

Design of Open Framework Based Smart ESS Profile for PV-ESS and UPS-ESS

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Abstract : In this paper, an open framework based smart energy storage system (ESS) profile for photovoltaic (PV)-ESS and uninterruptible power supply (UPS)-ESS is proposed and designed. An open framework based smart ESS is designed and developed for unifying the different interfaces among manufacturers. The smart ESS operates under the profile which provides the specifications of peripheral devices such as different interfaces and to the open framework. The profile requires well systemicity and expandability for addible peripheral devices. Especially, the smart ESS should provide the expansion with existing systems such as UPS and the linkage with new renewable energy technology such as PV. This paper proposes and designs an open framework based smart ESS profile for PV-ESS and UPS-ESS. The designed profile provides the existing smart ESS and also the expandability of additional peripheral devices on smart ESS such as PV and UPS.

Keywords : energy storage system (ESS), open framework, profile, photovoltaic (PV), uninterruptible power supply (UPS)

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