Dublin microgrid control

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Electrical and electronic engineering

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The proposed system can advance its energy management efficiency through implementation of Demand Side Management (DSM) technique. For the test case, 50% of energy storage capacity could be avoided through DSM technique. It also helps to further decrease the COE by 25%. The C-mGrid system with storage is optimised by implementing the Economic Model Predictive Control (EMPC) approach operating at the pricing level. Emphasis is given to the operational constraints related to the battery lifetime, so that the maintenance and replacement cost would be reduced. This technique could help to improve the battery performance with optimised storage and also reduces the COE of the system by 25%.

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