

**Distributed Renewable resources Exploitation in electric grids  
through Advanced heterarchical Management**

	<i><b>Distributed and coordinated Demand Response for the supply of Frequency Containment Reserve (FCR)</b></i>		
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**ABSTRACT:**

*The availability of frequency-controlled reserves is essential for any Utility to secure the power system in both interconnected and microgrid contexts. This paper presents a concept of coordinated Distributed Energy Resources (DER), load modulation willing to supply frequency-controlled reserves. These reserves, compliant with both Frequency Containment Reserves (FCR) and Under Frequency Load Shedding (UFLS) requirements, are provided through a structure of Virtual Power Plant (VPP). Physical demonstrations have already been performed on an off-grid system. HVAC variable speed motors and resistive loads control tests are now depending at the European scale within Dream FP7 project.*