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Russell Pendlebury
Senior Economist
Australian Energy Market Commission
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Dear Russell

Transmission access reform

AGL Energy (AGL) welcomes the opportunity to comment on the AEMC Transmission Access reform Interim Report and NERA cost benefit analysis report.

AGL is one of Australia's leading integrated energy companies and the largest ASX listed owner, operator, and developer of renewable generation. Our diverse power generation portfolio includes base, peaking, and intermediate generation plants, spread across traditional thermal generation as well as renewable sources. AGL is also a significant retailer of energy and provides energy solutions to over 3.6 million customers in New South Wales, Victoria, Queensland, Western Australia, and South Australia.

The past decade has seen significant investment in new generation capacity in the NEM much of which has not been efficiently located based on network capacity, which has led to reduced output from these generators. Generally, this has not been a failure of new entrant generators, but rather the absence of adequate mechanisms to ensure new investment is well located. Increased understanding regarding the congestion risk of poorly located investment, including improved access to system information due to the Transparency of new projects rule change, combined with the Integrated System Plan and Renewable Energy Zones are likely to significantly improve this problem.

The introduction of Locational Marginal Pricing (LMP) and Financial Transmission Rights (FTRs) in theory could further improve the efficient location of new investment in the NEM. However, AGL considers that whether LMP and FTRs in the NEM are required and will be cost effective remains an open question. The NERA cost benefit analysis of access reform report does not adequately resolve this uncertainty since the report relies on too many flawed assumptions and has too many limitations. The proposed reforms may also raise barriers to entry in the NEM by increasing complexity and reducing contract market liquidity.

Given these issues we consider that there remains a significant risk that the proposed reforms will increase costs for consumers. In addition, we suggest that the current market environment of broad rule changes may not be conducive to such an extreme re-design.

The below section discusses these issues and provides AGL's views on the design of the proposed reform.



If you have any questions about this submission, please contact Anton King at aking6@agl.com.au or on 03 8633 6102.

Yours sincerely,

Chris Streets

Senior Manager Wholesale Markets Regulation



Locational Marginal Pricing design

Regional price determination

AGL agrees that if LMP is adopted that scheduled and semi-scheduled participants should face the LMP and non-scheduled market participants should face the regional price. We also support the AEMC decision to have regional pricing set by the volume weighted average price of non-scheduled participants, which accords with our November 2019 COGATI submission.

Dynamic marginal losses

The AEMC has indicated that its preferred design would be for dynamic marginal losses (MLF) to replace static intra-regional MLFs as this should lead to more efficient dispatch. We consider this to be a sensible decision provided the dynamic MLFs are reflected in FTRs, for the reasons stated below in the section titled *Exclusion of losses from FTRs*.

Ex-ante offer cap

The AEMC has indicated that it is considering the need for an ex-ante offer cap to mitigate the risk of high nodal prices at dispatch where generators are able to exploit their position due to network constraints. We consider the introduction of an ex-ante offer cap would be an unnecessary market intervention which will weaken investment signals and undermine the value of LMP. The new PART XICA of the CCA prohibition on bidding “for the purpose of distorting or manipulating prices in the electricity spot market” makes the exploitation contemplated prohibited conduct and we therefore consider the likelihood of it occurring to a significant extent to be very low. We therefore suggest that the AEMC only introduce such a mechanism if a material problem is shown to exist after the five-year initial period has commenced. The current proposal to assess the need for the mechanism on the basis of historical data is unlikely to be a useful assessment given that the NEM will change significantly from now until after the four year implementation period when LMP is proposed to be introduced and because it will be difficult to accurately predict generator behaviour without having detailed knowledge of their contract positions.

Financial Transmission Rights design

Unchanged design elements

AGL agrees with the AEMC’s decision that FTRs should pay out continuously or at specific times, that FTRs be backed by settlement residue and auction revenue, and that they be auctioned in tranches run by AEMO. We support these design elements, which are unchanged since the AEMC March paper, as they will ensure FTRs can be used flexibly by market participants and will be firm, which is crucial for their effectiveness. We also support the creation of an FTR auction register to ensure FTR trade remains transparent through the publication of the price and quantity of each FTR trade for a given route. Financial derivatives registers do not typically include the identity of the purchaser, and we query why the AEMC has decided it should be included on the proposed FTR register. Including a purchaser’s identity may reduce FTR liquidity by dissuading some participants from trading in FTRs if they believe a trade will reveal broader commercial intent.



Effective competition mechanism

The AEMC has indicated that it does not propose to introduce any FTR design elements to ensure effective competition in FTR markets. We support this decision on the basis that FTRs do not on their own form a separate market from a competition perspective as the AEMC has claimed. FTRs are merely a financial instrument used to determine the contractual terms (including price) of wholesale electricity, like cash and derivative contracts. To be effective financial instruments must be liquid and firm. Competition metrics (market concentration, BTE etc) have no relevance in assessing the effectiveness of financial instruments, including FTRs. For example, barriers to entry in cash are not relevant, however it is crucial that cash is both liquid and firm for it to be an effective financial instrument for wholesale electricity markets. Concern that some participants may 'hoard' FTRs, equates to concern that FTRs may not be adequately liquid which we discuss below, in the section titled *Inclusion of non-physical participants*.

FTRs available a decade in advance

AGL does not share the AEMC's preference for FTRs to be available up to ten years in advance. FTRs in foreign jurisdictions are typically only available up to three years in advance, SRAs are available three years in advance, and ASX electricity futures are only available four years in advance. It is sensible for hedge products to only be available a few years in advance as otherwise the price at which they are acquired will be overly speculative since the assessment of risk will be less accurate many years in advance. For FTRs this means the price paid many years in advance may not accurately reflect the value at payout which should reflect the value of risk being mitigated. Some market participants suggest that FTRs should be available at least ten years in advance to ensure they are available to reduce congestion risk for a period long enough to support the financing of a new generator, and that if they are not available that this may increase barriers to entry. However, if FTRs are available many years in advance this may actually increase barriers to entry because a new entrant deciding to enter only a few years in advanced will have missed the opportunity to participate in many of the early FTR auction tranches where it is likely that you can acquire an FTR if you bid high enough. The only scenario in which we consider it may be appropriate to allow FTRs to be available many years in advance is if a company privately pays for transmission upgrades, in which case it may be appropriate that they are allocated FTRs for that route many years in advance.

Inclusion of non-physical participants

AGL supports the proposed inclusion of non-physical participants in FTR auctions due to the general principle that financial instruments will be more liquid if they are widely tradeable and because the inclusion of non-physical participants is normal in FTR markets. Increased liquidity should ensure that FTRs are efficiently priced and therefore if a party wished to hoard FTRs they would have to pay a price higher than their likely value at payout. In regard to the idea that the inclusion of non-physical participants may increase the risk of hoarding we note that non-physical participants may be less likely to engage in such conduct since FTRs may ultimately have more value to physical parties who require a hedge to their congestion risk. If a generator purchases FTRs to hedge congestion risk we expect that it will be unlikely that they will on sell the FTRs unless they can sell a volume or period of FTRs that does not correspond to a risk they expect to face e.g. due to an outage or a change in expected congestion. We note that the requirement that non-physical participants be appropriately registered requires careful consideration since



registration requirements that are too stringent or costly will limit participation in FTR trade to the detriment of liquidity.

FTR reserve price

AGL supports the AEMC's preference for no FTR reserve price. If FTRs are designed appropriately, and FTR trade is liquid, then there should be no need for an FTR reserve price since efficient prices will be determined by the market. We suggest that the inclusion of non-physical participants in FTR auctions, and only having FTR auctions a few years in advance, will greatly lessen the need for an FTR reserve price.

Number of FTR routes

AGL does not share the view held by some market participants that less FTR routes will necessarily reduce the complexity of an LMP/FTR regime because if FTR routes are limited participants will have to manage the congestion risk between their local node and the FTR route. We note that the AEMC is undertaking empirical analysis to determine the significance of this basis risk, and we encourage the AEMC to publish this analysis before deciding on the number of FTR routes. Less FTR routes also increases financial lender risks on debt equity and therefore the cost of capital associated with new and existing developments, which may reduce contract market liquidity. We suggest the AEMC provide more detailed information regarding the proposed number and location of FTR routes so that industry participants are able to make a proper assessment of the complexity and liquidity of the proposed design.

Exclusion of losses from FTRs

AGL suggests that if dynamic MLFs are introduced then they should be reflected in FTRs because then the FTRs would pay out the full LMP difference between two connection points. This would allow participants to hedge both the risk of congestion and marginal losses. We agree this may increase the complexity and reduce the firmness of FTRs, however the introduction of dynamic MLFs are likely to increase the volatility of losses and therefore it is sensible to provide a mechanism to hedge this risk. Given that the final rule is still a few years from completion we consider it premature to exclude dynamic MLF risk from FTRs without a more through exploration of how they could be included.

NERA Cost benefit analysis of access reform

AGL considers the NERA Cost benefit analysis (CBA) of access reform relies on too many flawed assumptions and has too many limitations to serve as an accurate assessment of the cost and benefits of the introduction of LMP and FTR in the NEM. We consider the estimated benefits to be significantly overstated for each of the four key identified areas of benefit.

Impact of Reforming Locational Signals in Generation and Storage

Although AGL generally agrees that LMP should increase efficiency in overall investment we believe the outcome of the NERA modelling is significantly overstating the impacts in two ways:

1. Qualitatively investors are likely to avoid connection locations subject to congestion, especially if it is already known to exist or could have the potential to exist through future modelling. Although pool price forecasts form a significant part of an investment decision, they still have a



high degree of uncertainty - actual or known congestion is a significant factor in location choice and is a more certain downside to any investment business case.

On this basis, AGL believes that in the non-reform case an investor would look for locations less likely to be subject to congestion especially where expected congestion is high (these probably are locations with the largest subsidy in the modelling). Financing of the project itself could also be more difficult – at the very least the rate of return on the investment would increase. Although we would agree this is difficult to model, an assessment of the expected congestion against a benchmark would be a useful filter when determining the build in the non-reform case (for example if expected congestion > 5% of generation output it would not be built). The rate of return for the investment could also be increased to accommodate.

2. While the general approach used by NERA is adequate in determining the subsidy and the potential change in build, we are concerned that a single iteration of the process is unlikely to lead to an outcome close to the equilibrium. Based on internal modelling, AGL believes that the subsidy can decrease rapidly with increased generation capacity and the approach taken by NERA will not adequately demonstrate this effect (in effect the subsidy doesn't change with capacity in this analysis). For AGL to have confidence in the NERA modelling we would require multiple iterations of the RRP – LMP subsidy calculation loop to confirm the magnitude of overbuild.

Increased Efficiency of Dispatch from Eliminating Distorted Bidding

In general, AGL believes the general importance, frequency, and potential impact to customer costs of “race to the floor bidding” is significantly overstated by the AEMC. We note NERA has chosen a relatively simplistic approach to calculating the benefits of reduced “race to the floor bidding” in the NEM, using 1 year of actual analysis and extrapolating this forward using coal capacity – it is difficult to have high confidence in the overall NPV provided given this approach. The underlying assumption in this analysis that “...market participants bid to the floor whenever they have incentive to do so...” we think is an assumption with a very limited basis in fact. Actual generation trading operations in the NEM are significantly more complex than a model of this nature addresses. We would propose the three reasons articulated by NERA on page 55 of the report as to why participants “may not bid to the floor” are far more prevalent than actual ‘race to the floor bidding’ in these circumstances.

Dynamic Loss Factors

It is difficult to determine the actual breakdown in these benefits between the “price effect” and “volume effect”. Given that as stated in the NERA CBA the “price effect” is likely the main benefit from the movement to LMPs (and even then significantly smaller if improvements to AEMO forecasts are carried out) it is difficult to ascribe any real benefit to Dynamic Loss Factors in the CBA.

NERA also states in this section “Introduction of dynamic losses would reward plant based on the losses the system would experience in real time. Accordingly, one would expect a positive impact on the efficiency of investment because it would introduce a more granular price signal which would reflect system costs and needs.”



Although this may improve investment efficiency for a theoretical merchant participant, the nature of contracting for both PPAs and normal derivative contracts could mean dynamic losses have the opposite effect on actual investment as buyers may be reluctant to enter into contracts with this type of variability (in the absence of hedging instrument in particular).

Competition benefits

Competition benefits are overstated in the NERA CBA since evidence of ineffective competition in the NEM is weak. As NERA noted, the ACCC considers barriers to entry in the NEM to be low. If barriers to entry are already low, then the potential for FTRs to reduce barriers to entry by providing a firmer hedge for interregional risk is limited. We note that the ACCC and AER did not conclude that competition in the NEM was ineffective. Their key competition concern related to average prices offered by black coal-fired generators rather than price spikes. These high prices were caused by undersupply conditions rather than ineffective competition, as evidenced by the reduction in prices due to reduced demand during the COVID-19 pandemic. We suggest that a conclusion that FTRs would lead to a competition benefit in the NEM should be supported by an explanation of a link between the specific nature of ineffective competition claimed and the manner in which FTRs would improve that competition.

Implementation cost assessment

AGL is pleased that the AEMC plans to engage a consultant to conduct a detailed implementation cost assessment which will include discussions with AEMO and market participants, as we consider the preliminary reform cost assessment significantly understates the implementation cost. In particular we consider the estimated average contract re-opening cost of between \$5k and \$20k per PPA to be a gross underestimate since it only accounts for legal costs and even underestimates these. Since the introduction of LMP will change the risk exposure for contract parties differently, and because the reform change may be deemed a market disruption event under many contracts, we expect many contract renegotiations to be either very costly or impossible. We note that when a price on carbon was introduced the required contract renegotiation was very challenging and costly and we expect the renegotiation challenge due to the introduction of LMP and FTR to be more extreme.

Implementation and transitional FTR arrangements

Implementation period

AGL supports an implementation period of at least four years before the proposed transmission reforms are introduced as it limits the overlap between SRAs and FTRs and will reduce the renegotiation of existing ASX contracts. We would appreciate further detail on any potential SRA and FTR overlap or clarity on how the implementation is likely to occur without overlap.

Allocation of transitional FTRs

We welcome the allocation of transitional FTRs to existing generators, including generators that have reached financial close on a generation project prior to the final rule being made. We consider it fair to exclude other generators from the allocation of transitional FTRs since they will have the benefit of full knowledge of the final form of the LMP/FTR rule before committing to a new



development and they will be able to assess and modify their plans to avoid locating in areas of high congestion risk.

We consider the forecast allocation method is the most appropriate method to allocate transitional FTRs because in a rapidly evolving market historical data is unlikely to provide an accurate basis for allocation, and because dynamic allocation is unsuitable as it would mean that market participants would not obtain FTRs prior to dispatch and therefore they could not be used for risk management.

We would appreciate the opportunity to comment on the appropriate mechanism for the allocation of FTRs to each generator (or generator unit), and the proposed sculpting of transitional FTRs once more detail has been provided by the AEMC. We consider both these factors will be crucial to reducing the likely significant disruption of the transition period. We consider it too early to decide whether five years is an adequate transitional FTR period, given the details of FTR sculpting have not yet been determined.

[Impact on contract market liquidity](#)

AGL expects the introduction of LMP will reduce contract market liquidity since LMP exposes participants to locational price risk which may lead to less participation by parties who do not have the tolerance for this increased risk. Credit risk with contract counterparties will be increased since the level to which a contract counterparty has hedged their congestion price risk through the acquisition of FTRs will not be known. We expect an even greater decline in contract market liquidity during the transition period due to uncertainty regarding the impact of the new reforms. We expect the reduction in contract market liquidity caused by these factors, and the increased complexity created by the reforms, may raise barriers to entry in the NEM and therefore suggest the AEMC give further consideration of the long-term impact of these factors.