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IEGA
INDEPENDENT ELECTRICITY
GENERATORS ASSOCIATION

3 November 2022

Submissions
Electricity Authority
P O Box 10041
Wellington 6143

By email: network.pricing@ea.govt.nz

Dear Electricity Authority Board Members,

RE: Consultation Paper – consultation on ACOT payments to distributed generation

The Independent Electricity Generators Association Incorporated (IEGA) welcomes the opportunity to make a cross submission on the Authority's proposal to amend Part 6.4 of the Code. [1] We commend the Authority for undertaking a cross-submission process.

Impact on system reliability

The Authority discounted the impact of removing ACOT on system reliability. However, the submission that holds the most weight from the IEGA's perspective was an unequivocal statement from Transpower and the System Operator. Transpower, obviously, has the best information about system security and the value of distributed generation in managing system security during peak demand periods and submitted:

> *"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."*

It is not clear what period of phase out Transpower is suggesting. However, the IEGA notes Transpower's information indicates a tight system security for the "*next few years*" and potentially out to 2028.

> *"Tight capacity margins are expected to persist for the next few years until sufficient investment in peaking capacity is made. Specifically, our recent (June 2022) annual security of supply assessment identified that the market would need to develop all the known consents to maintain the North Island winter capacity margin (NI-WCM) above the upper security standards between now and 2028 and begin commissioning*

[1] The Committee has signed off this submission on behalf of members.

> *projects currently unconsented from 2028. Even with developing all the known consents, some sensitivities or combination of sensitivities may still result in the NI-WCM falling below the security standards prior to 20282 which would require even more development of currently unconsented projects."* [footnotes removed]

Top Energy is also concerned about reliability and submitted its "*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 ….*"

Top Energy, Manawa Energy and King Country Energy provide evidence that distributed generation in their areas is necessary to ensure grid security. The IEGA's submission relied on the Mitton ElectraNet analysis that identified eligible distributed generation because it "was required for Transpower to meet its Grid Reliability Standards". We reiterate our request that the Authority commission independent analysis of the power system to identify / confirm distributed generation that is providing a transmission service and avoiding future transmission costs prior to any change to the current ACOT payments.[2]

Transpower also confirms the Transitional Congestion Charge option is "*not a relevant consideration*".

Submitters call for the Authority to undertake additional work

As well as the IEGA, numerous other submitters have called for the Authority to undertake additional work before eliminating ACOT payments, focusing on a framework that recognises distributed generation does and can avoid transmission costs by providing grid support, alongside other technologies:

Electra comments "*While the Authority's proposal is a solution to the problem identified in its Consultation Paper, we believe that the Authority's proposal is premature. The Authority has not yet explored alternative approaches that would recognise the benefits arising from DG as well as effectively and appropriately compensating investment in DG*" and 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."*

ETNZ: "*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*."

Ngawha Generation Limited: *"ACOT payments can be justified where there is benefit to the end-consumer from the DG existing. If Transpower considers it could make a more efficient investment (reducing the long-term cost to consumers) then it should identify this with sufficient lead time for the DG to manage its costs in expectation that it will no longer provide the same benefit." "It is our understanding that after the 2016 amendment Transpower has not conducted any further analysis to determine if any given DG is in fact "essential to reliability". This cannot be where the analysis is left, …." "Consideration of, and consultation on how ACOT payments can be used to avoid network upgrades, which will reduce costs to customers in the long term, has not yet been undertaken." "We do not agree with the phase out option, but we advocate for a delayed application of Part 6 amendments to allow time for Transpower to fully assess which generators provide grid support. With*

[2] The IEGA notes that the Mitton ElectroNet 2017 analysis assessed distributed generation against future transmission system capacity ie, future transmission costs.

this information the Authority and Transpower could develop alternative frameworks to compensate DG that provide network benefits."

Top Energy: "*… where an avoided transmission cost has been identified, an alternative mechanism for compensation should be implemented before the removal of the current ACOT payment for those identified to ensure continued reliability and security of supply." "Further, it could also be the case that not only the host network is benefitting from the DG and that there are regional benefits. This is the sort of issue which the Authority needs to resolve before amending the Code and if it doesn't then it may be enacting regulation which is contrary to its statutory purpose*.' "*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 (eg Transpower and Northland EDBs)."*

IEGA agrees with Powerco's comments that any "*transition approach for eligible distributed generators may need refinement to reflect reliability value*" and:

"*Although the TPM will change, the need/value for distributed generators to maintain N-1 grid security may not have. For DG on our network, the starting point is the 2018 Mitton report used to derive a list of generators eligible to receive ACOT. The Authority describes this analysis as "… effectively a high-level assessment of locations in the grid where DG potentially contributes to grid reliability" (2.6). The Mitton report which informed the status of generation on our network was agreed with Transpower and used previous analysis methodologies developed as part of Transpower's published 2017 Transmission Planning Report. It's possibly more than a high-level assessment. For example, the assessments of eligibility are framed as "DG contribution required" and appear separate to the method of pricing. We are interested in submitter views about this analysis including how it can inform the (ACOT) costs customers should pay (ideally directly from Transpower) for any grid services provided. Another useful reference point could be the impact on grid reliability standards from distributed generation that was assessed as ineligible."*

Vector: "*This consultation provides an opportunity for the Authority to consider incentives on Transpower to support the uptake and use of technologies that reduce the need for transmission upgrades – i.e. "transmission alternatives". "Particularly given the removal of the RCPD, we recommend the Authority consider incentives for Transpower to contract with distributors, DER owners and aggregators of DER portfolios to provide services that assist Transpower avoid transmission investment." "Transpower has a significant upcoming investment programme planned for its fourth regulatory control period which Transpower has indicated will result in transmission prices increasing by 31% in nominal terms. Accordingly, we consider work that facilitates the uptake of grid support technologies to reduce the need for traditional investment should be prioritised by the Authority."*

While Aurora supports the Authority's proposal they also acknowledge that "*There may be instances where DG efficiently defers investment in new or upgraded transmission connection assets, as opposed to interconnection assets. Under those circumstances, it would be appropriate that EDBs (as the connection customer) remain able to pass the efficient cost of deferral to consumers. To facilitate that, the Authority may need to consider amending its proposal to allow payments for efficient deferral of transmission connection asset investment, but make it explicit that ACOT cannot be paid on the basis of charge avoidance*." The IEGA disagrees with Aurora's distinction between connection and interconnection assets – it is the capacity of both that determines the volume of electricity that can be delivered at a GXP. However, Aurora's point about the Code continuing to allow payment for activities that avoid transmission costs is highly relevant.

The IEGA reiterates its request of the Authority to commission independent robust power system modelling analysis (replicating the Mitton ElectraNet analysis that has been relied on for years) to reveal the transmission benefits provided by existing distributed generation. Further, a standard regulated mechanism for payment of these services must be maintained, consistent with the philosophy underpinning the TPM of beneficiary pays.

We also agree with NgaWha Generation that "*Transpower will not be incentivised to investigate the benefits provided by DG without explicit regulatory guidance in place*". And Network Tasman: "*There needs to be some consistency in the regulatory approach to DG that provides such [grid support] services and this needs to align Authority's statutory purpose to promote reliability of the electricity system for the long term benefit of consumers*." Information asymmetry and the bargaining power of individual investors in distributed generation negotiating with a monopoly/ies were reasons the regulated pricing principles were originally put in place and these reasons remain valid today.[3]

Reliance on nodal prices only to provide the right signals

The IEGA notes that Ngawha Generation has provided factual evidence that nodal prices are not relevant for distributed generation and the reliance of Transpower on its distributed generation plant to support its n-1 grid reliability standards.

Vector also submit: "*We consider recent experience following the removal of the RCPD charge from the TPM suggests there are limitations to relying solely on the nodal price to manage peak demand in the transmission grid. The recent changes may well have caused distributed generation to operate differently as well.*"

Further, we agree with Manawa Energy that the Authority's paragraph 3.8 implies distributed generation will have the power to set nodal prices behind a constraint without breaching the trading conduct rules.

The IEGA suggests the Authority survey distributed generation owners to find out if they are changing their generation profiles / operating mode away from peak demand periods to 'chase' high spot prices.

Other submitters focus on the consequence that eliminating ACOT payments means distributed generation is providing transmission services for free. The Lantau Group submit: "*BB charges are what they are as much because of all that happened up to this point, which includes the impact of distributed generation resources taken into account by Transpower in its planning and investment activities. Clearly if BB charges are lower than they would otherwise be, then an ACOT style payment is merited by the resources that contribute to those savings. The services cannot just suddenly be assumed to be provided without compensation*."[4]

Top Energy identify this in the Authority's cost benefit analysis: "*However, it appears the analysis has not considered any change in behaviour from participants and assumes that participants will provide a service for free. This is inconsistent with economic efficiency principles and should be carefully evaluated before any decision is made*."

[3] The Authority should consider these barriers when it is thinking about why "flexibility funding in not widespread" (section of Appendix C in the consultation paper (page 38)).

[4] Page 12 https://www.ea.govt.nz/assets/dms-assets/30/Manawa-Energy-Appendix-1-TLG-Report-on-ACOT-for-Manawa.pdf

Submitters supporting the Authority's proposal

The submitters that supported the Authority's proposal have either:

1. adopted the Authority's assertion that ACOT payments are for avoided transmission charges as opposed to transmission costs (Aurora, Meridian, Unison, WEL)
2. agreed with the Authority that nodal prices will incentivise operation of distributed generation (Aurora, Northpower, The Lines Company)
3. are suggesting priority work on wider distribution pricing reform (MEUG)

On point 1, the IEGA believes we have provided robust reasoning to reject the Authority's assertion that ACOT payments have been for avoided charges. Other industry participants hold the same view as the IEGA that analysis to identify eligible distributed generation confirms it is providing services that avoid transmission costs.

On point 2, the IEGA notes that distributors that do not own generation assets are not exposed to nodal prices and thus have no experience of the complexity and cost of the wholesale market.

On point 3, the IEGA supports ongoing work on distribution pricing reform.

Additional points raised by the IEGA previously but omitted from this consultation

ETNZ, rightly in our view, raises two relevant additional points that the IEGA has raised in support of ACOT payments in the past but omitted from our last submission:

a) c54Q of the Commerce Act:

Clause 54Q of the Commerce Act requires the Commerce "*Commission must promote incentives, and must avoid imposing disincentives, for suppliers of electricity lines services to invest in energy efficiency and demand side management*."

"*ACOT payments are the only substantive regulatory incentive provided to promote demand-side management by distributors. As such they are consistent with section 54Q of the Commerce Act*"

"*To the extent that distributors either invest directly in distributed generation or contribute to other parties' DG investments, they are fulfilling the purpose of s54Q by promoting demand-side activities and by achieving reductions in energy losses on the Grid. ACOT provides an incentive to do this especially as it ensures that the incentive payments are passed through to the DG operations. Removal of ACOT will, effectively, impose a disincentive on DG that currently fulfills the objectives of s54Q."*

"We believe that the Authority should recognise the clear instructions provided in that section of the Commerce Act and move at once to put an effective alternative is in place. The focus on achieving greenhouse gas reductions has increased markedly since s54Q was inserted into the Act in 2008, meaning that it was a farsighted clause that has become increasingly relevant."

ETNZ has an interesting alternative allocation proposal "*Here one option would be to progressively shift responsibility for compensating Transpower for loss of load due to DG to Grid-dependa[e]nt generators.*"

b) Impact of losses on nodal prices

"*The Authority's analysis of the impacts of ACOT on household bills seems to omit the very significant effect that DG has on nodal pricing. Because the energy losses on the transmission and distribution systems rise exponentially with load and distance, resulting in much higher nodal prices, investments in DG that reduce line load can provide a major cost benefit to consumers.*

To the extent that ACOT has promoted DG, resultant line load reductions (particularly at peak times) will have contributed to very significant local energy cost reductions. Future DG investments will have similar impacts. Calculation of the impact of these reduced costs to consumers should be central to any evaluation of ACOT alternatives."

Transpower's draft Assumptions Book details the following about their losses assumptions:

- HVDC: 66 MW of losses when sending 1200 MW north, and 35 MW when sending 850 MW
- "Transmission losses on the AC network above 66kV are included in our demand forecast rather than as an endogenous variable in SDDP. To account for the additional generation required due to AC losses, we add an additional 2.85% on to North Island demand and 3.85% on to South Island demand."[5]

Meeting demand at 9.45am on 1 November 2022 resulted in AC losses of approximately 160MW.

Regulatory intervention in bilateral ACOT contracts

Some distribution companies have requested the Authority's Code amendment also unwinds bilaterally agreed ACOT payments. The Authority must be aware of the limitations of its regulation making powers. Amending the Code to interfere with bilateral contracts (made outside the ambit of the Code) will impact investor confidence. Horizon also warns the Authority that bilateral contracts are outside the mandate of the Authority.

Code amendment

The IEGA agrees with EA Networks that the definition of incremental costs should relate to both distribution and transmission costs incurred with the connection of distributed generation. This is our understanding of the approach of some distribution companies at this time.

The IEGA supports Aurora's recommendation that if "*the Code amendment made it clear that a distributor's avoided costs excluded charges from the transmission provider, then concerns about making ACOT payments based on allocator updates and diminished future investments would largely disappear*".

Concluding remarks

Electra highlights the importance of the timing of this decision in relation to the significant investment that is required to achieve NZ's decarbonisation goals "*An ill-timed move now by the Authority to end ACOT payments before establishing a viable alternative that effectively and appropriately recognises*

[5] Page 16 and 18 of the draft Assumptions Book for consultation (the final Assumptions Book was not available on Transpower's new website) https://tpow-corp-production.s3.ap-southeast-2.amazonaws.com/public/uncontrolled_docs/Part%20B%20-%20TPM%20Assumptions%20Book%20-%20Draft%20for%20consultation%20-%20April%202022.pdf?VersionId=kYSQ8oyWtfQ3pFtRgTrr0bNahnaQ7o6u

DG's contribution to New Zealand's decarbonisation journey, risks disincentivising essential investment in the energy sector.” “There is a role for regulated price signals for grid support technologies, including DG. We believe that New Zealand's energy future depends on enabling such technologies. We also agree that establishing appropriate consideration for the provision of grid support technologies is difficult and requires full and rigorous consultation before reaching a decision.”

We reiterate Electra’s call “*Accordingly, we urge the Authority not to proceed with its proposed TPM-related amendments; instead, leave ACOT unchanged in the short term, and follow due process by consulting fully on an effective and appropriate alternative approach before amending the Code*.”

NgaWha provides a consumer perspective: “*The best long-term decision that can be made for consumers is to fully assess the benefits provided from DG that provide grid support and to put in place a new incentive mechanism*.”

The IEGA agrees with NgaWha Generation that “*A new ACOT framework involving Transpower needs to be in place before the existing ACOT arrangements are withdrawn. We therefore do not support the staged transition measure or immediate amendment.”*

The IEGA is committed to working with the Authority to develop a new regulatory framework for identifying and compensating existing distributed generation that has avoided future transmission costs as well as avoidable costs. We look forward to a transparent and robust policy development process that is completed prior to any change to the current Part 6.4 of the Code.

Again, we suggest a discussion about this submission is appropriate given our strongly and long held views differ from those of the Authority.

Yours sincerely

Warren McNabb
Chair