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Chloe Hicks

Director, Energy Infrastructure and Zones

Energy, Climate Change and Sustainability | Department of Planning, Industry and Environment

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[cc:](#) Nick Landreth

Dear Chloe,

UPC\AC Renewables Australia - submission to consultation on CWO REZ Access Schemes

UPC\AC Renewables Australia (UPC) welcomes the opportunity to provide the attached submission to the consultation on the access scheme options for the Central West Orana Renewable Energy Zone.

UPC is an Australian entity, established in early 2017, that is headquartered in Tasmania. We have a development portfolio of several GW of renewable energy projects within the National Electricity Market (NEM). UPC is part of the global UPC Renewables Group that was established in the early 1990s. The UPC Renewables Group has developed, owned and operated over 10,000 MW of large scale wind and solar farms in 10 countries across Europe, North America, North Africa, China and Australia-Asia, with an investment value of over \$5 billion USD. We have always been a pioneering renewable energy developer, developing the first commercial wind farms in Italy and Indonesia as an example. We recently financed and started construction of the first stage of the New England Solar Farm project located in the New England Tablelands region, which is 400 MW of a total project of 720MW. 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 has long been an advocate for the development of renewable energy in the Central West Orana (CWO) region as we consider it has excellent renewable energy resources close to strong grid access,

namely the 500kV network that passes through the TransGrid Wollar substation. UPC applauds the vision of the NSW government in progressing the development of the CWO Renewable Energy Zone (CWO REZ) and welcomes the opportunity to provide our perspective on the issues raised in terms of an access scheme for the CWO REZ.

UPC is currently progressing 6 projects in the CWO REZ including solar, wind, battery energy storage (BESS) and pumped hydro opportunities that represents a potential development of over 4,000 MW. These projects include the Stubbo Solar Farm (400MW) and associated BESS (up to 400MWh), the Valley of the Winds Wind Farm (800MW) and other projects not currently in the public domain. We note that UPC lodged the majority of these via the NSW Governments registration of interest process in early 2020. These projects would benefit from a more coordinated approach to the development of new transmission infrastructure in the CWO region and an access rights protection scheme.

UPC sees a well-designed access scheme - that is, one which genuinely reduces the risk of transmission curtailment and the worsening of marginal loss factors (MLFs) for participants in the CWO REZ - as being worth pursuing, as this has the potential to deliver more cost-effective renewable energy generation assets in the CWO REZ and hence lower cost energy for NSW consumers.

UPC has provided a detailed response to several of the questions asked in the consultation paper which is attached to this submission. However, the purpose of this cover letter is to highlight some of the more critical high-level aspects of our views on the access scheme.

Benefits and evaluation criteria

UPC considers that the key benefits of the CWO REZ should be lowering the cost of connecting more renewable energy projects through a better coordinated approach and encouraging more investment than under the status quo by reducing risk and the cost of capital for proponents. If more stable MLFs can be achieved for projects in the REZ this will also assist in financing and developing projects. The connection of major loads might help support the long term stability of MLFs for generation projects and could be encouraged by Government. If well-designed and implemented, the access scheme - combined with the other NSW roadmap initiatives i.e. safeguard mechanisms including the Long Term Energy Service Agreements will provide greater investment certainty.

UPC considers the evaluation criteria as generally sufficient to be able to select the most appropriate access regime. However, given the complexity of many of the issues, we encourage the NSW Government to take the time to analyse the preferred option/s carefully and continue consulting with industry on the design of the preferred Access Scheme model prior to commencing implementation.

Ensure there is genuine value for participants in paying for access rights – make them fully firm

We note that the Access Scheme's stated focus is on protecting rights *within* the CWO REZ, and no measures for protection of access rights are currently being considered *outside* the REZ. UPC believes that this represents probably the biggest threat to successful realisation of the desired benefits of the CWO REZ. Further consideration should be given to ways to minimise congestion risk arising outside the REZ, i.e. between the REZ border and the Regional Reference Node (RRN), even if only on a temporary or partial basis. Spending a fraction of the costs of the transmission assets being developed for the REZ to relieve or reduce constraints outside the REZ would provide greater confidence for projects to develop in the REZ.

UPC would encourage the NSW Government to identify cost-effective network augmentation options that could enhance power flows and network stability in the 500kV and 330kV system between the CWO REZ and the RRN. The Government is also encouraged to consider some of the key transmission upgrades already identified in the ISP, like the completion of the 500kV loop around Sydney (Reinforcing Sydney, Newcastle and Wollongong Supply – ISP 2020,¹), to reduce likely impacts of curtailment outside the REZ. While the Energy Security Board Post 2025 review process may provide a path to developing such options, NSW should be prepared to press ahead with such development in case the ESB process does not deliver a timely path to bring these developments to fruition.

Whether through physical augmentation of the wider network or through a short term compensation model - e.g. 5 – 10 year “curtailment holiday” – the aim is to give investors confidence that the access rights they pay for are “fully firm”. Even a limited guarantee regarding curtailment on the network outside of the REZ would be positive, and could help underwrite the REZ through boosting willingness to pay for the access rights. Currently, generators do not pay for access rights under the open access regime, so if the fees are intended to deliver more investment, the access rights must be valued by debt and equity providers, otherwise participation may be lower than expected.

Access scheme options

UPC agrees with the NSW Government that of the options presented, Option 2B appears to be the preferred approach for protection of congestion risk. More narrow definition of trading intervals via Option 2B is preferred to Option 2A, as this should encourage more efficient use of the total capacity of the REZ as well as ensuring greater diversity of technology deployed i.e. storage is more likely to be developed with and separate from renewable energy generation projects.

While Option 1 could work, UPC sees issues in managing the allocation of capacity across technologies and projects. By definition, Option 1 will rely on accurate forecasting and then building transmission

¹ <https://www.aemo.com.au/-/media/files/major-publications/isp/2020/final-2020-integrated-system-plan.pdf?la=en&hash=6BCC72F9535B8E5715216F8ECDB4451C>

assets to match that forecast, with the risk that the transmission network built may be less utilised than expected and hence not the most effective outcome. Without the financial compensation of Option 2, there will be pressure to over-build the assets, which is why the likely downside scenario is underutilisation. Under this option the Government would be more reliant on TransGrid to allocate the capacity effectively versus the market driving a more efficient allocation outcome (the trading aspect of Option 2B would in itself be more likely to deliver an efficient outcome).

Recognise the links between the Long-Term Energy Service Agreements and the Access Scheme.

UPC encourages the NSW Government to recognise that investors will make strong linkages between the access rights allocation process and the safeguard mechanism/long term energy supply agreements (LTESAs). The two initiatives, whether that is underwriting renewable projects or firming/storage assets, must work in concert with each other if the policy framework is to be effective in a project finance arrangement. Being allocated access rights via the capacity auction and then not being successful with a safeguard contract could mean a project is forced to hand back the rights. Vice versa, if a proponent is successful in the LTESA auction but then fails to secure access rights, it would be likely to lose the LTESA, while other projects had missed out in the tender may have secured access rights.

Careful consideration should be given to the sequencing and linking of these two policy mechanisms. For example, one approach could be to run an initial round for the access rights auction, with a meaningful bid bond, and then require participants to demonstrate they have a secure grid connection path in order to be eligible to participate in the LTESA auction – i.e. at least passing the initial round of the capacity auction. In the second access rights round, the auction would then require fully binding bids; participants that were successful in being selected for the LTESA contracts would be eligible to bid for the capacity rights with the certainty that the project has a revenue contracting path to being financed, and could be assigned priority if there is over-subscription for capacity rights. A participant in the binding stage of the capacity auction that has not secured an LTESA should be required to demonstrate that it has a credible alternative path to being financed such as a commercial sector offtake or private sector PPA.

An alternative could be to staple the access rights to the LTESA auctions and run the auction for the LTESAs and the access rights effectively at the same time. Winning participants would then be able to finance projects with both the revenue contract and the access rights in hand. While this is likely to be more onerous from an auction scheme design point of view and may reduce the pool of projects able to participate, it would limit the likelihood of projects winning capacity rights and then failing to progress. Irrespective of the approach, substantial bid bond linked to the capacity requested should be required as a way of discouraging speculation and non-serious projects from buying up rights.

Access scheme detailed design issues

Trading of access rights – trading should definitely be allowed if Option 2B is implemented. UPC recommends trading be limited initially to the owners of physical generation and storage assets, i.e. market participants and intending participants in the REZ, rather than pure financial market participants, to avoid the risk of speculation and hoarding of rights.

Use it or lose it provisions - UPC supports use or lose it provisions to further reduce the likelihood of hoarding or preventing competing projects from connecting to the REZ. Sunset clause timeframes should be reasonable, however, to allow for “normal” delays and genuine force majeure events. Some form of a reasonable cure period with strict requirements about demonstrating progress should be allowed prior to the withdrawal of awarded access rights by the scheme regulator.

Incentivising storage

The different issues relating to the treatment of storage in the REZ are arguably the most complex. We encourage the Government to proceed with caution as storage will certainly have to play a critical role in the future energy system, so getting the settings right is important. We think the conclusions could be quite different depending on the assumptions made about the revenue model and hence operational profile of the asset. For example, in theory a battery linked to a “firmed” or “shaped” PPA or contracted for specific grid support services may require firm access rights, whereas a merchant storage asset that is naturally incentivised to dispatch during high price events and charge during low price events may be comfortable with non-firm access rights. Conversely, owners of a pumped hydro project for example would need to be able to demonstrate that the plant can take advantage of high price events – without firm access rights this may be difficult to finance (unless of course if the Government is intending to underwrite a long term revenue line). It is worth further analysing the likely coincidence of renewable energy-driven congestion within the REZ and high prices in the NSW region vs renewable energy-driven congestion within the REZ and low prices in the region, and try to model likely participant behaviour to see if the assumptions that are being made about the behaviour of storage assets will hold in practice.

Don't limit the REZ to 3GW

UPC notes the substantial over-subscription of interest in the CWO REZ following the Registration of Interest round in early 2020 considers that even when the “non-credible” projects are accounted for there will be more than the targeted 3,000 MW of interest in the auction when announced. The Government is encouraged to carefully consider the minimum eligibility requirements for participation and should require proponents to show certain essential progress has been made in order to participate – for example, land rights should have been secured and ideally a Development Approval should be in hand, or if not in hand at the time of submitting the bid, demonstrated to be highly likely to be awarded by the time of the capacity rights are allocated.

UPC has long advocated for the CWO REZ to target 4 - 5 GW as a starting point, with a view to potential expansion to as much as 6 GW. We believe this is entirely feasible from a technical and economic perspective given the T-Link is connecting into the 500kV network. We suggest that the NSW Government should consider potentially increasing the capacity of the REZ – either now or by announcing a second stage in response to the demand for access rights revealed through the first round of the auction (provided that a meaningful bid bond is required as part of this, so that it is real).

UPC believes that the CWO REZ represents the least cost renewable energy zone in NSW because of its combination of high quality resources and lower cost connection into the existing 500kV network. The risk of aiming for too small a target in terms of the MW cap is that otherwise good quality projects may effectively become stalled when the cap is reached. This may mean that higher cost/less viable projects in other locations in the State are needed to achieve the State's policy objectives.

Grid connection application process

With respect to the connection application process itself, UPC is wary about proposing any additional process or elements designed to “improve” the existing generator connection application process – however well intentioned, it is unlikely to materially improve the process for proponents unless the NSW Government can find a way of streamlining and reducing the complexity of the existing requirements. That said, a few key things that the Government could aim to achieve are:

1. Direct TransGrid to work collaboratively with proponents which are interested in connecting to the same segment of the REZ T-Link (e.g. two or more proponents wanting to establish a cut-in and substation in roughly the same location), designed to lower the costs of the connection assets. TransGrid should be obligated to reveal to each proponent the cost savings and timeframes for a coordinated approach compared with the “go it alone” option and then let the individual proponents choose. A mandatory “must join the club” style approach is not recommended as this would be likely to slow down development.
2. Provide proponents with good quality, detailed technical information relating to the intended transmission asset configuration, location of infrastructure and other key details well in advance of when the Government expects projects to bid for access rights and the LETSAs - more than 12 months ideally, but no less than 6 months. Otherwise, it will be almost impossible to proceed with detailed grid studies in a timely and meaningful manner and determine project economics with any level of accuracy.
3. Coordinate a centralised approach for system strength, so that each individual proponent does not have to demonstrate that their project can “solve” any system strength issues through the connection application process. We note the recent announcement that the AEMC intends to abolish the “do no harm” rules and require TNSPs to manage system

strength. This is encouraging, but should not mean that TransGrid has a monopoly on the provision of the services, however, as the market can also deliver these services (e.g. through batteries with grid forming inverters). The key thing that is needed early on are the technical assumptions for the grid studies and then to define the rules of any tender for the services.

Conclusion

UPC is highly supportive of the NSW Government's progress of the access scheme design for the CWO REZ its strong support of renewable energy development in the state.

If you would like to discuss any of the comments in this submission further then please contact myself on [REDACTED] or [REDACTED]

Yours sincerely,



Killian Wentrup Head of Solar Development

UPC\AC Renewables Australia

A UPC Renewables and AC Energy Company

M: [REDACTED]

E: [REDACTED]

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