

CENER CONFERENCE ON MICROGRIDS IN INDUSTRIAL AREAS

Sarriguren (Navarra), 6 May 2011. -“Microgrids in industrial areas” is the title of the conference that has been held this morning at the test laboratory that CENER owns in Sangüesa.

José M^a Roig, the Regional Minister for Innovation, Enterprise and Employment of the Government of Navarra, Pedro Larraz, the Research Director of San Jorge University, Coordinator of the OPTIMAGRID Project, and Jose Javier Armendariz, Director General of CENER have taken part in the opening act of the conference.

Conference participants have been able to learn about theoretic concepts and examples of best practices of this type of installation, as well as the Walqa project in Aragon, the complementary services for correct grid management (modelling), and the role played by microgrids in the European energy strategy.

The central axis of the OPTIMAGRID European programme, which CENER is a partner of and which, for a two-year period, is going to study smart energy control systems, which will permit the real time management of an electricity distribution microgrid, applied to an industrial area and with a high renewable energy interaction percentage in the project.

During the morning, a visit has also been made to the CENER microgrid that has recently been launched in the Rocaforte industrial estate and which is currently providing service to part of the electrical loads of the CENER laboratory installations themselves, as well as to part of the public lighting of the Sangüesa industrial estate.

The main characteristics of the CENER Microgrid are:

- Microgrid aimed at industrial applications. To date, the majority of the microgrids have focused on residential applications. In our case, the idea is to be able to replicate this experience in industrial estates to make them self-sustainable and green, on the one hand, and on the other hand, in the event of grid faults and disconnections, for there to be no supply cuts.
- Microgrid focused on storage systems. One of the main objectives of this microgrid is to test and analyse the different energy storage systems. Due to the design itself, carried out by CENER, this microgrid gives us the necessary versatility to be able to test any storage technology, using medium scale renewable power generation.
- Finally, this microgrid has been designed as a test bench, not only for storage technologies, as indicated above, but also for any generation

system, converters, control, etc. Thus, in short, this installation will permit performing practical experiments in the field of distributed generation.

It is comprised of the following elements:

- A 25 KWp photovoltaic installation.
- A full-converter type 20 kW nominal power wind turbine.
- A 55 kVA nominal power diesel-driven generating set.
- A lead acid gel technology battery bank, able to supply 50 kW uninterruptedly for 2 hours [BAE].
- A 120 kVA three-phase loads bank.
- A Vanadium Flow Battery with capacity to provide 50 kW for approximately 4 hours.

CENER has been responsible for the design and management of the microgrid and its start-up has been possible thanks to the funding of the Government of Navarra and the European Regional Development Funds (ERDF) of the European Commission. In the case of Navarra, this infrastructure forms part of a microgrid development plan promoted by the regional government and which encompasses another microgrid of the UPNA for basically residential applications.

The Optimagrid project has a budget of 1.19 billion Euros and will last for two years. Coordinated by San Jorge University, its partners include the Foundation for the Development of New Hydrogen Technologies in Aragon, the Research Centre for Energy Resources and Consumption (CIRCE), ESTIA Recherche, AICIA, the Higher Technical Institute of the Technical University of Lisbon, and CENER.

During the visit, which has included a run through the solar panel and module test and characterisation laboratory and the biofuel laboratories, representatives from the Swiss Embassy have expressed their interest in organising a meeting of business people from their country at the CENER facilities, to thus analyse possible collaboration channels.

More information: www.cener.com/ www.optimagrid.eu

About CENER

The **National Renewable Energy Centre** is a technology centre, with excellent qualifications and international prestige, specialised in applied research and the development and

promotion of renewable energies. CENER has more than 200 researchers, carrying out activities on the five continents. The Board of trustees is comprised of the Ministry of Science and Innovation, the Research Centre for Energy, Environment and Technology (CIEMAT), the Ministry of Industry and the Government of Navarra.

CENER performs its activity in six work areas in the field of energies: wind, solar thermal and solar photovoltaic, biomass, bioclimatic architecture and renewable energy grid integration. Its headquarters are located in the Ciudad de la Innovación (Innovation Centre), in Sarriguren - Navarra, although it has offices in other locations in Spain. It has modern accredited laboratories and technological facilities that are a benchmark all over the world, as is the case of the Wind Turbine Test Laboratory (located in Sangüesa), a biofuel laboratory, a thermal collector and photovoltaic module test laboratory, as well as a photovoltaic cell materials and processes laboratory. The 2nd Generation Biofuel Centre has recently been created.

For more information:

JULIA ELIZALDE (CHIEF COMM. AND EXT.AFF. OFFICER) Tel: 948 25 28 00
comunicacion@cener.com / www.cener.com