

Off-Grid Solar Electrification: Business Models and Success Stories from Around the World

Leveraging Finance to Deliver Energy Access for the Last Mile

Asia Clean Energy Forum

June 7, 2017

Koen Peters, GOGLA Executive Director
www.gogla.org

What is GONGLA?

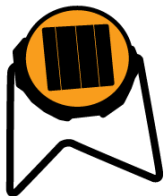
Independent, not-for-profit advocate for the emerging off-grid electrification industry.

Promoting energy access solutions that benefit society and businesses in developing country markets.

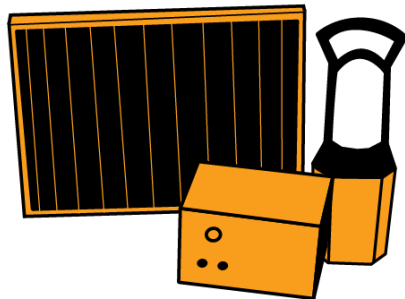
Ca 100 GONGLA members, mostly manufacturers & distributors, attracting over \$500 million of investments

GOGLA focus:

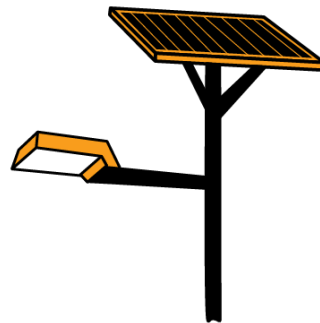
To date:



Solar
Lanterns



Solar Home
Systems



Community &
Street Lighting

Expanding into:

- *Off-grid productive use appliances (solar pumps, irrigation, refrigeration)*
- *Larger stand-alone installations*

GOGLA's Members (May 2017)

INDUSTRY



ASSOCIATE



Off-grid solar lighting and electrification



Entry-level
High quality
Affordable
Scaleable

Snapshot of the market: July-December 2016 sales

8.07 million

Products sold in
2016

South Asia:

1.41 million

US\$ 35.52 million

East Asia & Pacific:

96,456

US\$ 4.33 million

3.77 million

Products sold globally in H2 2016

US\$ 113.9 million

Cash sales revenues in H2
2016 (excluding PAYGO)



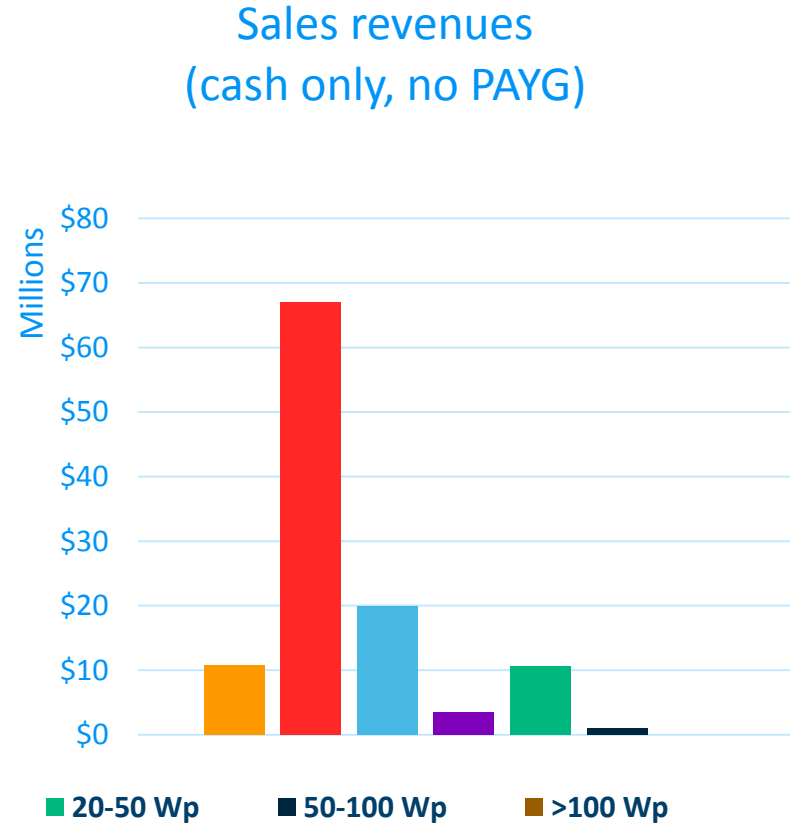
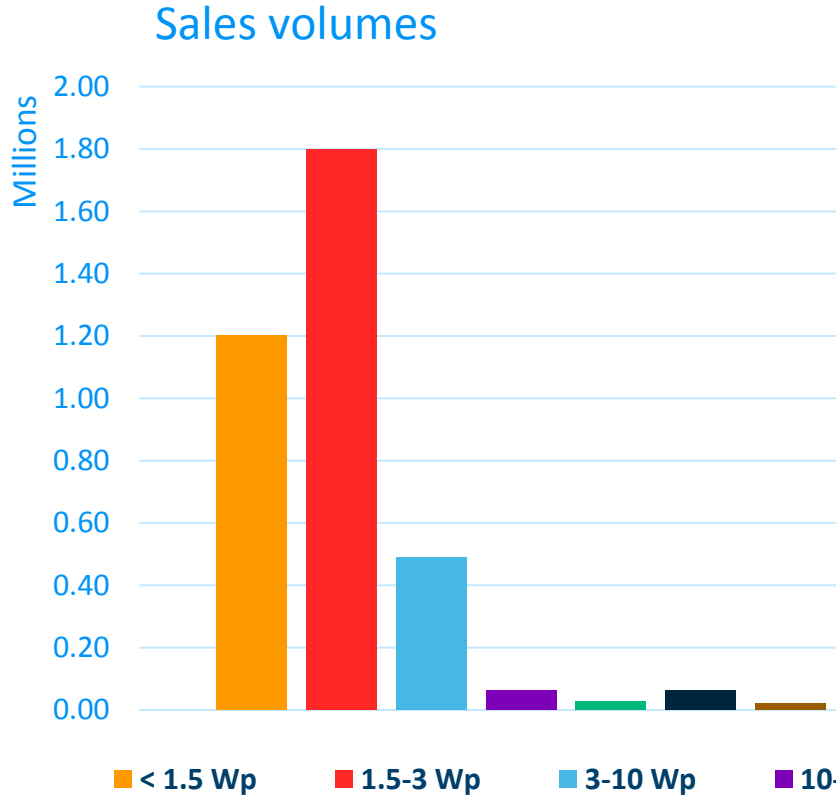
27.2 million

Cumulative product sales
since July 2010,
23.7 million of these being
quality verified

85.5 million

People with improved energy
access, currently

Sales by product categories (H2 2016)



Annual growth since 2014 despite slowdown in H2 2016

Regional Sales: Volume of Products Sold in Millions



The data presented in this chart has been compiled from various sources: The data from H2 2010 to H1 2014 originates from Lighting Global's own data collection, while the data from H2 2014 to H2 2016 comes from the joint Lighting Global / GOGLA / Berenschot data collection process. The methodology and the questions used have evolved over time and the number of respondents has changed with each round of data collection. Therefore, the data presented above does not constitute the basis for an in-depth statistically correct analysis. However, it does indicate general market trends and reflects the evolution of the market as it encompasses data from most of the industry leaders. As the data collection process is improved with every round and with companies submitting their data on a consistent basis, we will be able to paint an ever more accurate picture of the market.

How to accelerate growth in the off-grid sector?

- Despite the rapid growth of the sector, there is still huge unmet demand: *In India alone, with current trends (grid expansion, urbanization, population growth), in 2024 over 70 million households still need off-grid solutions*
- GOGLA works to strengthen and scale the off-grid solar market through three interlinked pillars, addressing key enablers for growth:

Creating an enabling environment

Protecting consumers with sustainable quality

Facilitating access to finance

- Through this combined approach, the market can grow to meet demand in a sustainable way

Business models to expand affordability



Rental



Perpetual
lease



Lease-to-
own



Upfront
sales with
financing
partner



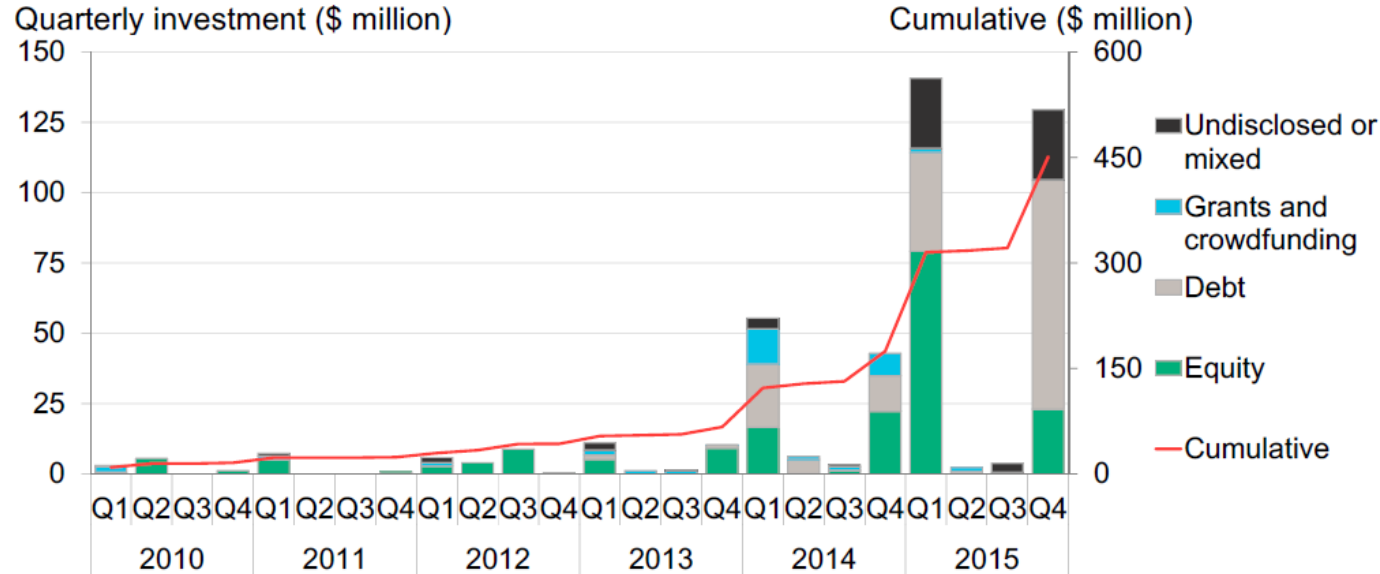
Direct
cash sales

Consumer
buys a
service

Consumer
buys a
product

Current status: rapid growth in investment since 2014

Investments in off-grid solar companies and intermediaries by asset class (end- 2015)



Source: Bloomberg New Energy Finance, GOGILA. Note: no dates were available for an additional \$60 million of investments. Includes funds raised by intermediaries with energy access mandates that are likely to focus heavily on off-grid solar.

Key conditions for PAYG to flourish

- Ecosystem

- Widespread use and acceptance of **mobile money** or other digital finance
- Clarity and consistency in **regulatory environment** (incl. taxation and tariffs)
- Clarity and predictability of **national electrification plans**, incl. subsidies for grid expansion and government off-grid programs

- Company

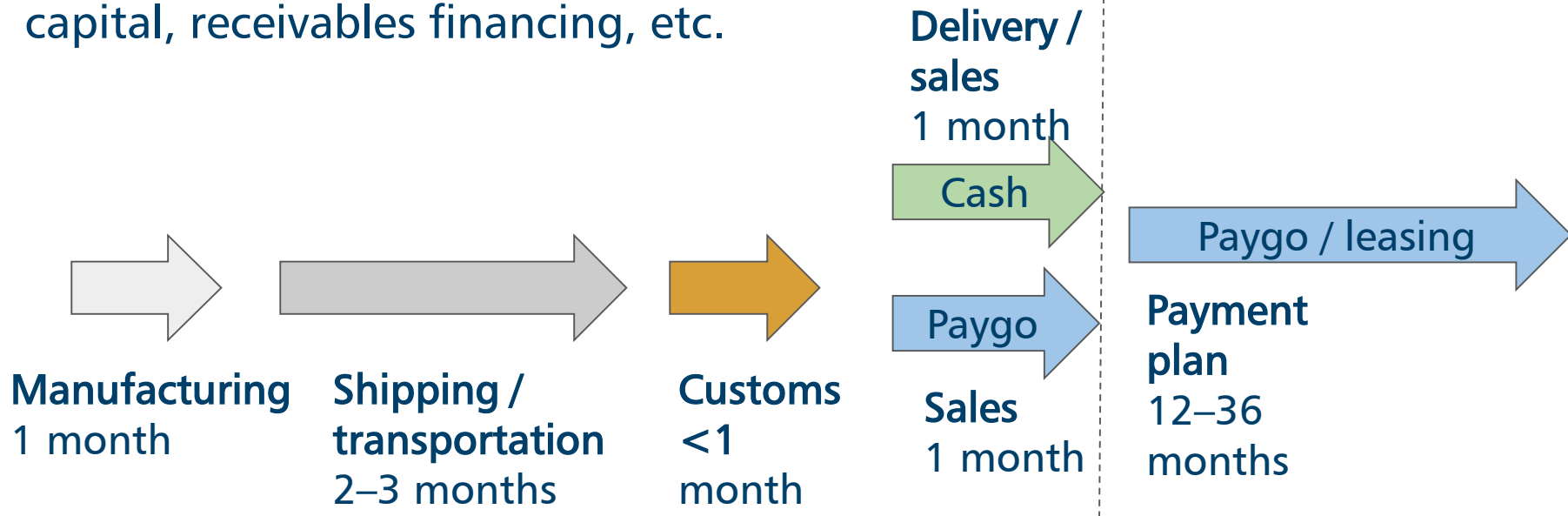
- Access to **appropriate capital**, especially local currency finance
- Development of a **skilled workforce** with appropriate incentives in place
- Access to a **robust supply chain** and strong partners (e.g. mobile network operators)



© Nizam Bijili

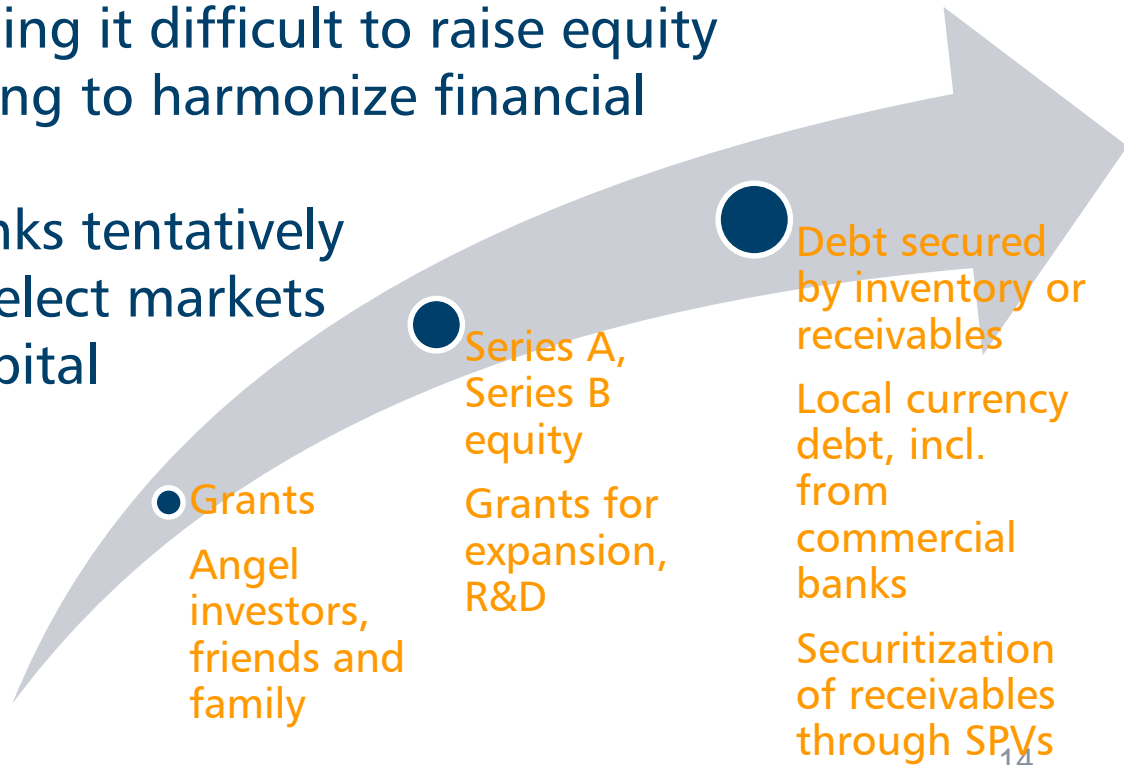
Off-grid solar financing needs

A typical solar company will have financing needs at every stage of the value chain. This will take different forms e.g. inventory finance, working capital, receivables financing, etc.



Looking ahead

- Off-grid companies at various stages of the spectrum
- New market entrants finding it difficult to raise equity
- Industry starts collaborating to harmonize financial performance reporting
- Local and commercial banks tentatively engaging with sector in select markets
- Several major working capital facilities to come online by 2018



Thank you!

Connect with us:

www.gogla.org

info@gogla.org

[Twitter](#) | [Facebook](#) | [LinkedIn](#) | [YouTube](#)