



## MSc Hybrid Energy Supply System

## Hybrid Energy Supply System for microgrid



SMART GRID

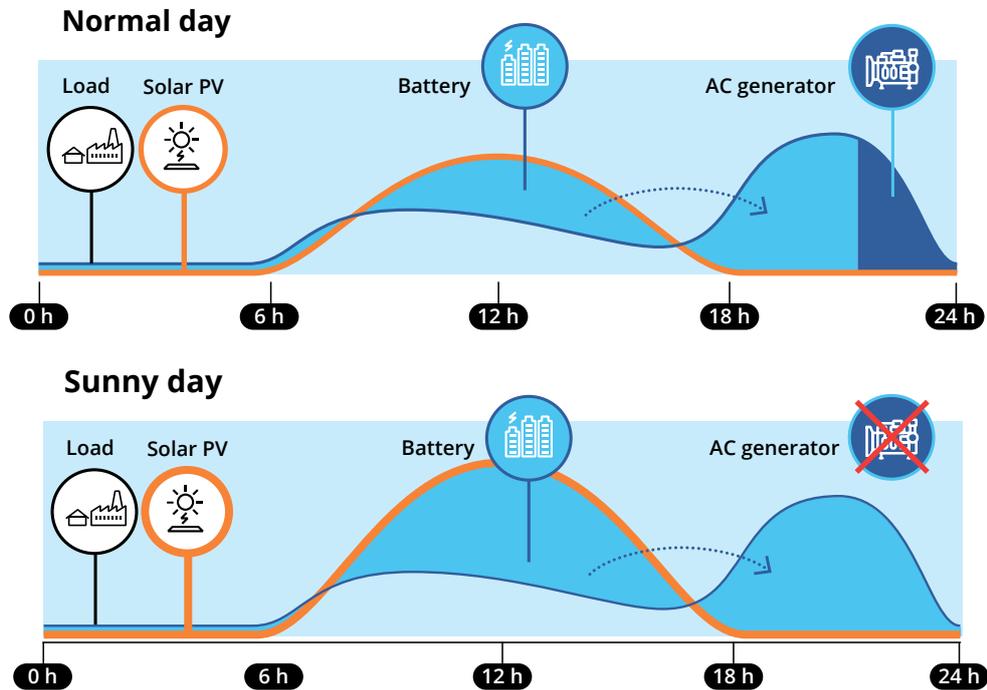
MSc HESS Hybrid Energy Supply System makes it easy to create an independent microgrid connecting available energy sources such as solar panels, modern diesel generators or batteries. Microgrids are typically used in areas where centralized power grid is not available.

Hybrid system helps to reduce carbon emissions as the use of diesel generators can be minimized with smart control. MSc Hess automatically optimizes the energy supply by loading the batteries when there is more energy available from renewable sources than the current need. Diesel generator is only started when the needed capacity is not available from either renewable sources or batteries.



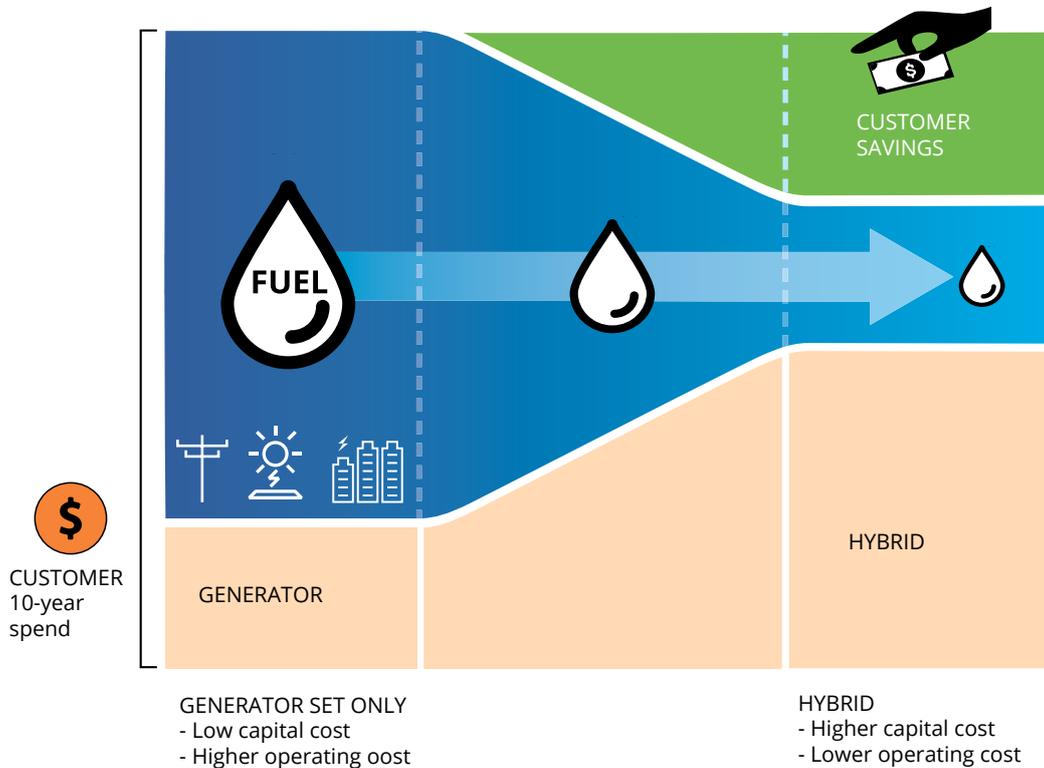
# Hybrid Renewable Energy System

Power on a normal day or sunny day



## MSc HESS Hybrid Energy Supply System economic justification

Hybrid energy supply system for microgrid





## Applications

Microgrids are created in remote locations where power is needed but not available. Need for power maybe also for short period of time and connecting to centralized power grid is not economically feasible. Typical applications can be:

- Rural villages
- Small hotels
- Hospitals and health centres
- Refugee camps
- Smaller industrial establishments
- Places where diesel generator is currently used as energy source

## Modular design

MSc Electronics has vast experience in designing power electronics applications for 35 years. This knowhow has now been used for creating MSc HESS. New Hybrid Energy Supply System has several unique features:

- Tolerant for 100% unbalanced load
- Voltage stability is excellent
- Designed to handle non-linear loads
- Parallel connectable up to 400 kW (8 units)
- Integrated active filter function
- Designed according to European safety standards



Further information, please contact



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