

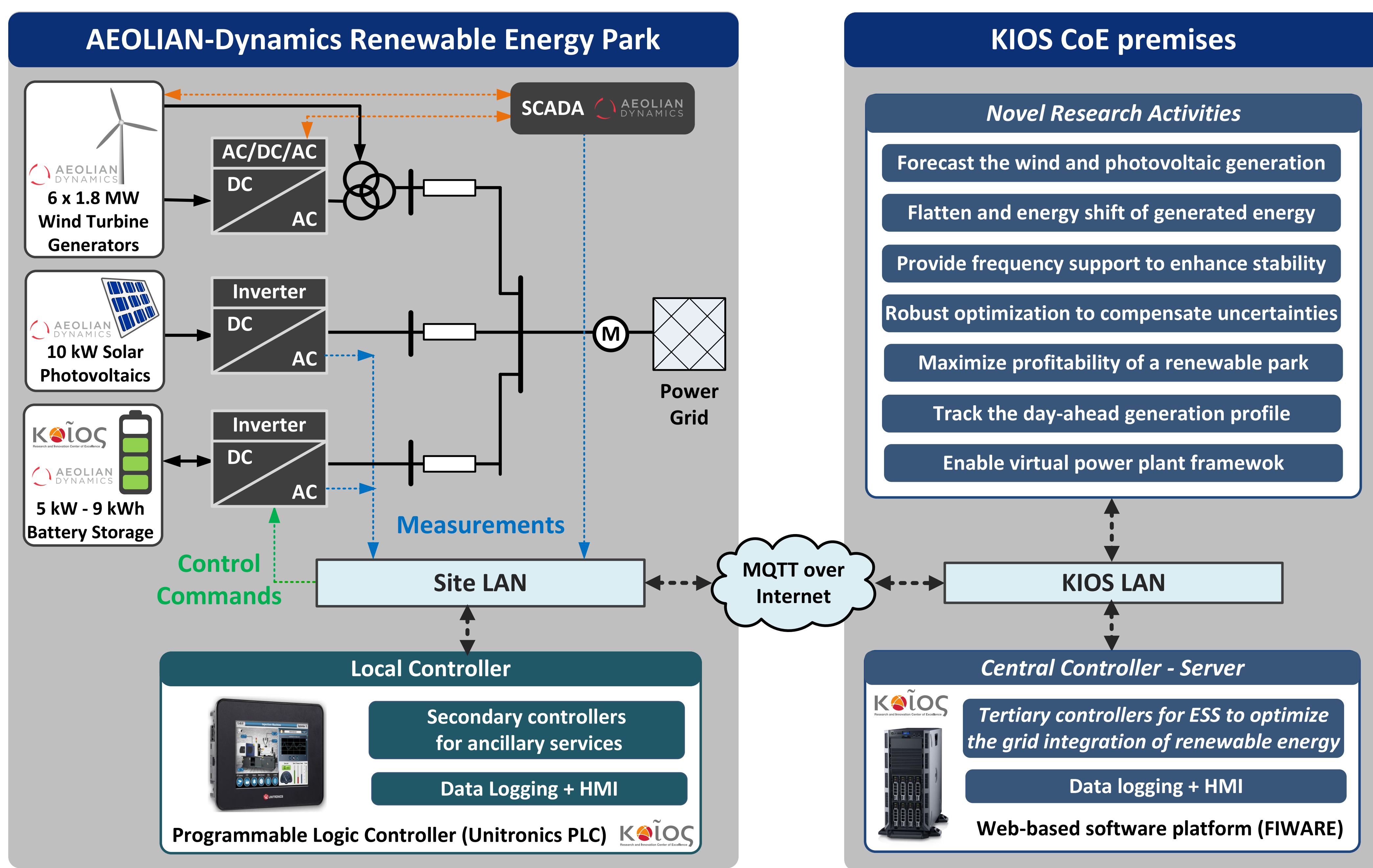
EMPOWER bring together all the key stakeholders in Cyprus with the goal to develop sustainable and intelligent solutions for the green and digital evolution of electric power system of Cyprus.

### Pilot Demonstration – Energy Storage System for Renewable Energy Sources



This pilot demonstration site of the EMPOWER project aims to investigate how the flexibilities provided by energy storage systems can enhance the grid integration of renewable energy. Novel solutions, developed within this project, demonstrate in operational environment that energy storage can compensate the intense and unpredicted variations of renewable energy generation, enable the grid friendly operation, and maximize the profitability of the investment.

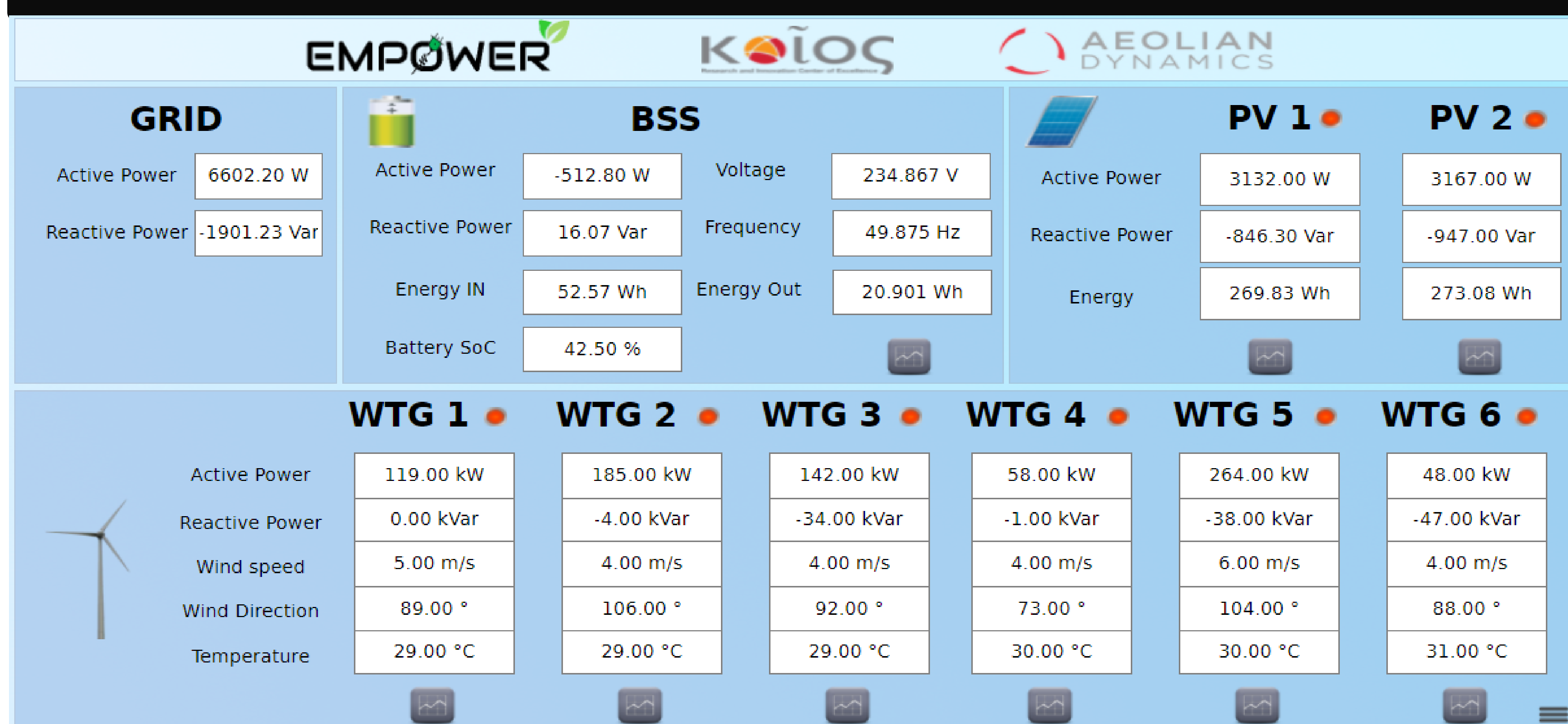
### Pilot Architecture



### Technical objectives

- Control energy storage to accurately track the day ahead generation profile
- Compensate power fluctuations and achieve robustness against weather uncertainties
- Apply energy shifting methodologies for increasing the profitability of the park
- Provide frequency support to the ancillary services market to enhance system stability
- Enable a virtual power plant framework

### Monitoring and automated control



### Impact

- Develop innovative solutions for energy storage and renewable energy systems
- Validate and demonstrate novel research results in operational environment
- Demonstrate the benefits of incorporating energy storage in future power systems

### Connect

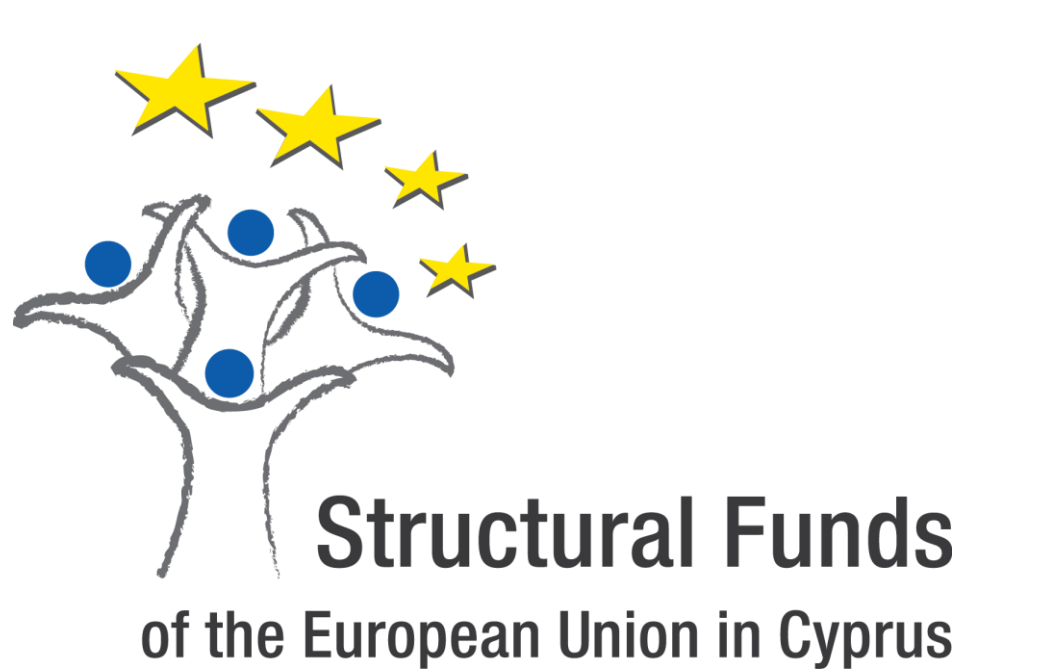


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### Sponsors



### Consortium of the EMPOWER project (INTEGRATED/0916/0035)