

sol

Information Workshop on Solar PV in Bangladesh

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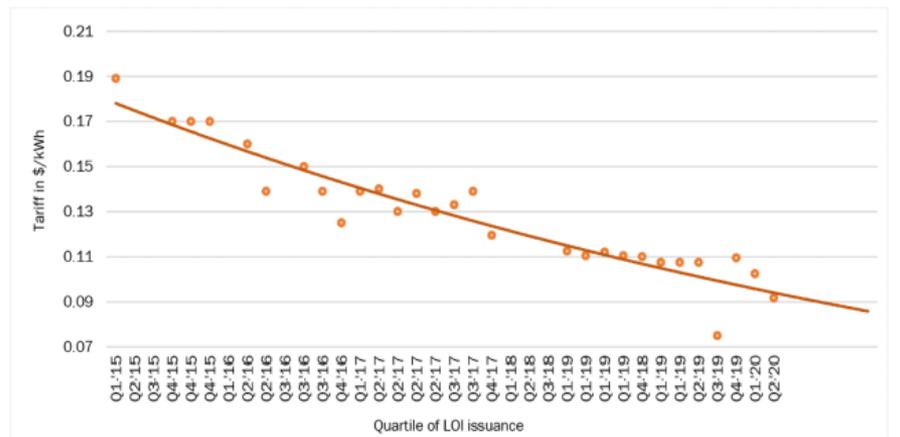
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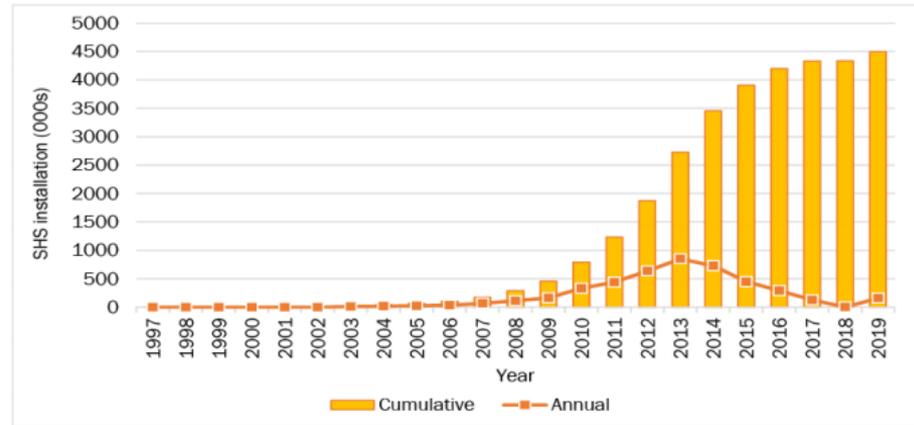


BANGLADESH Solar PV Industry

Source: National Solar Energy Roadmap, 2021 - 2041



Tariff Trend of Solar IPP of Bangladesh



Trend of IDCOL SHS Installations in Bangladesh

Table 5.2: Solar Photovoltaic Targets to be Achieved by 2041 (Medium case).

Component	until 2020	2021-2030	2031-2041	Cumulative
	MW	MW	MW	MW
Solar Power Hub (Utility + IPP)	0	2000	7000	9000
Solar PV power capacity addition by Utilities	15	585	800	1400
Solar PV power capacity addition by solar IPPs	160	640	800	1600
Rooftop solar PV systems	50	1000	5550	6600
Solar irrigation pumps	40	500	400	940
Solar mini-/micro-/nano-grids	6	10	0	16
Solar home systems	252	6	0	258
Solar-powered telecom towers	9	10	16	35
Solar street lights	11	10	18	39
Solar charging station	1	30	70	101
Other solar-powered systems	2	4	5	11
Total	546	4795	14659	20000

Alternative Solar PV deployment scenarios

BAU:

- Cumulative capacity: 6,000MW
- Solar Rooftop PV: 705

High Case:

- Cumulative Capacity: 30,000
- Solar Rooftop PV: 12,000

New Solar PV capacity additions	Cumulative capacity
China (30.1 GW)	China (176.1 GW)
USA (13.3 GW)	USA (62.4 GW)
India (9.9GW)	Japan (56 GW)
Japan (7.0 GW)	Germany (45.3 GW)
Vietnam (4.8 GW)	India (32.9 GW)

REN21, "Renewables 2020 Global Status Report," REN21 Secretariat, Paris, 2020.



Leading Countries in Solar PV



Vietnam installed a record **6.71 GW** of Rooftop Solar in only one month (Dec, 2020) according to PV Magazine (2021).

However, according to IDCOL, the RMG sector in Bangladesh alone holds a potential of currently 5GW for PV rooftop installation, and consumes 30% of total industrial load.

Rooftop Solar PV will lead to

- higher profits (lower electricity cost)
- better reputation (become a green champion)
- increased resilience (diversified power source)

VS

Solar PV is

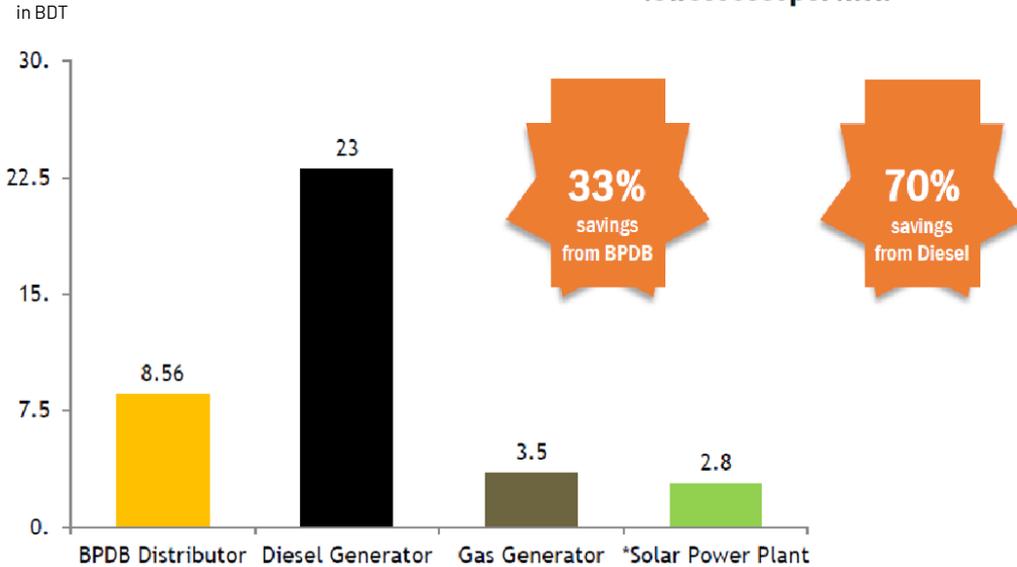
- small,
- expensive, and
- doesn't really work

Source: BSW Study on NMP in Bangladesh, 2018



Triple Win Proposition
meets
Scepticism & Wrong Perceptions

solar power has the lowest cost per kWh



- Indicative price assuming own finance and 500 KWp capacity. Actual price depends on characteristics of the power plant
- Price of gas and electricity from BPDB is going to increase soon
- Gas / Diesel generators have a lifetime of 5-7 years while a solar power plant has a lifetime of 20 years

Sources: own calculations



Solar PV Rooftop Overview

1. Ready to be deployed at larger scale
2. Generally supported by respective agencies
3. Strong local ecosystem with specialized service providers
4. Importing and warranty claim channels established and functional
5. Maintenance incentive is coupled to revenue potential

Challenges

1. Net metering and beyond
2. Visibility of solar energy yield
3. Small solar on domestic rooftops need to be reactivated

Recommendations

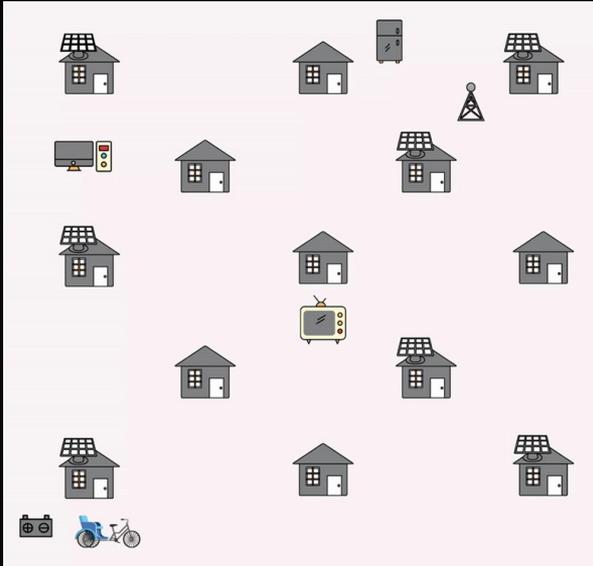
1. Local presence or strong local partner required
2. OPEX model in demand
3. Scope for offering solar PV rooftop + (environmental KPI strategy)
4. Storage, storage, storage



Overview, Challenges & Recommendations for German SMEs

*The new energy world is fuelled by the 5 D's:
Decentralisation, Decarbonisation, Digitisation, Democratisation & Disruption*

Peer-To-Peer Solar Microgrids



A platform where solar home system users and non-users can exchange electricity seamlessly

Electric 3-wheeler Smart Charging



Formalized charge infrastructure needed for 1.5M+ EVs throughout the country

- ✓ *Energy based metering*
- ✓ *Increases in EE of chargers*
- ✓ *RE component under net-metering policy*



Solar Rooftop PV Support Services

- **Working with PDP/GIZ team**
- **Several implementation partners**
- **Good overview over the market**
- **Project management + quality assurance**





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