Design Application of Wireless Sensor Networks and GSM Technique for Monitoring Distributed Energy Resources Linked System Bonggakaradeng District.

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Abstract. The proposed research work aims to enhance the operational provision of DERs (Distributed Energy Resources) setup via scrutinizing and upgrading of the state documents scheme. Inspection of thermal performance in the energy resources system will be performed to check the contrast amid heat impact and the electric energy current process. It is captious to check the dynamic evaluation to maintain the performance of system in accordance with proposed electric current transmitting ability. This will lessen the advancement constraints due to heat impact in supply systems. ZigBee and GSM established technology will be applied to send the notifications to the scheme technicians about the impact of severe heat effect. Further, LM35 heat detectors are employed to check the heat of supply networks, temperature state in storage rooms, safety confine apparatus, photovoltaic radiations as well as wind turbine. Furthermore, the outturns are introduced into the file of ATMEGA328P MCU for additional handling, organizing and it is subsequently conveyed via ZigBee and GSM program to be exhibited on LCD display in common form. The detectors which are connected with MCU will initiate a warning if they encounter an unusual condition. This step directs a GSM initiation message to the distant observer for making an alarm to workers. The electric circuit is advanced by employing NI Multidisc software. The proposed scheme will remotely scrutinize the thermal states of the distributed energy resource system, and can solve the current supply shortfalls.

Keyword: condition, monitoring, thermal behavior and zigbee/GSM components.