

Maxine Frerk
Interim Senior Partner
Smarter Grids and Governance: Distribution
Ofgem
9 Millbank
London
SW1P 3GE

Your ref

Our Ref

SM/sb

Date

26 August 2014

Contact / Extension

0141 614 1612

Dear Maxine

Following the release of the RIIO ED1 Draft Determination, I noted with interest the savings that have been applied in relation to smart grid benefits. I am enthused that Ofgem are now taking the transition to a smarter grid seriously and recognising the benefits that may be achieved in the future. Over the course of DPCR5 we have developed a range of innovative solutions which are now being embedded within our business and makes up a significant proportion of our ED1 plans including the LCNF project ARC, which is allowing us to connect generators faster, and dynamic rating which maximises the capacity of existing assets thus reducing our load related investment. In total we have identified more than £72m of savings for customers from the application of innovation which is new for ED1; a 200% return on the £21.5m of investment through IFI and LCNF over the course of DPCR5, which is the highest return of all DNO groups.

Within our plan we have embedded an ongoing 1% annual efficiency improvement to continue to position ourselves as the most efficient DNO group. We believe that smart grid benefits will be a significant component of achieving this efficiency improvement. The inclusion of a separate Smart grid benefit would result in a significant double count of these benefits which we do not believe to be achievable in a safe and secure way.

Within the analysis which you have shared on Smart Grid benefits, we have identified a number of inaccuracies which we would like to address. The proposals suggest that a further reduction of £89m should be applied to our plan, however, we have identified where these savings have been incorrectly applied:

- A higher scenario and incorrect assumptions have been used in the TRANSFORM model analysis which forecasts a greater opportunity for Smart Grids, but does not reflect the assumptions within our Business Plan. We believe that this equates to approximately £46m difference.
- No cognisance appears to have been given to the SP Manweb interconnected (meshed) network as only reference to LPN is made and the limitations in terms of further smart solutions.
- TRANSFORM models a subset of the distribution network and the forecast benefits cannot be extrapolated across all reinforcement investment. We do believe that some benefit should be applied and this is identified in the scheme papers which we have provided as part of our plan. Removing this subset would be a reduction of £30m

Ochil House, 10 Technology Avenue, Hamilton International Technology Park, Blantyre, G72 0HT

Telephone: 0141 614 0008

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- Smart metering benefits analysis does not recognise the most recent and comprehensive analysis by the ENA and as a result DNO benefits are overstated by more than 300%, or £13m over the course of ED1.

Within our well justified business plan we have highlighted savings for customers from using smart grid technology to the value of £39m which includes HV static compensation, phase shifting transformers and dynamic rating, all of which are innovative solutions developed through DPCR5. In addition to this we also have a further £33m of savings in asset replacement by using the latest developments in condition monitoring to refurbish assets rather than a full replacement as detailed within our main Business Plan document. This total of £72m is not fully reflected in the benefits which you have quoted as being embedded in our plan.

We are in agreement that DNOs should include all possible smart grid and innovation benefits but we need to ensure that it does not compromise the security of supply for customers or result in longer term costs. With the introduction of new technology, increased risk can be created as we do not understand the long term implications of its use and we would refrain from making a short term investment which could cost customers more in the long term. We have applied a rigorous approach to our investment with more than 70% of our load related investment being subject to a cost benefit analysis to consider alternative, traditional and innovative solutions in order to identify the most cost effective Totex solution for customers. The application of smart grid technology will also be deployed over the course of ED1 and beyond. As a result, the benefits achieved will be lower in ED1 as the technology is being applied for the first time and progressively rolled out. Through the benchmarking analysis which you have shared with us, we have identified a number of areas which we believe are inaccurate.

Smart grid savings identified through TRANSFORM

Within our well justified plan we have assumed one of the highest levels of low carbon technology (LCT) uptake for both of our licence areas, compared to the other DNOs, due to the policies being applied by the Scottish and Welsh governments and higher proportion of off-gas grid customers who are more likely to adopt heat pumps. In re-running the TRANSFORM model to replicate your analysis, we believe that the assumption of a reinforcement saving of 23-25% is based upon a substantially higher volume of low carbon technology being adopted over the ED1 period compared to our best view. The higher LCT uptake scenarios result in a higher saving due to more reinforcement being required to facilitate the additional LCT. We would suggest that the model be re-run to reflect DECC Scenario 4, in which case we expect a much more modest saving will be identified, but one which is commensurate with the level assumed by most DNOs' plans. The current saving which is forecast would result in the network capacity reducing and as a result would delay the connection of low carbon technology and create additional network risk due to underlying load growth. Without sufficient funding this could result in asset failures which would cause disruption to the network and interruptions to supply with a higher net cost. We would be happy to engage with your team to reflect this scenario in the TRANSFORM model for your consideration.

We believe that the TRANSFORM model has provided a common model for considering the range of smart grid benefits across Great Britain. We have been and continue to be active in the development of the model to ensure it is a fair reflection of the electricity network and have helped ensure that the functionality is built into the model to provide a representation of the unique factors across DNOs. In the preparation of our Business Plan we commissioned EATL (the developers of the TRANSFORM model) to provide a more accurate representation of the Manweb network, such as the interconnected network and smaller transformer sizes which we utilise. From the draft determination, no cognisance appears to have been given to the SP Manweb interconnected (meshed) network as only reference to LPN is made. As a result of the nature of the network it is already 'smarter' than most other network models which is reflected in the network having one of the lowest customer interruption levels along with LPN which is designed in a similar fashion. As a result, a number of the smart solutions within the model are not applicable to 78% of the SP Manweb licence area. From our own analysis this will have a

material effect on the level of incremental benefits which can be achieved as this network already deploys one of the most cost effective smart solutions.

Our final point relating to TRANSFORM is to highlight that the model does not analyse fault level requirements and only considers the 33kV network (excluding 132/33kV Transformers) and below. Our total load related investment includes £59.3m for 132kV schemes (including 132/33kV transformers) which have been developed on a scheme by scheme basis and are all subject to a cost benefit analysis to demonstrate the range of innovative and conventional solutions considered. The TRANSFORM model does not recognise this subset of the network or the £56.8m of investment required for fault level remediation and Transmission Connection Points (TCP) as it is outside the capability of the model. Failure to invest in sites which are in excess of the fault level risk catastrophic failure which poses a risk to both staff, the public as well as security of supply. For this reason, we believe that the savings range proposed in the draft determination should only be applicable to the £179.2m for reinforcement at 33kV and below and excludes 132kV reinforcement, TCPs and fault level schemes. The £179.2m is derived from the total reinforcement investment of £287.8m (£132.8m SPD and £155m SPM) from CV101 less £59.3 for 132kV reinforcement and £56.8m for fault level/TCP reinforcement.

Smart Metering

The application of Smart Metering data in ED1 is undoubtedly going to help change the way the network operates and we have therefore set out an extensive Smart Metering strategy as part of our Business Plan. We have noted reference to both the DECC Impact Assessment as well as the ENA Smart Metering benefits analysis as being references for the potential benefits to customers. We have been involved with the ENA revised study and are largely supportive of its conclusions which included additional, independent research by Kema, EATL and Baringa Redpoint to consider the benefits that we could achieve based on the current technical specification. This identified a value of benefits which could be achieved by the DNOs to be substantially lower than that quoted by the DECC IA. The DECC IA is based on partial information that is now out of date and does not extract the subset of benefits which flows directly to the DNOs cost base. Given the comprehensive analysis which has been applied to the ENA analysis, we believe this is a fairer reflection and should be used in place of the DECC analysis. We have also drawn upon the experiences within the wider Iberdrola Group where we have installed more than three million smart meters across Spain and the USA.

The draft determination also refers to the varying levels of smart metering benefits which have been assumed by DNOs. The benchmarking suggests that SPEN have not included the associated benefits within our plan but we would like to highlight that we have not included the corresponding costs that we will incur post 2021 to realise those benefits. Our proposed approach was not to include any costs thus customers will not be funding the DCC charges and as such we will look to benefit from the IQI mechanism which allows for these costs to be recovered whilst sharing the benefit with customers. Should all benefits be included within the Business Plan, we would be unable to take full advantage of the data generated from smart meters as we would have no funding mechanism to cover data costs. As outlined in our smart metering strategy, we are expecting to make full use of the data available and any benefits would be shared through the IQI mechanism in the longer term.

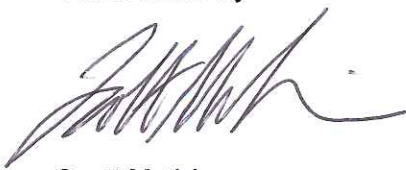
Other smart grid savings

We are in agreement that smart grid technology can have benefits which extend further than load related investment. We have noted from the benchmarking analysis that the quoted non-reinforcement smart grid benefits which ENW refer to are being funded through IFI and NIA and will result in improvements in quality of supply. If this is the case we do not believe that this should be considered in the analysis as the benefit should fund the investment rather than using customer money to pay for the infrastructure and allowing the DNOs to benefit from the consequential CI/CML benefits. We think that if ENW are in fact using IFI and NIA then this is a gross misuse of this fund and breaches the principle that any financial benefit from innovation being funded through IFI/NIA should be used to off-set the cost. We have also been unable to

consider the cost benefit analysis of these savings and would not like to think that ENW are supplementing this investment using innovation allowances to fund investment in the network.

I trust that you find these points to be constructive and that they highlight that the £72m of innovation savings we have included in our plan are both ambitious yet realistic and demonstrate a significant return on the innovation investment we have made in DPCR5, which is the highest return of all DNO groups. We believe that the current approach of applying a simplistic percentage reduction is flawed and could have a negative effect on the safety and security of the network, as well justified projects will need to be sacrificed to achieve the reduction. We would be happy to assist your team in improving the accuracy of the analysis as a matter of urgency, to support the inclusion of Smart Grid benefits within the ED1 proposals and ensure a well justified and realistic level of savings for customers is demonstrated by all.

Yours sincerely

A handwritten signature in dark ink, appearing to read 'S Mathieson', with a long horizontal flourish extending to the right.

Scott Mathieson
Regulation & Commercial Director

Cc: Frank Mitchell, CEO, SP EnergyNetworks
Dermot Nolan, CEO, Ofgem