

Rešitve slovenskih podjetij »izstreljene« med najperspektivnejše strateške energetske tehnologije evropske unije

Pod okriljem evropske komisije, predsedujoče Španije, članov SET-Plan (Strateške energetske tehnologije) ter najvišjih predstavnikov iz elektro energetike, so bile ustanovljene Evropske Industrijske Iniciative za Strateške Energetske Tehnologije prihodnosti. Glavne usmeritve so na področju obnovljivih virov in pa elektroenergetskih omrežij prihodnosti (Smart Grids).

Vsi sodelujoči so se strinjali, da bo EU dosegla zastavljene okoljske cilje samo ob inovativnih tehnologijah s področja energetike. Kar bo imelo za posledico zniževanje stroškov za »dekarbonizacijo« družbe skozi razvoj tehnologij, odpiranje novih delovnih mest ter zviševanje konkurenčnosti evropskega gospodarstva.

Na pomembnost teh smernic in ukrepov kažejo tudi številke, saj je Evropska komisija Oktobra 2009 ocenila, da bo potrebno v naslednjih 10 letih nameniti za področje »Investiranje v razvoj nizko ogljiknih tehnologij«, kar 37 milijard €.

Prav zaradi vseh teh dejstev in usmeritev ima dosežek naših podjetij še toliko večjo veljavo. Med 20 najperspektivnejših evropskih rešitev je bila izbrana rešitev KIBERnet. Gre za rešitev s področja pametnih elektro-energetskih omrežij prihodnosti – Smart Grids. Izmed vseh sprejetih rešitev je prav rešitev KIBERnet predstavljala celovitost združevanja vseh elementov elektro-energetskega sistema. Tu govorimo o vključevanju obnovljivih virov, razpršene proizvodnje ter industrijskih porabnikov električne energije v tako imenovano »Virtualno elektrarno«, ki omogoča brezogljicho proizvodnjo ter učinkovito rabo električne energije.

Prav zaradi svoje »povezovalne« vloge, je ta rešitev požela še dodatno pozornost med vidnimi člani evropske komisije in ostalimi udeleženci SET-Plan konference.

SET-Plan Conference 2010
3rd and 4th of June 2010, Madrid, Spain

International Demand Response Demonstration Centres – KIBERnet

Virtual Power Plant as an integral part of future electricity networks

Overall Objectives and Budget
The KIBERnet system centrally manages electricity consumption and distributed generation across a network of industrial and commercial prosumers. It provides regional distribution of electricity, transmission and distribution networks and enables its better responsiveness. It's a Virtual Power Plant (VPP) for effectively managing energy challenges in balancing the supply and demand in the electricity system.
Total R&D and Demonstration Budget is 2.914.101 €

“Managing consumption and distributed generation across a network of industrial and commercial prosumers”

Technical Barriers and Targets
Concept requires for managing a wide range of different industrial loads without harmful influence by the production process and an important objective: They enhance the total capacity of the VPP and its financial effectiveness.
Communication security and interoperability is another issue which has to be tackled together with the high complexity of the VPP.

Technical accomplishments/progress/results
The system is fully automatic with support for different pricing schemes: Real, dynamic and real-time. With proprietary algorithms technology it enables formation of different kinds of electricity contracts: day ahead, intraday and balancing.

Future Work
On the basis of all R&D results there will be established three International Demand Response Demonstration Centres to establish a realistic environment for VPP. These are going to be located in Vienna (Austria), Ljubljana (Slovenia) and Atlanta (USA).

Conditions and usage
KIBERnet system offers demand response solution, whereby it monitors electricity consumption and automatically adapts electricity supply to those that usage during those same peak periods. This helps optimize the balance of electric supply and demand, it can be used as a significant resource for all suppliers and producers.

Project Overview
Cooperation Lead Investigation: Mr. Peter Nemec
R&D Lead: Dr. J. J. Garcia
Budget: 2.914.101 €
1000 Ljubljana - SLOVENIA
1000 Vienna - AUSTRIA
1000 Atlanta - USA
Key partners:
- Jozef Stefan Institute, Institute for Energy Efficient Systems
- University of Ljubljana, Faculty of Electrical Engineering
- University of Vienna
From 01/2008 to 03/2011
Website of the project:
www.kiber-net.com

KIBERnet
International Demand Response Demonstration Centres

