

Resilience of hydrogen fuel station-integrated power systems with high penetration of photovoltaics

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Abstract-

power systems; to absorb electricity, hydrogen storage tanks and FCs are the most efficient components in resilience enhancement of the system. Hydrogen tanks improve ELNS of electricity by 1.8 % and remove the need of system operator to shed hydrogen demands. A sensitivity analysis is done to see how the results of the developed model are sensitive to its parameters.

Index Terms- Electrolyzer; Green hydrogen; Hydrogen fuel station; Hydrogen storage; Mobile battery; Power system resilience

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