Sustainable Energy Access



Concept to Commissioning Solutions for Decentralised Power

TECHNOLOGY CUSTOMISATION

- Appropriate Technology Design
- Smart, Grid-Ready & Reliable Systems

TRAINING & CAPACITY BUILDING

- Operation & Maintenance
- Business Management & Marketing
- Book-keeping & Finance

CREATING INSTITUTIONAL MODELS

- Effective Decentralisation through Participatory Project Planning
- Creating Strong Local Institutions





BUSINESS MODELS

Development Programmes

- Ensuring Return On Investment
 & Long Term Sustainability
- Customised Pricing Strategies
- Identification of Income Generating Activities



Solar Multi Utility (SMU) for livelihood generation



SHG Preparing Sattu for Mid-Day Meal Programme

CASE STUDY 2 Biomass-Solar Hybrid Cold Storage & Power



Decentralised Cold Storage for Horticulture

CASE STUDY 3 Lighting a Billion Lives (LaBL)



Solar Lighting for Rural Communities

Innovative Solutions

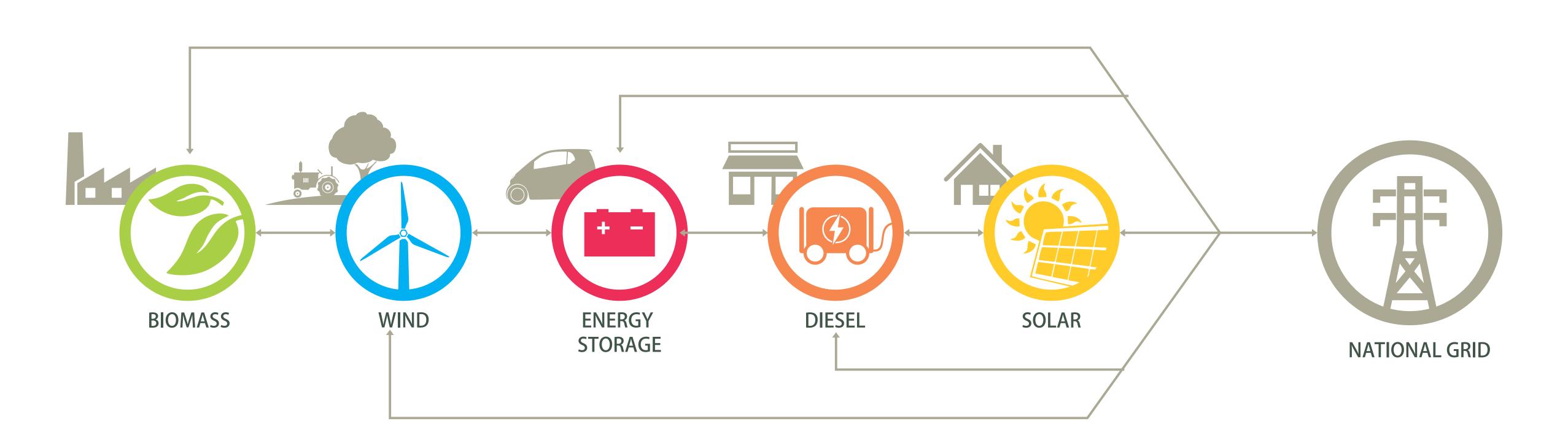


Pioneering Smart Mini Grids in India

TERI Gram, Gual Pahari

SMART MINI GRIDS:

ENERGY SECURITY Decentralised • Optimised • Integrated



Why Smart-Mini Grids?

- Diversity in sources of electricity including both renewable and conventional energy
- Need for optimum resource & demand side management
- Requirement of better quality & reliable power
- The need for decentralised, selfsufficient electricity production

Features

- Intelligent load & energy resource management
- Accommodation of multiple Distributed Energy Resources and energy storage into a common grid
- Self-healing, selfconfiguring, plug & play

Benefits

- Demand side management
- Minimised fossil fuel consumption
- Reduced power outages, increased reliability, efficiency & safety of the grid
- Increased autonomy of customers

Our Expertise

- Planning, design, simulation and optimization of SMGs
- Load and resource forecasting
- Utilisation of renewable energy resources
- Policy, regulatory and financial aspects of SMGs

Smart Controller Laboratory

Testing, Evaluation & Research laboratory for Distributed Power Systems & Smart Controllers.

Equipment

- Solar PV Array Simulator
- Grid Simulator
- Load Emulator
- Inverter Test Bed
- Embedded System Controller

Testing & Performance Assessment

- Different Photovoltaic (PV) Technologies
- Inverters
- Storage Technologies
- Renewable Energy Based Hybrid Systems (including Smart Micro/Mini-Grids)

Training

- Management Development Programmes (MDP) on Smart Grids & GIS
- Virtual Lab and Hands-On Training Facility for Researchers