Response to Northern Ireland Electricity plc Transmission & Distribution 6th Price Control (RP6) Consultation Document

On behalf of
AES Kilroot Power Ltd and AES Ballylumford Ltd

4th November 2015

RP6 Consultation

AES welcomes the publication of the consultation document on NIE's Transmission & Distribution 6th Price Control (RP6) and the opportunity to provide comments on the Regulator's initial views on the high level implementation approach.

AES Corporation (AES) is a global energy company and is a non-vertically integrated independent generator which owns and operates Ballylumford and Kilroot power stations in Northern Ireland with a combination of merchant and contracted base load, mid merit and peaking plant.

AES is also independently ranked as the global world leader in grid scale energy storage, with eight years of operating experience across the largest fleet of arrays in the world (86MW of interconnected storage, equivalent to 172MW of flexible resource), a fleet which will more than double by the end of 2016. AES is currently constructing the largest advanced battery storage array in the United Kingdom (a 10MW interconnected, 20MW resource array), which is on track for completion by the end of 2015.

The responses to this consultation are conditioned by the nature of our current position and portfolio of assets operating in the SEM.

Summary Key Messages

AES has contributed to this response in recognition of the important role that innovation and new technologies (including distributed battery storage) could play in achieving the aim of RP6 of creating a more secure, sustainable and cost effective network in Northern Ireland.

We highlight the issue of a lack of clarity over energy policy post 2020, with the 2010 Strategic Energy Framework (SEF) only setting a pathway to 2020. We urge NIE Networks and the Utility Regulator (UR) to work together with other stakeholders to create a clear and robust post 2020 future pathway, without which it is difficult to adequately plan which investments will be needed under RP6.

We agree with the stated objectives in supporting the aims of RP6 but note that the role of innovation and alternative technologies (including distributed energy storage) is only mentioned fleetingly within the document.

AES recommends ongoing monitoring and annual updates within the price control period to ensure the network investment strategy is agile enough to keep up with the evolving nature of the sector, capturing changes such as rapidly falling costs of solar and battery technologies.

Finally, we strongly urge NIE Networks and the Regulatory Authority to give careful consideration to recent OFGEM report (see footnote 1) that make clear recommendations for how flexible technologies could be encouraged at a network level in order to deliver benefits for consumers.

Section 3 – Overview of Price Controls

3.13 – "We would encourage other stakeholders to consider and expand on these outline set of aims and objectives for RP6"

We agree with the rationale of taking into account network requirements in light of the Strategic Energy Framework (SEF) and any subsequent review (as set out in 3.11). However, we note that the SEF only tracks a vision up to 2020 and after this there is no clear direction or vision for the future development of the electricity system to meet the legally binding UK emissions directives or other aspects of mitigating risks and costs associated with the energy trilemma.

We urge NIE Networks and the UR to work together with other stakeholders to provide vital input to DETI to help create a clear and robust post 2020 future pathways and for the SEF to be updated out to 2030, without which it is difficult to adequately plan which investments are needed under RP6.

We agree with the objectives set out in 3.12 and offer the following comments:

- *Introduce consumer engagement and ensure lessons are carried on in future work* – we agree this would be valuable, and that it is of growing importance to give more prominent consideration to the views and needs of end users given the clear trend towards decentralisation of energy and the changing role of the T&D network.

- *Incentivise network development to evolve with changes in the electricity industry e.g. DSU, renewables, DS3* – we agree that this is crucial to ensure the aims of RP6 are met and invite the UR and NIE Networks to follow closely the recommendations published by Ofgem to incentivise flexibility when considering implementation of incentives[1]. Network development could be assisted by technologies being contracted to provide services rather than NIE Networks investing in traditional upgrades.

- *Drive effective innovation such as in smart grids* - we agree this is an important objective, and support the idea that NIE Networks and the UR maximise opportunities to learn from other innovation projects, for example the UK Power Networks owned Leighton Buzzard 6MW battery, who have produced their own set of recommendations for the regulatory and legal framework[2] required to allow such technologies to resolve network challenges.

Section 4 – Our Approach to Key Areas

4.18 – "As we shall expect NIE Networks' Business Plan to be aligned to the longer term strategic goals of the electricity sector taking account, as necessary, of network resilience, sustainability and the needs of future customers, we will require information to demonstrate this."

We agree this is an important practical requirement and offer the suggestion that this links to Section 4.12's requirement for NIE Networks to develop their IT and data systems to support robust

[1] Ofgem, Making the electricity system more flexible and delivering the benefits for consumers, September 2015. Available online: http://tinyurl.com/qjqku4c

[2] UK Power Networks, Smarter Network Storage Low Carbon Network Fund: Electricity Storage in GB: SNS 4.7 – Recommendations for regulatory and legal framework (SDRC 9.5), September 2015. Available online: http://tinyurl.com/prlnz5z

assessment. Such developments should also factor in better monitoring of these above indicators and inform any calls for value creating solutions by NIE Networks.

4.28 – "The CEAP has an established Terms of Reference and provided advice on and agreed the scope of works for the procurement of expert market research advice to deliver a robust, statistically representative sample of consumers, a set of focus groups of domestic and Industrial and Commercial users (existing and potential future consumers)…"

We support the proposed idea of more active consumer engagement and stakeholder involvement. Evidence from the California Public Utilities Commission's Energy Storage Roadmap explicitly outlines the additional value from stakeholder input[3].

As a comment to the proposed terms of reference, we wish to highlight that demand side response companies, energy storage companies and others involved in smart grid innovation may be valuable stakeholders to consult with. Such input could certainly assist NIE Networks and the UR to inform their respective views and decisions on what business cases to seek funding for, and which to allow respectively.

4.48 – "The purpose of the interventions and expenditure which NIE Networks will propose in its RP6 Business Plan is to maintain and improve the services which consumers receive. Consumers experience service as a series of interlinked outcomes, including… whether there is adequate capacity in the network and/or processes in place to allow consumers to connect and economic growth to be sustained."

We would welcome NIE Networks and UR consideration as to the role storage could play in terms of alleviating constraints which impact customer connections and economic growth. Energy storage technologies are a key tool in maximising value and performance of existing infrastructure.

However, whilst distributed storage technologies could play an active role in alleviating such issues, their ability to do so is impeded by being required to queue in the same manner as other connection requests. AES would suggest consideration of the value created in allowing priority access for technologies that can defer transmission upgrade or extension costs.

4.63 – "We expect the company to assess the range of known and potential changes in legislation and policy and engage with the Utility Regulator on this issue well in advance of the RP6 Business Plan submission. Our objective is to develop a common understanding of future legislation and policy objectives and the extent to which their impact can be assessed and included in the RP6 Business Plan and RP6 determination with reasonable confidence."

We agree this is a very prudent decision, particularly given the current lack of clarity post 2020.

4.66 – "The way which demand will change in the future may differ from the past due to changes in policy, technology and incentives. In recent years, incentives to reduce carbon emissions have

[3] California ISO, "Advancing and maximising the value of energy storage technology: a California roadmap", December 2014. Available online: http://tinyurl.com/qj2sfc3.

resulted in demand for distributed generation connections, for example. These have changed, and sometimes reversed energy flows on the distribution network which has become a key driver for network investment. In the future, changes in incentives and technology might result in distributed energy storage and other measures to reduce peak demands. Improved technology and a general drive for energy efficiency might begin to off-set growth from new connections. Major changes in the generation market through I-SEM and the need to deliver security of supply might require changes to the transmission and distribution networks."

We fully support this rationale and agree these drivers are particularly important. We note that this is the only mention of storage in the whole consultation document. Given the maturity of certain storage technologies and potentially critical role in solving transmission and distribution level network challenges, we would welcome a forum to explore the benefits of these alternative technologies to system operation and customers.

In addition we note Ofgem's RIIO price control methodology for monopoly distribution companies. Ofgem adopted this approach to ensure that network investment was delivered at a fair price for consumers using a model based on Revenue = Incentives + Innovation + Outputs. RIIO is designed to encourage network companies to:

- Put stakeholders at the heart of their decision making process
- Invest efficiently to ensure continued safe and reliable services
- Innovate to reduce network costs for current and future consumers
- Play a full role in delivering a low carbon economy and wider environmental objectives

AES would suggest a price control methodology based on similar principles is appropriated for NIE Networks as it has a core role in addressing issues associated with Northern Ireland's energy trilemma. We would particularly welcome a new focus on innovation incentives looking at alternative technologies which may offer alternative's to conventional infrastructure investment approach, focussing more on enhancing the performance and value of existing assets and system configurations.

4.80 – "While we have focused on the financial incentives in the above list and while we are reviewing this closely to inform our approach to RP6, we will also reassess the non-financial incentives which are also in operation during RP5."

The consultation document does not clarify if the the four incentives identified in Section 4.79 that were considered in RP5 were implemented, and if so, on whether they were successful and what lessons were learned. We would suggest this would be an important basis for which to consider the approach to incentives for RP6.

4.88 – "UR's view is that successful innovation is best driven by NIE Networks operating under an appropriate incentive regime. Such a regime would allow it to make decisions on what innovation investments to make taking into account the impact they will have on reducing costs and improving outputs. NIE Networks will then be rewarded through the price control framework from resulting outperformance and customers will benefit in the long run from improved services and lower prices."

We would refer to our comment under 4.66 previously. Ofgem's RIIO price control approach is a much more rigorous, transparent and accountable approach compared to what has been proposed by the UR.

It is worth highlighting that this point infers that the kind of innovation that is encouraged strongly hinges upon which incentives are selected and how the challenges listed in Section 4.83 are addressed. We invite the UR to clarify what they mean by innovation as this is a broad term that can serve many definitions. It is important to establish a clear meaning so that all stakeholders are speaking a common language.

The closest definition in this document is mentioned under Section 3.12 where it suggests "innovation such as in smart grids". If this is the definition, we are supportive but would note that this does not clearly map onto the suggested incentives. If innovation is to be encouraged we would suggest that there is an explicit incentive based upon this – for instance, benchmarking innovation spend and effectiveness metrics against those of other DNOs in Great Britain.

4.107 – "Whilst there is considerable uncertainty as to how new technologies and the smarter grid may develop over time, its impact on an established first world distribution network such as NIE Networks is decidedly marginal in nature. The Utility Regulator is minded to adopt at least a six year duration, reflecting the specific need for NIE Networks to be able to plan for a smarter network and develop new technologies."

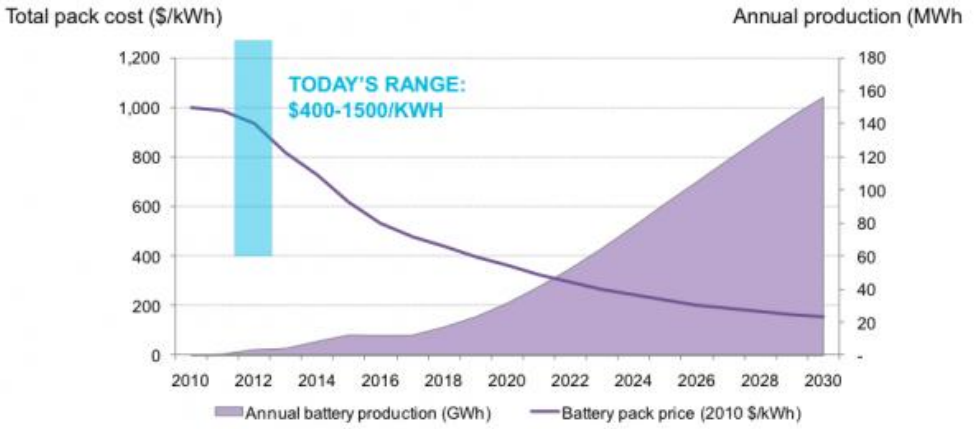
We would strongly challenge the notion that new technologies and a smarter grid will only have a decidedly marginal impact. On the contrary, these technologies have the potential to have a profound impact on the evolution of Northern Ireland's distribution network, introducing new solutions but also new challenges associated with bi-directional flows of energy, big data and consumers proactively participating in the energy market.

However, AES supports the view that the need to plan for a smarter network and develop new technologies warrants a longer duration – we note that Ofgem have adopted eight year price control periods.

We would recommend at least annual monitoring and updates within this period to roadmap progress, much like the annual update to the All Island Generation Capacity Statement. This is crucial to ensure the network investment strategy is agile enough to keep up with the evolving nature of the sector, and captures rapidly falling costs of solar and battery technologies, the latter of which are expected to be up to 50% lower by the time we are in the middle of the price control period relative to the price point in 2012 (see Bloomberg graph below).

AES would also highlight that the regulator's own minded-to decision to consider a 6.5 years price control period takes the period beyond that covered by the strategic energy framework. This reinforces the points made earlier in this consultation about the need for both NIE and the Regulatory Authority to urge policymakers to clarify post-2020 policy trajectory in order for effective decisions to be made.

LI-ION BATTERY PACK COST AND PRODUCTION, 2010-30



Source: Bloomberg New Energy Finance

Bloomberg NEW ENERGY FINANCE