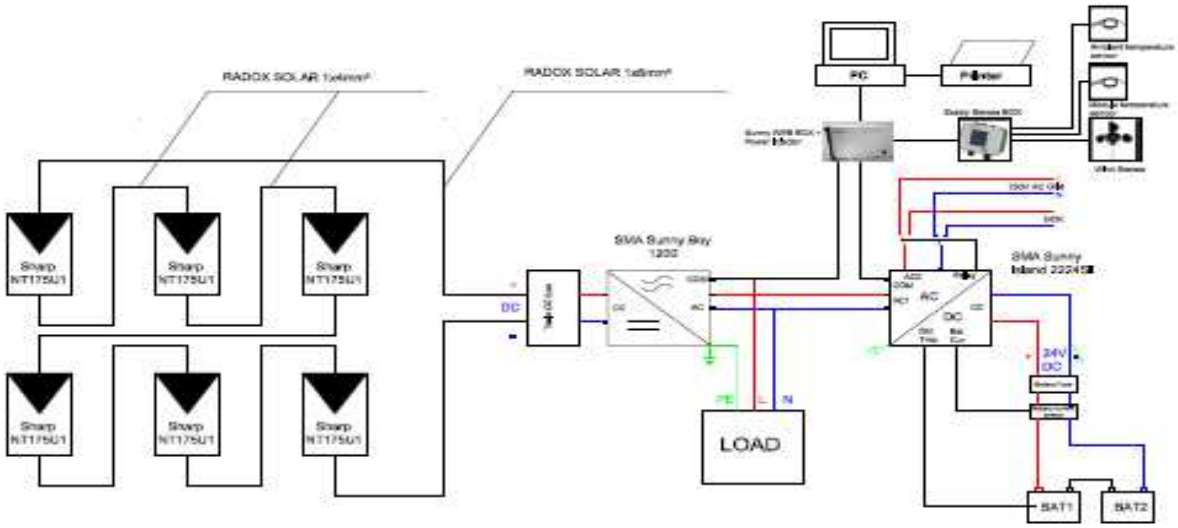
Test Facility 1. Power Electronics Laboratory (PEL)

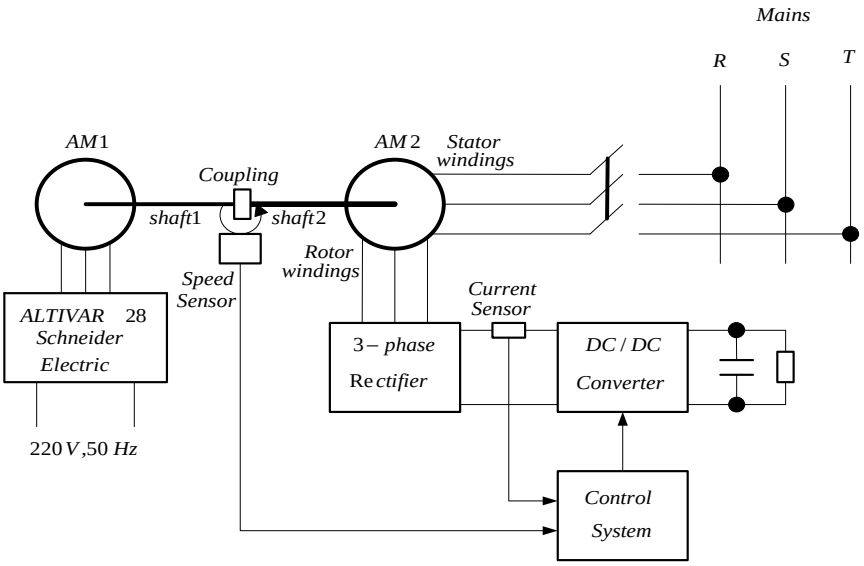
The Power Electronics laboratory is equipped with physicals models of different type electrical energy converters and the measurements apparatuses for his investigations: AC/DC, DC/AC current or voltage inverters, DC/DC converters, Active power filters, Digital oscilloscopes, Power Quality Analyzer, Simulation Software, Control Systems, Computer systems for modeling the power electronics devises. Wind generator physical model stand is realized.
New Hybrid installation equipped 2011 consist of PV modules Sharp NT175 , two SMA Inverters SMA Sunny boy 1200; Sunny Island 2224, Storage, DC line, AC line, Controllable DC and AC loads, Monitoring with Internet connection, Network connected and Island operation

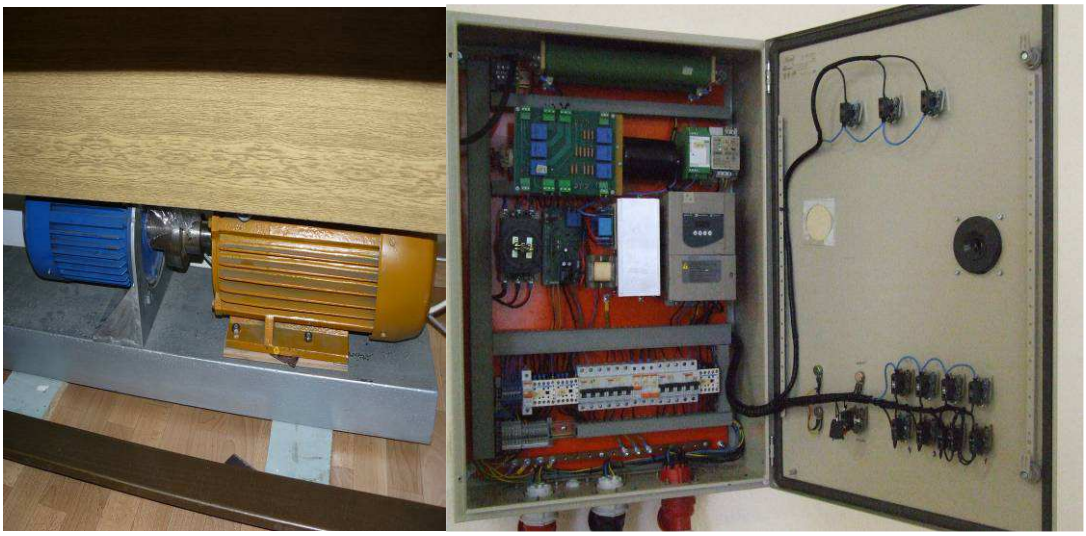
Proposed services:

- Research of methods and models for distributed systems with improved power factor relatively the electrical network:
- Research on network connected to the grid and Island operation in hybrid installation whit controllable loads and storage.
- Research on power flow in the hybrid system – steady state applications.
- Investigation and implementation of Active Power Filters for improvement of Power Quality and Energy Efficiency.
- Computer aided design and simulation with MATLAB, PSIM, PLECS and OrCAD Design Centre of DC/DC, DC/AC and AC/AC converters.



Wind generator physical model stand: Two Asynchronous Generators AM1 with frequency control, AM2 with current control





Current researches

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