



Advanced Flow Battery Energy Storage Systems into a Microgrid Network (GREENERNET)



Objectives

The GREENERNET Project aims at evolving and scaling up an existing 1kW prototype of Energy Storage System based on new organic AQDS (anthraquinone di-sulphonate) flow batteries into an innovative 10 kW, cheap and safe, energy storage system module integrated in a smart microgrid for distributed energy applications.

Redox Flow Battery Technology

RFB is just like any other electrochemical cell with the exception that the ionic solution (electrolyte) is not stored in the cell around the electrodes. Rather, the ionic solution is stored outside of the cell, and can be fed into the cell in order to generate electricity. The total amount of electricity that can be generated depends on the size of the storage tanks.

Energy and power of the system are totally decoupled: power depends on the size of the stack (electrodes surface), energy on the size of the tanks.

| PARTICIPANT ORGANISATION NAME | COUNTRY |
|--|-----------|
| GREEN ENERGY STORAGE (COORD.) | IT |
| AARHUS UNIVERSITET | DK |
| ENGINEERING INGEGNERIA INFORMATICA SPA | IT |
| UNIVERSITA' DEGLI STUDI DI ROMA TOR VERGATA | IT |
| EVOPRO INNOVATION KFT | HU |

