

SP Energy Networks
Future Networks
September / 2021

**FUSION Flexibility
Services Requisition
for St. Andrews 11kV
Feeder 18622
V0.1**

FSR – St. Andrews

1. Flexibility Services Requisition for St. Andrews

Overview

The Flexibility Services Requisition (FSR) articulates the service requirements for St. Andrews trials in April 2022 – March 2023 (see Appendix 1) and has been developed to ensure trials occur closely aligned with actual demand on the network. The learnings developed from these trials will inform a greater understanding of the application of the Universal Smart Energy Framework (USEF) to the use of flexible assets in delivering network services.

USEF Compliance

All participants¹ must be USEF compliant² as FUSION will use USEF protocols for the delivery of flexibility in the initial trials.

The following documents indicate what is required for USEF compliance:

- [Specification of communication protocols between market participants](#)
- [Compliance to the USEF Flexibility Trading Protocol \(UFTP\) version 1.01](#)
- [Quantification of market participant costs for Implementing USEF Interface compatibility](#)

Any costs that you would incur in responding to the needs of this FSR (e.g. UFTP development costs) may be reflected in your 'availability charge' when you come to respond to the Invitation to Tender (ITT)³.

Location of Flexibility

All flexible units, including distributed energy resources (DERs) and flexible assets, must be located within the areas normally supplied by St. Andrews 11kV Feeder 18622 as indicated in Table 1.

1Participants can be an individual entity or a consortium.

2Participants are not required to be currently USEF compliant provided full compliance can be ensured prior to the commencement of the earliest contracted period.

3 Once the ITT is announced (December 2020) SPEN will publish an 'ITT response proforma' for bidders to complete. At that time these costs can be simply included in that response proforma.



FSR – St. Andrews



Figure 1: Connection points at St. Andrews 11kV Feeder 18622

Post codes normally served by St Andrews 11kV Feeder 18622					
KY16 8AA	KY16 8AS	KY16 9AU	KY16 9HW	KY16 9JG	KY16 9TB
KY16 8AD	KY16 8JA	KY16 9BD	KY16 9JA	KY16 9JJ	KY16 9XL
KY16 8AE	KY16 8JB	KY16 9EF	KY16 9JB	KY16 9JL	
KY16 8AF	KY16 9AB	KY16 9EU	KY16 9JD	KY16 9JQ	
KY16 8AG	KY16 9AS	KY16 9HP	KY16 9JE	KY16 9QQ	
KY16 8AQ	KY16 9AT	KY16 9HR	KY16 9JF	KY16 9SF	

Table 1: Post Codes applicable for providing flexibility for the St. Andrews 11kV Feeder trials



Appendix 1 St. Andrews 11kV Feeder 18622 Flexibility Services Requisition (FSR)

Table 2: Flexibility Service Requisition – Flexibility availability required during April 2022 – March 2023

Ref	Year	Response Type (+ is increase demand or export; - is opposite)				Period	Service Window	Days	Service Type	Maximum Response Time	Minimum Run Time (mins)	Maximum Run Time (mins)	Recovery Time * (mins)	Ramp Down Time * (mins)	Ramp Up Time * (mins)	Estimated Runs (No.)
		Demand (kW)	Gen. (kW)	Demand (kVAr)	Gen. (kVAr)											
1	2022/23	-500	500	N/A	N/A	Jul22	10:00 – 18:00	Mon - Sun	Sustain Peak Management	17 hrs	15	60	30	30	30	4
2	2022/23	-150	150	N/A	N/A	Apr22 - Sep22 (Excl. Jul22)	11:00 – 14:00	Mon - Fri	Sustain Peak Management	17 hrs	15	60	30	30	30	8
3	2022/23	-500	500	N/A	N/A	Oct22 – Mar23	10:30 – 15:30	Mon – Fri	Sustain Peak Management	17 hrs	15	60	30	30	30	20
4	2022/23	-150	150	N/A	N/A	Apr22 - Sep22	11:30 – 13:30	Mon – Fri	Secure DSO Constraint Management (Pre-Fault)	30 mins	15	60	30	30	30	8
5	2022/23	-500	500	N/A	N/A	Oct22 – Mar23	11:30 – 14:30	Mon – Fri	Secure DSO Constraint Management (Pre-Fault)	30 mins	15	60	30	30	30	20
6	2022/23	-150	150	N/A	N/A	Apr22 – Mar23	12:30 – 14:30	Mon – Fri	Dynamic DSO Constraint Management (Post-Fault)	15 mins *	15	60	30	30	15	16

* Can be reviewed subject to asset / DER capabilities

Table 2 Identifies the total flexibility requirements for the St. Andrews initial trials;

- Participants shall use the ITT response proforma to indicate the extent to which they can provide all the above services.
- The Duration column in Table 2 represents the maximum service run time for the delivery for that service within a specified service window.
- The service should be delivered from flexible units located within one or more of the postcodes described in section 1.
- The capacities reflected in this FSR have been deliberately kept low to minimise the impact of these trials on the network.
- The minimum total aggregate capacity of a group of assets that can qualify for bidding is 1KW.
- The capacity that is called upon to be 'utilized' in any given event may be lower than the total amount procured under this 'availability' contract.
- A summary overview of the services descriptions is provided in Appendix 2 of this document.
- Exact characteristics of these services will be defined in schedule 1 of the Flexibility Services Agreement (FSA) in due course. A template FSA is available on the Project FUSION website.



Appendix 2 – FUSION Service Descriptions

Table 3: Service descriptions

Service to be Trialled	Summary of Service
Sustain Peak Management	A service to provide the DSO with a planned reduction in demand or increase in generation in advance of a forecast capacity constraint at peak time, e.g. to reduce the loading on a transformer during tea-time peak.
Secure DSO Constraint Management (pre-fault)	A service to provide the DSO with an immediate reduction in demand or increase in generation during a planned outage of one or more critical assets or in the event of network disturbances to maintain security standards and avoid any customer minutes lost.
Dynamic DSO Constraint Management (post-fault)	A service to provide the DSO with an immediate reduction in demand or increase in generation following an unplanned outage of one or more critical assets to maintain security standards and avoid any customer minutes lost.



Appendix 3 – FUSION Trial Location

