



Professor Roy Green
Queensland Competition Authority
Level 27
145 Ann Street
Brisbane QLD 4000

Submission on Aurizon Network's Electric Traction (AT5) Draft Amending Access Undertaking (AT5 DAAU)

8 February 2018

Dear Professor Green,

Aurizon Operations (**AZJ**) welcomes the opportunity to comment on Aurizon Network's 2017 Electric Traction Pricing DAAU (**AT5 DAAU**). This submission is intended to be read in conjunction with AZJ's previous submission on electric traction dated 17 February 2017.

The regulation of Aurizon Network's overhead infrastructure has drawn significant attention for a long period of time, and the relevant issues are well-understood by industry.

The current pricing mechanism exposes electric traction operators and their customers to material uncertainty and price increases as a result of traction decisions made by other users. This distorts competitive outcomes in the above-rail market, increases cost to industry, and makes ongoing investment in both below and above-rail electric assets increasingly unviable.

The AT5 issue is overdue for resolution, with ongoing uncertainty imposing real costs on industry, as necessary capital expenditure in electric assets continues to be deferred or cancelled. The impact of this capital deferral on the competitiveness of the industry will grow, as the uncertainty associated with this issue inevitably spreads to the Goonyella system.

Aurizon notes the need for sustaining capex in the Goonyella electric infrastructure, and the high likelihood that new mine developments in Goonyella will be exclusively diesel. It is notable that diesel consists now regularly operate in the corridor.

1. Impact to complementary above rail investment in electric traction

Operators have collectively made significant investment (~\$1bn) in electric locomotives, with the average physical life of each locomotive equal to at least 30 years. All three operators in the CQCN operate electric locomotives.

The significant remaining asset lives and value of electric rollingstock investment across all operators underpins the need to ensure sustainability of the electric traction system. In part, this is achieved by having a regulatory framework that provides the right incentives and price signals to support this long term investment – and in turn, support effective and ongoing competition in the above-rail market.

The current regulatory framework undermines the sustainability of electric traction as it incentivises users to respond to short term incentives and price signals and bypass electric traction, raising the average AT5 tariff for remaining users and distorting competition.

Fuel and energy costs are subject to short to medium term fluctuations and will over the average 30 year life of electric rollingstock both positively or negatively impact the competitiveness of electric traction. Equally, the infrastructure itself requires large, 'lumpy' investments, which can have a short-term impact on the competitiveness of electric traction. These fluctuations flow through regulated tariffs, providing, in effect, short-term volatile price signals in a market that depends on stable price signals to allow investment in long-lived assets.

These short term incentives and price signals are not aligned to the long term interests of operators (who have made significant investments in electric rollingstock with long physical asset lives) nor the supply chain (which would have otherwise benefitted from lower electric traction costs achieved through exhausting economies of scale).

The current system also allows a single user to adopt diesel traction in order to obtain unique economic benefits that accrue only to themselves, whilst externalising the costs of that decision to other users. In effect, the current regulatory framework requires users to assume the risk of commercial decisions made by other businesses. For example, under the current arrangements, a producer may elect to transition their operation to diesel traction so as to support greater cross-system flexibility, a rail operator may elect to invest in diesel so as to support operational transferability with its non-coal business, or a greenfield mine may choose to minimise up-front capital. Whilst each decision makes economic sense for the individual user, the outcome may be a greater, countervailing increase in costs to other users.

The regulatory framework should not facilitate an individual user benefiting from short to medium term incentives to the detriment of the longer term interests of the supply chain, in particular the legitimate interest of those that have or will seek to acquire rights to use the declared service.

AZJ believes that the AT5 tariff needs to provide a consistent, stable price signal that reflects the efficient, long-run economies of scale that an electric system requires for its viability. It is only on that basis that operators will be able to make long-term investment in electric rollingstock, or alternatively, to manage a staged adjustment towards diesel traction. Any transition to diesel, if that is in the long-term interest of the supply-chain, needs to be orderly, and the costs of such a transition not disproportionately borne by a user or class of users.

The AT5 DAAU goes some way to addressing these issues. It is traction neutral and does not impede the transition to diesel should it be the more competitive, long-term traction mode. At the same time it maintains an efficient price signal for the electric infrastructure for its remaining users or future users.

2. Impact of climate change policies and commitments

Aurizon notes that the QCA's resolution of this issue must ensure that the supply chain is able to respond to anticipated developments in climate change policies. This is essential to maintaining the supply chain's competitiveness by responding to potential cost implications, but also to its role in ensuring Queensland is able to achieve its climate change commitments.

- (a) Supply chain responsiveness to cost implications of climate change policies

Both the State and Federal Governments have recently made ambitious commitments to climate change targets. The Queensland Government's climate change policy includes an interim target of at least a 30% reduction in greenhouse gas (**GHG**) emission on 2005 levels by 2030, with a longer term target of zero net GHG emissions by 2050.¹ At a Federal Government level, under the Paris Agreement, the Government has committed Australia to reducing emissions by 26-28% compared to 2005 levels by 2030.

Meeting these targets will be challenging, and depending on the policy framework developed could mean additional costs are imposed on industry either in requiring implementation of technology to reduce emissions on diesel locomotives or placing a cost on emissions itself.

As an example, under the National Greenhouse and Energy Reporting Act 2007 (**NGER**), a Federal Safeguard Mechanism (**the Safeguard**), seeks to impose limits on organisations, including AZJ, who are required to report on their Scope 1 GHG emissions. Scope 1 emissions include emissions from a diesel locomotive. Under the Safeguard, if an organisation increases its Scope 1 emissions above its determined emissions baseline (**Baseline**), then it may be required to purchase carbon credit units. A transition to diesel traction and a resulting increase in Scope 1 emissions may expose AZJ and its customers to the costs of carbon credit units.

At the Federal level, because there are more developed strategies (such as the Safeguard to achieve climate change policy objectives), the cost implications to diesel traction are clearer. At the State level, the strategies to achieve climate change policy objectives are in the formative stage. Their evolving nature means industry does not yet have a full understanding of the cost implications flowing from these climate change policies. This applies not only to the cost of diesel traction (through increased or additional costs on emissions) but also to electric traction as energy prices respond to the outcomes of renewable energy targets. Provision also needs to be made for evolution of Federal policy strategies in the medium to long term either in response to changes in government leadership or outcomes of current Federal policy mechanisms.

Maintaining traction choice provides customers with greater optionality in responding to these policy frameworks, which require further development before full implications to both diesel and electric traction are fully understood.

(b) Supply chain impact on climate change policies and commitments

The transport sector accounts for 22%² of Queensland's overall emissions and is the second largest contributor to overall emissions. As a relatively low emissions intensive means of transportation, electric traction plays a significant role in Queensland's ability to reduce emissions and achieve its climate change policy objectives.

Compared to diesel, electric traction has 13%³ lower GHG emissions on a gross tonne per kilometre basis. In addition to the lower emissions generated by electric traction, AC locomotives that operate in the QCCN also have regenerative capacity which reduces overall electricity consumption. The displacement of electric locomotives with diesel locomotives would clearly result in a substantive increase in GHG emissions generated by rail.

¹ Department of Environment and Heritage Protection (DEHP) 2017

² Department of Environment and Energy (DoEE) 2015

³ Aurizon 2017 Sustainability Report

Additionally, as more renewable energy sources connect to the Queensland grid (resulting in a reduction in emissions factors associated with consumption of electricity), the comparative emissions intensity of the existing diesel locomotive fleet would increase. This would have a compounding effect on what the substitution of electric by diesel locomotives would have on the proportion of emissions attributed to the mining and transportation industries in Queensland.

Conversely, as more renewable energy sources connect to the Queensland grid, electric traction will be in a strong position to make a substantially larger contribution to reductions in emissions. The supply chain only has the ability to contribute these additional benefits if electric traction was maintained and is available as a traction choice.

The public interest reasons for maintaining the electric traction system are relevant factors when considering the long term interests of the supply chain.

3. Conclusion

In summary, AZJ considers that the AT5 DAAU seeks to balance the interests of stakeholders and address the longer term interests of rail operators and the supply chain in preserving traction choice. This allows:

- the efficient use of operators' electric rollingstock investment;
- appropriate investment in below and above rail electric assets or a staged adjustment towards diesel;
- the supply chain to flexibly respond to cost implications of climate change policies; and
- the supply chain to contribute, rather than negatively impact achievement of climate change commitments.

AZJ urges the QCA to consider the AT5 DAAU and provide its determination in FY18 to ensure a timely resolution and ability to respond to current market incentives to continue to bypass electric traction.

If you wish to discuss any elements of this submission please do not hesitate to contact Louisa Chung at Louisa.Chung@aurizon.com.au.

Kind regards,



Samuel McSkimming
Head of Coal Customers