

Pioneer experience in rural microgrids

Akane
(Morocco)



Santo Antão
(Cape Verde)



Chad



Isla Floreana
(Ecuador)



2013

2012

2009

2007

2006

2005

2002

1997

1994

Las Balsas (Ecuador)



Atouf (Palestine)



Cal Peraire
(Spain)



Escuain
(Spain)



Beni Said
(Morocco)



Beginning:
Country house
electrification
(Spain)



Diakha Madina (Senegal)



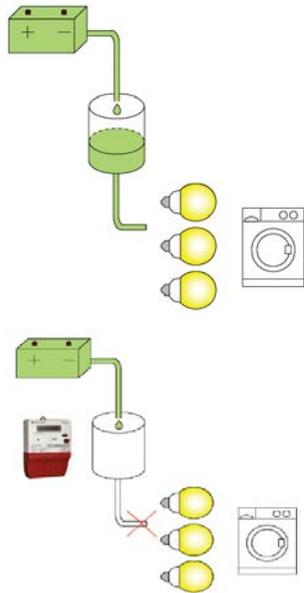
Innovative concept: Energy Daily Allowance (EDA)

- Traditionally in conventional grid connection: users pay for consumed kWh
- In autonomous electrification with RE: Key aspect is the constrain on available energy
- In RE electricity, user should pay for availability not for the consumed energy
- Tariff based on the **Energy Daily Allowance** (fee for service)
- Clearer and easier financial planning for operator and for client
- It reduces transaction costs because of flat fees

Electricity Dispenser essential for EDA control



- Patented & Innovative smart metering concept.
- Energy budget.
- Extend battery lifetime and performance.
- Promotes consumer awareness of energy self-management.
- Low transaction costs.



- Dispenser as a buffer water tank: gets a constant trickle inflow from the micro-grid proportional to the contracted EDA
- The tank empties as energy is used
- Balanced consumption: equal to the fill up rate
- Capacity eq. to 3 days EDA
- Use energy anytime but cannot store more units than the tank's capacity

