

Construction of IoT-based Campus Micro-grid Project in South Korea

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Abstract

Development of a customized SNU(Seoul National University) campus micro-grid model to provide 1) 4 hours islanding operation to critical loads, 2) 20% peak load reduction and energy cost saving by cell micgro-grid model, 3) consumer participative energy-saving services by employing big data platform. This project achieves early commercialization by 2 years of development and 2 years of demonstration. Model considering energy consumption characteristics and energy saving methods is to develop accurate model(lecture, research, hospital, dormitory, and etc) for each building types. The accurate model will be designed by enhanced time-spatial resolution from IoT-based big data technology. Each type models are built and secured accurate model through time and space resolution improvement by IoT based big data technology. Lego style campus micro-grid customized model takes flexible configuration change depending on customer demand. Lego-style campus microgrid customized solution is consist of campus model development, IoT based cell platform development and flexible solution by model combination.