Bangladesh Solar Home System Program – lessons learned
- Webinar seminar organized by jointly by the United Nations Foundation’s Energy Access Practitioner Network and the Clean Energy Solutions Center

The implementation of the solar home system in Bangladesh & performance of tubular batteries in harsh environment

Presented by: Sayeed Hassan – Rahimafrooz

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Content of the slides

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- Pictures of some of the tubular batteries manufactured by RAL
- Performance of tubular batteries in SHS
- Success of SHS rollout in Bangladesh – Interview given by the MD of Rahimafrooz Storage Power Division to PVTECH
Rahimafrooz Group Structure

Group Board

Retail Division
- Rahimafrooz Superstores Ltd

Energy Division
- Rahimafrooz Energy Services Ltd

Storage Power Division
- Rahimafrooz Batteries Ltd
- Rahimafrooz Renewable Energy Ltd
- Rahimafrooz Accumulators Ltd

Automotive & Electronics Distribution
- Rahimafrooz Distribution Ltd
- Rahimafrooz Gastech Ltd
Quality, Environmental & Safety Certifications of RAL

ISO 9001:2008

ISO 14001:2004

BS 18001:2007

RAL: Rahimafrooz Accumulators Limited

integrity | excellence | customer delight | innovation | inspiring people
Typical installation of SHS in Bangladesh

Largest SHS rollout in the world
SHS application in Bangladesh
Rahimafrooz received Ashden award in 2006 for its contribution in renewable energy sector.
SHS Systems and Requirements in Bangladesh

**SHS System in Bangladesh**

- Number of SHS installed up to Sep. 2013: ≈ 2.3 Million
- System range: 10 – 90 Watt
- Battery range: 15 – 130 AH
- Number of batteries supplied by Rahimafrooz: ≈ 1.3 Million

**SHS System Requirements**

- Battery type: Tubular
- Batter warranty: 5 years
- Panel warranty: 20 years
- Daily operating hours: 4 hours
- Autonomy: 3 days
- Maximum DOD at the end of autonomy period: 80%
Some of the Tubular Batteries Manufactured by Rahimafrooz
Performance of Tubular Batteries in SHS

- Tubular batteries have been used in SHS operation since 2001 in Bangladesh with 5 year warranty

- These are low maintenance type

- Operating in temperature range of 6 to 40 °C

- Application environment is not very controlled. Difficult to enforce the 4 hours max daily usages. Direct tapping on battery for mobile charging cannot be avoided

- Average 1% return per year

- Battery life so far observed in the field: 7 – 8 years
Success of SHS rollout in Bangladesh

During a interview given by Mr. Munawar M Moin, MD of Rahimafrooz Storage Power Division to PVTECH during the Intersolar Munich, 2013, he noted the following main reasons for the success of the rollout:

- System sales through micro financing arrangements
- Participation of multi-lateral agencies like World Bank, ADB, KFW, etc in the program with soft loan facilities
- Structured approach to rollout the program through IDCOL
- System performance as per expectation
THANK YOU