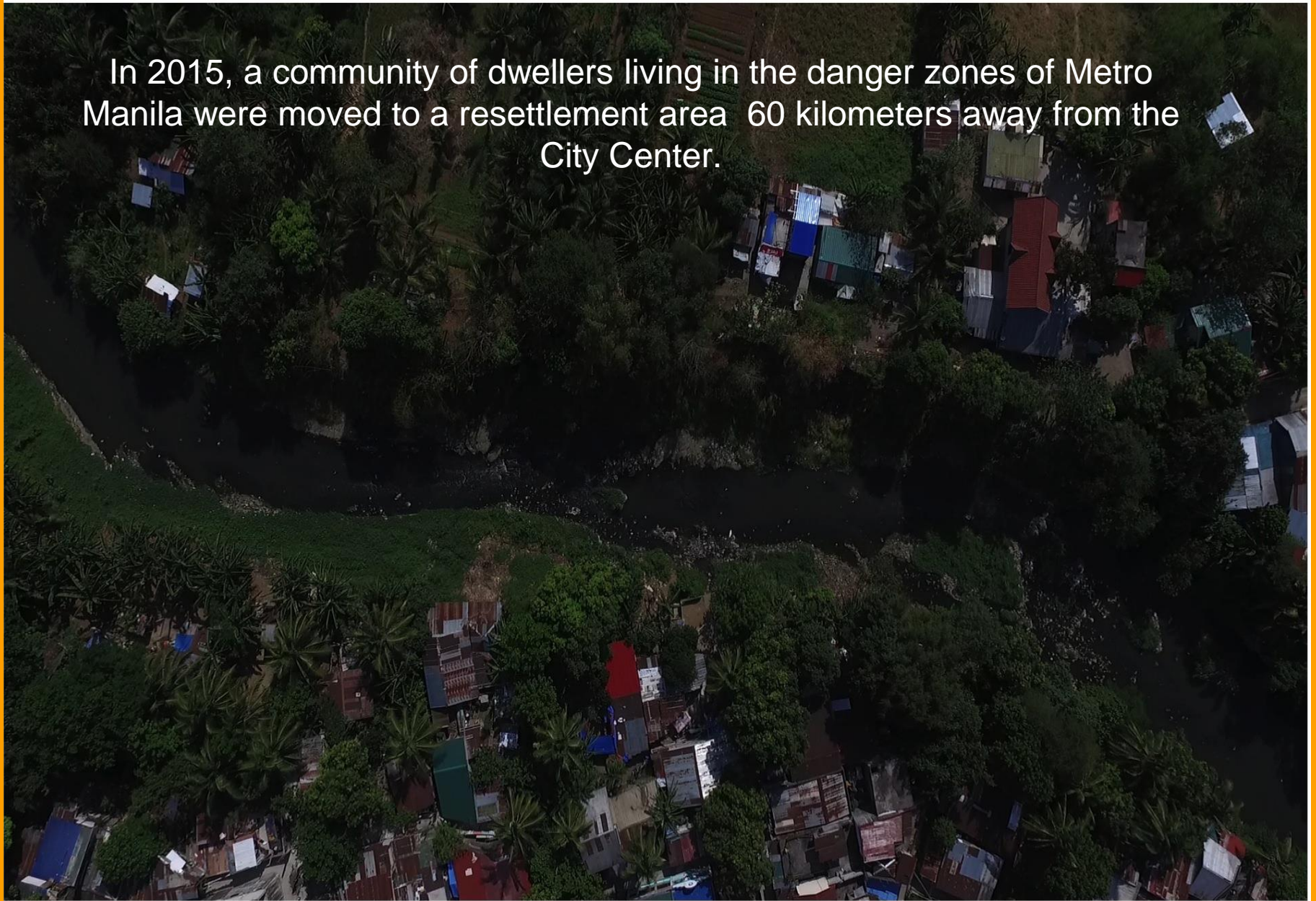


Making A Difference : Providing Energy Access to Urban Poor through Community Solar

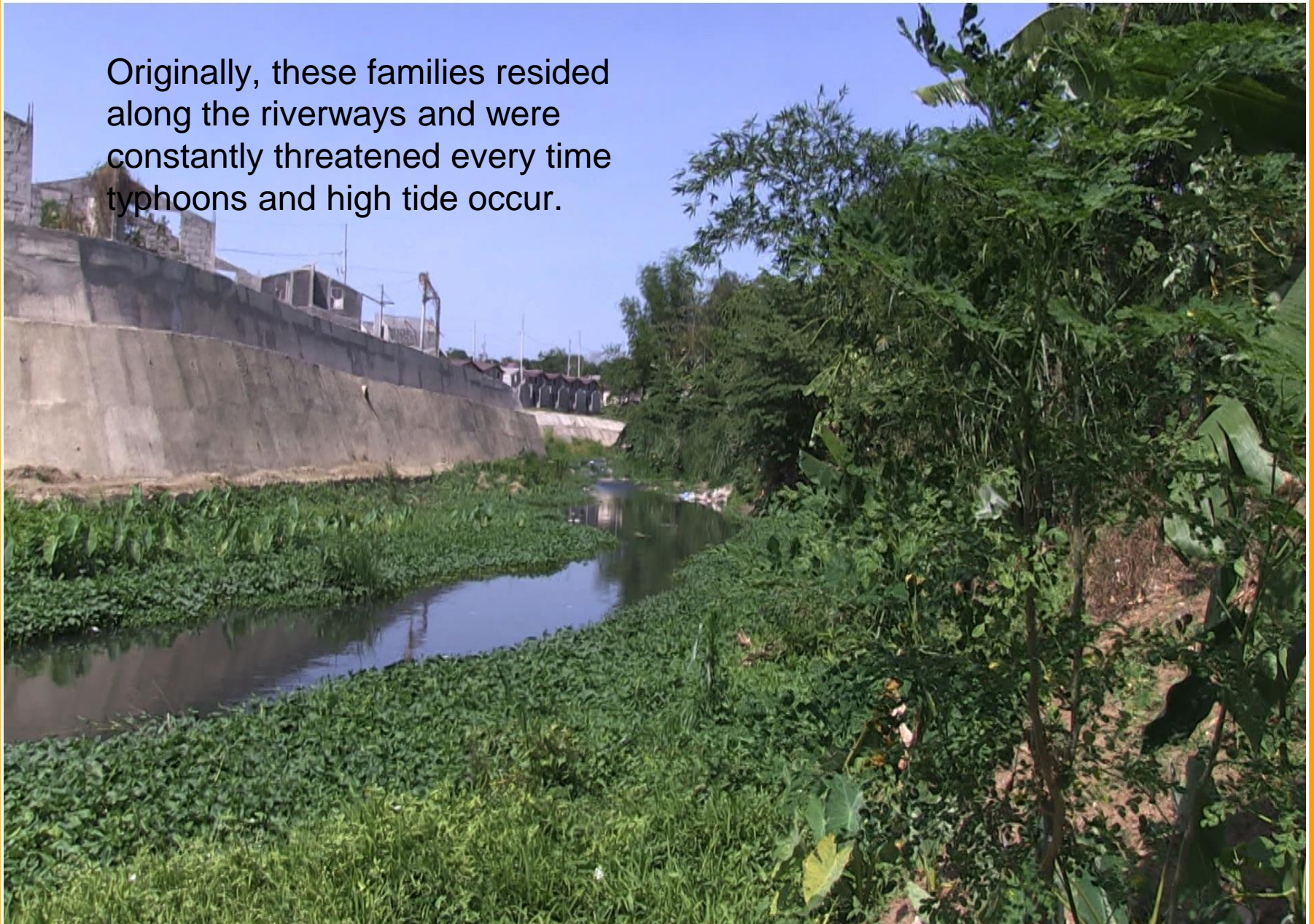


June 2018
ADB, Philippines

In 2015, a community of dwellers living in the danger zones of Metro Manila were moved to a resettlement area 60 kilometers away from the City Center.



Originally, these families resided along the riverways and were constantly threatened every time typhoons and high tide occur.



HOUSING SITE

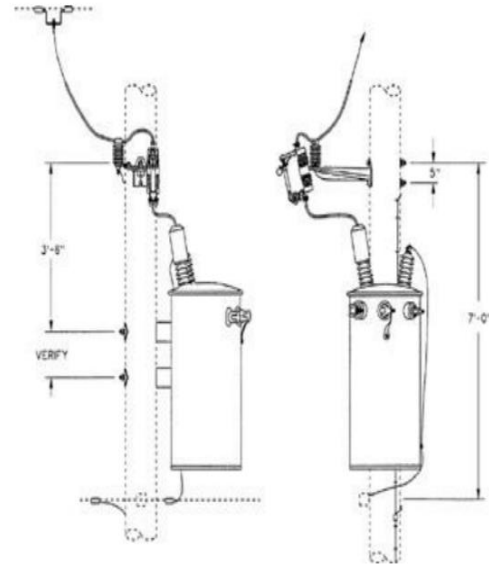
Location	San Jose del Monte, Bulacan
Building Type	Vertical
No. of Bldgs & Units	26 Buildings 21 units/bldg 570 residents
Size per Lot	20 units : 280sq.m. 5 units : 250sq.m
No of Floors	4 floors per bldg





Sadly, for a long time, families were unable to occupy the homes.
They have no idea when they can move in...

WHY?



Socialized housing units generally have no provisions for utilities such as water and electricity because these services are provided by private companies requiring upfront payments.



Many newbuilt socialized homes remain un-occupied because settlers do not have the resources to pay for the upfront costs.

WHAT IF WE CHANGE THE WAY ELECTRICITY IS DELIVERED?

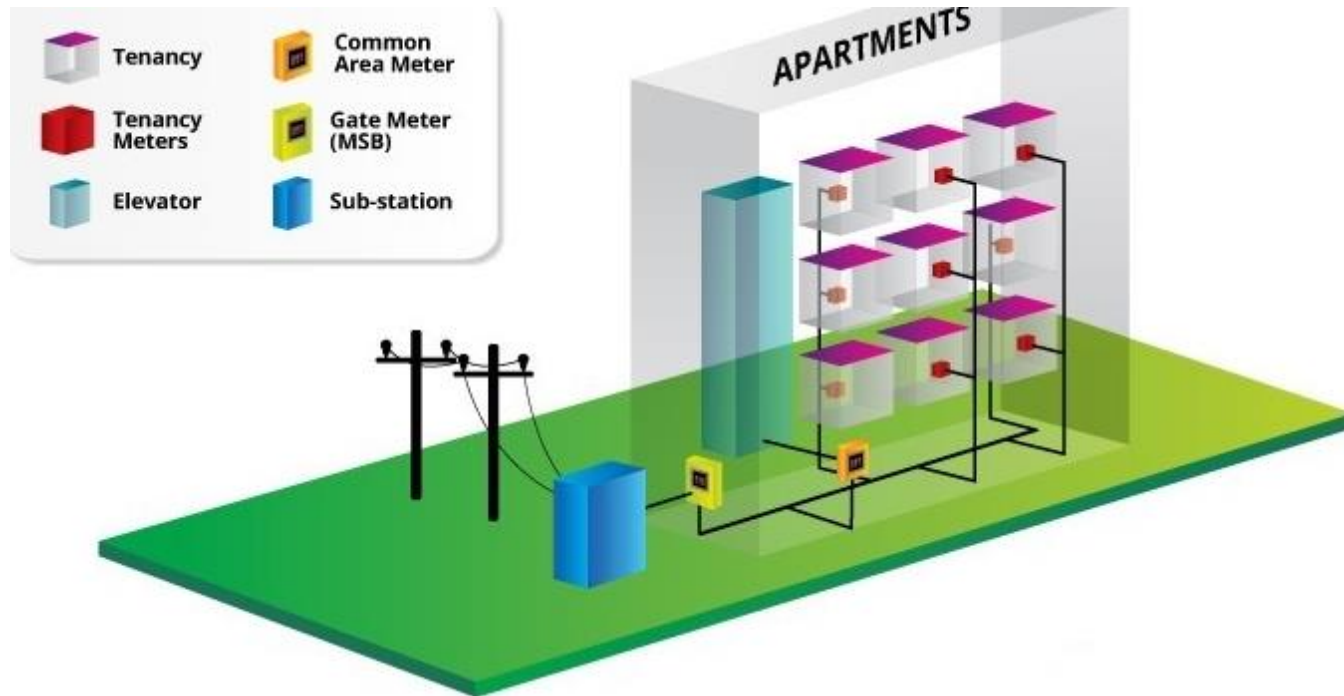
SINAG HOMES

The Concept

- ✓ SINAG HOMES is a non-for-profit entity dedicated towards building a small distribution network to deliver
- ✓ It is a partnership among housing cooperatives, private sector and civil society for the delivery of services associated with providing clean electricity on-site.
- ✓ SINAG HOMES mobilizes private capital and equity contribution from housing cooperatives build the community infrastructure for clean energy.
- ✓ Assets in the Embedded Network such as lines, wires, switchboards, electrical infrastructure, ducts, meters, and others belong to the SINAG HOMES.

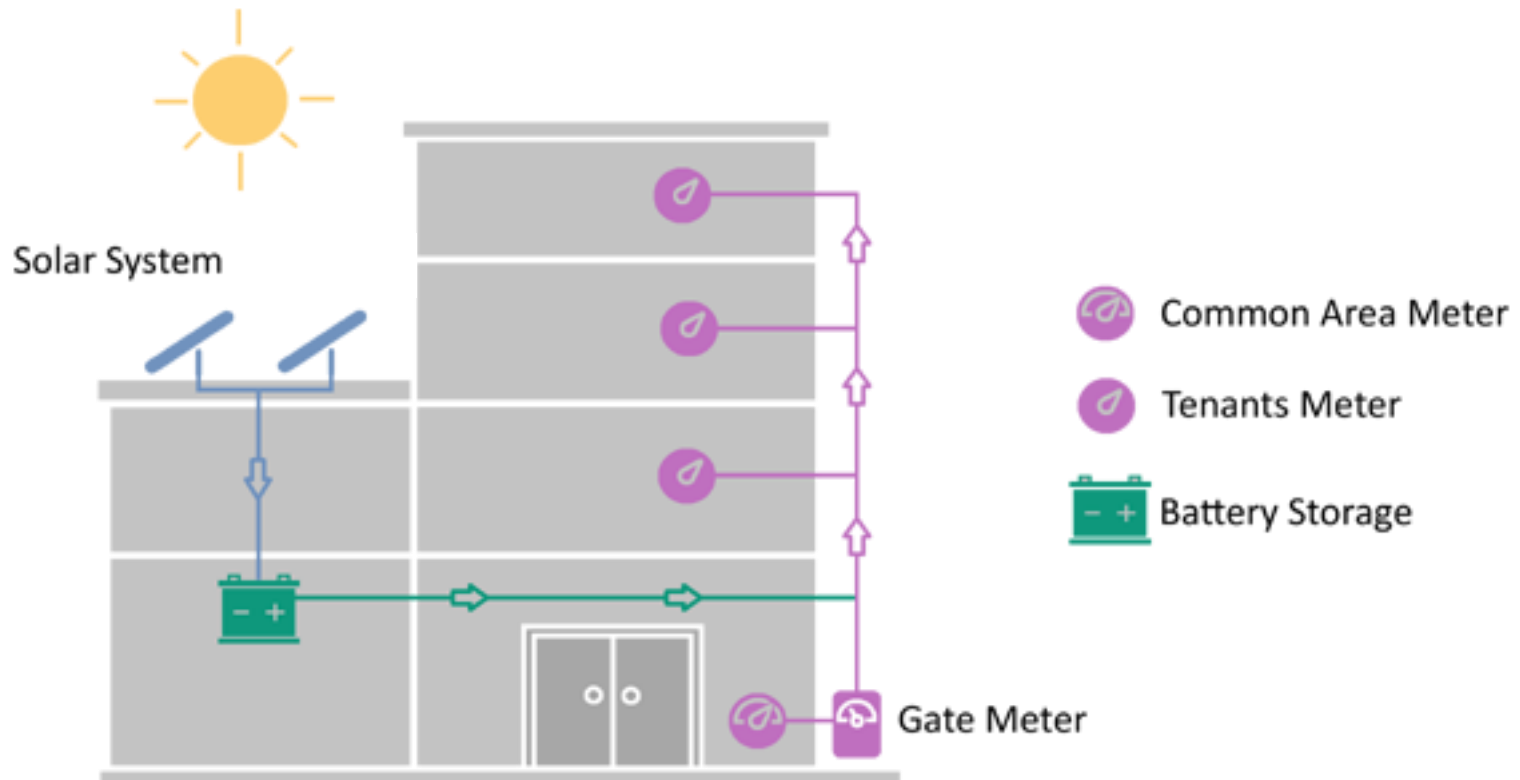


How It Works



- ✓ SINAG HOMES serves as the **Embedded Network Operator (ENO)**. It consolidates all consumption from on-site customers under a single meter called the “Parent Meter.”
- ✓ Then, SINAG HOMES purchases electricity for the whole site at a reduced bulk rate. Electricity is delivered on-site via the “Parent Meter” and distributed to individual customers who form part of the Network.
- ✓ Each customer has their own individual meter used to measure the electricity consumption regularly. The electricity rates set forth in the site is then collected from each customer.

How It Works



In addition, solar system is installed in their network to further reduce the amount of energy purchased from their electricity retailer. With RE and energy storage, rates are expected to drop significantly as it serves load shifting and peak reduction function to the network.

How It Works The Technology

Pay-What-You-Can-Afford...

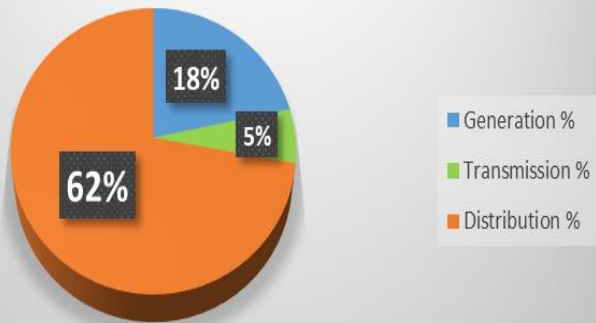


- Homeowners uses a pay-as-you-go system that matches residents capacity to pay
- Allows residents to adjust daily consumption
- Reloads what homeowners can afford
- Multiple Kiosks to Ensure Convenient Re-loading
- Tracks current load balance
- Monitors consumed electricity
- Enables homeowner to use electricity wisely
- Receives notifications when low in balance



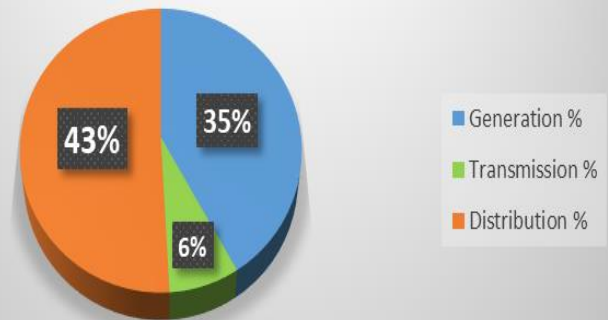
DID THE MICROGRID HELP END-USERS

Gen Power Secondary
(April 2018)



Php29.59/kwh

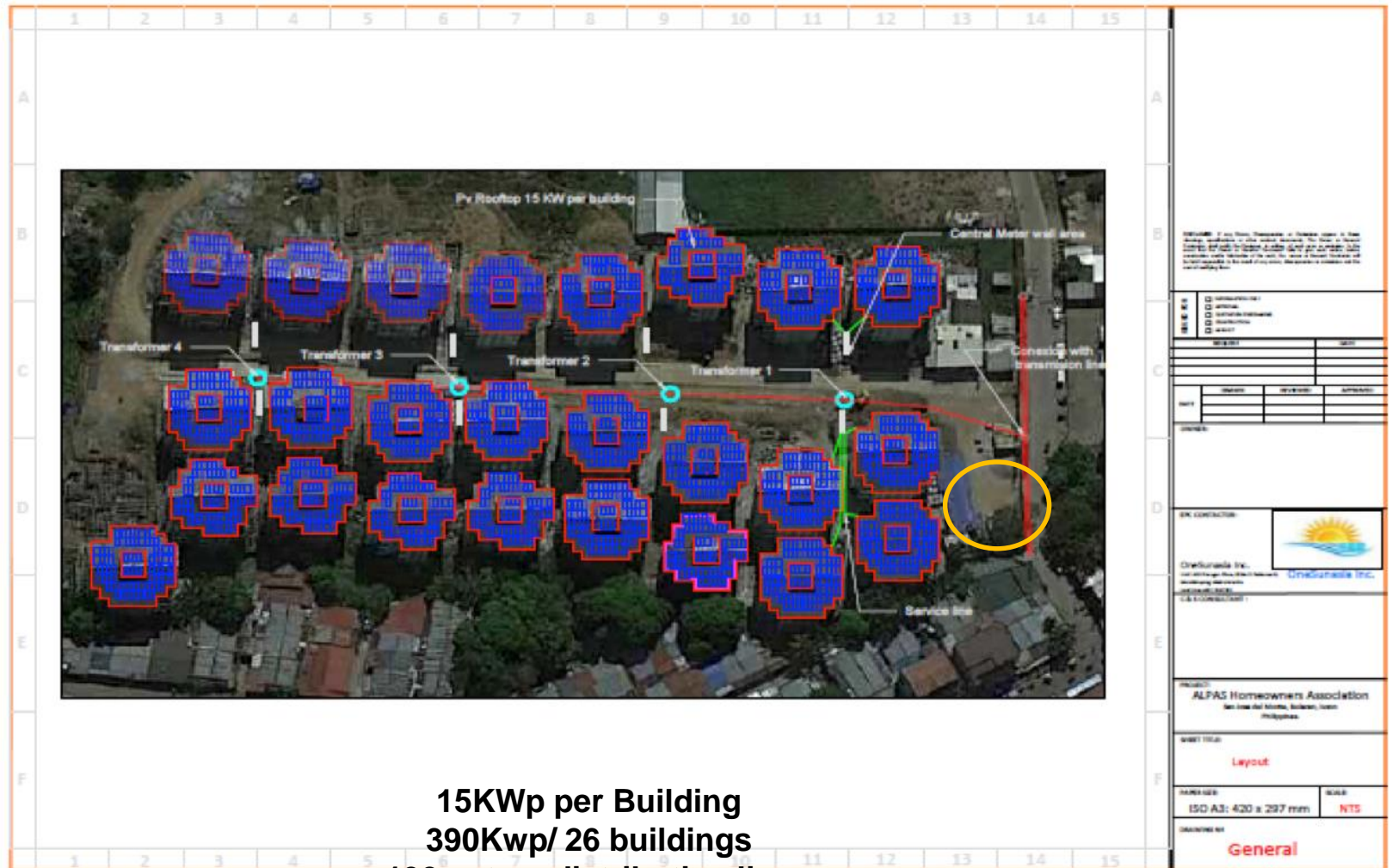
ALPAS
(May 2018)



Php14.46/kwh

WHAT NEXT?

ROOF & DISTRIBUTION LINE LAYOUT



PROJECT PIPELINE 2018

Project Name	Location	Type	No of HH	Status of completion
Aniban sa Lehitimong Paninirahan Laban sa Sakuna (ALPAS)	San Jose del Monte, Bulacan	Vertical	546	100%
Gumamela Neighborhood Housing Cooperative (GNACH)	San Jose del Monte, Bulacan	Horizontal	1,406	80%
Sandigan ng Mamamayang Pilipino, (SMP)	San Jose del Monte	Horizontal	800	90%
Social Resettlement For Comprehensive Community - Magic Circle Housing Coop (SRCC-MCHC)	Tandang Sora, QC	Horizontal	1,039	30%
TOTAL			3,791	

1. Solar Projects for Socialized Housing Sectors have limited financing opportunities. Lending institutions have to make money available in order for settlers to occupy their new homes.
2. Innovations help reduce risks. Government incentives should be available to roll out these expensive technology in socialized housing.
3. Strong Social Preparation is important for project viability. Partnership with Civil Society makes the Project bankable.
4. Regulators has to introduce a Balanced Tariff Structure that ensures flexible payments for lifeliners and at the same time, project sustainability.
5. Bulk buying of electricity has to be managed properly so it becomes win-win for All. New rules have to be made to reduce HH burden.

Connect to our World.



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