3 November 2022

Cross submission — to the consultation on ACOT (Avoided Cost Of Transmission) proposed TPM-related amendments

Electra Limited (Electra) welcomes the opportunity to cross-submit on submissions received to the Electricity Authority's consultation *Avoided Cost of Transmission (ACOT) – proposed TPM-related amendments*, 16 September 2022 (the Authority's Consultation Paper). Nothing in this cross-submission is confidential.

As submitted in our submission *Consultation Paper — consultation on ACOT proposed TPM—related amendments*, 20 October 2022—

> '*We do not support the Authority's proposal to remove provisions for ACOT payments from distributed generation (DG) pricing principles from 1 April 2023. Nor do we support its alternative option; to phase out ACOT over three years (i.e., 50%,25%,0%). Alternatively, Electra recommends that the Authority permit ACOT payments to be made until it has considered in full an effective and appropriate alternative framework that recognises the benefits of DG to the energy sector*.'

Having considered the views of all the submissions we believe that the removal of ACOT is warranted and inevitable in the long term. However, we maintain our view that in the short term the removal of ACOT is not prudent before determining an effective and appropriate alternative approach to recognise the value of distributed generation. A view supported by several submissions to the Authority's Consultation Paper.

There is support for retaining ACOT payments in the short term while an effective and appropriate replacement is determined

Energy Trusts of New Zealand (ETNZ) summarised their position by stating—

> *'Removal of the existing ACOT arrangements means the end of the only substantive incentive arrangements for an off-Grid generation.* ***If ACOT is to be removed, work to find an effective replacement should be given immediate priority***.'[1] [Emphasis added]

We agree with ETNZ's reasoning that—

> '*While the existing ACOT arrangements are flawed by, in particular, the TPM formula that forces distributors and their consumers to fund the cross-subsidies involved, we*

[1] ETNZ, Consultation Paper — consultation on ACOT payments to distributed generation, 20 October 2022, page 1.

recognise that their removal contradicts a primary regulatory requirement under the Commerce Act. We believe that work should begin immediately to identify alternative and less distortionary measures to promote distributed generation and other demand-side technologies. ***Ideally, an effective replacement should be in place as soon as ACOT incentives are removed****.'* [Emphasis added]

It is imprudent that a mechanism recognising efficient investment in non-grid solutions is put aside before an effective replacement has been fully considered and implemented. While it is unfortunate that not all the mechanisms in the new TPM could be aligned before taking effect on 1 April 2023, it is better to retain ACOT payments in the short term while the Authority works to determine a long-term solution.

Electra believe it is not appropriate that the Authority put aside current mechanisms simply because it has run out of time to consider all facets of the new TPM before implementation date. If the alignment of all facets of the TPM is vital the Authority might be better to delay the implementation of the TPM. This will give it more time to address these outstanding issues than sweep aside current mechanisms simply because at this late stage, they are inconvenient.

The Authority has failed to make the case that embedded generation proves little or no benefit

The Independent Electricity Generators Association (IEGA) strongly submits that the Authority's focus must now be on designing a new payment mechanism for [distributed generation][2] and until this work is done to retain the status quo.[3]

'*The IEGA's position is that distributed generation is (and has been for many years)* ***providing transmission benefits and must be compensated for*** *this (consistent with the Authority's beneficiaries pay approach for transmission costs)*.'[4] [Emphasis added]

[And]

'R*obust analysis was undertaken to identify 'eligible' distributed generation. This analysis has not been disproven or reviewed* *. Any change to payments to distributed generation for transmission services must be based on robust analysis (and not assertions*).'[5] [Emphasis added]

We support IEGA's position that the Authority has failed to make a case that distribution generation does not provide consumer benefits, and accordingly, the payment of ACOT is unwarranted. The Authority, itself recognised in its Consultation Paper that there are benefits to distributed generation. However, with 1 April 2023 coming fast upon us, the Authority's preference is to clear away any outstanding implementation issues before the new TPM takes effect; and then take steps to consider what to replace that mechanism with.

The Authority appears confident that the distributed generators are comfortable to wait for the Authority to get around to considering an alternative mechanism for recognising benefits. We do not believe that is the case or that it is appropriate that distributed

[2] IEGA, Consultation Paper — consultation on ACOT payments to distributed generation, 20 October 2022, page 2.
[3] Supra, n2
[4] IEGA, Consultation Paper — consultation on ACOT payments to distributed generation, 20 October 2022, page 9.
[5] Supra, n4

generation should be asked to wait it out while the Authority gets the TPM over the line.

Embedded generators provide much-needed security of supply that the Authority's proposal puts at risk

King Country Energy (KCE) owns and operates 45.2 MW of distributed generation, which include the Mangahao power station embedded in the Electra network. KCE raised the issue of the N-1 security that distributed generation provides the grid currently and its role in New Zealand's decarbonised future. KCE stated in its submission that—

> '*Calderwood Advisory's case study (as attached as an appendix) found that KCE's Mangahao generation has been necessary to ensure N-1 reliability at the MHO0331 grid connection point. This value has been historically recognized by ACOT payments and there is network support contracts in place*.'[6]

[And]

> '*Without such arrangements there is likely to be the loss of a low-cost source of flexibility putting pressure on system delivery at the very time we are seeking to promote the industry to new players*.'

We value the support that the Mangahao power station offers our network. Their support during the 9 August event was invaluable and we agree with KCE that distributed generation—

> '*reinforces the public interest in ensuring that sufficient capacity, from both distributed generation and load control is operating to reduce demand at a GXP during peak demand periods*.'[7]

Manawa Energy (Manawa) supported a phased transition to the removal of ACOT payments because a phased transition is better than no transition[8], i.e., it is the best of a poor choice of options.

In its submission, Manawa comprehensively explained the importance of ACOT as a recognition of the benefits derived from distribution generation—

> 'T*he proposed removal of ACOT payments represents a fundamental change to the arrangements for renumerating distributed generation (DG) and will require a reliance of nodal prices and/or contractual arrangements, the effects of which are not yet fully understood*.'[9]

[And]

> '*We have closely examined the tools the Authority considers can be used to manage this risk and are concerned that while each tool has its place, collectively these tools will fall short of the mark. This has* ***led the Authority to under-estimate the potential reliability benefits of a transition for consumers****.*'[10] [Emphasis added]

6 KCE, King Country Energy Submission on ACOT Code Change, 19 October 2022, page 2.
7 KCE, King Country Energy Submission on ACOT Code Change, 19 October 2022, page 1.
8 Manawa, Manawa Energy Submission: Proposed ACOT Code change, page 1.
9 Surpa, n8
10 Ibid, n9

We agree with Manawa. The Authority's proposal could have unintended and ill-considered impacts on supply security. As demand, driven by the electrification of the New Zealand economy, pushes against existing GXP capacities.

> '*As the energy transition accelerates it must be acknowledged that peak demand charging has suppressed network and generation investment and offtake for decades. These effects have been largely unseen by the market. The contribution of DG is particularly relevant at the local GXP level which is often overlooked by policymakers in favour of national assessments.*
>
> *The removal of TPM usage charges creates uncertainty as to the level of demand that will now come forward and the embedded demand response that will drop out. Problematically this is occurring at a time when we are already in tight supply conditions.'*[11]

The Authority appears to place little value on distributed generation and sees minimal risk of investors deferring investment or, worse, leaving the market by disallowing ACOT payment before another alternative mechanism is implemented. Like KCE, IEGA, and Manawa, we are deeply concerned that the Authority has called this incorrectly. Their proposal will result in distributed generation investors, current and future, reconsidering their investment decisions to the disadvantage of New Zealand at large.

Retain ACOT where there is evidence of avoided transmission costs

Ngāwhā Generation Limited (NGL) supported the Authority's preferred option 'in-principle' in its submission—

> *'However, we do not support the Authority's proposed approach to remove ACOT in its entirety, in situations when DG provides grid support that avoids future transmission costs.* ***We recommend that provisions are maintained in Part 6 to clarify that payments of ACOT that contribute to the avoidance of Transpower's future grid costs are permissible****. This will support efficient operation and investment in the grid by incentivising DG that reduces future grid costs.*'[12] [Emphasis added]

Like KCE, IEGA, Manawa, and ourselves, NGL is concerned that the Authority has not correctly assessed the benefits of distributed generation and has understated the risk of distributed generators deferring investment or exiting the market.

> '***The Consultation Paper starts from the position that no DG provides any benefit to consumers****, Electricity Distribution Businesses (EDBs), or Transpower in respect of transmission costs.* ***The Authority indicates that it will deal with any case to the contrary directly, and in time****. By doing this, the Authority has relied on an untested assumption that there are sufficient other incentives for DG to continue to generate in the interim to support efficient operation and investment in the grid.* ***We believe this puts at risk grid reliability and lower cost grid alternatives for the means of regulatory expediency***.'[13] [Emphasis added]

Top Energy supports the removal of ACOT payments from 1 April 2023, where there is no identified avoided cost of transmission. However, where an avoided transmission cost has been identified-

11 Manawa, Manawa Energy Submission: Proposed ACOT Code change, page 3.

12 Ngawha Generation Limited, Submission on ACOT — proposed TPM-related amendments, 20 October 2022, page 2.

13 Supra, n12

'***an alternative mechanism for compensation should be implemented before removing the current ACOT payment*** *for those identified to ensure continued reliability and security of supply*.'[14] [Emphasis added]

Top Energy also considered the impact of the Authority's proposal on future investment, stating that—

'From an EDB perspective this is an important consideration where the cost of future transmission investment, in the absence of the Distributed Generators (DG) providing these grid services, would fall to the EDB and consumers. ***The complete removal of ACOT removes our options to act in the long-term best interests of consumers*** *by incentivising DG to continue to operate to avoid these costs.'*[15] [Emphasis added]

The Authority's proposal to disallow ACOT from 1 April 2023 is not in the long-term best interests of consumers

We agree with Top Energy that without a mechanism to encourage a reward to avoid transmission costs, those costs will be borne by Transpower's customers. Based on the allocation approach under the new TPM, much of that cost is borne by load customers, i.e., electricity distribution customers. Price-quality regulation requires those costs to be passed through to consumers. Accordingly, the risk of costs increasing from the disallowance of ACOT payments is higher costs to consumers. We do not believe this is in consumers' long-term best interests.

Like KCE, IEGA, Manawa, and ourselves, Top Energy are also concerned that the Authority has underestimated the impact that removing ACOT payments will have on embedded generators.

'*Top Energy's main concern is that* ***the Authority has underestimated the immediate potential impact on reliability and security of supply*** *with the removal of ACOT payments. This could immediately impact our consumers...*'[16] [Emphasis added]

[And]

'*…it is our opinion that the* ***removal of ACOT by 1 April 2023 will result in a material reliability issue****, in opposition to section 4.4, as Transpower will not have put in place grid support arrangements to provide n-1 security at Kaikohe from that date.*'[17]

Top Energy's submission goes on to detail the impact on its consumers highlighting the long-term disadvantages that could arise if the Authority proceeds as it plans to, including—

'With the requirement for significant DG and distributed energy resources (DER) in the future to support the Governments electrification goals, the full removal of ACOT does not encourage the investment in transmission alternatives which implies only national grid investments are seen to provide a valuable service to consumers. Even if there is a

[14] Top Energy, Submission to the Electricity Authority on Avoided Cost of Transmission (ACOT) – proposed TPM-related amendments, 20 October 2022, page 1.

[15] Supra, n14

[16] Top Energy, Submission to the Electricity Authority on Avoided Cost of Transmission (ACOT) – proposed TPM-related amendments, 20 October 2022, page 2.

[17] Supra, n16

process developed later to compensate these participants for the benefits they provide, ***this proposed amendment sends a signal which adds to uncertainty in the sector rather than removing it***.'[18] [Emphasis added]

We agree with Top Energy's proposal that—

'…*for eligible DG that have been identified by Transpower as providing grid support (ie, in the Transmission Planning Report 2022), the current ACOT payment arrangements should remain until further work on alternative support arrangements for DG is completed... This should be limited to ACOT payments that are based on the avoidance of future transmission investments related to security of supply.*

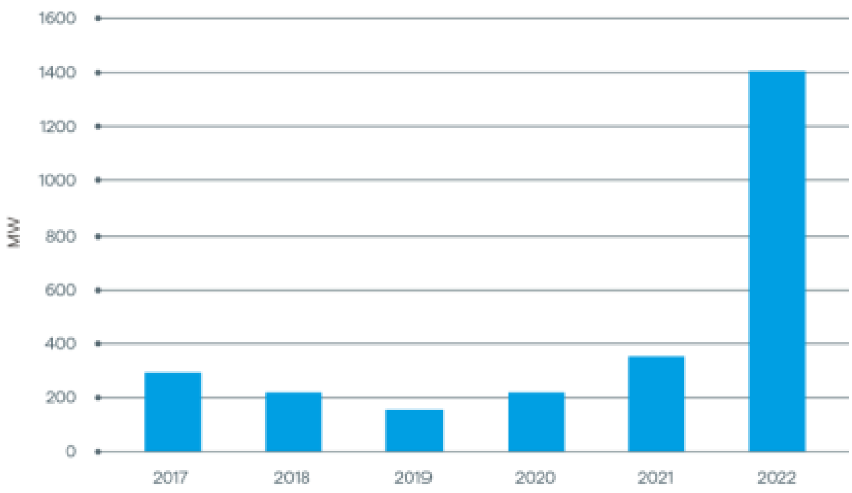
This would ensure that the appropriate alternative mechanisms and / or market can be developed to ensure that best long run outcome for consumers. ***Once this new mechanism is in place, the current ACOT payments for eligible participants should be phased out or ceased****. We believe this approach aligns with the intent of the TPM that the costs of grid services (in this case, grid support services provided by NGL) should be recovered from participants that benefit from those services*.'[19] [Emphasis added]

Further, Transpower as the system operator does not support the immediate removal of provision for ACOT payments, stating that—

'While ACOT payments were not intended to assist with system security, nevertheless, as they provide a financial incentive for distributed generation to operate at peak times, ***there is a risk that their removal could impact system security****.*'[20] [Emphasis added]

Transpower predicts that its customers are facing a near tripling of demand by 2037[21]. Figure 11 below shows the step change in demand forecast (15 years) from load customers[22].

Figure 11: Electricity demand steps forecast (15 years) from load customers



The magnitude of this step change in demand highlights the role that embedded generation has a vital role to play in supporting New Zealand's energy transformation. We must be supporting investment by ensuring the right mechanisms are in place

[18] Top Energy, Submission to the Electricity Authority on Avoided Cost of Transmission (ACOT) – proposed TPM-related amendments, 20 October 2022, page 3.

[19] Supra, n18

[20] Transpower, ACOT — proposed TPM-related amendments, page 1.

[21] Transpower, RCP4 Consultation, page 31.

[22] Supra, n21

before making changes that risk creating disincentives at this critical time. The premature removal of ACOT risks non-grid solutions pushing up Transpower's future costs to serve. Higher transmission costs resulting from inefficient investment in the grid is not in the long-term best interests of consumers.

Closing comments

Retaining ACOT payments in the short term will give the Authority the time to consider alternative mechanisms that meets its objectives, align with the TPM, and encourages efficient investment in distributed generation and other non-grid technologies.

Unfortunately, ACOT could not be given full consideration during the implementation of the TPM, and a mechanism that better aligns with the TPM was not devised before 1 April 2023. Like all of us, the Authority had to focus its constrained resources on the biggest issues first. We find no fault with the Authority for doing so. However, we believe that the Authority's proposal is rushed, short-sighted, and not in the consumers' long term best interests.

While not ideal, we urge the Authority to keep ACOT payments in place until an effective and appropriate alternative mechanism is fully considered and implemented.

Yours sincerely

Dylan Andrews
Chief Operating Officer — Lines Business
dylan.andrews@electra.co.nz