

EERA Workshop on Hybrid Energy and Energy Storage Systems

Date: 22 March 2017 – 09:00h to 16:00h

Venue: IK4-CIDETEC - Pº Miramón 196, 20014 - DONOSTIA / SAN SEBASTIÁN (SPAIN)

Programme

09:00		Start
09:00	I	Opening and Introduction <ul style="list-style-type: none"> • <u>Atle Harby</u> – SINTEF (NO) / EERA JP ES SP4 Coordinator • <u>Giovanna Cavazzini</u> – University of Padova (IT) / EERA JP ES SP4 Deputy
09:25	II	CASE STUDIES
09:30		1- Contribution of hybrid energy and energy storage systems to the integration of variable renewable energy in the power system <ul style="list-style-type: none"> • «Hybridisation with fast energy storage technologies» - <u>Marcos Lafoz</u> – CIEMAT (ES) • «Integrating renewables and storage» - <u>Atle Harby</u> – SINTEF (NO)
10:15		2- Control and Energy Management Systems for hybrid energy and energy storage systems <ul style="list-style-type: none"> • «Control strategies and sizing of a flywheel energy storage plant for the frequency control of an isolated wind-hydro power system» - <u>Juan Ignacio Perez Diaz</u> – UPM (ES)
11:00		Coffee Break
11:20		3- Regulatory barriers for the deployment of hybrid energy and energy storage systems <ul style="list-style-type: none"> • «Regulatory framework for energy storage systems, barriers and recommendations» - <u>Raquel Garde</u> – CENER (ES) • «EU regulatory barriers to energy storage – how to unlock the grid code?» - <u>Alfons Westgeest</u> – EUROBAT (BE)
12:05		4- Hybrid energy and energy storage systems in a Smart Grid: New concepts and future potential <ul style="list-style-type: none"> • «Flywheel- Battery Hybrid for Grid Stability» - <u>Frank Burke</u> – Schwungrad Energy (IE) • «Novel concepts of increasing the storage at Pumped Storage Power Plants» - <u>Pål-Tore Storli</u> – NTNU (NO) • «An innovative configuration of Pumped Thermal Electricity Storage System» – <u>Anna Stoppato</u> – University of Padova (IT)
13:00	III	DISCUSSION (all)
14:00		Lunch (BIZI restaurant)
15:00	IV	PLAN for FUTURE WORK (all) <ul style="list-style-type: none"> - Publications - Research needs
15:50	V	CONCLUSIONS
16:00		End of meeting