

ELECTRIFYING THE LAST MILE

THE ROLE OF RURAL ELECTRIFICATION SERVICES COMPANY





Indonesia's Energy Access Landscape

- ✓ 88% electrification ratio
- ✓ High failure rate of projects
- ✓ No operation and maintenance
- ✓ Poor initial workmanship
- ✓ Incorrect technology and design applications
- ✓ Lack of proper project planning
- ✓ Projects not bankable

OUR VISION

EMPOWER individuals and communities for GROWTH by providing
a platform to develop SUSTAINABLE clean energy solutions



OUR MISSION

To provide the services required to sustainably provide electricity to remote areas.

- Perform **BANKABLE FEASIBILITY STUDIES** utilizing the community's geophysical features, social behavioral analysis and economic activity growth indicators.
- Assist stakeholders to **ACCESS FUNDS** and financing
- **PROCUREMENT** management
- System **COMMISSIONING**
- **OPERATIONS AND MAINTENANCE**





WHO WE ARE AND WHAT WE DO: RE-Geeks

RE-Geeks: Passionate Renewable Energy Geeks Team Members with International Experience and Knowledge to Lead and Manage the Rural Electrification Projects

Regional RE-Geeks Trained to Manage the Project, Implement and Build the Project, Manage and Operate the Project to Ensure Long-term Sustainability of the System

Community Based Teams Trained by RE-Geeks and Deployed for Implementation

RE-Geeks : Energy Needs Assessment Including Productive Use and Growth Model

RE-Geeks : Willingness and Ability to Pay Including Income Stream Analysis

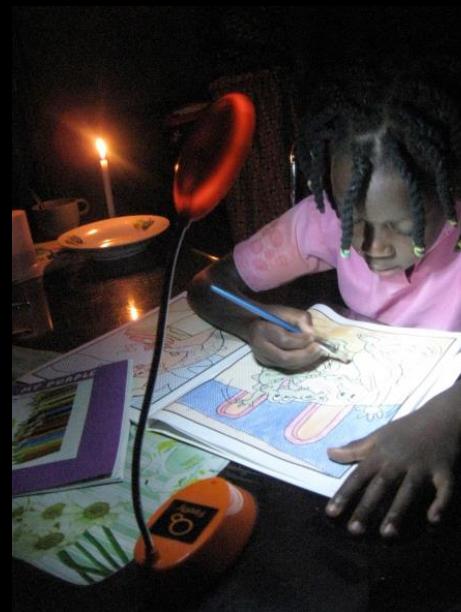
RE-Geeks: System Design and Business Model Development



ENERGY ACCESS?

ENERGY ACCESS

WHAT IS IT AND HOW
DO WE GET THERE



**EQUAL
OPPORTUNITY
ACCESS**

**SERVICE
PRICE**



INTERIM SHORT TERM



HOW LONG?



HOW DO WE PLAN? DEPLOYING THE RIGHT SOLUTION



ELECTRIFICATION GOAL

IS JUST A WISH



UNTIL THERE IS A PLAN



FINANCIAL ENGINEERING

THE REAL BARRIER – RISK MANAGEMENT



BUSINESS
AS USUAL

**GOING OUT OF
BUSINESS**

INDONESIA: 12,800 UNELECTRIFIED VILLAGES



INDONESIA: 12,800 MINIGRIDS?????



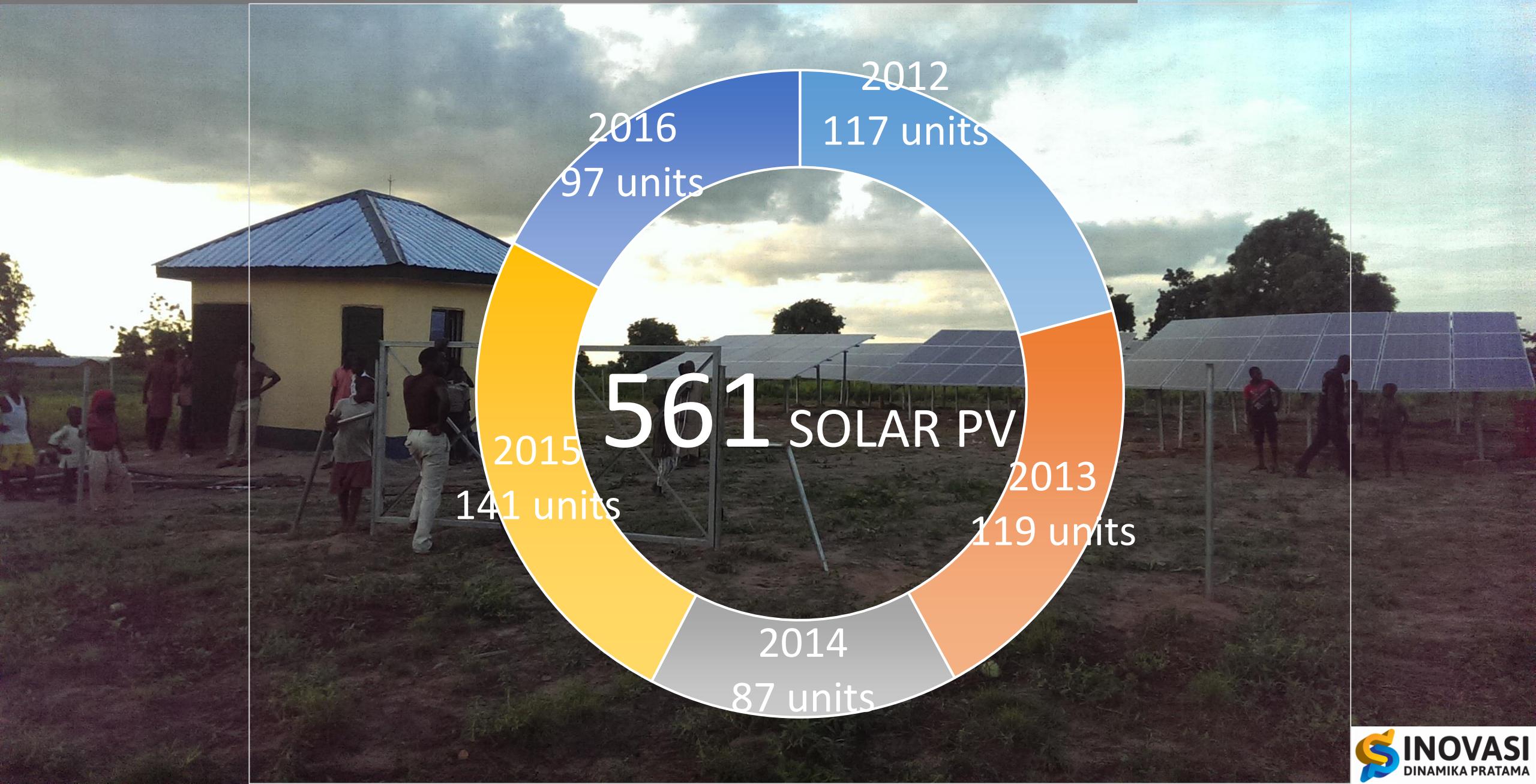


INDONESIA MICROGRIDS IN RURAL AREAS

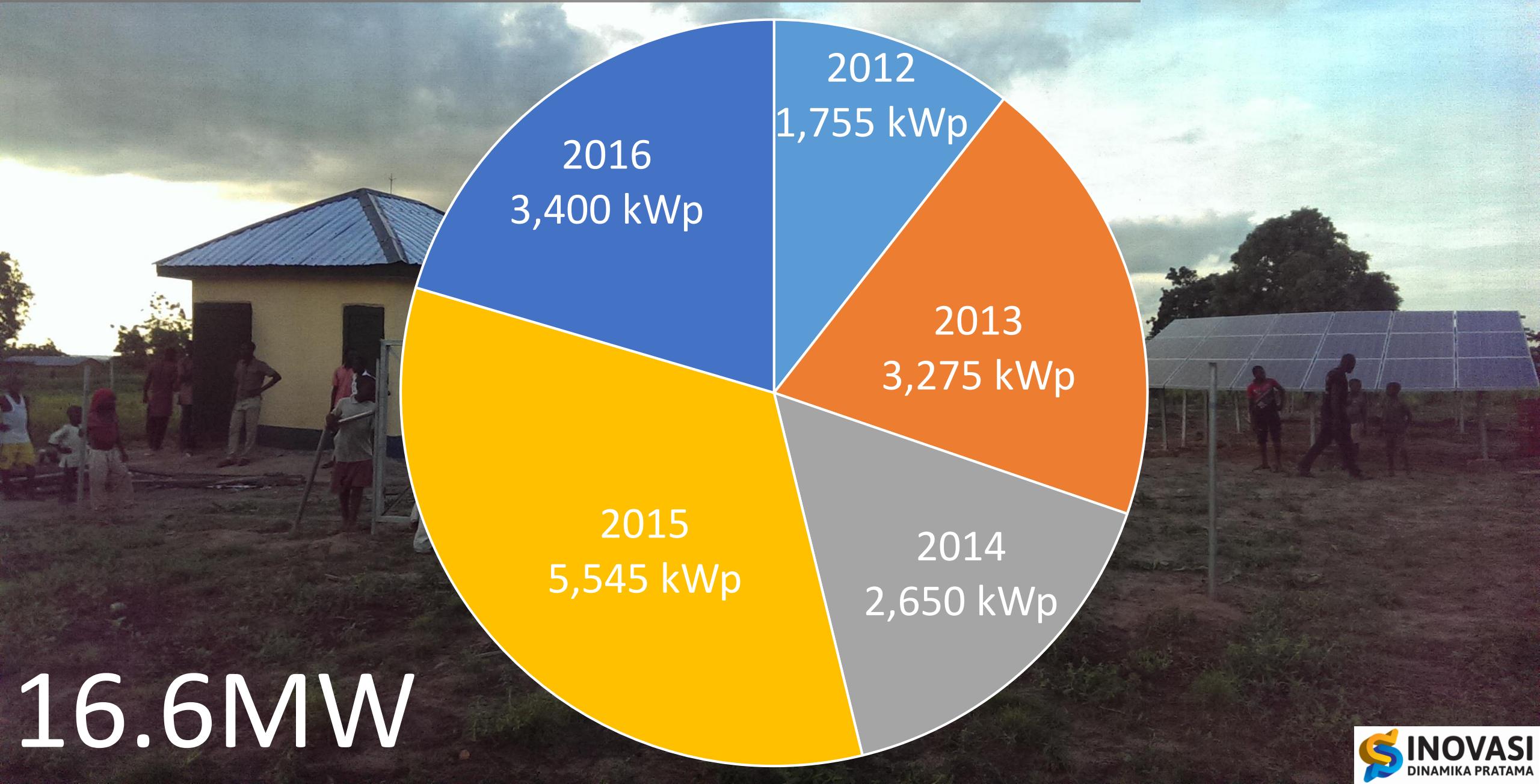


OVER 1000 GOVERNMENT FUNDED
MICROGRIDS SINCE 2012

INDONESIA MICROGRIDS



INDONESIA MICROGRIDS

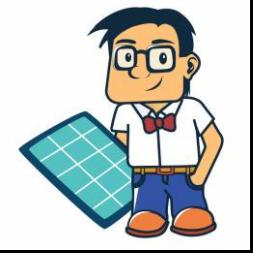




MICROGRID DEPLOYMENT CHALLENGES

Work and Play?





MICROGRID DEPLOYMENT CHALLENGES



It does mean higher cost for logistics



MICROGRID DEPLOYMENT CHALLENGES



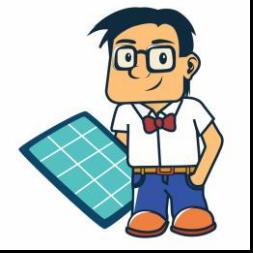
It does mean an accurate survey and planning for the project is **IMPORTANT**

MICROGRID DEPLOYMENT CHALLENGES

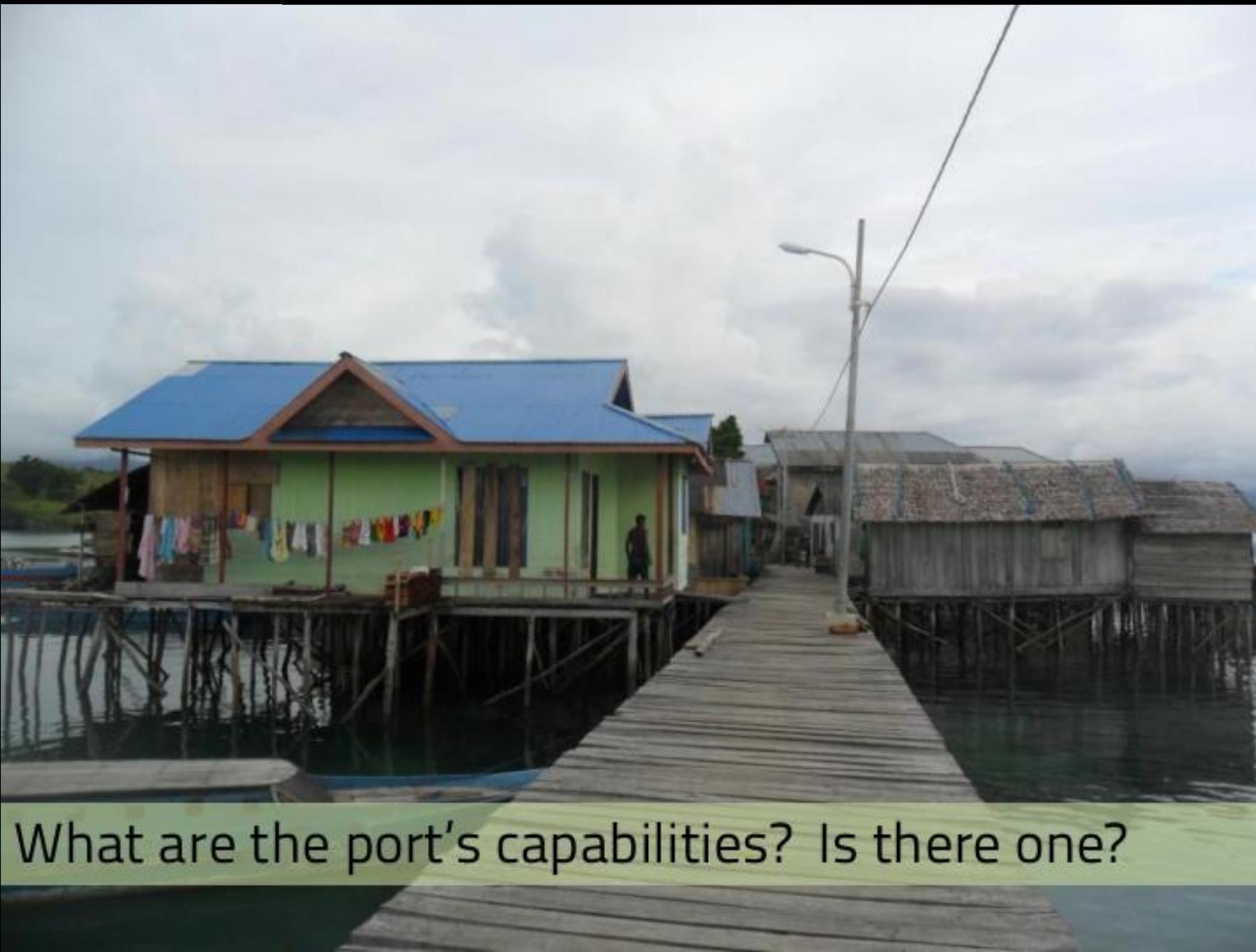


What facilities are available for materials delivery?

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MICROGRID DEPLOYMENT CHALLENGES



What are the port's capabilities? Is there one?



MICROGRID DEPLOYMENT CHALLENGES



Check carefully



MICROGRID DEPLOYMENT CHALLENGES



There is a road, you say?



MICROGRID DEPLOYMENT CHALLENGES



There is a bridge, you say?



MICROGRID DEPLOYMENT CHALLENGES



A HIGHWAY

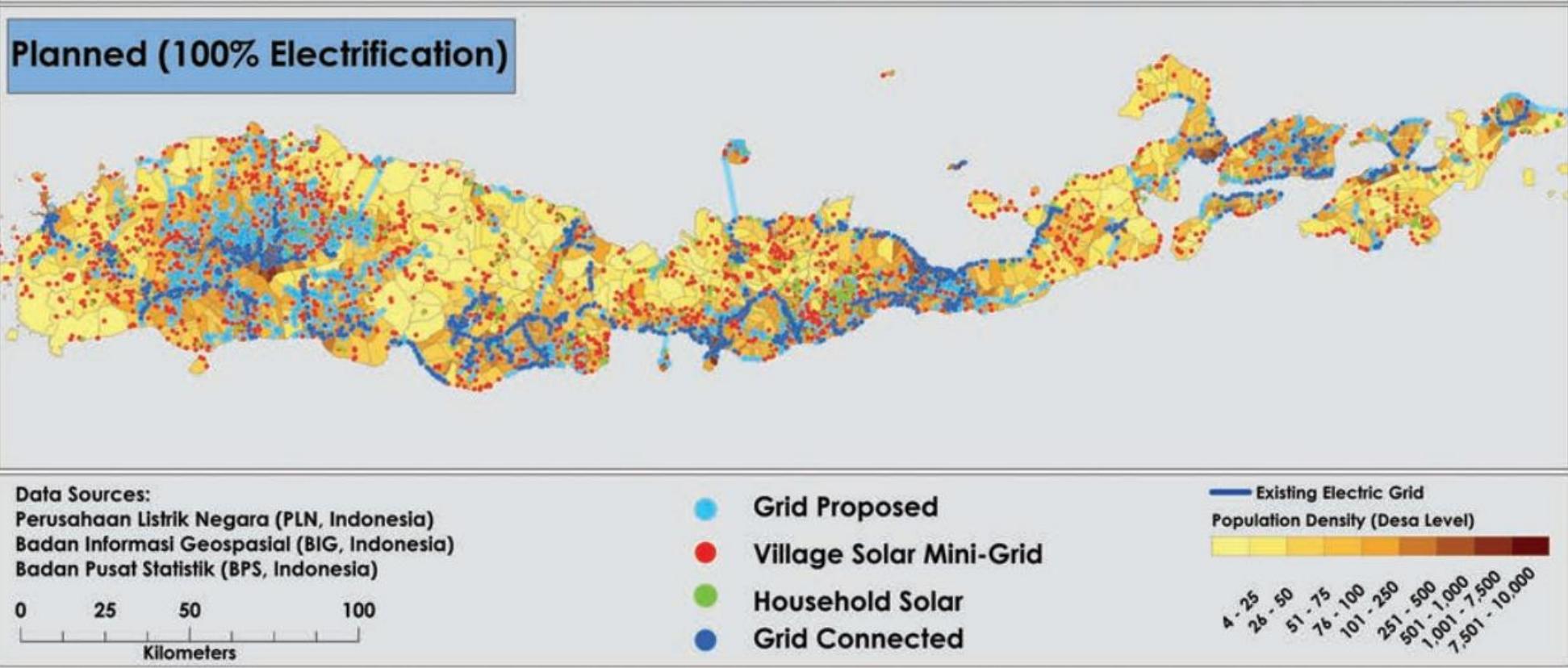
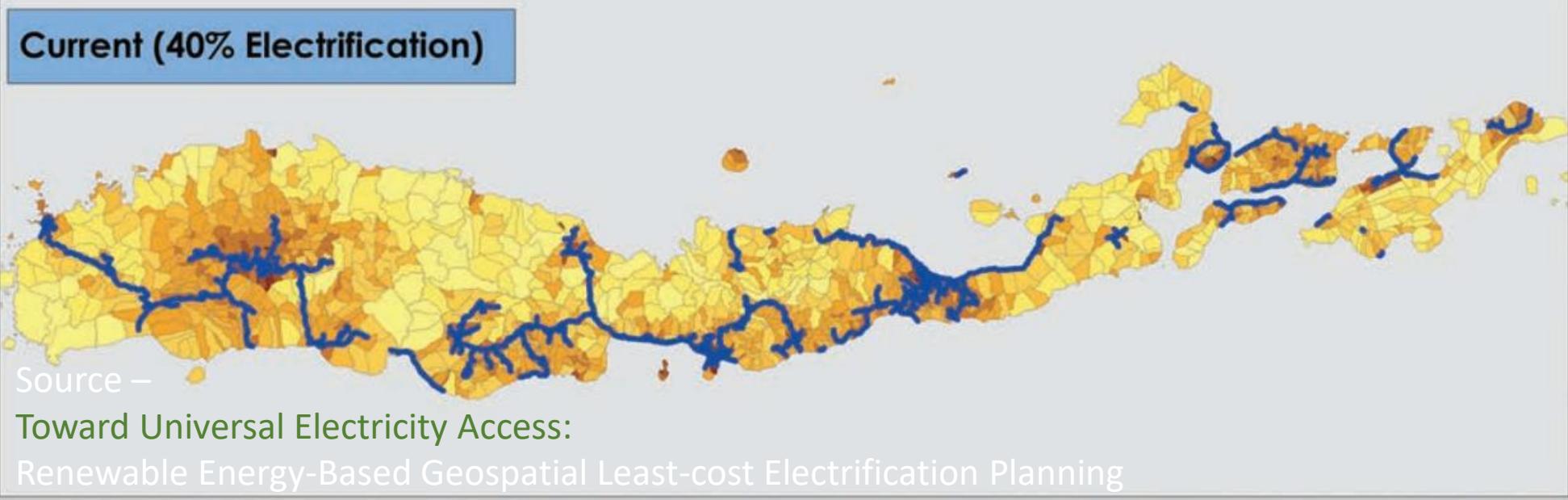


MICROGRID DEPLOYMENT CHALLENGES



A HIGHWAY

LEAST COST ELECTRIFICATION PLANNING WITH GIS ROOFTOP TAGGING



TECHNOLOGY

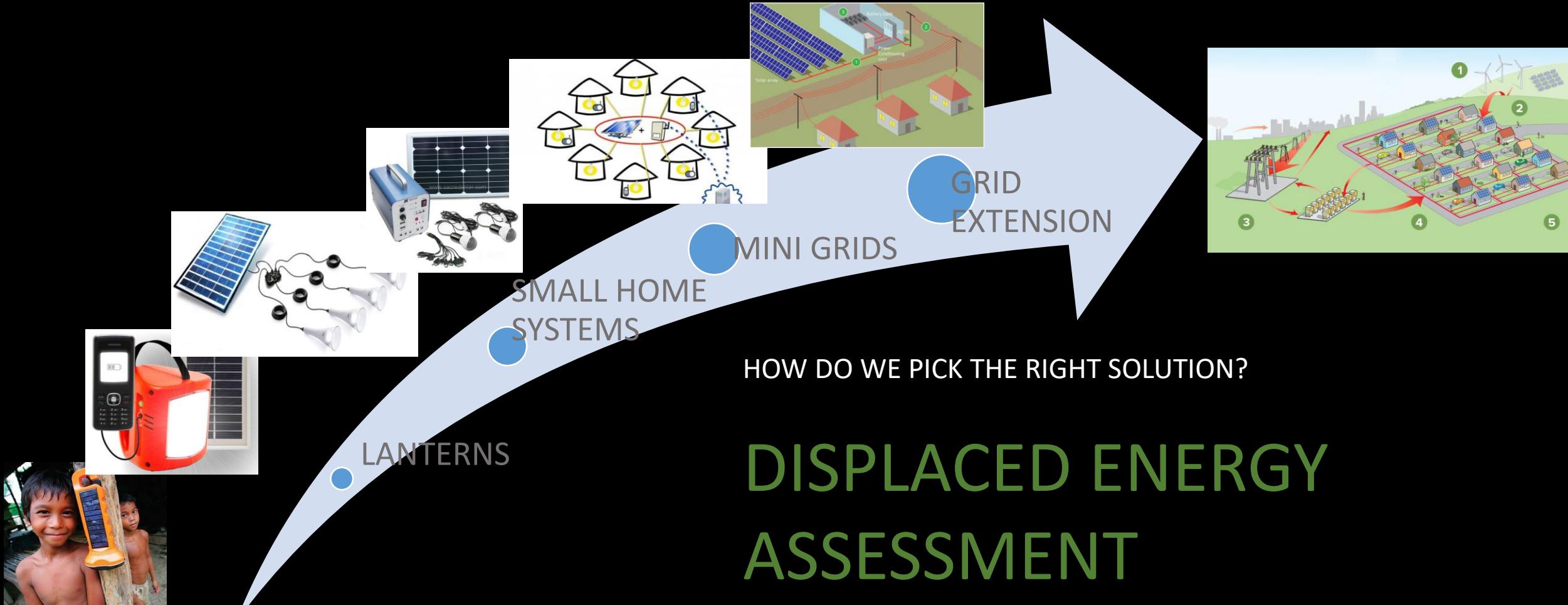
IS NOT

THE SOLUTION



ENERGY ACCESS TOOLS

SPECTRUM OF SOLUTIONS



SOLAR LANTERNS

INDIVIDUAL SYSTEMS



2-3 LAMPS
8 HOURS

EQUALS

0.3
KWh
DAILY

SHS - HOME SYSTEMS

INDIVIDUAL SYSTEMS



1-5
KWh
DAILY
DISPLACES
SMALL
GENSET

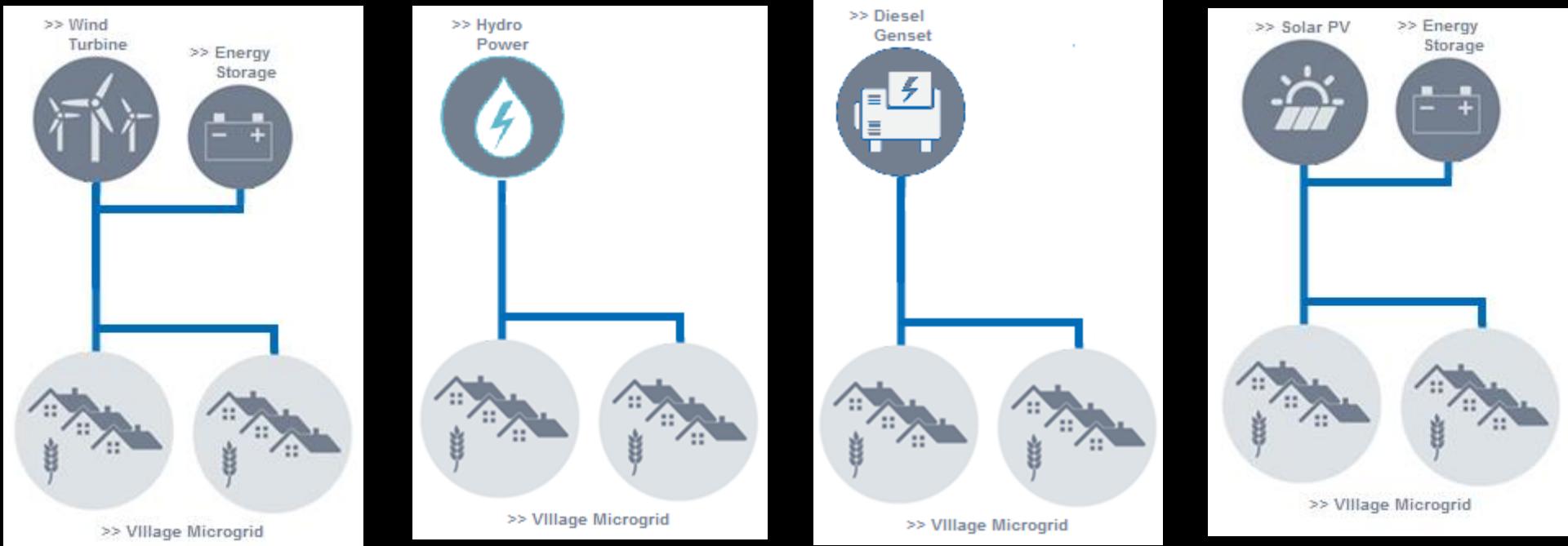
VILLAGE MICROGRID COMMUNITY SYSTEMS



0.3 - 10
KWh
DAILY
DISPLACES
COMMUNITY
GENSET

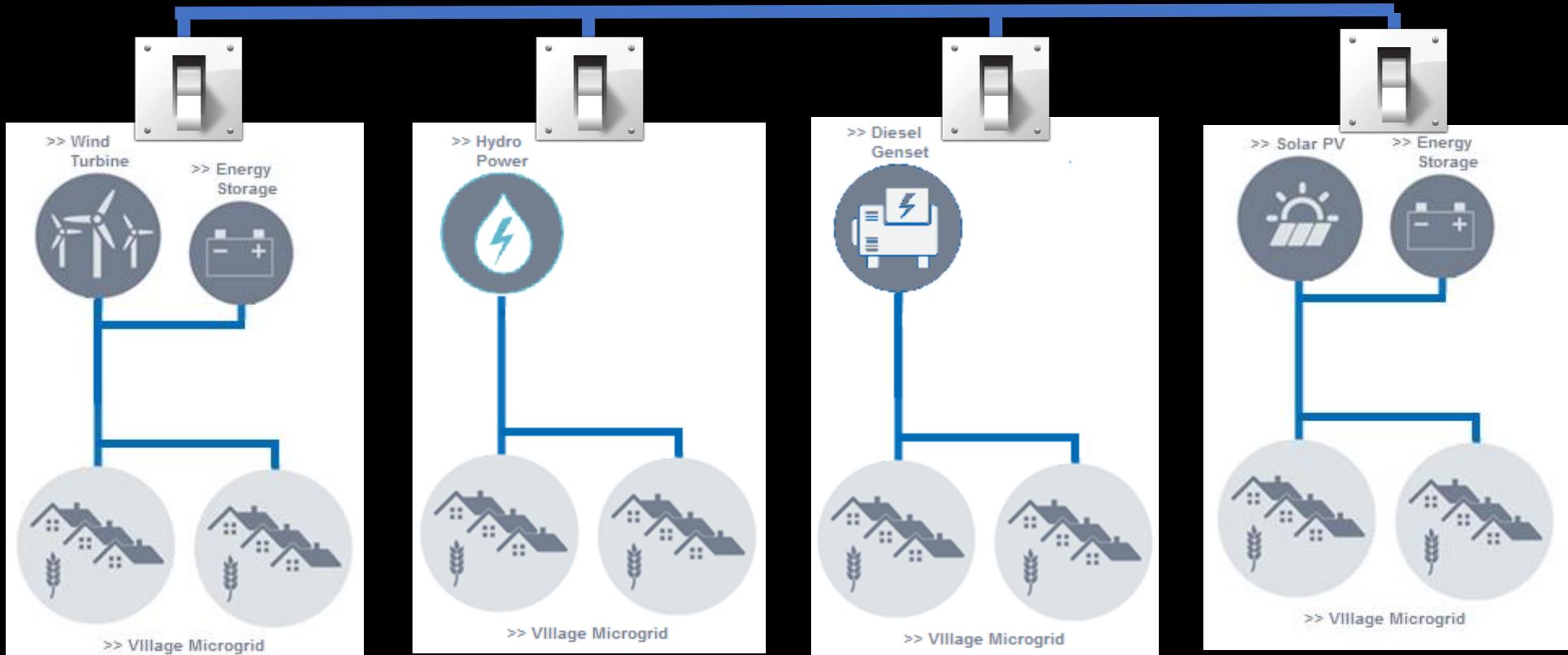
TYPICAL MINIGRIDS

COMMUNITY SYSTEMS



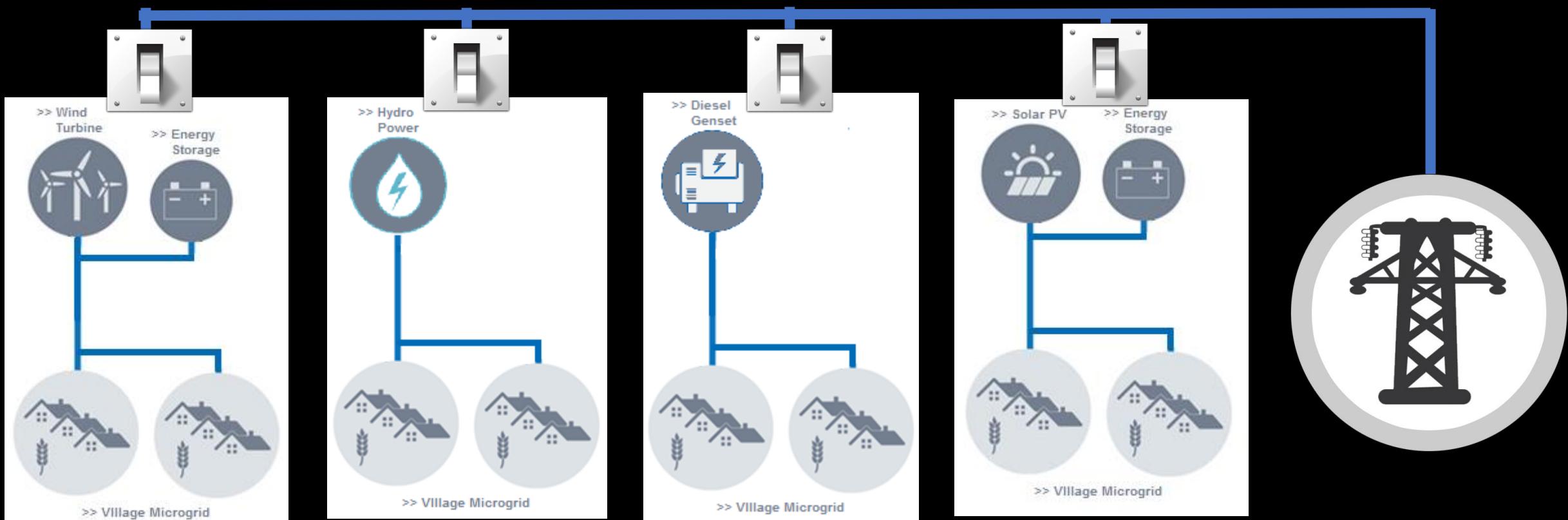
CONNECTED MINIGRIDS

SHARED EXCESS ENERGY



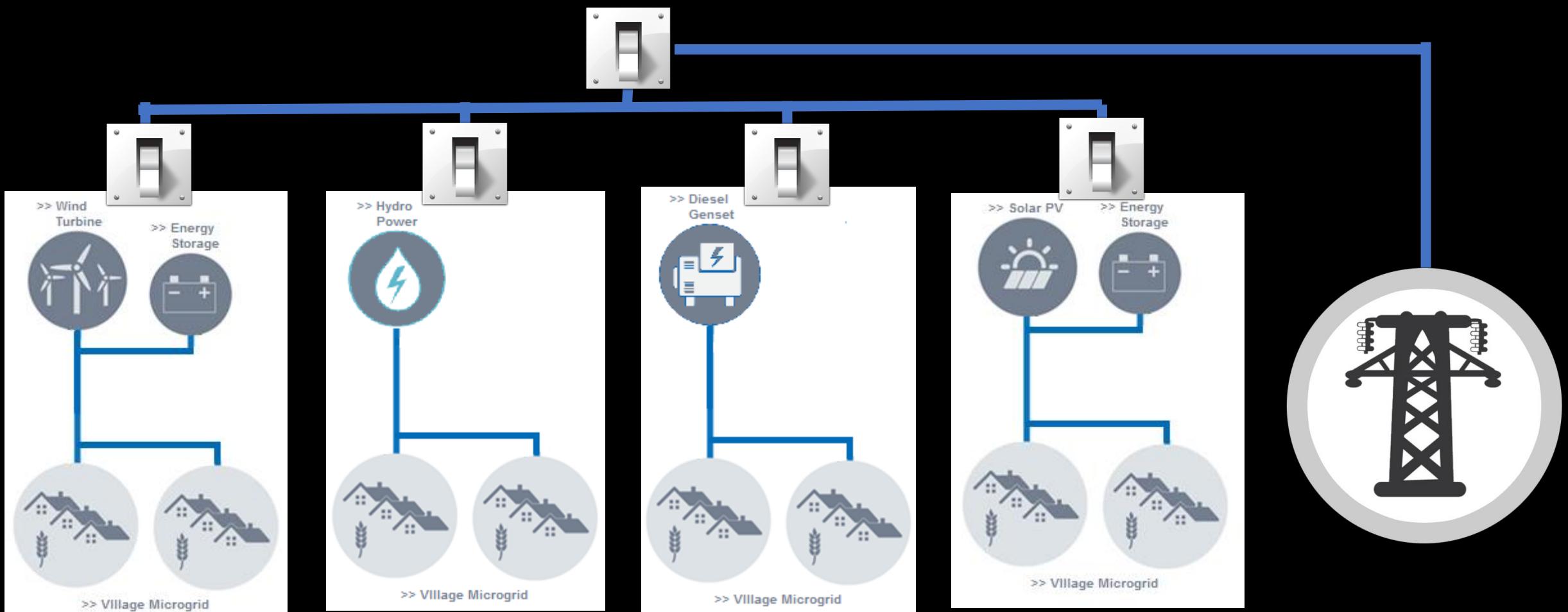
“THE GRID” CONNECTION

CONNECTING TO THE PUBLIC GRID



“THE GRID” CONNECTION

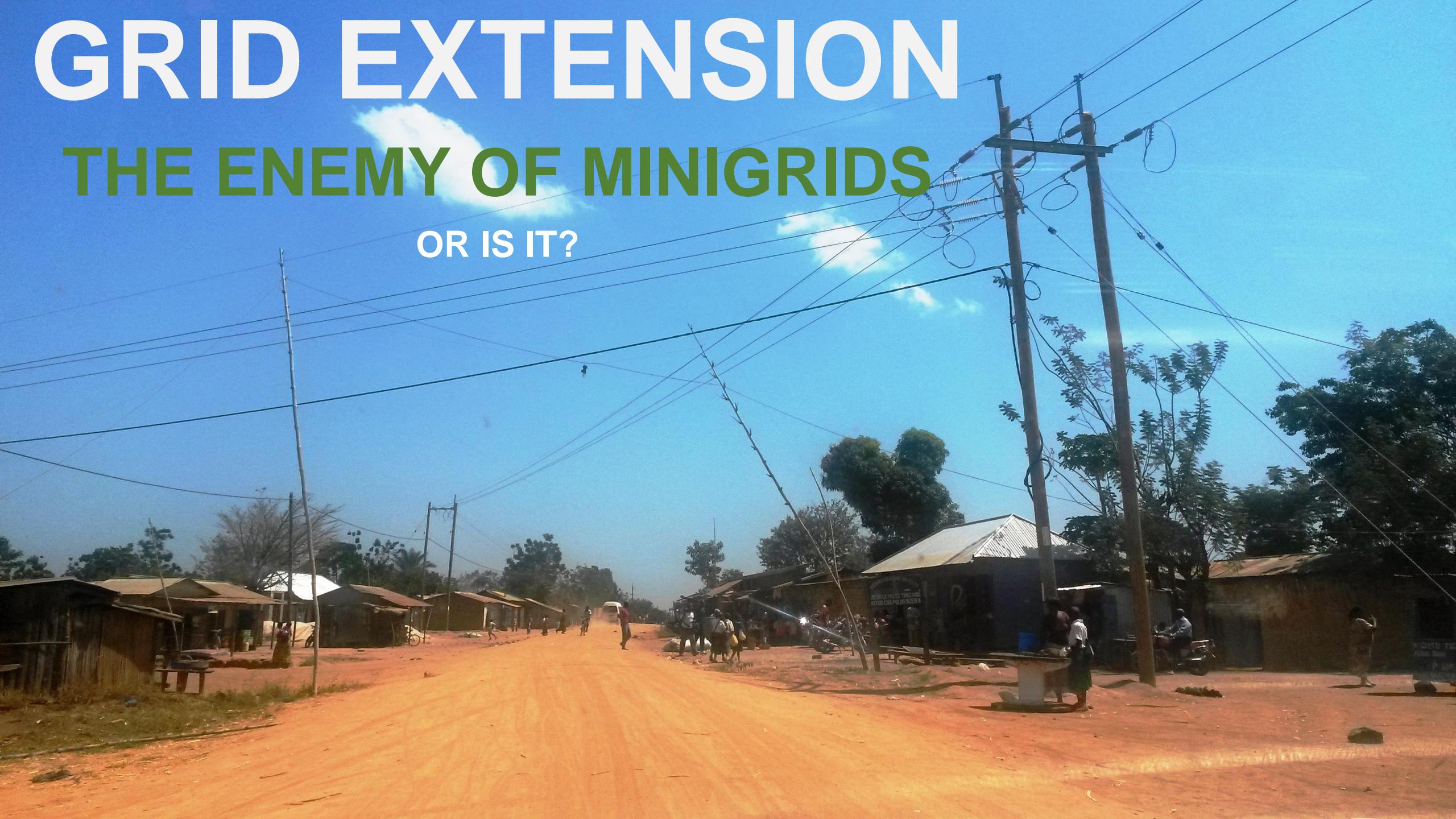
ANOTHER WAY TO CONNECT

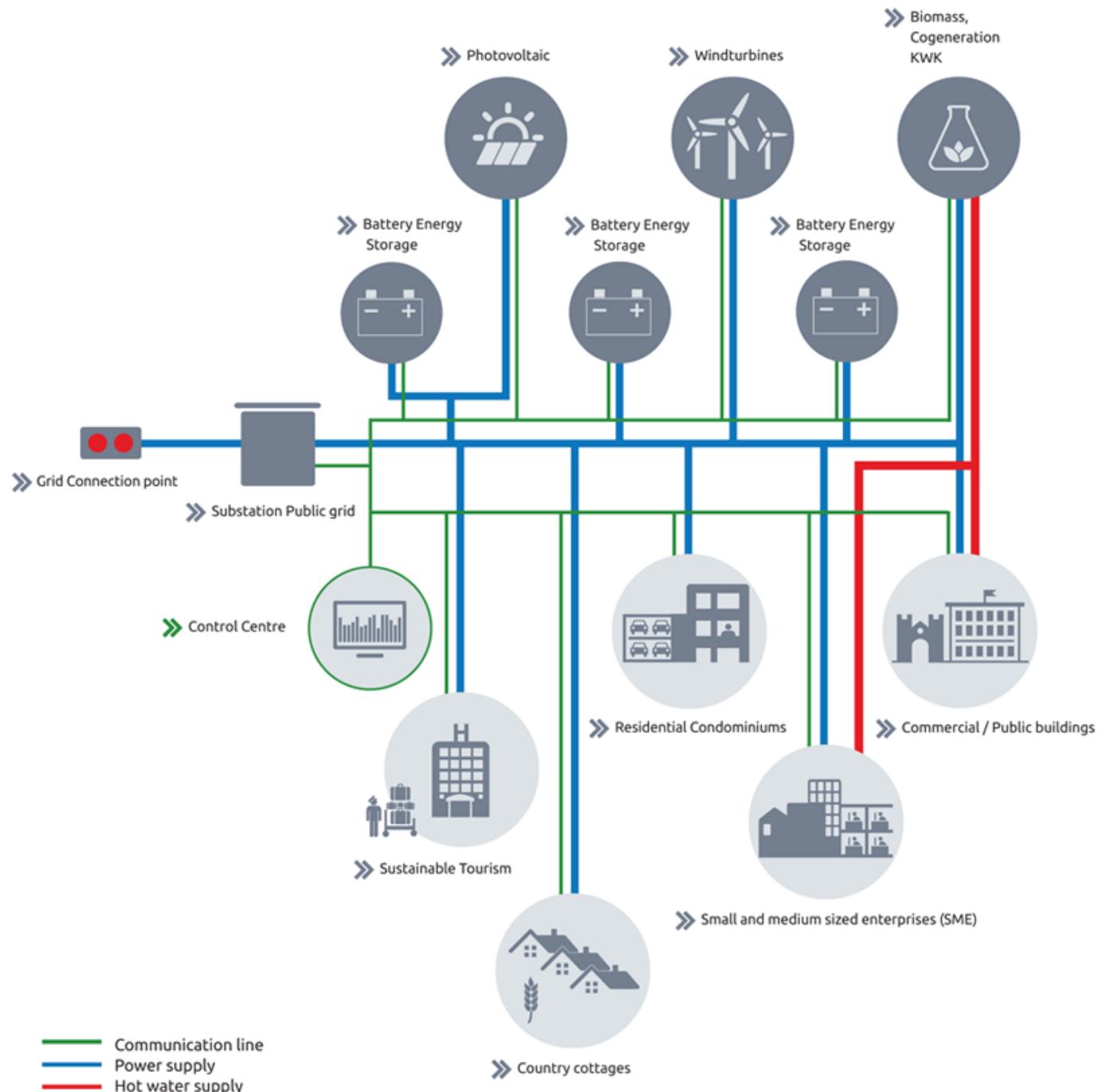


GRID EXTENSION

THE ENEMY OF MINIGRIDs

OR IS IT?





END RESULT

100% ELECTRIFICATION

BY

MAXIMIZING THE USE OF PUBLIC GRID

RURAL ELECTRIFICATION

Providing SERVICES that:

EMPOWER individuals and communities for
GROWTH by providing a platform to develop
SUSTAINABLE clean energy solutions



RENEWABLE ENERGY GEEKS

RURAL ELECTRIFICATION DONE THE RIGHT WAY

GRACIAS DANKSCHEEN
ARIGATO SPASSIBO
SHUKURIA NUHUN SHACHALHYA
JUSPAXAR TAVTAPUCH MEDAWAGSE
GOZAIMASHITA CHALTU
EFCHARISTO MERASTAWHY SANCO
KOMAPSUMNIDA GAEJTHO LAH
GRAZIE MAKE ATTO
MEHRBANI YAQHANYELAY HABEEJA MAITEKA
PALDIES DHANVYARAD HUT
BOLZİN SUKSAMA EKHMET
MERCİ JUSPAGARITAM
YOU HATUR GUI
THANK TINGKI
BİYAN SHUKRIA
SHUKRIA EKOUU SIKOMO
MAKETAI MINMONCHAR



andreosae@gmail.com



<https://id.linkedin.com/in/andresusanto>