

**Ofgem/DECC Smart Grids Forum
Draft Work Programme
27 May 2011**

Introduction

As a result of the discussions at the first meeting of the SGF, it is proposed that five work streams will be initiated with the intention that they will be completed in the first year of the SGF. They are:

- WS1 – Assumptions and scenarios
- WS2 – Evaluation Framework
- WS3 – The Ideal Network
- WS4 – Closing Doors
- WS5 – Ways of Working

The rationale behind the selection of these work streams is as follows. WS1 and WS2 are intended to jointly provide the data and methodology to assess smart grid development opportunities, in particular as part of the RIIO-ED1 business planning process. WS3 will provide the opportunity to explore, without constraint, the possibilities for future networks to gauge the level of ambition in the actual plans for the future and help ensure that valuable opportunities are not missed. WS4 will help reduce the risk that short term decisions, in both smart grids and smart meters, have a negative impact on longer term opportunities. Finally, WS5 will consider how best to maximise the value of the SGF going forward.

Additionally, it is proposed to liaise closely with work outside of the Forum on customer issues via the Smart Demand Forum: in particular, the conclusion of the EDRP¹ study and the new three year study taking place at Sustainability First, "GB Electricity Demand – realising the resource".

The overall objective is to deliver a useful, focused body of work at the end of the Forum's first year.

WS1 – Assumptions and scenarios

Purpose

There is a consensus view that the uncertainties associated with the Low Carbon Transition Plan, in terms of the likely impact on electricity networks, are acting as a constraint on the network companies in pursuing non-BAU/incremental development opportunities.

It is therefore considered necessary to agree, at a high level at least, what type and capacity of services networks will be required to provide to [2030], for a number of credible scenarios. These scenarios could be linked for example to specific policy decisions and the availability of certain technologies. Agreeing these scenarios will allow the network companies to be better able to develop well justified business plans.

This WS is therefore intended to deliver sufficient data to underpin the DNOs' RIIO-ED1 business plans. The needs of the transmission companies will also be taken account of.

¹ <http://www.ofgem.gov.uk/Sustainability/EDRP/Pages/EDRP.aspx>

Scope

This work stream will look to take the different low carbon pathways work already carried out by DECC and, in conjunction with the relevant policy teams that focus on electric vehicles, distributed generation and heat, 'convert' these into a set of assumptions and scenarios designed to act as a guideline for the network companies. These assumptions and scenarios will be in the form of demand forecasts – the term demand here being used in the widest sense to include all devices that are likely to require network connection. It is proposed that data will be generated for 2020 and 2030.

It will be vital that this work is linked to the work on the Evaluation Framework.

Lead

DECC will lead this work but will require the full support of other stakeholders, particularly the DNOs and Ofgem. The work will only be of value if the outputs are supported by Ofgem and are genuinely useful to the DNOs in their RIIO-ED1 business planning processes.

Funding

It is envisaged that this work will be carried out within DECC, though there may be some third-party analytical support which would be funded by DECC.

Support

DNOs, Ofgem, suppliers

Timescale

- Form a WG – July (confirm membership at 2nd SGF meeting)
- Initial progress report to 3rd SGF meeting (Autumn 2011)
- Draft findings/assumptions – report and discussion 4th SGF meeting (January 2012)
- Draft report available – following 4th SGF meeting February 2012
- Final report – Spring 2012 (coincident with and part of DECC's vision paper)

Deliverable

Report in a form to be agreed as part of the project specification.

WS2 – Evaluation Framework

Purpose

The challenge of carrying out credible cost benefit analyses for smart grid deployment is well recognised. As an example, the ENSG Smart Grids WG attempted a CBA as part of its Vision report². This proved to be a useful exercise but highlighted the difficulties involved. Essentially, the number of input variables and the range and value of the benefits delivered make the analysis very volatile. The purpose of developing an

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http://webarchive.nationalarchives.gov.uk/20100919181607/http://www.ensg.gov.uk/assets/ensg_smart_grid_wg_smart_grid_vision_final_issue_1.pdf

evaluation framework would be to reduce this volatility and increase the level of confidence in the results achieved.

Scope

The framework will be designed to dovetail with the outputs from WS1. It is intended to deliver a spreadsheet model that will enable smart grid investments to be assessed on a comparative basis with BAU solutions. It is expected that the model will be able to recognise that different value streams will become important in different timeframes. It should therefore help us understand the key variables that have the greatest effect on the value of specific smart grid functionalities. The model will be able to provide inputs to the business planning processes of the network companies.

This WS will also consider the key value drivers for a smarter network. It will test the thesis that the facilitation of demand side management (in particular related to the reduction of generation capacity but also system balancing and managing network constraints) could be the highest value smart grid application, albeit not strictly a network issue. The work on this already carried out should be developed further to better understand/evaluate this value stream.

Lead

Ofgem will lead this work but will require the full support of other stakeholders, particularly the DNOs and DECC. As for WS1, the work will only be of value if the framework/methodology is endorsed by Ofgem so that it can be used as a tool for RIIO-ED1 business planning processes.

Funding

It is envisaged that this work will be carried out by a third party and that this will be funded by Ofgem.

Support

DNOs, DECC, SGF members

Timescale

- Form a WG – July (confirm membership at 2nd SGF meeting)
- WG to agree a specification for competitive tendering – early September
- Place a contract for the work – early October
- Draft report available – end December for discussion at 4th SGF meeting
- Final report – following 4th SGF meeting, February 2012

There may be scope to advance this programme. However, the work of WS1 and WS2 is closely linked. The evaluation framework will need to take account of the data available from WS1. The timescale for WS2 will therefore be, to some extent, contingent on the work of WS1.

Deliverable

Report in a form to be agreed as part of the project specification. Spreadsheet model to be made freely available to the network companies.

WS3 – The Ideal Network

Purpose

At the first meeting of the SGF, there was a discussion about the level of ambition in current network development thinking – in short, are we being ambitious enough? This piece of work is intended to address this question. The idea is to allow unconstrained thinking as to what a future 'ideal' network would look like.

Scope

It is proposed that the scope should initially be limited to the distribution network up to 132kV and that the time horizon should be [2030]. Ideally, this work should be based on the outputs of WS1 but the network design should not be constrained by the system existing today. It is recognised that, regardless of cost, the solution delivered may not have a credible transition path from today's networks. However, the exercise may generate specific development opportunities that are able to be incorporated in actual plans.

Lead

Network companies

Funding

Network companies

Support

Manufacturers, suppliers, Ofgem, DECC,

Timescale

There is a critical dependency here – i.e. with WS1. Initial work could be carried out straightaway but it may be necessary to wait until WS1 has delivered some outputs before the bulk of WS3's work can continue.

- Form a WG – July
- Agree scope of work, deliverables and method of delivery – end August
- Liaison with WS1 - August
- Agree detailed work programme September
- Commence detailed work November
- Draft report – end January
- Final report – end February

Deliverable

Report in a form to be agreed as part of the project specification.

WS4 – Closing Doors

Purpose

WS4 is intended to help reduce the risk that short term decisions, in both smart grids and smart meters, have a negative impact on longer term opportunities. This risk was highlighted by some parties at the first meeting of the SGF.

Scope

To review current electricity supply chain developments, particularly the smart meter implementation programme, to assess their impact on the development of smart grids.

Lead

SGF members

Funding

It is expected that a sub-group of the SGF could complete this review without additional funding. However, following the establishment of the sub-group, if the need for funding was identified the SGF would consider the options available.

Support

It is proposed to ask SGF members to volunteer to take this WS forward. Non-SGF parties could be asked to join this group as appropriate.

Timescale

To be agreed by the sub-group. However, inputs to the smart meter implementation plan are required as soon as possible.

Deliverable

Report in a form to be agreed by the sub-group. It would be of real value if the sub-group could meet before the 2nd SGF meeting so that its initial thoughts could be reported to the full SGF.

WS5 – Ways of Working

Purpose

A number of practical issues were identified at the first SGF meeting relating to the operation of the SGF. They included:

- Horizon scanning – how can we efficiently track smart grid developments internationally?
- Knowledge dissemination – how can we do this most effectively?
- Role & profile of the SGF – what outreach activities would be of value?

This WS will address these issues.

Scope

As per the Purpose above.

Lead

DECC and Ofgem.

Funding

DECC and Ofgem.

Support

SGF volunteers.

Timescale

Report to the July meeting of the SGF.

Deliverable

To be agreed.