

**GOING BEYOND ENERGY
ACCESS: HOW TO
ENSURE THEIR LONG
TERM SUSTAINABILITY
COMMUNITY ENGAGEMENT/OWNERSHIP**

By Florence Agbejule

ABOUT FOUNDATION FOR PARTNERSHIP INITIATIVES IN THE NIGER DELTA (PIND)

The Foundation for Partnership Initiatives in the Niger Delta (PIND), a non-profit Foundation established in 2010 fully funded by Chevron Corporation to provide support for socio-economic development programs which improve standards of living for many communities in the Niger Delta. This is done through dynamic, innovative programs and multi-stakeholder partnerships focused on poverty alleviation and the promotion of peace. To achieve this goal, PIND has established four inter-related program namely: Economic Development, Peace Building, Capacity Building, and Analysis & Advocacy.

Appropriate Technology Enabled Development (ATED) is part of PIND's Economic Development Program.

The Appropriate Technology Demonstration (ATED) Centre was built by PIND to showcase working examples of technologies that reduce energy consumption, recycle waste, and provide alternatives to traditional power sources. [A disastrously warming climate, coupled with dwindling energy resources, has created a situation where it is increasingly necessary to adopt energy efficient technologies and renewable power sources.](#) Thus, the project was spurred by the need to effectively mitigate global climate change as well as the challenges of the distribution and cost of fuel and power.

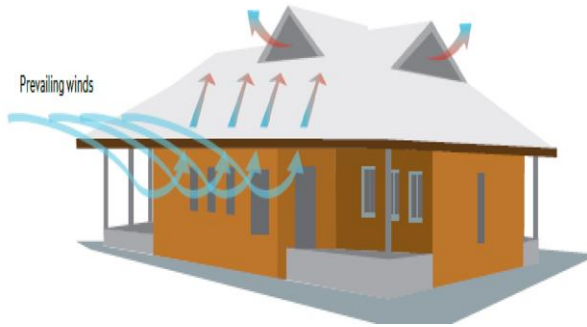
Appropriate Technology Enabled Development (ATED) Program



The ATED Centre opened in 2015 was built by PIND to showcase working examples of technologies that reduce energy consumption, recycle waste, and provide alternatives to traditional power sources including of carbon neutral technology on household water treatment



ATED Centre



Roofing Design

- Capture prevailing winds
- Roof vent: minimize indoor heat transfer



Over hang

- Protect exterior
- keep rain water away
- remove water from the roofline



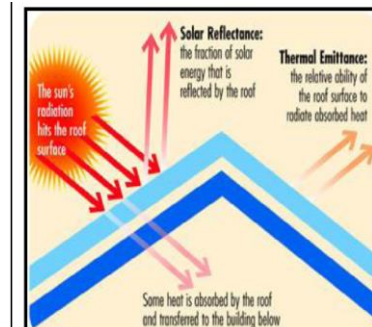
Air handling system

- Good flow of oxygen
- Passively dehumidifies air
- Energy efficient system
- Lower investment cost for larger units/buildings
- Maintains indoor climate



Doubled Glazed Window

- Reduces exposure to exterior light & noise
- Highest ROI in terms of home remodeling
- Improves energy efficiency
- Reduces maintenance



Light colored roofing

- Absorb 50% of the radiant energy

SOLAR POWER



Nigeria – Market Potential



Over 23 Million Households and 17 Million SMEs rely on Generators for an average of 8 hours/day for 25 days/Month

Source: National Bureau of Statistics



According to the IEA, Nigeria accounts for 75% of back up power generation from diesel generators in Africa (with annual fuel costs of \$2Billion in 2012). Although 20% occurred in Residential sector.

- Approx 93M people without electricity, about 80% use other sources aside the national grid.
- FG of Nigeria committed \$1.75Billion to develop 1100MW of Solar
- BOI working with various investors to install Solar power across Nigeria
- Private investors - recently confirmed, \$1.5B, \$280M, to build Solar power plants in Nigeria.
- The story continues..... access is still on the high in rural areas.

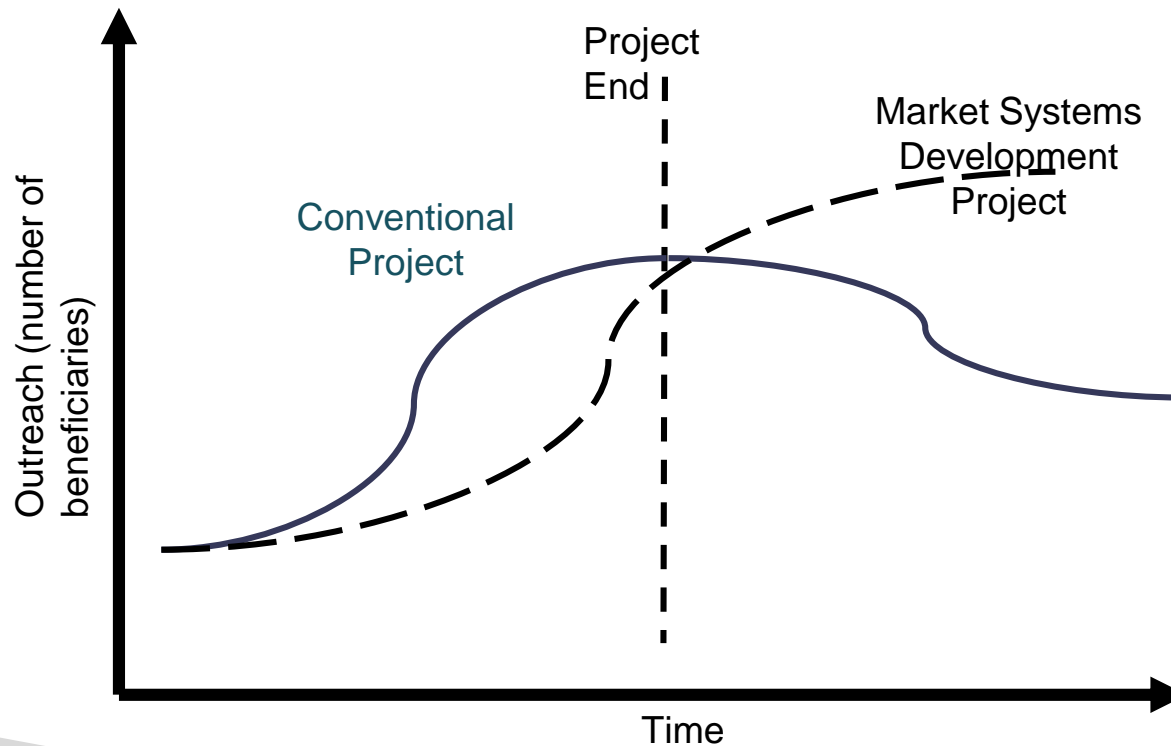
PIND/GVE - CHALLENGES – SOLAR POWER

- Costs in all its ramifications – too much project risks - **Financial Constraint (Fund raising) for scaling the model**
- Lack of Market Information -Knowledge sharing – Renewable Energy as alternative to National Grid
- **Absence of Clear Regulatory and Policy framework**
- Lengthy & expensive customs clearances
- **Unavailability of data on Grid expansion plans**
- Insufficient Community outreach and/or buy- in
- **Lack of Skilled Workers to provide maintenance on equipment/facility in local communities – leads to improper use of equipment by customers**
- Trouble sourcing spare and replacement parts
- **Lack of use of Debit meters or “Smart” meters**
- Seasonality of final transport from POE to deployment site due to bad terrain.
- Complex Equipment Import documentation & Cost
- **Delays between order, shipping, clearance & final delivery**
- Data Capturing and recording
- **Bureaucracy in Project Supervision & funds release**

Community Engagement and Ownership

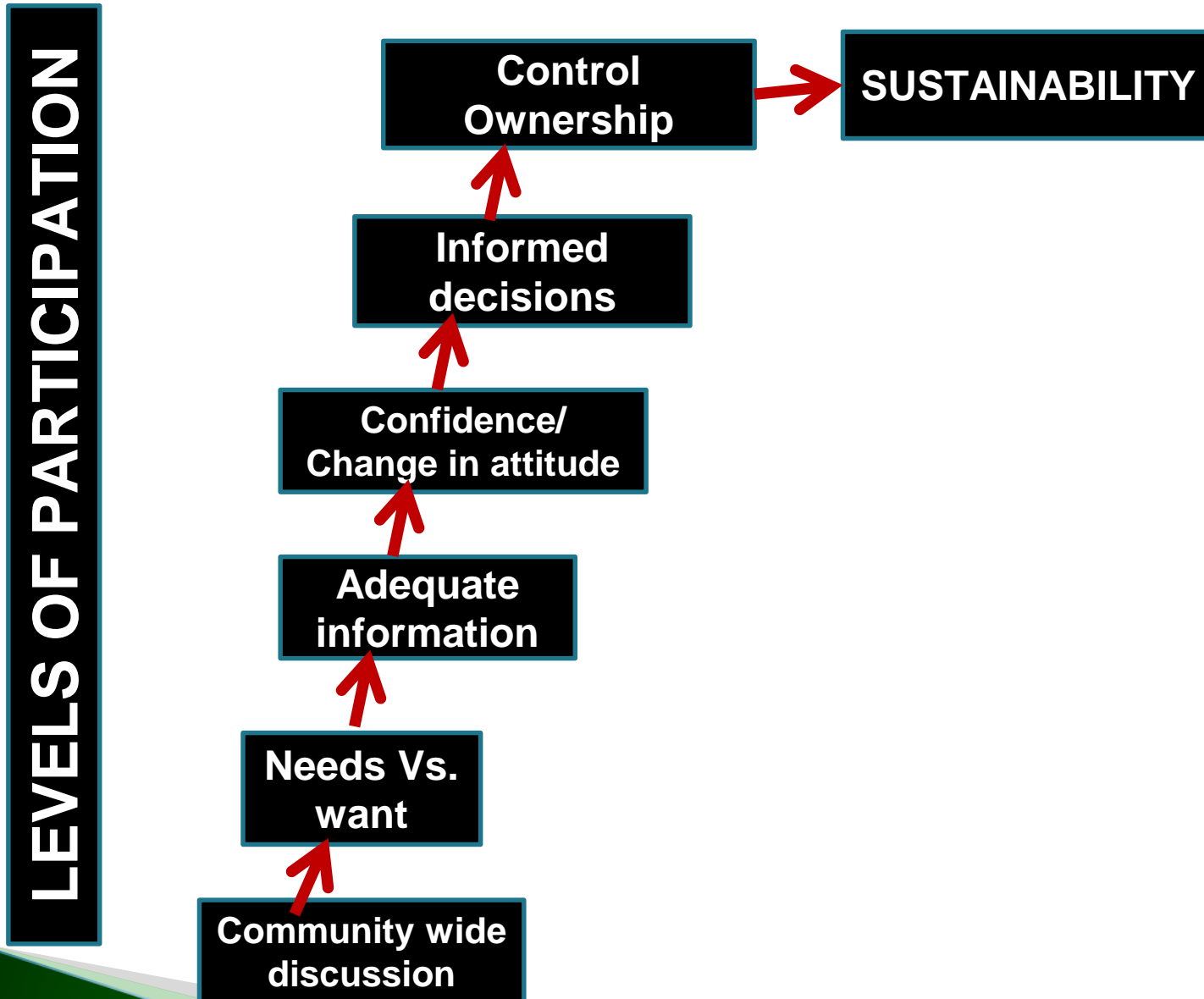
- ❑ Accessing energy a challenge, how do you mitigate - use of less energy – back to basics – Energy Efficient design homes.
- ❑ Needs –vs- Wants; Willingness to pay –vs- Ability to pay
- ❑ Capacity Building/Training of Artisans
- ❑ Engagement with community contractors – building capacity in readiness for adoption/scale up
- ❑ Engagement with professional bodies in the state chapters – change in attitude
- ❑ Academic Institutions in the region – curriculum, projects, thesis, etc.,

Long Term Sustainability – Market Systems Approach



COMMUNITY ENGAGEMENT BOTTOM UP APPROACH = LONG TERM SUSTAINABILITY

- ❑ For practitioners using the bottom-up model as structured by social development theory, participation in community wide discussions, improved opportunities to learn, and the sense of empowerment that comes with adequate knowledge are the necessary signs for accomplishing the stated and implied goals of community development.
- ❑ Community wide discussions = Adequate information = confidence/change in attitude = informed decisions = control of projects = ownership = Sustainability.
- ❑ Create sufficient awareness and change in attitude
- ❑ Engagement with community local contractors (on ATED construction) - building capacity in readiness for adoption/scale up = LONG TERM SUSTAINABILITY



*Thank
you*

