

JUNE 2024

COMPANY PROFILE



LM TOWER (2ND FLOOR), KA/87,
JOAR SHAHARA BAZAR ROAD VATARA, 1229 DHAKA, BANGLADESH
<https://www.solshare.com/>
+88 01708-458764

BACKED BY



PARTNERS & CUSTOMERS



AWARDS





ABOUT
SOLSHARE

ABOUT SOLSHARE

A CLIMATE TECH ORGANIZATION



SOLSHARE IS A CLIMATE-TECH COMPANY CREATING A GLOBAL NETWORK OF SMART DISTRIBUTED SOLAR PV AND STORAGE ASSETS AT THE NEXUS OF ENERGY AND TRANSPORT TO INCREASE RENEWABLES TO THE GRID WHILE PUTTING MORE MONEY INTO THE POCKETS OF FIVE MILLION ELECTRIC THREE-WHEELER DRIVERS IN BANGLADESH TODAY.

By making Lithium-ion batteries bankable and as such accessible to the low-income population driving the electric vehicle revolution. We are on the verge of developing the country's first Virtual Power Plant, the Rickshaw VPP, with the potential to buffer up to 30% of the country's peak grid load. This is a critical piece of the journey to net zero. And if we can do it here in Bangladesh, we can do it anywhere.

At SOLshare, we have consistently refined and broadened our range of services, with a niche focus on addressing the core challenges faced by our customer base, constituted by the underserved at the base of the economic pyramid. These challenges centre around the access deficit to sustainable energy services and the fundamental understanding that poor people don't need cheap products, but high-quality ones designed for them and made affordable. In a changing market while acclimating constantly to new challenges by adapting and improving our technology, our marketplace for future-proof energy infrastructures, the SOLbazaar, has grown to 3 distinctive business lines- SOLmobility, SOLgrid, and SOLroof. Each business line lends each other synergy effects from a strong IoT backbone, integration from mobile financial services, and secure authentication.

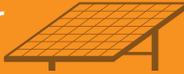
120
Peer-to-peer
microgrids



185
Smart batteries
on the road



2.7 MWp
Rooftop solar
installed



2700+
mtCO₂e
reduced



80K+
Number of
beneficiaries



2.5K+
Households and
microbusinesses



THE FUTURE OF ENERGY LIES IN 5D

D

ECENTRALIZATION
EMOCRATIZAION
ECARBONATION
IGITIZATION
ISRUPTION

Grounded in the 5 D's of energy: Decentralization, Decarbonization, Democratization, Digitalization, and Disruption, SOLshare's work began in the energy access space with a focus on energy efficiency by tapping into the off-grid energy market by creating the world's very first Peer-to-peer (P2P) microgrid, the SOLgrid. This provides households and microbusinesses with and without solar home systems the freedom to use energy as a producer, consumer, or prosumer (both). SOLshare's ICT-based energy service platform, the SOLbazaar, monetized excess solar energy along the value chain with mobile money in real-time, allowing users to earn an income directly from the sun.

Now expanding to electric three-wheeler (E3W) vehicle batteries, SOLshare is developing a network of smart distributed solar-powered storage assets that economically empower EV drivers while paving the way for virtual power plants in Bangladesh. SOLshare's patented battery management technology is integrated with smart batteries that provide remote monitoring and access, which are sold to garage drivers to be leased to EV drivers on a pay-as-you-go (PAYG) model with an automatic shut-off function. Coupled with mobile payment systems, these factors remove the high capital expenditures required for EV drivers, increasing their incomes by at least 30%.

Access to electricity is crucial but more so than that is the flexibility and profitability behind energy usage that leads to real change towards sustainable development. SOLshare has thus grown from an energy access company to an energy service provider, from a household energy challenge to a mobility energy challenge.

MISSION

Create a network. Share electricity.
Brighten the future

VISION

Facilitate a Climate-resilient, Equitable, and Sustainable Future for All where Smart Technology Innovation is the Enabler for the People's Empowerment.

OUR VALUES



Leadership

Articulates a clear vision, values diverse perspectives, weighs risks and benefits, empowers the team, and fosters trust



Invincible

Resilient and fearless, stands up for beliefs and others despite the odds



Grounded

Stays calm under pressure, acknowledges limitations, and learns from mistakes



Hardworking

Diligent, committed, adaptable, and willing to put in the effort to achieve goals



Trailblazer

Thinks creatively, finds novel solutions, and leads by example with integrity

TIMELINE

2013



- Ideation of 'swarm electrification' concept at Stanford Ignite

2014



- SOLshare was established
- First office in Dhaka
- Selected for CTI-PFAN ACEF

2015



- SOLbox 1.0. prototype developed
- World's 1st solar P2P microgrid installed

2018



- USD 1.64M Series A funding raised
- World's Best Energy Startup winner at Free Electrons
- Featured as a Tech Pioneer by World Economic Forum

2017



- 8 solar P2P grids installed
- \$385K Seed Funding raised

2016



- UNFCCC Climate Award at COP22

2019



- 25 solar P2P grids installed
- Installed 2 solar P2P grids in India
- Won Global Cleantech 100

2020



- 38 solar P2P grids installed
- Raised bridge round of US\$915K
- Won Global Cleantech 100

2021



- 100th grid activated
- EV charging launched
- SOLroof launched
- Earthshot Prize finalist

2024



- 2 new SOLgrids in the Rohingya Refugee camp
- Partnership with Mutual Trust Bank on e-mobility
- 185 smart lithium-ion batteries on the road

2023



- PCC extended to include EV charging station
- MFS Transaction service for e-mobility
- Greener Garments Initiative Launched
- 1 MWp rooftop solar installed

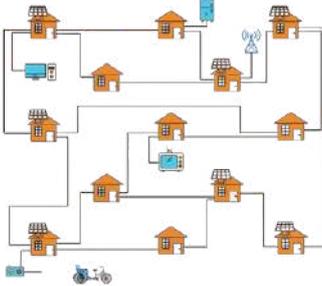
2022



- Energy Winner at ZSP
- 2 SOLgrids in Rohingya Refugee Camps
- First solar-equipped EV charging station
- PCC Inauguration

OUR WORK- AT A GLANCE

SOLBAZAAR - THE MARKETPLACE FOR FUTURE-PROOF ENERGY INFRASTRUCTURES.



SOLAR MICROGRIDS SOLGRIDS - SOLAR P2P MICROGRIDS

Interconnects households and micro businesses
Uses SOLbox : point of interconnection within the peer-to-peer network
Allows users to sell excess electricity and earn income directly from the sun

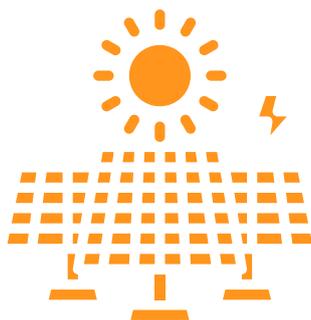
TAM (2022): US \$1bn **YoY growth:** 3%



MICRO-MOBILITY ELECTRIC 3-WHEELER CHARGING

PAYG lithium-ion battery leasing model
Smart metered pit-stop charging stations allow rickshaw pullers to fast charge during the day.
Risk reduction through IoT intelligence on the assets

TAM (2024) = US\$ 7.5bn **YoY growth:** 30%

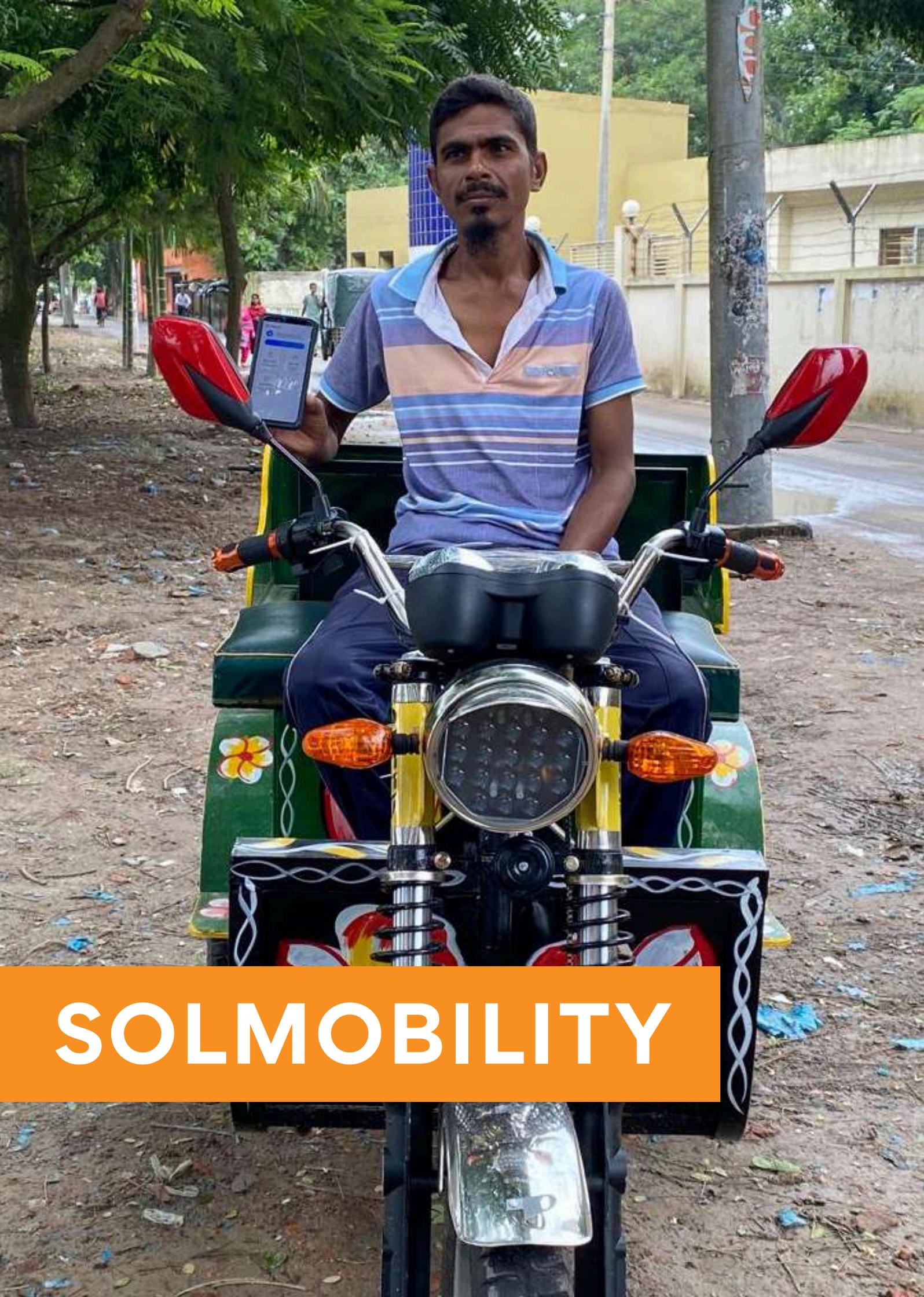


SOLAR ROOFTOP SOLAR ROOFTOP INSTALLATION SERVICES

A photovoltaic system where solar panels are mounted on top of commercial and industrial structures.
Directly reduces energy costs
The cost of electricity is lower than utility Capacities go up to Megawatt Range

TAM (2024) = US\$ 4bn **YoY growth:** 5%





SOLMOBILITY

SOLMOBILITY

POOR PEOPLE DON'T NEED CHEAP PRODUCTS, BUT HIGH-QUALITY PRODUCTS MADE AFFORDABLE.



SOLSHARE'S SOLMOBILITY SOLUTION CONVERTS EV CHARGING GARAGES INTO GRID-FRIENDLY NET-METERED SOLAR GARAGES, PROVIDING SMART PAY-TECH INTEGRATED LITHIUM-ION BATTERIES FOR ACCESS TO IMPROVED BATTERY TECH AND FINANCING MECHANISMS.

The global electric vehicle (EV) market is experiencing a significant surge, driven by an increased demand for eco-friendly transportation and heightened environmental awareness. This growth is further propelled by the ongoing energy and fuel crisis, which has prompted a shift from ICE-powered vehicles towards more sustainable and efficient modes of transport.

EVs combat climate change by cutting emissions, but their production harms the environment through raw material extraction. With a global population of 8 billion, the idea of manufacturing enough EVs for 8 billion people raises sustainability concerns. Electric three-wheelers offer a greener solution in emerging economies due to their small size and affordability.

Electric three-wheelers offer a promising alternative in these cases; they are compact, spacious, and affordable, making them one of the fastest-growing transportation options in emerging economies. However, the electrification of micro-mobility in these regions still faces challenges like affordability, infrastructure, and energy reliability.

THE PROBLEM

In Bangladesh, the electric 3-wheeler (E3W) charging market plays a crucial role as the country's transportation backbone.

The total addressable market for Bangladesh is USD 10 Billion, with approximately 5M EVs plying predominantly in the semi-urban and rural areas and more than 40K charging stations across the country. The sector is expected to grow to up to 8M EVs by 2029, a staggering YoY growth of 30%. This market, however, is yet to be formalized.

The present charging infrastructure is hazardous, uncoordinated, and informal and is running on ill-suited lead-acid batteries. It is also largely only available at night for non-EV owners, making it slow and inefficient.

Furthermore, the mileage for the charge is not known. SOLshare's surveys have shown that there is a fair amount of range anxiety among EV drivers unwilling to take up the more profitable long-term trip (>10km) in the afternoon.

Rental rickshaw drivers pay 89% more to charge their batteries than garage owners would have to pay to charge from the grid. Not to mention, these commercial battery banks only last between 6-7 months, whereas conventional lead-acid batteries last between 2-3 years, while lithium-ion batteries go for 5-6 years. The charging mechanism is also decentralized, as EV owners partner with households who run mini charging stations using the residential tariff which is significantly higher than the EV charging official tariff.

On the part of the charging stations, they too are at a loss with their high electricity costs due to inefficient chargers, lack of commercial meters, and improper wiring. They also lack the capital to invest in commercial charging stations, which can bring down the electricity cost. While the advantages of LI batteries by far outweigh the older lead-acid (LA) battery technology, leading to a per-day cost reduction of more than 70%, to date there are hardly any LI batteries on the road, nor any systematic approach to charge those vehicles. LI batteries used for e-mobility can be repurposed for rural stationary storage applications, such as our solar p2p grids.

THE SCOPE

The number of EVs is constantly increasing every year, providing more scope for growth. According to our surveys, more than 90% of garage owners are willing to increase the number of charging sessions, given that the batteries can be charged faster, and can be done so during the day. EV drivers are also willing to spend an additional 30% for day-time charging if it can provide them with extra mileage amounting to at least BDT 100. This creates a market opportunity of approximately USD 200M.



OUR SOLUTION

SOLMOBILITY - SMART ELECTRIC THREE-WHEELER CHARGING

SOLshare's SOLmobility solutions convert EV charging garages into grid-friendly net-metered solar garages, providing smart PAYG-tech integrated lithium-ion batteries for improved battery tech and leasing models.

SOLshare's technological intervention is centered around the facilitation of smart services enabling modern batteries with PAYG capability. These batteries are equipped with a smart battery management system that ensures safety and allows for data acquisition with battery locking and unlocking features.

These batteries also feature SOLshare's proprietary IoT device, enabling them for Bluetooth communication with nearby devices. Sold to garage owners, these smart batteries are then leased to EV drivers on a pay-as-you-go (PAYG) basis with an automatic shut-off upon lease expiration function. Garage owners manage earnings and cash-outs through an app, with SOLshare receiving software-as-a-service (SaaS) fees during cash-outs.

From a user perspective, modern batteries such as LI batteries, given their longer lifetime reduce the daily battery costs for EV drivers, who now benefit from higher payment flexibility and a smoother payment process, rather than being locked into a constant cycle of debt. In neighboring India, this rapid transformation has already been initiated. In Bangladesh, we are the first mover with our patented PAYG battery leasing model through a smart partnering approach.

CREATING SYNERGIES BETWEEN ENERGY & TRANSPORT

SMART PAYG
SOLUTION FOR E3W DRIVERS

IOT TECH
WITH BATTERY LOCK FEATURES

DATA VISIBILITY
AND MILEAGE INFORMATION

LI-ION BATTERIES
WITH BETTER LIFESPAN

5M ELECTRIC THREE WHEELERS

40K CHARGING STATIONS

OUR SOLUTION

Each time SOLshare swaps out a lead-acid battery for our smart LI battery, we



The potential carbon emissions avoidance for swapping 5M lead-acid batteries would be over 5M+ mtCO emissions.



A boom in the Bangladesh electric 3-wheeler market + **Existing 5M electric three-wheelers** = **Passing of more EV-friendly regulation policies**



Figure - The SOLmobility Leasing Model

THE RICKSHAW VPP - THE FUTURE OF ENERGY

THE FUTURE OF ENERGY LIES IN BANGLADESH. IF WE CAN DO IT HERE, YOU CAN DO IT ANYWHERE.



The Future of Energy Lies in Bangladesh. If we can do it here, you can do it anywhere. These two lines hold the essence of what SOLshare's technology has achieved so far, and what we aim to achieve in the future. - a Virtual Power Plant (VPP)

Two of today's largest challenges are providing access to high-quality electricity supply and addressing climate change. While energy access has drastically improved over the years for Bangladesh, assuring quality service at an affordable cost for the consumers and the government is where the real challenge lies.

This is something we faced in 2022 as the entire country once again faced severe power disruptions, even more so due to the rising cost of fuel globally.

There is no doubt that the percentage of renewable energy is increasing, but it still lies at a mere 5% in the energy mix. We need to increase the share of volatile renewable energies while ensuring the transformation of the way we move heat, cool, process, and manufacture while maintaining reliability in services.

THE BACKGROUND

On a regular day, an electric vehicle (EV) driver rents a fully charged EV from a garage owner, using it to provide transportation services throughout the day. Upon returning to the garage in the evening, the driver plugs his battery into the outlet for overnight charging. Studies reveal that, on average, a lithium-ion battery still holds approximately 30% of its charge at this point. This surplus energy, when multiplied across the 5 million EVs operating nationwide, holds substantial value for Bangladesh, a country that grapples with electricity shortages and is currently falling short of its renewable energy targets.

THE SCOPE- RENEWABLE ENERGY

It is no secret that renewables are the way forward for a sustainable and clean future. While we grapple with challenges to the mainstream adoption of renewable energy such as the lack of opportunities for scaling up, the unpredictable nature of generation, and high costs, there are innovative solutions. These solutions, which usually involve a discussion around storage, can pave the way forward for increasing the use of renewables within the current energy infrastructure. Bangladesh's Mujib Climate Prosperity Plan has renewable energy targets of 40% by 2041 and 100% by 2050 in the national energy mix.



OUR SOLUTION

VPP technology offers a solution by tapping into unused energy reserves in distributed assets like lithium-ion batteries of electric vehicles. In Bangladesh, with 5 million light electric vehicles (LEVs) or electric three-wheelers (E3Ws) operating daily, each battery holds surplus energy at day's end, which remains unutilized.

VPP cloud sends signals to smart chargers to discharge or charge batteries based on grid demand, enabling surplus battery energy to feed back into the national grid during peak evening demand. This aligns with trends when most drivers are inactive, and vehicles are idle, awaiting recharge in garages.

E3Ws running on lead-acid batteries require all night to charge in the garage, leading to clustered storage assets being charged at peak-hour tariffs. VPPs can aggregate surplus battery energy to supply the national grid during peak hours, allowing vehicles to recharge during super off-peak hours when the demand and tariffs are lower.

According to
Bloomberg
micro-mobility is
really what's
driving the electric
vehicle (EV)
revolution.

SOLAR POWERED CHARGING STATIONS

Solar panels on rooftops are also distributed assets which provide great value in a country where the sun shines as regularly as it does in Bangladesh but the land is scarce.

The complete VPP solution would include solar panels installed on the rooftops of charging stations. In Bangladesh, garages store and charge groups of LEVs as many as fifty in one location.

This allows for greater pooling of resources and the potential to feed back stored energy from the batteries to the national grid through a central location. Additionally, at the solar power charging stations, the batteries of the LEVs are charged in a sustainable way.

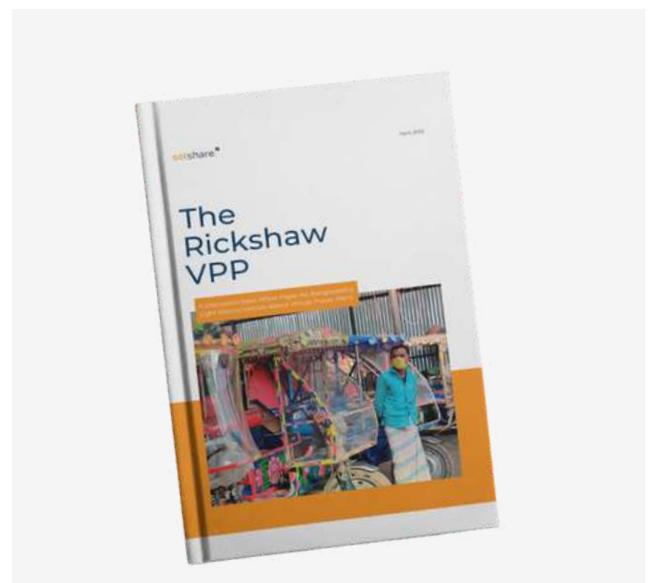
We have already seen that the installation of solar panels reduces the electricity bills of garages, as the government provides rebates according to the amount of electricity consumed through solar power.

All in all, the VPP takes advantage of the huge potential in distributed assets including millions of battery-powered LEVs and solar panels. It provides a solution to existing problems while innovating a more creative pathway to make better use of renewable energy.

Our elaborate Rickshaw VPP white paper outlines key mechanisms that make load-shedding history and renewable energy generation the foundation for everything we seek to do with energy.

With the estimated 5 million units available in the country today, LEVs have a VPP potential of 5 GW today.

This number represents more than 30% of Bangladesh's peak load, which was reported as 14 GW in 2022. SOLshare is positioned to develop a network of distributed storage assets at a scale that we believe right now is only possible in emerging markets like Bangladesh.



Read the full Rickshaw VPP White Paper [here](#).

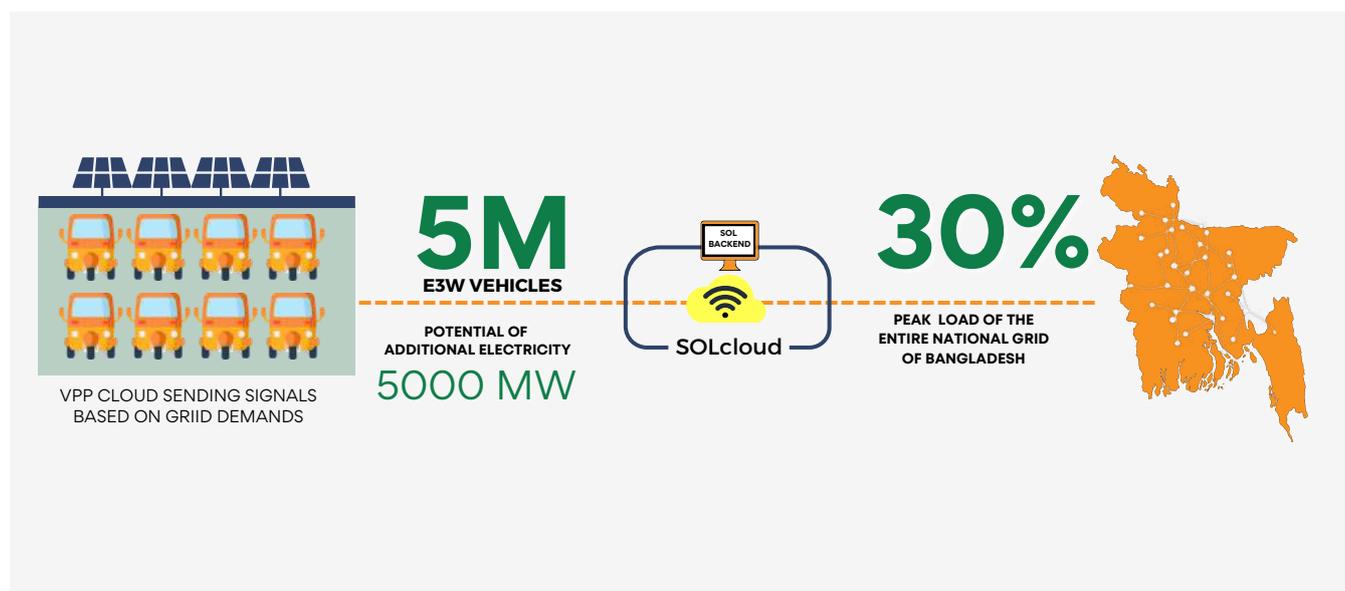


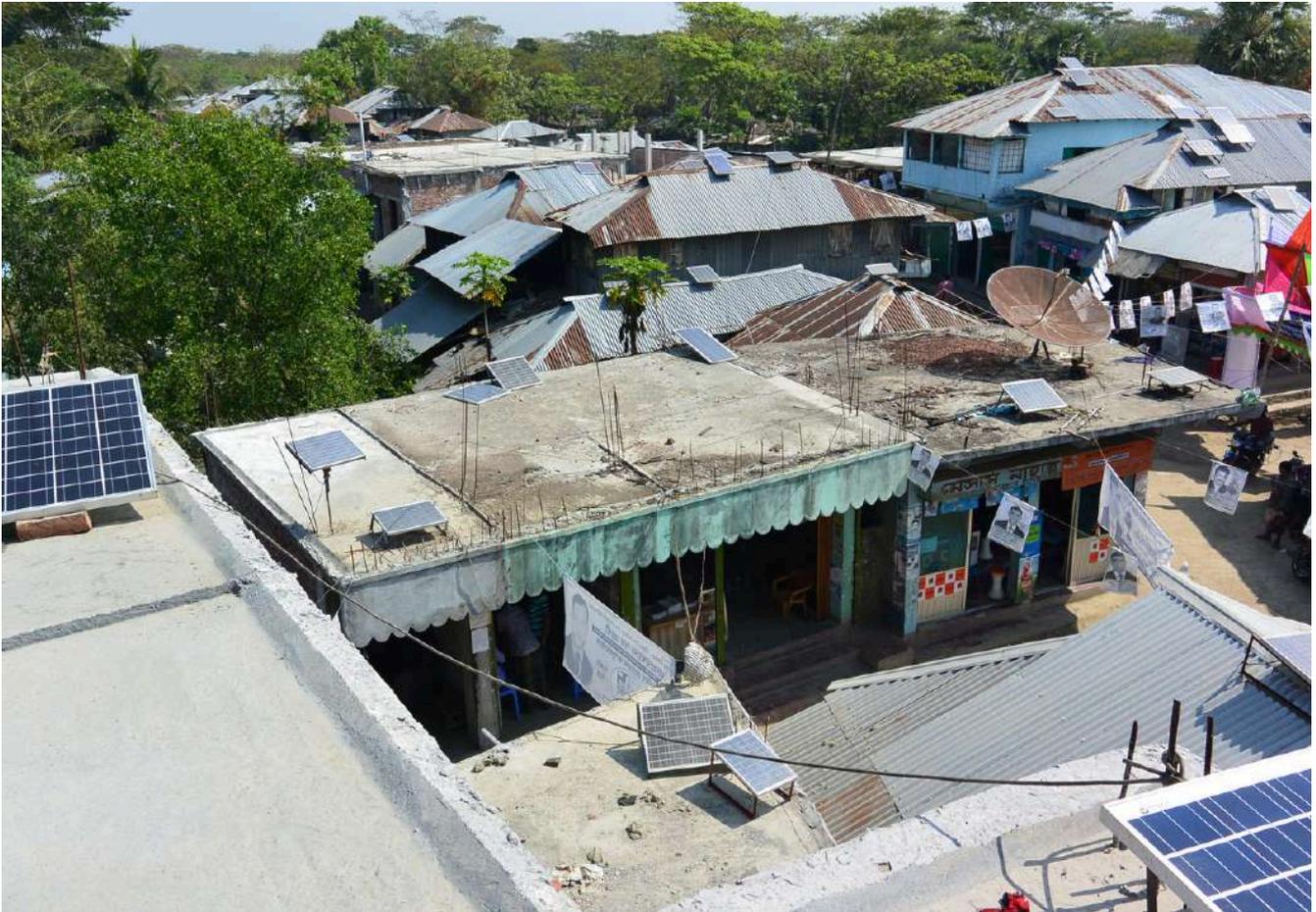
Figure - The Rickshaw VPP



SOLGRID

SOLGRID

CREATE A NETWORK. SHARE ELECTRICITY. BRIGHTEN THE FUTURE



SOLSHARE CREATED THE WORLD'S FIRST PEER-TO-PEER ENERGY EXCHANGE NETWORK OF RURAL HOUSEHOLDS AND SMALL BUSINESSES WITH SOLAR HOME SYSTEMS, WHICH ENABLED A MORE EFFICIENT DISTRIBUTION OF ELECTRICITY ACROSS RURAL COMMUNITIES.

SOLshare is building upon the success of an installation base of 6 million solar-home systems (SHS) in Bangladesh that generates an excess amount of energy worth US \$1 billion per year that cannot be stored by individual systems. We are the pioneer of an ICT-based micro-energy transition model, which interconnects solar home systems into smart peer-to-peer micro-grids, monetizing (excess) solar energy along the value chain with mobile money in real-time, thus empowering rural communities to earn a direct income from the sun. The very base of SOLshare was built upon our SOLgrid technology, the world's first peer-to-peer microgrid that allowed energy-poor rural communities to exchange energy, earning them an income directly from the sun. The SOLgrid was built leveraging the existing solar home systems in Bangladesh which has the largest deployment of solar home systems in the world.

THE PROBLEM

Bangladesh is the global market leader in SHS, serving six million households and microbusinesses and over 25 million people. However, energy poverty continues to plague the nation leaving up to millions of people without access to reliable electricity due to inadequate distribution networks and burgeoning power disruptions.

The Government of Bangladesh projects that electricity demand will reach 34 GW by 2030 and at least 52 GW by 2041. The poor transmission infrastructure in Char areas constrains the system and limits the possibilities of a large amount of excess energy, up to 30%. An unreliable power supply materializes in constant outages that highlight the day-by-day gap between demand and supply.

Moreover, one of the highest charges for renting light and mobile charging, at US \$3.50/kWh and US \$10.50/kWh respectively, have fostered private power installations, which now represent 50% of total investments. Financing options, however, are scarce, locking isolated communities into an energy poverty trap. Lastly, the lack of accurate data in char and river island areas is a stumbling block on an unstructured process that results in significant delays, expenses, and viable projects being discarded.

This leads to an opportunity for micro-grids at the community level to enable local balancing, provide extra revenue schemes, and unlock productive use potential.

THE SCOPE

Research discovered that 30% of solar energy is lost every day. This translated into 600,000kWh of energy that was being lost from 6 million Solar Home Systems (SHS) daily. By tapping into this excess energy and creating a platform, users can trade this excess energy while simultaneously making a profit. This inclusive approach allowed those without solar home systems access to affordable and clean energy with just a SOLbox.

On one hand, combining access to energy systems with financial inclusion instruments and entrepreneurial training for productive use is a clear market opportunity for SOLshare, as it opens the outreach to more than 10 million people with a lack of access to reliable electricity. On the other hand, the value of the data collected through the peer-to-peer grids could set an academic benchmark for open source models for electricity pricing in decentralized power markets.



OUR SOLUTION

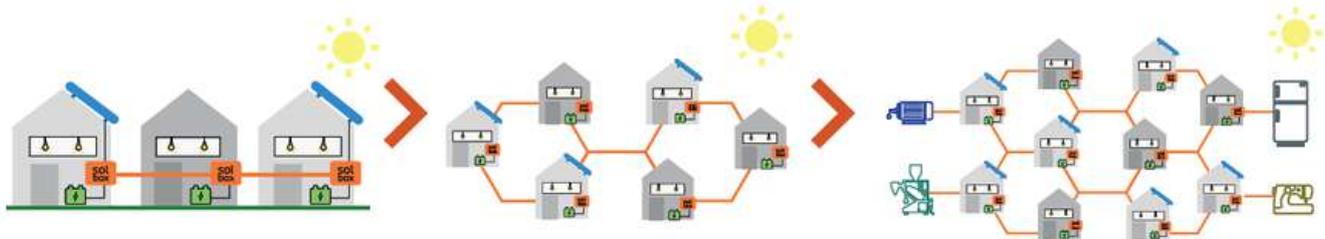
SOLgrid- PEER-TO-PEER SOLAR MICROGRIDS

And hence the SOLgrid was born. To address this gap, SOLshare created the world's first peer-to-peer energy exchange network of rural households and small businesses with solar home systems, which enabled a more efficient distribution of electricity across rural communities.

This innovative model is commonly referred to as the 'prosumer' model, allowing households to become both a producer and a consumer of electricity generated by their SHS installation. In summary, one household can sell excess power into the microgrid network, whereas neighboring households or businesses can buy it in small increments using mobile credits.

Off-grid solar products, particularly the SHS, serve an important role in frontier markets by empowering the 'next billion', who currently lack electricity or live with unreliable or insufficient electricity service. SHS complements grid-based power distribution in frontier economies, by serving as a platform for a) effective energy transition (from fossil fuels to renewables), b) affordable, reliable, and scalable rural electricity supply, and c) carbon neutrality.

SOLshare's technology is comprised of our ICT-enabled energy trading platform (the SOLgrid), a peer-to-peer (P2P) solar micro-grid, that interconnects households and microbusinesses with and without solar home systems allowing users the freedom to use the energy as a producer, prosumer, or a consumer. The SOLbox is a machine-to-machine (M2M) enabled integrated direct current bi-directional power smart meter that is the point of interconnection within the peer-to-peer (P2P) network. It is the precursor of the 'swarm' approach for sustainable rural electrification. The world's first solar peer-to-peer grid has significant entrepreneurial benefits for all Solar Home System (SHS) users in remote and rural areas in Bangladesh and India where main grid electricity is currently unavailable.



Connect to your neighbors.

Create your own grid.

Use more energy and appliances

Create a network.
Share electricity.
Brighten the future



OUR SOLUTION

The SOLgrid is dependent on an Internet of Things (IoT) working together called the SOLbazaar. The SOLbox is installed in every home within the microgrid and empowers users to choose whether to become consumers, producers, or prosumers of energy. The SOLbox shows each user how much energy they can trade, and users can top up the box using pay-as-you-go mobile payment software such as bKash.

Each user is registered using SOLshare's app, SOLapp, which allows SOLshare to study the energy trading data of each user. Every microgrid has a Wi-Fi tower through which data from the surrounding SOLboxes are transmitted to SOLshare's head office. Here, the data team receives, analyzes, and translates this data, which is then stored on a dashboard, the SOLweb. This allows the team to stay abreast of any issues that could hamper the performance of the SOLboxes and repair them remotely when issues are minor.

Data collection is a primary objective of SOLshare which is used as a part of operations and maintenance. Each microgrid has a trained appointed SOLshare Area Manager (SAM) who looks after the grid and can help tackle minor problems that may occur. The SAM also ensures that a field engineer is on-site if a bigger problem happens. All of the analyzed data is ultimately used by SOLshare's R&D and Lab teams to continue to upgrade and optimize the SOLbox.



Figure - The SOLbox

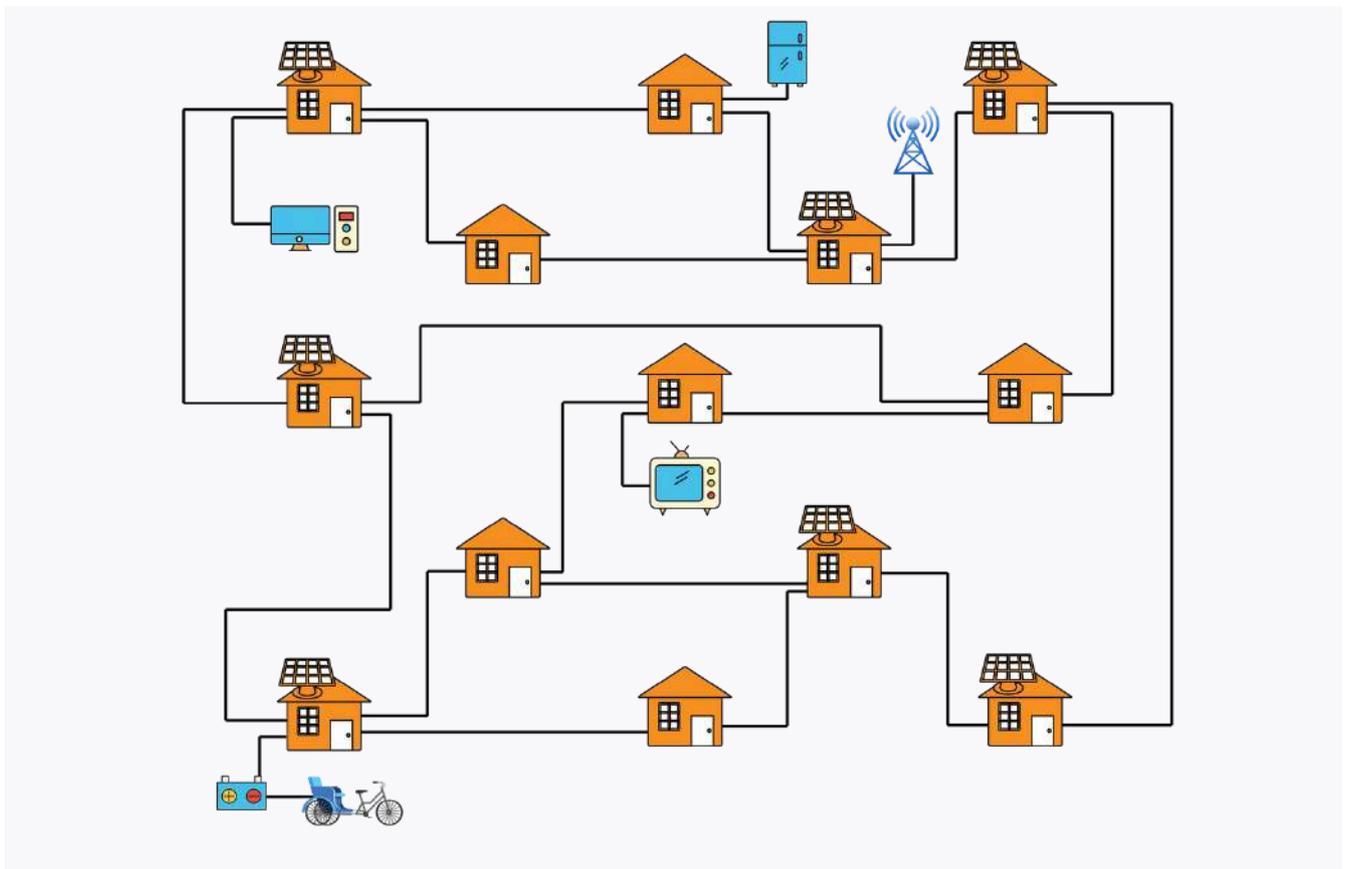


Figure - The SOLgrid model

THE PCC

THE POINT OF COMMON COUPLING (PCC) TECHNOLOGY



THROUGH THE PCC,
SOLSHARE HAS
INTERCONNECTED A PEER-
TO-PEER MICROGRID,
THROUGH A SINGLE POINT
CALLED THE PCC WITH THE
NATIONAL GRID,
ALLOWING RURAL
VILLAGERS TO SELL
ENERGY INTO THE GRID.

In 2022, Bangladesh reached 100% electrification as the national grid reached every corner of the country, including the rural communities in char areas that previously did not have access. While this seemed like the end of the SOLgrid, it was actually the beginning of a technological revolution, which we call the Point of Common Coupling (PCC).

THE PROBLEM

100% electrification stands as a significant milestone in Bangladesh's energy landscape. This accomplishment presented a new avenue for utilizing the 6 million Solar Home Systems (SHS) installed by the government and in turn, created a new application for the SOLgrids.

THE SCOPE

If the SOLgrids, composed of decentralized networks of interconnected, peer-to-peer microgrids, were to integrate with Bangladesh's national electricity grid through a single point, it would breathe new life into the 6 million solar home systems and set the stage for establishing a new global standard for electricity distribution. Thus, the Point of Common Coupling (PCC) emerged as a solution to contribute to the national grid's resilience.



OUR SOLUTION

2022 marks a revolutionary year for SOLshare as we broke yet another glass ceiling in energy innovation by launching the PCC at our Saddambazaar grid. Funded by the UK government, in partnership with Shakti Foundation, we have interconnected the Saddambazaar SOLgrid through a single point called the PCC with the national grid, allowing rural villagers to sell energy into the grid.

This is the first time such an attempt has been made is bringing about a whole new energy revolution in integrating distributed renewables into the national grid as well as creating a sustainable way forward for the existing 6 million+ solar home systems across the country.

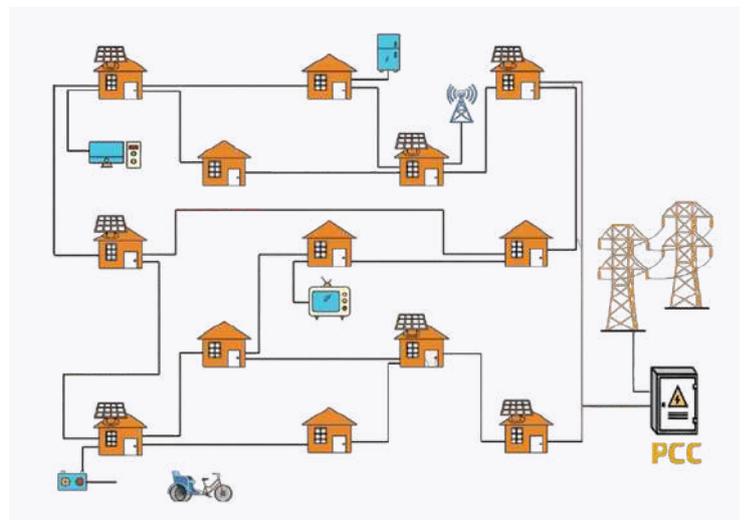


Figure - The PCC





SOLROOF

SOLROOF

SOLSHARE'S SOLAR ROOFTOP INSTALLATION SERVICES



SOLshare is building a global network of smart distributed solar powered storage assets.

The Global South is more vulnerable to the effects of climate change and global warming, where Bangladesh is a highly vulnerable place due to rising sea levels. Solar Rooftop installations provide an alternative way to electricity generation that works to fight climate change and helps to reduce overall energy costs while increasing the reliability of the electricity supply. As a clean source of energy, Solar PV creates opportunities for sustainable operation and an alternative solution to increasing LNG prices.

Commercial and Industrial (C&I) solar rooftop installations have seen quite a growth in recent years with more businesses and organizations adopting renewable energy sources in a race to reduce their energy costs as well as their carbon footprint. The global rooftop solar photovoltaic market size was valued at a whopping USD 99.5 billion in 2021 and is expected to grow to USD 398.3 billion within the next decade. In terms of location and geography, the largest share of this market for Commercial and Industrial (C&I) rooftop solar installations lies in the Asia Pacific region.

The reason that industries are flocking toward this form of renewable energy has a lot more to do than simply reducing climate change. While the generation of clean energy is the most important aspect of this solution, it also reduces the heavy electricity bills that industries are known to generate, slashing those prices by at least 15% to 20%.

THE PROBLEM

Electricity costs have steadily increased over time, compounded by uncertainties arising from the global geopolitical crises and supply chain disruptions. In 2023, bulk electricity prices surged by 29.6%, reaching BDT 7.04 per unit. With growing ESG awareness and international environmental standards, industries, particularly manufacturing, are shifting towards solar energy.

The average annual growth of gas in the past 10 years has been 5.63% for industrial use. The Power System Master Plan (PSMP) 2016 also proposed that Bangladesh needs to increase the tariff for gas, coal, and oil products due to expensive imported fuel and investment in energy infrastructure.



THE SCOPE

At least 8,000 MW of solar power could be generated by 2041 in the case of the "as usual business case scenario", and 25,000 MW in a "medium case scenario". Currently, Bangladesh generates a total of 649.61 MW of electricity from different renewable sources while the country's total generation capacity is 22,000 MW. Of this, 415.68 MW is being generated from solar power. This leaves a big gap for improvement and implementation of solar power, which could potentially help Bangladesh reach the target numbers.

Plans laid out by the Mujib Climate Prosperity Plan have Bangladesh at 100% renewables by 2050 creating resilience and energy independence while enabling the country to become a net exporter of energy as a green economy with leading technological innovations.

The installation of Solar Panels also allows more industries to earn LEED points, eventually making them LEED-certified buildings. As of 2021, Bangladesh has a drastically low number of LEED-certified buildings (100+) compared to our neighboring country India (1000+).



OUR SOLUTION

SOLroof

SOLAR ROOFTOP INSTALLATION SERVICES

Our services allow clients to build and lease solar PV plants on C&I rooftops to reduce their environmental footprint and bring down their utility bills while providing an alternative to load shedding and using diesel & and gas generators.

We manage the project finance and set up the solar rooftop installation. For the next 25 years, industries enjoy lower tax rates and 15-20% cheaper electricity rates while being a part of the global clean future. In 2022, SOLshare has commissioned 468.6kWp of grid-tied solar rooftop capacity for its C&I customers, with a 27MWp pipeline based on signed agreements already.

Our services include

- **Preliminary Site Assessment**

We perform the initial site and feasibility assessment by analyzing the energy consumption and assessing the roof structure and its solar PV potential.

- **Engineering System Design & Simulation**

A complete engineering system design & simulation is created showcasing the solar panel layout, quantity, and inverter size, along with a financial model showcasing what the final outcome will be like.

- **Procurement**

We will order the necessary items required (solar panels, inverters, accessories, etc) for the installation process to begin.

- **Construction**

Once everything has been procured and approved, it is time for installation. The solar panels are installed and connected to the inverter and the building's electrical system.

- **Trial and Inspection**

The installed system is inspected during a trial run to ensure it is functioning properly.

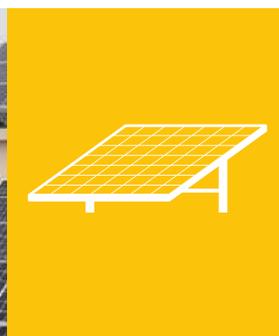
- **Maintenance and monitoring**

We ensure the longevity and efficiency of the system through our regular maintenance and monitoring for optimal performance.

- **Other services**

We also provide turnkey project EPC services along with advisory services.

Creating Green, Efficient and Sustainable Industries



20+MWP
IN THE
PIPELINE

WHY US?

- Ensuring **correct investments**
- Ensuring the **safety of your valuable asset** over its life
- **German engineering** with the best practices
- **20+ years of experience** with solar photovoltaics, and renewable energy technology.

 <p>40 kWp Unilever Sales Depot, Bogra</p>	 <p>145 kWp IRIS Garments, Gazipur</p>	 <p>15.93 kWp British High Commission, Dhaka</p>	 <p>250 kWp Knit Concern Limited, Narayanganj</p>
--	--	--	---

OUR WORK

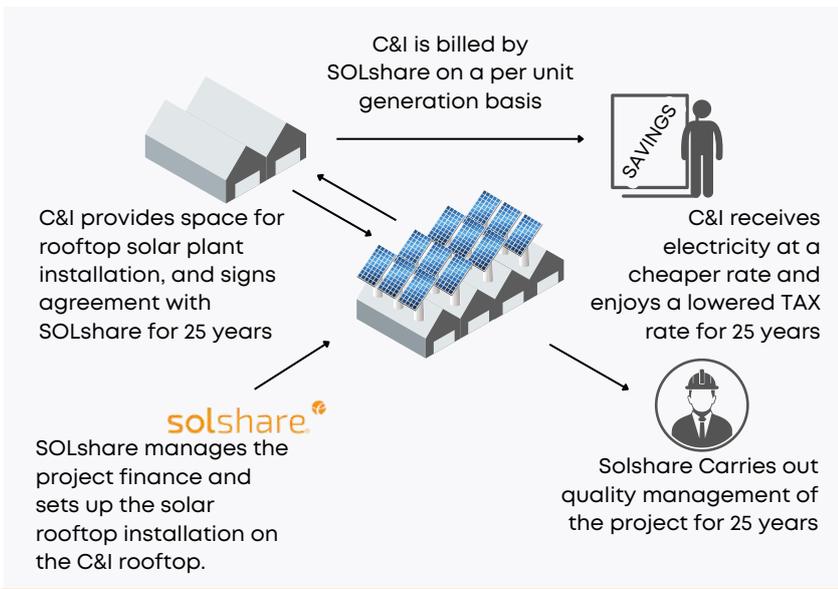


Figure - SOLroof OPEX Model

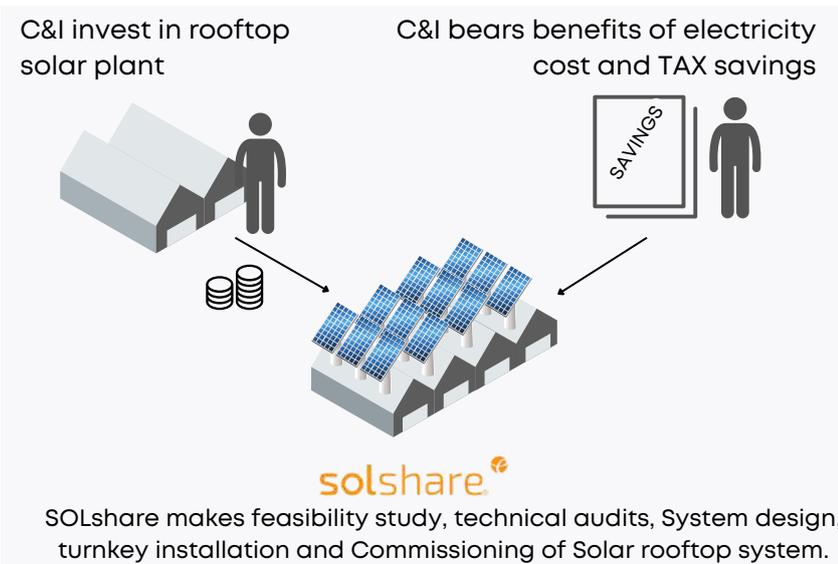


Figure - SOLroof CAPEX Model



SOLAR REVOLUTION IN BANGLADESH

BESTSELLER'S PARTNERSHIP WITH GREENER GARMENTS INITIATIVE (GGI) FOR SUSTAINABLE FASHION MANUFACTURING

“The initiative is the first joint venture between an international fashion brand and a climate technology company in Bangladesh. We look forward to building solar plants across BESTSELLER's suppliers via a close collaboration based on dialogue and fast and reliable execution,”

BESTSELLER, a Danish fashion company, aims to further reduce its carbon footprint by focusing on indirect emissions in its extended value chain. The company has already achieved an 82% reduction in direct greenhouse gas emissions between 2018 and 2021. Now, BESTSELLER plans to establish solar power plants on factory roofs in Bangladesh, where textile factories produce clothes and shoes for the fashion industry. These installations will contribute to lowering the company's overall carbon footprint and set an example for the entire fashion industry.

The initiative addresses the fact that 95% of BESTSELLER's total emissions come from the extended value chain, including material production and suppliers. In collaboration with its parent group HEARTLAND, BESTSELLER will finance the establishment of solar power plants in Bangladesh, enabling textile manufacturers to invest in renewable energy for their factories. This global contribution aligns with HEARTLAND's commitment to supporting green projects globally, especially in regions facing challenges in transitioning to sustainable practices.

The installation of solar plants is set to commence in 2023, with Body Fashion Limited, a long-standing supplier in Bangladesh, being the first factory to participate. Greener Garments Initiative (GGI), a company established by HEARTLAND and climate technology company SOLshare, will oversee the installation of solar panels. This project marks the first joint venture between an international fashion brand and a climate technology company in Bangladesh, aiming to bring about positive change through sustainable energy solutions.

GREENER GARMENTS INITIATIVE (GGI)



The Greener Garments Initiative (GGI) is an Energy Service Company (ESCO), established by SOLshare, a Bangladeshi climate-tech company, and Heartland (holding company of BESTSELLER), a global family-owned fashion company.



This is the first time ever in Bangladesh that a global fashion brand has become part of an ESCO company to develop and set up solar rooftop installations across the country for a greener supply chain. The partnership has clearly defined roles, with SOLshare being the local operator and technical partner and BESTSELLER, through its parent company Heartland, being the main equity investor.

MISSION

Powering a greener future by harnessing the power of the sun

VISION

Becoming the leader in providing green, affordable, sustainable solar energy services.

WHY GGI?

- Access to clean and reliable energy is a fundamental right for all, and through the GGI initiative, we aim to realize this goal.
- Our **20+** years of experience in the industry, paired with German engineering and technical expertise allows us to turn this vision into reality.
- We are **100% compliant** with all required regulations like RSC, BNBC, which enables factories to avoid surprises when installing solar panels. Find details about our compliance below.



THE GGI MODEL

Providing An Innovative Financing Model that leads by example and demonstrates a commitment through concrete actions.

THE FINANCING PROBLEM

The reduction of carbon dioxide emissions is a pressing global issue. However, investing in solar rooftop installations can pose a financing problem as it requires a long-term commitment before the benefits can be fully enjoyed. GGI offers an innovative financing model that provides a solution to this problem.

By investing in solar rooftops across Bestseller's factories in Bangladesh, GGI is leading by example and demonstrating a long-term commitment through concrete actions.

OUR SOLUTION - AN INNOVATIVE FINANCIAL MODEL

The innovative financing model offered by GGI provides partners with

- A 20-year power purchase agreement at a floating discount rate over the utility tariff.
- This enables partners to receive subsidized electricity rates
- It helps them to reach scope 3 carbon emission reduction targets.
- Additionally, partners have the option of a solar rooftop buyback, which allows them to monetize their investment if necessary.

Overall, GGI's innovative financing model provides a solution to the core financing problem of solar rooftop installations while also contributing to the global goal of reducing carbon dioxide emissions. Through this partnership, we managed to secure long-term EPC and O&M service contracts which will provide a significant income stream over the upcoming years. We also think that through this partnership, SOLshare will be able to acquire more similar projects, establishing our company as a gateway for international investors into the rooftop solar space in Bangladesh.

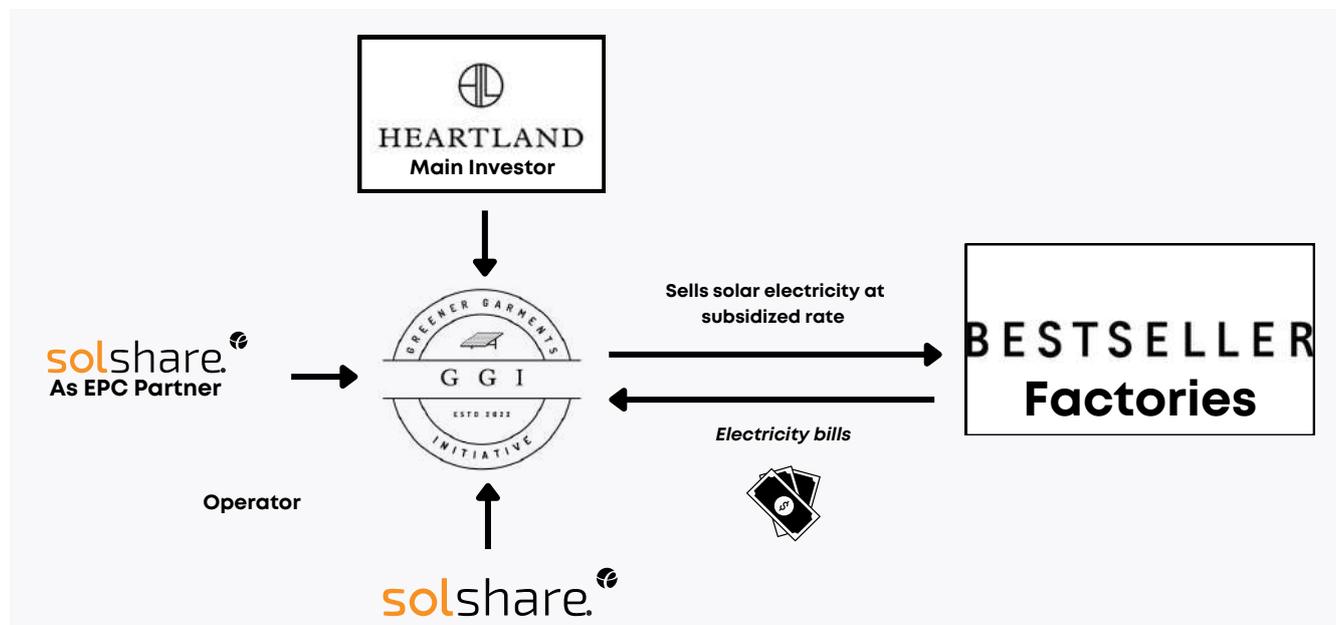


Figure - The GGI Business Model

GGI - WHAT WE DO

1. **Preliminary Site Assessment** - We perform the initial site and feasibility assessment by analyzing the energy consumption and assessing the roof structure and its solar PV potential.
2. **Engineering System Design & Simulation** - A complete engineering system design & simulation were created showcasing the solar panel layout, quantity, and inverter size, along with a financial model showcasing what the final outcome will be like.
3. **Procurement** - We will order the necessary items required (solar panels, inverters, accessories, etc) for the installation process to begin.
4. **Construction** - Once everything has been procured and approved, it is time for installation. The solar panels are installed and connected to the inverter and the building's electrical system.
5. **Trial and Inspection** - The installed system is inspected during a trial run to ensure it is functioning properly.
6. **Maintenance and monitoring** - We ensure the longevity and efficiency of the system through our regular maintenance and monitoring for optimal performance.
7. **Handover** - The completed project is then handed over to you as we provide hands-on training on monitoring, operation, and maintenance.
8. **Other services** - We also provide turnkey project EPC services along with advisory services.

GGI - YOUR PARTNER IN COMPLIANCE

Key Artifacts

1. Standard project plan with punchlist tracker
2. Punch List of pending items as process control tool
Checklists for each stage
3. Feedback tool to add checklist points
4. Training Slide Deck safety awareness, based on ILO
Construction safety guidelines

Our Offering

1. Dependable, long-lifetime sourcing
2. Speed and quality of execution
3. Professionalism and experience
4. Exemplary safety record
5. "Your partner in compliance"
6. High reliability, German engineering
7. Top-notch after-sales services
8. Excellent customer experience

Our Approach

1. Safety first
2. Come fully prepared
3. Radiate competence and professionalism
4. Claim authority and execute on it
5. Clear rules and delivery

Standard Project Execution Plan

1. Project Preparation
2. Order Confirmation
3. Procurement
4. Installation
5. Hand-over

Construction Site Readiness

1. Contracts with all entities
2. Roof must be prepared before we engage Perimeter
clearly defined and labeled [Tool] Safety gear on site
3. Worker registry and daily logs

Safety As Our Duty

1. Legal obligations

- i. Minimum standards: Labour Act (2006) - Chapter 6 (Safety)
- ii. Binding: Bangladesh National Building Code Vol. 3, Part 7, Ch 1 - 4 PDF pp.1817
- iii. Vicarious liability: Generally responsible for undertakings of our staff and hired labor

2. International compliance, even if not ratified by BD:

- i. ILO Code of practice Safety and health in construction (Revised edition) (Nov 2022)
- ii. C167 - Safety and Health in Construction Convention, 1988 (No. 167)
- iii. P155 - Protocol of 2002 to the Occupational Safety and Health Convention, 1981

3. Our company values, especially:

- i. Accountability
- ii. Mutual Respect
- iii. Integrity



TESTIMONIALS

TESTIMONIALS



MEET MR. OMAR FARUK

I was an EV garage owner in Rajshahi, struggling with the huge electricity bills that came with powering lead-acid batteries solely from the national grid.

Things took a turn for the better when the solar panel installation took place. My expenses went down as the electricity bills started decreasing. Not to mention, as the lead-acid batteries were swapped in the vehicles with better and improved lithium-ion batteries, the charging time was cut down by half, which allowed more vehicles to come in to charge - in turn providing me with an increased income.

After being able to put away savings through this increased income and decreased expenses, I now dream of owning a second garage to further boost my business.



MR. OMAR FARUK,
A SOLMOBILITY
CUSTOMER

TESTIMONIALS



UNILEVER SOLAR ROOFTOP PROJECT

*Wonderful partnership with ME SOLshare Ltd and Unilever Bangladesh to move our needle a bit towards netzero - Zaved Akhtar
CEO & MD - Unilever Bangladesh*



**UNILEVER BOGURA
DEPOT, SOLROOF
CUSTOMER**

TESTIMONIALS



MEET MRS. ALEYA BEGUM

I faced significant challenges as this is a male-dominated business in the area.

I got married at an early age. My husband and son work in the paddy fields to support the family, but it has not been enough. This is when I opened a small shop in the village bazaar. But I faced significant challenges as this is a male-dominated business in the area. To do business properly, I needed a refrigerator, but I wasn't able to procure one due to the lack of electricity. This is when I learned about the SOLgrid, and had the SOLshare team install solar panels on my rooftop along with the SOLbox. Now I can run a refrigerator, stock up on necessary goods in the warmer months and increase my sales.



MRS. ALEYA BEGUM,
A SOLGRID
CUSTOMER

STORIES FROM THE ROHINGYA REFUGEE CAMPS

Sofika is one of the hundreds of refugees who received access to electricity through our SOLgrids.

For the past five years, Sofika (36) has lived in the Rohingya Refugee camp in Ukhiya. She manages a household of nine, including seven children, and irons the clothes of her neighbors with coal during her free time to earn some money. Living off-grid, she and her family relied on small solar lamps provided by UNHCR. However, they needed a more reliable power source for daily household activities like cooking, dining, studying, and childcare.

Since the installation of SOLshare's SOLgrid in their camp, Sofika now has access to electricity throughout the day, allowing her to tackle chores and support her children's studies at any time. Moreover, they are now comfortable using fans during the humid summer months.



MRS. SOFIKA, A SOLGRID CUSTOMER



PROJECTS

PROJECTS



Project: Expansion of SOLgrids in the Rohingya Refugee Camps of Cox's Bazar

Date of Initiation: December 2023

Status: Completed

Location: Bangladesh

Client: UNHCR

Budget: USD 85,000

Main project features: Installation of 2 pilot P2P solar microgrids within the Rohingya refugee camp of Cox's Bazar.

Project: Modern Energy Cooking Services

Client: MicroEnergy International

Date of Initiation: October 2022

Status: Completed

Location: Bangladesh

Amount: USD 14,550

Main project features: Consultancy services for an in-depth exploration of cooking entirely with electricity via ICT-enables services in a range of households

Project: GIZ PAP Consultancy

Client: GIZ

Date of Initiation: March 2022

Status: Completed

Location: Bangladesh

Amount: USD 8,605

Main project features: Consultancy services for an assessment of an overview of renewable energy & energy efficiency technology with dissemination potential in Bangladesh.

Project: GIZ EERGIE Consultancy

Client: GIZ Date of Initiation: May 2022 Status:

Completed Location: Bangladesh

Amount: USD 20,800

Main project features: Consultancy services for energy efficiency and grid integration of renewable energy business case demonstration for solar battery charging in Bangladesh.

Project: GIZ Net Metering Consultancy
Client: GIZ **Date of Initiation:** July 2022
Status: Ongoing
Location: Bangladesh
Amount: USD 43,000
Main project features: Consultancy services for technical support in rollout of net metering applications in Bangladesh

Project: GIZ EERGIE Consultancy
Client: GIZ
Date of Initiation: May 2022
Status: Completed
Location: Bangladesh
Amount: USD 20,800
Main project features: Consultancy services for energy efficiency and grid integration of renewable energy business case demonstration for solar battery charging in Bangladesh.

Project: GIZ Net Metering Consultancy
Client: GIZ
Date of Initiation: July 2022
Status: Ongoing
Location: Bangladesh
Amount: USD 43,000
Main project features: Consultancy services for technical support in rollout of net metering applications in Bangladesh

Project: Green, Regulated EV Charging in Rajshahi to improve E-Rickshaw driver's livelihoods lighthouse project.
Date of Initiation: February 2021
Status: Completed
Location: Bangladesh
Donor: BAT
Award Amount: GBP 46,420
Main project features: Integrating solar PV (18.5 kWp) on an EV charging station in Rajshahi, under the net-metering policy. Deployment of lithium-ion batteries for EV drivers.



Project: Sustainable Dissemination, Management, and Operation of a Charging Garage
Date of Initiation: June 2022
Status: Ongoing
Donor: Clean Rides Limited
Sales Amount: BDT 1,474,731
Main project features: Business case for sustainable dissemination, management, and operation of a charging station garage.

Project: Technical Feasibility of integrating P2P solar microgrid with the national grid through a single point of connection.
Date of Initiation: December 2021
Status: Ongoing
Location: Bangladesh
Donor: FCDO
Award Amount: GBP 300,000
Partner: Shakti Foundation
Main project features: Implementation of a Point of common coupling (PCC) for through which a P2P solar microgrid will be connected to the national grid to feed in excess solar energy.

Project: Impact Ready Matching Fund (IRMF)
Date of Initiation: May 2021
Status: Completed
Location: Bangladesh
Donor: SIE-B/ Roots of Impact
Award Amount: USD 100,000
Main project features: Piloting of lithium ion batteries integrated with smart battery technology.

Project: Piloting 2 peer-to-peer solar microgrids in the Rohingya Refugee Camp on the Cox's Bazar peninsula.
Date of Initiation: July/Aug 2020
Status: Ongoing
Location: Bangladesh
Client: UNHCR
Budget: USD 80,000
Main project features: Installation of 2 pilot P2P solar microgrids within the Rohingya refugee camp of Cox's Bazar.

Project: Smart Charging for Green Rides.
Date of Initiation: January 2022
Status: Ongoing
Location: Bangladesh
Donor: P4G
Award Amount: USD 100,000
Partner: Integrated Development Foundation (IDF)
Main project features: Evaluating and strengthening the lithium-ion battery supply chain and developing an improved, robust, and scalable smart dongle that supports lithium-ion batteries

Project: Electric Three-Wheelers (E3W) Charging to improve livelihoods for EV Drivers in Bangladesh
Date of Initiation: September 2021
Status: Completed
Location: Bangladesh
Donor: Siemens Stiftung
Award Amount: EUR 80,000
Main project features: Testing and deployment of Lithium-ion batteries integrated with smart battery technology for the improvement of EV driver livelihoods.

Project: RCTs for SOLdemand estimations
Date of Initiation: 2019
Status: Completed
Location: Bangladesh
Status: Completed
Donor: MIT and Harvard
Project features: To test definite price points of customers and price sensitivities.

Project: Solar PV Program for Rural Areas
Date of Initiation: July 2018
Status: Completed
Location: Bangladesh
Donor: UNDESA
Award Amount: USD 1,000,000
Partner: Grameen Shakti
Main project features: Installation of 100 P2P microgrids.

Project: Swarm Electrification in Bangladesh 2.0: Stimulating indigenous growth through rural-based solar rickshaw charging points
Date of Initiation: December 2018
Status: Completed
Location: Bangladesh
Donor: GIZ
Award Amount: EUR 281,951
Main project features: Implementation of EV Charging.

Project: Access to Affordable, Reliable, Clean Energy
Date of Initiation: May 2019
Status: Completed
Location: Bangladesh
Donor: DEG
Award Amount: EUR 100,000
Main project features: Installing 2,200 SOLboxes, and reducing SOLbox price to USD56

Project: Swarm Electrification
Date of Initiation: November 2017
Status: Completed
Location: Bangladesh
Donor: BGEF and GIZ Endev Bangladesh
Award Amount: EUR 50,000
Main project features: Installation of three swarm grids in the rural off-grid areas of Mymensingh with productive energy-use appliances.

Project: SOL-IoT: INTERNET as a SERVICE
Date of Initiation: May 2018
Status: Completed
Location: Bangladesh
Donor: Microsoft, Airband Initiative
Award Amount: USD 100,000
Project features: Piloting Billable Wi-Fi within two SOLgrids.

Project: Swarm Electrification of Rural India
Date of Initiation: November 2018
Status: Completed
Location: Assam, India
Donor: GIZ and Cygni Energy Systems Ltd.
Award Amount: EUR 50,000
Project features: Installation of two pilot solar P2P microgrids in rural Assam in collaboration with Cygni.

Project: DYNAMIC SOLpricing
Date of Initiation: 2019
Status: Completed
Location: Bangladesh
Donor: ORIGIN Energy
Main project features: To test definite price points of customers and price sensitivities, including dynamic pricing models, to improve grid efficiency and predict user behavior.

Project: AI to power the SOLbazaar
Date of Initiation: 2019
Status: Completed
Location: Bangladesh
Donor: Alpha Telefónica
Main Project features: Joint SOLgrid data analysis and identification of new business opportunities for distributed energy infrastructure.

Project: Community Based Decentralized DC Microgrids for Combined Household and Productive Use
Date of Initiation: August 2015
Status: Completed
Location: Bangladesh
Award Amount: USD 25,000
Donor: Infrastructure Development Company Ltd. (IDCOL)
Main project features: Piloting of electricity sharing enabled technologies.



Project: Powerline Communication
Date of Initiation: 2018
Status: Completed
Location: Bangladesh
Donor: TEPCO
Award Amount: USD 20,000
Main project features: Leveraging existing infrastructure to transfer data

Project: Providing Support for the Sustainable Energy Development Access Assessment SE4ALL
Date of Initiation: 2017
Status: Completed
Location: Bangladesh
Donor: TUV Sued / GIZ Bangladesh / World Bank
Award Amount: USD 50,000
Main project features: Assessment of the multi-tier energy access methodology

Project: Regional Technical Assistance (RETA) 7512: Empowering the Poor through Increasing Access to Energy—Swarm Electrification Pilot Project (Bangladesh)
Date of Initiation: 2016
Status: Completed
Location: Bangladesh
Donor: ADB
Award Amount: USD 100,000
Main project features: Piloting a smart solar peer-to-peer microgrid in Bangladesh

Project: Piloting and Implementation of DC microgrid concepts
Status: Completed
Location: Bangladesh
Award Amount: EUR 50,000
Donor: GIZ & Solar Energy Research Institute of Singapore (SERIS)
Main project features: Innovative ICT infrastructure piloting
Project: Research study on workability of solar minigrids for rural electrification and feasibility study of productive use of solar power in off-grid areas in Bangladesh
Date of Initiation: 2014
Status: Completed
Location: Bangladesh
Donor: ADB
Main project features: Feasibility study of productive use of solar power in off-grid areas

Project: A decentralized approach for rural electrification
Date of Initiation: 2016
Status: Completed
Location: Bangladesh
Donor: GSMA, Mobile for development (M4D)
Main project features: Integrating internet of things (IoT) services into the SOLgrid infrastructure including machine-to-machine communication capabilities and real-time mobile wallet services

Project: Rooftop Solar Panel
Date of Initiation:
Status: Signed MoU
Location: Bangladesh
Client: Heartland
Sales Amount: USD 400,000
Main Project Features: Installation of 10MW solar PV panels across 14 sites

Project: Rooftop Solar Panel
Date of Initiation: September 2022
Status: Ongoing
Location: Completed
Client: British High Commission
Sales Amount: BDT 11,25,143
Main project features: Installation of 15.90 kWp grid-tied rooftop solar panel solution at BHC

Project: Pay As You Go [PAYG] Micro-Credit Program for EV Garages
Date of Initiation: Jan 2022
Status: Ongoing
Client: Integrated Development Foundation (IDF)
Sales Amount: N/A
Main project features: Test the business case for the sustainable dissemination, management, and financial inclusion of Micro Small Medium Enterprise (MSME).

Project: Software maintenance and hardware licensing.
Date of Initiation: Jan 2018
Status: Ongoing
Client: RANGS
Sales Amount: N/A
Main project features: Exclusive pilot to test technology for monthly payments of consumer electronics. (Minimum of 10,000 units).

Project: Dissemination of a range of LI Batteries
Date of Initiation: September 2021
Status: Ongoing
Client: Grameen Shakti
Sales Amount: BDT 1,592,342
Main project features: Business case for the sustainable dissemination of a range of LI batteries.

Project: Rooftop Solar Power Solution
Date of Initiation: July 2022
Status: Done
Location: Bogura
Client: Unilever Sales Depot
Sales Amount: USD 14,400 + BDT 3,100,000
Main project features: Installation of 39.6 kWp net-metered rooftop solar PV system at the Unilever Sales Depot.



Project: Rooftop Solar Power Solution
Date of Initiation: March 2022
Status: Done
Location: Dhaka
Client: Knit Concern Limited
Sales Amount: USD 109,000 + BDT 3,100,000
Main project features: Installation of 249.6 kWp grid-tied rooftop solar PV system at Knit Concern Limited garment factories.

Project: Rooftop Solar Power Solution
Date of Initiation: April 2021
Status: Done
Location: Gazipur, Dhaka
Client: IRIS Fabrics Ltd.
Sales Amount: BDT 75,00,000
Main project features: Installation of 150 kWp grid-tied rooftop solar PV system at the IRIS Fabrics garment factory.



SUSTAINABLE DEVELOPMENT GOALS

PRIORITY SDGS



1 NO POVERTY



NO POVERTY

SOLshare fosters resilient communities through innovative infrastructure, driving sustainable development and socioeconomic progress. Our SOLgrids provide rural areas with clean, affordable solar energy, tapping into 6 million solar home systems for maximum efficiency. By linking rural households to the national grid via the PCC, communities contribute to national power generation. SOLmobility transforms E3W industry with safer, sustainable tech like smart batteries and solar charging. SOLroof helps the manufacturing industry to reduce utility costs while adding solar to the grid.

5 GENDER EQUALITY



GENDER EQUALITY

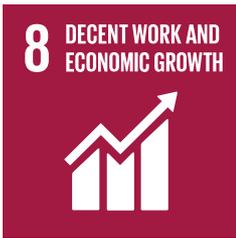
Despite Bangladesh's leading status in achieving SDG 5 for gender equality in South Asia, gender disparities persist, notably among the Bottom of the Pyramid (BoP) population. The rollout of SOLgrid in remote Bangladeshi regions empowered more women to become solar entrepreneurs and start home-grown businesses. Additionally, SOLshare's work during COVID distributed smart home appliances to SOLgrid users, facilitating entrepreneurship. Mamoin Ching Marma, pictured here, uses a SOLbox to power digital health equipment with which she provides healthcare services to villagers.

7 AFFORDABLE AND CLEAN ENERGY



AFFORDABLE AND CLEAN ENERGY

SOLshare focuses on clean, accessible, affordable energy, making SDG 7 paramount. Peer-to-peer microgrids enable users to share clean energy, with excess power fed into the national grid via the PCC. SOLmobility's solar energy and smart batteries offer a cleaner energy supply. Rooftop solar PV on EV charging garages reduces electricity costs by 40% and promotes sustainable transport. The current 30K garages across the country has the potential to add 600MWp of solar to the grid. Our SOLroof allows C&I to install rooftop solar for clean energy, lower bills, and grid contribution.



DECENT WORK AND ECONOMIC GROWTH

The unemployment rate declined to 4.2% in 2023. SOLshare's peer-to-peer microgrids supported rural households, enabling work and income generation through selling excess electricity. Moreover, with smart DC appliances, users were able to set up their microbusinesses such as small shops for tailoring services or household goods to earn an income. Electric three-wheelers offer potential for decent work, with over 5 million vehicles in Bangladesh. SOLmobility's leasing services expand access by eliminating upfront capital expenses, benefiting drivers with improved technology and financing mechanisms.



INDUSTRY, INNOVATION AND INFRASTRUCTURE

SOLshare fosters resilient communities through innovative infrastructure, driving sustainable development and socioeconomic progress. Our SOLgrids provide rural areas with clean, affordable solar energy, tapping into 6 million solar home systems for maximum efficiency. By linking rural households to the national grid via the PCC, communities contribute to national power generation. SOLmobility transforms E3W industry with safer, sustainable tech like smart batteries and solar charging. SOLroof helps the manufacturing industry to reduce utility costs while adding tsolar to the grid.



REDUCED INEQUALITIES

SOLshare is addressing inequalities by providing access to high-quality products made affordable that provide opportunities to enhance income, increase climate resilience and improve livelihoods. Our P2P microgrid enables rural communities, including women, to earn an income from solar energy. The disparity in income distribution in Bangladesh needs more focus and action. SOLshare's e-mobility solution empowers marginalized E3W drivers to earn a higher income, breaking their cycle of debt.



SUSTAINABLE CITIES AND COMMUNITIES

SOLshare believes sustainable energy builds resilient communities, a principle that underpins all our services. The P2P microgrid has helped create sustainable communities in rural areas that were initially left behind but now have a source of income by selling excess electricity. In Bangladesh's 5 million E3W market, our technology swaps harmful LA batteries for smart LI ones, slashes charging times, and trims grid use via solar-equipped stations, fostering sustainability. SOLroof covers commercial and industrial rooftops with net-metered solar PV, curbing emissions, and cutting electricity expenses.



CLIMATE ACTION

SOLshare prioritizes climate action, integrating clean energy tech into the existing infrastructure. Our services integrate clean energy tech with existing infrastructure, realized through SOLgrids sharing excess solar energy in rural areas and feeding it to the national grid via PCC, boosting efficiency and reducing waste. SOLmobility's solar-equipped charging stations and smart batteries cut electricity needs by 40%, slashing emissions. SOLroof reduces industrial carbon footprints. In 2023, all our business lines combined reduced over 200 mtCO

ZAYED
SUSTAINABILITY
PRIZE



AWARDS & RECOGNITIONS



AWARDS & RECOGNITIONS

- Bangabandhu Innovation Grant - BIG 2023 (Top 50)
- Winner of the BASIS National ICT Awards 2022 for Sustainability and Environment Category of Inclusions and Community Services
- Winner of the Zayed Sustainability Prize 2022 in the Energy Category
- Finalist for the Earthshot Prize 2021 in the “Fix Our Climate” Category
- Winner of the Ashden Awards 2020 for Financial and Business Model Innovation in Energy Access
- Winner MIT Solve’s 2020 Global Challenges for Good Jobs and Inclusive Entrepreneurship
- 2019& 2020 Global CleanTech 100 Company
- Unilever Young Entrepreneurship Award 2019 (Top Eight)
- Winner of the Siemens Stiftung empowering people Network Award 2019
- UBS Global Visionary 2019
- Winner of Energy Globe Awards 2019
- Winner of Free Electrons Accelerator Program 2018 as the world’s best energy startup
- Winner of the Microsoft 2018 Airband Grant Fund
- Winner of the 2018 GIZ-Endev Innovation Competition
- World Economic Forum Tech Cohort ‘2018 of the most game-changing start-ups in the world
- Winner of the BASIS National ICT Awards 2018 in Bangladesh
- Winner of the 2018 MIT Inclusive Challenge Asia
- Winner of the 2018 IKU Award by the German Industry Association (BDI) & the German Ministry of Environment (BMUB)
- Winner of the 2017 UNDESA Powering the Future We Want Grant
- Winner of the 2017 Renewable Transformation Challenge by Elsevier Energy & the International Solar Energy Society
- Winner of the 2017 Start-Up Energy Transition Challenge by DENA (German Energy Agency)
- Winner of the 2016 UNFCCC Momentum for Change Award at COP22
- Winner of the 2016 Intersolar Award “Outstanding Solar Project”





AWARDS & RECOGNITIONS

BOARD OF DIRECTORS



Dr. Sebastian Groh

*Chief Executive Officer (CEO)
Chairman of the Board, and
Co-Founder*

Dr. Groh is a 2013 Stanford Ignite Fellow from Stanford Graduate School of Business and holds a Ph.D. from Aalborg University and the Postgraduate School Micro Energy Systems at the TU Berlin where he wrote his doctoral thesis on the role of energy in development processes, energy poverty & technical innovations, with a special focus on Bangladesh. He published a book and multiple journal articles on the topic of decentralized electrification in the Global South.

Dr. Groh started his career and received his DNA at MicroEnergy International, a Berlin-based consultancy firm working on microfinance and decentralized energy. In 2014, Dr. Groh co-founded SOLshare, acting as its CEO since then. He is also a Professor at the BRAC Business School at BRAC University in Dhaka (Bangladesh). On behalf of SOLshare, he received numerous awards, including Tech Pioneer '18 by the World Economic Forum, the Empowering People Network Award 2019 from the Siemens Stiftung Foundation, Finalist at the inaugural Earthshot Prize 2021, the most prestigious global environment prize in history launched by Prince William, and 2022 Winner of the Zayed Sustainability Award. Dr. Groh became an Ashoka Fellow in 2018, a UBS Global Visionary in 2019, and a Member of the Board and Vice President at the Bangladesh-German Chamber of Commerce & Industry (BGCCI) in 2021.



Hannes Kirchhoff

*Senior technical Advisor
Co-Founder*

Hannes is an energy and process engineer by background, holds a master's degree in renewable energy systems engineering, and is pursuing a Ph.D. in DC microgrids. Before joining SOLshare, Kirchhoff worked as a technical consultant for MicroEnergy International (Germany) on several projects in Asia and Africa undertaking technology, supplier, and value chain assessments. Previously, he has worked for CAMCO (Tanzania), Schott Solar CSP (Germany), and the Institute for Ecological Economy Research (Germany).

Kirchhoff has authored multiple technical and non-technical international publications on the topic of swarm electrification. He was an awardee of the German National Academic Foundation as well as a scholar of the national Ph.D. program of the Federal Ministry of Education Germany. Kirchhoff is involved in standardization work in IEEE and IEC, has co-authored the VDE DKE "Low-voltage direct current standardization roadmap", has served in IEC system evaluation groups, and is a member of the IEC System Committee Low Voltage Direct Current (SyC LVDC). As the Senior Technical Advisor of SOLshare, he is responsible for the development and deployment of solutions for smart energy services in stationary and mobile applications.



Daniel Ciganovic

*Senior Financial Advisor
Co-Founder*

Daniel holds a Master's in Economics from the University of Trier with a specialization in Monetary Economics and Social Psychology. He has more than ten years of experience in business development and international development projects and has worked in Germany, Serbia, and Bangladesh.

He moved to Dhaka, Bangladesh in January 2015, and has played a major role in the fast development of the company, with a focus on product-market fit, and operational, and business model development.

Before joining SOLshare, Daniel worked as an independent consultant for IT Start-Ups in Germany. He then worked in the development sector as a consultant for MicroEnergy International in Germany as well as the KfW Development Bank and GIZ in Serbia, where he was involved in energy and private sector development projects. As Co-Founder and Senior Financial Advisor of SOLshare, Daniel is leading the business as well as company development activities and is overseeing the company financials, accounting, and HR department.

NON-EXECUTIVE BOARD OF DIRECTORS



Giancarlo Savini
Investment Director - Climate
Tech, Future Energy Ventures,
E.ON

Giancarlo Savini is the Climate Tech Investment Director at Future Energy Ventures, the venture investment arm of German utility giant E.ON. An engineer by training with over 15 years of early stage technology management experience and 6 years of investing experience, Giancarlo has been involved in 23 deals and driving directly two exits.

He was awarded a GCVI Global Energy Award in 2019 and taught Corporate Venture Capital and Innovation at IMD Business school. Giancarlo also co-authored several publications on material science and corporate venture capital



Luis Manuel
Executive Board Member
EDP Ventures SA

EDP is an energy producer, distributor, and retailer with 12 million customers in Portugal, Spain, and Brazil. Its renewable power business is present in 14 countries including the US and Brazil. EDP Ventures SA is the early-stage corporate venture capital fund of the EDP Group, with the aim to support and stimulate the open innovation process in the energy sector.

At EDP, Luis is responsible for EDP's open innovation mechanisms: EDP Ventures SA (corporate VC fund), EDP Starter (business incubation program), the Open Innovation award, Free Electrons accelerator partnership, and other startup development initiatives.



Robert Kraybill
Managing Director
Impact Capital Holdings Pte. Ltd

Robert is the Managing Director, Portfolio Management for the Impact Investment Exchange (IIX) based out of Singapore. IIX is a global organization dedicated to building a more inclusive world as the foundation for sustainable peace. IIX does this by changing financial systems and innovating solutions for women's empowerment, climate action, and community resilience.

Rob started to mentor SOLshare on financial issues in 2013 when SOLshare came 3rd in the CTI PFAN business plan competition. The engagement which came as part of the prize was originally intended to be one year. However, the relationship between Rob and SOLshare in fact never stopped. Today, Rob is sitting on our Board representing the IIX Growth Fund.



LEADERSHIP TEAM



Aziza Sultana Mukti

Director of Operations

Aziza holds a Bachelor's and Master's in Science in Geology and Mining from Rajshahi University and later completed a Master's in Business Administration with a major in marketing from BRAC University, Bangladesh. She possesses over 15 years of experience in the blend of retail and development sectors in Bangladesh. Prior to joining SOLshare, she was part of the management team of BRAC Aarong for over a decade, one of the most successful social enterprises in the world. She earned a gold medalist at Rajshahi University and was announced the BRAC values award winner. Fluent in Bengali and English, Aziza has mastered a range of extra training programs on leadership, gender awareness, and analysis, strategic decision making, as well as M&E. Aziza codeveloped the smart entrepreneurship approach at SOLshare with an emphasis on its female end-users. As the Head of Operations of SOLshare, Aziza is leading the field operations, sales, aftersales, customer-relations, and production unit and has played a major role in establishing SOLshare in the local energy market in Bangladesh.



Syed Ishtiaque Ahmed

Director of Engineering & Innovation

Ishtiaque completed his Bachelor's from the Chittagong University of Engineering & Technology, and his Master's in Business Administration (Finance) from the Institute of Business Administration at Dhaka University. Ishtiaque has worked in the renewable industry for over 13 years with a focus on solar, and DRE. His expertise in Photovoltaics includes floating solar system assessments, MW Solar IPP design, grid connection, off-grid, and hybrid PV systems, and Solar pumping systems. He has worked on feasibility studies, system design specifications, project rollouts, and program design. Ishtiaque has extensive knowledge of rural energy programs, renewable energy-based agriculture interventions, solar rooftops, and solar park design. Prior to SOLshare, Ishtiaque was working at Rahimafrooz Renewable Energy Ltd. as the Head of Off-grid. Ishtiaque is a member of the Institution of Engineers (IEB) in Dhaka as well as a member of the Bangladesh Solar Society. He is also the Chairman of the Power Electronics Subcommittee.



Isa Abrar Ahmed

Director of Product & Business Development

Abrar brings over 10 years of experience in leading growth and operations across technology companies. Before SOLshare, he led Sheba Platform Limited, a B2B SAAS company as Vice President under which his team served 750 corporate companies from World Bank to Foodpanda. Abrar also has expertise in the management of tech products from his work with global tech giant Samsung (India) as well as the top local IT conglomerate Aamra Group of Companies.

As the Director of Product & Business at SOLshare, Abrar is committed to expanding SOLmobility. His efforts are centered on advancing the transition to electric three-wheelers in Bangladesh and developing a virtual power plant powered by these vehicles. Additionally, he is responsible for engaging key stakeholders, including garage owners, financiers, and battery assemblers, essential to this transition.

LEADERSHIP TEAM



Muhammad Muhaimin
Principal, Data &
Information Technology

Muhaimin is an accomplished alumnus of Queen's University and Simon Fraser University, holding degrees in Computing Science. With over 14 years of experience in the IT industry, he has worked across renowned organizations such as Thomson Reuters, IBM, and Canon Canada. Specializing in Big Data and machine learning, he is also an AWS Certified Solutions Architect Associate.

As the Director of Data and Information Technology at SOLshare, Muhaimin is responsible for crafting and implementing the company's data analytics strategy to align with business objectives. He ensures the reliability of data across the pipeline and oversees system infrastructure to maximize efficiency.



Mohsena Khanom
Director of Finance

Mohsena is a trained finance and accounting professional with credentials including FCCA, ACMP. With over 11 years of corporate financial management experience in the ICT industry, her core expertise includes financial and strategic planning, general ledger accounting, and cash flow management. She is the founder of de tempête, a multinational BPO platform providing ERP implementation, financial accounting, tax, and regulatory services.

As Director of Finance at SOLshare, she standardizes compliance and control processes, develops financial strategies to balance costs and revenues, and oversees policy formulation for cash flow tracking and daily financial decisions.



Salma S. Islam
Head of Projects, Fundraising
and Communications

Salma is a Chevening Scholar with an MSc. in Development Studies from SOAS, University of London, and a BSc in Environmental Studies from NSU. She spent 15 years working in various development sector organizations such as Oxfam GB in both Dhaka and London, NACOM, ICCCAD, and Adam Smith International (ASI). Her main focus has been on Project Management, Research, and Policy Analysis. She spent her childhood in the United States and has worked and studied in Bangladesh, the Middle East, and the UK. Prior to SOLshare, she was the Senior Research Advisor for the Economic Dialogue on Green Growth (EDGG) a project implemented by ASI in Bangladesh. She is currently the Head of Projects, Fundraising, and Communications at SOLshare, managing all of SOLshare's ongoing donor and private-sector-funded projects. In the past, she managed projects on Green Growth, WASH, the Bangladesh INDC, and Food Security funded by USAID, CDKN, the EU, and DFID. Through this, she brings with her a wealth of development sector experience and a true passion for improving rural livelihoods.

ADVISORY BOARD



Shahriar Ahmed Chowdhury

Director, Centre for Energy
Research of UIU



Sonia Bashir Kabir

Founder of SBK Tech
Ventures & SBK Foundation



Karthik Chandrasekar

Founder & Chairman of Sangam
Ventures



Noara Kebir

Managing Director at
Microenergy International



Daniel Philipp

Chairman, MicroEnergy
International GmbH



Dr. Hartmut Schüning

H. S. Hamburg Solar GmbH



Andrew Reicher

Investment Committee Member, Asia,
and Africa at Berkeley Energy



Dr. Daniel M. Kammen

Director of Renewable and
Appropriate Energy Laboratory (RAEL)
University of California, Berkeley,

Honorary member



Mohammed Monir-uz-Zaman

Director at Ahmed Mashuque & Co.

Honorary member

OUR PARTNERS



CONTACT US

Address

BANGLADESH

ME SOLshare Ltd.
LM Tower (2nd Floor), Ka/87,
Joar Shahara Bazar Road Vatara,
Dhaka – 1229, Bangladesh

INTERNATIONAL

ME SOLshare International Pte. Ltd.
5 Shenton Way, #10-01 UIC Building
Singapore 068808

GERMANY

MicroEnergy International GmbH
C/O ME SOLshare Germany
Potsdamer Straße 143,
10783 Berlin, Germany

Telephone

+880 1708 458769

Website

www.solshare.com

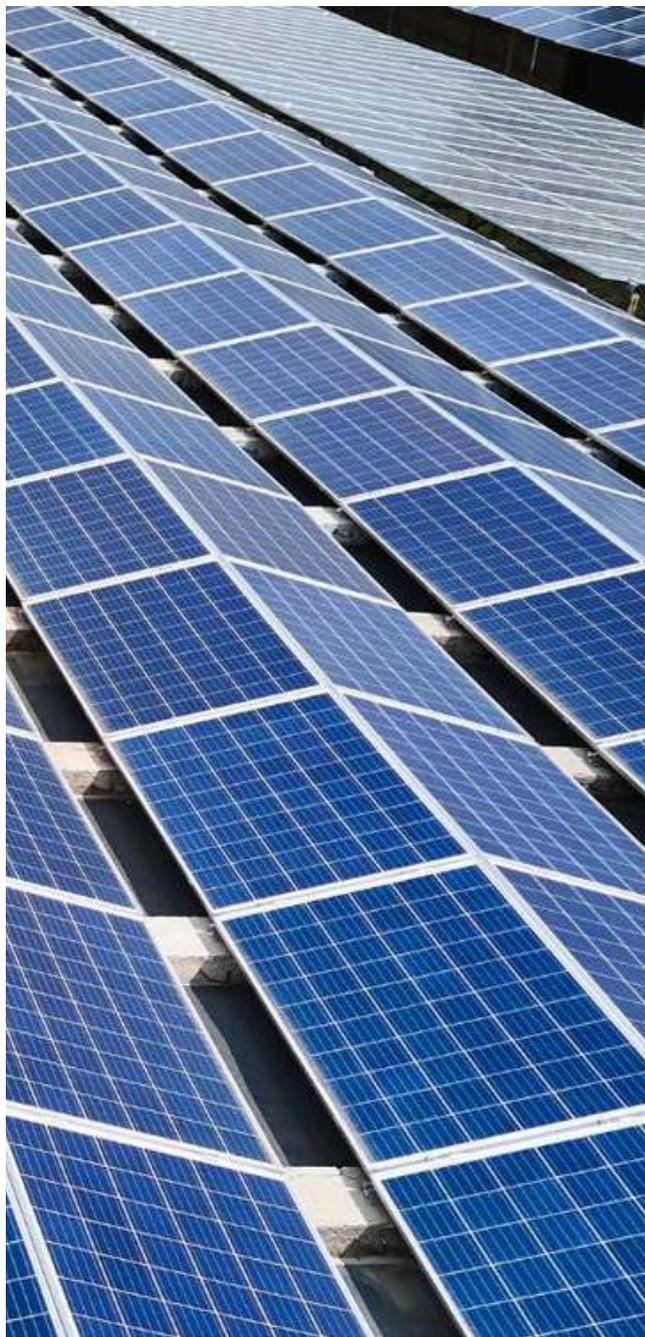
 /mesolshare

 /company/me-solshare

 /sol_share

 /MESOL_share

 /@solshare



**THE FUTURE OF
ENERGY BEGINS
WITH BANGLADESH**



www.solshare.com