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Dear Ms Pyper,

**Draft Forward work programme 2017-18 Consultation Response**

Thank you for the opportunity to respond to your Draft Forward Work Programme (DFWP).

I would like to start by congratulating you on the vision and scope of the DFWP. In my opinion enactment of the strategic objectives listed in the DFWP has the potential to improve efficiencies and security in the electricity and water markets whilst simultaneously controlling costs for suppliers and consumers.

The scope of the DFWP objectives is particularly welcome given the complete lack of any recent Northern Ireland energy policy direction or likelihood of anything being forthcoming in the near term.

Whilst the energy and water sectors are closely coupled, my comments will be directed at the electricity market strategic objectives, their implementation timeframes, prioritisation and resource concerns.

Having worked in the Northern Ireland public and private energy sectors in a variety of roles over the past 25 years, I've been privileged to have had oversight of major NI energy and resource flows and their trends. In recent years I've become firmly of the opinion that, given our modest size and infrastructure and with a suitable policy direction in place, Northern Ireland has the potential to become a globally important 'smart grid' proof of concept, whilst simultaneously decarbonising the grid and offering significant efficiency and cost savings. I believe this to be an opportunity with a limited life span, particularly so the IP and 'know how' that could subsequently be commercialised.

While 'smart grid' can be a fairly nebulous term, the cost effective integration of energy storage into the NI grid is I believe, a fundamental requirement to delivering a cleaner, more efficient and robust electricity network for all consumers. This would be consistent with the Utility Regulators statutory duties.

Not to be confused with an academic exercise, particularly given the high levels of investment that will be required to do something significant, I see this as enabling / leveraging the private sector to deliver viable commercial solutions. The National Grid's December 2016 Enhanced Frequency Response auction is a good example of this.

I was therefore surprised to note the low priority afforded within the DFWP to item 4: Review of Approach to Electricity Storage in Annex 1: Other projects (which we could do if additional resources became available).

Timing and priorities are important here. The speed at which the energy intensity of batteries is increasing while simultaneously costs are falling strongly indicates that infrastructure and commercial scale electricity storage solutions are already commercially viable under the right market conditions. Indeed some significant investments in battery based electricity storage have already occurred globally, with considerable further capacity planned.

Bloomberg New Energy Finance estimate the energy storage market to be worth \$250 billion by 2040, with a projected 25 GW of energy storage installed in the next 12 months. A rough pro rata calculation by electricity consumption equates to a projected 2040 energy storage market of \$30 billion in Europe, \$3.3 billion in the UK and \$250 million in ROI.

Other DFWP high priority strategic objectives critical to enabling the deployment of distributed wide scale electricity storage on to the NI grid include; I-SEM, DS3 and the ongoing connection review. None of which should be deprioritised.

With this in mind, I would strongly urge the board of the Utility regulator to seek additional in-house resource so that regulatory structures that facilitate a role for electricity storage in line with best practice regulations are implemented within a suitable timeframe.

Given Northern Ireland's aforementioned energy policy vacuum, I believe it to be particularly important that the Utility Regulator resources sufficiently to ensure that the multiple benefits of integrating electricity storage at scale and development of a Northern Ireland 'smart grid' are not lost. That these benefits may be delivered at a saving to the NI electricity consumer demands the Regulator's Board, the Department of Finance and Personnel and the NI Assembly's full attention.

Yours sincerely,



**David Browne**

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**Facilities and Energy Management**