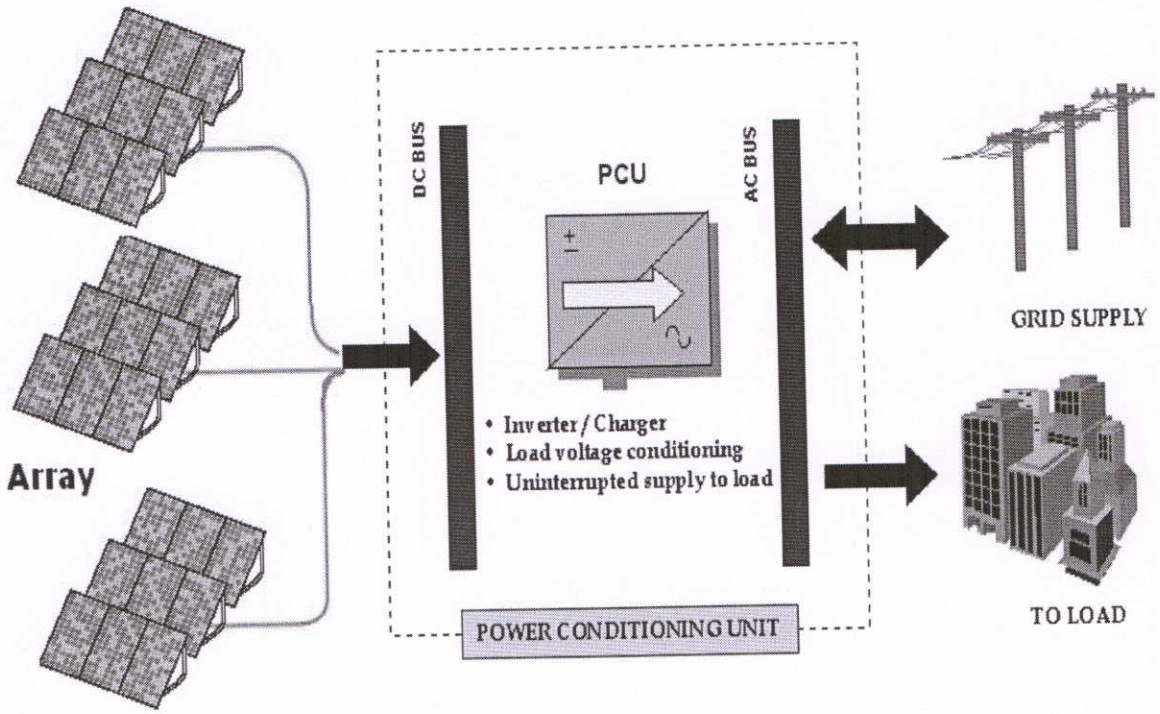
U R Energy has been active in the field of Solar Photo voltaic (SPV) and is in a position to set MW scale SPV Power Plants. This write up describes a typical Solar Grid Connect Rooftop Power Plant for captive consumption.

The Photo voltaic (PV) Grid Tied system consists of mainly of 3 components:

- The Crystalline Silicon PV array
- Solar Inverter (Power Conditioning Unit)
- BOS like MMS, AJB, MJB, ACDB, Cables, Hardware, Earthing & Lighting kit

Crystalline silicon Modules are of high Power density & will convert Sun Light in to Electricity. The power generated by the Solar array needs to be 'conditioned' in respect of voltage, phase and frequency to make it Grid – Tied. The Power Conditioning Unit used in grid connected SPV systems consist of an Inverter and other electronics for MPPT, Synchronization and remote monitoring. The Module mounting structure with suitable tilt angle for optimized annual is used to hold the module in position.

Figure shows the Rooftop Solar Generation System



3. System Description and Specifications of the components

In this report we discuss the performance of the photovoltaic solar power plant in Mehsana district during the thought year. The identified site is located at Godhavi Ganpat University, The Mehsana District Education Trust, Ganpat Vidhyanagar, Kherva, Mehsana Distrrict, Gujarat and site coordinates are *Lattitude 72°.27'53" E and Longitude 23°31'98" N* at an altitude of approximately 201 meter above mean sea level in the Indian state of Gujarat.

The project is 270 KW grid-connected rooftop solar photovoltaic power plant & it is due south fixed tilt power plant technology. The main components of solar PV plant are modules, inverters, mounting structure, monitoring and data acquisition system. The project uses 310Wp poly-crystalline PV panels and string inverters. The modules shall be arranged in horizontal with 18 & 20 modules in series on mounting structure. The layout shall be designed with a pitch (distance between the fronts of one row of the front of the next row) between rows of arrays so that there is minimal inter-row shading at the maximum sun angle at winter solstice and adequate distance for maintenance purposes.

The PV modules are electrically connected to form a string. The DC electrical output from the PV modules is fed to inverters. The cable routes from the inverters lead to the L.T. distribution panel of the client. The client will be able to consume the power thereof.

Power evacuation of generated power for the plant will be at 0.415 KV internal grid of the Ganpat University.

The expected energy generation from the suggested PV power plant will be 1728 Kwh/annum/KW and Total generation will be 466560 Kwh/annum for capacity utilization factor (CUF) 20%.

The impact of temperature variation of modules on their performance is studied both on daily and yearly basis. It is observed that the efficiency of the plant is more sensitive to temperature than the solar insolation.

Table Gives the detail summary of 270 KWac Rooftop Solar Power Plant

Summary of 270kW Rooftop Solar PV Power Plant	
Nominal location	*72°.27'53" E, 23°31'98" N*
PV module	Jakson
PV Module peak power (Wp)	310
Total Area in m2	V M Patel : 110 Sqmtr, Acharya Motiram : 100 SqMtr Pharmacy College: 105 Sqmtr
Inverters	U R Energy (India) Private Limited
Inverter AC power (kW)	33 KW
Inverters in the plant	8 (Each one of above mentioned capacity)
Peak power of plant (kWp)	272.5

4.1 Solar PV Module :

The 310 WP modules have been selected for the execution of the designs. These modules are rated at 310 Wp at standard test conditions (25°C, 1000W/m2).The technical specifications of the modules are presented in Table.

310 Wp PV Module Specifications	
Particulars	**Remarks**
Type	Poly-Crystalline (C-si)
Module Manufacturer	Jakson
Max. output, Pmax, at STC (W)	310 Wp
Maximum power voltage, Vmpp (Volts)	37.50 V
Maximum power current, Impp (A)	8.28 A
Open-circuit voltage, Voc (V)	45.30 V
Short-circuit current, Isc (A)	8.77 A
Length (mm)	1960
Width (mm)	990
Thickness (mm)	40
Weight (Kg)	22

Module String / Array Configuration

18 nos & 20 nos modules are connected in series forming a string. This arrangement ensures the current and voltage levels match the specification of the inverters.

PV Module Configuration	
PV module	310 WP
Module peak power (Wp)	310
Modules per string	18 & 20 Nos
Strings per inverter	08 Nos

Table presents the system design parameters.

System Design Parameters	
PV module	310 WP
Module peak power (Wp)	310
Modules per string	18 & 20 Nos
Strings per inverter	08
Inverter Max Power, Pmax, at STC (kW)	33
Maximum power voltage, Vmpp (Volts)	740
Maximum power current, Impp (A)	64
Open-circuit voltage, Voc, (V)	900
Short-circuit current, Isc (A)	72

4.2 Grid Tie Inverters

The DC electricity generated by modules is converted to AC in inverters. Total 08 nos of inverter of 33 KW capacity have proposed for this system. For the proposed project string inverters having capacities of 33kW is opted. The main technical characteristics of these inverters are illustrated in below given Table.

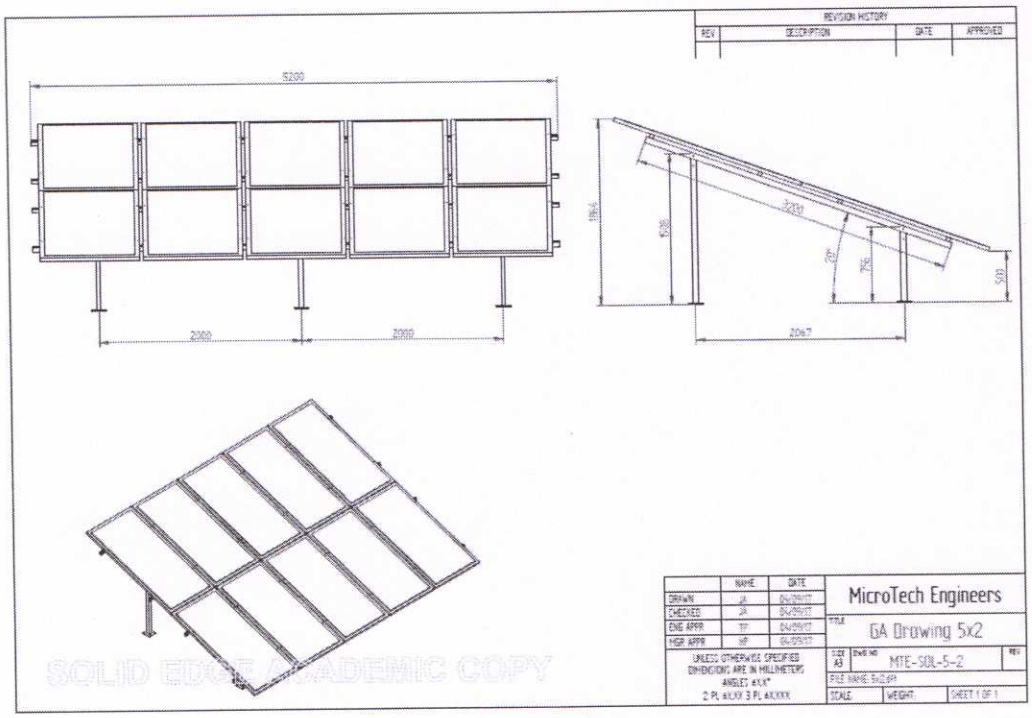
U R Energy Inverter Specifications	
Modal/ Parameter	**Remarks**
Energy Source	PV
Input Side(DC)	
Max. DC input power(kW)	36 KW
Max. DC input voltage(V)	1000 V
Start-up voltage(V)	350 V
MPPT voltage range(V)	200....800 V
Max. input current(A)	4 x 18 A
MPPT No./Max i/ps strings no.	4/8
Output Side (AC)	
Rated output power(kW)	33 KW
Max. apparent output power(kVA)	33 KVA
Max. output power(kW)	33 KW
Rated grid voltage(V)	400 V
Grid voltage range(V)	304....460 V
Rated grid frequency(Hz)	50/60 Hz
Operation phase	Three Phase
Rated grid output current(A)	47.8 A
Max. output current(A)	50 A
PF (at rated output power)	0.8...1...0.8
THDi (at rated output power)	<3%
DC injection current(mA)	<50
Grid frequency range(Hz)	47-52 or 57-62
Efficiency	
Max.efficiency	98.70%
EU efficiency	98.30%
MPPTefficiency	> 99.9%
General Data	
Dimensins(mm)	530W*700H*356.5D (mm)
Weight(kg)	58.2 KG
Topology	Transformerless
Self consumption (night)	<1W(Night)
Operating ambient temperature range	-25~60°C
Ingress protection	IP 65
Grid connection standard	EN50438, G59/3, AS4777, VDE0126-1-1, IEC61727
Safty/EMC standard	IEC62109-1/-2, AS3100, EN61000-6-1, EN61000-6-3

4.3 Module Mounting Structure

A fixed module mounting system of 23° inclination has been selected for the rooftop solar PV plant. The mounting structures to be selected shall comply with the appropriate Indian / international standards and shall be capable of withstanding on-site loading and climatic conditions.

As mentioned above, a group of seventeen modules per string will form a general configuration. Numerous such tables will be placed on the roof to place all the modules comprising of 270kWac rooftop solar power plant. The mounting structure shall be made of hot dip galvanized iron. The roof on which the modules are mounted shall be checked to see if it can sustain the weight subjected by the rooftop solar power system.

Figure shows the structure diagram



4.4 DC Distribution Box

The DC Distribution Box is used to provide flexibility for the operator of the solar power plant to disconnect and connect both the inward solar supply and battery terminals. Here an MCB or Isolator and a fuse of proper rating depending upon the capacity of the power plant and the battery bank are used.

4.5 AC Distribution Box

The cable routes from the inverters lead to the L.T. distribution panel of the client. The client will be able to consume the power thereof. Power evacuation of generated power for the plant will be at 0.415 KV internal grid of the Ganpat University. The L.T. distribution box consist of bus bar, MCBs, MCCBs / RCCBs as per rooftop solar power plant required.

4.6 Cables

All the DC and AC cables are designed for outdoor application with a continuous ambient temperature of 50°C. They are sized for a power loss and voltage drop below 1.5%.

4.6.1 DC Cabling

All the modules shall be equipped with attached junction boxes with 4mm2 & 6mm2 connecting leads. PV Crystalline modules will be interconnected to form a string of seventeen modules. Each strings shall be paralleled using harness to form a single input of the string inverter.

4.6.2 AC Cabling

Three phase AC output from each of the inverters of a block will be connected to LV distribution box using 5 core 16mm2 multi-stranded copper cable.

Power will be fed from the LV distribution box to Ganpat University's main L.T. distribution panel using 3.5 cores 120 mm2 1.1kV grade XLPE aluminum armored cable.

4.7Earthing Kit (Maintenance Free)

There will be dedicated earthing stations for DC side and AC Side. Earthing system shall comply with the latest edition of IS 3043 describing code of practice of earthing and IEEE80.

All the modules & AC LT distribution box shall be appropriately earthed in accordance to NEC. Grounding of the PV modules shall be done as recommended by manufacturer.

4.7.1 Lightning Protection

The entire PV plant will be protected from lightning. The protection system will be based on early streamer emission lightning conductor air terminals. The air terminals shall provide an umbrella protection against direct lightning strike covering a radial distance of 100m. The air terminal will be capable of handling multiple strikes of lightning current and should be maintenance free after installation. The lightning arrestor will be installed on the roof with a mast height of 3m.

These air terminals will be connected to respective earthing stations, and an earthing grid will be formed connecting all the earthing stations through the required galvanised iron tapes. The earthing stations for the lighting discharges will be provided with test links of phosphorus bronze and located above ground level in an easily accessible position for testing.

4.8 Installation Kit : N.A.

4.9 Energy Meters

In addition to the metering and monitoring arrangement in inverters, monitoring of voltage, current and energy will be provided at take-off point within the plant premises. These meters will be digital with an RS 485 port for remote monitoring. They will have an accuracy class of 0.5S.

Tariff metering shall be done with main and check meters of 0.5S accuracy class or as required and specified by UGVCL. These meters shall be installed at take-off point within the plant premises. However measurements at net meter shall be considered for import - export calculation.

"Net meter" means an appropriate energy meter capable of recording both import & export of electricity.

"Solar meter" means an appropriate energy meter capable of recording both import of electricity.

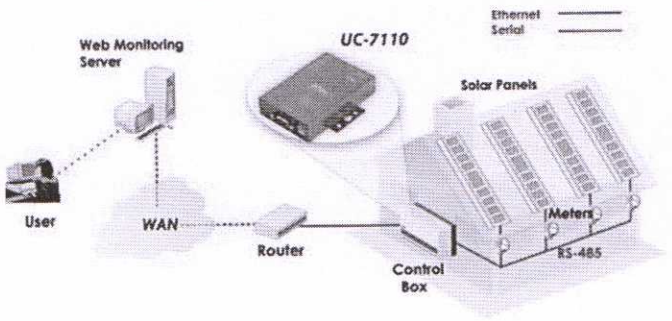
Table shows the Energy Meters detail.

Particulars	Bi-directional Energy Meters (Import-Export) Specifications	Solar Energy Meters (Forward Import) Specifications
Nos of Phases & Wires	Three Phase - Four Wire	Three Phase - Four Wire
Voltage Rating	3 x 11KV	3 x 240V(P-N),
Current Rating	5 Amp	5 Amp
Accuracy Class	0.5S	0.5S
Indian Standards / IEC	IS 13779-IS 14697	IS 14697, IS 13779
Measurands	kWh,kVah,kVA ,PF, Max Demand	kWh,kVah,kVA
Communication Port / Protocol	Optical,RS-232/DLMS	Optical,RS-232/DLMS

4.10 Online Monitoring System

The power plant will incorporate a communication system to monitor the output of each MPPT and inverter so that system faults can be detected and rectified before they have an appreciable effect on production. The monitoring system will be a web based internet portal solution. A local display shall be provided showing instantaneous and cumulative energy produced, tons of CO2 saved, etc.

Figure shows the Online Monitoring System Concept



UR Energy make inverter has created powerful monitoring tools that reliably and accurately gathered pertinent data and feed it into UR Energy's monitoring system. Monitoring service includes :

- Performance ratio of the plant.
- Automatic analytical report.
- Good access to historical data.
- Recommendation for all necessary preventive and corrective actions.
- Site Specific Notes.

UR Energy monitoring equipment allows you to "keep an eye" on your entire photovoltaic system from the comfort of your own home/office by means of various electronic tools.

4.11 Any Other Component: N.A.

Detailed Project Report

Grid Interactive Solar Photovoltaic Based Power Plant of 270kW Capacity

For

Ganpat University.
at Ganpat Vidyanagar, GJ SH 73, Gujarat 384012

In Gujarat, India

	Name	Job Title
Reviewed by	Jigar Bhuptani	Ass. Manager Technical
Authorized by	Alpesh Desai	DGM-Technical

Project installer:
UR Energy (INDIA) PVT LTD
B2/9th Floor,Palladium,
B/h. Divya Bhaskar Press,
Corporate Road, Prahlad Nagar,
Ahmedabad-380054,
Gujarat, India

A I Patel
Managing Trustee
Mehsana District Education Foundation
Ganpat Vi... Kherva.

Glossary of Terms

A	Amp
AC	Alternating Current
°	Degrees
DC	Direct Current
Hz	Frequency, Hertz
kWp	One thousand Watts peak
kWh	One thousand Watt hours
M	Meters
m^2	Meters squared
Mm	Millimetres
mm^2	Millimetres squared
m/s	Meters per second
MPPT	Maximum Power Point racking
MV	Medium Voltage
MW	One million Watts or Megawatt
MWp	Megawatt peak of Solar PV modules
N/m2	Newton per meter Squared
N	North
%	Percentage
PV	Photovoltaic
STC	Standard Test Conditions
V	Volts
Voc	Open Circuit Voltage
VT	Voltage Transformer
W/m2	Watts per metres squared
Wp	Watt peak

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Managing Trustee
Mehsana District Education Foundation
Ganpat Vidyanagar, Kherva.

1 INTRODUCTION

The purpose of this report is to provide a preliminary design basis report for 270kW Grid tied solar Photovoltaic (PV) plant at Gujarat, INDIA.

1.1 SITE OVERVIEW

The project site lies in Ganpat University, Ganpat Vidyanagar, GJ SH 73, Gujarat 384012, and Gujarat around the co-ordinates 23.5N, and 72.5E at an altitude of approximately 96 meters above means sea level.

The proposed 270kW Grid tied Solar PV plant is coming up in Ganpat University, located at Ganpat Vidyanagar, GJ SH 73, Gujarat 384012, INDIA.

Figure 1 illustrates the Map of Gujarat state.

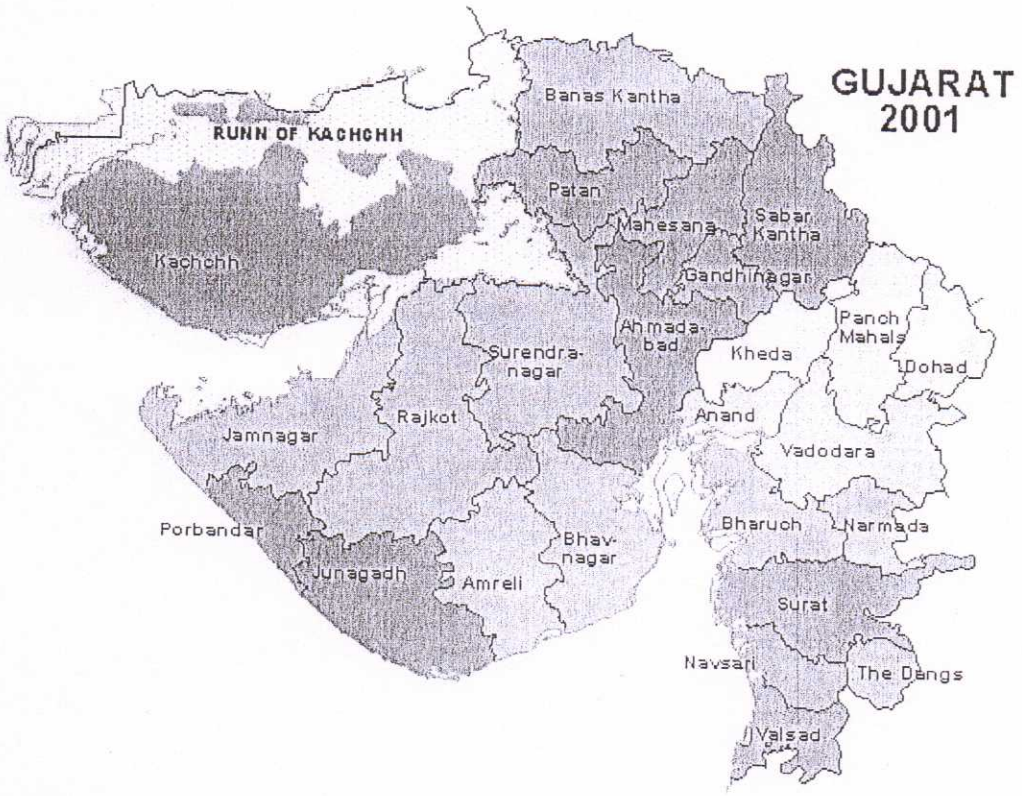

Figure 1: Map of Gujarat

2 SOLAR RESOURCE

The annual energy yield of a PV plant is heavily dependent on solar resource of the site. Since solar Irradiation data has not been recorded at the proposed site, it is necessary to use other data source to obtain estimates of the solar resource.

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Mehsana District Education Foundation
Ganpat Vidyanagar, Kherva.

Meteonorm data used for energy yield prediction is shown in Table 1.

Table 1:Meteonorm Irradiation Data for Sunrise	
Month	Mean global daily irradiation on a horizontal plane kWh/m^2
January	143.8
February	153.7
March	198.9
April	208.8
May	219.2
June	182.8
July	135.9
August	130.3
September	158.2
October	167.6
November	141.1
December	133.3
Annual Mean	1973.6

3 PLANT DESCRIPTION

The main components of solar PV plant are modules, inverters, mounting structure, monitoring and data acquisition system.

The proposed PV plant is a plant of fixed type with PV modules facing due south at a tilt of 18^0. The Project uses 310Wp Poly-crystalline PV modules and 33kW string inverters.

The modules shall be arranged in portrait orientation. The PV modules are electrically connected to form string and two strings are parallely connected by Y connector. The DC electrical output from the PV modules is fed to junction boxes and then to inverters.

The detail summary of 270kW solar PV plant.

Table 2: Summary of 270kW Solar PV Power Plant	
Nominal location	23.5N,72.5E
PV module	UREnergy
PV module peak Power (Wp)	310
Modules per plant (310Wp)	880
Inverters	UR Energy (INDIA) Pvt Ltd
Inverter AC power (kW)	33
Inverters per Plant	8

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3.1 SUMMARY OF SYSTEM CHARACTERISTICS

Figure 2: Power flow of 180kW Solar PV plant

Further, in the section a typical design of PV plant on one plot is described. The design basis for all the other plots shall be similar.

3.2 PV MODULES

The 310Wp modules have been selected for preliminary designs. The 310Wp Modules are rated at 310 WP respectively at standard test conditions (25^0C, 1000W/m^2). The 310Wp Modules are rated at 310Wp respectively at standard test conditions (25^0C, 1000W/m^2).
The technical specifications of the modules are presented in Table 3 and 4.

Table 3: 255Wp PV Module Specifications	
Type	Multi- crystalline
Module Manufacturer	UREnergy
Max. output, $P_{max,}$ at STC (W)	310
Maximum power voltage, V_{mpp} (V)	37.5
Maximum power current, I_{mpp} (A)	8.28
Open circuit voltage, V_{oc} (V)	45.3
Short-circuit current, I_{sc} (A)	8.77
Efficiency(%)	15.7
Length (mm)	1960
Width (mm)	990
Thickness (mm)	35
Weight (kg)	22

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3.3 MODULES STRING/ARRAY CONFIGURATION

Modules are connected in series forming a string and two strings are connected in parallel by y-connector and thus 2 strings are connected in parallel to forming an array. This arrangement ensures the current and voltage levels match the specification of the inverters.

Table 5 presents the PV module design parameters

Table 5: PV Module Configuration		
SR No	PV module	Seraphim
1	Module peak power (Wp)	310
2	Module per Roof	880
	Modules per inverter	72
	String per inverter	03
	Module per string	18 and 20
	Number of inverter	08

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3.4 INVERTERS

The DC electricity generated by modules is converted AC in inverters. For proposed project String inverters having capacity of 33kW is opted. The main technical characteristics of these inverters are illustrated in below Table 6.

Table 6: Inverter Specification	
Manufacturer	UR Energy (INDIA) Pvt Ltd
Max. PV input power	33kW
Max. DC input voltage	1000V
Max. DC input current	A
MPPT DC input voltage range	200-800V
No. of MPPT/strings per MPPT	4/8
Nominal AC power	33000W
Nominal AC voltage	415V/50Hz
Power factor (+ and +-)	>0.99 at rated power
Max. efficiency	98.6%
Size in mm (W*H*D)	530*700*356
Weight (kg)	58.2
Communication Interface	RS 485, Wi-Fi/GPRS(Optional)

4 MODULE SUPPORT STRUCTURE

A fixed module mounting system of 18^0 inclination has been selected for PV plant. The mounting structures to be selected shall comply with the appropriate industrial standards and shall be capable of withstanding on-site loading and climate conditions.

Figure 2 illustrate the typical mounting rail layout and orientation.

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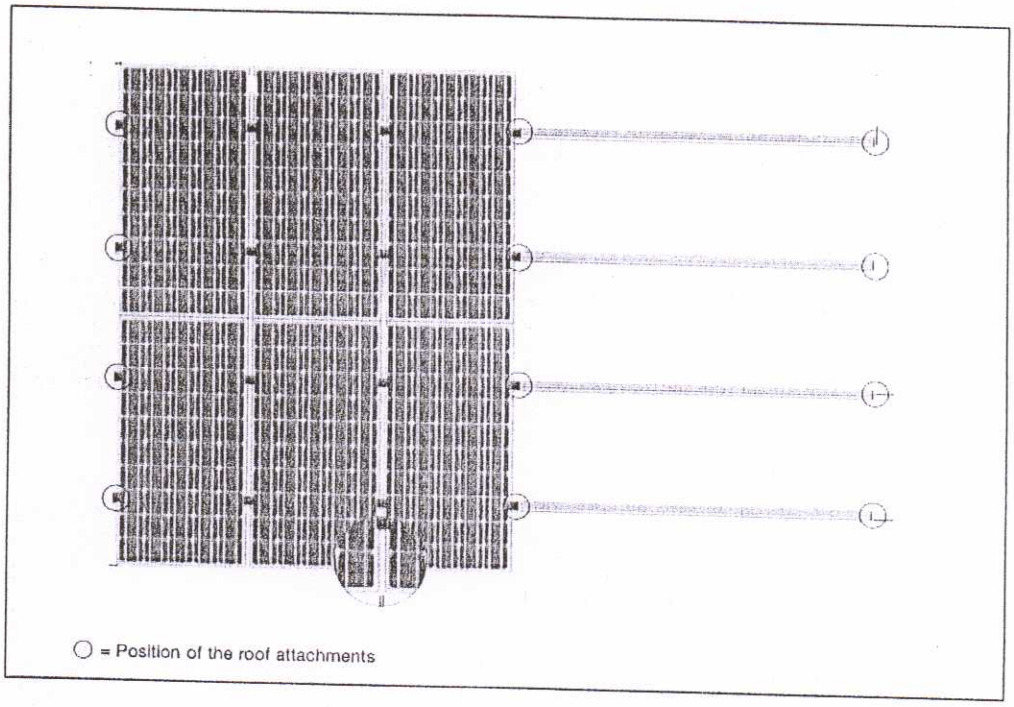

Figure 2 Module Mounting Rail with 18^0 Tilt

4.1 MODULE PLANT LAYOUT

The layout is chosen to maximize the annual energy output. Further layout refinements may be made in the detail design phase.

5 ENERGY YIELD OVERVIEW

The energy yield analysis involved:

1) Sourced average monthly horizontal irradiation, wind speed and temperature data from Metronome and used in the energy yield simulation software.

2) Calculated the global incident radiation on the collector plane, taking into account horizon shading.

3) Calculated the losses, as described in section 5.2 below, using inverter specification, PV module characteristics and the site layout.

4) Applying AC losses, module degradation, down time losses, auxiliary consumption losses and transmission line losses to obtain an energy yield for a twenty-five year project life cycle.

A. A. Patel
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Steps 2 and 3 are facilitated using industry standard photovoltaic simulation software PVSYST 6.0 That simulates the energy yield using hourly time steps. The software takes as input detailed specifications of:

- The solar PV modules
- The inverter
- Electrical configuration including number of modules in series and parallel

5.1 RADIATION IN THE PLANE OF THE MODULES

Tilt angle of 18^0 has been selected for the preliminary design of the plant. The tilt angle may be refined during the detail design phase of the project.

PV modeling software PVSYST 6.0 is used to calculate the global irradiation on the collector plane from the irradiation in the horizontal plane.

5.2 CORRECTIONS AND LOSSES

Data obtained for irradiation on collector plane, PV module and inverter specifications and plant configuration are inputs to the PV modeling software to calculate DC energy generated from the modules in hourly time steps throughout the year. This direct current is converted into alternating current by inverter.

A number of losses occur during the process of converting irradiated solar energy into AC electricity fed to the grid. Table 7 shows the yield loss factors used in the energy yield analysis.

Table 7: Yield Loss Factor for Solar PV plant Ganpat University, Gujarat

Losses	Percentage (%)
Shading	3.0
Incident Angle	2.8
Module temperature	15.4
Low irradiance	3.0
Soiling	3.0
Module quality	2.5
Module mismatch	1.0
DC ohmic	1.2
Inverter performance	1.4
Down time	0.5
Auxiliary Consumption	0.5
AC Losses	
AC ohmic	1.2
Transformer (LV/MV)	1.1

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Some of these losses are calculated within the PVSYST software, whilst others like the downtime, auxiliary consumption, AC ohmic and transformer losses are applied externally to the output of PVSYST and are nominal figures applied from the data on the performance of similar PV plants.

6 YIELD PREDICTION

Table 8 summarizes the energy yield of 270kW solar PV plant, the available resource, the losses and the first year yield.

Table 8: Energy Yield Prediction for 270kW Solar PV Power Plant	
PV modules	
Peak power of module (Wp)	310Wp
Modules per plant (310Wp)	310
Peak power of plant	880
Module efficiency at STC[1] (%)	270kW
Solar Resource (based on METEONORM data)	15.71
Annual global horizontal irradiation (kW/m^2)	
System Losses	1973.6
Shading	
Incident Angle	0.960
Low irradiation	0.968
Module temperature	0.974
Soiling	0.940
Module quality	0.970
Module mismatch	0.988
DC ohmic	0.986
Inverter performance	0.979
Down time[2]	0.989
Auxiliary consumption	0.995
AC Losses	0.995
AC ohmic	
Transformer (LV/MV)	0.988
	0.989

[1]Standard Test Condition, which are defined as follows: irradiance of 1000W/m^2 at a spectral density of AM 15(ASTM E892) and cell temperature of 25^{0}C.

[2] Based on performance of similar PV plants. Client should confirm local grid availability.

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Table 9: Energy Yield Prediction for 180kW Solar PV Power Plant	
First year energy yield (MWh/annum)	414.4
First year AC specific Yield (kWh/kWp)	1614
Performance Ratio (PR) (%)	75.2
Capacity Utilization Factor (CUF) (%)	17.70

6.1 DEGRADATION

The performance of a PV module decreases with time. Initial degradation occurs due to defects in the cell, which are activated on exposure to light. The subsequent degradation occurs at the module level and may be caused by:

- Effect of environment on the surface of the module e.g, pollution
- Lamination defects
- Mechanical stress and dampness on the contacts
- Cell contact breakdown
- Wiring degradation

Factors affecting the degree of degradation include the quality of materials used in manufacture, the manufacturing process, and also the O&M regime employed at the site.

For solar PV plant energy yield prediction, a linear degradation of 0.70%[3] has been considered. The degradation loss is applied to the simulation software.

[3] Manufacturer will provide a 25 years linear power output warranty of 0.7-1.0%

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Agreement / Consent/ Certificate from User/ Beneficiary

1. This is to certify that I,Anilbhaipatel S/o Shri Tribhovandas Residentof kherva,mehesana herewith agree to install the Grid Connected Rooftop Project / Small Power Plant of 270 kWp capacity as per details submitted in the Form B / DPR of the proposal.
2. I confirm that the CFA received will be utilized for this project only and not for any other purpose. I herewith also confirm that the balance cost in addition to the CFA will be met by me from my own/ other resources.
3. I agree that the roof space will be made available in the proposed project site and is owned by me/ leased to me by the owner.
4. This is also confirmed that I will extend full cooperation including access to the project site premise to the implementing/ executing agency during installation and O&M, of the plant.

Signature.............................

Managing Trustee
Ganpat university.
Kherva
Mehsana-384012.

MEHSANA DISTRICT EDUCATION FOUNDATION Reg.No. E/3845 MEHSANA

Place: Kherva

Date:

Managing Trustee
Mehsana District Education Foundation
Ganpat Vidyanagar, Kherva.

ANALYSIS REPORT OF SOLAR POWER GENERATION

Capacity : 270 KW or 300 KVA
Connection: With 600 KVA HT connection of GNU
Installation : 36 KW Each * 8 Nos. Invertor
Commissoned plant : 07 July 2017

MONTH	UGVCL UNIT IMPORT (KWH) A	BILLING AS PER UNIT IMPORT B	UNIT RATE PER MONTH C=B/A	GNU SOLAR UNIT EXPORT WITH DISCOM (KWH) D	EXPORTED UNITS ADJUSTMENT IN RS. E	EXPORTED UNIT RATE /MONTH F=E/D	TOTAL SOLAR UNIT GENERATED (KWH) G	SOLAR UNIT UTILIZED IN GNU BUILD. (KWH) H=G-D	UTILIZED UNITS ADJUSTMENT IN RS. I=H*C	BENEFIT FROM GNU SOLAR POWER PLANT IN RS. J=I+E	TOTAL UNIT CONSUMTION OF HT CONNECTION /MONTH K=A+H
JUL' 17	67080	589527.19	8.79	248	1845.14	7.44	5960	5712	50199.45	52044.59	72792
AUG' 17	56832	506891.53	8.92	1488	10900.47	7.33	16240	14752	131574.88	142475.35	71584
SEP' 17	68024	589033.01	8.66	1648	12136.42	7.36	27080	25432	220220.62	232357.04	93456
OCT' 17	60520	534522.48	8.83	4624	34400.93	7.44	32520	27896	246382.01	280782.94	88416
NOV' 17	26264	284711.30	10.84	13136	97545.21	7.43	36040	22904	248287.68	345832.89	49168
DEC' 17	29328	303661.54	10.35	8066	59767.83	7.41	29920	21854	226275.89	286043.72	51182
JAN' 18	28800	297440.73	10.33	13008	95692.86	7.36	34920	21912	226302.82	321995.68	50712
FEB' 18	28552	292952.44	10.26	12289	89961.01	7.32	36720	24431	250669.70	340630.71	52983
MAR' 18	28128	295086.77	10.49	9392	68244.19	7.27	38040	28648	300542.01	368786.20	56776
APR' 18	45424	421147.10	9.27	5360	39097.92	7.29	42440	37080	343785.99	382883.91	82504
MAY' 18	55832	489668.83	8.77	4888	36024.29	7.37	42280	37392	327942.70	363966.99	93224
JUN' 18	64768	551011.01	8.51	2240	16487.04	7.36	40200	37960	322943.09	339430.13	102728
JUL' 18	64216	552632.74	8.61	2336	17068.9	7.31	28720	26384	227056.53	244125.43	90600
AUG' 18	77816	654073.45	8.41	984	6970.85	7.08	23840	22856	192113.48	199084.33	100672
SEP' 18	60096	527664.67	8.78	1728	12047.62	6.97	23760	22032	193448.95	205496.57	82128
OCT' 18	53928	479421.22	8.89	4464	31123.01	6.97	20960	16496	146649.84	177772.85	70424
NOV' 18	33472	333778.32	9.97	9904	70114.38	7.08	33440	23536	234697.85	304812.23	57008
DEC' 18	31096	316632.62	10.18	5408	38108.23	7.05	24320	18912	192569.98	230678.21	50008
JAN'19	17688	220913.14	12.49	10855	76217.73	7.02	33640	22785	284571.79	360789.52	40473
FEB'19	14560	202801.95	13.93	10881	79045.68	7.26	32000	21119	294160.33	373206.01	35679
MAR'19	15272	207860.16	13.61	9080	66465.60	7.32	36040	26960	366940.15	433405.75	42232
APR'19	34392	353379.36	10.28	8624	63127.68	7.32	42200	33576	344994.92	408122.60	67968
MAY'19	34816	356277.60	10.23	4216	30861.12	7.32	37320	33104	338758.43	369619.55	67920
JUN' 19	53120	492902.88	9.28	2018	14771.76	7.32	36480	34462	319774.46	334546.22	87582
JUL'19	53368	496425.69	9.30	1822	13291.13	7.29	27120	25298	235320.36	248611.49	78666
AUG'19	79208	715565.89	9.03	688	5187.41	7.54	20240	19552	176632.97	181820.38	98760
SEP'19	65648	621663.76	9.47	2584	19463.41	7.53	22320	19736	186893.07	206356.48	85384
OCT'19	62360	580308.16	9.31	2480	18673.80	7.53	27480	25000	232644.39	251318.19	87360
NOV'19	33168	351018.62	10.58	5584	42088.39	7.54	24680	19096	202093.93	244182.32	52264
DEC'19	34792	365841.12	10.52	2288	17297.28	7.56	24080	21792	229144.91	246442.19	56584
JAN'20	21968	265979.52	12.11	5880	44363.89	7.54	25960	20080	243120.39	287484.28	42048
FEB'20	23368	274959.22	11.77	6040	45205.06	7.48	33800	27760	326637.62	371842.68	51128
MAR'20	25696	292689.79	11.39	6008	45132.10	7.51	33240	27232	310185.57	355317.67	52928
APR'20	14176	108223.39	7.63	11880	86961.60	7.32	34880	23000	175588.18	262549.78	37176
MAY'20	13952	196283.52	14.07	9888	72380.16	7.32	31840	21952	308831.41	381211.57	35904
JUN'20	22280	259764.77	11.66	3272	23951.04	7.32	27200	23928	278978.97	302930.01	46208
JUL'20	22744	263693.57	11.59	3744	27855.36	7.44	25760	22016	255253.15	283108.51	44760
AUG'20	21048	252220.07	11.98	5168	38332.70	7.42	26480	21312	255383.61	293716.31	42360
SEP'20	22592	264693.32	11.72	2912	21503.84	7.38	19120	16208	189896.84	211400.68	38800
OCT'20	20664	250137.87	12.11	4056	30125.53	7.43	28840	24784	300010.50	330136.03	45448
NOV'20	22488	260553.61	11.59	4576	32967.52	7.20	29240	24664	285765.49	318733.01	47152
DEC'20	15496	206421.15	13.32	6336	45328.00	7.15	24000	17664	235300.93	280628.93	33160
JAN'21	18928	231990.61	12.26	8440	60124.87	7.12	20280	11840	145116.70	205241.57	30768
FEB'21	13264	191893.44	14.47				36080	36080	521977.93	521977.93	49344
MAR'21							33400	33400	0.00	0.00	33400
APR'21							0	0	0.00	0.00	0
MAY'21							0	0	0.00	0.00	0
JUN'21							0	0	0.00	0.00	0
JUL'21							0	0	0.00	0.00	0
AUG'21							0	0	0.00	0.00	0
SEP'21							0	0	0.00	0.00	0
OCT'21							0	0	0.00	0.00	0
NOV'21							0	0	0.00	0.00	0
DEC'21							0	0	0.00	0.00	0
	1657232				1758258.96		1331120	1090589	11125640	12883899	2747821

Remark : 270 KW Solar power generation commissioned(Bring in to working condition) on 7th July 2017 with UGVCL DISCOM.
Billing unit calculation on the basis of 15th to next month 14th midnight.
Collected A,B and C units from different metering unit

NOTE : NET BENEFIT OF 270 KW - GNU SOLAR POWER PLANT IS — RS. 12883899

% OF SOLAR UNIT GENERATED V/S UGVCL UNIT UTILIZED — 80.32 %

Ref.: GNU/PO/204/MNRE Ggrant/652/2018

Date :22/05/2018

To,
Deputy Director,
Gujarat Energy Development Agency,
4th Floor, Block No 11 & 12,
UdyogBhavan, Sector – 11.
Gandhinagar 382 017.

Subject : Claim letter for MNRE 30% Subsidy for 270 KW Grid Connected Rooftop Solar Photovoltaic Power Plant for captive consumption at Ganpat University, The Mehsana Dist. Edu. Trsut, Ganpat University, Vidhyavihar, Kherva, Mehsana – 396120.

Reference : 1) GEDA Registration Letter No.RTSPVOTH03032017-4551 & Date 03-Mar-2017

Dear Sir,

With reference to the above subject, We would like to inform you that the execution work had been completed by U R Energy(I) Pvt ltd, and the UGVCL discom has the successful installed the bi-directional & solar energy meter.

Therefore we are requesting to GEDA for claiming of the MNRE 30% subsidy for 270 KW Grid Connected Rooftop Solar Photovoltaic Power Plant.

We also confirm that the CFA received will be utilized for this project only and not for any other purpose. We have enclosed following documents for release of MNRE 30% subsidy to us.

Do needful in this matter.

Enclosed Documents :

1) Copy of GEDA Registration letter, 2) Copy of financial sanction issued by GEDA,
3) Copy of commissioning certificate issued by GEDA, 4) Work completion letter,
5) Copy of bill submitted to beneficiary by EPC contractor, 6) Bank details with Pan Card

Thanking You,
Yours Sincerely,

For, Ganpat University

Authorized Signatory

Ganpat Vidyanagar - 384 012, Mehsana-Gozaria Highway, District: Mehsana, Gujarat, INDIA.
Phone: +91-2762-286924/25, Fax : +91-2762-286080, Toll Free No.: 180023312345
Email: info@ganpatuniversity.ac.in Website: www.ganpatuniversity.ac.in

GEDA

ગુજરાત ઊર્જા વિકાસ એજન્સી
GUJARAT ENERGY DEVELOPMENT AGENCY
A Government of Gujarat Organisation

Ref: GEDA/SOL-4551/2017/07/OW\12861

3 July 2017

To,
M/s, Ganpat University
The Mehsana Dist. Education Trust
Ganpat, Vidhyanagar
Kherva, Mehsana - 396120

Sub: Installation of Social Sector Rooftop Solar PV System under the subsidy scheme for the year 2016-17.

Ref: 1) Your application for availing 30% MNRE CFA for Rooftop Solar PV System.
2) GEDA/SOL –4551/2017/03/OW/12965 Dated 03 March 2017

Sir,

With reference to above, Director, GEDA is pleased to revise subsidy sanctioned for the above-mentioned system as per the details given below:-

1	GEDA registration no. / year	RTSPVOTH03032017-4551 Dated 03.03.2017
2	SPV panel specification / capacity	As per latest edition of IEC 61215/270 kW
3	Grid tied inverter specification / capacity	As per IEC 61683/IS 61683 & IEC 60068-2/2705 kW
4	Total System Cost considered	Rs. 123,95,700/-
5	MNRE 30% CFA	Rs. 37,18,710/-

You have to get the system installed by 30/09/2017 as per MNRE terms & conditions and Specification (inclusive of indigenous SPV modules) and issue us a certificate of installation of the system along with copy of Connectivity agreement, CEIG System Charging permission, Bi-directional and Solar Meter installation & its details to enable us to undertake its inspection, failing which subsidy sanctioned to you will be treated as cancelled.

Above mentioned subsidy amount can be reduced or cancelled without assigning any reasons.

Thanking You,
Yours faithfully,

(S. B. PATIL)
DY. DIRECTOR

Copy to:
1) M/s, U R Energy India Pvt Ltd
B-9, Palladium, B/h, Divyabhaskar Press
Corporate Road, Makarba,
Ahmedabad – 380015

2) Manager (A & A), GEDA, Gandhinagar

ચોથો માળ, બ્લોક નં. ૧૧-૧૨ ઉદ્યોગ ભવન
સેક્ટર-૧૧, ગાંધીનગર - ૩૮૨ ૦૧૭.
4th Floor, Block No. 11-12, Udhyogbhavan,
Sector-11, Gandhinagar-382017. India.
Ph. : 079-232 57251-53
Fax : +91 79 232-47097, 57251
e-mail : director@geda.org.in
www.geda.gujarat.gov.in

GEDA
ગુજરાત ઊર્જા વિકાસ એજન્સી
GUJARAT ENERGY DEVELOPMENT AGENCY
A Government of Gujarat Organisation

Ref: GEDA/SOL-4551/2017/03/OW/12965 Date: March 03, 2017

By REGISTERED A.D.

To,
Chief Engineer (OP),
Uttar Gujarat Vij Company Limited (UGVCL),
Visnagar Road, Mehsana
Mehsana – 384 001

Chief Electrical Inspector,
Block no. 18, 6th floor, Udyog Bhavan, Sector-11,
Gandhinagar- 382 017

Sub: Registration of application for setting up of Solar Rooftop Project under Gujarat Solar Power Policy -2015.

Ref: Application registration no.RTSPVOTH03032017-4551 dated 03-Mar-17.

Sir,
With reference to above, the details of application received at GEDA are as under:

1. GEDA registration number is RTSPVOTH03032017-4551 dated 03-Mar-17.
2. Contract Demand 600 kVA Consumer no.19433.
3. The application for Solar Rooftop Project capacity is 270 kW (DC); as per the copy of electricity bill provided by the applicant which is up to 50% of the Contract Demand.
4. Documents regarding ownership/ legal possession of the premises are provided by the applicant.
5. You may consider providing grid connectivity as per the provision of the policy and also enter into wheeling of power agreement with the applicant. The Energy Settlement option is Billing Cycle as per the provision of the policy.
6. The specification of Bi-directional meter/ upgradation of present meter to Bi-directional meter for Net Metering as per the provision of policy be provided to the applicant.
7. Commissioning shall be taken up by GEDA on the submission of CEIG permission along with connectivity and wheeling agreement with DISCOM.
8. The action taken in the matter for the above applicant may be intimated to GEDA for further considerations. Future correspondence may be referred with GEDA Application registration number.

Thanking you

Yours faithfully

(R. V. Arya)
Sr. Project Executive I/c.

Cc to: Ganpat University,
The Mehsana Dist. Edu. Trust,Ganpat Vidhyanagar,
Kherva,
Mehsana- 396120

You may install the Solar PV Rooftop System on execution of Connectivity agreement with DISCOM

ચોથો માળ, બ્લોક નં. ૧૧ અને ૧૨ ઉદ્યોગભવન
સેક્ટર-૧૧, ગાંધીનગર - ૩૮૨ ૦૧૭.
4th Floor, Block No. 11-12, Udhyogbhavan,
Sector-11, Gandhinagar-382017. India.
Ph. : 079-232 57251-53
Fax : +91 79 232-47097, 57255
e-mail : director@geda.org.in
www.geda.gujarat.gov.in

GANPAT UNIVERSITY
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Covering Letter

Ref No: SP/00752/2016-2017 Date:

To,
Director,
Customs and Excise Cell
Ministry of New & Renewable Energy Sources
Block 14 CGO Complex Lodi Road
New Delhi

Sub: Application for approval for total Bill of Material for concessional customs and excise duty exemption for Solar Energy Project.

Sir,

With reference to above subject, we would like to submit that M/s. Mehsana District Education Foundation, Ganapat University is proposing to execute 0.270 MW Solar Power Project at Kherva village in Mehsana taluka of Mehsana District of GUJARAT. The project is allotted to us by **Gujarat Energy Development Agency** under the **state** policy and the clearance for the projects is obtained.

In this regard, we have awarded EPC contract to M/s U R energy (India) Pvt. Ltd. to execute the above mentioned project. Further, we have submitted detailed "Total Bill of Materail "on line on MNRE portal with BOM No. for availing the customs and excise exemption duty. The details of the submission along with the letter are as follows:

1. Certified Copy of Total Bill of Material by chartered engineer Annex 1
2. Land allotment letter Annex 2
3. Project Executive Summary Annex 3
4. Detailed Project Report (DPR) Annex 4
5. Whether Proof of tied up with State Transmission Utility (STU) Annex 5 for evacuation of power from the proposed plant to Grid
6. Power Purchase Agreement (PPA) Annex 6
7. EPC Contract/Agreement Annex 7
8. Print out and soft copy of PDF layer drawing of auto cad Annex 8 generated plant layout with each layer indicating material consumption in plant layout and in table
9. SLD (Single Line Diagram) / Detailed Drawings Annex 9 for power evacuation, Poles, Inverter, Transformers, etc.,
10. Self-Declaration/ Undertaking Annex 10
11. Affidavits for Excise Duty Exemption Annex 11
12. Affidavits for Concessional Customs Duty Annex 12

It is once again requested to process and approve our application at earliest for concessional customs and excise exemption for Solar Power Project.

For, Mehsana District Education Foundation, Ganpat University

A J Patel

Name: Mr. Anilbhai Patel

MEHSANA DISTRICT EDUCATION FOUNDATION
Reg.No. EI/3845 MEHSANA

Ganpat Vidyanagar - 384 012, Mehsana-Gozaria Highway, District: Mehsana, Gujarat, INDIA.
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Email: info@ganpatuniversity.ac.in Website: www.ganpatuniversity.ac.in

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SELF DECLARATION / UNDERTAKING
(TO BE SELF CERTIFIED BY PROJECT DEVELOPER)
Declaration by Company for concessions claimed by submitting Total Bill of Material for Concessional Custom Exemption Certificates and Excise Exemption Certificates for Installation of Solar Energy Project.

I Mr. Anilbhai Patel, R/o Mehsana District Education Foundation, Ganpat University, Ganpat Vidhyanagar-384012, Mehsana, Gujarat, am Authorized Person of M/s. Mehsana Distict Education Foundation, Ganapat University which is setting up a Solar PV plant of 0.270 MW capacity at village-Kherva, Tehsil-Mehsana, District-Mehsana, State-GUJARAT And on behalf of the above company/organization, do hereby solemnly affirm and undertake that:-

a. The Total Bill of material for initial setting of Solar Power project are uploaded in online system [http://164.100.194.45/ccms/] as per the procedure for applying as stated in Office Order No 30/42/2012-13/ NSM dated 1st July 2013 and as per modified vide OM of even number dated 26th November 2015 in the correct category of project as per classification of the projects. The individual certificates for partial withdrawal of the material will be generated through the system after The total Bill of Material is approved for the CCDC & ECCD by the Ministry of New & Renewable Energy. Subsequently, the certificates shall be submitted to relevant Customs/ Excise Tax Offices in physical or electronic format as per modification of the system takes place.

b. The application for Total Bill of Material is supported with following enclosures:

1. Detailed Project Report
2. Proof of Possession of land or Rooftop for Solar Projects
3. Solar Block Drawing indicating detailed Solar Power Project layout for the entire project.
4. Single line Diagram (SLD) along with calculation sheets for Solar Block, Power Block, Power Evacuation Block and Measuring Instruments covering Cables, Module Mounting Structures invertors and Transformers.
5. Power Purchase Agreement/Clearance from DISCOM for Net Metering (in case of Solar Rooftop Projects).
6. Proof of tied up with State Electricity Utility (Name of Electric Utility) for evacuation of Power from the
Solar Power Project.
7. Chartered Accountant Certificate on estimated Project cost with detailed Breakup.
8. Approved drawing for injection point and metering.
9. EPC Contract/Agreement, if applicable.
10. A auto CAD generated drawings Solar Block, Power Block, Power Evacuation Block indicating location of component & indicating quantity of material required.

c. The Total Bill of Material for the project as submitted in the MNRE portal at [http://164.100.194.45/ccms/] has been scrutinized and vetted by the MNRE empanelled Chartered

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Email: info@ganpatuniversity.ac.in Website: www.ganpatuniversity.ac.in

Engineer Name : **Shersingh** The institute of Engineers Register No: **AM 129702** , at Number **6** in MNRE Approved Channel Partners No. **28** Age-**45** Address: **Flat 270, PKT-13, Ph-1, DDA flat dwarka, New delhi-110045.)**

d. The listed goods are eligible for concessional duty of customs and excise leviable under the Ministry of Finance Notification no. 01/2011 dated 06/01/2011 & No. 21/2012-Customs dated 17/03/2012 and amendment Notification No. 32/2012 Customs, dated 8th May 2012 and any subsequent amendments/clarifications issued thereafter.

e. The certificates for ineligible items declared by MNRE vide their letter no. 22/09/2009-10/ ST/NSM dated 08.01.2014 and by any other subsequent instructions, have not been preferred for exemption/concession.

f. The said goods for which concessions shall be availed through the approved application no. SP/00752/2016-2017 of approved Total Bill of Material shall be used only towards installation & commissioning and running of the solar power Project/Plant under reference. The material shall not be shifted to other location.

g. If there is change in location or technical modification in the system, Developer will intimate MNRE regarding the changes made within two months.

h. Statement indicating utilization of material /components and parts procured from various manufacturers /suppliers under MNRE Certificates along with details of the actual bills will have to be submitted to MNRE, duly endorsed by Chartered engineer and State Nodal Agencies in paper form / electronic form in prescribed format within 60 days of commissioning of the afforested project.

i. The project proceedings/documents shall be submitted to Customs & Excise Office for examination of the certificates withdrawal and actual consumption of duty exemption.

j. No other similar certificate to any other EPC Contractors/ Supplier party has been granted for the same supplies as detailed above under the same Purchase Order contract referred to above.

2. In event of noncompliance of above, I do hereby undertake to pay the amount equal to the difference between duty leviable on such goods but for the exemption under the aforesaid notification and that already paid at time of import or withdraw from the factory. In case of deviation, the developer/EPC Contractor or both shall be liable for prosecution as per extent Rules/Laws of Customs and excise if the misuse of the certificates is found made by Company or EPC contractors towards this project or suppliers of these goods.

3. The cost of the project is derived after competitive bidding and tendering process and includes the customs and excise exemption benefits which shall be availed and I fully understand that MNRE is giving concessions based on my self-declaration and signature and of empanelled Chartered Engineer based on

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good faith & trust. I hear by also undertake not to misuse or abuse this faith imposed on our company by the Ministry.

4. I also understand that the random checks by Ministry of New Renewable Energy (MNRE), State Nodal Agencies, Customs & Excise Departments and shall cooperate by sharing information during inspections. In case of abuse/misuse of the concessions I and my company will be liable for criminal precaution.

5. I further solemnly affirm and declare that above information is true to the best of my knowledge and belief and nothing has been concealed.

Signature of Authorised Signatory:

Name: **Mr. Anilbhai Patel**

Designation: Managing Trustee

Place:

Name of Project Company: Mehsana Distict Education Foundation
Ganpat University

Date:

Seal:

Witnesses with their designation (Board of Directors with their DIN) and addresses:

Ganpat Vidyanagar - 384 012, Mehsana-Gozaria Highway, District: Mehsana, Gujarat, INDIA.
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Email: info@ganpatuniversity.ac.in Website: www.ganpatuniversity.ac.in

Affidavits for Excise Duty Exemption

To Whomsoever It May Concern

Ref No: SP/00752/2016-2017

I Mr. Anilbhai Patel , , R/o Mehsana District Education Foundation, Ganpat University, Ganpat Vidhyanagar-384012, Mehsana, Gujarat, am Chief Executive Officer/Authorised Signatory of Mehsana Distict Education Foundation, Ganapat University which is setting up a Solar PV plant of 0.270 MW capacity at village-Kherva, Tehsil-Mehsana, District-Mehsana, State-GUJARAT And I on behalf of the above company/organization, solemnly affirm and undertake that

(1) The items/components listed in the Total Bill of Material being imported would be utilized for initial setting up of a solar PV power generation project or solar energy production project or facility, as the case may be, for 0.270 MW capacity at village-Kherva, Tehsil-Mehsana, District-Mehsana, State-GUJARAT for export of power to grid.

(2) The listed goods are eligible for exemption from duties of excise leviable under the Ministry of Finance's Notification no. 15/2010 dated 27/02/2010 and amendment Notification No.26/2012-Central Excise, dated 8th May 2012, No. 15/2014 Central Excise, dated 11th July 2014 and any subsequent amendments/clarifications issued thereafter.

(3) The said imported goods shall be used only in the aforesaid Solar Power Generation Plant namely 0.270 MW SPV power plant to be set up at Village-Kherva, Taluka-Mehsana, District-Mehsana, State-GUJARAT by Mehsana Distict Education Foundation, Ganapat University and not for any other use and will not be sold in the market.

(4) In the event of noncompliance of the above, I undertake to pay the amount equal to the difference between the customs duty leviable on such goods but for the concession under the aforesaid notifications and that already paid at the time of importation.

(5) Statement indicating utilization of materials/components and parts procured from various manufacturers/suppliers under MNRE certificates, will be submitted to MNRE in the prescribed format, within 60 days of commissioning of the aforesaid project.

(6) No other similar certificate to any other party has been granted for the same supplies as detailed above, under the same P.O/contract referred to above.

I further solemnly affirm and declare that the above information is true to the best of my knowledge and belief and nothing therefrom has been concealed.

Signature: A.J.Patel

Name: **Mr. Anilbhai Patel**

Designation: Managing Trustee

Place:

Name of Project Company: Mehsana Distict Education Foundation, Ganpat University

Date:

Seal:

MEHSANA DISTRICT EDUCATION FOUNDATION
Reg.No. E/3845 MEHSANA

Ganpat Vidyanagar - 384 012, Mehsana-Gozaria Highway, District: Mehsana, Gujarat, INDIA.
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Affidavits for Concessional Custom Duty

To Whomsoever It May Concern

Ref No: SP/00752/2016-2017

I **Mr. Anilbhai Patel**, R/o Mehsana District Education Foundation, Ganpat University, Ganpat Vidhyanagar-384012, Mehsana, Gujarat, am Managing Trusty/Authorised Signatory of Ganpat University which is setting up a Solar PV plant of 0.270 MW capacity at village-Kherva, Tehsil-Mehsana, District-Mehsana, State-GUJARAT And I on behalf of the above company/organization, solemnly affirm and undertake that

(1) The items/components listed in the Total Bill of Material being imported would be utilized for initial setting up of a solar PV power generation project or solar energy production project or facility, as the case may be, for 0.270 MW capacity at village-Kherva, Tehsil-Mehsana, District-Mehsana, State-GUJARAT for export of power to grid.

(2) The listed goods are eligible for concessional duties of customs leviable under the Ministry of Finance's Notification No. 01/2011 dated 06/01/2011 No.21/2012Customs dated 17/03/2012 and amendment Notification No.32/2012Customs, dated 8th May 2012. No.14/2014Customs dated 11th July, 2014 and any subsequent amendments/clarifications issued thereafter.

(3) The said imported goods shall be used only in the aforesaid Solar Power Generation Plant namely 0.270 MW SPV power plant to be set up at Village-Kherva, Taluka-Mehsana, District-Mehsana, State-GUJARAT by Mehsana Distict Education Foundation, Ganapat University and not for any other use and will not be sold in the market.

(4) In the event of noncompliance of the above, I undertake to pay the amount equal to the difference between the customs duty leviable on such goods but for the concession under the aforesaid notifications and that already paid at the time of importation.

(5) Statement indicating utilization of materials/components and parts procured from various manufacturers/suppliers under MNRE certificates, will be submitted to MNRE in the prescribed format, within 60 days of commissioning of the aforesaid project.

(6) No other similar certificate to any other party has been granted for the same supplies as detailed above, under the same P.O/contract referred to above.

I further solemnly affirm and declare that the above information is true to the best of my knowledge and belief and nothing therefrom has been concealed.

Signature:

Name: **Mr. Anilbhai Patel** A.I.Patel

Designation: Managing Trustee

Place:

Name of Project Company: Mehsana District Education Foundation, Ganpat University

Date:

Seal: MEHSANA DISTRICT EDUCATION Reg.No. E/3248 MEHSANA

BOM of Mehsana Distict Education Foundation, Ganapat University

भारत सरकार / Government of India

नवीन और नवीकरणीय ऊर्जा मंत्रालय / Ministry of New & Renewable Energy

****

Ref No. : SP/00752/2016-2017

APPLICATION FORMAT FOR "TOTAL BILL OF MATERIAL"

(TO BE FILLED BY PROJECT PROMOTER/DEVELOPER AND FORWARDED IN TRIPLICATE)

Application format for submission of "Total Bill of Material" for grant of customs and excise duty benefits to Project Developers by MNRE for initial setting up of Solar Power generation project or facility. This application needs to be submitted by Developers to MNRE, along withaffidavite undertaking of details under Part-A below.

Note: Each Page of Part A and Part B of the total Bill of Material must be signed by the authorised signatory of project ompany, Chartered Engineer.

Part-A: Project Details

1.	Name, address, phone, fax, email of the project Promoter/ Developer along with corporate office including registered/branch office	**Mehsana District Education Foundation, Ganpat University, Ganpat Vidyanagar- 384012, Mehsana, Gujarat** **Contact No. : -** 02762 286924 **Mobile No. : 7573047703** | 9687631936 **Email : president@ganpatuniversity.ac.in** **PAN : -** AAATM3229M **TIN : -**
2.	Name and Address of EPC Contractor	**M/s. U R energy (India) Pvt. Ltd.** **Address. : B2 / 9th floor, PALLADIUM, B/h Divya Bhaskar Press, Corporate Road, Prahlad Nagar, Ahmedabad-380015** **Mobile No. : 7573047703** **Email : comm2@urenergyglobal.com**
3.	Location of the project (village, taluka, district, state) , Geographic Location of Plant	**Kherva, Mehsana, Mehsana, GUJARAT** **Lognitude. : 72.5** **Latitude : 23.5**
4.	Capacity of power project being installed (MW)	**AC Capacity as in PPA0.270 MW** **DC Capacity : 0.270 MW**
5.	Details of Technology to be used & related Bill of Matererial for equipment, component, material etc for the plant (Please provide details for each item)	**PV** **Grid Connected** **Roof Top** **Non Tracking**
6.	Details of Roof area or Land with proof of possession to be enclosed	**Issuing Authority. : Gujarat Energy Development Agency (GEDA)** **Letter No. : GEDA/SOL-4551/2017/03/OW/12965** **Latter Date : 03/03/2017**
7.	Information on tied up with State transmission utility for evacuation **(proof if connected to grid**	**Issuing Authority. : Gujarat Energy Development Agency (GEDA)** **Letter No. : GEDA/SOL-4551/2017/03/OW/12965** **Latter Date : 03/03/2017**
8.	Name of Agency with whom PPA is signed (copy to be enclosed) or captive utilization	**Issuing Authority. : N/A** **Letter No. : N/A** **Latter Date : N/A**

9.	Total cost of project as appraised by FI/ certified by Chartered Accountant	**12395700 Rs.**
10.	Term loan sanctioned, if any (copy of loan agreement/loan sanction order to be enclosed)	**Name of F.I. : N/A** **Name of Branch : N/A** **Loan Amount. : N/A Rs.**
11.	Project schedule/status: (i) Expected date of commissioning (ii) Present status	**31/05/2017** **procurement and designing in progress**
12.	(i)Whether you have availed exemption certificate in the past for any of your commissioned solar project(s)	No

Ref No. : SP/00752/2016-2017

Part B:

S.No.	Description of Item	Item No.	Quantity	Specification	Concessional custom duty (CCD) to be availed (Yes/No)	Excise duty Exemption (EDE) to be availed (Yes/No)
Solar Block						
1	Module Mounting Structure	1	3000 Kg	Aluminium solar channel	No	Yes
2	DC Cable	2	300 Mtrs	4 sq mm DC cable with XLSR, UV p rotected	No	Yes
3	DC Cable	3	1000 Mtrs	6 sq mm DC cable with XLSR, UV p rotected	No	Yes
4	DC Distribution Box	4	8 Nos	ENYSUN DC combiner Box-5 (4 IN 4 out)	No	Yes
5	Earthing Cable	5	300 Mtrs	10 sq mm cable 1C copper PVC She athed	No	Yes
6	Earthing Electrode	6	7 Nos	GI Earthing rod with accessories	No	Yes
7	Earthing Strip	7	100 Mtrs	25 x 3 mm Aluminium strip for earth ing	No	Yes
8	PVC Pipe	8	200 Mtrs	Electrical PVC Pipe with accessories of 25 MM / 50 MM	No	Yes
9	MC4 Connector	9	140 Nos	UV Protected MC4 connectors for D C cable connection	No	Yes
10	Y connector	10	80 Nos	UV protected Yconnector	No	Yes
Power Block						
1	Solar Inverter	11	8 Nos	33 Kw String type 3Phase Grid Tied Inverter with accessories	Yes	No
2	Cable Tie	12	500 Nos	U V protected cable ties of various si ze for cable dressing	No	Yes
3	AC Cable 5C x 16 sq mm	13	150 Mtrs	1.1 kV grade, CU flexible cable	No	Yes
4	AC cable 3.5C x 120 sq mm	14	1600 Mtrs		No	Yes

				1.1 KV Grade, aluminum armoured conductor, XLPE Cable		
5	AC Distribution Box	15	2 Nos	ACDB or LT Panel with digital meter, MCB and other accessories and protection (LT Panel)	No	Yes
6	Cable tray	16	200 Mtrs	150 mm x 50 mm Cable tray with cover	No	Yes
7	Lightning Arrester	17	2 Nos	Lighting arrester Lap Bax-175	No	Yes
Measuring Instruments						
1	Solar Meter	18	1 Nos	Solar Meter for solar power generation measurement	No	Yes
2	Net Meter	19	1 Nos	HT Meter	No	Yes

Note: SPD/EPC Contractor shall file a reconciliation report to MNRE on actual consumption of material and usage of Certificates online and same duly certified by an empanelled Chartered Engineer, within two months after commissioning of the project.

Note: Ministry reserves its right to delete item/items at any stage or even after approval of BOM, and refuse/ cancel or recall the certificate(s) with regard to any of the items in the approved BOM.

(1) Signature and Seal of Authorised Signatory of Project Company

Signature:
Company Name: Mehsana Distict Education Foundation, Ganapat University
Name: Mr. Anilbhai Patel
Designation: Chief Executive Officer

Managing Trustee
Mehsana District Education Foundation
Ganpat Vidyanagar, Kherva.

(2) Certification by Empanelled Chartered Engineer:

I undertake and certify as under:

(i) I have examined the applicant company's requirements of new materials, components etc. with regard to their technical description/specification and the quantity against each item of manufacture or import and having regard to proper technical norms of consumption and after technical scrutiny of DPR and relevant designs and drawings, I hereby certify that they are correct in all respects and are actually required for the execution of the 0.270 MW Solar PV power generation project or facility at Village Kherva , Taluka Mehsana , District Mehsana, State GUJARAT.

(ii) I have also examined each item/component, their description, quantity and specifications mentioned in the BoM in terms of non-eligible items declared by the Government and certify that no ineligible item is included in the BoM.

(iii) I am not an employee of the Solar Power Developer or the Company doing EPC for this project nor I am an employee of MNRE.

(iv) I will ensure that the SPD/EPC submits the Statement indicating utilization of above mentioned material/equipment to MNRE in prescribed format within 60 days of commissioning of the said project.

(v) Information given above and in the enclosed documents is true to the best of my knowledge and belief and nothing has been concealed therein. I am well aware of the fact that if the information given is proved false/not true, I will be liable to be debarred from certifying the BoM of solar power projects or any legal or other action that Govt. may deem fit.

Signature:
Name of the Empanelled Chartered Engineer:
Address:
Ref. No. & Date of membership:

CHECK LIST

Ref No. : SP/00752/2016-2017

For checking Documents to be submitted by Solar Power Developers to MNRE along with Application for approval of Total Bill of Material prior to issue of Certificates for Concessional Customs Duty and Excise Duty Exemption

(Refer : OMs (1) No.30/42/2011-12/NSM dt. 28.02.2014; (2) No.30/42/2012-13/NSM dt. 17.01.2013 (3) No.30/20/2011-12/NSM dt. 01.07.2013; and (4) No.22/09/2009-10/ST(Pt.) dt. 04.04.2013 – All these OMs are available on MNRE's Website - www.mnre.gov.in)

S. No.	Particulars / Documents	Status	Page No.	
			From	To
1	Covering Letter	Yes		
2	Whether the BoM is duly signed by the Chief Executive Officer (CEO) of the project or an authorized signatory of the project company	Yes		
3	Letter of Award of Project	Yes	2	2
4	Details of Land Area with Proof of possession of land enclosed	Yes	1	1
5	Project Executive Summary	Yes		
6	Whether Detailed Project Report (DPR) is enclosed	Yes	7	7
7	Whether Proof of tied up with State Transmission Utility (STU) for evacuation of power from the proposed plant to Grid, provided	Yes	3	3
8	Copy of Power Purchase Agreement (PPA) provided, if applicable. (PPA is not required in case project is being set up under REC scheme)	Yes	4	4
9	Whether copy of EPC Contract/Agreement is provided, if applicable.	Yes	8	8
10	Whether the print out and soft copy of PDF layer drawing of auto cad generated plant layout with each layer indicating material consumption in plant layout and in table as per BOM is attached. (copy of PDF for refence is at http://164.100.194.45/ccms)	Yes	12	12
11	Whether Chartered Accountant's Certificate on the estimated project cost, is enclosed, along with detailed break-up of project cost	Yes	5	5
12	**Whether Electrical Engineering SLD (Single Line Drawing) of DC Solar Block + Power Block + Evacuation Block + Route Survey Transmission Line / Detailed Drawings with calculation sheets of requirement of cable in respect of length and distance;** **Calculation sheets of Equivalent weight Module mounting structures in KG or MT, Poles, Inverter, Transformers,Material Chart etc., are enclosed** **** Note:-All drawing must bi Large Size also Route Survey Transmission Line must be certified by Chief Electrical Inspector of concerned area.**	Yes	9	9
13	**Civil Engineering Project Layout Drawing of Array, switch yard control room, Mechanical Engineering structure(Table, Tracker and other relevant Drawing etc.)** **** Note:-Google Map Image is not a Civil Layout drawing therefore it can not be entertain.**	Yes	10	10
14	**Whether SLD or approved drawings for injection point and metering, have been provided**	Yes	11	11
15	Whether copy of SLSC approval or in principle approval of the concerned authority in the State, is provided. This is applicable in case the plant is installed under REC Mechanism	N/A		
16	Whether the SPD has given Self Declaration Undertaking as required in MNRE MNRE's OM No 30/2014 dated 16th September 2016	Yes		
17	Two Affidavits with self-certification only - one each for Excise Duty Exemption and Concessional Customs Duty separately, submitted in the prescribed formats (NOT ON STAMP PAPER)	Yes		
18	Project's Financial Document/Loan Document	Yes	6	6

Affidavits for Concessional Custom Duty

To Whomsoever It May Concern

Ref No: SP/00752/2016-2017

I **Mr. Anilbhai Patel** , ----- , R/o Mehsana District Education Foundation, Ganpat University, Ganpat Vidhyanagar-384012, Mehsana, Gujarat, am Chief Executive Officer/Authorised Signatory of Mehsana Distict Education Foundation, Ganapat University which is setting up a Solar PV plant of 0.270 MW capacity at village-Kherva, Tehsil-Mehsana,District-Mehsana, State-GUJARATAnd I on behalf of the above company/organization, solemnly affirm and undertake that

(1) The items/components listed in the Total Bill of Material being imported would be utilized for initial setting up of a solar PV power generation project or solar energy production project or facility, as the case may be, for 0.270 MW capacity at village-Kherva, Tehsil-Mehsana, District-Mehsana, State-GUJARATfor export of power to grid.

(2) The listed goods are eligible for concessional duties of customs leviable under the Ministry of Finance's Notification No. 01/2011 dated 06/01/2011 No.21/2012-Customs dated 17/03/2012 and amendment Notification No.32/2012-Customs, dated 8th May 2012. No.14/2014-Customs dated 11th July, 2014 and any subsequent amendments/clarifications issued thereafter.

(3) The said imported goods shall be used only in the aforesaid Solar Power Generation Plant namely 0.270 MW SPV power plant to be set up at Village- Kherva, Taluka- Mehsana, District- Mehsana, State- GUJARAT by Mehsana Distict Education Foundation, Ganapat University and not for any other use and will not be sold in the market.

(4) In the event of non-compliance of the above, I undertake to pay the amount equal to the difference between the customs duty leviable on such goods but for the concession under the aforesaid notifications and that already paid at the time of importation.

(5) Statement indicating utilization of materials/components and parts procured from various manufacturers/suppliers under MNRE certificates, will be submitted to MNRE in the prescribed format, within 60 days of commissioning of the aforesaid project.

(6) No other similar certificate to any other party has been granted for the same supplies as detailed above, under the same P.O/contract referred to above.

I further solemnly affirm and declare that the above information is true to the best of my knowledge and belief and nothing therefrom has been concealed.

Signature:

Name: **Mr. Anilbhai Patel**

Designation: Managing Trustee
Mehsana District Education Foundation
Ganpat Vidyanagar, Kherva.

Name of Project Company:Mehsana Distict Education

Place:
Foundation, Ganapat University

Date:

Seal:

MEHSANA DISTRICT EDUCATION FOUNDATION
Reg.No. E/3845 MEHSANA

Affidavits for Excise Duty Exemption

To Whomsoever It May Concern

Ref No: SP/00752/2016-2017

I **Mr. Anilbhai Patel** , ----- , R/o Mehsana District Education Foundation, Ganpat University, Ganpat Vidhyanagar-384012, Mehsana, Gujarat, am Chief Executive Officer/Authorised Signatory of Mehsana Distict Education Foundation, Ganapat University which is setting up a Solar PV plant of 0.270 MW capacity at village-Kherva, Tehsil-Mehsana,District-Mehsana, State-GUJARAT And I on behalf of the above company/organization, solemnly affirm and undertake that

(1) The items/components listed in the Total Bill of Material being imported would be utilized for initial setting up of a solar PV power generation project or solar energy production project or facility, as the case may be, for 0.270 MW capacity at village-Kherva, Tehsil-Mehsana, District-Mehsana, State-GUJARAT for export of power to grid.

(2) The listed goods are eligible for exemption from duties of excise leviable under the Ministry of Finance's Notification no. 15/2010 dated 27/02/2010 and amendment Notification No.26/2012-Central Excise, dated 8th May 2012, No. 15/2014-Central Excise, dated 11th July 2014 and any subsequent amendments/clarifications issued thereafter.

(3) The said imported goods shall be used only in the aforesaid Solar Power Generation Plant namely 0.270 MW SPV power plant to be set up at Village- Kherva, Taluka- Mehsana, District- Mehsana, State- GUJARAT by Mehsana Distict Education Foundation, Ganapat University and not for any other use and will not be sold in the market.

(4) In the event of non-compliance of the above, I undertake to pay the amount equal to the difference between the customs duty leviable on such goods but for the concession under the aforesaid notifications and that already paid at the time of importation.

(5) Statement indicating utilization of materials/components and parts procured from various manufacturers/suppliers under MNRE certificates, will be submitted to MNRE in the prescribed format, within 60 days of commissioning of the aforesaid project.

(6) No other similar certificate to any other party has been granted for the same supplies as detailed above, under the same P.O/contract referred to above.

I further solemnly affirm and declare that the above information is true to the best of my knowledge and belief and nothing therefrom has been concealed.

Signature:

Name: **Mr. Anilbhai Patel**

Designation: Managing Trustee
Mehsana District Education Foundation
Ganpat Vidyanagar, Kherva.

Name of Project Company: Mehsana Distict Education

Place:
Foundation, Ganapat University

Date:

Seal:

SELF DECLERATION / UNDERTAKING
(TO BE SELF CERTIFIED BY PROJECT DEVELOPER)
Declaration by Company for concessions claimed by submitting Total Bill of Material for Concessional Custom Exemption Certificates and Excise Exemption Certificates for installation of Solar Energy Project.

I **Mr. Anilbhai Patel** , ----- , R/o Mehsana District Education Foundation, Ganpat University, Ganpat Vidhyanagar-384012, Mehsana, Gujarat, am Authorized Person of M/s. Mehsana Distict Education Foundation, Ganapat University which is setting up a Solar PV plant of 0.270 MW capacity at village-Kherva, Tehsil-Mehsana,District-Mehsana, State-GUJARAT And on behalf of the above company/organization,do hereby solemnly affirm and undertake that:-

a. The Total Bill of material for initial setting of Solar Power project are uploaded in online system [http://164.100.194.45/ccms/] as per the procedure for applying as stated in Office Order No 30/42/2012-13/NSM dated 1st July 2013 and as per modified vide OM of even number dated 26th November 2015 in the correct category of project as per classification of the projects. The individual certificates for partial withdrawal of the material will be generated through the system after The total Bill of Material is approved for the CCDC & ECCD by the Ministry of New & Renewable Energy. Subsequently, the certificates shall be submitted to relevant Customs/ Excise Tax Offices in physical or electronic format as per modification of the system takes place.

b. The application for Total Bill of Material is supported with following enclosures:

1. Detailed Project Report
2. Proof of Possession of land or Rooftop for Solar Projects
3. Solar Block Drawing indicating detailed Solar Power Project layout for the entire project.
4. Single line Diagram (SLD) along with calculation sheets for Solar Block, Power Block, Power Evacuation Block and Measuring Instruments covering Cables, Module Mounting Structures invertors and Transformers.
5. Power Purchase Agreement/Clearance from DISCOM for Net Metering (in case of Solar Rooftop Projects).
6. Proof of tied up with State Electricity Utility (Name of Electric Utility) for evacuation of Power from the Solar Power Project.
7. Chartered Accountant Certificate on estimated Project cost with detailed Breakup.
8. Approved drawing for injection point and metering.
9. EPC Contract/Agreement, if applicable.
10. A auto CAD generated drawings Solar Block, Power Block, Power Evacuation Block indicating location of component & indicating quantity of material required.

c. The Total Bill of Material for the project as submitted in the MNRE portal at [http://164.100.194.45/ccms/] has been scrutinized and vetted by the MNRE empanelled Chartered Engineer (Name Shersingh---- The institute of Engineers Register No AM 129702, at Number ----6----- in MNRE Approved Channel Partners No. 28 Age--45----- Address Flat 270, PKT-13, Ph-1, DDA Flat dwarka New Delhi-110045)

d. The listed goods are eligible for concessional duty of customs and excise leviable under the Ministry of Finance Notification no. 01/2011 dated 06/01/2011 & No. 21/2012- Customs dated 17/03/2012 and amendment Notification No. 32/2012 Customs, dated 8th May 2012 and any subsequent amendments/clarifications issued thereafter.

e. The certificates for ineligible items declared by MNRE vide their letter no. 22/09/2009-10/ST/NSM dated 08.01.2014 and by any other subsequent instructions, have not been preferred for exemption/concession.

f. The said goods for which concessions shall be availed through the approved application no. SP/00752/2016-2017 of approved Total Bill of Material shall be used only towards installation & commissioning and running of the solar power Project/Plant under reference. The material shall not be shifted to other location.

g. If there is change in location or technical modification in the system, Developer will intimate MNRE regarding the changes made within two months.

h. Statement indicating utilization of material /components and parts procured from various manufacturers /suppliers under MNRE Certificates along with details of the actual bills will have to be submitted to MNRE, duly endorsed by Chartered engineer and State Nodal Agencies in paper form / electronic form in prescribed format within 60 days of commissioning of the afforested project.

i. The project proceedings/documents shall be submitted to Customs & Excise Office for examination of the certificates withdrawal and actual consumption of duty exemption.

j. No other similar certificate to any other EPC Contractors/ Supplier party has been granted for the same supplies as detailed above under the same Purchase Order contract referred to above.

2. In event of noncompliance of above, I do hereby undertake to pay the amount equal to the difference between duty leviable on such goods but for the exemption under the aforesaid notification and that already paid at time of import or withdraw from the factory. In case of deviation, the developer/EPC Contractor or both shall be liable for prosecution as per extent Rules/Laws of Customs and excise if the misuse of the certificates is found made by Company or EPC contractors towards this project or suppliers of these goods.

3. The cost of the project is derived after competitive bidding and tendering process and includes the customs and excise exemption benefits which shall be availed and I fully understand that MNRE is giving concessions based on my self-declaration and signature and of empanelled Chartered Engineer based on good faith & trust. I hear by also undertake not to misuse or abuse this faith imposed on our company by the Ministry.

4. I also understand that the random checks by Ministry of New Renewable Energy (MNRE), State Nodal Agencies, Customs & Excise Departments and shall cooperate by sharing information during inspections. In case of abuse/misuse of the concessions I and my company will be liable for criminal precaution.

5. I further solemnly affirm and declare that above information is true to the best of my knowledge and belief and nothing has been concealed.

Signature of Authorised Signatory: A. I. Patel

Name: **Mr. Anilbhai Patel** Managing Trustee

Designation: Mehsana District Education Foundation
Ganpat Vidyanagar, Kherva.

Name of Project Company: Mehsana Distict Education

Place:
Foundation, Ganapat University

Date:

Seal:

Witnesses with their designation (Board of Directors with their DIN) and addresses:-

Covering Letter

Ref No: SP/00752/2016-2017

Date

To,
Director,
Customs and Excise Cell
Ministry of New & Renewable Energy Sources
Block 14 CGO Complex Lodi Road
New Delhi

Sub : Application for approval for total Bill of Material for concessional customs and excise duty exemption for Solar Energy Project.

Sir,

With reference to above subject, we would like to submit that M/s. Mehsana Distict Education Foundation, Ganapat University is proposing to execute 0.270 MW Solar Power Project at Kherva village in Mehsana taluka of Mehsana District of GUJARAT. The project is allotted to us by Gujarat Energy Development Agency under the Gujarat policy and the clearance for the projects are obtained.

In this regard, we have awarded EPC contract to M/s. U R energy (India) Pvt. Ltd. to execute the above mentioned project. Further, we have submitted detailed "Total Bill of Materail "on line on MNRE portal with BOM No. for availing the customs and excise exemption duty. The details of the submission along with the letter are as follows :

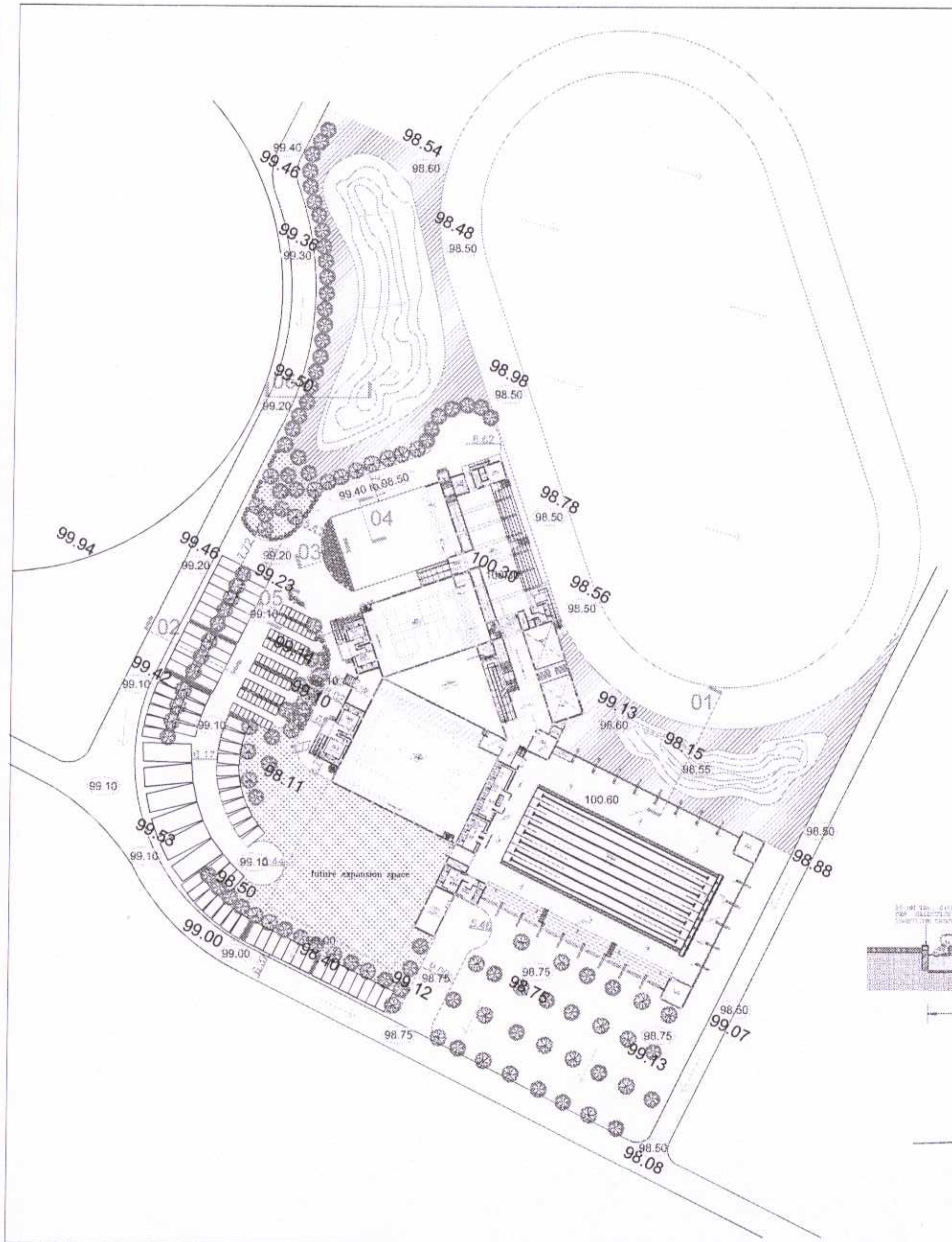
1. Certified Copy of Total Bill of Material by chartered engineer Annex 1
2. Land allotment letter Annex 2
3. Project Executive Summary Annex 3
4. Detailed Project Report (DPR) Annex 4
5. Whether Proof of tied up with State Transmission Utility (STU) Annex 5
for evacuation of power from the proposed plant to Grid
6. Power Purchase Agreement (PPA) Annex 6
7. EPC Contract/Agreement Annex 7
8. Print out and soft copy of PDF layer drawing of auto cad Annex 8
generated plant layout with each layer indicating material
consumption in plant layout and in table
9. SLD (Single Line Diagram) / Detailed Drawings Annex 9
for power evacuation, Poles, Inverter, Transformers, etc.,
10. Self-Declaration/ Undertaking Annex 10
11. Affidavits for Excise Duty Exemption Annex 11
12. Affidavits for Concessional Customs Duty Annex 12

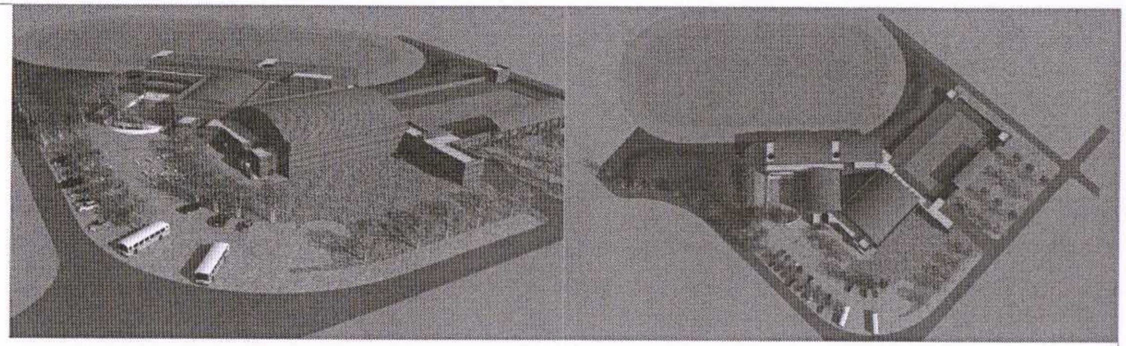
It is once again requested to process and approve our application at earliest for concessional customs and excise exemption for Solar Power Project.

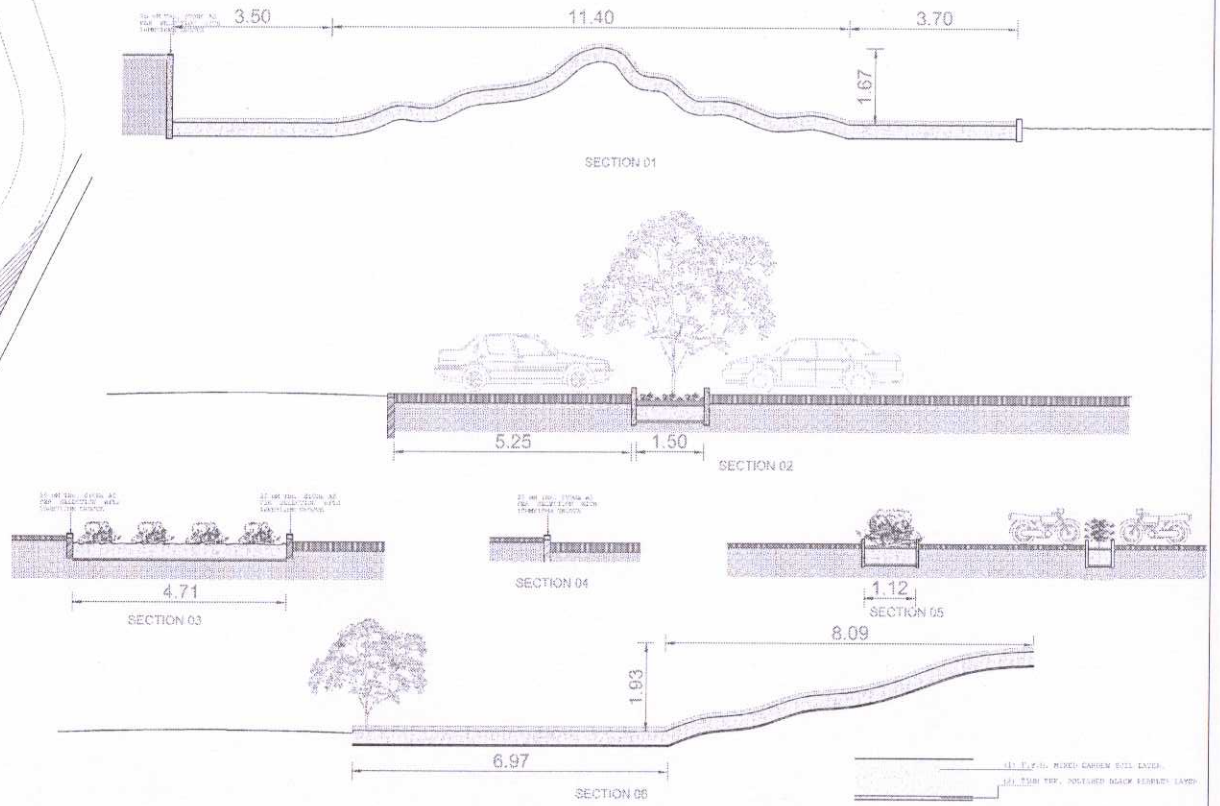
For Mehsana Distict Education Foundation,
Ganapat University

MEHSANA DISTRICT EDUCATION FOUNDATION Reg.No. EI3845 MEHSANA

A J Patel
Managing Trustee
Mehsana District Education Foundation
Ganpat Vidyanagar, Kherva.







revised on 23/12/2017

PROMOTERS: MDEF KHERVA, MAHESANA.	NORTH	PROJECT No. - C A D - MUKESH DEALT - JASMIN FILE NAME - SPORTS COMPLEX DATE - 02-02-16	SCALE: DRAWING NO. 02
PROJECT : SPORTS COMPLEX AT KHERWA		ARCHITECTS: KSA DESIGN PLANNING SERVICES (P) LTD.	
DESCRIPTION: UPPER GROUND FLOOR PLAN	BUILDING		DPS ARCHITECTS

भारतीय गैर न्यायिक

एक सौ रुपये Rs. 100

रु. 100 ONE HUNDRED RUPEES

सत्यमेव जयते

भारत INDIA

INDIA NON JUDICIAL

ગુજરાત गुजरात GUJARAT

નંબર :

તારીખ : ૨૦૧૭

નામ :

ઠેકાણું :

AV 567064

કે. આર. પાટડીયા
લા. નં. એસ.બી. ૨૪૬, ૨૪૭/૧૯૯૬
અમદાવાદ નારણપુરાના સણંદી
લેનારની સહી............

Net Metering inter connection agreement

This Agreement is made and entered into at (location)_________ on this (date) ____day of (month)______ year _____ between The Consumer, by the name of **Ganpat University, The Mehsana District Education Trust** having premises at **Ganpat Vidyanagar, Mehsana-Gozaria Highway, Kherva Village, Dist.- Mehsana 396120** (address) as first party

AND

Uttar Gujarat Vij Company Limited, a Company registered under the Companies Act 1956 and functioning as the "Distribution Company" under the Electricity Act 2003 having its Head Office at, Visnagar Road, Mehsana – 384 001 (hereinafter referred to as UGVCL or Discom which expression shall include its permitted assigns and successors) a Party the Second Part.

WHEREAS, the Gujarat Energy Development Agency (GEDA) through letter dated **03/03/2017** has registered for developing and setting up **270** KW own Rooftop Solar PV power project for his/her/its own use under Gujarat Solar Power Policy - 2015.at his/her/its premises in legal possession including rooftop or terrace.

AND, WHEREAS **Ganpat University, The Mehsana District Education Trust** (Name of consumer) desires to set-up such Solar Photovoltaic Rooftop power project of **270** KW at **Ganpat Vidyanagar, Mehsana-Gozaria Highway, Kherva Village, Dist.- Mehsana 396120** connected with UGVCL's grid at **HT** Voltage level for his/her/its own use within the same premises.

Consumer Number : 19433

And whereas, the Discom agrees to provide grid connectivity to the Consumer for injection of the electricity generated from his Rooftop Solar Photovoltaic plant of Capacity **270** kilowatts into the power system of Discom and as per conditions of this Agreement and in compliance with by the Consumer the applicable Policy / rules/ Regulations/ Codes (as amended from time to time) which includes-

1. Government of Gujarat Solar Power Policy 2015
2. Central Electricity Authority (measures relating to Safety and Electric Supply) Regulations, 2010.
3. Indian Electricity Rules, 1956
4. Central Electricity Authority (Technical Standards for Connectivity of the Distributed Generation Resources) Regulations, 2013.
5. Central Electricity Authority (Installation and Operation of Meters) Regulation 2006
6. Electricity Supply Code & Related Matters Regulations and Distribution Code Regulations of GERC
7. Instruction, Directions and Circulars issued by Chief Electrical Inspector from time to time.

Both the parties hereby agree to as follows:

1. Eligibility

1.1 Consumer shall own the Rooftop Solar PV system set up on its own premises or premises in his legal possession.

1.2 Consumer needs to consume electricity in the same premises where Rooftop Solar PV system is set up.

1.3 Consumer shall ensure capacity of Rooftop Solar not to exceed 50% of its contract load / demand

1.4 Consumer has to meet the standards and conditions as specified in GERC Regulations / Supply Code / CEA Regulations and provisions of Government of Gujarat's Solar Power Policy 2015 for being integrated into grid/distribution system.

2. Technical and Interconnection Requirements

2.1 The Consumer agrees that his Rooftop solar generation plant and net metering system will conform to the standards and requirements specified in the Policy, Regulations and Supply Code as amended from time to time.

2.2 Consumer agrees that he has installed or will install, prior to connection of Rooftop Solar Photovoltaic system to Discom's distribution system, an isolation device (both automatic and inbuilt within inverter and external manual relays) and agrees for the Discom to have access to and operation of this, if required and for repair & maintenance of the distribution system.

2.3 Consumer agrees that in case of a power outage on Discom's system, Rooftop Solar photovoltaic system will disconnect/isolate automatically and his plant will not inject power into Licensee's distribution system.

2.4 All the equipment connected to distribution system shall be compliant with relevant International (IEEE/IEC) or Indian standards (BIS) and installations of electrical equipment must comply with Central Electricity Author5ity (Measures of Safety and Electricity Supply) Regulations, 2010 as amended from time to time.

2.5 Consumer agrees that licensee will specify the interface/interconnection point and metering point.

2.6 Consumer and licensee agree to comply with the relevant CEA regulations in respect of operation and maintenance of the plant, drawing and diagrams, site responsibility schedule, harmonics, synchronization, voltage, frequency, flicker etc.

2.7 In order to fulfill Discom's obligation to maintain a safe and reliable distribution system, Consumer agrees that if it is determined by the Discom that Consumer's Rooftop Solar photovoltaic system either causes damage to and/or produces adverse effects affecting other consumers or Discom's assets, Consumer will have to disconnect Rooftop Solar photovoltaic system immediately from the distribution system upon direction from the Discom and correct the problem at his own expense prior to a reconnection.

2.8 The consumer shall be solely responsible for any accident to human being/animals whatsoever (fatal/non-fatal/departmental/non-departmental) that may occur due to back feeding from the Rooftop Solar plant when the grid supply is off. The distribution licensee reserves the right to disconnect the consumer's installation at any time in the event of such exigencies to prevent accident or damage to man and material.

3. Clearances and Approvals

3.1 The Consumer shall obtain all the necessary approvals and clearances (environmental and grid connection related) before connecting the photovoltaic system to the distribution system.

4. Access and Disconnection

4.1 Discom shall have access to metering equipment and disconnecting means of the Rooftop solar photovoltaic system, both automatic and manual, at all times.

4.2 In emergency or outage situation, where there is no access to the disconnecting means, both automatic and manual, such as a switch or breaker, Discom may disconnect service to the premises of the Consumer.

5. Liabilities

5.1 Consumer shall indemnify Discom for damages or adverse effects from its negligence or intentional misconduct in the connection and operation of Rooftop Solar photovoltaic system.

5.2 Discom shall not be liable for delivery or realization by Consumer for any fiscal or other incentive provided by the Central/State Government.

5.3 The Discom may consider the quantum of electricity generation from the rooftop solar PV system under net metering arrangement towards RPO.(i) Residential and Government Building, (ii) consumers who are not utilizing 'Renewable' attribute for meeting its RPO or registered under REC Mechanism, (iii) surplus energy purchased by Discoms from the Rooftop solar project which are not under REC Mechanism.

5.4 The consumer shall ensure that at all the time, sanctioned load / contract demand shall be double of the capacity of Solar Rooftop Project.

6. Metering:

Metering arrangement shall be as per Central Electricity Authority (installation and operation of meter) Amendment Regulations, 2014 and amended from time to time.

(a) In case of Residential and Government Buildings, Bi-directional meter shall be installed of same accuracy class as installed before setting up of Rooftop Solar PV system.

(b) In case of Industrial, Commercial and other consumers-

(i) Type-1 consumer (consumers not utilizing 'Renewable' attribute for RPO or REC)- Bi-directional meter shall be installed of same accuracy class as installed before setting up of Rooftop Solar PV system.

(ii) Type-2 (a) & (b), ABT compliant meter having 15 minute integration shall be installed.

7. Commercial Settlement

All the commercial settlement under this agreement shall be as per Government of Gujarat's Solar Power Policy 2015 & GERC Order amended from time to time. The commercial settlement will be as follows:

(A) Residential consumers and Government Building

(i) In case of net import of energy by consumer from distribution grid during billing cycle, the energy consumed from Discom shall be billed as per applicable tariff to respective category of consumers as approved by GERC from time to time. The energy generated by Rooftop Solar system shall be set off against unit consumed (not against load/demand) and consumer shall pay demand charges, other charges penalty etc as applicable to other consumers.

(ii) In case of net export of energy by consumer to distribution grid during billing cycle, Discom shall purchase surplus power after giving set off against consumption during the billing period at Average Pooled Power Purchase Cost (APPC) of the year of commissioning of Rooftop Solar PV system. Quantum of electricity generated by Rooftop Solar PV system shall be utilized for meeting RPO of Discoms. However, fixed / demand charges, other charges penalty etc shall be applicable as applicable to other consumers.

(B) For Industrial, Commercial and other consumers

(a) Type-1 consumer (consumers not utilizing 'Renewable' attribute for RPO or REC

(i) in case of net import of energy by consumer from distribution grid during billing cycle, the energy consumed from Discom shall be billed as per applicable tariff to respective category of consumers as approved by GERC from time to time. The energy generated by Rooftop Solar system shall be set off against unit consumed (not against load/demand) and consumer shall pay demand charges, peak charges, other charges penalty etc as applicable to other consumers.

(ii) In case of net export of energy by consumer to distribution grid during billing cycle, Discom shall purchase surplus power after giving set off against consumption during

the billing period at Average Pooled Power Purchase Cost (APPC) of the year of commissioning of Rooftop Solar PV system. Quantum of electricity generated by Rooftop Solar PV system shall be utilized for meeting RPO of Discom However, fixed / demand charges, peak charges, other charges penalty etc shall be applicable as applicable to other consumers.

(b) Type-2 (a) – consumers utilize renewable attribute to meet its RPO

(i) Energy accounting shall be undertaken on 15 minute basis. In case of net import of energy by consumer from distribution grid, the energy consumed from Discom shall be billed as per applicable tariff to respective category of consumers as approved by GERC from time to time. The energy generated by Rooftop Solar system shall be set off against unit consumed (not against load/demand) and consumer shall pay demand charges, peak charges, other charges, penalty etc as applicable to other consumers.

(ii) In case of net export of power on 15 minutes basis after giving set off against consumption, Discom shall purchase such surplus power at APPC of the year of commissioning of Rooftop Solar PV system. Such surplus purchase shall be utilized for meeting RPO of Discom. However, fixed / demand charges, peak charges, other charges penalty etc shall be applicable as applicable to other consumers.

(c) Type-2 (b) – consumers utilize renewable attribute under REC Mechanism

(i) Energy accounting shall be undertaken on 15 minute basis. In case of net import of energy by consumer from distribution grid, the energy consumed from Discom shall be billed as per applicable tariff to respective category of consumers as approved by GERC from time to time. The energy generated by Rooftop Solar system shall be set off against unit consumed (not against load/demand) and consumer shall pay demand charges, peak charges, other charges, penalty etc as applicable to other consumers.

(ii) In case of net export of power on 15 minutes basis after giving set off against consumption, Discom shall purchase such surplus power at 85% of APPC of the year of commissioning of Rooftop Solar PV system. However, fixed / demand charges,

peak charges, other charges penalty etc shall be applicable as applicable to other consumers.

8. Connection Costs

8.1 The Consumer shall bear all costs related to setting up of photovoltaic system including metering and interconnection costs. The Consumer agrees to pay the actual cost of modifications and upgrades to the service line required to connect photovoltaic system to the grid in case it is required.

9. Inspection, Test, Calibration and Maintenance prior to connection

Before connecting, Consumer shall complete all inspections and tests finalized in consultation with the UGVCL and GETCO (State Transmission Utility) to which his equipment is connected. Consumer shall make available all drawings, specifications and test records of the project or generating station as the case may be.

10. Records:

Each Party shall keep complete and accurate records and all other data required by each of them for the purposes of proper administration of this Agreement and the operation of the Power Project for a period of 36 months.

11. Dispute Resolution:

11.1 All disputes or differences between the Parties arising out of or in connection with this Agreement shall be first tried to be settled through mutual negotiation, promptly, equitably and in good faith.

11.2 In the event that such differences or disputes between the Parties are not settled through mutual negotiations within sixty (60) days or mutually extended period, after such dispute arises, then it shall be adjudicated by the Consumer Grievances

Redressal Forum (CGRF). If any party is aggrieved with the order passed by the CGRF, may prefer a representation before the Ombudsman.

12. Termination

12.1 The Consumer can terminate agreement at any time by providing Discom with 90 days prior notice.

12.2 Discom has the right to terminate Agreement on 30 days prior written notice, if Consumer commits breach of any of the term of this Agreement and does not remedy the breach within 30 days of receiving written notice from Discom of the breach.

12.3 Consumer shall upon termination of this Agreement, disconnect the photovoltaic system from Discom's distribution system in a timely manner and to Discom's satisfaction.

Communication:

The names of the officials and their addresses, for the purpose of any communication in relation to the matters covered under this Agreement shall be as under:

In respect of the UGVCL:	In respect of the Consumer
K D Patel Chief Engineer (Operation) Executive Engineer Uttar Gujarat Vij Co. Ltd, Division Office, UGVCL Mehsana	( ) Dr. Amit Patel Registrar - Ganpat Uni

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be executed by their fully authorized officers, and copies delivered to each Party, as of the day and year first above stated.

FOR AND ON BEHALF OF M/s UGVCL	FOR AND ON BEHALF OF THE PROJECT OWNER
K D Patel Executive Engineer Division Office, UGVCL Mehsana Authorized Signatory	Dr. Amit Patel Registrar - Ganpat University Authorized Signatory
WITNESSES	WITNESSES
1. (P.P. Solanki) Supdt Ae	1. (Dr. Hardik P. Patel) 10, Adhishtan Bunglows S2-Street, Radhanpur Road Mehsana-384002,
2. (R. A. Katariya) Junior Engineer Mehsana DO.	2. [illegible]

No. 48897 Spl.C/C/BPT 2

Serial No. 1770/2002
Book No. 7
Page No. 17
Receipt No. 1770
Date 19/8/2002

Registration Certificate

This is to certify that below mentioned Public Trust has been duly registred at the public Trust Registration office Mehsana under the Public Trust Acts of 1950 Bombay (29 th ord. of 1950 of Bombay)

Name of the Public Trust : Mehsana District Education Foundation, Mehsana. Di . Mehsana.

The Public Trust Register No.: E 3845/ Mehsana.

The certificate is issued to Ambalal Narsinhdas Patel, Arts & Commerce College, Nagalpur, Mehsana under my signature on date 29, Month August, Year 1996.

Sd/-

Sd. B.H. Pathak
Asstt.Charity Commissioner
Mehsana Prades, Mehsana.

Seal

NOTARY R.N.BAROT Dist.MEHSANA NTR/143/R 19/8/02 GUJARAT (INDIA)

This is Certified to be the true TRANSLATION of the Original document issued in Gujarati Language (Zerox Copy of which is attached here with).
Date 19/8/2002

R. N. Barot
NOTARY
DIST. MEHSANA (N.G.)
PIN. 384002

19/8/02

A.J.Patel
Managing Trustee
Mehsana District Education Foundation
Ganpat Vidyanagar, Kherva.

Exh. No.1/3.

Change Application No.119/2002.

Registered Date 21/3/2002.

Sd/- Illegible
Superintendent/M.C.C.

Serial No. 1601/2002
Book No. 7
Page No. 8
Receipt No. 1601
Date 12.3.02

Date of application 06.04.02.

Filed for Copy
Sd/- Illegible
Superintendent

Date of preparing Copy 09.04.02

Sd/- Illegible
Superintendent

Date of Copy delivered 09.04.02.

Sd/- Illegible
Superintendent

Amended Trust Deed

100 Rs.

	Indian non Judicial	
100 Rs.	Satya Meva Jayte India	Rs.100/-
One hundred Rupees		One hundred Rupees

Sr. No.1005.5 Date 28.02.2002

Name :- Mahesana District Education Foundation.

Address Mahesana

Sd/-Illegible

Signature of Stamp Vendor

Sd/-Illegible

Date

Name of Stamp Vendor: Ashokkumar Chhanalal Bhavsar

Address :- MahesanaRajMahel Office.

Licence No. 25/1979.

Mahesana District Education Foundation

Trust Deed

(1) Name :- The name of this institution shall be Mahesana District Education Foundation.

(Note : In this constitution where ''institution'' word use it means ''Mahesana District Education Foundation.''

NOTARY
R.N.BAROT
Dist. MEHSANA
NTR/143/R
GOVT. OF GUJARAT (INDIA)

// 2 //

Managing Trustee
Mehsana District Education Foundation
Ganpat Vidyanagar, Kherva.

start now hostels, manage them and provide help to institutes running hostels.

(6) Provide necessary help to financially weak students.

(7) To start any other activities connected with educational, social, economical and health development subject, maintain them and provide help to institutions doing activities in consistent with objects of institute, take over them and manage them.

(8) To establish and maintain the institutions imparting education training and research in different areas of healthcare like Dental College, physiotherapy College Nursing Institute, Ayurvedic Medical College, Homeopathic College, Allopathic Medical College, etc.

(5) Membership :- A doner of amount fixed in this constituti a person of mature age, who may have agreed with the objects and constitution of this institute, and for whom to be a member, the executive committee may accord sanction, such any person shall be a member of this institute.

In this institute, the members shall be as under :-

(1) Life member :- A person who may donate minimum Rs.25,000/- Twenty five thousand, to this institute shall be considered life member. Out of members registered thus five members shall be included in executive committee.

(2) A patten life member :- A person who may donate to this institute minimum Rs. Fifty thousand, shall be considered patron life member of institute. Out of members, registered thus, five members shall be included in executive committee.

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NOTARY
BAROT
MEHSANA
1743/R
GUJARAT (INDIA)

A. T. Patel
Managing Trustee
Mehsana District Education Foundation
Ganpat Vidyanagar, Kherva.

(3) The amount of membership not paying completely within five years in proportion to amount of donation paid, they shall get membership in relegant cadre.

(4) Out of all the above cadres, member of any cadre, when pay donation for upper cadre then, shall be considered member of relevant upper cadre and at that time their membership of lower cadre shall automatically be cancelled.

(6) For any one reason of following, the general meeting, by passing resolution, shall retire any member from the membership of general meeting, executive committee and management committee. (1) On death (2) On resignation. (3) On acting against the interest of institute (4) On declaring insolvent by Court. (5) When any Court decide accused for offence of moral turpitude (6) On becoming insane)

(7) Board of Trustees : General meeting shall nominate five members of this institute as trustees. Their tenure shall be for five years. The old trustees ~~xxx~~ shall be ~~xxxx~~ continued, till new trustees are not nominated. The retired trustees shall be considered eligible for nomination. All the properties of institute shall ~~xxxxx~~ ~~xxxxx~~ stood in the name of trustees. They shall be considered as custodian of property, When any trustee may retire, at that time the successor trustee, shall get rights-authorities of old trustee automatecally

OF GUJARAT (INDIA)

A. T. Patel
Managing Trustee
Mehsana District Education Foundation
Ganpat Vidyanagar, Kherva.

(4) shall approve the budget prepared by managing committee of institute.

(5) After verifying the audited accounts of institute, shall approved it.

(6) Discussing rules regulations framed by managing committee for management or educational or other programme run by institute, shall approve it.

(7) For achivement or abjects of institute if necessary, shall constitute differenct committees and fix thdir field and duties,

(11) Executive committee shall form one management committee of 21 members for management of institute. The tenure of managing committee shall be of three years. The retiring members, shall be re-nominated.

The functions of managing committee, shall be as under:-

(1) shall do proceeding, for execution of policies and resolutions decided by executive committee.

(2) shall manage immovable. movable properties.

(3) shall prepare budget of institute and produce before executive committee.

(4) shall ~~PREPARE~~ keep account of institute, shall got ~~RUN~~ audited and shall got approved by executive committed.

(5) shall call meeting of executive committee and general meeting.

Managing Trustee
Mehsana District Education Foundation
Ganpat Vidyanagar, Kherva.

of managing committee may properly done. shall process for execution of resolutions passed by general meeting and executive committee.

Managing Trustee :-

(1) In absence of Chairman, shall perform all the duties of Chairman and enjoy his all r rights.

(2) Shall keep accounts of institute, shall do work pertaining to record-keeper etc. all administrative work.

(3) Shall prepsre budget, preparing accounts, getting it audited shall product before dirrerent authorities.

(4) Shall deat with all the correspondence of institute.

(5) For institute, shall sign all agreement deed, undertaking letters, etc. documents and in necessity shall authorise other person to do different acts.

(6) Shall arrange for general meeting, meetings of executive committee, managing committee and other committees, as per requirement and shall keep note of its proceedings.

(7) For execution of resolutions passed by differenct authorities, shall do necessary process.

(8) For purchase, maintenance and disposal

GUJARAT (INDIA)

Managing Trustee
Mehsana District Education Foundation
Ganpat Vidyanagar, Kherva.

(Note :- Non coram general meeting shall gather after half an hour at the same place and decisions shall be taken by the members present)

(5) The notice for general meeting and meeting of executive committee, shall be sent through ordinary post, before 10 days from the date of meeting.

(6) Special meeting :- On written demand by 1/4 members or 30 members, which ever may be less, in consultation with the Chairman, the Secretar should have to conven the special general meetin or special meeting of executive committee, within 10 days.

15) Fund :- The fund of this institute may collect by the following system :-

(1) Amount received from members. (2) Donation. (3) Gift (4) Grant (5) Income realised through activities of institute (6) Rent of properties of institute.

The cash money of institute, shall be kept with the Banks or otner financial institutions, fixed as per trust Act. The financial transaction shall be carried out under the signatures of two members, out of three decided by the managing committee.

17) Accounts :- The account year of institute shall be from April to March. The accounts of institute duly audited shall have to produce before executive committee and general meeting each year.

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A J Patel
Managing Trustee
Mehsana District Education Foundation
Ganpat Vidyanagar, Kherva.

મહેસાણા ડિસ્ટ્રીકટ એજયુકેશન ફાઉન્ડેશન
ગણપત વિદ્યાનગર
ખેરવા–૩૮૪૦૧૨
ખેરવા ગ્રામ પંચાયત માંગણા પત્રક

અનું.નં	કોલેજનું નામ	રકમ	મિલકત નં
૧	MDEF સંચાલિત યુ.વી.પટેલ કોલેજ ઓફ એન્જીનિયરીગ	૨૫૧૫૪/–	૪
૨	MDEF સંચાલિત એન્જીનિયરીગ વર્કશોપ–૧(યુ.વી.પી.સી.ઈ)	૬૯૫૧/–	૧૦
૩	MDEF સંચાલિત એન્જીનિયરીગ વર્કશોપ–૨ (યુ.વી.પી.સી.ઈ)	૧૨૩૬૮/–	૧૧
૪	MDEF સંચાલિત એન્જીનિયરીગ વર્કશોપ–૩ (યુ.વી.પી.સી.ઈ)	૨૩૭૦/–	૯
૫	MDEF સંચાલિત એન્જીનિયરીગ કોલેજ ન્યુ બિલ્ડિંગ–૨	૩૦૦૫૦/–	૬
૬	MDEF સંચાલિત વી.એમ.પટેલ ઈન્સ્ટીટયુટ ઓફ મેનેજમેન્ટ (ન્યુ એમ.બી.એ.)	૨૨૪૪૯/–	૭
૭	MDEF સંચાલિત વી.એમ.પટેલ કોલેજ ઓફ સેન્ટર ફોર મેનેજમેન્ટ સ્ટડીઝ	૯૨૧૮/–	૩
૮	MDEF સંચાલિત આચાર્ય મોતીભાઈ પટેલ ઈન્સ્ટીટયુટ ઓફ કોમ્પ્યુટર સ્ટડીઝ	૯૨૧૮/	૨
૯	MDEF સંચાલિત એસ.કે.પટેલ કોલેજ ઓફ ફાર્મસીટયુકલ એજયુકેશન એન્ડ રીચર્સ બિલ્ડીગ:–૧	૨૩૪૮૭/–	૧
૧૦	MDEF સંચાલિત એસ.કે.પટેલ કોલેજ ઓફ ફાર્મસીટયુકલ એજયુકેશન એન્ડ રીચર્સ બિલ્ડીગ:–૨	૧૧૦૨૧/–	૧૨
૧૧	MDEF સંચાલિત મહેસાણા અર્બન ઈન્સ્ટીટયુટ ઓફ સાયન્સ	૨૧૫૬૭/–	૧૩
૧૨	MDEF સંચાલિત ગણપત યુનિવર્સિટી સેન્ટ્રલ ઓફિસ	૬૭૨૯/–	૧૪
૧૩	MDEF સંચાલિતસ્ટુડન્ટ ફેસીલીટી સેન્ટર:–૧	૨૦૫૭/–	૨૯
૧૪	MDEF સંચાલિત સ્ટુડન્ટ ઈનફોરમેશન સેન્ટર:–	૩૦૦૦/–	૩૦
૧૫	MDEF સંચાલિત બી.એસ.પટેલ પોલીટેકનીક	૨૭૭૭૪/–	૫
૧૬	MDEF સંચાલિત ઓટોમોબાઈલ વર્કશોપ–(બી.એસ.પી.પી)	૨૩૭૦/–	૮
૧૭	MDEF સંચાલિત એ.એસ.પટેલ(પ્રાઈવેટ) ઔધિગિક તાલીમ સંસ્થા એન્ડ ઈન્સ્ટીટયુટ ઓફ સ્કીલ ડેવલોપમેન્ટ	૧૨૨૪૬/–	૧૭
૧૮	MDEF સંચાલિત એ.એમ.પટેલ સેકન્ડરી ઈગ્લીશ મિડિયમ સ્કૂલ (ગણપત વિદ્યાલયા)	૧૪૬૦૩/–	૧૫
૧૯	MDEF સંચાલિત હોસ્ટેલ બ્લોક:– એ.બી.સી.ડી.	૩૨૬૭૬/–	૨૧
૨૦	MDEF સંચાલિત હોસ્ટેલ બ્લોક:– ઈ.એફ	૫૫૦૨/–	૨૨
૨૧	MDEF સંચાલિત હોસ્ટેલ બ્લોક:– જી.એચ	૧૭૮૩૮/–	૨૩
૨૨	MDEF સંચાલિત સ્ટાફ કવાટર્સ જુના એ.બી	૧૫૩૧૧/–	૧૯ એ
૨૩	MDEF સંચાલિત સ્ટાફ કવાટર્સ નવા એ.બી	૭૬૫૬/–	૧૯ બી

MDEF
Cash/Ch/D.D. No.....
Dt/...../.....Rs.....
Budget Head.....
Account Officer.....
Director.....

Managing Trustee
Mehsana District Education Foundation
Ganpat Vidyanagar, Kherva.

૨૪	MDEF સંચાલિત શોપીગ સેન્ટર	૩૭૪૬/-	૨૮
૨૫	MDEF સંચાલિત હેલ્થ કેર સેન્ટર	૧૧૯૩/-	૨૦
૨૬	ગણપત વિદ્યાનગર ઉમા પરિવાર ટ્રસ્ટ હોસ્ટેલ સ્કુલઃ-૧ (હોસ્ટેલ-૨ અને ડાઈનીગ હોલ)	૨૭૮૩૬/-	૨૪
૨૭	ગણપત વિદ્યાનગર ઉમા પરિવાર ટ્રસ્ટ હોસ્ટેલ સ્કુલઃ-૨ (હોસ્ટેલ-૨ અને ડાઈનીગ હોલ તથા મરીન ડાઈનીગ)	૬૦૮૬/-	૨૫
૨૮	MDEF સંચાલિત કૃષિ વિજ્ઞાન કેન્દ્ર એડમીનીસ્ટ્રેટીવ બિલ્ડિગ	૧૫૧૪/-	૧૮ એ
૨૯	MDEF સંચાલિત કૃષિ વિજ્ઞાન કેન્દ્ર ફાર્મર્સ બિલ્ડિગ	૨૧૪૬/-	૧૮ બી
૩૦	MDEF સંચાલિત કૃષિ વિજ્ઞાન કેન્દ્ર સ્ટાફ કવાર્ટર્સ બિલ્ડિગ	૯૪૭/-	૧૮ સી
૩૧	MDEF સંચાલિત કૃષિ વિજ્ઞાન કેન્દ્ર ઇમ્પ્લીમેન્ટ એન્ડ વમિકમ્પોસ્ટ બિલ્ડિગ	૭૭૯/-	૧૮ ડી
૩૨	શ્રી ઉતર ગુજરાત પાંચ ગામ લેઉઆ પાટીદાર-મહામંડળ સંચાલિત શ્રી એસ.સી.અમીન પ્રાથમિક વિદ્યાલય	૧૬૮૦૦/-	૨૬ એ
૩૩	શ્રી ઉતર ગુજરાત પાંચ ગામ લેઉઆ પાટીદાર મહામંડળ સંચાલિત શ્રી ટી.આઈ.અમીન માધ્યમિક અને શ્રીમતિ એન.એન.એલ.પટેલ માધ્યમિક વિદ્યાલય	૧૪૯૩૧/-	૨૬ બી
૩૪	શ્રી ઉતર ગુજરાત પાંચ ગામ લેઉઆ પાટીદાર મહામંડળ સંચાલિત શ્રી અંબુભાઈ વી.પટેલ ગર્લ્સ હોસ્ટેલ	૧૪૯૧૬/-	૨૬ સી
૩૫	શ્રી ઉતર ગુજરાત પાંચ ગામ લેઉઆ પાટીદાર મહામંડળ સંચાલિત શ્રીમતિ એમ.બી.ડી.પટેલ બોયઝ હોસ્ટેલ	૨૪૬૧૨/-	૨૬ ડી
૩૬	શ્રી ઉતર ગુજરાત પાંચ ગામ લેઉઆ પાટીદાર મહામંડળ સંચાલિતસાંકુબેન ખોડીદાસ માધવજી પટેલ ભોજનાલય	૨૬૭૬/-	૨૬ ઇ
૩૭	શ્રી ઉતર ગુજરાત પાંચ ગામ લેઉઆ પાટીદાર મહામંડળ સંચાલિત ન્યુ બોયઝ હોસ્ટેલ	૧૭૯૦૯/-	૨૬ એફ
		૪,૫૭,૭૦૬/-	

MDEF

Cash/Ch/D.D. No. 004316

Dt. 15/09/16 Rs. 4,57,706/-

Budget Head....................

Account Officer................

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[illegible]

Managing Trustee
Mehsana District Education Foundation
Ganpat Vidyanagar, Kherva.

UGVCL

Uttar Gujarat Vij Company Ltd.

CIN – U40102GJ2003SGC042906

UGVCL/Mehsana/Solar Roof top/Net Metering/1336 Date : 16.03.17

By RPAD

To,
The Mehsana Dist Education foundation Trust
C/o Ganpat Vidyanagar,
Kherva
Kherva

Sub:- An Estimate for Grid Connectivity & Net Metering of Solar Roof-Top Photo-Voltaic systems as per Provisions under the Gujarat Solar Power Policy-2015.

Ref: (1) Dy.Director,GEDA Registration Number GEDA/SOL-4551/2017/03/OW/12965dated
(2)Corporate office letter No. UGVCL/COM/RTSPV/GSP2015/799 / Date 14/03/2017
(3) TFR Submitted by Sub Division office vide letter No.UGVCL/JAGUDAN/TECH/615 Date 16/03/2017

Dear Sir,

Your application for installation of Solar Roof-Top Photo-Voltaic systems has been verified as per TFR submitted by Sub-Division office vide letter under reference (3).The details is as Under

Name of consumer	The Mehsana Dist Education foundation Trust	Name of 11 KV Feeder	11 Ganpat Feeder
Consumer Number	HT-19433	Existing Sanction capacity of T/C in KVA	800 KVA
Category		Contract Load (Kw)	600 KVA
End use of Electricity	Captive use	Capacity of Solar roof top project (KW)	270 KW
S/DN	Jagudan	Registered under REC Mechanism	No
Circle	MAHESANA	Division	Mehsana

An estimate for Grid Connectivity & Net Metering of Solar Roof-Top Photo-Voltaic systems

Sr No	Item		Amount (Rs)	Payable at
1	Connectivity Charge (On Solar Project Capacity)(A/C 61.937)		50000	UGVCL,DO, Mehsana.
	From 1 KW up to 6 KW	Rs 1500/-		
	More than 6 KW up to 100 KW	Rs 10,000/-		
	More than 100 KW up to 1 MW	Rs 50,000/-		
2	Strengthening of DISCOM's System (if any)(A/c 61.940)	As per TFR		
3	Cost of additional SMC provided for solar meter (A/C 61.938)		2500	
	Single Phase	Rs 282/-		
	Three Phase (10-60 Amp) up to 35 KW	Rs 698/-		
	Three Phase CT Operated more than 35 to 100 Kw	Rs 1122/-		
	HT (more than 100 Kw)	Rs 2500/-		
	Total Amt. To be paid at UGVCL		52500	

UGVCL
Uttar Gujarat Vij Company Ltd.
CIN – U40102GJ2003SGC042906

UGVCL/COM/RTSPV/GSP2015/537/ 799 Dt.14.03.2017

To,
The Mehsana Dist Education foundation Trust
C/o Ganpat Vidyanagar,Kherva Ta & Dist Mehsana-384012

Sub: Grid Connectivity & Net Metering of Solar Roof-Top Photo-Voltaic systems as per Provisions under the Gujarat Solar Power Policy-2015.

Ref: Dy. Director, GEDA letter no. GEDA/SOL-4551/2017/03/OW/12965 dated 03.03.17.

Consumer Number	19433	Contract Load	600 KVA
Category	Others	Capacity of Solar roof top project	270 KW
End use of Electricity	captive Consumption	Registered under REC Mechanism	NO
S/DN	Jagudan	Division	Mehsana
Circle	Mehsana	Type of consumer	Type-1

Dear Sir,

Your application for installation of Solar Roof-Top Photo-Voltaic systems has been registered by GEDA vide registration no. RTSPVOTH03032017-4551 dated 03.03.17.

For Grid Connectivity, Net Metering and the benefits/facilitation under Gujarat Solar Power Policy 2015, following points are to be complied:

1) Maximum Solar Rooftop capacity that can be installed shall be 50% of the Consumer's sanctioned load,
For the consumer having contract demand in KVA considering power factor 0.9 as per section no. 2.3(20) of GERC Electricity Supply Code and Related Matters Regulations, Notification No. 4 of 2015.(i.e. Sanction load in KW = KVA*0.9)
2) Comply with the provisions of CEA (Technical Standards for Connectivity to the Grid) Amendment Regulations, 2013.
3) Sanctioned/Contract load of consumer shall not be reduced till the connectivity agreement period.
4) For grid connectivity point of drawl and injection of energy shall be same. The responsibility and costs associated with the infrastructure facilities for providing Delivery points shall be borne by consumer. An Estimate will be issued by Circle office after submission of Technical Feasibility report by concern S/Dn or Division.
5) Payment of an Estimate is required to be paid at Division office, then connectivity agreement is required to be executed with UGVCL at R&C office Mehsana, with copy of all documents,2 photographs, Draft agreement is required to be printed on Rs.100/-stamp paper (with one copy Xerox).
6) Suitable metering system

ઉત્તર ગુજરાત વિજ કું. લી.

ઉત્તર ગુજરાત વિજ કંપની લી.

ગ્રાહકનું

પ્રત

No. 001737

બુક નં. UGX 0755 રસીદ

તા.

વોર્ડ સ્થળ

ગ્રાહક નંબર

શ્રી

રૂા. (શબ્દમાં)

રોકડેથી / ચેકથી

માસ

ચેક/ડ્રાફ્ટ નાણાં વસુલાત ને આધીન

સદર

પૈસા

ઉત્તર ગુજરાત વિજ કંપની લી. વતી

GEDA
ગુજરાત ઊર્જા વિકાસ એજન્સી
GUJARAT ENERGY DEVELOPMENT AGENCY
A Government of Gujarat Organisation

Ref: GEDA/SOL-4551/2017/07/OW 12861

3 July 2017

To,
M/s, Ganpat University
The Mehsana Dist. Education Trust
Ganpat, Vidhyanagar
Kherva, Mehsana - 396120

Sub: Installation of Social Sector Rooftop Solar PV System under the subsidy scheme for the year 2016-17.
Ref: 1) Your application for availing 30% MNRE CFA for Rooftop Solar PV System.
2) GEDA/SOL –4551/2017/03/OW/12965.Dated 03 March 2017

Sir,
With reference to above, Director, GEDA is pleased to revise subsidy sanctioned for the above – mentioned system as per the details given below:

1	GEDA registration no. / year	RTSPVOTH03032017-4551 Dated 03.03.2017
2	SPV panel specification / capacity	As per latest edition of IEC 61215/ 270 kW
3	Grid tied inverter specification / capacity	As per IEC 61683/IS 61683 & IEC 60068-2/2705 kW
4	Total System Cost considered	Rs. 123,95,700/-
5	MNRE 30% CFA	Rs. 37,18,710/-

You have to get the system installed by 30/09/2017 as per MNRE terms & conditions and Specification (inclusive of indigenous SPV modules) and issue us a certificate of installation of the system along with copy of Connectivity agreement, CEIG System Charging permission, Bi-directional and Solar Meter installation & its details to enable us to undertake its inspection, failing which subsidy sanctioned to you will be treated as cancelled.

Above mentioned subsidy amount can be reduced or cancelled without assigning any reasons.

Thanking you,
Yours faithfully,

(S. B. PATIL)
DY. DIRECTOR

Cc to:1) M/s, U R Energy India Pvt Ltd
B-9, Palladium, B/h, Divyabhaskar Press
Corporate Road, Makarba,
Ahmedabad – 380015

2) Manager (A & A), GEDA, Gandhinagar

ચોથો માળ, બ્લોક નં. ૧૧ અને ૧૨ ઉદ્યોગભવન
સેક્ટર-૧૧, ગાંધીનગર - ૩૮૨ ૦૧૭.
4th Floor, Block No. 11-12, Udhyogbhavan,
Sector-11, Gandhinagar-382017. India.
Ph. : 079-232 57251-53
Fax : +91 79 232-47097, 57255
e-mail : director@geda.org.in
www.geda.gujarat.gov.in

UGVCL

Uttar Gujarat Vij Company Ltd.

CIN – U40102GJ2003SGC042906

Estimate should be paid at the office stated above by cash (up to Rs 20000/- Only)/ demand draft or Bank's pay order drawn in favour of **Uttar Gujarat Vij Company Limited** payable at **Mehsana**

If the payment of this estimate is not received within one month from the date of issue of this letter, the estimate will be treated as cancelled and your application will be filed.

After payment of an estimate, you have to execute Net Metering Inter connection agreement at Division office, Mehsana. Duly printed on Rs 100/- stamp paper with (One Xerox copy of agreement)
2 photographs, photo id, Consumer or Authorized person has to execute an agreement with UGVCL along with duly attested specimen signature of Authorized signatory, Approved Drawing and Initial Inspection of electrical Installation by Electrical Inspector.

The draft copy of agreement and Specifications of metering system are available on website www.ugvcl.com as per below path.

Consumer →Consumer Services/Investor Potential →Guidelines for Solar Bi-Directional Meter Specification

Suitable metering system and NV Relay are required to be procured by you.

1. **Solar meter** (Only Import feature) to record total generation
2. **Bidirectional/ABT meter** for Net Metering)-Capacity same as existing meter on your Installation

As per Directives of Chief Electrical inspector for Solar Project Capacity more than 10 KW, **No Volt Relay** is compulsory to be install.

Meters/CTPT procured by you from registered suppliers, is required to be tested by paying necessary testing fees at Hi-Tech Lab Sabarmati/ERDA. Duly sealed Meters will be handed over to concern S/Dn office or Division Office for installation and replacement.

If you fail to execute an agreement within 15 days from the date of payment of estimate, your application will be liable for cancellation.

Thanking You

Shri(K.D.Patel)
Executive Engineer
Division Office, Mahesana

Copy Fwcs to :-

- The Chief Engineer (OP),UGVCL, Regd. & Corp office, Mehsana
- The Superintending Engineer, UGVCL, Circle office, Mahesana
- The Deputy Engineer, UGVCL,S/Dn office,Jagudan_
  - Intimate the details of payment of estimate. Also by mail to seqcc@ugvcl.com
  - Execute the work if any involved, after payment of an Estimate.

- Solar meter (Only Import feature) to record total generation
- Bidirectional/ABT meter for Net Metering)-Capacity same as existing meter on your Installation is to be procured by the consumer
- Specifications of metering system are available on website www.ugvcl.com as per below path
  Consumer → Consumer Services/Investor Potential→ Guidelines for Solar Bi-Directional Meter Specification
- Meters/CTPT procured by you from registered suppliers, is required to be tested by paying necessary testing fees at Hi-Tech Lab Sabarmati/ERDA. Duly sealed Meters will be handed over to concern S/Dn office or Division Office for installation and replacement.

7) Get Approval of Chief Electrical Inspector (CEI) for Single Line Diagram, Earthing Diagram and Wiring Diagram.
8) Installation of proper protection system. All equipment should comply with IEC Standards, relevant IEC certificates are to be submitted.
9) Building and Architectural Drawings approvals from relevant authorities.
10) Submission of project commissioning certificate by GEDA.
11) Applicable APPC rate as per Gujarat Solar Power Policy-2015
    APPC rate can be decided based on the year of commissioning of Solar Project.

This is for your information in the matter.

Yours Sincerely
For & on behalf of UGVCL

Chief Engineer (OP)

Copy to:

- The Superintending Engineer (O&M),UGVCL, Circle office, Mehsana
  Monitor application process at your end and submit report of action taken
- The Ex. Engineer, UGVCL, Division Office, Mehsana
  -------On the basis of TFR submitted by Sub Division office, issue estimate to the applicant from your end.
- The Deputy Engineer, UGVCL,S/Dn Office, Jagudan

----Please submit TFR (Activity No 5) to Circle Office as mentioned in EPD Circular No SLR/11/2016/70/B dated 18.02.2016, forwarded by this office letter No. UGVCL/QCC/ Solar/417 date 01.03.2016.

Ref. No.: GNU/PO/013/Solar Project/137/2017 Date: 15/02/2017

To
U R Energy
B-9, Palladium,
B/h Divyabhaskar Press,
Corporate Road,
Makarba,
Ahmedabad-380015
Mobile: 9726503000

Subject:- Work order for Design, Supply, Installation, Testing and commissioning of 270K WP Grid Interactive Solar Rooftop Power Project.

Ref: - Your quotation dated: 08/02/2017

Dear Vendor,

With reference to above mentioned subject & reference, we are issuing work order for supply, Installation, Testing and commissioning of 270K WP Grid Interactive Solar Rooftop Power Project of Ganpat University. Solar Rooftop specifications, term and condition are accepted as under.

Sr.no	Description	Installed Capacity (KW)	Rate/KW	Value (INR)
1	Design, supply, erection and commissioning of a roof top grid tie solar PV power generation plant with standard lengths of wires. The solar power plant will consist of required no. of SPV panels, inverter and with all the electrical items suitable to the designed installed capacity	270	₹ 45,910	₹ 1,23,95,700
Total Value(Included Tax)				₹ 1,23,95,700
Saving due to 30% MNRE CFA				**₹ 37,18,710**
Total Net Value				**₹ 86,76,990**

GENERAL CONDITIONS

1. The contractor shall complete this work within **120 days** from the date of possession of the site or from the date of work order whichever is later.

2. The Contractor to deposit with Ganpat University a performance bond (Contract Performance Guarantee) in the form of Bank Guarantee an amount equivalent to 4% of the value of the contract, which will be returned to the contractor on the faithful completion of 10 years from date of completion of work, on virtual completion as certified by the client. Ganpat University will not be liable to paid any interest on this amount. Ganpat University reserves the right to withhold/ encash full or part of the Performance bond in case the contractor fails to

Ganpat Vidyanagar - 384 012, Mehsana-Gozaria Highway, District: Mehsana, Gujarat, INDIA.
Phone: +91-2762-286924/25, Fax : +91-2762-286080, Toll Free No.: 180023312345
Email: info@ganpatuniversity.ac.in Website: www.ganpatuniversity.ac.in

complete the project as per the Quotation stipulations due to any failure on his part. The guarantee shall be submitted as per the proforma given in Annexure I.

3. The defect liability period shall commence from the date of virtual completion certified by client and will end after six months. This shall start from the date of completion of work and testing certificate.

4. The contractor shall submit the running and final bills in three copies. The client shall certify after proper and through security of bills.

5. The contractor shall carryout the work in Specifications as per quotation submitted by you.

6. The contractor shall prepare a time and progress chart showing the complete and actual work done every week, and copies of the same shall submit to the client.

7. The contractor shall not be eligible for any claim due to any variation in/or omission of any item. The payment shall be done as per KW as per site.

8. The rates to be quoted by contractor must be Exclusive of all taxes such as Vat, Excises, Service tax etc. Service tax shall be paid by the contractor to be concern authority and will be reimbursed by the Employer/client to the contractor on submission of documentary evidence. Insurance, Transportation, loading & unloading of material shall be borne by the contractor.

9. GEDA Registration, DISCOM and Net Meter Charges shall be excluded.

10. Payment Terms & Condition:

- 20% Advance along with P.O.
- 70% Material Delivered at Site.
- 10% After Testing & Commissioning of the Final power project.

11. Procuring all electric service connection shall be the responsibility of the Contractor from one convenient point (to client) made available by owner.

12. A full time qualified and experienced supervisor shall be kept in charge of the execution when work is under execution.

13. Contractor shall make his own arrangement for water and power for the Execution of work. Water & power shall be provided at one convenient point (to client) at free of cost by owner.

14. Method of work, specification, mode of measurements and other detail wherever not mentioned should be followed as per Indian Standard Code Of practice or as per client's instructions.

15. The contractor shall provide the amenity of proper shade and shelter to the workers/labours.

16. The contractor shall provide drinking water facilities to the workers/labours.

17. The contractor shall have to arrange for first aid box at side of work for immediate relief at the time of accident.

18. The contractor shall obtain necessary certificate & licenses from the labour department as and when required as per labour laws in force.

19. In the event of any damage to or loss of material brought by the Contractor, safe keeping responsibility lies entirely with contractor. In no way client shall be responsible.

20. There shall be no objection from the contractor for any other agencies working on the same site.

21. The contractor shall have to give detailed working schedule of the execution for the work justifying expected progress of work.

22. The site shall be cleared totally after the completion of work to the satisfaction of client. The site shall be cleaned on day to day basis.

23. Misuse of electricity and water for purpose other than work shall result is termination of such facility by owner. Then the contractor has to arrange for his own source.

24. If any work carried out is found improper & not corresponding to the specification / drawings same shall be re done by contractor again without any payment from the client. If contractor not carry out this work according to the Instruction of Architect/ Client this shall be done from the retention amount deducted from the contractor's bill as well from Security deposit. The contractor shall be not having any right for this amount.

25. The scaffolding work if required shall be total responsibility of contractor & no extra shall be payable on this account to the contractor.

26. The rates shall be quoted on KW basis.

27. Warranty and Guarantee.

- The contractor shall provide 10 Years warranty on SPV Modules.
- The Contractor shall warranty for SPV Modules performance 25 Years among them 90% output for 10 Years and 80% output for 15 Years.
- The contractor shall provide 5 Years warranty on Inverter.

28. In addition to above terms and conditions the scope of work as mentioned in Annexure-II shall be considering for Solar Project.

Annexure-II		
Sr. No	SERVICE	SCOPE
I.	**SITE LOCATION**	
1	Finalization of site location	CLIENT (Ganpat University)
2	Ensuring site availability at all times without any hassles or hindrances for peaceful execution of project	CLIENT
II.	**PRELIMINARY**	
1	Basic Engineering of plant	URE (U R Energy)
2	Submission of BOQ with offered makes, SLD and PV System Report	URE
III.	**LIAISONING AND APPROVALS**	
1	Local state Govt. project registration	URE
2	Power evacuation permission from local DISCOM	URE
3	SLD approval from Local Electricity Authority Agencies	URE
4	Detailed Project Report- Technical	URE
5	Approval for grid synchronization if required	URE
6	Final Completion Certificate	URE
IV.	**ENGINEERING**	
1	Preparation of all drawings (Civil, Electrical and Mechanical)	URE
2	Preparation of all documents (Civil, Electrical and Mechanical)	URE
3	Submission of drawing and documents list	URE
4	Submission of technical datasheet of all equipment	URE
5	System sizing calculations	URE
6	Quality assurance plan	URE
7	As built drawings and O & M manuals	URE
8	Project Handover Documentation	URE
V.	**PROJECT CONSTRUCTION ACTIVITIES**	
1	Material storage room	CLIENT
VI.	**CIVIL DETAILS**	
1	Mounting Structure Foundations (If any)	URE
VII.	**MECHANICAL WORKS**	
1	Module Mounting Structure	URE
2	String Monitoring Box Structure	URE
VIII.	**DC ELECTRICAL SYSTEM**	
1	Solar PV Module	URE
2	Solar Cable – From Module to string combiner Box	URE
3	MC4 compatible Connectors	URE
4	Conduits for burying unarmoured solar cable	URE
5	DC Cable (Al) from string combiner box to inverter	URE
6	Cable Terminations as per the scope above	URE
IX.	**AC ELECTRICAL SYSTEM**	
1	LT Panel	URE

2	AC Cable (Al) from inverter to LT panel to transformer	URE
X.	**PROTECTION SYSTEM**	
1	Earthing Strip Grid for MMS	URE
2	Chemical Type Maintenance Free Earthing Electrode for the scope mentioned above.	URE
3	Equipment Earthing restricted to scope as mentioned above	URE
4	Lightning Arrestors	URE
XI.	**AUXILIARY SYSTEM**	
1	Main Control Room Electrification	URE
2	Auxiliary Power Cables and Accessories	CLIENT
XII.	**MONITORING SYSTEM**	
1	Wifi monitoring system	URE
2	Internet Connectivity	CLIENT
XIII	**SECURITY SYSTEM**	
1	Fire/Smoke detect system for inverter/control room	CLIENT
2	Security System (Plant Surveillance Camera)	CLIENT
XIV.	**WATER SUPPLY**	
1	Plumbing line with water pump with accessories and motor installation	CLIENT
2	Water tank and water for panel cleaning	CLIENT
XV.	**MISCELLANEOUS**	
1	Fire Extinguishers and Electrical Safety Items	CLIENT
2	Consumables (Paint, Cleaning, Accessories)	CLIENT
XVI.	**TESTING AND COMMISSIONING**	
1	Inspection of equipment	URE
2	Pre – Commissioning tests of items	URE
3	System commissioning as per the scope mentioned above	URE
4	On-site training and system handover to Client for the scope mentioned above only	URE
XVII.	**SPARE for OPERATION AND MAINTENANCE**	
1	As per policy Maintenance free for 1st year.	URE

Assistant Registrar
Procurement Officer
Ganpat University

C.C. to:- 1) Procurement Department, 2) Account Department, 3) Office files, 4) Copy Estate Dep., 5) Vendor file,

Applicant:- (On letter Head)

DATE :-

To,

The Electrical Inspector.
of Govt. of Gujarat,

Sub: - Electrical Drawing application for setting up of Solar roof top project under Gujarat Solar Power Policy-2015

Ref:-Geda application Registration no : RTSPVOTH03032017 - 4551, dated 03/.

Dear Sir,

With reference to the above subject matter, we are hereby submitting our application for setting up

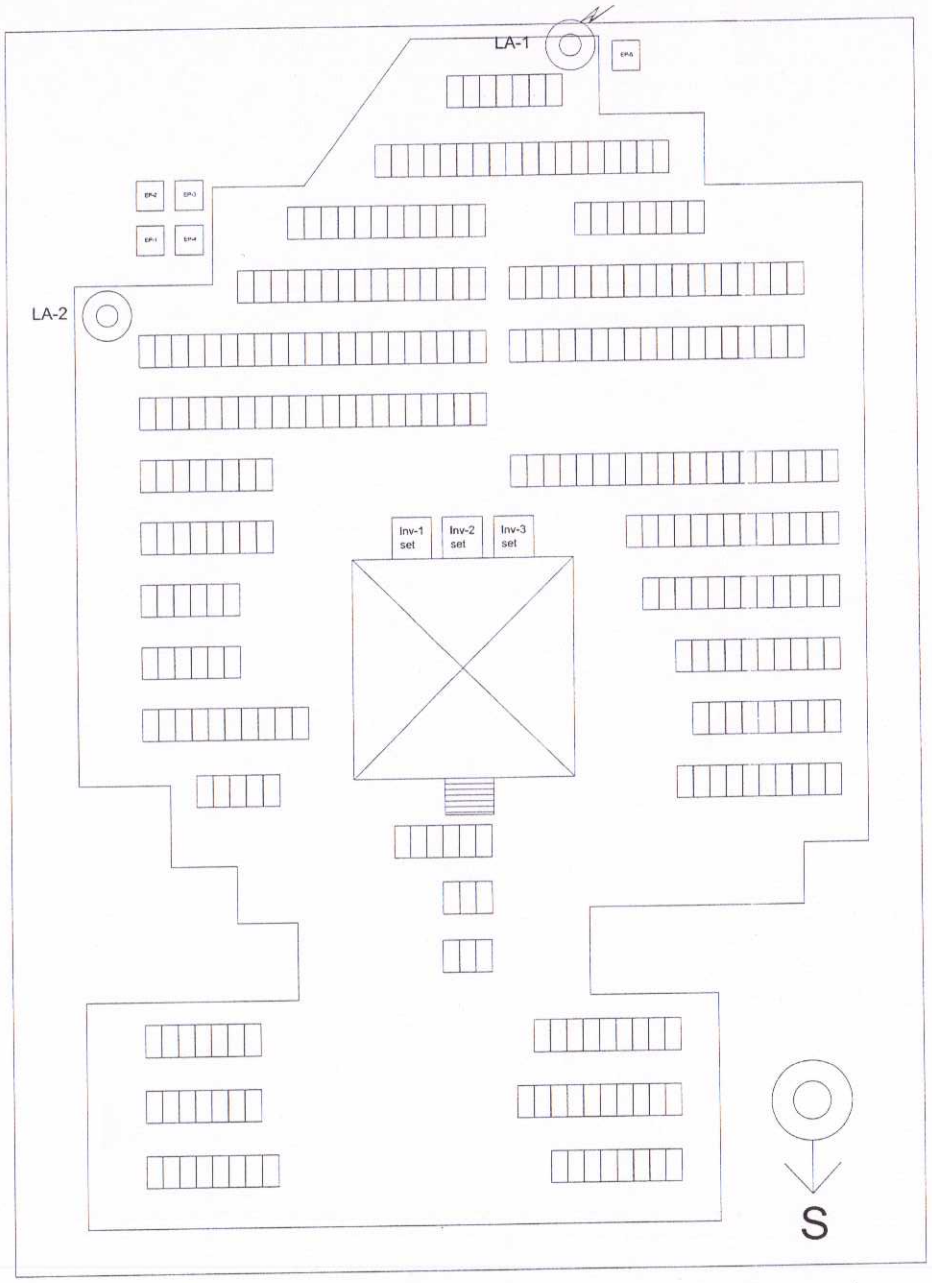
_____ ROOFTOP Solar System at our premises.

The Following Documents are Attached Herewith.

1. Application Letter
2. Application form submitted to GEDA & supplementary documents.
   (With ref. to meeting with CEI , Gandhinagar)
3. _____ Solar plant Drawing
   (As per Model drawing given by Chief Electrical Inspector-Gandhinagar)
4. Inverter Technical Specification
5. PV Panel Technical Specification

We request you to go through the same and give us your approval at the earliest.

Thanking You.



GENERAL NOTES:-

1) ALL DIMENSIONS ARE IN MM

TOTAL NO. OF MODULE : 316 NOS

S

REV	DATE	DESCRIPTION	DRAWN
0	06/05/2017	FOR APPROVAL	JB

PROJECT TITLE:	270 kWp At Kherva
PROJECT DEVELOPER	Ganpat University
CLIENT	Ganpat University
VENDOR	UR ENERGY INDIA PVT.LTD
ENGG CONSULTANT	UR ENERGY INDIA PVT.LTD
DRAWING TITLE:	SPV ARRAY LAYOUT- ACHARYA MOTIRAM BUILDING

DRAWING NO : URE-GP-ELE-DRG-0003		SCALE	NTS
DRAWN	JB	SHEET NO	SH-01 OF01
CHECKED	JB	PAPER SIZE	A3
REVIEWED	JB	REV. NO.	0
APPROVED	JB		
DATE	06/05/2017		

A3

URenergy
USA | UK | AFRICA | DUBAI | INDIA | CHINA | AUSTRALIA
Energy for All

UR Energy (INDIA) Pvt. Ltd.
B1-B2/9th Floor, Palladium, B/h. Divya Bhaskar Press,
Corporate Road, Prahlad Nagar, Ahmedabad-380015.
india@urenergyglobal.com l www.urenergyglobal.com
Toll Free : 1800 120 4011

270 KW Grid Tied Roof Top Solar Power Plant at

Ganpat University,

The Mehsana District Education Trust,
Kherva, Mehsana.

GANPAT UNIVERSITY
॥ विद्यया ममाऽमृतमश्नुते ॥

Technical Details	Specification
Building Name	S K Patel Pharmacy
Project Capacity	70 KW
Co-ordinates	23.52° N, 72.5° E
Total Area Covered	840 Sq Mtr
Roof Type	RCC Plain Roof
String Inverter Manufacturer	U R Energy
String Inverter Rating	33 KW
Inverter Output	3-Phase, 415V,50Hz
String Inverter Installed	02 Nos
Grid Evacution Voltage	415 V
Solar PV Panel Manufacturer	Jakson (Marketed by UR Energy (India) Pvt. Ltd.
Solar PV Panel Type	Poly Crystalline
Solar PV Panel Capacity	310Wp
Solar PV Panel Installed	230 Nos
Array Current	8.20 Adc *
Array Voltage	650 Vdc *
Remote Monitoring Unit	Web/App. - Based Remote Monitoring
Expected Generation of the Roof Top Solar System	105000 kwh/Annum*

URenergy
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UR Energy (INDIA) Pvt. Ltd.
B1-B2/9th Floor, Palladium, B/h. Divya Bhaskar Press,
Corporate Road, Prahlad Nagar, Ahmedabad-380015.
india@urenergyglobal.com l www.urenergyglobal.com
Toll Free : 1800 120 4011

270 KW Grid Tied Roof Top Solar Power Plant at

Ganpat University,

The Mehsana District Education Trust,
Kherva, Mehsana.

GANPAT UNIVERSITY
॥ विद्या समाजोत्कर्षः ॥

Technical Details	Specification
Building Name	Acharya Motibhai Patel
Project Capacity	100 KW
Co-ordinates	23.52° N, 72.5° E
Total Area Covered	1200 Sq Mtr
Roof Type	RCC Plain Roof
String Inverter Manufacturer	U R Energy
String Inverter Rating	33 KW
Inverter Output	3-Phase, 415V,50Hz
String Inverter Installed	03 Nos
Grid Evacution Voltage	415 V
Solar PV Panel Manufacturer	Jakson (Marketed by UR Energy (India) Pvt. Ltd.
Solar PV Panel Type	Poly Crystalline
Solar PV Panel Capacity	310Wp
Solar PV Panel Installed	316 Nos
Array Current	8.20 Adc *
Array Voltage	650 Vdc *
Remote Monitoring Unit	Web/App. - Based Remote Monitoring
Expected Generation of the Roof Top Solar System	150000 kwh/Annum*

URENERGY
USA | UK | AFRICA | DUBAI | INDIA | CHINA | AUSTRALIA
ENERGY FOR ALL

UR Energy (INDIA) Pvt. Ltd.
B1-B2/9th Floor, Palladium, B/h. Divya Bhaskar Press,
Corporate Road, Prahlad Nagar, Ahmedabad-380015.
india@urenergyglobal.com l www.urenergyglobal.com
Toll Free : 1800 120 4011

270 KW Grid Tied Roof Top Solar Power Plant at

Ganpat University,

The Mehsana District Education Trust,
Kherva, Mehsana.

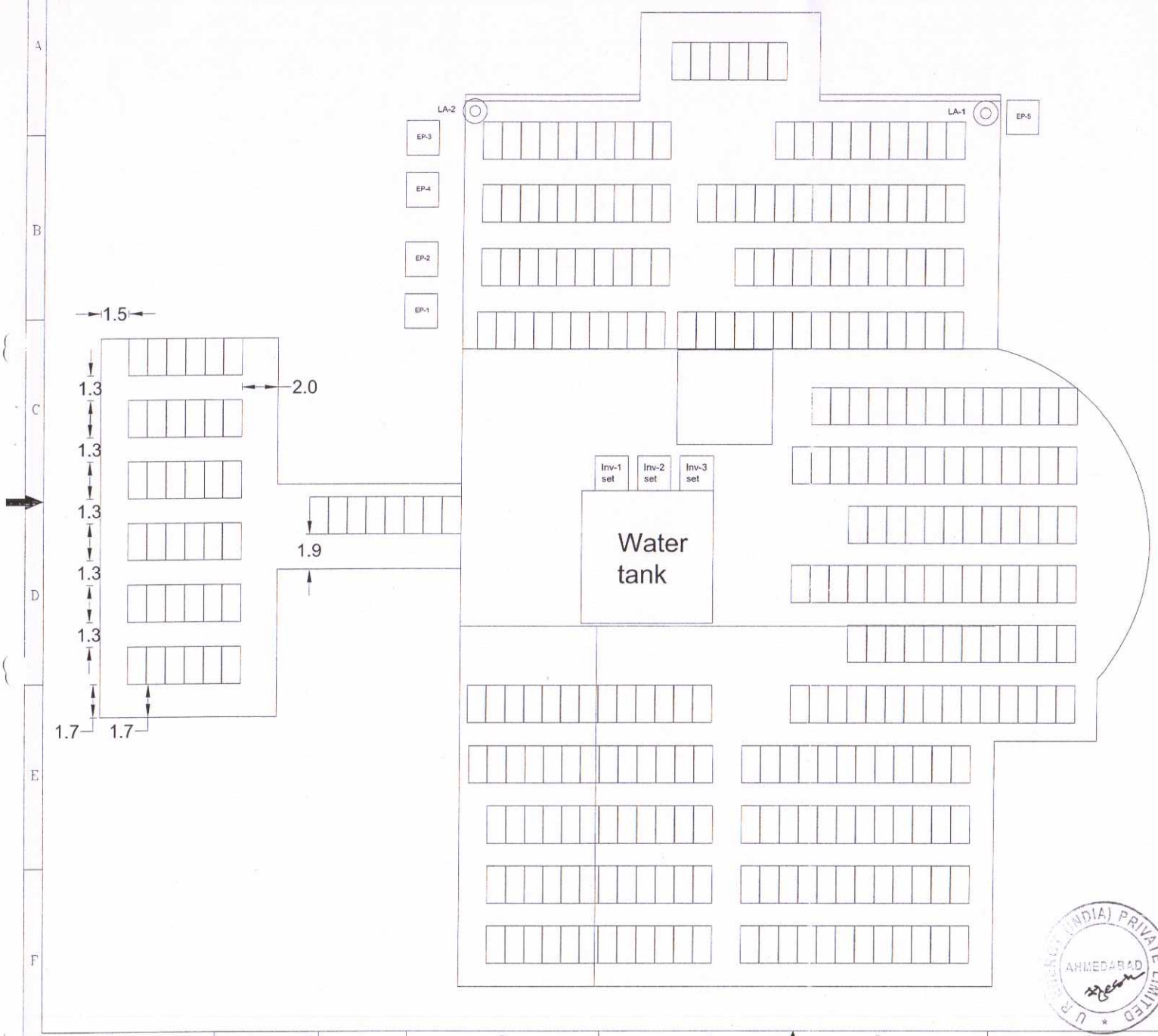
GANPAT UNIVERSITY
॥ विद्यया समाजोत्कर्षः ॥

Technical Details	Specification
Building Name	V M Patel
Project Capacity	100 KW
Co-ordinates	23.52° N, 72.5° E
Total Area Covered	1200 Sq Mtr
Roof Type	RCC Plain Roof
String Inverter Manufacturer	U R Energy
String Inverter Rating	33 KW
Inverter Output	3-Phase, 415V,50Hz
String Inverter Installed	03 Nos
Grid Evacution Voltage	415 V
Solar PV Panel Manufacturer	Jakson (Marketed by UR Energy (India) Pvt. Ltd.
Solar PV Panel Type	Poly Crystalline
Solar PV Panel Capacity	310Wp
Solar PV Panel Installed	334 Nos
Array Current	8.20 Adc *
Array Voltage	650 Vdc *
Remote Monitoring Unit	Web/App. - Based Remote Monitoring
Expected Generation of the Roof Top Solar System	150000 kwh/Annum*

GENERAL NOTES:-

1) ALL DIMENSIONS ARE IN MM

TOTAL NO. OF MODULE : 334 NOS



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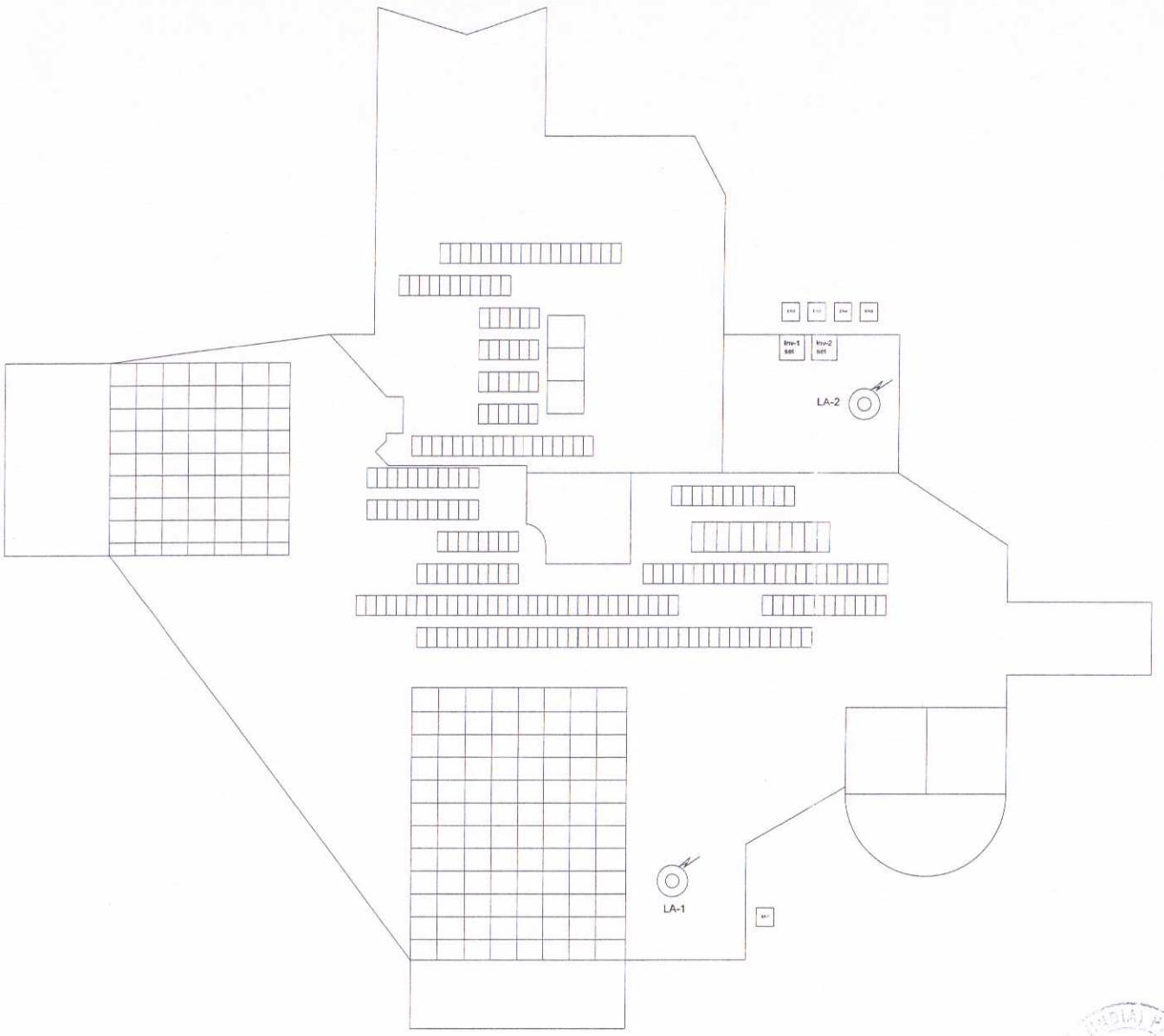
REV	DATE	DESCRIPTION	DRAWN
0	06/05/2017	FOR APPROVAL	JB

PROJECT TITLE:	270 kWp At Kherva
PROJECT DEVELOPER	Ganpat University
CLIENT	Ganpat University
VENDOR	UR ENERGY INDIA PVT.LTD
ENGG CONSULTANT	UR ENERGY INDIA PVT.LTD
DRAWING TITLE:	SPV ARRAY LAYOUT- V.M PATEL INSTITUTE

DRAWING NO : URE-GP-ELE-DRG-0004		SCALE	NTS
DRAWN	JB	SHEET NO	SH-01 OF01
CHECKED	JB	PAPER SIZE	A3
REVIEWED	JB	REV. NO.	0
APPROVED	JB		
DATE	06/05/2017		

U R ENERGY (INDIA) PRIVATE LIMITED AHMEDABAD

A3



GENERAL NOTES:-

1) ALL DIMENSIONS ARE IN MM

TOTAL NO. OF MODULE : 230 NOS (SKPCPER-GUNI)

S

REV	DATE	DESCRIPTION	DRAWN
0	06/05/2017	FOR APPROVAL	JB

PROJECT TITLE:	270 kWp At Kherva
PROJECT DEVELOPER	Ganpat University
CLIENT	Ganpat University
VENDOR	UR ENERGY INDIA PVT.LTD
ENGG CONSULTANT	UR ENERGY INDIA PVT.LTD
DRAWING TITLE:	SPV ARRAY LAYOUT-PHARMACY BUILDING

DRAWING NO : URE-GP-ELE-DRG-0002		SCALE	NTS
DRAWN	JB	SHEET NO	SH-01 OF01
CHECKED	JB		
REVIEWED	JB	PAPER SIZE	A3
APPROVED	JB	REV. NO.	0
DATE	06/05/2017		

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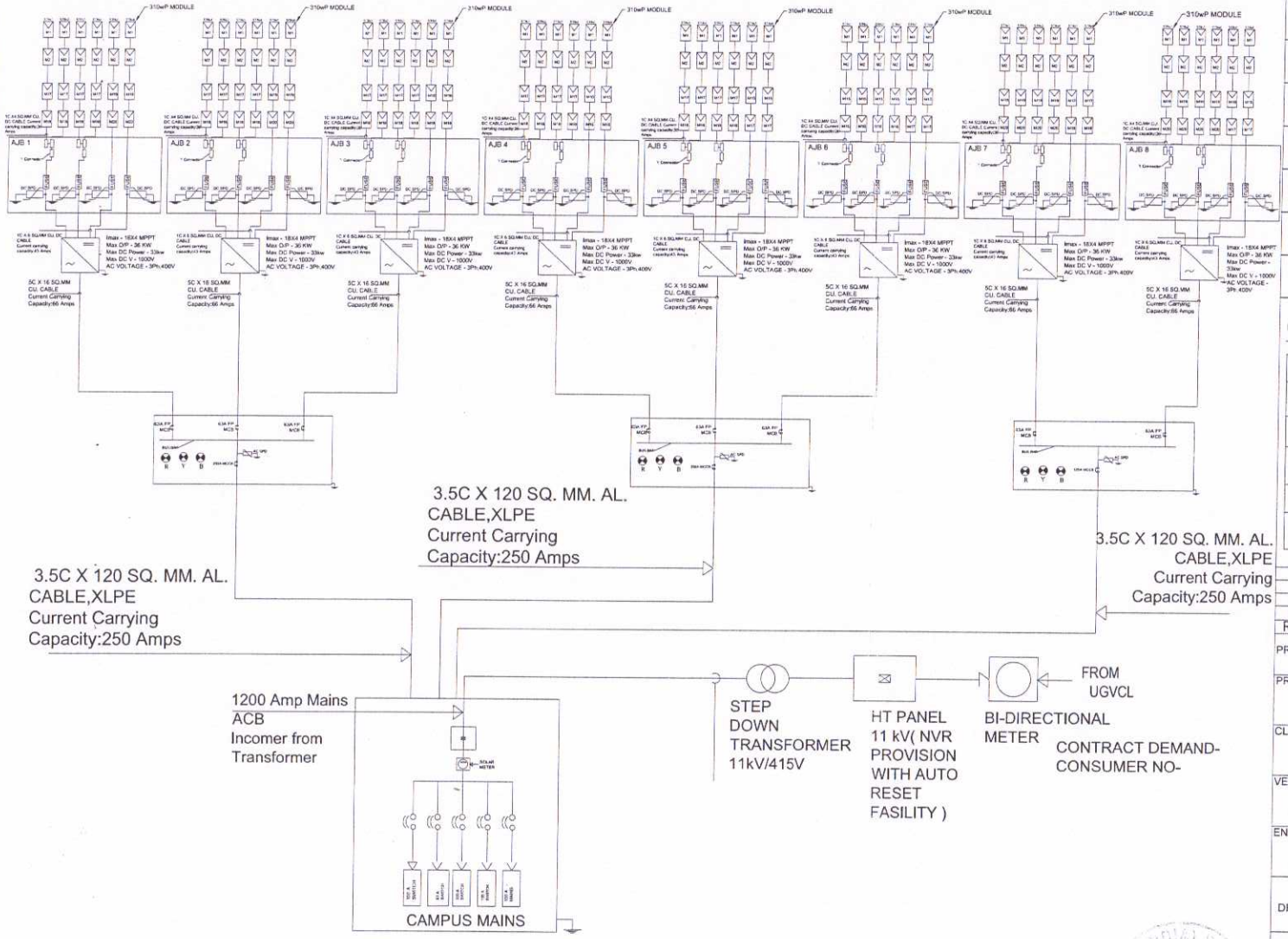

LEGENDS

SYMBOL	DESCRIPTION
	310 Wp SOLAR MODULE
FUSE	20 AMP DC FUSE
	INVERTER
	MCB
	SPD
	Y- CONNECTOR
	250 AMP. SFU
	HT BREAKER

GENERAL NOTES:

SR.NO	DESCRIPTION	QTY
1	TOTAL NO. OF STRING	48
2	TOTAL NO. MODULE 310 Wp	872
3	TOTAL NO. OF AJB	8
4	TOTAL NO. OF ACDB	3
5	TOTAL NO. OF INVERTER 33 KW	8

REV	DATE	DESCRIPTION	DRAWN
1	26/04/2017	FOR APPROVAL	JB
0	12/03/2017	FOR APPROVAL	JB

PROJECT TITLE:	270 kW At Ganpat University
PROJECT DEVELOPER	Ganpat University
CLIENT	Ganpat University
VENDOR	UR ENERGY INDIA PVT.LTD
ENGG CONSULTANT	UR ENERGY INDIA PVT.LTD
DRAWING TITLE:	SINGLE LINE DIAGRAM

DRAWING NO : URE-GP-ELE-SLD-0001		SCALE	NTS
DRAWN	JB	SHEET NO	SH-01 OF01
CHECKED	JB	PAPER SIZE	A3
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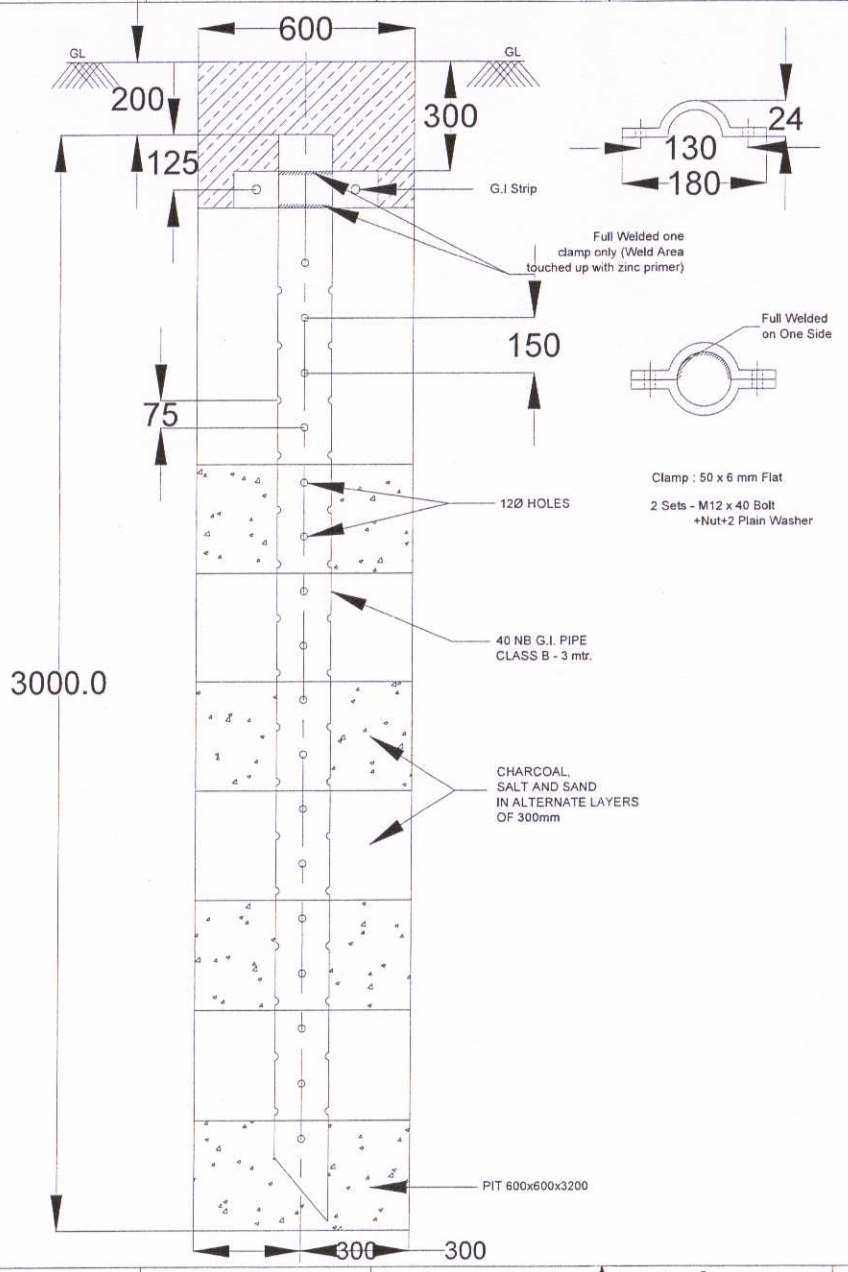
APPROVED	AD		
DATE	26-04-2017		



Clamp : 50 x 6 mm Flat

2 Sets - M12 x 40 Bolt +Nut+2 Plain Washer

GENERAL NOTES:

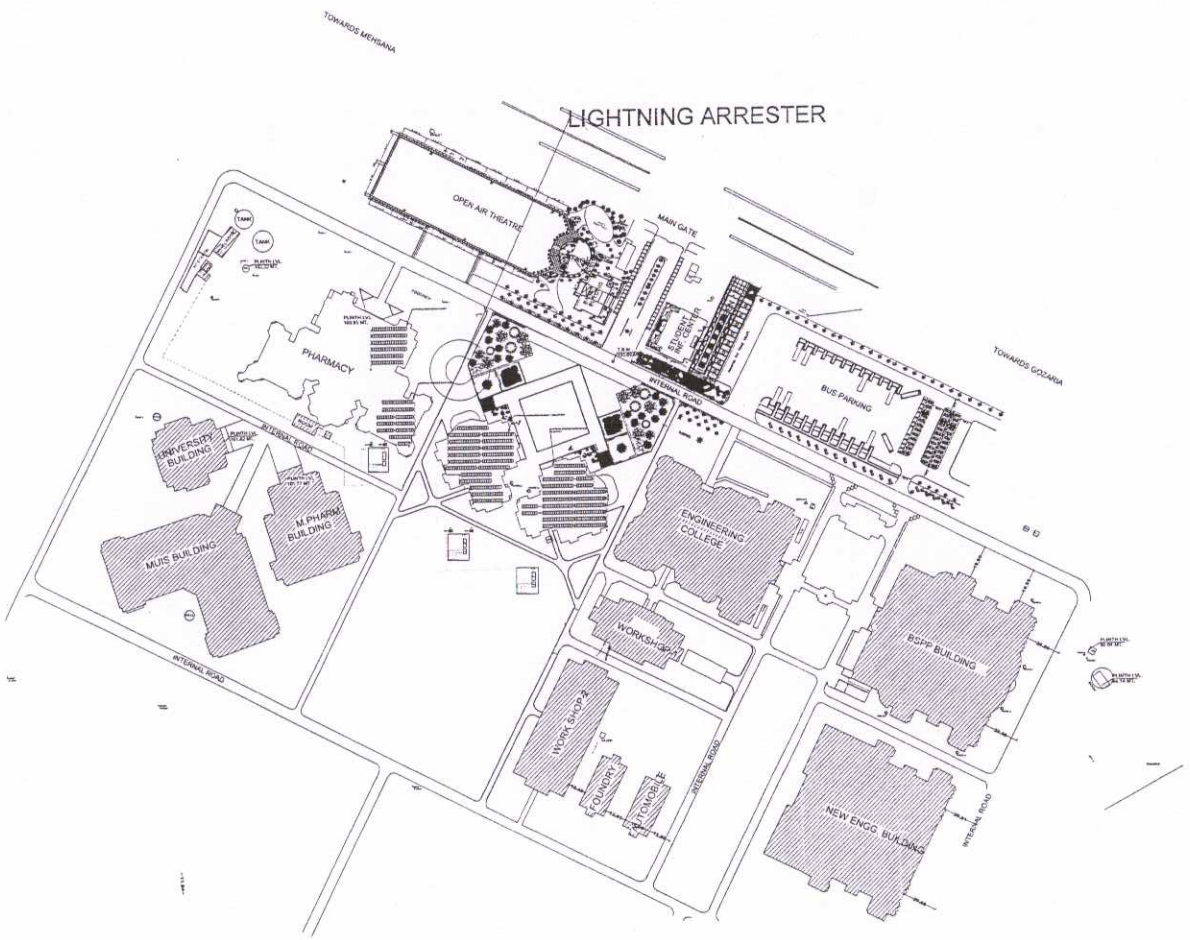
1) ALL THE DIMENSIONS ARE IN MM
2) THE PIPE ELECTRODE SHALL CONFORM TO IS-3043, SUBJECT TO TOLERANCE PERMITTED THEREIN
3) ALL MS PATRS SHALL BE HOT DIP GALVANISED : 80 MICRON

REV	DATE	DESCRIPTION	DRAWN
0	12/03/2017	FOR APPROVAL	JB

PROJECT TITLE:	270 kW At Kherva
PROJECT DEVELOPER	Ganpat University
CLIENT	Ganpat University
VENDOR	UR ENERGY INDIA PVT.LTD
ENGG CONSULTANT	UR ENERGY INDIA PVT.LTD
DRAWING TITLE:	DETAILED EARTHING LAYOUT

DRAWING NO : URE-GP-ELE-LAY-0003		SCALE	NTS
DRAWN	JB	SHEET NO	SH-01 OF01
CHECKED	JB	PAPER SIZE	A3
REVIEWED	AD	REV. NO.	0
APPROVED	AD		
DATE	12/03/2017		

A3



LEGENDS

	DESCRIPTION
	310 Wp SOLAR MODULE
	INVERTER 33 KW
EP	EARTH PIT

GENERAL NOTES:-
1) ALL DIMENSIONS ARE IN MM

2) TOTAL PROPOSED CAPACITY = 270kWp.

N

REV	DATE	DESCRIPTION	DRAWN
0	12/03/2017	FOR APPROVAL	JB

PROJECT TITLE:	270 kWp At Kherva
PROJECT DEVELOPER	Ganpat University
CLIENT	Ganpat University
VENDOR	UR ENERGY INDIA PVT.LTD
ENGG CONSULTANT	UR ENERGY INDIA PVT.LTD
DRAWING TITLE:	MODULE PLACEMENT

DRAWING NO : URE-GP-ELE-DRG-0002		SCALE	NTS
DRAWN	JB	SHEET NO	SH-01 OF01
CHECKED	JS	PAPER SIZE	A3
REVIEWED	JS	REV. NO.	0
APPROVED	JS		
DATE	12/03/2017		

GANPAT UNIVERSITY
॥ विद्यया समाजोत्कर्षः ॥

To whom so ever It May Concern

This has reference for 270 KW Rooftop Solar Power Project at Ganpat University, Mehsna District Education Foundation, Ganpat Vidyanagar, Mehsana – Gozaria Highway, District Mehsana 384012, Gujarat, India.

I authorize Mr. Amit Patel to sign all necessary documents to avail customs and excise duty benefits from MNRE & communicate with MNRE and liaison work with state nodal agency, UGVCL (Discom), MNRE and other departments / agency of Government on behalf of our company and the specimen signature of authorized representative is as below.

Thank you,

A.T.Patel

Anilbhai T. Patel

President,
Ganpat University

Ganpat Vidynagar-384012, Mehsana-Gozaria Highway, District : Mehsana, Gujarat, INDIA
Phone : +91-2762-286924/25, Fax : +91-2762-286080, Toll Free No.: 180023312345
E-mail: info@ganpatuniversity.ac.in Website : www.ganpatuniversity.ac.in

GANPAT UNIVERSITY
॥ विद्यया समाजोत्कर्षः ॥

Ref: GNU/PO/059/Solar Project/727/2017

Date: 31/07/2017

To,
The Dy. Director,
Gujarat Energy Development Agency
4th Floor, Block No. 11/12,
Udyog Bhavan, Sector-11,
Gandhinagar- 382 011

Sub: Declaration of Ownership of Premises and Solar PV Rooftop Plant.

Dear Sir,

With reference to the above subject, we have installed 270 kWp Solar PV Rooftop plant at our premises. We hereby declare that the Solar PV Rooftop Plant has been installed under CAPEX model only with the ownership of premises and Solar PV Rooftop plant of the undersigned. We are aware that any other model (OPEX, BOOT, BOOM etc.) is not applicable under the provision of Gujarat Solar Power Policy-2015. In case the above information is found to be concealed, suppressed or incorrect, we shall be responsible for the consequences, if any.

Authorized signatory
(Sign. & stamp)

Ganpat Vidyanagar - 384 012, Mehsana-Gozaria Highway, District: Mehsana, Gujarat, INDIA.
Phone: +91-2762-286924/25, Fax : +91-2762-286080, Toll Free No.: 180023312345
Email: info@ganpatuniversity.ac.in Website: www.ganpatuniversity.ac.in

Ref: Date: 31/07/2017

To,
The Dy. Director,
Gujarat Energy Development Agency
4th Floor, Block No. 11/12,
UdyogBhavan, Sector-11,
Gandhinagar- 382 011

Sub: Declaration of Ownership of Premisesand Solar PV Rooftop Plant.

Dear Sir,

With reference to the above subject, wehaveinstalled **270 kWp** Solar PV Rooftop plant at our premises. We hereby declare that the Solar PV Rooftop Plant has been installed under CAPEX model only with the ownership of premises and Solar PV Rooftop plant of the undersigned. We are aware that any other model (OPEX, BOOT, BOOM etc.) is not applicable under the provision of Gujarat Solar Power Policy-2015. In case the above information is found to be concealed, suppressed or incorrect, we shall be responsible for the consequences, if any.

Authorized signatory_____
(Sign.& stamp)

Date:

GANPAT UNIVERSITY
॥ विद्यया समाजोत्कर्षः ॥

Date: 31/07/2017

To Whom So Ever It May Concern

This is certified that **M/s. U R Energy (India) Pvt. Ltd.** has completed the work of Design, Supply, Erection, testing & Commissioning of **270 kW** capacity Solar Power Plant at **M/s Ganpat University, The Mehsana District Education Foundation Trust,** at **Ganpat Vidhyanagar, Kherva, Mahesana District- 396120** on complete turnkey basis and M/s. U R Energy (India) Pvt. Ltd. have successfully completed the work to the best of satisfaction and the solar power plant has been successfully commissioned on **05/07/2017**.

270 KW Rooftop Solar Grid Tied Power Plant at Ganpat University

Sr No	Particulars	Remarks		
		V M Patel Building	Motiram Acharya Building	Pharmacy Building
A	**PV Modules**			
1	Make	Jakson		
2	Capacity	310 Wp		
3	Nos of Module	334	316	230
4	Total Capacity	103.54 kWp	97.96 kWp	71.30 kWp
B	**Inverters**			
5	Make	URE		
6	Capacity	33 KW		
7	Nos of Inverter	03	03	02
8	Serial Number	470217324242 470217324222 470217324231	470217324241 470217324246 470217324243	470217324223 470217324207

Authorised Signatory

Ganpat University

Ganpat Vidyanagar - 384 012, Mehsana-Gozaria Highway, District: Mehsana, Gujarat, INDIA.
Phone: +91-2762-286924/25, Fax : +91-2762-286080, Toll Free No.: 180023312345
Email: info@ganpatuniversity.ac.in Website: www.ganpatuniversity.ac.in

ironmental Consciousness and Sustainability (10)
3 Alternate Energy initiatives such as:
centage of annual power requirement of the Institution met by the renewable energy sources
(Current year Data)

Power quirement met by renewable nergy sources	Total power requirement	Renewable energy source	Renewable energy generated	Renewable energy used	Energy supplied to the grid	Remark
0 KVA(270 KW)	600 KVA CONTRACT DEMAND WITH UGVCL	On Grid Rooftop Solar power Generation with Polycrestiline panels	147760 KWh (2017)	118550 KWh (2017)	29210 KWh (2017)	On Grid Rooftop Solar Power Generation Commissioned on 7th July 2017
			389640 KWh (2018)	317639 KWh (2018)	72001 KWh (2018)	
			363600 KWh (2019)	302480 KWh (2019)	61120 KWh (2019)	
			340360 KWh (2020)	270600 KWh (2020)	69760 KWh (2020)	

Date : 13/06/2017

To,
The Chief Electrical Inspector,
Block No-18, 6th Floor,
Udyog Bhavan, Sector 11,
Gandhinagar, Gujarat.

Subject : Submission of project completion letter for 270 KW Roofotp Solar Project at Ganpat University.

Dear Sir,

After the approval from GEDA & CEIG, we are issuing project completion letter attached with test report form for our 270 KWp Rooftop Solar project at our premises.

Kindly provide the inspection & approval for the same.

Please acknowledge the receipt of this letter and attachment for the same.

Thanking You,

Authorized Signatory

Ganpat University.

Test Report of Solar Power Plant

Certified that my firm has carried out the Electrical Installation work of **270 KW Solar Roof Top Power Plant** under direct supervision of my competency certificate holder at the premises of **Ganpat University** at address of the **Ganpat Vidyanagar, Mehsana-Gozaria Highway, District Mehsana 384012** in accordance with the plan approved by the Chief Electrical Inspector, Gandhinagar vide his letter no. letter no.**CEI/T-1/P-1/SOLAR/0052/17/6549 Dated 26/05/2017**.

The electrical installation work has been completed on date **11/06/2017** and the necessary testing is done on it. The results of the same are as under.

Details of Solar Power Plant:

Sr No	Particulars	Remarks		
		V M Patel Building	Motiram Acharya Building	Pharmacy Building
A	**PV Modules**			
1	Make	Jakson		
2	Capacity	310 Wp		
3	Nos of Module	334	316	230
4	Total Capacity	103.54 kWp	97.96 kWp	71.30 kWp
B	**Inverters**			
5	Make	U R Energy		
6	Capacity	33 KW		
7	Nos of Inverter	03	03	02
8	Serial Number	470217324242 470217324222 470217324231	470217324241 470217324246 470217324243	470217324223 470217324207

Insulation Resistance: The I.R. test has taken with 500V megger with an ambient temperature.
The results are:

LV to LV 647 Mega ohm
LV to Earth 731 Mega ohm

D.C I.R. Values:
Positive to Negative 432 Mega ohm
Positive to Earth 518 Mega ohm

Remarks:- Satisfactory / Not Satisfactory : Satisfactory

U R ENERGY (INDIA) PRIVATE LIMITED AHMEDABAD CIN : U40108GJ2011PTC067854

Test of earth pit resistance :
Earth resistance of earth pit :

E/P-1	1.1 Ω	E/P-5	0.8 Ω	E/P-9	1.2 Ω	E/P-13	1.2 Ω
E/P-2	0.9 Ω	E/P-6	0.7 Ω	E/P-10	1.0 Ω	E/P-14	0.9 Ω
E/P-3	1.2 Ω	E/P-7	0.7 Ω	E/P-11	0.8 Ω	E/P-15	0.8 Ω
E/P-4	1.0 Ω	E/P-8	0.9 Ω	E/P-12	0.9 Ω		

Remarks:- Satisfactory / Not Satisfactory : Satisfactory
General remarks if any:

Signature and Stamp of
Electrical Contractor
(With license no. and full address)

U R ENERGY (INDIA) PVT. LTD.
Electrical Contractors License No.
G/AHD/C-4591

U R ENERGY (INDIA) PRIVATE LIMITED * AHMEDABAD * CIN : U40108GJ2011PTC067984

Signature of Electrical Supervisor
And Permit No.

JIGAR BHUPTANI
G/GS-E-003408-DEE-2014

Signature and stamp of Proprietor of the
Electrical Installation

Date : 13/06/2017

To,
The Chief Electrical Inspector,
Block No-18, 6th Floor,
Udyog Bhavan, Sector 11,
Gandhinagar, Gujarat.

Subject : **Submission of project completion letter for 270 KW Roofotp Solar Project at Ganpat University.**

Dear Sir,

After the approval from GEDA & CEIG, we are issuing project completion letter attached with test report form for our 270 KWp Rooftop Solar project at our premises.

Kindly provide the inspection & approval for the same.

Please acknowledge the receipt of this letter and attachment for the same.

Thanking You,

U R ENERGY (INDIA) PRIVATE LIMITED
AHMEDABAD
CIN : U40108GJ2011PTC067834

Authorized Signatory

Ganpat University.

Copy submitted to GEB. 13/6

URenergy®
DUBAI | INDIA | CHINA | AUSTRALIA
Energy for All

UR Energy (India) Pvt. Ltd.

Part of V Square Group

CIN :U40108GJ2011PTC067834 | TIN : 24072904945

RETAIL INVOICE

URENERGY (INDIA) PVT. LTD.
206,SHANTI ARCADE,132 FT. RING ROAD,
NARANPURA, AHMEDABAD-380013
CIN: U40I08GJ20IIPTC067834

Buyer
#367-GANPAT UNIVERSITY
Ganpat University
The Mehsana Dist Education Foundation
Kherva,Mehsana

Invoice No. R/343/16-17	Dated 30-Mar-2017
Delivery Note	Mode/Terms of Payment
Supplier's Ref. R/343/16-17	Other Reference(s)
Buyer's Order No. -	Dated
Despatch Document No.	Delivery Note Date
Despatched through	Destination
Terms of Delivery	

Sl No.	Description of Goods	Quantity	Rate	per	Disc. %	Amount
1	SOLAR POWER SYSTEM- 270 KW	1 NOS	1,05,19,714.00	NOS		1,05,19,714.00
	OUTPUT VAT @ 4 %		4	%		4,20,788.56
	OUTPUT ADD VAT @1%		1	%		1,05,197.14
	INSTALATION INCOME					11,73,913.04
	SERVICE TAX PAYABLE@14%		14	%		1,64,347.83
	SERVICE TAX PAYABLE(SWACHH BHARAT CESS)@0.5%					5,869.57
	SERVICE TAX PAYABLE (KRISHI KALYAN CESS)@0.5%					5,869.57
	ROUND OFF					0.29
	Total	1 NOS				₹ 1,23,95,700.00

E. & O.E

Amount Chargeable (in words)
Indian Rupees One Crore Twenty Three Lakh Ninety Five Thousand Seven Hundred Only

Company's VAT TIN : 24AADCV8692D1Z4
Company's PAN : AADCV8692D

Declaration
We declare that this invoice shows the actual price of the goods described and that all particulars are true and correct.

for URENERGY (INDIA) PVT. LTD.

Authorised Signatory

This is a Computer Generated Invoice

UR Energy (India) Pvt. Ltd.
B-9, Palladium,
Divya Bhaskar Press
Corporate Road, Prahladnagar,
Ahmedabad-380015.

Registered Office :
206, Shanti Arcade, Nr. Akash III, 132 Feet Ring Road,
Naranpura, Ahmedabad-380013. Gujarat, India.
Phone : +91-79-26935400/01/02/03

Corporate Office :
Block : B1-B2/ 9th Floor, Palladium, Nr. Divya Bhaskar Press,
Corporate Road, Prahlad Nagar, Ahmedabad-380015, Gujarat
india@urenergyglobal.com | www.urenergyglobal.com
Toll Free No. 1860 120 4011

GEDA

ગુજરાત ઊર્જા વિકાસ એજન્સી

GUJARAT ENERGY DEVELOPMENT AGENCY

A Government of Gujarat Organisation

Post

Ref: GEDA/SOL-4551/2017/12/OW૨૬૧૨૩ 18 December 2017

CERTIFICATE OF COMMISSIONING

This is to certify that M/s, Ganpat University, The Mehsana Dist. Education Trust, Ganpat, Vidhyanagar, Kherva, Mehsana - 396120 has installed and commissioned 264 kW Capacity Solar Power Plant on 05.07.2017, along with the associated equipment as per detail given below:

GEDA registration no. / year	RTSPVOTH03032017-4551
Capacity of Solar Power Project	264 kW
SPV Modules- Type & Make	Polycrystalline & Jakson
Nos. of Photovoltaic Modules & Rating	880 nos & 310 Wp
Inverters- Type & Make	String & U R Energy
Nos. of Inverter & Rating	8 & 33 kW
Solar Meter – Make & Sr. No.	HPL & 812919, 812917 & L550732
Bidirectional Meter – Make & Sr. No.	HPL & HTBD000135

The Commissioning test of the Rooftop Solar PV System has been carried out; and the Bidirectional Meter along with Solar Meter has been installed and sealed by UGVCL and commissioned with effect from 05.07.2017.

For Gujarat Energy Development Agency

(S. B. PATEL)
DY. DIRECTOR

To,
M/s, Ganpat University
The Mehsana Dist. Education Trust
Ganpat, Vidhyanagar
Kherva, Mehsana - 396120

CC to:
Chief Engineer (OP),
Uttar Gujarat Vij Company Limited (UGVCL),
Visnagar Road, Mehsana
Mehsana – 384 001

ચોથો માળ, બ્લોક નં. ૧૧ અને ૧૨ ઉદ્યોગભવન
સેક્ટર-૧૧, ગાંધીનગર - ૩૮૨ ૦૧૭.
4th Floor, Block No. 11-12, Udhyogbhavan,
Sector-11, Gandhinagar-382017. India.
Ph. : 079-232 57251-53
Fax : +91 79 232-47097, 57252
e-mail : director@geda.org.in
www.geda.gujarat.gov.in

Date: 31/07/2017

To Whom So Ever It May Concern

This is certified that M/s. U R Energy (India) Pvt. Ltd. has completed the work of Design, Supply, Erection, testing & Commissioning of 270 kW capacity Solar Power Plant at M/s Ganpat University, The Mehsana District Education Foundation Trust, at Ganpat Vidhyanagar, Kherva, Mahesana District- 396120 on complete turnkey basis and M/s. U R Energy (India) Pvt. Ltd. have successfully completed the work to the best of satisfaction and the solar power plant has been successfully commissioned on 05/07/2017.

270 KW Rooftop Solar Grid Tied Power Plant at Ganpat University

Sr No	Particulars	Remarks		
		V M Patel Building	Motiram Acharya Building	Pharmacy Building
A	PV Modules			
1	Make	Jakson		
2	Capacity	310 Wp		
3	Nos of Module	334	316	230
4	Total Capacity	103.54 kWp	97.96 kWp	71.30 kWp
B	Inverters			
5	Make	URE		
6	Capacity	33 KW		
7	Nos of Inverter	03	03	02
8	Serial Number	470217324242 470217324222 470217324231	470217324241 470217324246 470217324243	470217324233 470217324247

Authorised Signatory

Ganpat University

Ganpat Vidyanagar - 384 012, Mehsana-Gozaria Highway, District: Mehsana, Gujarat, INDIA.
Phone: +91-2762-286924/25, Fax : +91-2762-286080, Toll Free No.: 18002333345
Email: info@ganpatuniversity.ac.in Website: www.ganpatuniversity.ac.in


યુવા કેફે
Takeout
Uma fast food
ઉમા ફાસ્ટ ફૂડ
Takeout
SBI & MUC ATM
સીબી.& મુક આત્મ
Ghanshyam Stationary Store
ઘનશ્યામ સ્ટેશનરી સ્ટોર
Pen store
Ganpat University Garba Ground
ગણપત યુનિવર્સિટી...
Bhagu Kaka's Canteen
ભગુ કકસ કેન્ટીન
Main canteen
મેઈન કેન્ટીન
shree sk patel college of pharmaceutical...
શ્રી સ ક પટેલ કોલેજ ઓફ...
Bus transportation office
બસ ટ્રાન્સપોર્ટેશન ઓફિસ
Ganpat University
ગણપત યુનિવર્સિટી
Achaya Motibhai Patel Intitute Of...
આચાયા મોતીભાઇ પટેલ ઇન્ટિટ્યૂટ...
UV Patel College of Engineering (Main...
યુ. વી. પટેલ કોલેજ ઓફ...
Temporarily closed
BS Patel Polytechnic
બી.એસ. પટેલ પોલિટેકનિક
Ganpat University Maritime Studies
ગણપત યુનિવર્સિટી...
Team shatashva office
ટીમ શતશવા ઓફિસ
Google