

Financial Commentary

**TRANSITION Project
August 2018**

Version 1.0



Scottish & Southern
Electricity Networks

WP1: Project Management

1.1 Programme Management

This includes budget for [REDACTED] person-days over the project including a Project Manager, Project Engineer, ICT Engineer, Knowledge, Commercial, and Stakeholder Engagement support.

Also included is project team travel, and a two-day project kick-off meeting with suppliers.

Collaboration impact: +21 person-days due to additional collaboration effort across project.

1.2 Project IT

This includes hardware, software, and licenses for the project team, based on previous projects.

WP2: Requirements design development

2.1 Best Practise Review

Undertake best practise review of relevant projects and trials.

[REDACTED] person-days have been budgeted to report on learning from other projects (eg Power Potential) specifying learning areas to be drawn upon.

2.2 Network visibility and connectivity

Develop specification for data exchange requirements, including stakeholder engagement.

[REDACTED] person-days to develop specification for network data exchange and customer data requirements; this will require stakeholder engagement to understand interaction with other Market Participants and potential future needs.

Collaboration impact: The specifications will be developed in collaboration with E&F - additional joint meetings to review and align outputs have been absorbed in original cost. Stakeholder engagement savings of approx. £5000 have been identified as the same stakeholders apply to T.E.F.

WP3: Forecasting and DSO data

3.1 Forecasting

Develop specification for forecasting data requirements for each DSO function and undertake regional FES analysis.

[REDACTED] person-days identified to develop specification for forecasting data requirements for each DSO function, and to undertake a regional FES analysis, building on the principals developed through ON WS1 P5.

Collaboration impact: Due to the critical importance of forecasting to successful DSO, we have retained the original budget for development of specifications. However, we will improve the robustness and confidence in the developed specifications through collaboration with E&F, by comparing outputs at joint meetings with the forecasting experts. This joint review has been absorbed in the original cost.

The regional FES is unique to TRANSITION and builds on the ON process. We will seek to reduce the costs associated with this if possible due to the reduced number of trial locations.

WP4: Market models

4.1 Market Models

Using Open Networks output, identify market models and Use Cases which can be trialled, engage potential participants, establish market rules and identify regulatory barriers.

█████ person-days will be used to develop SGAM modelling to further the DSO Worlds development work from Open Networks, the Use Cases which can be trialled, to engage with potential participants, to develop market rules and identify regulatory barriers.

Collaboration impact: Savings of approx. £7000 have been achieved through reduced number of site visits to engage stakeholders.

WP5: IT Framework

5.1 Technical specification

█████ person-days have been budgeted to develop a technical specification (including security standards, redundancy, resilience, BCP, etc) for the platform. This also includes functionality requirements of the trading platform such as flexibility state data, optimisation, scheduling, and delivery certainty.

5.2 Platform development

█████ person-days have been allocated to development of a detailed platform specification.

WP6: Trial Specification

6.1 Trial Location(s)

█████ person-days to develop a shortlist of trial locations including available flexibility and network adaptation requirements for a trial (incl. communications, protection, additional monitoring or flexibility assets)

6.2 Site characterisation

█████ person-days to conduct detailed network planning and protection requirements, undertake local stakeholder engagement, install and commission monitoring equipment, and decommission at project end.

£█████ for substation monitoring equipment.

Collaboration impact: a reduction of 40 person-days and £6,000 through reduced travel and number of sites.

STAGE GATE

█████ person-days to refine project budget, programme, and business case. A large stakeholder event, and full Steering Board review.

Collaboration impact: The Stage Gate is now common to all T.E.F. projects; approx £2,000 savings on travel and equipment for stakeholder event.

WP7: Deployment

7.1 Trials

This WP includes the IT infrastructure and servers which form the backbone of any DSO World. For the trial environment core spend covers:

- Computer server
- Data storage
- RTS, FTP and Communications
- Enterprise bus integration

█████ person-days to create Architecture and ITT for Comms, further refine target Information Systems and Security Architecture, Business Process Model and Operation Processes, create interfaces from existing SSE Corporate Systems and to external partners. Provide maintenance and support.

£█████ to purchase servers, storage, Wi-Fi.

£█████ for RTS, comms, and secure FTP; for example, ENMAC, PI, SMOS, Development, Test and Delivery Environments,

Collaboration impact: Saving 770 person-days and approx £555,000 through reduction in ENWL scope of works, with learning on deployment in another location coming instead from FUSION trials.

7.2 Licenses

£█████ software licences over two years and £█████ contractor support; the licences are for use in the DNO 'shadow environment' control room during trials eg PI, PowerOn Fusion.

Costs account for:

- Business Intelligence Real Time Licence
- DMS Licences
- OMS Licences
- Contractor support
- Software integration

While the physical deployment will take place within an SSEN licence, ENWL will still perform important desktop-based support and will need to integrate their network management system with the architecture developed. Costs shown reflect the SSEN and ENWL requirements.

Collaboration impact: Saving 145 person-days and approx £255,000 through replacement of physical trial with simulation. The potential for further cooperation between FUSION and TRANSITION regarding licenses and software platforms has been recognised. This will be a focus area during the early stages of both projects, and we will continue to explore every opportunity to reduce cost. At this stage, our understanding is that both projects will still require individual licenses due to differing requirements for integration with existing systems. However, a joint approach to the software vendor may result in an improved rate for both projects. This will be developed further as the project proceeds.

7.3 Specialist procurement/legal

█████ person-days of additional specialist resource to inform procurement exercise and FOAK contracts for platform developer, market participant legal and commercial agreements.

Collaboration impact: TRANSITION will work with FUSION (if they continue to the procurement phase) to avoid duplication whilst adhering to procurement best practise requirements. Savings on internal and external labour will be realised if both FUSION and TRANSITION progress to this stage and can collaborate under a common procurement framework.

7.4 Network adaptation

█████ person-days to install and commission protection, monitoring, and automation equipment including:

- Set relays up with the figures calculated through WP6;
- Install and commission RTUs at identified network locations if not already installed with suitable variant;
- Install and commission monitoring at identified network locations;
- Install and commission actuators at identified network locations.

Collaboration impact: Saving 300 person-days and approx £270,000 through reduced number of physical trial sites.

7.5 Software

█████ person-days to develop the trials platform, establish data exchanges, undertake full acceptance testing and user training. This requires a specialist platform developer and IT equipment to develop trial platform on which the DSO World can be trialled and forecast software which helps identify the potential service requirement from flexible resources. Also included is;

- Establishment of data exchanges;
- Full acceptance testing;
- Penetration testing;
- User training;
- Alterations following first round of trials.

Collaboration impact: A saving of 124 person-days through reduced number of physical trials.

Through collaboration with EFFS we intend to deliver a significant financial saving (circa £225,000) under this task. This saving will be formalised at Stage Gate, once we verify that WPD and partners have been able to develop forecasting software which can be adopted by TRANSITION.

7.6 Trials

█████ person-days for data collection and analysis over two years.

█████ user payments per site (over two years) to trial DSO service provision

Collaboration impact: Saving 40 person-days and approx £155,000 through reduced number of trial locations. Learning from other trials will be used to maximise the benefit from the TRANSITION trials, either through deliberately replicating previous Use Cases to

validate and provide further evidence of results, or through trialling different Use Cases to expand the evidence base for DSO operation.

WP8: Dissemination

8.1 Dissemination

██████ person-days for website creation/maintenance, dissemination events and webinars, annual and closedown reporting.

Collaboration impact: Dissemination events, materials, displays etc. will be jointly managed with the EFFS and FUSION projects to avoid duplication, saving 57 person-days.

Additional savings of approx £26,000 through joint stakeholder engagement with EFFS and FUSION.

Total Savings

Total identified pre-inflation savings of approx £1,795,000, with additional savings uncalculated.

This is broken down as £1.7 million saved through scope rationalisation due to T.E.F. collaboration, and £90k saved through aligned and/or combined stakeholder engagement.