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(54) Title of the invention : A SYSTEM FOR ENERGY MANAGEMENT THROUGH SOFTWARE DEFINED NETWORK OR NETWORK FUNCTION VIRTUALIZATION ARCHITECTURES

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## (57) Abstract :

The present invention is a long-term sustainable Demand-Response (DR) architecture for the efficient management of available energy consumption for Internet of Things (IoT) infrastructures. The proposal uses Network Functions Virtualization (NFV) and Software Defined Networking (SDN) technologies as enablers and promotes the primary use of energy from renewable sources. Associated with architecture, this paper presents a novel consumption model conditioned on availability and in which the consumers are part of the management process. To efficiently use the energy from renewable and non-renewable sources, several management strategies are herein proposed, such as prioritization of the energy supply and workload scheduling using time-shifting capabilities. The complexity of the proposal is analyzed in order to present an appropriate architectural framework.

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