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AEMC

By online: AEMC.gov.au

Re: EPR0052 Coordination of generation and transmission investment

UPC Renewables Australia Pty Ltd ("UPC") is the Australian entity representing the global UPC Renewables Group that was established in the early 1990s and has developed, owned and operated over 3500MW of large-scale wind and solar farms in 10 countries in Europe, Africa, North America and Austral-Asia with an investment value of over \$5Billion USD. We have always been a pioneering Renewable Developer, developing the first commercial wind farms in Italy and Indonesia as an example. Our mission is to meet our world's growing energy needs with clean electricity and improve the lives of local people and communities. As a developer, owner and operator, UPC is vested in the community for the long term. UPC established in Hobart, Australia in early 2017 and has an Australian development portfolio of over 5,000 MWs including the Robbins Island and Jim's Plain windfarms in north-west Tasmania and large solar and wind developments on mainland Australia.

UPC is pleased to have the opportunity to respond to the options paper into the coordination of generation and transmission investment. We consider this work is both important and timely in regard to ensuring the Integrated System Plan (ISP) is actionable and in the promotion of renewable energy zones and the transmissions to support such development.

The option paper is comprehensive and UPC has structured its response in regard to the specific areas covered by the options paper.

Role of the ISP

UPC sees the ISP as a strategic plan to ensure the NEM can continue to function efficiently over time to achieve the National Energy Objective (NEO)¹. On this basis UPC agrees that the ISP needs to be actionable and hence the projects identified need to have a defined development path. The ISP should focus on strategic investment to optimise the national flow paths across the NEM. There should be a strengthening of the interaction between AEMO and the TNSPs through the ISP and APR processes. This will ensure strategic projects are modelled in relation to the APR while also ensuring that the projects in the APR are considered in relation to strategic projects in the ISP. There needs to be a clear distinction then on who retains responsibility for the delivery of the projects. UPC considers that AEMO should be responsible for the ISP projects while TNSP should then deliver on the APR projects (note this does not mean the TNSPs cannot build the ISP projects).

One major issue is the implementation of the RiT-T for strategic projects. It would seem that there has been little success of large infrastructure projects being implemented through the RiT-T as it would appear to be a significant hurdle which risks making the ISP NOT actionable. Consistent with the feedback provided to COAG in December 2016, the RiT-T does not work in a manner that ensures appropriate investment in Australia to the benefit of the customers. UPC considers that the ISP process should have a benefits assessment in term of selecting the best option to meet a defined need and then focus on minimising the cost of the best option to be delivered by a TNSP (competitive process). This aligns to Option 4 but UPC considers that a contestable process should be used in selecting the TNSP to proceed with the project to help ensure the lowest cost of delivery for the project.

If the RiT-T is maintained as part of the ISP then there would be merit in considering who is best placed to assess the benefits. Traditionally the TNSP have been better placed and this would align to options 1 or 2. However, UPC believe that the ability of a TNSP to step away from the ISP project needs to be tightened to ensure the ISP projects can be delivered. Also if this is endorsed, more work is required to account for the value of strategic projects in the RiT-T process to increase the likelihood of ISP projects being successfully developed. This could also mean more an alignment to option 3 or option 4 with the TNSP/AEMO progressing a refined RiT-T assessment.

Stage 1 projects in the ISP should be seen as committed or locked into any future modelling. The ISP should then be the basis for future modelling/RiT-T. However, UPC considers that there is more work required to ensure realistic assumptions and scenarios are developed. UPC have already provided this feedback to AEMO as part of the ISP process.

¹ <https://www.aemc.gov.au/regulation/national-energy-objectives> - "to promote efficient investment in, and efficient operation and use of, electricity services for the long-term interests of consumers of electricity with respect to: price, quality, safety and reliability and security of supply of electricity."

Another aspect of the current ISP is the modelling assumes perfect knowledge of the future. While scenarios are modelled, the timing would seem to reflect the most likely timing outcome, rather than build some conservatism into the timing. There is a risk that some of the projects will end up too late if key assumptions change (i.e. coal closure is earlier). There is merit in adjusting the timing to bring forward projects or have the ability to fast track projects if the situation changes.

Finally, UPC considers that given the rate of change of the market and the fact that the initial ISP has just been delivered and needs refinement, it is recommended that there is an annual update for the first 3 years. At this time, the update timing could be considered depending on the progress of the ISP development and also on the eventual option adopted.

Regulatory Investment Test for Transmission (RiT-T)

UPC sees that the current RiT- T is too high a hurdle and has a number of issues that are likely to jeopardise the delivery of the ISP in the future.

In terms of some of the large strategic projects, the evaluation period would seem too short and this will negatively impact high capital cost and long lead time projects. When considering projects with asset lives in the order of 50 years and potential development periods of 4-5 years, then the RiT-T analysis is not likely to capture the full benefits appropriately. Also the strategic value of such assets always seems understated which maybe due to the assumptions and scenarios used and it is suggested that more work is done on this basis. Again this was highlighted to COAG in December 2016².

In some cases, the RiT-T also is limited as it won't consider the chicken and egg situations, where projects cannot be committed to as the network won't support the infrastructure but then the infrastructure won't be upgraded as the projects are not committed. UPC has seen this recently when considering the second interconnector between Tasmania and Victoria where the full potential of 1000 MW Robbins Island wind farm (which has a significantly lower LCOE than a 500 MW case) isn't considered as it needs more interconnection but more interconnection can't be justified unless there is large generation development to support it. This issue could be resolved with a more pragmatic view of the assumptions and scenarios modelled and greater interaction with the market when considering the ISP/RiT-T and potential projects, especially in AEMO identified Renewable Energy Zones.

An option to resolve this issue is for the transmission investment process to include provisions for conditional commitment to enable renewable generation zones to proceed with confidence that

²<http://www.coagenergycouncil.gov.au/sites/prod.energycouncil/files/publications/documents/Energy%20Council%20Communique%20-%2014%20December%202016%20Version%201.0.pdf>

transmission will be constructed. The process should include provision for TNSPs to acquire strategic easements in many years in advance of the final investment commitments.

As indicated the RiT-T needs to be either modified to overcome some of the issues raised or a modified benefits assessment used in the ISP process. Also any detailed assessment of cost/benefits would be more focussed on near term projects like the Stage 1 projects (0-5 years out) due to timing imperative. The level of complexity and detail of a cost/benefits analysis can then be decreased as the other stages are progressed (i.e. Stage 2 (post 5-15 years) is less detailed than Stage 1 but more comprehensive than Stage 3 (post 15 years) which could be high level and used to reduce the complexity and timeliness of the process over time).

The part of the RiT-T discussion not touched on is the cost allocation, particularly when applied to interconnectors and how the cost is proportion to customers across regions. In general, costs should be proportioned on a benefit basis although UPC understand that work on a interconnector between Tasmania and Victoria indicated that the benefits flowed to other jurisdictions, providing "National Benefits". The current rules do not seem to account for this outcome and hence distort the cost allocation. This is a major concern in the case of a new Tasmania - Victoria link where there is uncertainty over how costs will be allocated as UPC understand that clear benefits are identified for NSW/SA regions. Alternative approaches could be:

- funding strategic projects (like the ISP projects and interconnectors) outside the market (i.e. potentially in a similar manner to funding national road building infrastructure of 80 percent funding from the commonwealth/20 percent from the states) and then cost allocation in the NEM would not be needed;
- Improve cost allocation based on benefits across the two interconnected regions (i.e. proportionally based on total energy transferred across the link – percentage of volume weighted export/import); or
- potentially spread across all load in the adjoining regions or all NEM load (on the basis flow on effects will assist all regions).

Renewable Energy Zones

While the ISP is a good step in identifying REZs, the process to engage with generation and TNSP needs to be improved. UPC considers that the "bond" option should be explored further as it should provide a low-cost commitment opportunity to provide the ability for TNSP to develop viable transmission options to a REZ. The bond option could also be used by Governments to help fund transmission and effectively underwrite and promote REZ developments.

UPC also makes the observation that in the case of a TNSP speculative approach, and the potential to seek higher returns, then a TNSP could progress such an option on a non-regulated basis.

To help in promoting the REZ opportunities and general development activities, UPC consider that TNSP should pre-prepare detailed connection application responses and MLF forecasts to be available to developers, bankers, investors.

Congestion and access in the NEM

Congestion and MLF risk are major impediment to renewable investment. The current process for assessing these risks is also inefficient. UPC supports market reforms and rule changes that gives generators and investors more certainty and transparency in dealing with these risks. These include :

- Detailed AEMO studies forecasting future impact of interconnector and generation developments on MLF and congestion
- Publishing real time estimated 5 min MLF data

This should allow new developers to better understand the congestion and MLF impacts for their projects and hopefully allow them to make better informed decisions in regard to strong connection points in the transmission system. This would hopefully then mean existing generators in those areas are less impacted by drops in MLF or congestion that impact on the viability of those generators.

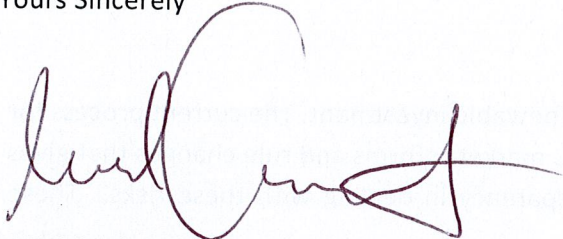
Following on from this, as well as better MLF forecasts, better congestion studies could be undertaken and provided to the market. Along with the MLF forecast this could help focus generation developments to stronger parts of the network.

Treatment of Storage

UPC considers that where a storage acts as a load on the system then it should pay a suitable TUOS charge reflective of the loading it places on the system. UPC advocates a cost reflective approach as most storage facilities will act as a load during low demand/high generation times which should translate into low cost TUOS charges (i.e. potential no cost). It could be argued that if the TUOS cost is low why bother, however the cost would serve as an incentive for load to utilise the transmission system at low cost times. UPC agrees with the AEMC that when a storage facility sits with generation and hence any load is behind the meter/generation source, then no TUOS charges should be paid as the storage facility is not using the network system.

UPC appreciates the opportunity to provide our input into this review and wish to state that we remain available to discuss or clarify our submission should you so wish.

Yours Sincerely



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