Project EDGE

Summary classification of Local Services

Version: Draft

Important notice

PURPOSE

This document provides aggregators with an overview of the types of local services to be procured within the Project EDGE trial. An example (draft) service attribute and procurement process are provided to guide aggregators in assessing their ability to participate in Project EDGE.

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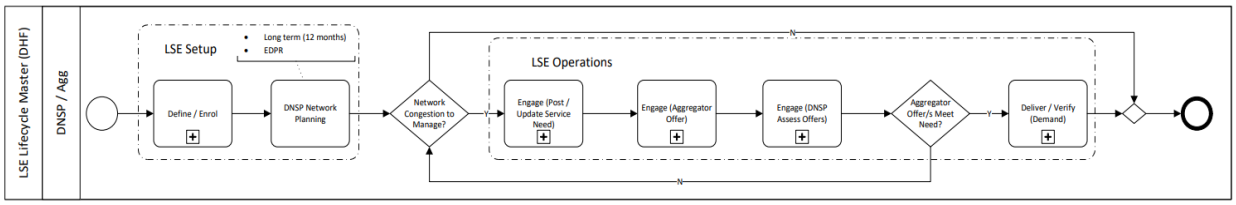
VERSION CONTROL

Version	Effective date	Summary of changes
Initial Draft	Dec 2021	

1. Demand increase/ reduction services

The EDGE Local Services Exchange (LSE) framework will facilitate and trial visible, scalable and competitive trade of local DER services that enable Distribution Network Service Providers (DNSPs) to manage network power security and reliability using local DER and in turn allow DER Aggregators to stack local and wholesale value streams efficiently. This is intended to complement the existing DNSP reliance on network and non-network based services and offer additional economic options for network operators. The diagram below shows the expected high-level process flow for LSE:



Three types of Local Services have been considered for the EDGE trial as listed below:

- High Firmness
- Medium Firmness
- Low Firmness

This document provides an overview of each of these services including the draft service attributes.

Please note that services are subject to change as Project EDGE progresses and are not limited to those shown here.

High Firmness

Typically linked to a network planning capex deferral use-cases and network augmentation expenditure.

- **Trial example:** Feeder with high overloading probability/incidence – peak demand reduction service required.
- **Future example:** Reverse power during solar PV generation peak causes sustained or regular network operation/asset issues – local generation reduction or load increase service required.
- **Treatment:** Likely to require services over a prolonged period (>1year), hence suited to a longer-term contract with *guaranteed availability and agreed pricing*.

Medium Firmness

Typically linked to an **operational planning** use-case, weather related, network operational expenditure funded.

- **Trial example:** Forecast asset overload as a result of heat wave activity or picking up additional customer load due to a planned temporary network reconfiguration - peak demand reduction service required
- **Future example:** Minimum demand system issue forecast - local generation reduction or load increase service required
- **Treatment:** Likely to require services on a seasonal basis, hence suited to a shorter-term contract with *negotiated availability and pricing*

Low Firmness

Typically linked to a spontaneous operational use-case trigger, event related, network operational expenditure funded.

- **Trial example:** Unexpected occurrence of abnormal local network loading as a result of a community event, or a combination of weather and special calendar days - peak demand reduction service required
- **Future example:** AEMO declared system contingent scenario – services required would relate to the event
- **Treatment:** Akin to NEM spot market - *no guaranteed availability, pricing is set by competitive bidding or negotiated earlier* , hence suited to a shorter-term contract with negotiated pricing

1.1 Draft service attributes – Demand High Firmness Local Service

The following table provides an example of the service attributes required for a High Firmness demand local service. This is a representation of the types of attributes aggregators can expect across local services.

Table 1 Draft service attributes for Demand High Firmness Local Service

Service Characteristics	Characteristic Description	Demand Increase or Reduction High Firmness (Capex Deferral)	Service Provision Lifecycle Stage
Service Type	The type of service a DNSP engages an Aggregator to deliver (e.g., demand reduction or voltage management)	Demand Increase / Reduction	Define
Firmness	Firmness indicates the certainty around service delivery, e.g., a high firmness service is very certain and has a confirmed, contractual payment structure	High	Define
Contract Term (Contract duration)	Length of contract between DNSP and Aggregator	5 years	Define

Service Characteristics	Characteristic Description	Demand Increase or Reduction High Firmness (Capex Deferral)	Service Provision Lifecycle Stage
Payment offsets for Unavailability	A regime for reduction/offset of the network support payments in the event of network support unavailability	-	Define
Plant supply capacity		4.95 MW	Enrol
No. of activations	How many times a DNSP can engage an Aggregator to deliver a service over a given contractual period Min - Aggregator gets paid for these activations regardless Max - Aggregator cannot be called more often than this	Min and Max	Define
Network Support during Dispatch Period	Used to assess performance at time-of-service enrolment, therefore sets the upper bounds for dispatchable capacity at each activation	e.g., 10 MWh	Define/Enrol
Max service duration (Dispatch Period - availability)	Used to stipulate max availability period for a particular event, therefore sets the upper bounds for duration of activation	4 hours	Define/Enrol
Annual Network Support Allowance	Max network support per contact period. Suppliers to propose pricing for Network Support requested beyond this annual allowance	e.g., 300 MWh per billing Period	Define/Enrol
Network Support Payments	Fixed network support payments per annual billing period	-	-
Pricing / Payment (Availability)	Customer is paid to be available during a particular timeframe to allow for some movement in the activation timeframe	$/kW (contractually fixed)	Define/Engage
Pricing / Payment (Performance)	If customer is activated / dispatched, payment is made based on performance (verified delivery of real power)	$/kWh (contractually fixed)	Define/Engage

Service Characteristics	Characteristic Description	Demand Increase or Reduction High Firmness (Capex Deferral)	Service Provision Lifecycle Stage
Pricing / Payment (Service)	If customer delivers service through local detection, payment is made based on verified service delivery	N/A	Define/Engage
Pricing / Payment (Demand Management Incentive Scheme)			Define/Engage
LSE Enablement signal	Time of signal provision by DNSP to allow the Aggregator to prepare for dispatch (expressed as a number of days or hours before 'T' - i.e., start of service delivery) Note - signal will include service duration and quantity	T - 2 days	Deliver
Availability start	Marks start of availability period	Date / time	Engage
Availability end	Marks end of availability period	Date / time	Engage
Notice period	Notice that DNSP must provide to Aggregator prior to commencement of service delivery (i.e., 'activation' starts)	30 minutes	Deliver
Activation start time	Marks start of activation period, (AEMO issued)	Date / time	Engage
LSE Dispatch Trigger	Dispatch signal triggers start of real power service delivery	Trigger – dispatch signal (Dispatch triggers)	Deliver
Activation end	Marks end of activation period ('best efforts')	Date / time	Engage
Location	Location of service delivery	Zone Substation / Feeder / LV DTX / Phase / Circuit	Engage
Real (P) amount (kW)	The amount of real power requested from an Aggregator	Fixed Real kW Target (P)	Engage

Service Characteristics	Characteristic Description	Demand Increase or Reduction High Firmness (Capex Deferral)	Service Provision Lifecycle Stage
Reserve Price (WTP)	DNSP willingness to pay	N/A (availability / performance - fixed as part of LTC)	Engage

1.2 Procurement of Local Services

The following figures provide an overview of the local services exchange (LSE) procurement process from DNSP and Aggregator perspectives.

Variations of this process will be applied across all LSE procurement.

Figure 1 **Draft work flow (DNSP) for High Firmness LSE Procurement**

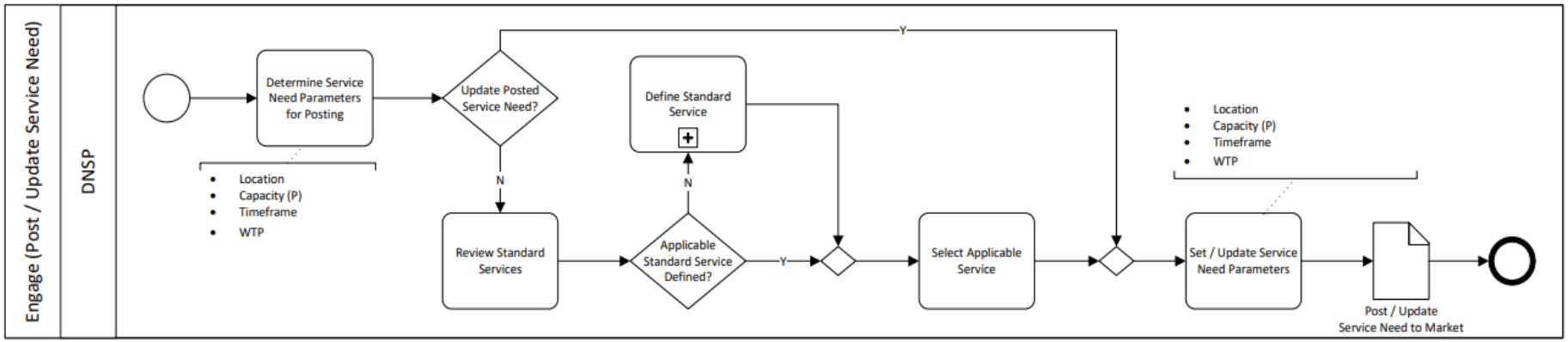


Figure 2 **Draft workflow (Aggregator) for High Firmness LSE Provision**