

Demand Management Innovation – examples of possible initiatives

Example Initiative Participation in Emergency System Management

Description Explore incentives and technology to enable control of demand side response and broader Distributed Energy Resources (DER) such that they can to contribute to emergency management activities, for example to allow (voluntary) participation in Special Protection Schemes (SPSs) required to maintain system security.

Potential benefit Minimise forced customer outages during conditions where emergency schemes operate. Improve resilience and selectivity of SPSs with high DER penetration.

Example Initiative Regional demand smoothing

Description Explore incentives and technology to dispatch demand side response and broader DER (storage, solar PV, controllable load) in a way that counteracts the moment-by-moment fluctuations from sources of intermittent generation (e.g. large solar or wind farms).

Potential benefit Improve the ability to operate at levels of high export from South Australia while minimising the risk that short-term fluctuations in intermittent generation could overload interconnector capability.

Example initiative Intermittent generation following

Description Explore incentives and technology to encourage high consumption at times of high intermittent generation output, and low consumption or net generation at times of low intermittent generation output.

Potential benefit Improve the correlation of demand to intermittent generation output, allowing more efficient network operation and operation of the market.

Example initiative EV-to-Grid integration

Description Explore incentives and technology to enable electric vehicles (EVs) to contribute to meeting grid and energy market needs such as localised transmission limitations.

Potential benefit Minimise the amount of network and generator investment needed to accommodate the future EV fleet.

Example initiative Locational trough filling

Description Explore incentives and technology to encourage increased connection point demand at times of very low or negative (reverse power flow) local demand due to the presence of significant embedded generation and localised transmission needs.

Potential benefit Enable increased penetration of embedded generation at local connection points that are at or close to their technical limits due to very high penetration of embedded customer generation and avoid unnecessary network investment.

Example initiative Locational peak lopping

Description Explore incentives and technology to encourage reduced connection point demand at very high local demand times.

Potential benefit Defer connection point augmentation and/or reduce the size of network replacement investment.

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