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Project Leader
Australian Energy Market Commission

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AEMC Review of regulatory arrangements for embedded networks

20 October 2017

Dear Ms Reid,

Aurizon Network Pty Ltd (Aurizon Network) makes this submission in response to the AEMC's Draft Report on the Review of regulatory arrangements for embedded networks dated 12 September 2017 (Draft Report).

Executive Summary

Aurizon Network is a major Queensland energy consumer that operates the Central Queensland Coal Network (CQCN), a 2,725 kilometre heavy haulage rail network that connects coal mines to Queensland ports and generators, ~2,000 kilometres of which is electrified. Electricity is mainly supplied via transmission level connections although it also connects to the distribution networks of [Powerlink and Ergon Energy]. The electric traction network represents a significant proportion of Queensland's total load, as well as the regional load. It provides a critical supply chain link for Queensland coal exports. Therefore, any consequences resulting from reform to the existing exemption framework will not only impact Aurizon Network, but also affect the minerals industry and state government export royalty revenue.

It is apparent from the Draft Report that the proposed reforms are intended to address challenges for small residential and commercial embedded network customers associated with the existing framework. This context is fundamentally different to Aurizon Network's electric traction network. However, given that the scope of the proposed reforms are significant, Aurizon Network is concerned that as the Draft Report translates into regulatory and rule changes, there is a risk of 'scope creep' such that the rules will apply to organisations such as Aurizon Network. Specifically, Aurizon Network is concerned that reforms may result in an expensive and unnecessary loss or change to the existing exemption that it holds from the requirement to be registered as a network service provider and/or a requirement to obtain a retail authorisation. Both of these outcomes would be costly, and would provide limited, if any, additional benefit to consumers sourcing electricity from the Aurizon Network's electric network.

Aurizon Network supports the AEMC's desire for an effective regulatory framework that protects consumer rights. Given the very broad definition of distribution and embedded networks, we

propose that any revised framework should retain flexibility to cater for the diverse nature and scale of these networks.

Background

Aurizon Network owns and operates the CQCN, and is regulated by the Queensland Competition Authority (QCA). As stated above, over 2,000 km of this network is electrified for heavy rail haulage. Aurizon Network has been granted an exemption from the requirement to be registered as a network service provider by the Australian Energy Regulator (AER). Aurizon Network also holds a special approval under the *Electricity Act 1994 (Qld)* that authorises the supply of electricity and operation of an electric traction network. Together, these regulatory instruments enable Aurizon Network to own and operate electric infrastructure and supply electricity to rail or rail-related infrastructure.

The electric traction network shares many characteristics with a distribution network and, without the benefit of existing exemptions, Aurizon Network would likely require registration as a DNSP together with a retail authorisation. Compared to many other electrified rail networks, Aurizon Network's context is unique. There are no restrictions on the number of rail operators or mines that can be connected to the electrified section of the network beyond capacity. Currently, while four independent rail operators use the electrified section of the network, other (new) operators also have the option to use it. The network provides a critical supply chain link for the minerals and agricultural industries located in regional Queensland. It is primarily an export supply chain used by customers competing in global markets and reliant on having access to infrastructure that enables high performing and efficient freight operations. While the scale of operations on Aurizon Network's electric network mean it is unlikely to fall within the scope of supplying 'small' consumers, we remain concerned about the scope of proposed regulatory changes.

The proposed framework represents a substantial change to existing arrangements. The extent to which the changes will apply to organisations that do not supply small customers is unclear. Aurizon Network has identified a number of factors for consideration below.

Policy motivation for reforms

We understand that the key motivation for the proposed reforms is the AEMC's view that the existing exemption framework is no longer fit for purpose because it does not achieve an "appropriate balance between innovation, consumer protection, and access to retail market competition".

These concerns appear to have been largely driven by the rapid expansion of, and increasing diversity of embedded networks. In some contexts, such as electric traction, they provide the only effective way to deliver electricity. Electric traction network characteristics are fundamentally different to other kinds of embedded networks as outlined below. Consequently, care should be taken to ensure the reforms have sufficient flexibility to cater for the diversity of embedded networks in the market. We set out below our specific recommendations in relation to the Draft Report.

Recommendation:

The scope of proposed reform should be carefully considered, and any reforms should retain sufficient flexibility to allow the private sector to develop solutions to benefit consumers.

Additional motivations for reform: Access to competition | Retail flexibility | Proposed metering obligations | Information | disclosure obligations | Public pricing/ standing offers

As noted previously, an electric traction network has unique characteristics which distinguish it from other types of embedded networks. These characteristics vary even between types of electric traction such as light passenger rail and heavy haulage. Specific characteristics of an electric rail network include:

- Large dynamic loads that depend on locomotive tractive effort
- Long overhead distribution networks to supply locomotives, the rail network and related infrastructure
- Single phase electrical requirements
- Specific technical characteristics associated with unbalance and harmonics
- High level of reliability required
- Linear network configuration
- Multiple moving, dynamic loads travelling across the network simultaneously
- Linked to rail infrastructure that generally has one owner and operator
- Often subject to economic regulation by State governments

Consequently, concerns regarding access to competition, retail flexibility, information disclosure and pricing standing offers are not relevant. Any obligations that arise as a result of regulatory reform are likely to significantly increase cost with little or no benefit to consumers.

Recommendation

Any reforms should specifically exclude electric traction networks from additional obligations relating to pricing, information disclosure or access to retail competition.

It is unclear how the AEMC intends the metering obligations to work in practice and whether they would extend beyond small customers. In electric traction networks electricity is generally metered at the supply point. Theoretically, the proposed reforms could require sub-metering at a more granular level. Practically this would be challenging and expensive. For example would meters be required at each locomotive, or each consist (train, including locomotives and wagons), or each individual electric engine (there can be numerous tractive loads per locomotive, numerous locomotives per consist, and numerous consists per section of the network. Further, even if the practicalities of metering could be addressed cost effectively, because locomotives travel geographically along the rail corridor, they would likely traverse multiple parent meters. Aurizon Network is not supportive of any requirement for metering in the electric traction network and considers any additional metering obligations would be costly and not in the interest of consumers.

Recommendation

No additional metering obligations should be imposed on electric traction networks that supply rail, rail related or linked infrastructure.

The proposed exemption framework

The proposed narrow exemption framework reflects the AEMCs conclusion that both the network and retailer exemptions frameworks are no longer fit for purpose for small customers.

Network service provider exemption

Specifically, the AEMC proposes to limit the scope of exemptions to:

(a) infrastructure

(b) related parties such as subsidiary companies

(c) the owners of short duration accommodation with simple network arrangements

These categories suggest that the reforms are likely to be more broad ranging than simply addressing the exemption framework for suppliers of 'small' customers.

Aurizon Network's electric traction network would likely fall within the "infrastructure" category. Further guidance provided by the AEMC suggests that infrastructure is an appropriate category because there is typically a single customer who is also the owner of the infrastructure. That context may be the case for many types of infrastructure, including light passenger rail, or telecommunications. However, it is not the case for Aurizon Network's rail network.

Electric traction systems are specifically identified in the Draft Report as an example of supply infrastructure. However, the clear intention to limit the AER's discretion and potential restrictive definition of infrastructure means there is a risk that Aurizon Network would not fall within the proposed exemption framework as defined. If the proposed changes proceed without revision, it may be necessary to seek a rule change to broaden the definition of infrastructure to specifically include electric traction networks where there are multiple users of rail, or rail related infrastructure.

Recommendation

Infrastructure be defined more broadly to reflect the diversity of Australian infrastructure operations. As an exempt category, infrastructure should specifically include electric traction networks that have multiple independent consumers of varying scale and nature.

An alternative flexible exemption framework

Notwithstanding the above recommendation, the AEMC may wish to consider an alternative to the proposed framework that introduces more flexibility to the exemption framework. This flexibility would be available to organisations that qualify under the revised, narrower exemption framework.

It is assumed that Aurizon Network would retain its existing exemptions following reform to the rules. However, it may be appropriate for Aurizon Network to have some discretion in the way the exemption applies, provided the discretion's exercise is consistent with the National Electricity Objective (NEO). In Aurizon Network's context, a number of existing connections are the subject of prescribed arrangements. However, following reform to the National Electricity Rules (NER), newer connections are the subject of negotiated arrangements and fall within a

different regulatory framework. All of the connections, whether they are prescribed or negotiated arrangements, link to the same network, for the same purpose.

There is no apparent benefit to consumers for the newer connections to be negotiated. In fact, it actually increases the cost of connections reducing benefits to consumers and increasing the risk of users of electric traction switching from electric to diesel. Such a result would reduce electric volumes and as a result of the regulatory framework governing Aurizon Network's electric traction, decrease efficiency and disadvantage electric consumers. It would also be likely to pose a significant risk to investments that have been made in the infrastructure, as well as investments by train operators in electric locomotives. Consequently, it may be in the interests of consumers for Aurizon Network to retain flexibility to elect to be regulated by a more limited framework. For example, because Aurizon Network's network has all the characteristics of a DNSP, but receives an exemption from registration, it could elect for its connections to be regulated as if it were a DNSP (therefore all connections would be the subject of prescribed arrangements). This outcome is consistent with Aurizon Network's critical role in the global export supply chain, policy goals supporting electric transport infrastructure, and the long-term regulated nature of rail infrastructure. Flexibility in the application of the exemption framework could result in cheaper costs to consumers supplied by electric traction network and is consistent with the NEO to promote efficient investment, operation and use of electricity services for the long term.

In practice, the discretion outlined above would have the effect that Aurizon Network's supply connections could be the subject of prescribed arrangements (if Aurizon Network elected **for them to** be regulated under that framework). However, it would remain exempt from other obligations under the NER as an exempt network service provider. Such an approach could be entertained through a principles based approach where existing (and future) exemption holders would retain their exemptions provided they qualify for an exemption under the narrower framework. Exemption holders can then exercise their discretion to 'opt in' to certain elements of the regulatory framework provided that doing so is consistent with the NEO.

Retailer authorisation framework

The AEMC proposes substantial changes to the existing retail exemption framework that allows for individual, deemed and registrable exemptions. It proposes that all energy sellers should be required to hold a retailer authorisation except in a narrow set of circumstances. Consequently, an exemption would only be available where the costs of retail authorisation and facilitating retail competition would outweigh the benefits to customers, and the need for regulatory oversight is low. Fundamentally, the goal is to only allow exemptions where the costs of authorisation would be high compared to the benefits to consumers and the need for regulatory oversight is low.

The scope of reform is similar to that proposed for network exemptions. The examples listed in the Draft Report are largely focused on same-entity or short term transactions. Even the example relating to large customers is problematic as it infers the ability to access retail market competition. Aurizon Network's position is that as an exempt network service provider it should not be obliged to on-sell electricity due to very high compliance costs and that doing so is unlikely to be in the interest of consumers. From Aurizon Network's perspective, there are challenges in using the electric traction network as a vehicle for other retailers (and for it to be treated as if it was a conventional network). Electric traction networks have particular technical characteristics and large peaky loads that travel across the network. Consequently, it would be extremely difficult to develop and then measure Distribution Use of System charges to deliver power for another retailer in the context of specific technical characteristics.

To address this concern, Aurizon Network proposes that a category be included in the proposed exemption framework that specifically includes electric traction. This could adopt wording similar to that used in relation to telecommunications such as:

Selling in conjunction with or ancillary to provision of electric traction

In addition, there is a risk that the circumstances identified by the AEMC as suitable for a retail exemption could be interpreted too restrictively and not possess the necessary flexibility. Aurizon Network considers that the fundamental intention of the criteria proposed by the AEMC are not dissimilar to the NEO. As such, we recommend that the NEO be incorporated into any proposed framework so that if a narrow interpretation is adopted, the AER retains discretion to grant exemptions. Further, we consider it appropriate to retain deemed exemptions in certain situations – such as the on-supply of energy to consumers via regulated infrastructure, or where on-sale is connected with, or ancillary to the provision of electric traction.

Recommendation

The proposed retail exemption framework should be broadened to specifically include electric traction, deemed exemptions should be retained in certain circumstances and the refined exemption framework should retain flexibility to cater for the diversity of business contexts.

Conclusion

The draft report proposes substantial changes to the existing exemption framework. Aurizon supports the AEMC's goal to improve outcomes for consumers but cautions that the scope and consequences of any reform should be carefully considered. Electric traction networks are fundamentally different to many other types of embedded networks. Exemption from the regulatory burden associated with registration as a network service provider and retail authorisation are essential for the efficient operation of Aurizon's network and in the interest of consumers.

We welcome the opportunity to engage further.

Kind regards,



Nicola Molloy

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