

Strategy consultation for the RIIO ED1 electricity distribution price control Siemens Smart Grid Division response

Siemens Transmission and Distribution has been a long standing supplier to UK Distribution Network Operators (DNO), providing a diverse range of network assets, primary and secondary along with a range of services, including refurbishment and asset lifecycle management.

Siemens is a market leader in energy infrastructure markets in both UK and global markets.

The Siemens Smart Grid Division, part of the Infrastructure and Cities Sector, has been actively engaged in the Low Carbon Networks Fund programme and has taken on the role of partner, or supplier, in each of the three years of the programme.

Siemens Smart Grid is working with 5 of the 6 UK DNOs, on high profile funded Tier 2 projects, or soon to be registered Tier 1 project – through this engagement and participation, Siemens has gained a clear understanding of the requirements, set out by Ofgem, to accelerate the electricity distribution network investment requirements to facilitate the transition to a low carbon based economy – innovation being a core theme which underpins the transition.

Siemens applauds the measures taken by Ofgem to introduce the Low Carbon Networks Fund, to act as a catalyst towards innovation.

From the recent ENA Low Carbon Networks Annual Conference in Cardiff, it is clear that the breadth and scope of innovation evident in the projects registered or funded date, has established the UK as a benchmark and leader on a global stage – being part of a global organisation, this is particularly evident. Of particular encouragement was the messages from many of the UK Distribution Network companies of how they are taking the learning from the Low Carbon Network Fund projects to transition to business as usual – the timing of the RIIO-ED1 Strategy consultation is therefore timely to invite stakeholder views on how the UK can build upon this transition and deliver a sustainable, secure, cost effective and flexible network that can be held up as an exemplar on a global stage. This is a very exciting time for the UK electricity market, to step up to the task of helping UK Government deliver its Energy Policy.

Siemens recognise that engagement in other stakeholder platforms is critical to ensure that key messages are communicated to wider stakeholder groups.

In UK, Siemens are active members of the BEAMA Smart Grid Task Force, whose role is to provide an effective platform through which expertise from the vendor community can inform scenarios for the future availability and functionality of low carbon networks solutions, BEAMA are represented on the DECC/Ofgem Smart Grid Forum, additionally we are members of SmartGrid GB, with a broad representation of members from the energy supply chain and representation from the ICT community, SmartGrid GB has developed a good profile within its first year, with support from government, Ofgem and the Distribution Network Companies.

Our response to this consultation focuses on our experience and need to understand the likely infrastructure investment over the ED1 period. A summary of our key points raised in the response are outlined below;

- The arrangements for customer engagement for innovation projects need to be simplified. Experience from the LCNF projects would indicate that the current conditions often result in delays to projects and discourages participation.
- The proposed innovation package needs to be structured to ensure the up scaling of NIC and NIA projects and the integration of smart grid solutions with stakeholders **outside the distribution network** into a business as usual approach for DNOs.
- The proposed change of economic asset lives to 45 years could have significant implications on DNOs, and the vendor community to ensure that the asset life risk is managed appropriately. It is unclear whether the consequences in terms of risk have been considered and how this change will drive behaviours, in terms of balance

between capital and operational expenditure. Many of the large network assets can reasonably be expected to have an asset life of 45 years and beyond, provided adequate maintenance and service guidelines set by the manufacturer are adhered to – however many of the network assets will not. The unintended consequences of risk management become a factor i.e. the need to maintain warranties from the supply chain, accounting for the asset risk and ability to support the asset for a period of 45 years, requires further consultation with manufacturers and the supply chain. Many of the assets procured today were never designed for an asset life in excess of 25 years and the implications on “re-designing” the asset base to achieve this are profound. Approaches that look at asset lifecycle management, with a balance between capital and operational expenditure and potential outsourcing asset services may provide the cost benefits perceived from this change. Ofgem engagement with bodies such as BEAMA will help to explore the range of approaches (including asset classes) that could be adopted and potential risks if a change of term to 45 years is implemented

It is recognised that there is a high degree of uncertainty in the likely take-up of low carbon technologies (LCT) during the ED1 period; particularly towards the latter period i.e. 2019 onwards when growth could accelerate quite quickly. Having an effective tracker with close links to the modelling tools is critical to ensure that investment decisions are taken at the most appropriate time. More consideration should be drawn to the timescales and implications of deployment of alternative or smart solutions and ensure that these are built in to the DNO planning timeline – without this change to the planning process within the DNO organisation, many feasible smart or innovative approaches could be missed, due to the necessary approvals and risks required to take alternative or smart approaches.

Until a higher degree of certainty, in terms of LCT take-up is established, it is considered that investment should focus on addressing localised network issues, with smart technologies, that are capable, and considered to be part of multi-hierarchical integration and control concept – investing ahead of need could result in sub-optimal investment strategies. It is considered that a higher degree of certainty will prevail under the ED2 period and this would appear to offer a higher degree of certainty on appropriate investment. Therefore the need to build ‘flexibility’ into DNO planning and deployment should be seen as a key measure under ED1 – some of this could have more structural implications on how the DNO is set-up to deliver flexibility – although outputs are a visible measure, understanding best practice in terms of how the DNO planning and operations functions may converge through this period, will provide a measure of how ‘flexible’, or agile the DNO organisation will be.

Our consultation response is outlined below and we would be pleased to provide any follow up to this that might be required.

Siemens has engaged with a number of the DNOs to better understand the implications of RIIO-ED1 strategy, through this process many of the questions that would have been raised through this consultation have been addressed.

We have also submitted a response to both BEAMA and SmartGrid GB under the NIC and NIA informal governance consultation.