

26 May 2011

Mr John Pierce  
Chairman  
Australian Energy Market Commission  
PO Box A2449  
Sydney South NSW 1235

Dear Mr Pierce,

**Transmission Frameworks Review, Directions Paper**

Loy Yang Marketing Management Company (LYMMCo) welcomes the opportunity to make a submission in response to the Australian Energy Market Commission's Transmission Frameworks Review, Directions Paper.

LYMMCo operates as the arm's length agent for Loy Yang Power, performing the energy trading functions and managing National Electricity Market regulatory and market development activities. Loy Yang Power is the largest single site privately-owned generator in the National Electricity Market (operating the Loy Yang A power station) and the supplier of coal to the Loy Yang A and Loy Yang B stations.

In total, LYMMCo trades in excess of 2,200 MW which represents around one third of Victoria's electricity needs and more than 8% of the total generation for the south-east of Australia.

LYMMCo supports the objectives of the Review and note our primary concern is the nature of generator access to transmission and its impact on our ability to operate in the spot and forward markets underpinned by Loy Yang Power's physical assets.

LYMMCo supports the AEMC's approach and looks forward to more detailed discussion and analysis in the development of the 1<sup>st</sup> Interim Report.

**The role of transmission**

LYMMCo notes the AEMC's view that "the objective for transmission frameworks should be to ensure that investment and operational decisions across generation and transmission are optimised in a manner that minimises the total system costs faced by consumers" and we support the position that the role of transmission is to "provide services to competitive and regulated sectors of the electricity market in a manner that is in the long term interests of consumers of electricity."

We do, however, have some concerns that the AEMC has not acknowledged that minimisation of total system costs can be measured in a number of ways. For example, a

preference for centrally planned instruments which direct private investors to behave in a manner which minimises transmission costs (for example G-TUOS) without regard for impacts on the private investors is arguably a model which could fit under the AEMC's narrow form of "reduced total system costs".

Alternatively, and as advocated by a number of generators, including LYMMCo, we support a model that ensures least cost delivered energy by encouraging cost-reflective decentralised decision-making. In our view, this requires generators and other investors in the competitive market to be in a position to make investment decisions which are fully informed as to the relationship between their investments, transmission and congestion on a project by project basis. This requires transmission frameworks to meet generator and loads' cost-reflective needs, and that those needs, which reflect business and investor requirements, should drive transmission investment.

### **Nature of access**

LYMMCo supports a framework for generator access to transmission that is consistent with the NEO and should conceivably:

- provide appropriate investor certainty;
- support efficient decentralised commercial decision-making;
- support location specific transmission investment;
- provide funding for new transmission investment; and
- ensure new transmission investment matches the preferences of new generation investment.

From a generators point of view, the essential feature of an access regime is the ability to choose a level of access that will be provided at a known cost, with certainty, for the life of the plant. This will ensure that wholesale competition will be maximised and generation and transmission investment is made at least cost. These essential features are consistent with the NEO and can be delivered through a variety of models.

We suggest the fundamental issue for consideration is how a framework can be developed, where upon connecting, the levels of service selected by generators reflects the nature of individual connection options (i.e. the type of line), the nature of the generator's business model (i.e. financial importance of service), and the ownership and construction of the transmission asset.

### **Differing interpretations of the current arrangements**

LYMMCo agrees it is important to approach the issue from a first principles perspective. Nevertheless, in doing so, it should be noted that current interpretations, which differ across the market, are the basis of existing business arrangements.

And, simplistically, while LYMMCo concedes that 5.4A's current expression does not have a material impact, and that its actual intention is in part unclear, what is clear is that a model was developed with the intention of effecting the decisions of new entrants where they impacted the network and the level of service of incumbents.

Furthermore, those market participants that have not advocated strongly for a strengthened 5.4A and do not believe they are entitled to an explicit level of service, either in principle or in contract, rely on an implicit level of access to the network. In essence, there is an expectation the NEM frameworks will recognise the economic benefit of keeping a generator unconstrained and able to compete, thereby ensuring the financial viability of their assets. This expectation that congestion will not materially effect existing generators, and that they will not be constrained off, needs to be recognised by the AEMC in its analysis.

The difference between LYMMCo, and those generators who are willing to rely on the existing uncertainty, is that being a privately owned entity, we feel a greater level of concern that congestion may materially impact our ability to maintain profitability going forward and we need to account for that risk in the context of financing and operating the business. We understand this view is also shared by companies like AGL and International Power.

#### Potential reliability standards for generation

LYMMCo's preferred outcome remains a model more closely aligned with 5.4A. Nevertheless, we remain open to discussing the possibility of a reliability standard for generators. The LYMMCo submission to the Issues Paper provided detailed commentary on such a model and the justification for the Alberta policy.

Conceptually the Alberta Government's analysis has parallels in the NEM. However, criticisms of the Alberta policy, in the context of the NEM, suggest that the costs associated with a reliability standard that builds transmission for broad economic and competition reasons may be difficult to justify.

However, the total costs of upgrades needed in the NEM to provide an implicit level of service to generators would be relatively modest in the context of required generation investment of over \$30b (according to the esaa) needed to meet Australia's energy needs going forward.

On this basis, an economic policy which supports the construction of new transmission and underpins investor certainty and increases competition should be considered by the AEMC. The aim would be to maximise the value of trade and secure investor certainty by providing:

- anticipated levels of service to network users;
- appropriate locational signals; and
- a model which promotes the build out of congestion to support increased competition.

Under this model, the transmission network would be regulated to meet reliability requirements for consumers and to meet a defined standard nationally, regionally or within a 'defined zone'. LYMMCo would be most interested in a model which measured the standard on a zonal basis to maximise individual generators say in the setting of the standard, as it affects them.

Nevertheless, LYMMCo would like to outline some of the concerns for generators with a reliability standard, which require the AEMC's attention.

First, the standard may be hijacked to meet social or policy goals which are far removed from the business needs of individual generators (i.e. to create green hubs and green zones, or to develop regional infrastructure). Such an outcome would lead to transmission assets not aimed at meeting the cost-reflective needs of individual generators.

Second, there is a fear that such a standard is appealing as it would enable a regulated charge to be set for each region. Such a charge would reflect the experience of energy regulators who are in the business of setting charges. This would also suit those interested in creating centrally determined charges, like G-TUOS, for the purpose of have greater influence over private generators investment decisions. Such a charge, like G-TUOS, in effect is not tied to actual costs, i.e. the absolute impacts of an individual generators locational decision and operational use of the network, but a “central planners” perspective on the best use of and investment in transmission going forward. This means transmission will lead generation.

Third, in an environment where charges are levied on generators, the incentive for planners to overbuild, at generators expense, will be difficult to manage. The same level of conservatism experienced in existing functions undertaken by the market operator and some TNSPs is likely to be experienced in the application of a reliability standard.

Finally, the reliability standard, if applied generically and not tailored to individual generators or a similar level of granularity, may not match generators business needs and in those circumstances could be inefficient where it created new charges for new entrants who did not require a defined level of reliability (i.e. wind or complimentary gas plant).

We continue to support the investigation of this model. However, we note that there are notable concerns if a reliability standard is created centrally and is charged back to generators. LYMMCo would not support any new charges, where such charges do not already exist given the existing implicit level of service expected by all NEM participants, and the specific rights which exist contractually.

If a case can be made that such a policy is in the best interests of customers and should be funded as such then the impacts on generators and the risks would be minimised. Nevertheless, in those circumstances the risks of overinvestment and inefficiency would remain. The main difference is that in those circumstances the cost of overbuilding or social policy initiatives are risks worn by government, as the instigators of such decisions, not entities attempting to make viable investment decisions.

In conclusion, the issue of a reliability standard for generators is a topic of interest. The appropriateness or preferred form of a potential standard at this stage requires further analysis and discussion.

#### Selective negotiated or enhanced rights for generators

LYMMCo supports an investigation of enhanced rights for generators. Like a reliability standard for generators, such a right would only be valuable if it meets the needs of the individual generator seeking an enhanced right.

A notable concern with a selective approach to rights is that the AEMC’s analysis, in assuming current generators have no guaranteed level of service, implies that if a number of individual generators negotiate enhanced rights than this will degrade the level of service

relied upon by the other incumbents. The framework should not permit the negotiation of enhanced rights for a generator(s) at the expense of existing users of the transmission network.

While LYMMCo notes the issue of explicit rights is currently problematic, and entities disagree over whether they have or don't have some level of protected transfer capability based on the National Electricity Rules and their contracts, what is not debateable is that all generators have a general expectation that the system will be built in a manner that minimises inefficient congestion overall while not partially stranding existing assets.

This is further reflected in the view held by those generators, including the Northern Group, who do not consider congestion a problem in the NEM as they argue the NEM frameworks will recognise the economic benefit of keeping a competitive generator unconstrained through investing in new transmission assets. This absence of concern is built on the expectation that has not been fully accounted for by the AEMC, that an implicit right already exists, which guarantees minimal congestion and hence lowers risk to their businesses.

#### *Possible methods of providing selective or enhanced rights*

There are circumstances where a technical solution to a new connection may permit a new entrant to build in manner which ensures it will not compromise the existing level of service experienced by incumbents. In those circumstances there is no logical reason why a new entrant should not be permitted to acquire an enhanced level of service, or a right, where they have identified a benefit for their business in funding additional connection or transmission assets. Currently, TNSPs do not generally support these technical solutions even when the proponent is able to identify and isolate them.

However, given the interconnected nature of transmission systems a problem with a discretionary rights system is that it impacts on a number of other parties in the bulk of instances. For instance, if one generator is provided with an enhanced right, they are in effect reducing the implicitly and historically experienced rights of existing participants. This would occur whether the generator in question was a new entrant or an incumbent.

Therefore, the first issue which requires resolution should the AEMC be minded to introduce a discretionary rights regime is: how to we deal with incumbents who have existing expectations around service? There are effectively two broad answers: (1) ignore the impact on incumbents; or (2) devise a methodology that provides incumbents with a base level of service.

The first option, of ignoring the impact on incumbents, implies that as new entrants join the NEM, and choose to acquire enhanced rights they will be degrading the existing level of service provided and expected by incumbents. This means, in the absence of incidentally beneficial investments for customer reliability, existing generators and investors can expect network services to degrade over time. This is an automatic cost to existing entities. It effectively is reducing the value of existing generators businesses and reducing the current standard of service experience by generators.

The second option is to, in a manageable and orderly fashion; provide incumbents with a base level of service (clearly, allowing incumbents to randomly acquire enhanced rights over the existing network would be chaotic). A number of options exist for how this process could occur. LYMMCo is happy to discuss these but notes the purpose of an allocation

process is to recognise the existing implicit level of service afforded to generators, which is historically identifiable in practice, not generate revenue for no new service.

Once those rights had been allocated formally, the process of allowing new entrants to seek enhanced rights, or not, depending on their business model, would be developed based on certain network conditions regarding outages and the like. Nevertheless, once those assumptions are resolved, new entrants can effectively cost rights at network locations either through funding transmission, buying existing rights off incumbents, or agreeing a compensation agreement bilaterally or via a third party (TNSP or AEMO).

Alternatively, a new entrant could locate where significant spare capacity exists and receive those rights free or choose to have no rights. This is in essence how LYMMCo suggests 5.4A could have worked if it was implemented and managed from market start.

The example above envisages a NEM-wide model. The AEMC may question could it be possible to implement such a model on a regional or smaller basis. The answer is yes, but it would seem to be difficult.

As new entrants enter the NEM it may be possible to provide them with enhanced rights, where sought, and resolve the implications for affected incumbents in isolation. However, this is likely to only remain viable over the shorter to medium term as isolated pockets managed in this way grow. Furthermore, there may be locations in the NEM whereby the implications for constraints are significant, and run across regions, and as such a wider solution would be required in the absence of new transmission investment.

Another question the AEMC may be minded to ask is can a selective or enhanced rights model be implemented without formally recognising individual rights for existing incumbents. Again, the answer is yes, but problematic and not ideal.

For instance, instead of formally recognising the existing implicit protection afforded to each generator individually in the form of rights, a new NEM-wide reliability standard could be implemented which assists incumbents. However, under such a model new entrants or incumbents would be permitted to acquire rights in excess of this reliability standard.

The primary rationale for such a standard in this circumstance is the standard is put in place to establish a floor, reflective of existing NEM experience, to clarify access arrangements for incumbents going forward. New entrants could then choose to acquire enhanced rights or have no rights. However, new entrants who did not choose to acquire rights would in effect benefit from the NEM-wide standard which has efficiency implications and possible gaming consequences.

Such an approach may not satisfy generators who are concerned about their individual exposure to congestion and believe their existing contractual agreements should be recognised.

In conclusion, the provision of enhanced rights requires resolution of the base level of service provided to incumbent generators; a significant question which underpins much of the debate around transmission frameworks.

## The potential for a financial access rights regime

LYMMCo supports investigation of a universal financial access rights regime which differs from a model seeking to provide a defined level of service protected in the planning domain (i.e. a 5.4A type model). Nevertheless, the issue of financial rights is particularly complicated and LYMMCo awaits the AEMC's analysis.

## **Network charging**

### *Cost imposed by generators under current frameworks*

LYMMCo believes this aspect of the AEMC's analysis requires more thoughtful consideration. The issue of a signal, versus facing absolute costs, is one matter the AEMC needs to appropriately investigate. The AEMC seems to already have concluded on a charge, which implies some level of bureaucratic setting, is the best method of accounting for a generator's impacts on the network.

The AEMC is correct to note the difference between long-term and short-term signals; however, the point with these different signals is not that they are mutually exclusive but that they are targeted at different problems. They could both be used but a short-term signal would have a material impact on disorderly bidding and short-term congestion whilst a long-term signal would be used to inform locational and investment decisions.

As LYMMCo, and others, have noted in numerous submissions resolving long-term signals in effect weakens the need to consider short-term signals as congestion would be less likely to arise.

### *Design issues for generator charging*

Debates around generator access to transmission generally focus on two issues: what a generator is given (i.e. services, assurances, standards); who pays; and how payment for transmission is made?

Participant funding refers to funding models where connecting generators pay the cost of the upgrades required to maintain the integrity of the network following their connection. This is sometimes called a deep connection model. In its purest form participant funding models would not attempt to take advantage of economies of scale through complimentary funding from customers. However, participant funding models can be designed to do so.

Participant funding models provide the strongest locational signals, minimise stranded asset risks, and encourage decentralised decision making, but also can result in individual generators being tagged with large costs, which when not resolved has led to queuing problems in similar markets.

Generator contributions generally refer to a system where the charge paid by the connecting party does not relate to any costs associated with undertaking a specific upgrade of the network as a consequence of that connection. Generator contributions can take the form of annual charges or one-off upfront payments and alternatively can be structured to take account of the impacts of one's connection.

Generator contributions models provide weaker locational signals, as they are usually not reflective of actual absolute costs; however, they facilitate greater shared grid investment at the planner's discretion.

At their extremes, generator contributions and participant funding are quite distinct; however, in practice modified versions of either approach can provide very similar outcomes.

Customer pays models refer to a model whereby customers are directly responsible for funding the upgrades of the network (and in this instance beyond the scope of upgrades currently provided for in the NEM).

LYMMCo remains favourable to a modified participant funding model but believes the AEMC should rigorously assess the viability of each of these three broad models – and relevant hybrid approaches – and the associated implications of each.

## **Congestion**

### **Materiality of congestion**

LYMMCo notes the issues associated with congestion and the inefficiencies that may arise from congestion in the NEM. We also note that while views on the existing impacts of congestion differ, both across the NEM versus individually, attempts to predict the implications of future congestion would appear to be even more problematic.

Clearly, while interesting, any studies of long term future congestion will be inaccurate as it is imponderable to calculate how congestion will arise in a dynamic system which will be impacted by unknown connections, unknown usage and demand, and unknown levels of transmission investment. Such a forecasting exercise can only be wrong. This is not to suggest such an exercise has no value, in particular in the shorter term horizon, but that such an exercise is not authoritative enough to justify action or inaction it is own right.

Furthermore, assurances or assumptions about congestion moving forward, in the absence of a defined level of service or generator reliability standards, are not firm enough to avoid potential discounting of revenue streams to account for the risk of congestion. Hence, the fear of unforeseen material and persistent congestion arising and causing a financial cost, even during periods of time when material congestion is actually absent, would remain the material measure and continues to be the case under the current frameworks.

### **Network availability (and TNSP incentive arrangements)**

LYMMCo supports further analysis in this area including in relation to the creation of better incentives for TNSP's to adopt better outage planning practices.

### **Congestion management mechanisms**

As it currently stands, with no prospect of regional boundary changes, there is no effective mechanism for managing the inefficiency that arises from inter-regional congestion in the NEM; the consequence of which is inefficient disorderly bidding.



We believe the implementation of an overarching congestion pricing mechanism which better supports settlement at the RRN should be investigated and is consistent with the regional model which we continue to support. This is likely to be a no regrets market wide enduring mechanism.

LYMMCo considers that such an arrangement should have the objective of ensuring that congestion does not occur or at least is managed at an “efficient” level. Noting that the existing management of congestion is largely inefficient and any support for a congestion pricing mechanism is conditional on a finding it will be less inefficient overall, and that questions of proportionality and complexity can be overcome.

We remain of the belief that inefficient congestion is not caused by generator operational decisions but by inefficient access arrangements which do not provide investors with appropriate price signals or fund transmission capacity to support new supply investment. Hence, resolution of long-term drivers of congestion is likely to be more beneficial across the NEM than a congestion management regime. However, should those drivers of congestion and the risk of congestion not be resolved a congestion management regime may be a necessary complexity.

### **Planning**

LYMMCO:

- supports the AEMC’s current views in this area and its ongoing work in relation to transmission reliability standards for load;
- welcomes further analysis around the RIT-T but notes the potential for this issue to involve a considerable amount of effort for little change given the purpose of the RIT-T is particularly narrow, and likely appropriately so, and the fact the RIT-T is in its infancy;
- awaits the AEMC’s further consideration of issues surrounding inter-regional augmentations;
- does not support proactive planning preferences of some stakeholders and maintains a view that in the main such approaches are likely to be uneconomic; and
- supports further analysis of existing TNSPs services, how they are discharged and the appropriate carriage of the planning, connections, asset management, infrastructure development, service delivery and coordination functions.

### **Connections**

LYMMCo supports a fulsome review of connections issues with a primary driver being a clarification of the services required by an investor to enter the market and an incumbent generator to continue operating, including renegotiation of connection agreements.

In our experience TNSPs are not structured in a manner which ensures high-levels of service to connected parties. We believe this stems from the absence of incentives on TNSPs and rights for generators to enforce action by TNSPs.

LYMMCo recommends the AEMC identify the multiple roles TNSPs play in the connection space, and clarify whether the manner in which the NER require the TNSPs to discharge their duties is optimal, particularly where there is significant discretion.

## **Conclusion**

If you have queries in relation to this submission or wish to seek further information please do not hesitate to contact me.

Yours faithfully,

A handwritten signature in blue ink, appearing to read 'J Lowe'.

Jamie Lowe

**Manager, Regulation and Market Development**