

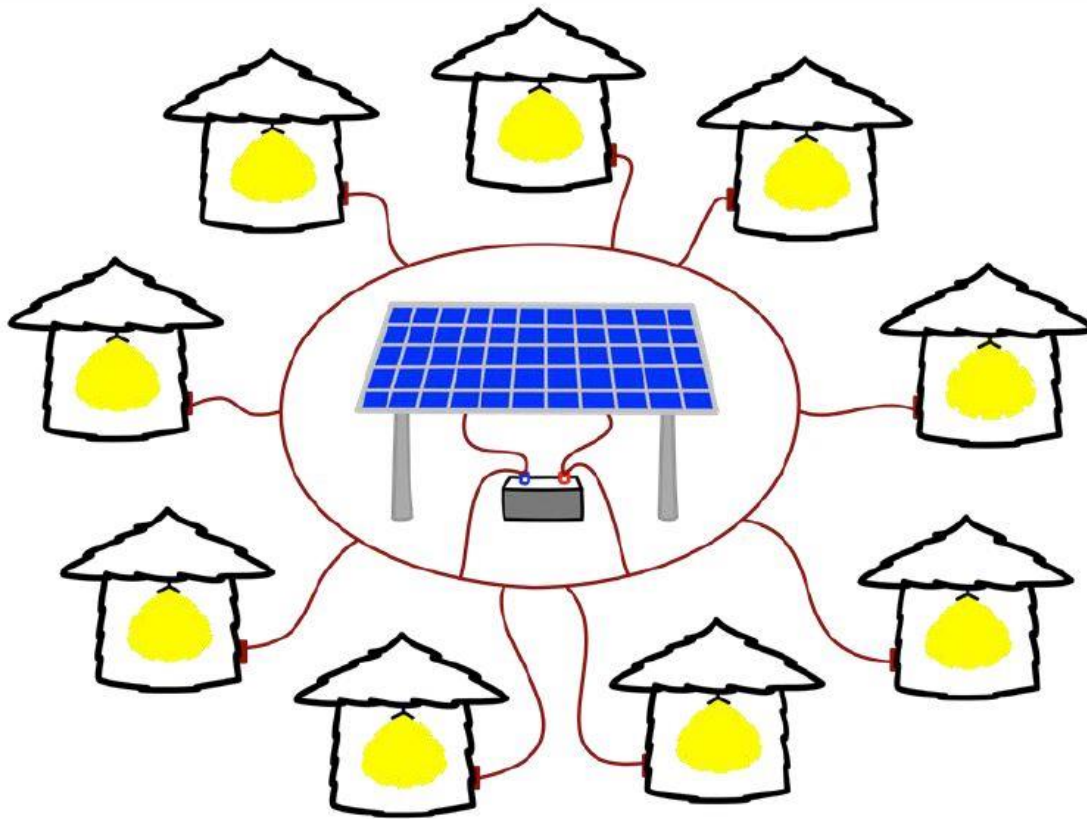
Experiences from dynamic DC nanogrids in Bangladesh using smart metering technology



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**Does smartness always
mean higher costs?**

Grid design



Selected smart grid features

▣ Real time pricing

- ▣ Day tariff
- ▣ Excess tariff
- ▣ Night tariff

▣ Data management tools and diagnostic software

- ▣ Permanent data tracking
- ▣ Low cost solution with SD card

High efficiency

▣ Tier 1 and Tier 2 Energy Services

- ▣ Light, TV and Fan available in DC
- ▣ No transformation losses

▣ Energy Services

- ▣ Predefined energy packages
- ▣ Loads + Electricity

▣ Smart appliances

End user financing

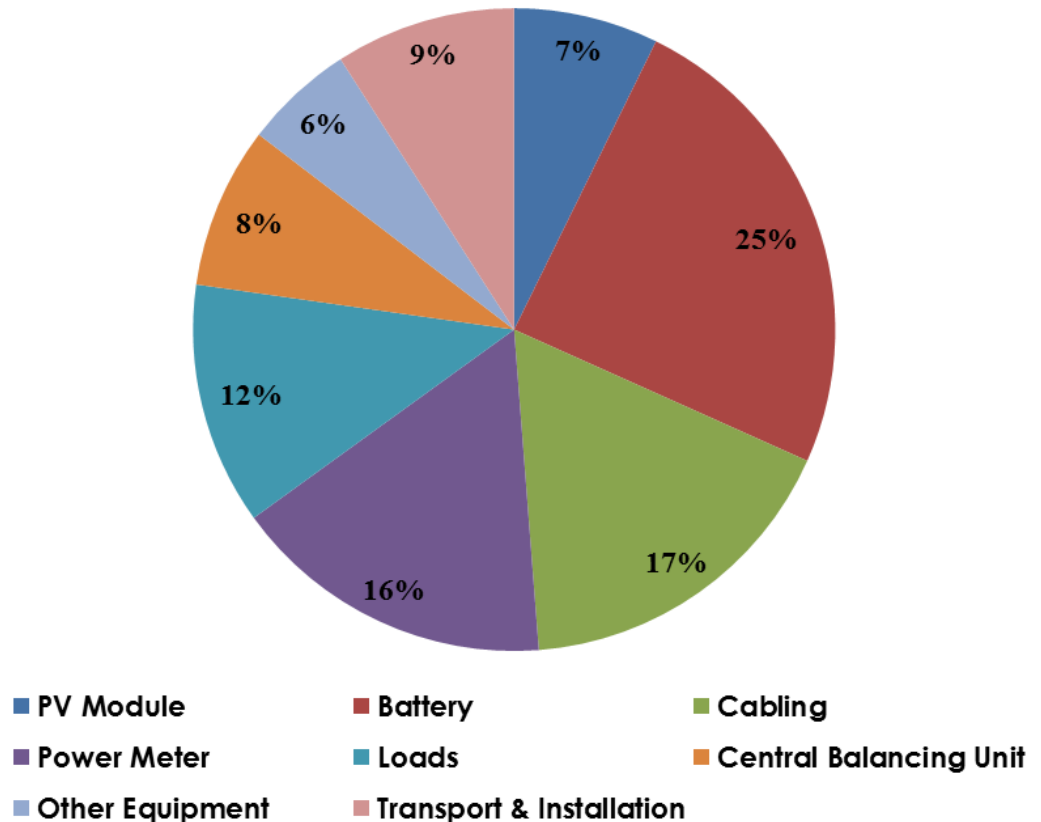
- ▣ Provide predefined consumption packages
 - ▣ Monthly basis
 - ▣ Energy services (e.g. light 100BDT for 5-20 hours per day)
- ▣ No end-user financing required
 - ▣ Pre-paid scheme possible

Small capacities, big impact

- ▣ 280Wp panel
- ▣ 250Ah battery
- ▣ 25 households
- ▣ 50 lights
- ▣ 25 phone charging connections
- ▣ 10 DC Fans

Low costs, fast payback

- ▣ 18-24 months payback
- ▣ 3000 USD initial investment



Results

- ▣ Problem in Bangladesh because of SHS
 - ▣ Integration of SHS into DC nanogrid
- ▣ Good solution for other countries
 - ▣ Myanmar
 - ▣ Nepal
 - ▣ India

The logo for !SOLshare features a white exclamation mark with a small globe icon at its base. To its right, the word "SOL" is written in a bold, orange, sans-serif font, and "share" is in a white, sans-serif font. A bright orange lightning bolt graphic strikes the letter "L" and extends across the top of the text.

!SOLshare

Create a network. Share electricity.
Brighten the future

**Thank you for your
attention**

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