

Lia Santis,
Ofgem,
9 Millbank
London
SW1P 3GE
020 7901 7304

lia.santis@ofgem.gov.uk

Date: 16th December 2011.

Lia,

Introduction

SmartestEnergy welcomes the opportunity to respond to Ofgem's consultation on Smart Grids Evaluation Framework – A Smart Grids Forum Consultation Report

We note that Ofgem will welcome comments in particular on: the overall real options-based evaluation framework; the assessment of the value drivers of smart grids; the assumptions on smart meter functionality; the smart grid strategies we intend to assess; our approach to including smart technologies in the model; and the detailed model specification. Our views on these matters come out through the answers to Ofgem's specific questions.

However, we would like to highlight at this point that we as a supplier would like to be reassured that the focus of the Smart Grids work is focused on encouraging Distributors to investigate solutions which engage with suppliers who ultimately are the parties who have the relationship with customers. Distributors cannot work on Smart Grids in isolation because load reducing activities will impact upon suppliers' balancing positions. An industry-wide and market-based approach is necessary. Whilst many of the funded Smart projects are jointly led by a supplier and a distributor, this in itself does not guarantee that the solutions are appropriate for the supplier community as a whole. There is a danger that a focus on SmartGrid investment would place a lesser emphasis this issue.

Ofgem's specific questions

For your convenience we answer Ofgem's specific questions below in the order in which they are presented in the consultation document.

Section 2: Smart grid evaluation framework?

Do you agree with our definition of smart grids?

The basic definition in the document viz: "[A] smart grid is part of an electricity power system which can intelligently integrate the actions of all users connected to it - generators, consumers and those that do both - in order to efficiently deliver sustainable, economic and secure electricity supplies" does not go far enough.

Put simply, a SmartGrid is the intelligent interaction of supply and demand. However, there is a danger the definition as it stands places too much emphasis on the physical grid. For a smart world to operate effectively, proper market mechanisms need to be in place so that distributors are dealing with suppliers in a fair and competitive manner.

Perhaps the issue, in fact, is that we should not be talking solely about SmartGrids but SmartEnergy.

Have we captured the main complexities associated with assessing the costs and benefits of smart grids?

No. There is too much emphasis on technologies and not enough on market solutions. As such the approach is just a list of technologies without assessing how it all fits together in a wider context of market solutions.

We propose to take a two-stage decision tree approach, rather than relying on a conventional cost-benefit analysis framework alone. Does this constitute an appropriate approach, given the need to measure differences in the "option value" that different smart grid investment strategies provide?

We do not agree with the aim to focus on the potential of smart grids and conventional solutions as an alternative means to achieving energy sector aims, rather than assessing the costs and benefits of these aims themselves. Costs and benefit analysis is essential at every stage.

We do, however, agree that doing both a top down and a bottom up approach is sensible as this should help inform the path for the future as well as measuring differences in the option value.

Do you agree that the year 2023 constitutes an appropriate decision point in our analysis?

Ofgem propose to use the year 2023 for the decision point in the decision tree analysis as this is likely to coincide with the beginning of the first price control period after the completion of the smart-meter roll-out and so is likely to be a natural point for the industry to adjust its smart grids strategy if necessary. It also seems to be intuitively at around the right time.

Section 3: Value drivers and scenarios

Do the technologies set out in Table 2 constitute a sensible list of value drivers?

It should not just be assumed that electric vehicles are the future and that hybrids are just a stepping stone. Combustion technology is likely to compete with more environmentally friendly solutions without the drawbacks of electric vehicles.

Do you agree with our assessment of the technical characteristics of each?

No comment

Are there any other technologies that could have a significant impact on the value of smart grids?

Energy Management Systems both in business and in the home

Our analysis suggests that the most important factors to vary across the scenarios will be: the pace of electrification of heat and transport; the increase in distributed generation; and the increase in intermittent and inflexible generation. Do you agree? Are there any other variables that we should look to vary across the scenarios and why?

Electric cars and renewable generation are top of mind because they are tangible. It is easy to forget that technological developments will lead to a much greater level of supplier-led demand-side.

Section 4: Smart grid and conventional investment strategies

Out of the options presented, which set of assumptions should we make on smart meter functionality?

The document states that "Smart meters will be included in the business-as-usual case for the smart grid evaluation as Government has already committed to their rollout." The potential for the government to abandon smart meter rollout after their review of the costs and benefits in 2012 and 2013 should not be ruled out.

Clearly there will be a need for enhanced Smart Meter communication. We are opposed to any top-down interference from distributors. There should be market mechanisms in place between suppliers and distributors and the communication to the customer should be through the supplier.

Do you agree with our proposed approach of including smart appliances in the business as usual?

No. It looks as if this has been assigned to the "business as usual" simply because modelling it would be too difficult. Smart appliances will be a critical part of the smart world but the uncertainty over the levels and timing of take-up need to be understood.

Do our proposed smart grid strategies capture the main deployment options?

Yes, we believe so.

Have we provided an accurate overview of the main services that smart grid technologies can provide?

No comment.

Do you agree with our proposed assumptions on the characteristics of these technologies?

No comment.

Section 5: Value chain analysis

Are there any other groups in society that we should consider in the value chain analysis?

Why are suppliers and generators lumped together as one grouping? They have totally separate roles to play. Suppliers are central and co-ordinate with distributors, generators and customers.

Suppliers will not only be directly affected by any change in generation costs along with generators as the document suggests, but will also be a critical figure in any Smart arrangements.

It should be understood that DNO-led demand side response cannot be effected through a direct relationship with customers.

Do you agree with our conclusions regarding the distribution of costs and benefits?

No comment

Do you agree with our proposed approach to assessing the costs and benefits for the transmission network?

No comment

Section 6: Proposed model specification

How suitable is the proposed network modelling methodology which use representative networks, with headroom used to model when network investments should be made on feeders?

We are generally supportive of the concept of two models (distribution and market wide) feeding into a realistic assessment.

Are the voltage levels (from 132kV down to LV) being considered by the model appropriate, or should the model be limited to focus on any particular voltage levels?

No comment

For each of the voltage levels we are considering, are current methods sufficient to recognise available headroom and the cost of releasing additional headroom in these networks? If not, is the proposed approach considered to be too simple or overly complex?

No comment

Is our approach to estimating the clustering of low-carbon technologies appropriate? Is any other evidence available in this area?

We are not entirely convinced that the approach to estimating the clustering effect is appropriate but in the absence of any other evidence it should be used as clustering will undoubtedly occur.

Are the proposed generation model assumptions (a simple stack of generator types, no technical dispatch constraints, half-hourly demand profiles for summer and winter, and representative wind profiles) suitable?

Probably

Should a simple representation of interconnection be included in the model?

Yes

Does the model represent DSR ("supplier-led" and "DNO-modified" profiles, with simple heuristics used rather than simultaneous optimisation) adequately?

We believe so.

Should you wish to discuss any aspect of this matter, please do not hesitate to contact me.

Yours sincerely,

Colin Prestwich
Deputy VP Commercial – Head of Regulation
SmartestEnergy Limited.

T: 020 7195 1007
M: 07764 949374