

**SP Energy Networks**  
**Future Networks**  
September / 2021

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**FUSION Flexibility  
Services Requisition  
for St. Andrews 11kV  
Feeder 18613  
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 participants<sup>1</sup> must be USEF compliant<sup>2</sup> 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)<sup>3</sup>.

#### 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 18613 as indicated in Table 1.

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<sup>1</sup>Participants can be an individual entity or a consortium.

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

<sup>3</sup> 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

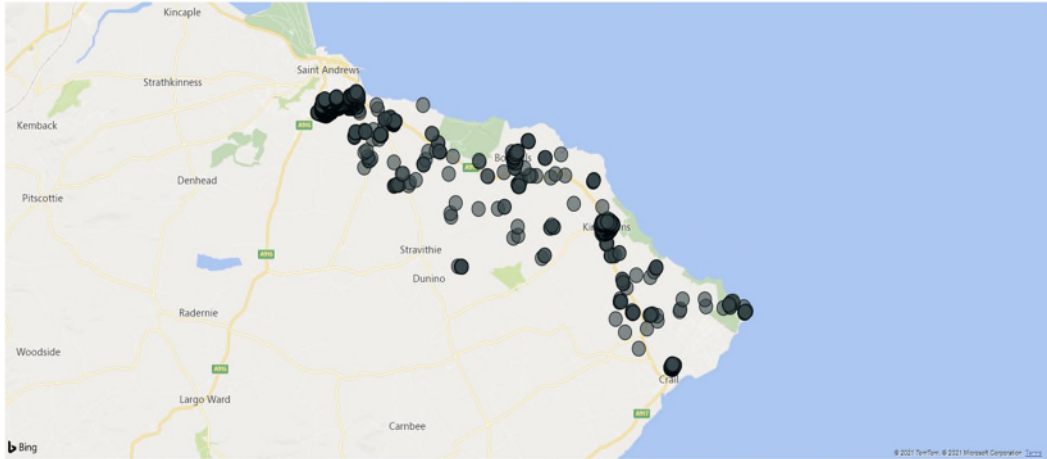


Figure 1: Connection points at St. Andrews 11kV Feeder 18613

<b>Post codes normally served by St Andrews 11kV Feeder 18613</b>					
KY10 3TN	KY16 8DP	KY16 8HD	KY16 8LG	KY16 8PU	KY16 8SW
KY10 3UX	KY16 8DR	KY16 8HF	KY16 8LJ	KY16 8PW	KY16 8SX
KY10 3UZ	KY16 8DS	KY16 8HG	KY16 8LL	KY16 8PX	KY16 8SZ
KY10 3WH	KY16 8DW	KY16 8HH	KY16 8LP	KY16 8PY	KY16 8TA
KY10 3WJ	KY16 8EG	KY16 8HJ	KY16 8LR	KY16 8PZ	KY16 8TB
KY10 3WN	KY16 8EH	KY16 8HL	KY16 8LS	KY16 8QA	KY16 8TD
KY10 3XG	KY16 8EJ	KY16 8HN	KY16 8LT	KY16 8QB	KY16 8TE
KY10 3XH	KY16 8EL	KY16 8HQ	KY16 8LU	KY16 8QD	KY16 8TG
KY10 3XN	KY16 8EN	KY16 8HR	KY16 8LW	KY16 8QE	KY16 8TH
KY10 3XQ	KY16 8EP	KY16 8HS	KY16 8NE	KY16 8QF	KY16 8TL
KY16 8BA	KY16 8ER	KY16 8HT	KY16 8NL	KY16 8SL	KY16 8TN
KY16 8BB	KY16 8ES	KY16 8HU	KY16 8PL	KY16 8SN	KY16 8TQ
KY16 8DE	KY16 8ET	KY16 8HW	KY16 8PN	KY16 8SP	KY16 8YE
KY16 8DH	KY16 8EU	KY16 8HX	KY16 8PP	KY16 8SR	KY16 8YF
KY16 8DJ	KY16 8EW	KY16 8HY	KY16 8PR	KY16 8SS	KY16 8YG
KY16 8DL	KY16 8EZ	KY16 8HZ	KY16 8PS	KY16 8ST	
KY16 8DN	KY16 8HB	KY16 8LF	KY16 8PT	KY16 8SU	

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

**Appendix 1 St. Andrews 11kV Feeder 18613 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.)
		Dem and (kW)	Gen. (kW)	Demand (kVAr)	Gen. (kVAr)											
1	2022/23	-150	150	N/A	N/A	Apr22 - Sep22	11:00 – 14:00	Mon - Fri	Sustain Peak Management	17 hrs	15	60	30	30	30	20
2	2022/23	-100	100	N/A	N/A	Oct22 – Mar23	10:30 – 15:30	Mon – Fri	Sustain Peak Management	17 hrs	15	60	30	30	30	8
3	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	20
4	2022/23	-100	100	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	8
5	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**

