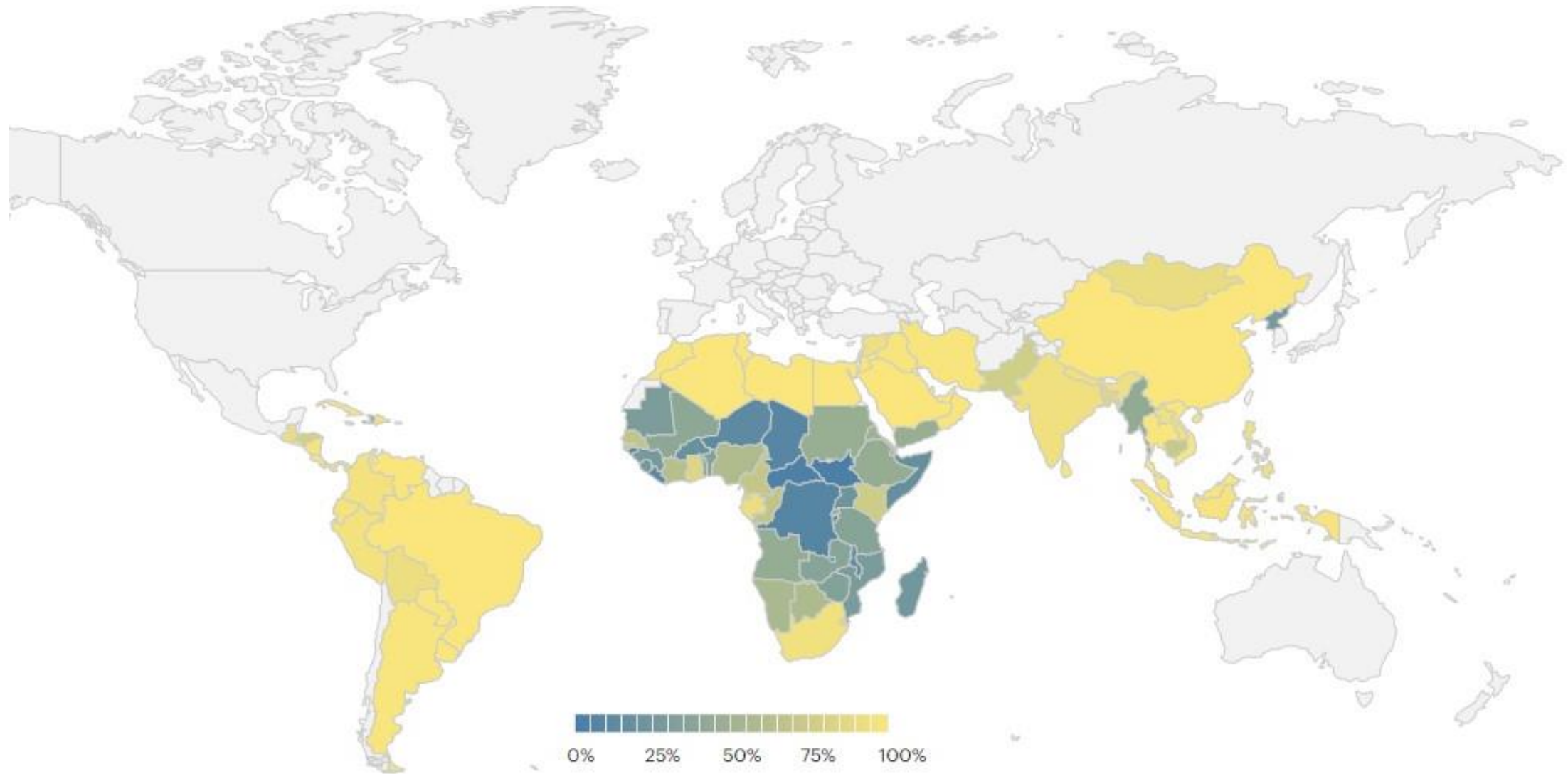


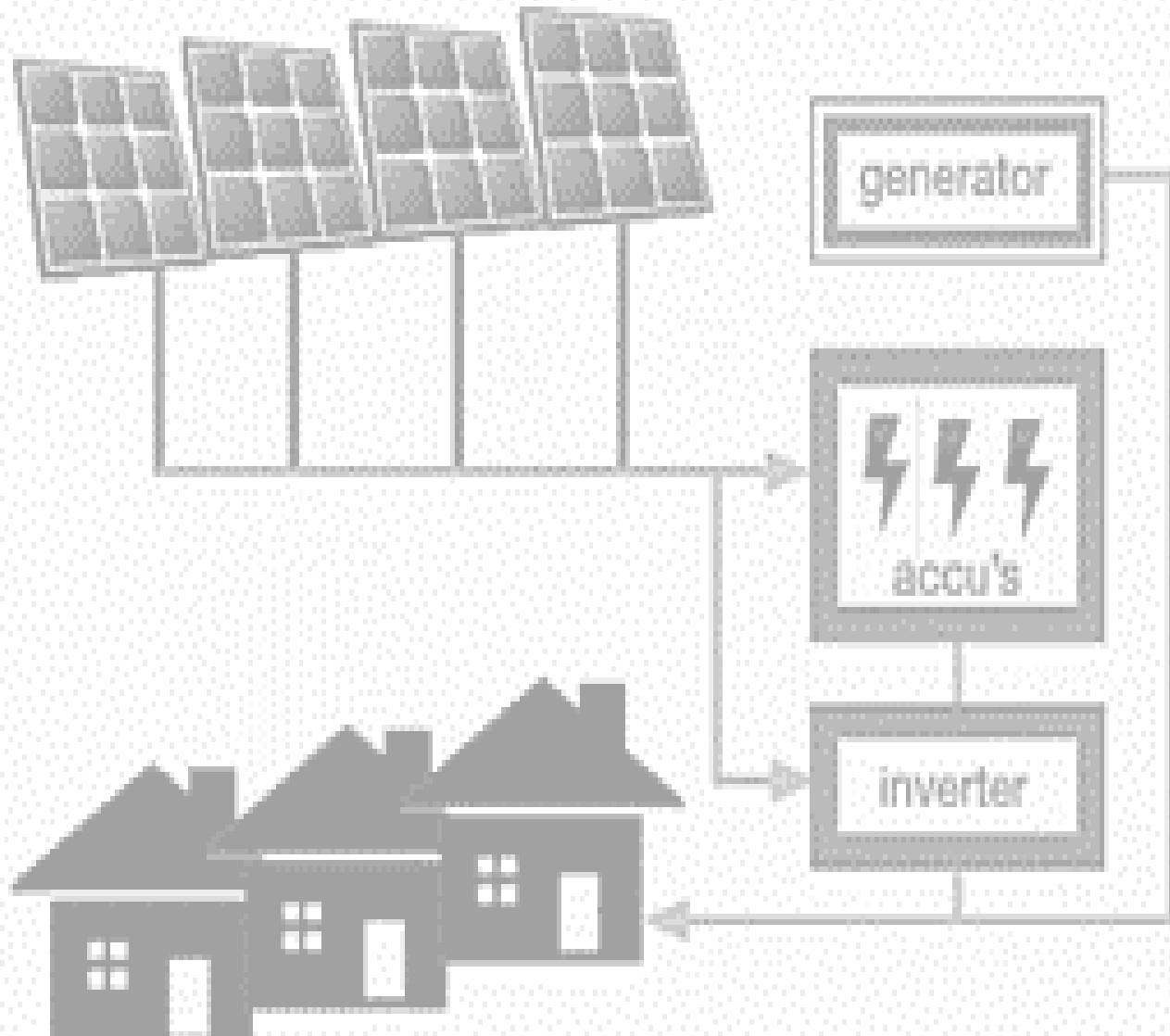
Sustainable business models for energy access in Sub-Saharan Africa

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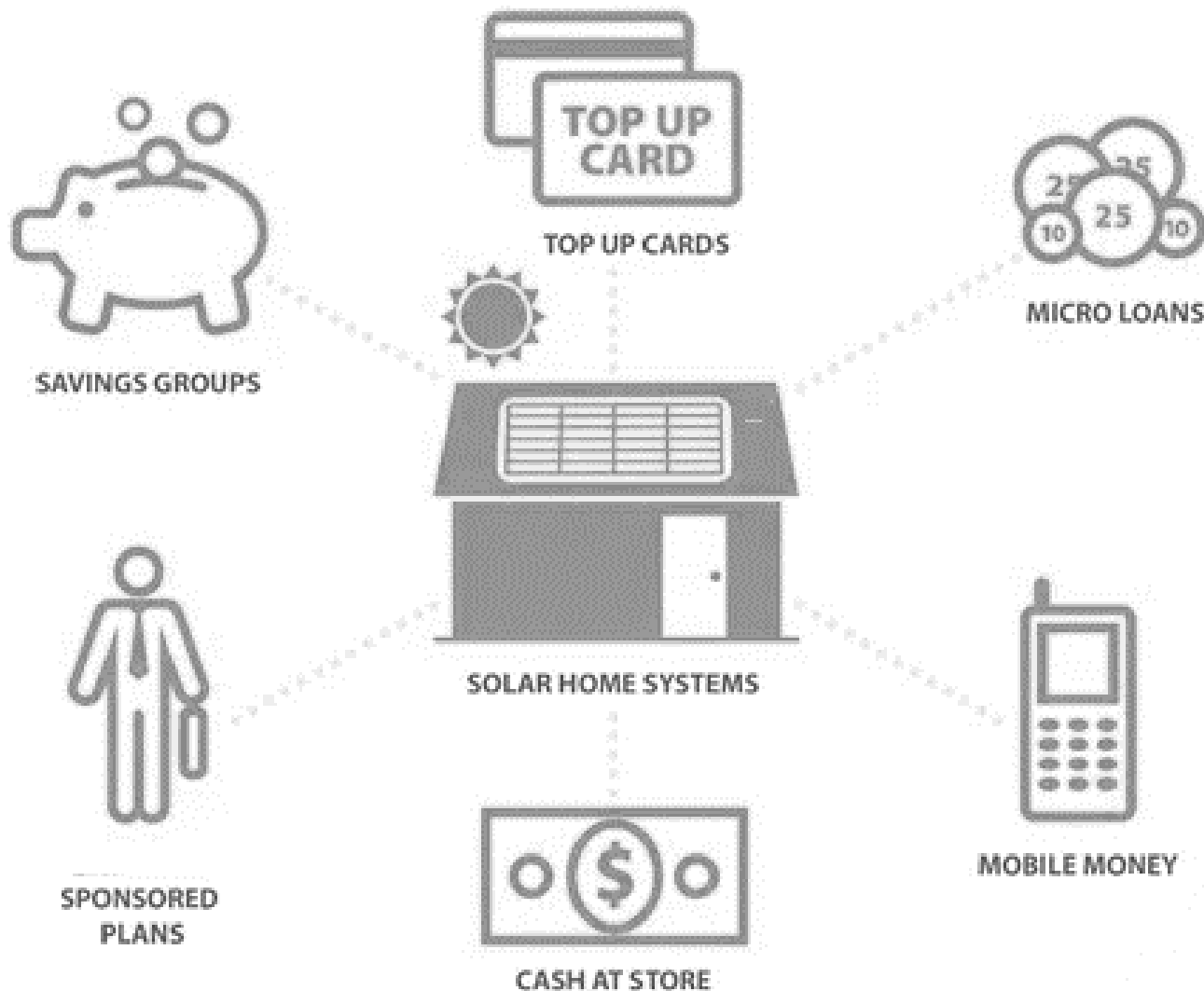
Energy access in Sub-Saharan Africa





Pay-per-service unit

- Off-grid
- Circular business model
- Energy company owns the infrastructure and sells electricity to customers
- Revenue: price per kWh



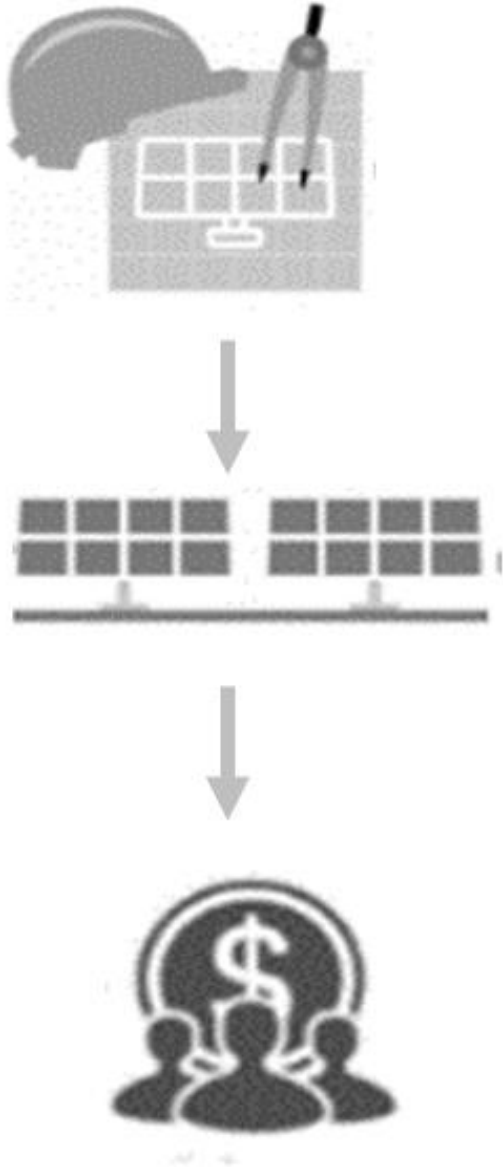
Rent-to-own

- Off-grid
- Linear business model
- Energy company sells energy technologies to customers. No O&M and take-back
- Revenue: pay-as-you-go & outright purchase



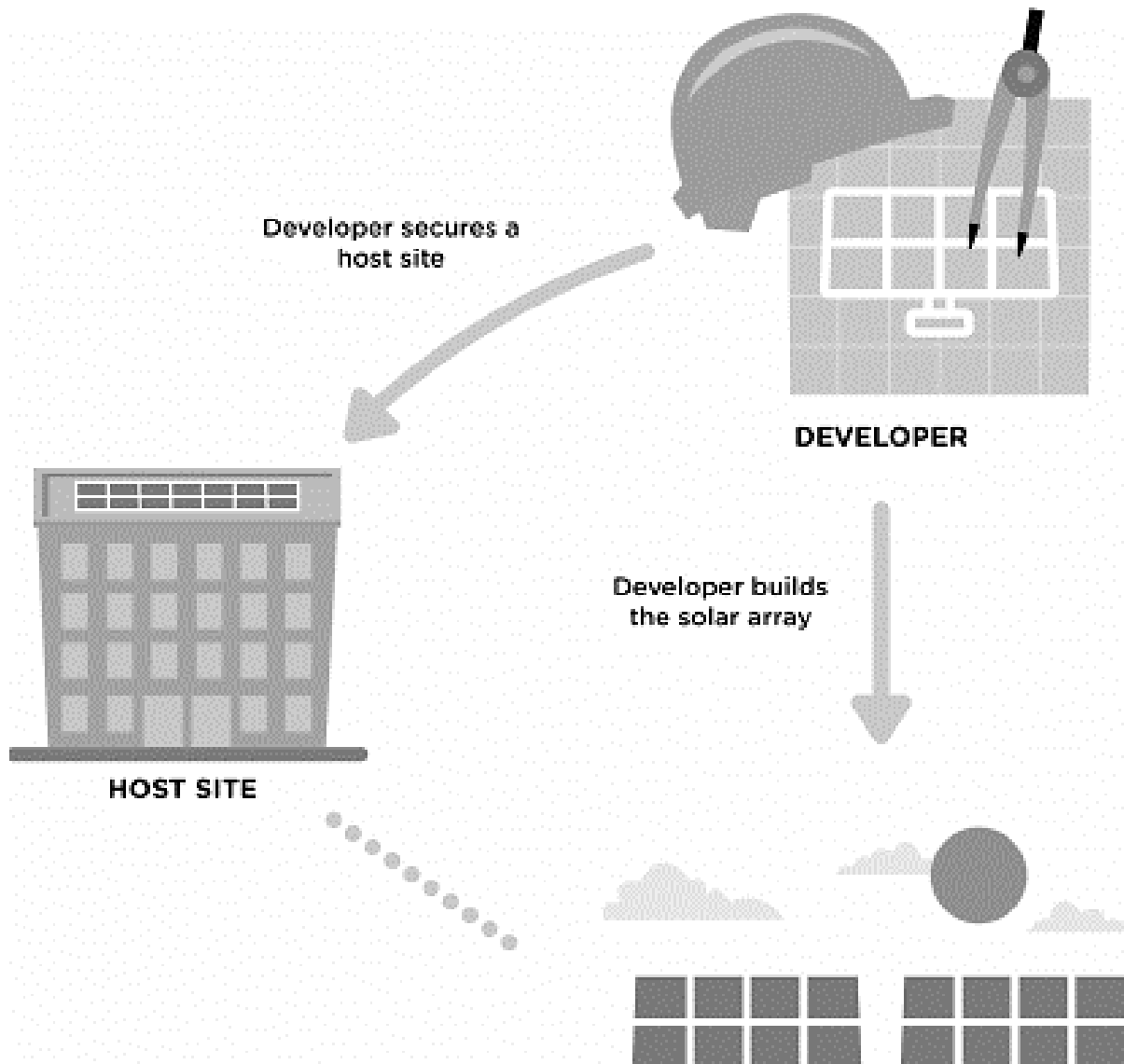
Renting

- Off-grid
- Circular business model
- Energy company rents portable energy technologies to customers.
- Ownership remains with the company
- Revenue: renting fees



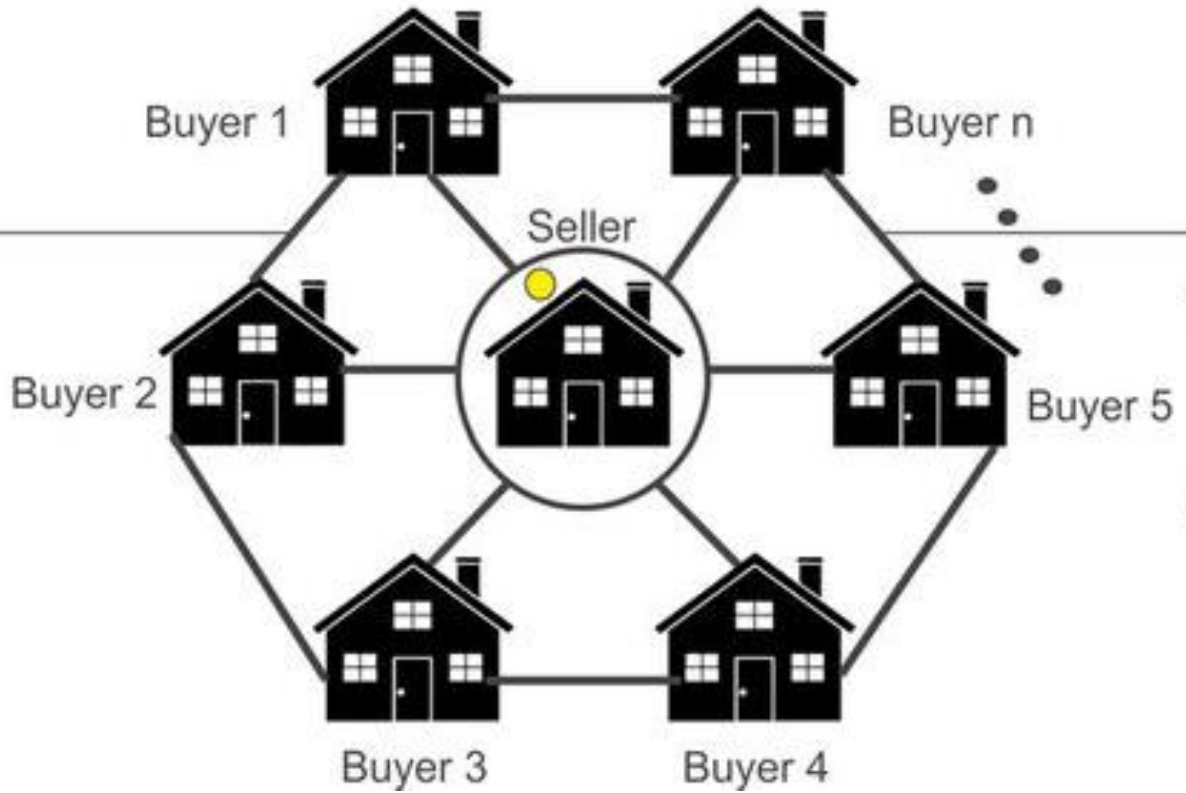
Engineering Procurement and Construction

- Off-grid and on-grid
- Linear business model
- Energy company designs, procures and constructs a system. Turnkey sells.
- Optional O&M, no take-back
- Revenue: EPC price



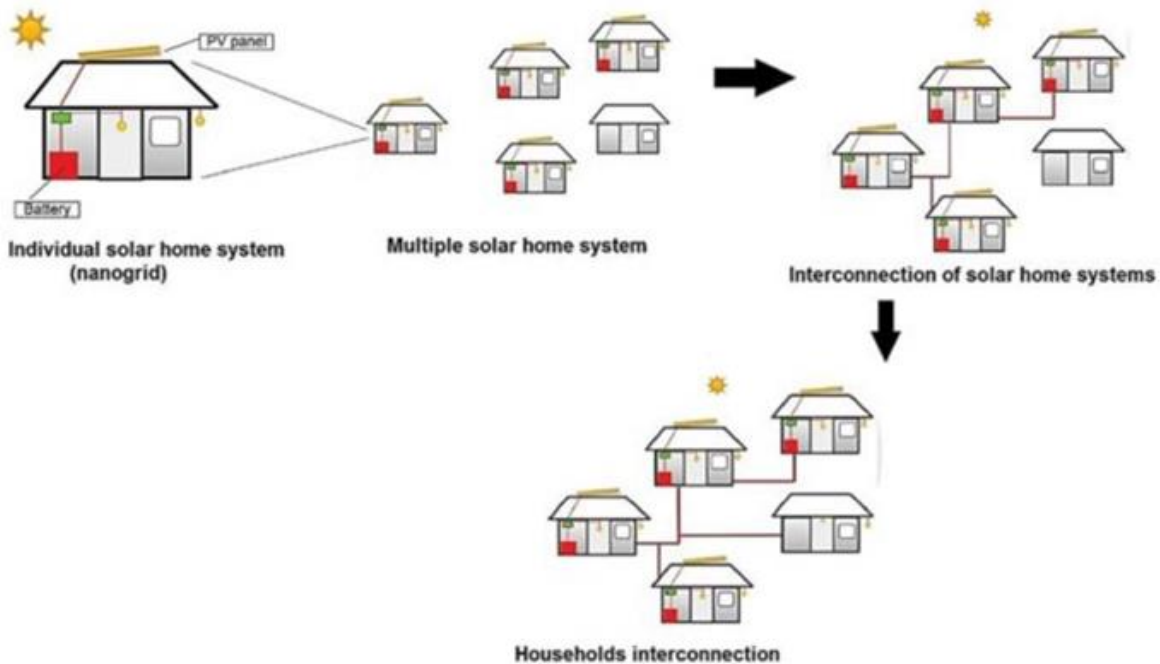
Leasing with PPA

- Off-grid and on-grid
- Circular business model
- Energy company leases technology to customers
- Revenue: lease fees or power purchase agreement price



Electrification seeds

- **Off-grid**
- **A prosumer sells surplus electricity to neighbouring households and businesses**
- **Prosumer owns and maintains the system**
- **Revenue: price per kWh**



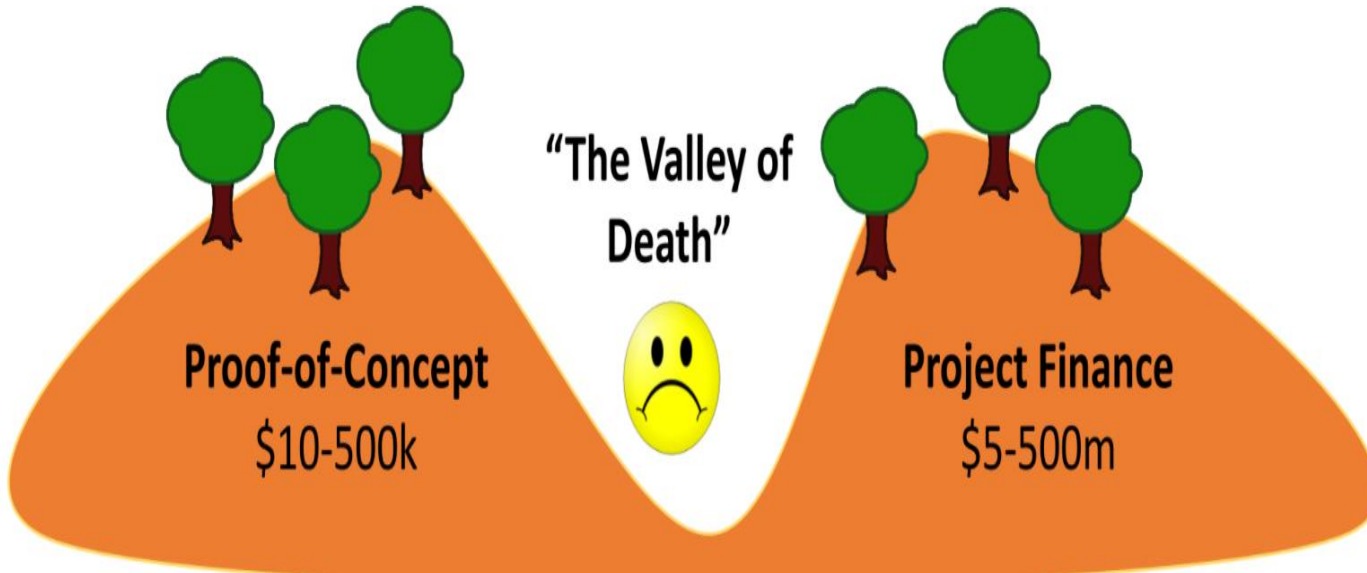
Swarm electrification

- Off-grid
- Owners of solar home systems interconnect to create a micro-grid with a higher power output
- Surplus electricity is sold to neighbouring households and businesses
- Revenue: power purchase agreement price

Commercial viability of energy business models

- Attractive value propositions: customer reception and compatibility
- Market: customers' willingness and ability to pay (tariff setting)
- Sustained and predictable demand
- Affordability

Barriers typical for renewable energy enterprises



Problem: the missing middle

Projects are too large for proof of concept funding and too small for project finance

Solution

Catalytic investment that can take companies through the valley (Acumen provides patient capital)

Barriers typical for renewable energy enterprises



Problem: unproven business models

Lack of track record discentivises commercial lending

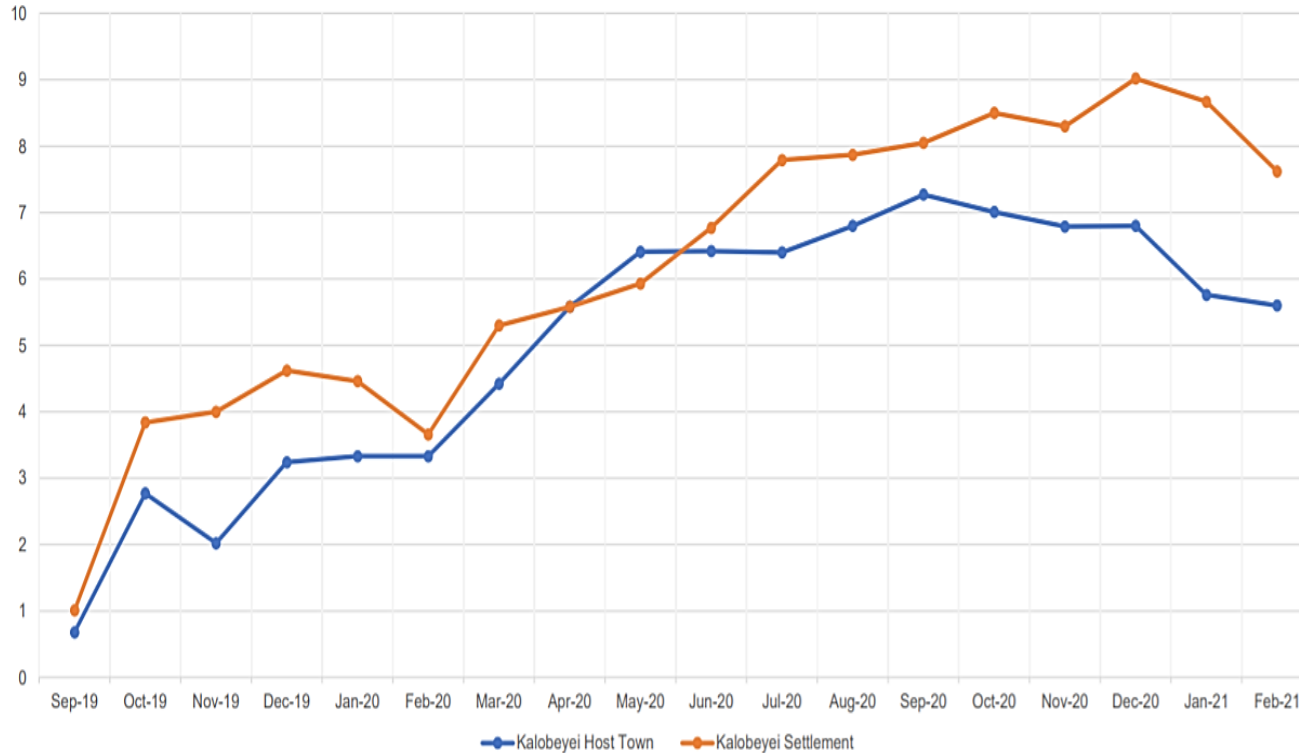
Solution

Alternative investment pathways e.g. angel investor

Customer engagement (attractive value propositions)

Barriers typical for renewable energy enterprises

Average Monthly Consumption (kWh) - Households



Problem: Unpredictable energy demand

The demand for electricity is low to warrant the commercial existence of energy projects

Solution

Demand stimulation should be a core function of business models e.g. productive use of electricity

Partnerships that stimulate demand

Thank you!