

Supplemental information - Review and techno-economic analysis of emerging thermo-mechanical energy storage technologies

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Section SI Off-grid system with abundant wind and solar

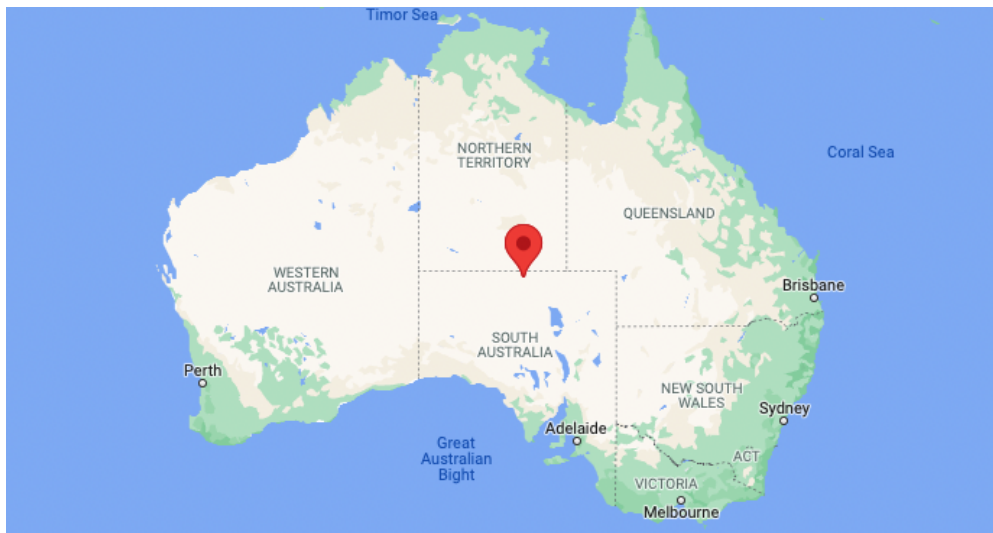


Figure S1: Off-grid system chosen to demonstrate location with abundant wind and solar.

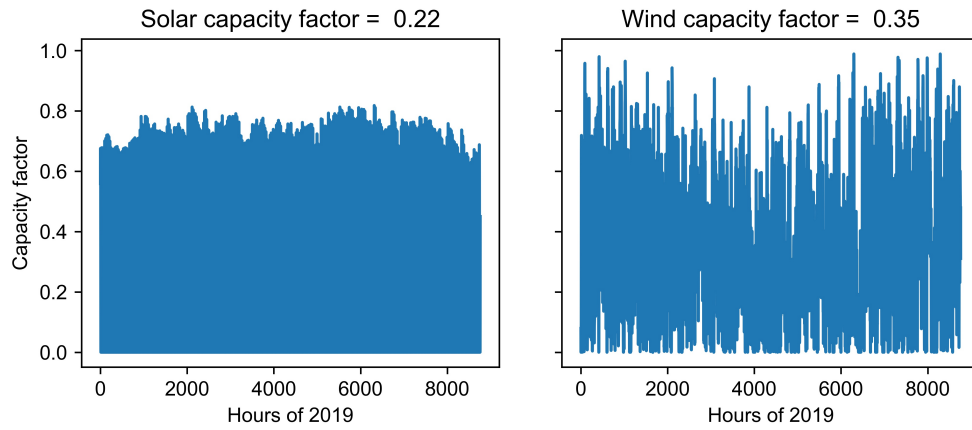


Figure S2: Wind and solar capacity factors for the off-grid system in Australia.

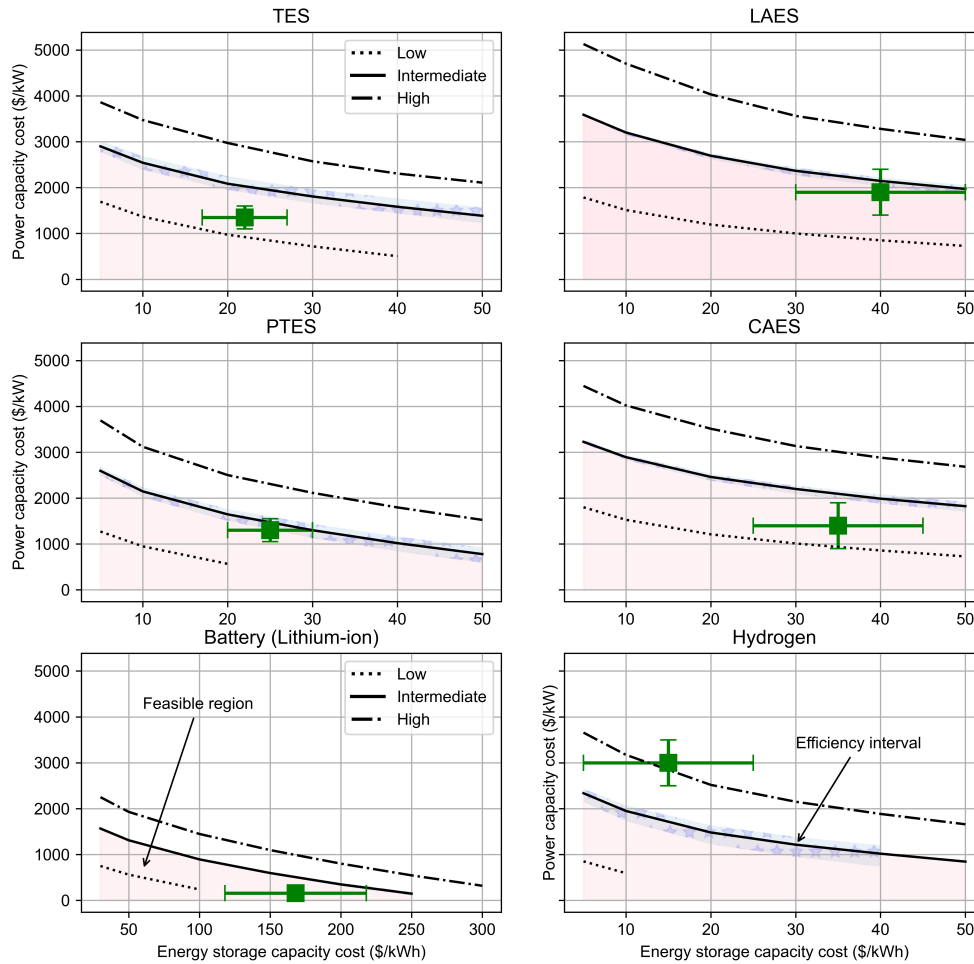


Figure S3: Investment cost curves for storage technologies to be economically viable in the off-grid energy system (Australia) when the storage size is limited to discharge 1% of annual energy demand.

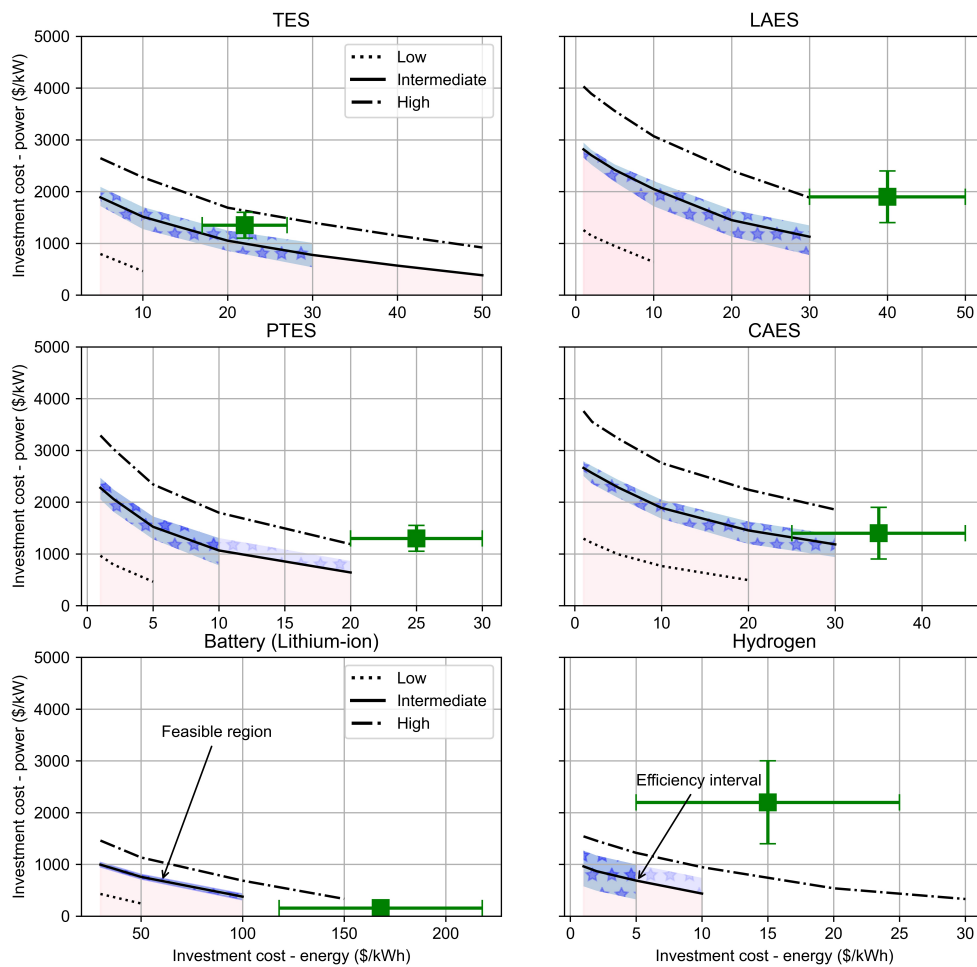


Figure S4: Investment cost curves for storage technologies to be economically viable in the off-grid energy system (Australia) when the storage size is sized to discharge at least 5% of annual energy demand.

Section SII Off-grid system dominated by wind

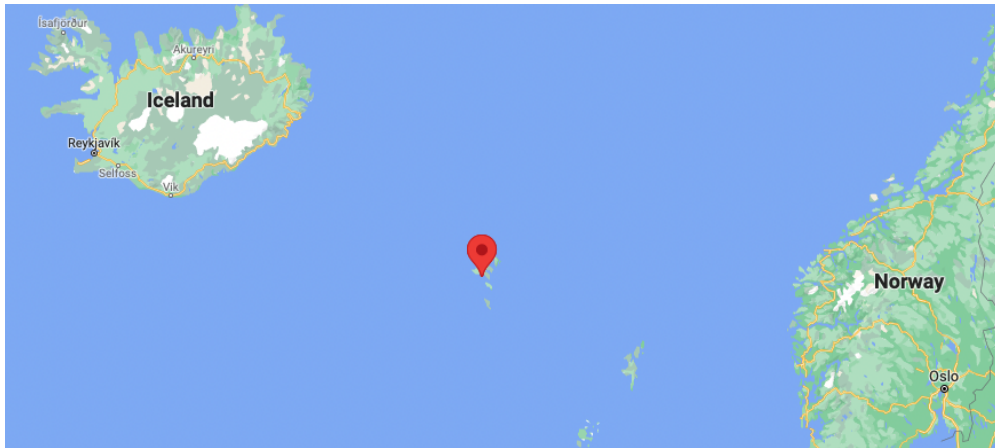


Figure S5: Off-grid system chosen to demonstrate wind dominated location (Faroe Island).

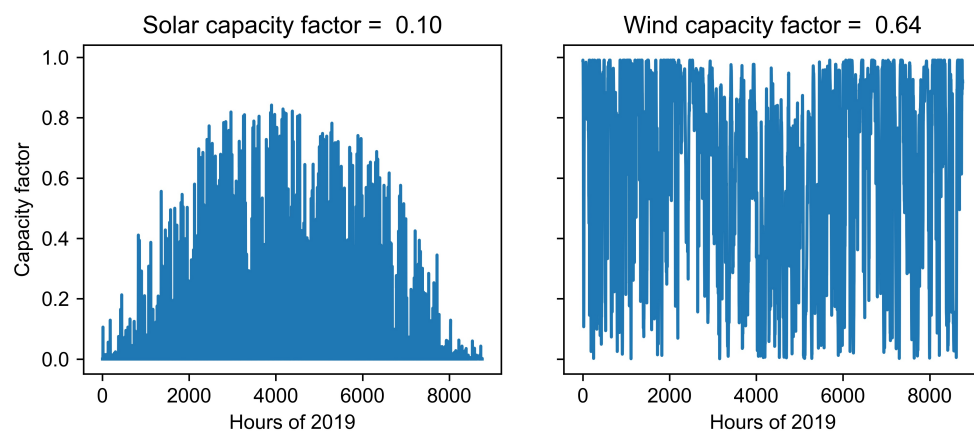


Figure S6: Wind and solar capacity factors for the off-grid system in Faroe Island.

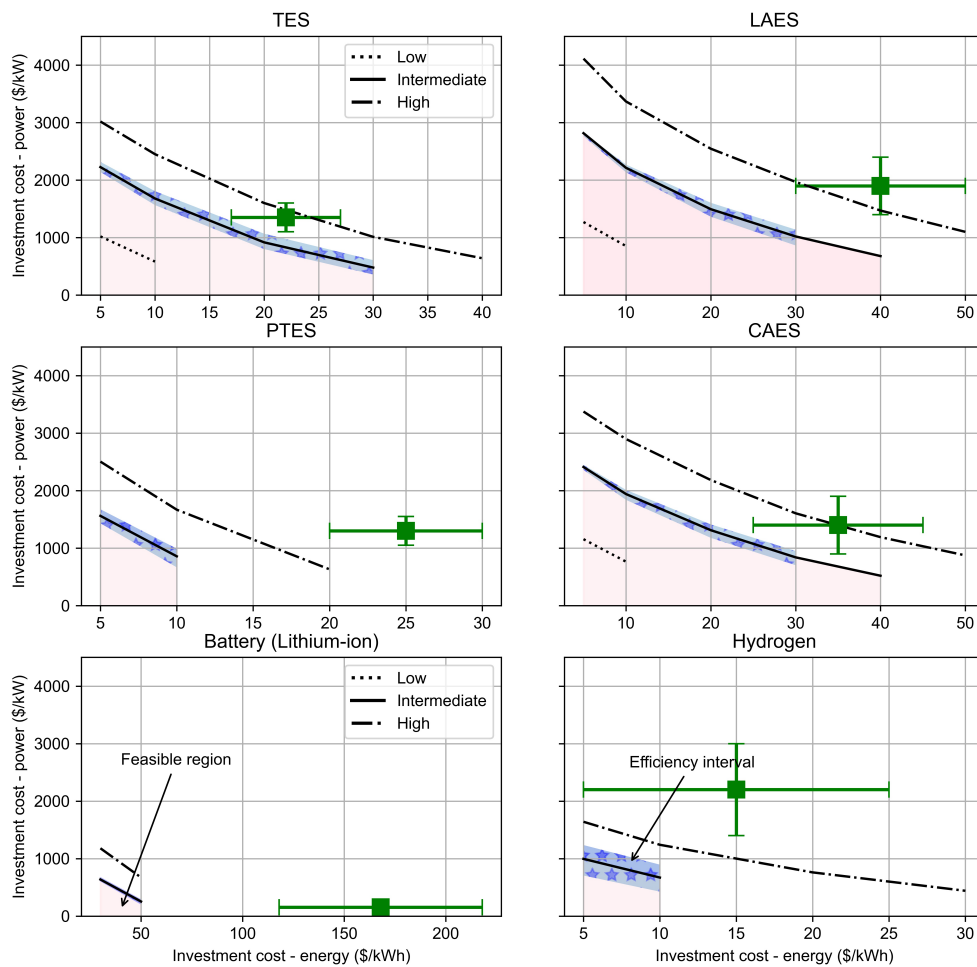


Figure S7: Investment cost curves for storage technologies to be economically viable in the off-grid energy system (Faroe Island) when the storage size is limited to discharge 2% of annual energy demand.

Section SIII Off-grid system dominated by Solar



Figure S8: Off-grid system chosen to demonstrate solar dominated location (Tibet).

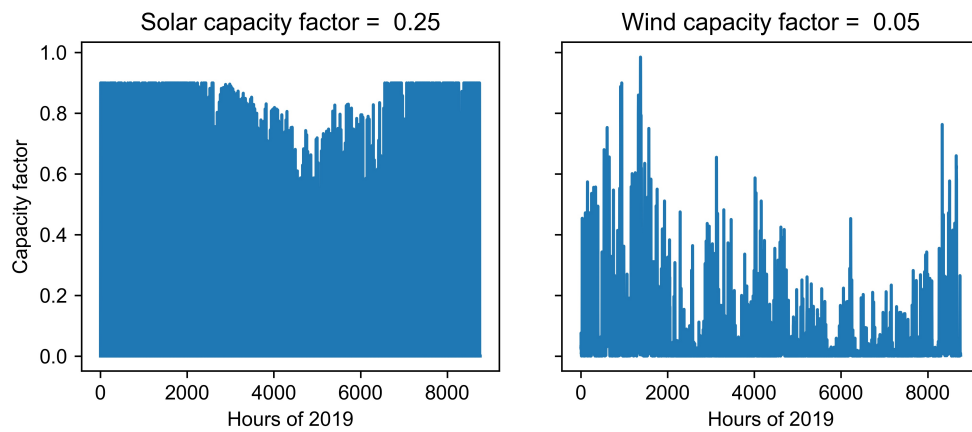


Figure S9: Wind and solar capacity factors for the off-grid system in Tibet.

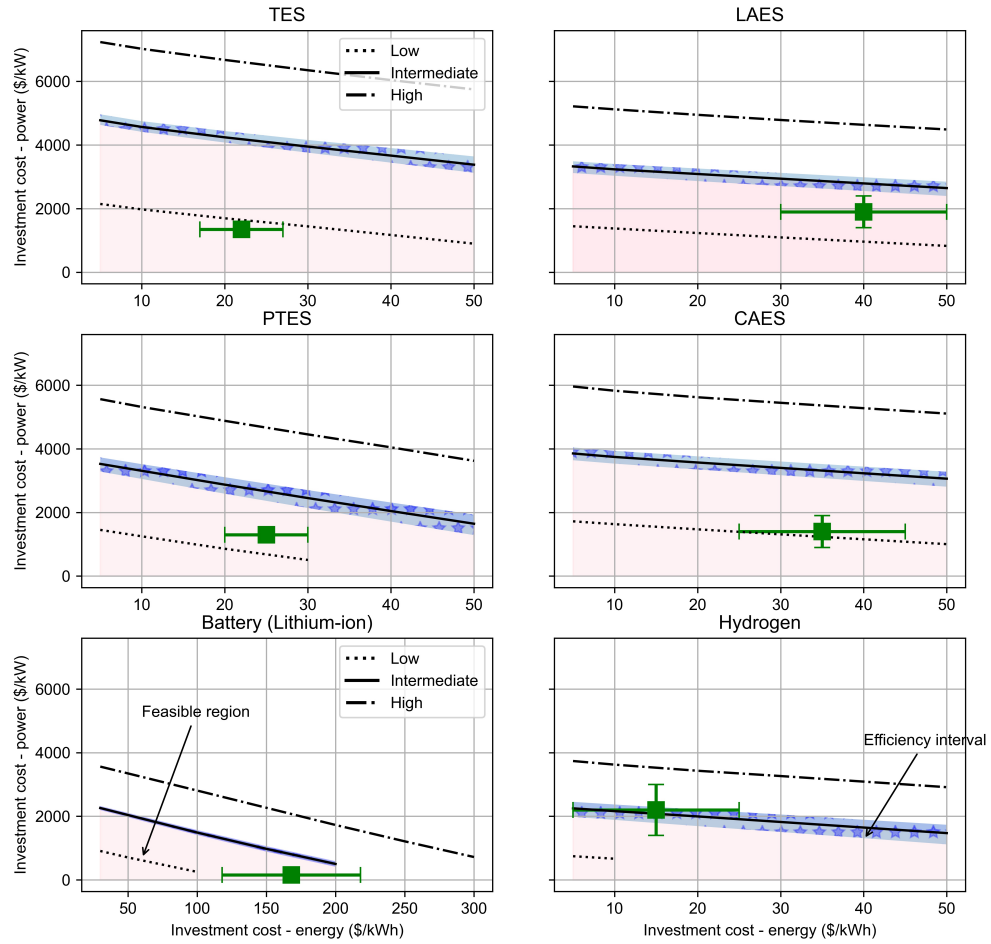


Figure S10: Investment cost curves for storage technologies to be economically viable in the off-grid energy system (Tibet) when the storage size is limited to discharge 2% of annual energy demand.