

Project FDGF

(Energy Demand & Generation Exchange)

The National Electricity Market (NEM) is experiencing its largest transformation ever with fossil fuel exits, rapid uptake of renewables and Distributed Energy Resources (DER) Project EDGE can inform this transformation to be one where voluntary DER coordination supports more affordable, reliable and cleaner electricity for all consumers

Project EDGE has published its final reports, providing a practical evidence base for Australia's electricity reforms to integrate DER into the NEM in a way that benefits all consumers.

The findings were obtained over 3 years from July 2020 to October 2023 from various field tests and research activities funded by the Australian Renewable Energy Agency and conducted by the Australian Energy Market Operator (AEMO), AusNet Services (AusNet) and Mondo, with the cross-industry support of multiple participants, partners and stakeholders.

The reports also identify practical insights and priorities for consideration by policy makers, industry leaders, market bodies and industry participants.

AEMO ARENA

- Wholesale market and system optimisation through AFMO

3. Efficient and affordable

Scaled VPP uptake is underpinned by efficient DER data exchange approach:

- Removes VPP cost and process duplication across industry
- Fosters DER service innovation and consumer choice
- Supports standardisation of services
- Enables value stacking and deployment of VPPs more efficiently



PROJECT EDGE KEY FINDINGS

WHAT PROJECT EDGE TESTED

The trial successfully demonstrated feasible end-to-end technical capabilities that can scale

The findings provide a proven framework of roles and market configurations that have the flexibility to facilitate new innovations as industry needs evolve.

4. Clear roles and responsibilities

DER value driven by clear, proven, customercentred roles

- DER optimisation through aggregators with customer consent
- Distribution network optimisation through DNSPs

Project EDGE DER integration framework

1. Consumer-centric

- Customers are optimistic about VPPs but financial and trust barriers need to be addressed
- Simple customer experiences and easy to understand communication is critical to customer retention
- Enable consumer choice on whether to join a VPP, with confidence they will be better-off by participating
- Greater DER participation generates greater value for all electricity consumers and greater emissions reductions

2. Secure and reliable

- DOEs enable VPPs to operate with greater solar exports, within power grid limits
- DOEs should start simply and progress in sophistication over time aligned to network needs
- Established DOE processes and technical standards will allow AEMO and DNSPs to better secure the electricity system for consumers
- A DER-specific Cyber Security standard is needed, covering all related parties
- Identified processes needed to coordinate DER operations between AEMO, DNSPs, and VPPs including for emergencies.
- Separating required visibility of DER behaviour is possible without dictating VPP business models
- VPP service performance improves with size and diversity
- VPP capability is best matured via a service-based stepping-stone approach

AusNet Mono



\$6 billion in cost savings for NEM electricity consumers

\$3 billion further societal benefits through emissions reduction



with an efficient and scalable data exchange approach to reduce costs and expand consumer choice