



*Lahdan Group of Companies*



CELEBRATING



YEARS



WE ARE PROUD TO DECLARE 300 GREEN CUSTOMERS.



## Achievements

1st Commercial Grid Interactive Solar Project in Thrissur Corporation  
**Sun Tower - 25 KW**

1st Residential Grid Interactive Solar Project in Thrissur Corporation  
**Mr. E.P. Varghese, Thrissur - 5 KW**

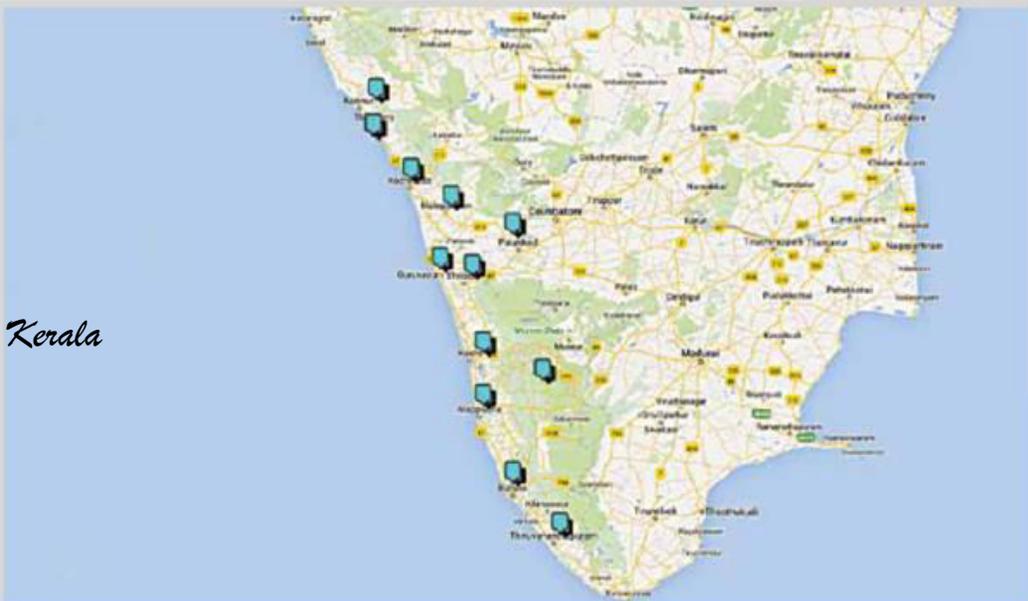
2nd Commercial Grid Interactive Solar Project in Ernakulam  
**TDM Hall, Ernakulam - 25 KW**

3rd Commercial Grid Interactive Solar Project in Ernakulam  
**Puthens Capitol - 11 KW**

4th Grid Interactive Solar Project in Ernakulam  
**Karuna Bhavan - 8 KW**



*Projects in Kerala*



*Lahdan Solar provides innovative solutions in the renewable energies sector, focusing its activity on solar power. Armed with the necessary technology and extensive experience in the construction and operation of photovoltaic power plants, Lahdan Solar offers its customers turnkey working systems. From viability studies and project development to engineering, construction, monitoring, commissioning and obtaining the necessary administrative permits, Go Green Solar does it all.*

*Lahdan Solar offer innovative solar energy products that are easy on the wallet and the environment. Lahdan Solar specializes in Off-Grid solar electric power system design and installation, offering the latest technology and state of the art equipment, from re-owned manufacturers around the globe..*

*Lahdan Solar have in the past and in the upcoming future is committed to support all Solar energy projects sponsored by the state and central governments by lending its expertise in system integration and marketing for the participants in such programs.*

*Lahdan Solar started its operations on September 2012 with a couple of R& D projects as well as market research and analysis to gain perspective and experience in technological aspects of the industry.*

## **Company Description**

### Products and services

Our Photovoltaic Business Unit offers a range of inverters and turnkey solutions that are specifically designed for photovoltaic applications and ensure optimum productivity, adaptability and resistance even in challenging environmental conditions.

Turnkey solar solutions from *Lahdan Solar* for the management of complete photovoltaic rooftop projects, designed, delivered cabled, installed and commissioned available in various versions to suit different regional and national standards and legislation.

Complete and innovative electronic solutions for the photovoltaic sector: everything from inverters for medium-large rooftop to parallel string connection boxes and plant monitoring systems for both Off grid and grid tied systems.

### Products:

*Lahdan Solar* does not manufacture solar cells and modules. Our core competency is downstream plant engineering, construction and operations. We are ideally positioned through mature supply agreements with industry-leading manufacturers and equipment suppliers.

*Lahdan Solar's* technology-neutral approach drives the purchase of PV modules and components with the best price-to-performance ratio independent of the manufacturers. This independence allows our team to provide a customized and optimized solution for each and every *Lahdan Solar* customer. Our approach also offers additional flexibility enabling rapid response to changing market trends

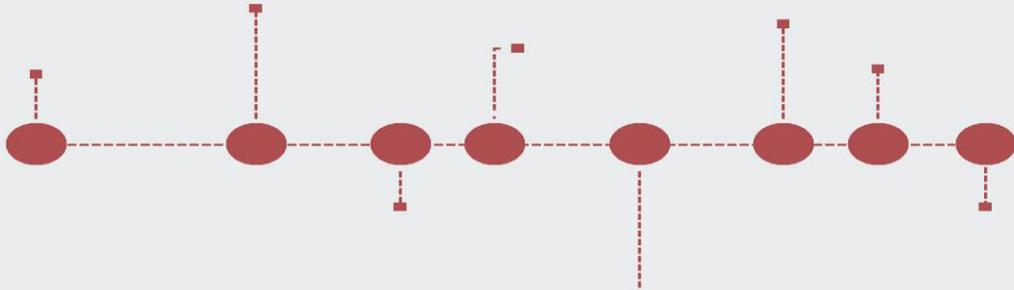
It is exactly this approach that has made *Lahdan Solar* a recognized leader and experienced solar partner with a proven track record for delivering innovation and excellence.

### Safety

To ensure that products are completely safe, we don't rely just on manufacturers' quality assurances. A *Lahdan Solar* team of engineers and technicians performs stress tests on all products. Random samples of products by all manufacturers are tested for reliability and performance.

### Carefully selected services from a single source

Our team's knowledge and experience enables *Lahdan Solar* to offer a diverse range of services to meet your needs. As an independent photovoltaic system integrator, we have the capability to react with proven technology solutions. Whatever the situation or project phase requires, we have the experience to maximize your investment.



Solid Products, Solid Company.

## Mitsubishi Electric's Monocrystalline

The technology and design of our products incorporates our comprehensive experience and extensive know-how in creating photovoltaic modules. The Mitsubishi Electric difference lies in all of the small details that add up for outstanding performance, reliability, and safety.

### Technology

Mitsubishi Electric is constantly pursuing the latest in technological innovations and adapting the newest breakthroughs into our photovoltaic products.

### Quality

Total quality from design to manufacturing ensures optimal performance and safety of our products in the real world.

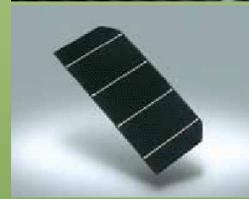
### Reliability

Building upon almost a century of manufacturing experience since our founding in 1921, we know how to make our products last. Rest assured that we will be there for our customers in the long term.



#### Mitsubishi Electric Logo and Traceable Barcode

Each module is tagged with a unique barcode which is used for greater product quality control and product traceability.



#### High-efficiency 4 Busbar Monocrystalline Cells

New selective emitter and half-cut technologies boost cell efficiency.



#### Flexible Cell Tab Wiring

Flexible tab material has been developed to reduce physical stress on the cells caused by thermal fluctuations.



#### Improved Frame Design with New Protection Bar

A re-designed module frame with protection bar has improved overall module strength.



#### New Junction Box Design with 4-layer Protection

New thermally efficient design reduces the amount of emitted heat by approximately 6.6% compared to earlier models.



#### Excellent Durability and Protection

Our modules have an uncompromising design and are built to last. Installable even in areas with high salt concentrations in the air.



Iida Factory  
Cell production



Kyoto Factory  
Module production



Nakatsugawa Works  
Product development headquarters,  
Inverter Production

## ISO 14001 Certified Factory

Our factories are managed using comprehensive water conservation and recycling measures in order to minimize the impact on the environment.



Waste paper and other materials are collected and separated for recycling.



Dozens of apple trees line the factory grounds, providing delicious apples in the fall.

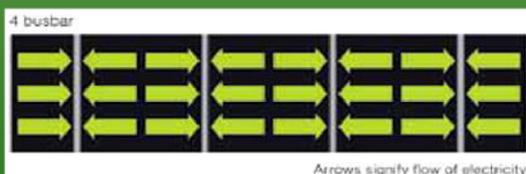
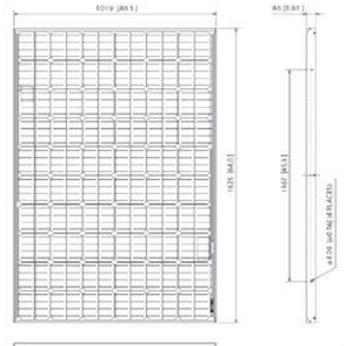


## SPECIFICATIONS SHEET



Model name	PV-MLE270HD2	PV-MLE275HD2
Cell type	Mono crystalline silicon, 78mm x 156mm	
Number of cells	120 cells	
Performance at STC *		
Maximum power rating (Pmax)	270W	275W
Warranted minimum Pmax	270.0W	275.0W
Tolerance of Pmax	-0 / +5%	
Open circuit voltage (Voc)	38.4V	38.5V
Short circuit current (Isc)	9.18A	9.28A
Maximum power voltage (Vmp)	31.9V	32.1V
Maximum power current (Imp)	8.48A	8.58A
Performance at NOCT (at 800W/m²)		
Maximum power rating [Pmax]	195W	199W
Open circuit voltage [Voc]	35.0V	35.1V
Short circuit current [Isc]	7.43A	7.51A
Maximum power voltage [Vmp]	28.5V	28.7V
Maximum power current [Imp]	6.84A	6.92A
Normal operating cell temperature (NOCT)	46.5 °C	
Maximum system voltage	1000V	
Fuse rating	15A	
Dimensions	1625x1019x46mm	
Weight	20kg	
Output terminal	(+) 800mm / (-) 1250mm with SMK connector (PV-03)	

## DRAWINGS AND DIMENSIONS



Arrows signify flow of electricity

Through an industry-leading innovation of integrating 4 busbars into each cell, internal electrical resistance is reduced, boosting cell output by 3%\*. This is possible because the distances between the busbars are shorter and less current flows through each smaller electrode where resistance is the highest.

mounting systems for photovoltaic's

Made in Germany

What makes our innovative mounting systems so convincing

– be it for pitched roof, flat roof or ground mounted structure - is that you are free to plan your desired mounting system which at the same time will meet the highest safety requirements

**Aluminium structures**

- Industrial roof system
- Multi-purpose mounting systems
- Pitched roof system
- Flat roof system
- Ground mounted system

PROTECTION RADIUS, Rp (m)											
H=height of Stormaster ESE terminal above the area to be protected (m)	2	4	5	6	10	15	20	45	60	80	100
<b>Protection Level I (Very High)</b>											
Stormaster ESE 15	13	25	32	32	34	35	35	35	35	35	35
Stormaster ESE 30	19	38	48	48	49	50	50	50	50	50	50
Stormaster ESE 50	27	55	68	69	69	70	70	70	70	70	70
Stormaster ESE 60	31	63	79	79	79	80	80	80	80	80	80
<b>Protection Level II (High)</b>											
Stormaster ESE 15	15	30	37	38	40	42	44	44	44	44	44
Stormaster ESE 30	22	44	55	55	57	58	59	59	59	59	59
Stormaster ESE 50	30	61	76	76	77	79	79	79	79	79	79
Stormaster ESE 60	35	69	86	87	88	89	89	89	89	89	89
<b>Protection Level III (Medium)</b>											
Stormaster ESE 15	18	36	45	46	49	52	55	60	60	60	60
Stormaster ESE 30	25	51	63	64	66	69	71	75	75	75	75
Stormaster ESE 50	35	69	86	87	88	90	92	95	95	95	95
Stormaster ESE 60	39	78	97	97	99	101	102	105	105	105	105
<b>Protection Level IV (Standard)</b>											
Stormaster ESE 15	20	41	51	52	56	60	63	73	75	75	75
Stormaster ESE 30	29	57	71	72	75	78	81	89	90	90	90
Stormaster ESE 50	38	76	95	96	98	100	102	109	110	110	110
Stormaster ESE 60	43	85	107	107	109	111	113	119	120	120	120

**LPI's Stormaster ESE**

The LPI Stormaster (Early Streamer Emission) range of terminals provides a safe and efficient system for the protection of your facility from direct lightning strikes.

The LPI Stormaster ESE terminal captures the lightning energy at a preferred point.

Control LPI for Protection Radius for Level + and Level ++

**LPI STORMASTER AIR TERMINALS**

Ultimate direct strike lightning protection as installed across 65 countries around the world.



**SUNNY TRIPower 5000TL / 10000TL**

**20000TL / 25000TL**

The three-phase inverter for easy plant design

**Economical**

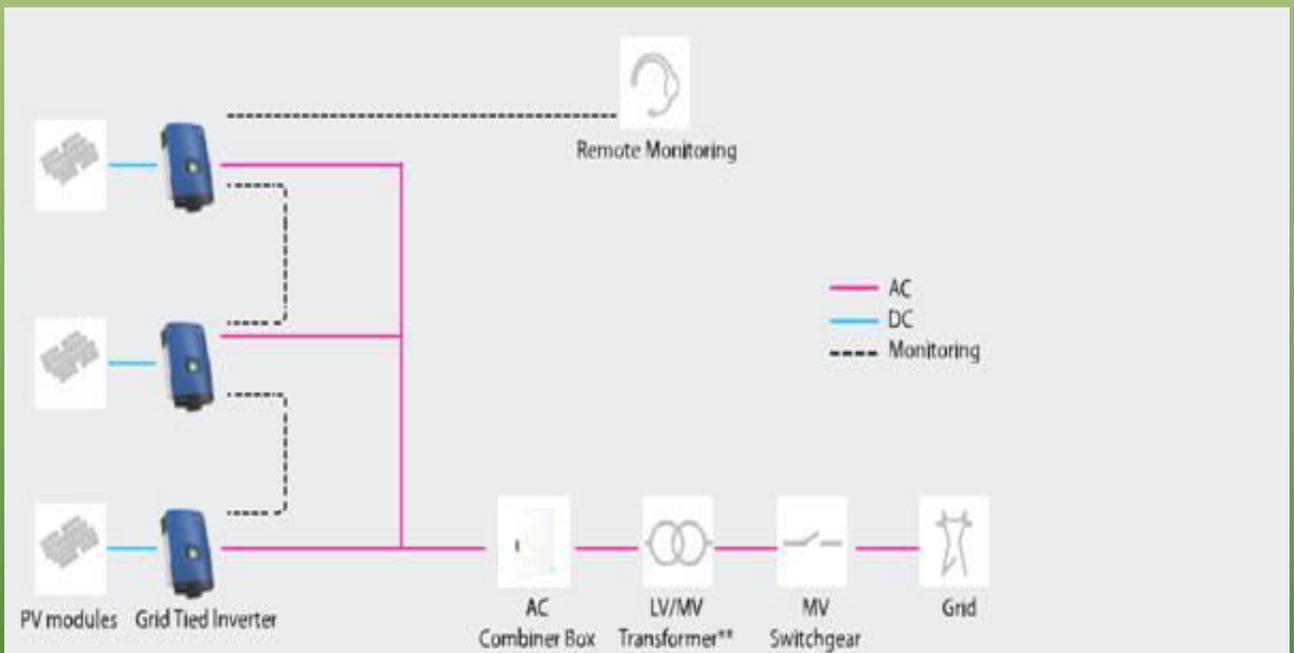
- ✓ Maximum efficiency of 98%
- ✓ Shade management with OptiTrac Global Peak
- ✓ Active temperature management with OptiCool

**Flexible**

- ✓ DC input voltage of up to 1,000 V
- ✓ Integrated grid management functions
- ✓ Reactive power supply
- ✓ Module-tailored system design with Optiflex



Professional management, monitoring and presentation of PV plants

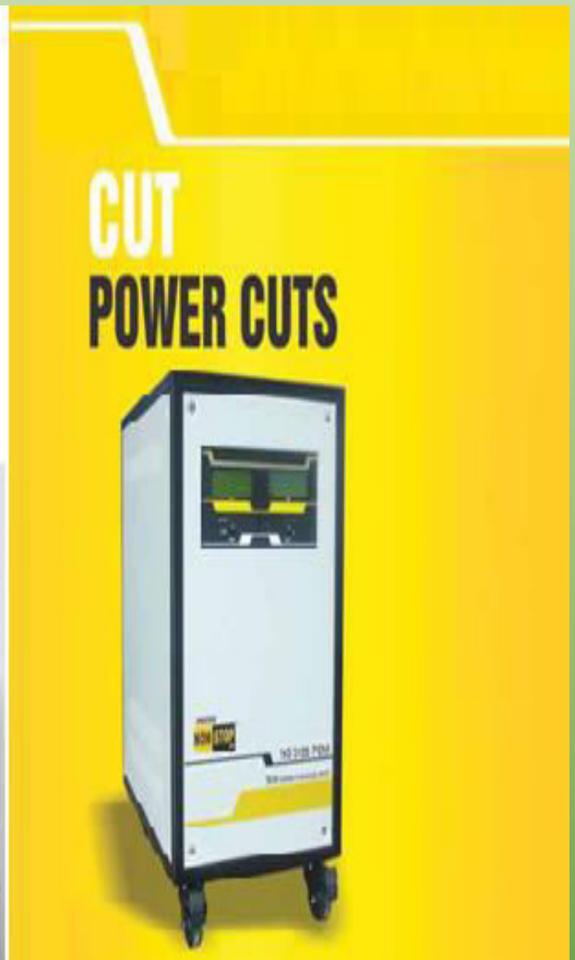


**Accessories**



## Lahdan Off Grid Home Power System

2000-48V/3000-96V/5000-120V/7500-144V/10000-168V





# EXPERT OPINION

## PANEL MOUNTING TILT FOR EFFICIENCY CHARGING



Tilt angle-10-12 degree



South facing



Light intensity

## DC CABLES

An important factor in performance of Solar PV Installations.

Energy delivered from a Solar PV system is not only dependent on the efficiency of the module but also on other system components like DC Cables, Connectors and Junction Boxes. While designing the solar farm, engineers have to factor the losses from modules to the inverters to calculate the over-all performance ratio of the farm. Low quality solar cables and connectors will lead to small increases in resistance and result in higher losses of energy ( $I^2Rt$ ). The loss of energy already harvested, when calculated over a twenty five year life represents a sub-stantial loss and would affect the profitability of the project.

A high quality Solar DC Cable is expected to perform for the complete lifetime of the installation which is about twenty five years. The cost of replacing a defective installed cable is very high. The replacement costs increase when factoring in manpower used for removal, reinstallation and testing of the system. In addition, there

The cost of these cables and connectors is very small in the total cost. Since the differential cost of the high quality cables is insignificant, it makes sense to invest with higher initial cost and reduce the "total cost of ownership" of a PV plant.



Solar cables have to withstand a wide range of environmental conditions – and continue to do so over a long period. High temperatures, UV radiation, rain, humidity, dirt and attack by moss and microbes are all a serious challenge to solar cables. Cables tested in accordance with EN, TUV and UL requirements. They should therefore achieve the target service life of 25 years. Apart from temperature, UV radiation is the other significant factor. Optimum UV resistance can therefore only be achieved by using black solar cables with enough black carbon content.



MC4 connectors are single-contact electrical connectors commonly used for connecting solar panels. MC4 stands assembly pin. MC4s allow strings of panels to be easily for the manufacturer Multi-Contact and a 4 mm<sup>2</sup> contact constructed.



Lahdan offers array junction (DC combiner) boxes that provide interconnection between the input leads from the solar PV modules, and the output lead to the re-combiner box or inverter. The combiner box is customized for different configurations, based on the number of strings of solar PV modules used in the PV layout. For a set of 10 PV modules arranged two in series and five in parallel, a 5:1 configuration combiner box is selected.



voltage spikes. Surge protection devices divert the excess voltage and current from transient or surge into grounding wires. SPD's used by Lahdan in the combiner boxes are typically rated

**The combiner boxes consist of the following key features:**

**IP65 Enclosure:** The combiner box enclosures are typically made out of thermoset (GRP or polyester), or thermoplastic (polycarbonate) material, and come with IP65 protection. Enclosures come in different sizes, depending on the number of input strings and protection features implemented in the combiner box.

**Fuse Protection for Strings:** DC fuses rated from 2A to 25A from leading manufacturers are used in the combiner box to provide over current protection. Fuses can be provided with or without indication.

**Surge Protection Device:** Surge Protection devices or SPD's in the combiner/junction box protects electrical and electronic equipments from the power surges and



## LOW MAINTENANCE

## TUBULAR BATTERY FOR SOLAR PV

## APPLICATION



meet Type 2 regulations, and are typically rated between 600 to 1000V.

**DC Disconnect/Isolation:** An accessible disconnect/isolator switch is recommended for placement before the inverter to disconnect the DC side of the system when maintenance is being performed on the inverter.

**Cable Glands/Connectors:** The combiner/ array junction box offered by Go Green is provided with IP 67 rated Cable Glands or MC 4 connectors at the input and output side to terminate the array strings into the box.

**String Monitoring (Optional):** Our String Monitoring Combiner Box uses non contact Hall sensors for the measurement of string currents. The string currents measured are accessible over MODBUS through a RS-485 communication port by central monitoring/ SCADA software.

For over 60 years, Exide Industries Ltd., has pioneered battery technology in India. It is the only company in South and South East Asia which designs and manufactures lead acid batteries from 7Ah to 20400Ah. Exide offers the latest series of tubular batteries, manufactured in its state-of-the-art ISO 9001 : 2008, ISO 14001: 2004 certified factories to meet the growing demand both in domestic and export market. Exide 12V and 6V low maintenance Tubular battery for Solar photovoltaic application comes with high quality TORR Tubular plate and its performance characteristics conform to IS 13369 : 1992 with latest amendments.

### PRODUCT FEATURES

- Available in SOLA-TUBULAR range
- PPCP Container
- Tubular Positive Plates
- Pasted Negative Plates
- High tensile, acid resistant Polyester
- High porosity Envelope Separators
- Microporous Ceramic Vent Plug
- Heavy duty Terminal
- Low resistance Fasteners.

### TORR TUBULAR TECHNOLOGY

Exide Tubular Batteries have the spines or the positive plate support cast at high pressure (100 Bar) in imported HADI machine which ensures void free structure and consistent grain orientation and can protect the plate support from anodic corrosion. This in turn ensures higher reliability and longer life. Exide Torr Tubular

plates are also cast with low antimony content which reduces the topping up frequency, making the battery low maintenance type. This also keeps the float charging current at a lower value, thus minimises the total energy requirement needed to keep the battery in charged condition during standby float application.

**APPLICATION :** SOLAR HOME LIGHTING • SOLAR STREET LIGHTING • SOLAR PHOTOVOLTAIC POWER PLANTS • TRAFFIC SIGNALLING

### Benefits

- Specially designed for arduous SPV application.
- Manufacturing with TORR Tubular Technology which stands for reliable and consistent performance.
- Designed to operate in partial state of charge condition.
- Ideally designed for cyclic application.
- Superior voltage and energy output profile.
- Excellent charging efficiency:
  - AH efficiency - In excess of 90%
  - WH efficiency - In excess of 80%
- Service life comparable with the best of the international brands.
- Designed cycle life at C10 discharge at 25°C:
  - 1500 cycles to 80% DOD
  - 3000 cycles to 50% DOD
  - 5000 cycles to 20% DOD
- Supplied in factory charged condition - ensures optimal quality and ready to use.
- Ultra low maintenance
- Low rate of self discharge
- 6V mono-blocks are supplied with MS Cabinet (fitted suitable exhaust system) or MS Stand (knock down condition) in 48V configuration - ideally designed for outdoor application.

### Charging Characteristics of Solar Batteries:

Model of Operation	Voltage Setting per mono-block unit for ambient temperature 25-30°C		Current Settings
	12V mono-block	6V mono-block	
Float Voltage	13.7V ± 0.1V	6.85V ± 0.1V	Maximum - 20% of battery Ah capacity Minimum - 10% of battery Ah capacity
Bulk Voltage	14.5V ± 0.1V	7.25V ± 0.1V	
Low Voltage Disconnect	11.1V ± 0.1V	5.55V ± 0.1V	

Temperature Compensation : (reference 25°C)

Float : -18mV/°C/12Vunit

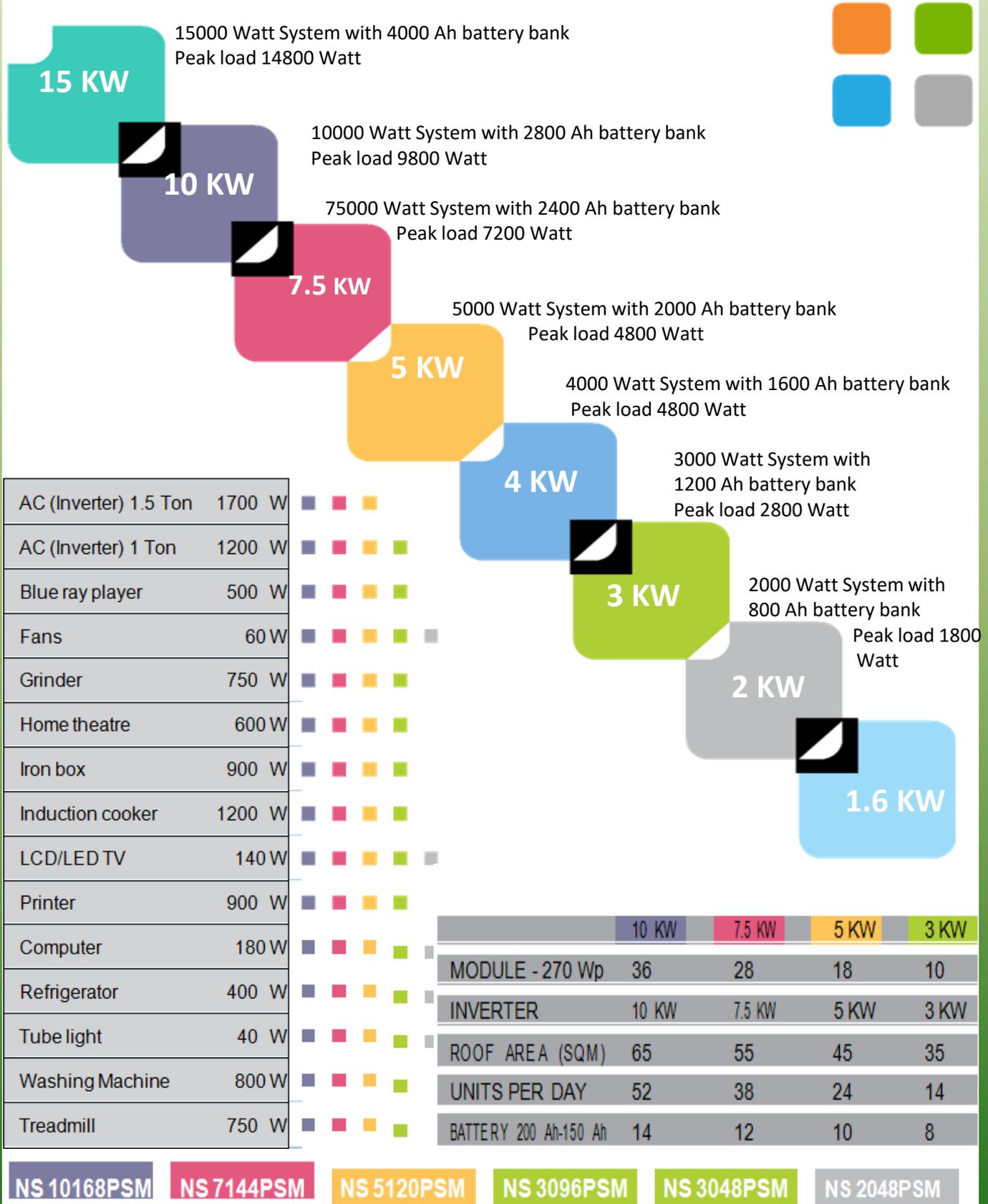
Cyclic : -30mV/°C/12Vunit

### Technical Data

Type of Battery	Nominal Voltage (V)	Capacity @C10 to 1.80 v.p.c at 27°C (Ah)	Cell Weight		Overall Dimension			Container Type
			Without Acid ± 5%	With Acid ± 5%	Length ± 5 (mm)	Width ± 5 (mm)	Height* ± 5 (mm)	
			(Kg)	(Kg)	(mm)	(mm)	(mm)	
6LMS20L	12	20	12.0	18.0	260	172	240	PPCP
6LMS40	12	40	12.0	23.5	410	176	282	PPCP
6LMS40L	12	40	14.0	26.5	410	176	282	PPCP
6LMS75	12	75	20.0	32.0	410	176	282	PPCP
6LMS75L	12	75	22.5	42.5	530	220	287	PPCP
6LMS100L	12	100	30.0	57.0	500	187	416	PPCP
6LMS120L	12	120	31.4	48.5	530	220	287	PPCP
6LMS150L	12	150	44.0	66.3	500	187	416	PPCP
3LMS200L	6	200	44.7	69.0	500	187	416	PPCP
3LMS300	6	300	44.0	66.3	500	187	416	PPCP

\*Height upto Terminal Top

# Lahdan - Solar



# Lahdan - GRID SOLAR SYSTEM

## GRID-TIED SOLAR SYSTEMS

Grid-tied, on-grid, utility-interactive, grid intertie and grid back feeding are all terms used to describe the same concept – a solar system that is connected to the utility power grid.

### 1. Save more money with net metering

A grid-connection will allow you to save more money with solar panels through better efficiency rates, net metering, plus lower equipment and installation costs:

Batteries, and other stand-alone equipment, are required for a fully functional off-grid solar system and add to costs as well as maintenance. Grid-tied solar systems are therefore generally cheaper and simpler to install.



Your solar panels will often generate more electricity than what you are capable of consuming. With net metering, homeowners can put this excess electricity onto the utility grid instead of storing it themselves with batteries.

Net metering (or feed-in tariff schemes in some countries) play an important role in how solar power is incentivized. Without it, residential solar systems would be much less feasible from a financial point of view.

Many utility companies are committed to buying electricity from homeowners at the same rate as they sell it themselves.

### 2. The utility grid is a virtual battery

Electricity has to be spent in real time. However, it can be temporarily stored as other forms of energy (e.g. chemical energy in batteries). Energy storage typically comes with significant losses. The electric power grid is in many ways also a battery, without the need for maintenance or replacements, and with much better efficiency rates. In other words, more electricity (and more money) goes to waste with conventional battery systems.

Additional perks of being grid-tied include access to backup power from the utility grid (in case your solar system stop generating electricity for one reason or another). At the same time you help to mitigate the utility company's peak load. As a result, the efficiency of our electrical system as a whole goes up.

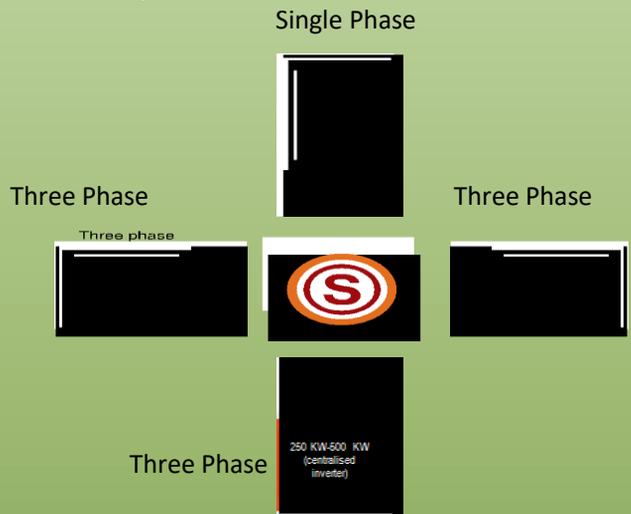
### TAX INCENTIVES FOR SOLAR IN INDIA

Accelerated depreciation is a method of depreciation used to depreciate the fixed assets in a manner that a significant depreciation is allowed in the first few years.

Accelerated depreciation can reduce costs during the project's start up year. In solar projects, accelerated depreciation is widely used to claim tax incentives under the section 32 of Income Tax Act 1961. In India, Accelerated depreciation (AD) allows investors, mostly setting up capacity for captive use, to take advantage of up to 80% of the project cost YOY.

### How does institutions benefit?

Since the institutions have most of the power used during the day time (10 am to 5 pm), it superimposes with the time that peaks the power generation from solar. Hence, this cancels out the use of a storing device to store the solar power generated. Hence a grid tie system assists in directly using the solar power generated during day time for powering the electrical systems of the institutions during its working time and also send the excess power generated into the grid without the use of any storage devices hence making the system commercially as well as economically viable.



### CARBON CREDITS

1 kw of solar power with a average of 5.5 hours of sunlight per day will produce 1 carbon credit per year. 1 carbon credit is equal to 1 ton of carbon dioxide offset.

Scientific consensus states that carbon emissions must be reduced by 80% by 2050 to avoid catastrophic climate change. Businesses have an important and essential role to play in meeting these targets and carbon offsetting schemes enable them to play their part in the climate change battle.

Carbon offsets are credits for reductions in greenhouse gas emissions made at another location, such as wind farms which create renewable energy and reduce the need for fossil-fuel powered energy. Carbon offsets are quantified and sold in metric tonnes of carbon dioxide equivalent (CO<sub>2</sub>e). Buying one tonne of carbon offsets means there will be one less tonne of carbon dioxide in the atmosphere than there would otherwise have been. This could be, for example, a project to swap coal-fired power stations with solar panels or hydro power

# Lahdan - SOLAR STREET LIGHTS

Lahdan Solar Street Light systems are engineered for long term and reliable performance with little or no maintenance. The systems are designed for a wide range of physical and operating environments and are perfect for rural, suburban and metropolitan areas.

## Applications

- Roadway: collector, arterial and highway lighting
- Open and covered parking lot lighting
- Pathways
- Perimeter fence lighting
- Portable emergency lighting
- Remote operations lighting
- Security lighting and surveillance cameras in construction sites and high-risk or dark areas
- Permanent and temporary - government and military applications

## Investment benefits



Accelerated Depreciation



Green Building



Carbon Credit



Breakeven



## LED Solar Street Lights

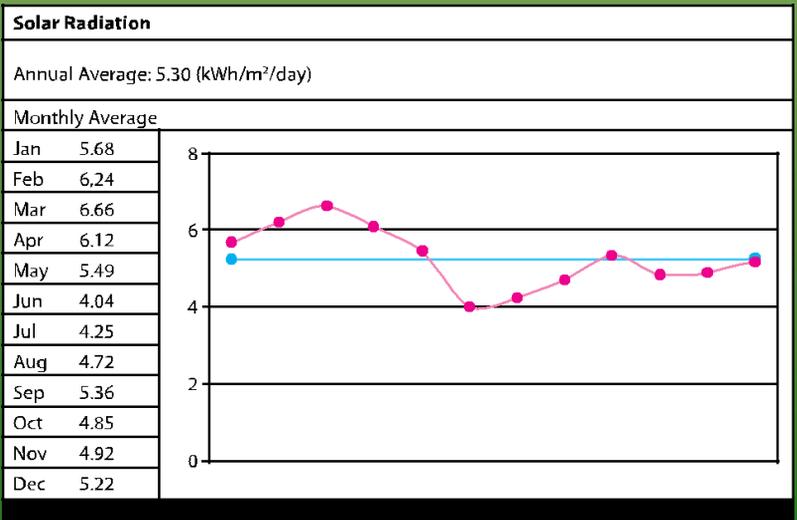
Highly efficient LED Lamp: 9 W to 100 W  
High Lumens per watt

Specially designed for Highway / Pathway lighting / Road lighting applications 100 Street Light represents a technological unique product, striking a new path in professional outdoor lighting. The unrivalled aesthetics, economic efficiency and eco-friendliness are setting new standards. It provides night illumination and security for places too costly to setup cabled lightings.

Reliable in operation. A programmable microcontroller operates the light flexible and demand orientated. The intelligent electronic system monitors the charging condition of the energy storage device, optimizes the energy efficiency and guarantees a trouble-free operation even during longer periods of bad weather conditions.

## Product Benefits:

- Economical lighting solution
- Good return on investment
- Enhance neighbourhood security
- Environmental friendly image
- Maintenance free



# Lahdan - QUICK SERVICE

Our services at a glance World-class systems and processes at work for you The Lahdan Solar team offers you turnkey photovoltaic plants from one source. Right from the outset, these are optimized in terms of yield, return and area usage and geared to the implementation of our customer or investor's requirements.

## DEDICATED SERVICE TEAM

24 x 7 on-site monitoring

## DEDICATED SERVICE STAFFING



## SERVICE AND MAINTENANCE CONDITIONS

### Service

System performance will be monitored at interval of every 4 months during the system warranty period (First 5 Years) Thereafter customer can enter into an Annual Maintenance Contact with GO GREEN

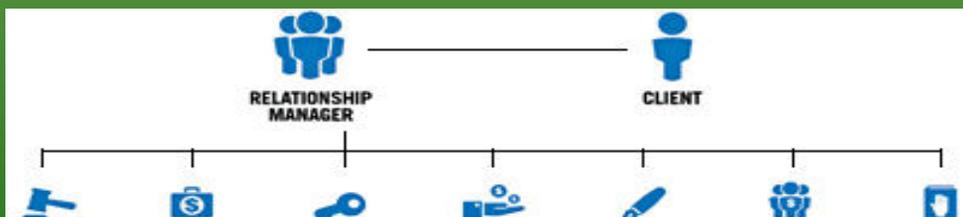
All the complaints on the operation of the solar system will be attended within 24 hours of reporting the same at the Lahdan service

### Maintenance

- Clean PV module, do visual inspection
- Check PV Module, voltage and current
- Do visual inspection inside the system enclosure
- Clean battery terminals and other dust inside the system and the components.
- Check battery voltage and the charging current
- Check battery voltage when the load is working
- Check inverter output voltage
- Check proper functioning of the load

### Overall maintenance

On an annual basis, check wiring and connections. Look for signs of overheating, discoloration, corrosion or loose connections. Any damaged wiring will be repaired or replaced



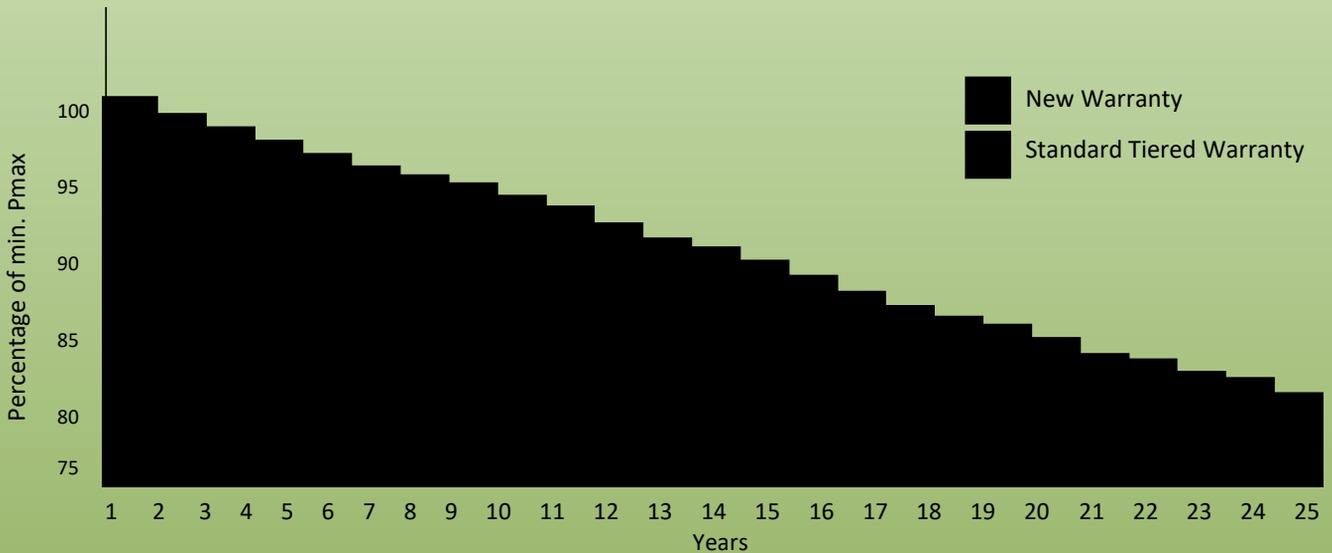
# Lahdan - WARRANTY CONDITIONS



## Warranty for PV module

10 years product warranty

25 years performance warranty (93% upto 10 years, 80% upto 25 years)



## Warranty on Balance of Systems:

Inverters carry 5 years warranty from the date of supply in accordance with the warranty conditions by the inverter manufacturers.

Electric installation works such as interconnection of strings, connection of string combiner boxes, AC/DC Cables will carry warranty for 5 year from the date of commissioning

Warranty for the structural safety and stability of the mounting system will be covered for a period of 5 years from the date of commissioning

Performance warranty for a period of 5 years (can be accessed on-call basis) Parts and components, which are repaired or replaced during such period, are warranted for the original warranty period only and will not carry any extended warranty. If the equipment is not repairable at site the same has to be sent at the workshop on freight prepaid basis after obtaining consent from Lahdan in writing and Lahdan shall make good the defect and return back to the Customer on freight to pay basis.

This warranty shall not apply to defects resulting from:

Wilful damage or negligence, normal wear and tear

Installation and /or maintenance by Customer or a third party

Misuse or abuse of Equipment

Modifications or alterations made by Customer or a third party without consent

# Lahdan Solar

## Projects



### TECHNOLOGY PARTNERS



**TDM Hall**  
Ernakulam

"My Energy Matters experience has been one that I could not rate highly enough. Everyone from the first phone call to the last has been a pleasure to deal with. All requests were dealt with promptly and without question. The pricing was competitive from the start. Installation was organised in a very timely manner and completed with very little fuss." *Secretary TDM Hall*

**Mitsubishi Electric 25 KW Grid Solar System**



Padmasree Dr. Tony Fernandez, Aluva.

"We are very happy with the system and it's working great."



Mr. Shaji Ambookan, Chalakkudy

"Just a note to thank you and the Lahdan team for the Solar Panel installation at our home. The guidance you gave me for selection of panels and inverters was invaluable in making my decision through the minefield of products available on the market. The prices were great and the service and installation excellent. A well coordinated project installed by a professional team."

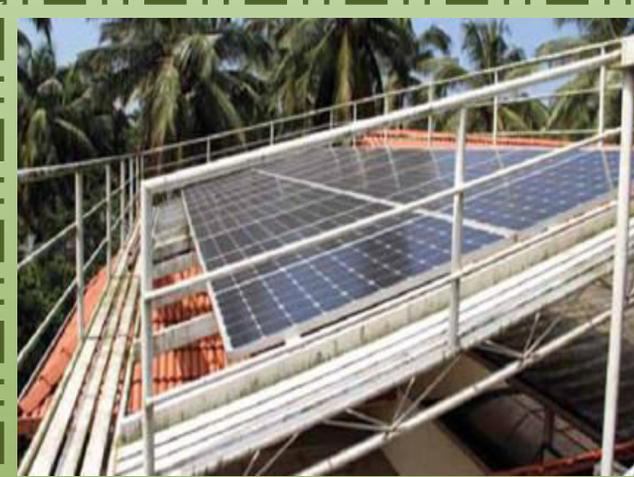
Mitsubishi Electric 3 KW Off Grid Residential Solar System

Mitsubishi Electric 5 KW Off Grid Residential Solar System



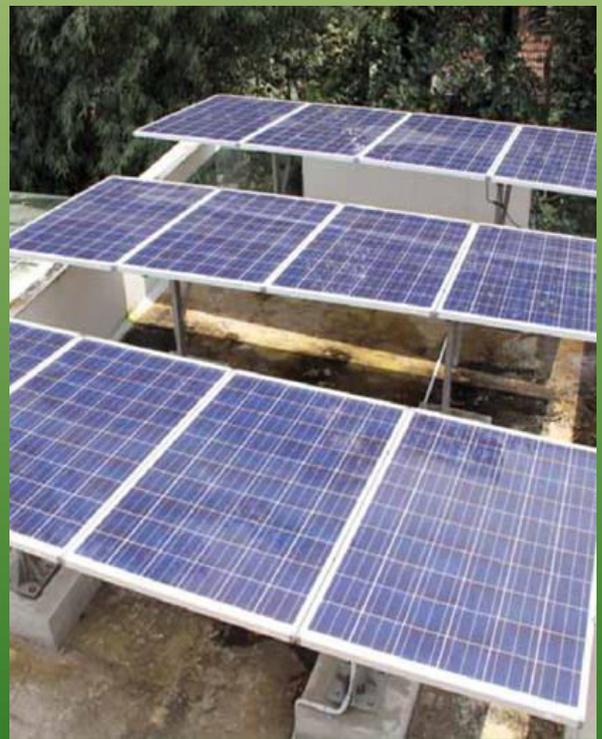
**Mr. Anto Nereparambil**, NRI Thrissur, India

*"Let me start by saying that I'm quite pleased with the system as well as the work done by Lahdan. You guys are one of the few contractors I've ever dealt with that do exactly the job you say you will do, on time, for the quoted price, and with no leftover messes or system bugs. Thank you."*



**Mr. Balachandran**, DFAB - Thrippunithura

*"Thank you to you and your staff for the prompt, courteous and helpful dealings with my request for a solar installation. It is up and running well. Even today whilst it is raining and very overcast it is still generating 8units, amazing!"*



Mitsubishi Electric 3 KW Off Grid Residential Solar System

Mitsubishi Electric 3 KW OffGrid Solar System



**Dr. Dileep** - Kunnamkulam

*Please pass my thanks to all. Got everything and much more than I expected and the pleasant shock of seeing my electric meter going backwards. Please thank all whom I had the pleasure dealing with in Lahdan for their superb work."*



**Dr. Prathap Kumar** – Edapilly

*"Totally Satisfied ! All work was done as planned in a timely fashion in a professional manner and lines of communication were excellent at every phase of the project."*



Mitsubishi Electric 3 KW Off Grid Residential Solar System

**Mitsubishi Electric 3 KW OffGrid Solar System**



**Dr. Viju, Vazhakkala**



*"Just a quick one to express our to you all at Lahdan for the great job installing our 3.5KW system. I can write lots of things but I believe that stating the following says it all: Our expectations of your service and the actual installation were largely exceeded – in every respect"*



**Mr. E.P.Varghese - Thrissur**



*"It is with great pleasure that I express my complete satisfaction with your operation from providing professional consulting services to product supply, installation, and service I also must commend the company for the assistance they provided me when I was having clarification issues with our electrical provider. Very helpful and knowledgeable"*



**Mitsubishi Electric 5 KW Grid Residential Solar System**

Mitsubishi Electric 3 KW Off Grid Solar System



Ar. Francis Chandy - Thrissur

"Lahdan Solar was quite pleasant. The team who came out knew their business. They took a look at my office and my needs and were very clear about what I needed. So I was quite impressed with their professionalism and their knowledge."



Mr. Joy Manjooran - Chalakkudy

"I have always been very impressed that you regularly follow up on the cases I have raised and follow them through to completion. I actually don't think I have experienced such proactive customer support before and you should be recommended for this. I have had a lot of friends and family asking me where we got our solar installation and I am always happy to recommend Lahdan Solar. This is in no small part due to your customer support since the installation of the system."



Mitsubishi Electric 3 KW Off Grid Residential Solar System

Mitsubishi Electric 2 KW Off Grid Solar System



Dr. Kishore - Edapplally,

*"We are very happy with the system and it's working great."*



Adv. Dr. Pradeep K.P. - Kadavanthra

*"We asked you to design a system to eliminate our electric bill. Well, in a year we have been producing just over 100% of our needs!"*



Mitsubishi Electric 3 KW Off Grid Residential Solar System

**Mitsubishi Electric 5 KW Off Grid Solar System**



**Mr. Antony Koitara** - Kongorpally, Paravoor



*"We had utilized the services of Lahdan to prepare and install our solar panels for our home. We were very pleased with the professional manner that the individuals handled our initial presentation, their knowledge of how the solar systems works, pay back time. Everything was very well presented from the quotation to the installation."*



**Dr Praveen Velappan** - Trivandrum



*"After researching other solar installation companies, I realized that Lahdan provided the best package with quality product. Everyone throughout the process from sales to installation and customer care was very helpful."*



**Mitsubishi Electric 3 KW Off Grid Residential Solar System**

Mitsubishi Electric 5 KW Off Grid Solar System



Dr Rajendran - Tripunitira

*"It is a great concept to create electricity without any fuss and also reduce our electricity costs at the same time. Extremely professional. From the initial visit to explain the system and the process involved."*



Mr. Varkichan Edassery - Aluva

*"We were very impressed with the care and professionalism of everyone we have dealt with Lahdan The installation crew was particularly outstanding."*



Mitsubishi Electric 7.5 KW Off Grid Residential Solar System

Mitsubishi Electric 3 KW Off Grid Solar System



Mr. Prasanth - Thalassery

"I had a totally positive experience with Lahdan solar. Everyone involved in the solar installation was thoughtful and friendly, and the system seems to be running fine."



Mr. Shibu Peter - Kizhakkambalam



"In my experience, Lahdan staffs are exceptional. They are extremely knowledgeable and considerate. They are genuinely interested in customer satisfaction and the long-term success of the systems they install. My advice: don't install a solar system without consulting them first; you'll be glad you did."



Mitsubishi Electric 5 KW Off Grid Residential Solar System

**Mitsubishi Electric 25 KW Grid Solar System**



**Sun tower, Commercial Bldg E.P. Varghese, Thrissur "**

*The installation process was very good indeed. I've been impressed with Lahdan solar performance throughout and the people working for them did their jobs brilliantly. They didn't interrupt our business, they stayed out of the way and their health & safety practices were spot on. I would recommend them to any other company considering solar for their business to cut costs and reduce their carbon emissions."*



**Mr. Thomas Chennakadan - Angamaly**

*"I just wanted to congratulate and says thanks to the crew that was here yesterday. Great job start to finish. They were a very nice group to have here. We are totally delighted. Thanks Lahdan ."*



**Mitsubishi Electric 5 KW Off Grid Residential Solar System**

**Mitsubishi Electric 5 KW Off Grid Solar System**



**Mr. Arun Karanavar - Vennala**

*"I have been really impressed with how Lahdan have dealt with the whole installation of our Solar power system – from the initial planning and quotation stages, right through to the completion of the project. The entire process has been extremely seamless from our perspective and our contacts at Lahdan have assisted and helped with everything that they can. They have really listened to everything that we wanted to achieve from this project"*



**Puthenz Capitol Inn, Kaloor Sarath S. Puthenparamban**  
*"We are proud to help produce "green" energy. It is fun to be able to track the progress of each day, week, and month's production. Going solar has already made a significant impact on our energy bill."*



**Mitsubishi Electric 12 KW Grid Solar System**

**Mitsubishi Electric 5 KW Off Grid Residential Solar System**



**Mr. Rajendrakumar** - Thrikkakara

*"Careful tracking of my solar array showed that I reduced my annual electricity expenses or an overall decrease of 70% of my grid electricity use."*



**Mr. Xavier Mathew** - Trikkakara - NRI

*"So far everything has been great. We used about 2200 units from solar and the first two full months' electricity bills were 80% less than they were before!"*



**Mitsubishi Electric 3 KW Off Grid Residential Solar System**

**Mitsubishi Electric 2 KW Grid Tied Solar System**



**Mr. G.K.Nair, - Chowara, Aluva**

*"I was impressed, start to finish, the with the great crew that you have and the professionalism all around -thanks to everyone!"*



**Mr. John Thomas, -Kakkanad - Business**

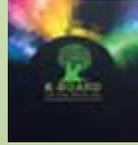


*"I did a research, met with a few vendors, and after meeting with Visal Varghese was obvious that Go Green Solar is the way to go. The Installation was done very professionally and as promised. If you are looking for professionalism, craftsmanship and expertise in the field, Lahdan Solar is that team. Thanks again, another happy customer."*



**Mitsubishi Electric 3 KW Off Grid Residential Solar System**

**Mitsubishi Electric 3 KW Off Grid Residential Solar System**



**Mr. Ibrahim, Odakali - Kunnathan Plywoods**

*"Great, I love making my own electricity. Feels like I'm contributing in some way. Convinced I made the right decision. Great team as I had expected. There is comfort in dealing with some you know and trust."great Lahdan thanks for the support"*



**Mr. Kuruvila, Kalamassery**

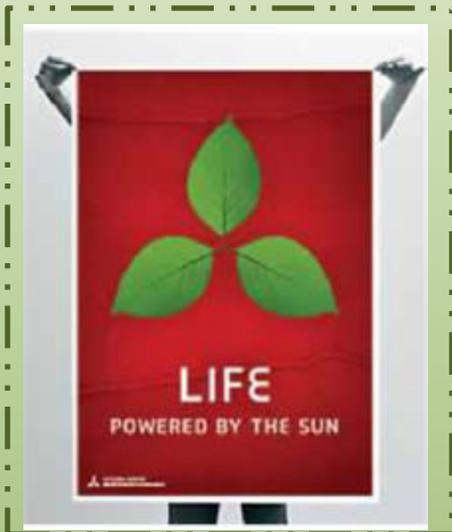
*"Great product and outstanding customer service. I've had my solar system for over 2 years now. The installation went smooth, and the system is performing better than projected. I highly recommend Lahdan Solar."*



**Mitsubishi Electric 3 KW Off Grid Residential Solar System**

Mitsubishi Electric Solar System





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