

OLE DUBNOV

# Cobrador Island Solar Hybrid Project

Achieving 100% electrification





# 2 90% Household Electrification Target by 2017

DOE: 80.9% ELECTRIFICATION IN 2014

DOE: 4.17 MILLION Households Without Electricity  
7107 Islands

Only 28 out of 302 NPC SPUG areas Have 24h Electricity  
70% have 8 Hours or Less of Electricity



## MINI GRID PILOT PROJECT

8 Hour Generation

Need 24 Hour Access Electricity for Productivity: Fishing, Marble Processing, Education, Health Services, Boat Making, Water Purification, Tourism

110 out of 244 Households with Electricity Access

Business Model for Replication - increasing efficiency, improving reliability, reducing costs

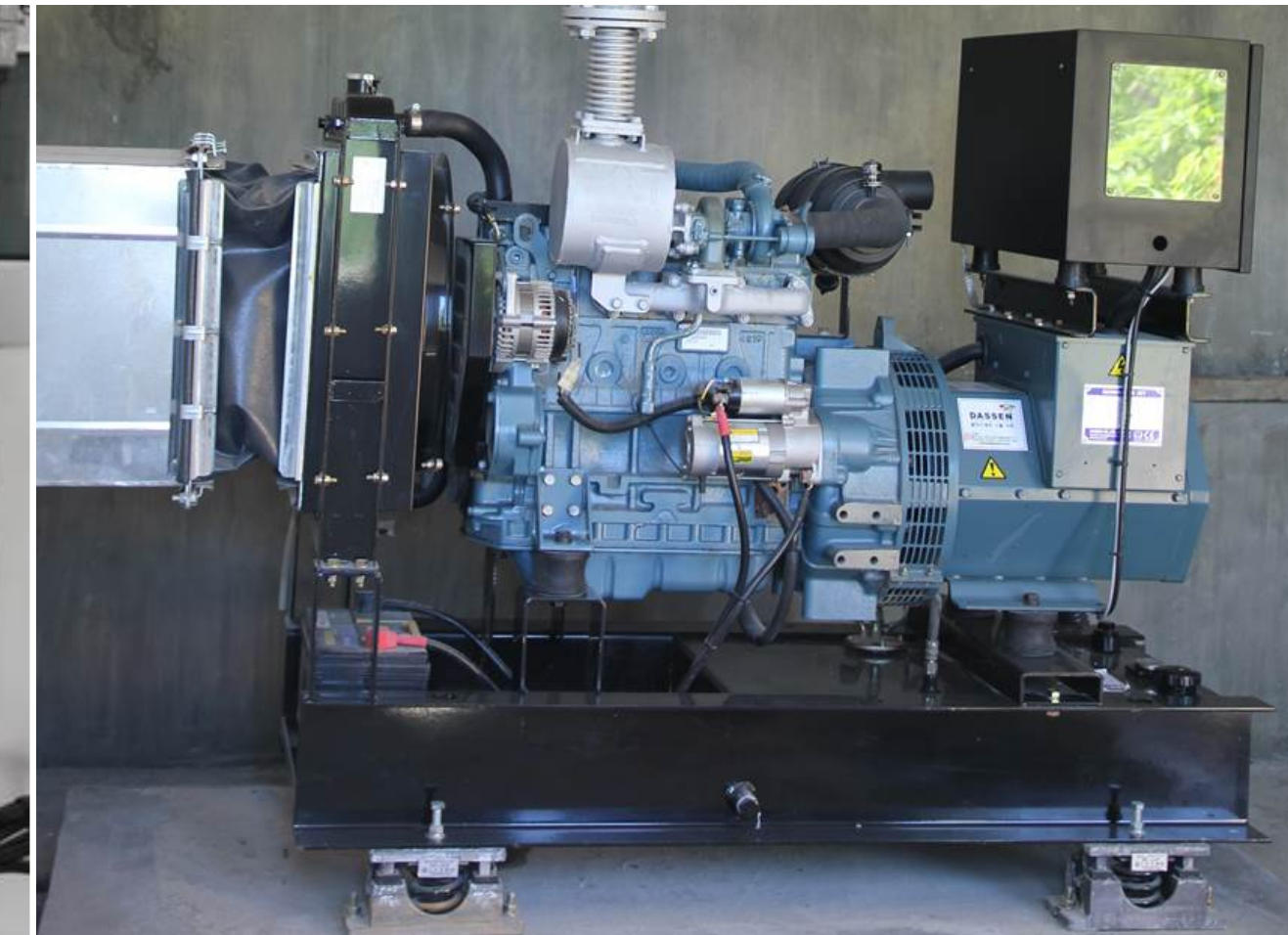
# 3 Cobrador Island



# 100% ISLAND ELECTRIFICATION

24 HOUR ENERGY SUPPLY

SOLAR 30 kW + Diesel 15 kW + ESS 180 kWh





# 5 Business Model

Tariff Reduction: 0.67\$ kWh to 0.32\$ kWh - Hybridization is Cost Effective

Full Cost Recovery by Romelco: Access to Government Subsidy (Universal Charge for Missionary Electrification (UCME)

Lithium-ION Batteries - Business Model will improve as battery cost goes down

Mixed Financing ADB, NEA, KEA, Romblon Electric Cooperative

# 6 Electrification Results

52% TARIFF REDUCTION

Improved Livelihood: Street Lights, Education, Health Services Delivery

Improved Economy: Marble Processing, Ice Making (Refrigeration)

Increased Load: 58.05 kWh on March 1 to 178.6 kWh on May 15

Solar: 92.9%

Diesel: 8.1%

Average Load Per Day: 89.35 kWh

Solar: 88.6%

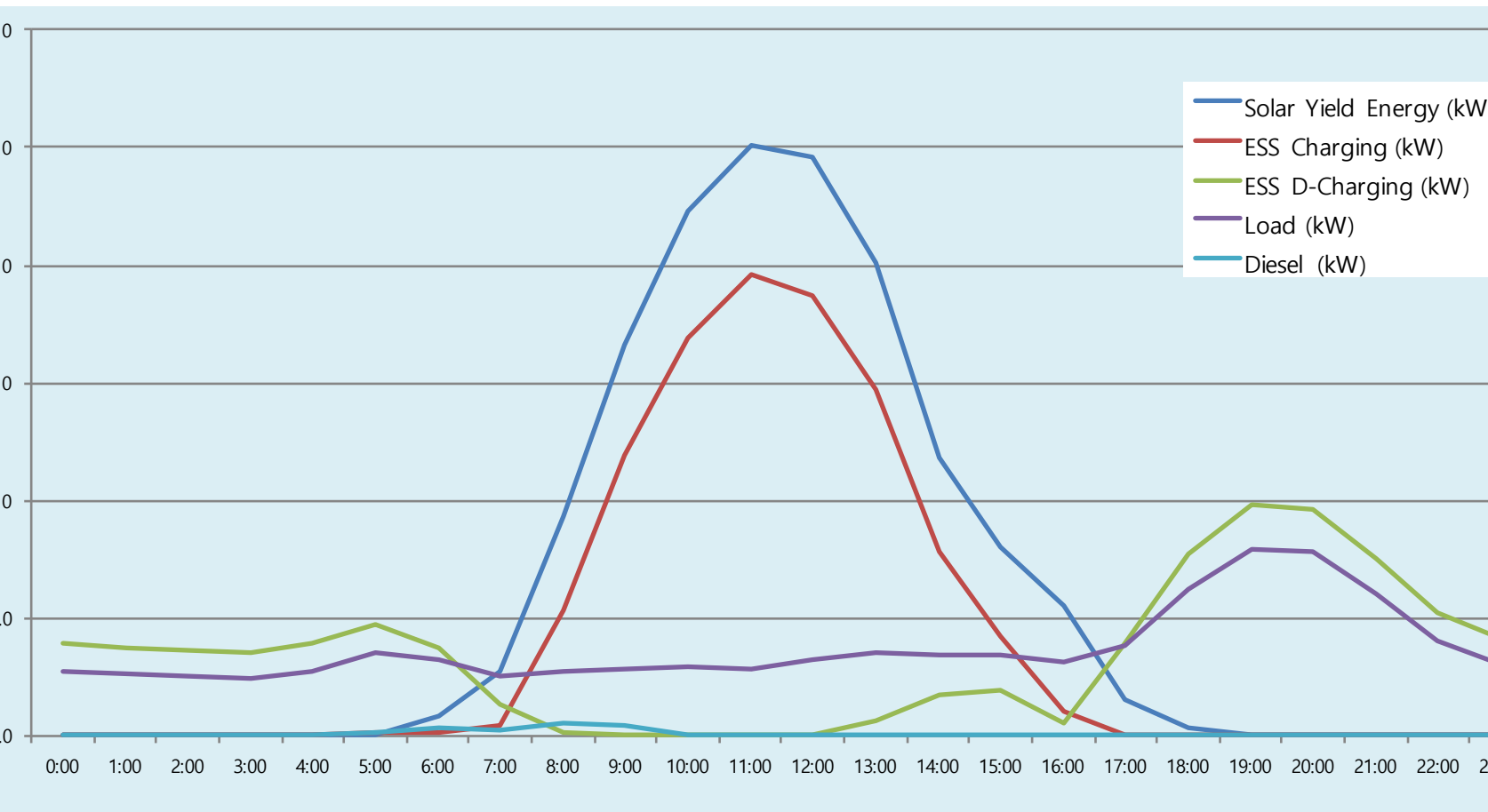
Diesel: 11.4%

Average Load Per Day: 131.85 kWh

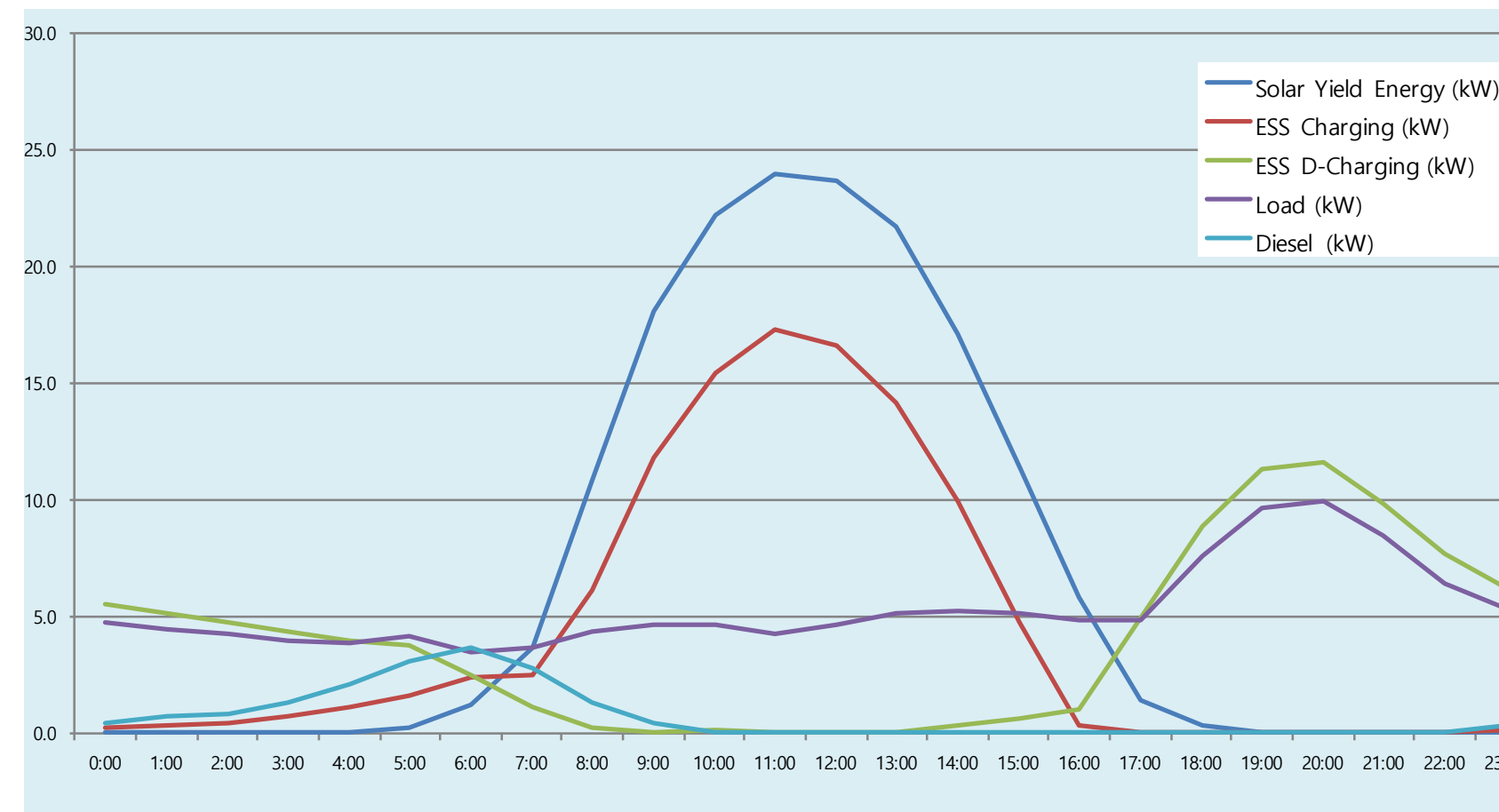
Solar: 69.2%

Diesel: 30.8%

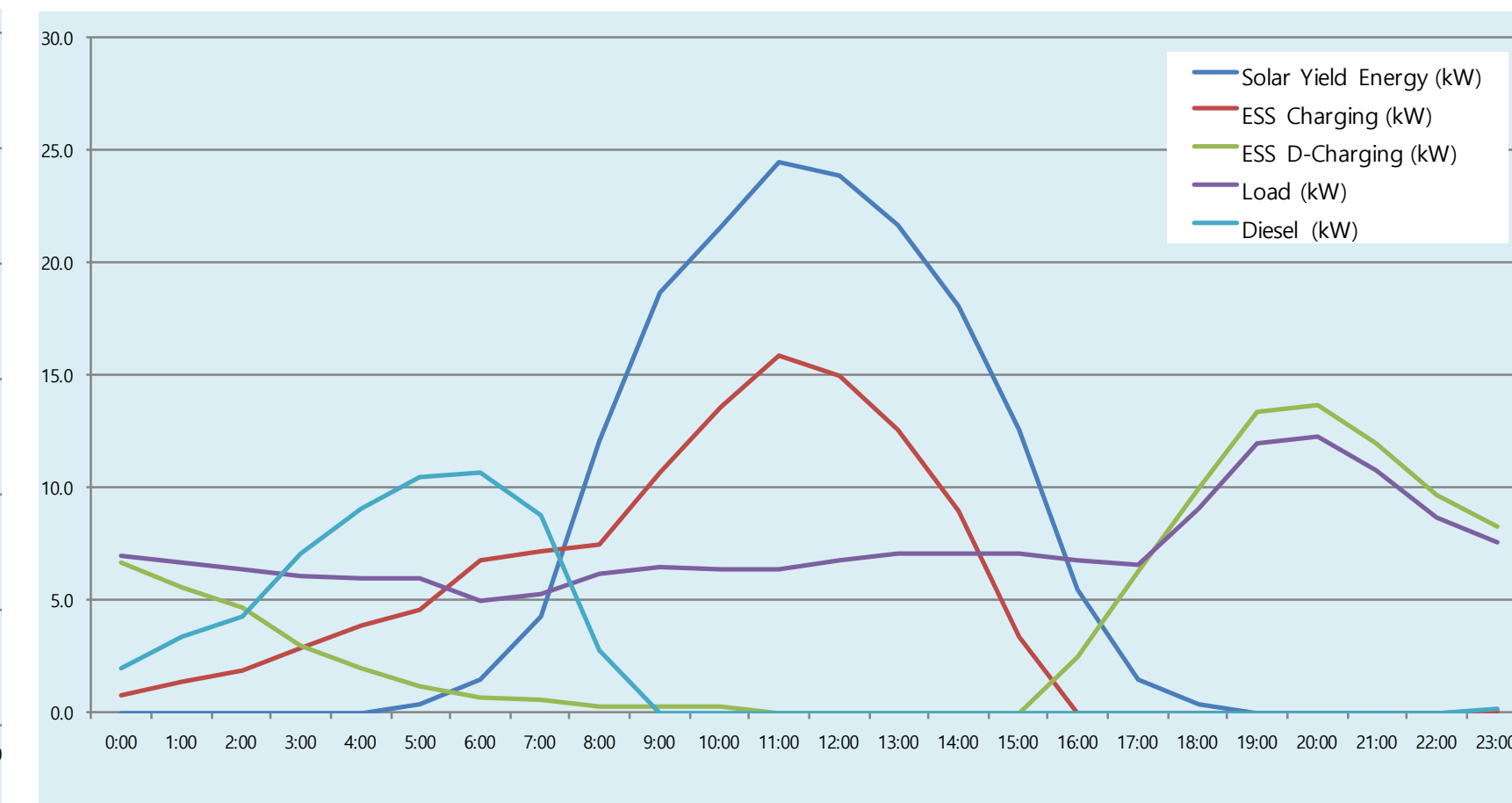
Average Load Per Day: 175.32 kWh



March



April



May

