Summary of submissions

Lists of distributed generation eligible to qualify to receive avoided costs of transmission (ACOT) payments in the upper North Island (UNI) and upper South Island (USI)

6 November 2018

Introduction

Under Part 6 of the Code, distributed generation is eligible to receive ACOT payments under the regulated terms only if it was connected to the distribution network as at 6 December 2016 and is on a regional list published by the Electricity Authority (Authority).

In August 2018 the Authority published for consultation proposed lists for distributed generation (DG) in the UNI and USI that would be eligible to qualify to receive ACOT payments under the regulated terms.

The Authority received 14 submissions on its consultation paper, from the parties listed below.

1. AD Harwood
2. Counties Power
3. Independent Electricity Generators Association (IEGA)
4. Inchbonnie Hydro
5. Kawatiri Energy
6. Marlborough Lines
7. Mercury
8. Meridian Energy
9. Network Tasman
10. Northpower

11. Orion NZ
12. Pioneer Energy
13. Transwaste Canterbury
14. Trustpower.

This paper provides a high-level summary of the key issues raised by submitters.

Summary of issues raised

Submitter	Comments
AD Harwood	AD Harwood submits that the recorded capacity of its DG, which is on the USI list, requires correction.
Counties Power	Counties Power submits that distributors are being encouraged to implement a size threshold within their own policies, given the significant administration time and costs from paying small DGs, and the Authority's statements that suggest it is acceptable to exclude them. Counties Power suggests distributors' policies around size should be considered before including small DG on the lists. Counties Power also suggests that the current arrangements mean consumers will continue to fund ACOT payments to DG that does not provide any benefit to consumers, and that this is inconsistent with the Authority's pursuit of more efficient transmission investment via a beneficiaries pay approach to the transmission pricing methodology (TPM). It therefore suggests distributors should have full discretion as to which DG can receive ACOT payments on the regulated terms, noting the Authority is comfortable with them using discretion to exclude small DG.
IEGA	IEGA submits that it supports the submissions made by its members (which include Inchbonnie Hydro, Kawatiri Energy and Pioneer Energy); the comments it has made in submissions on the lower North Island (LNI) and lower South Island (LSI) lists remain relevant; and that it has limited its comments to the USI list since all UNI GXPs are included in the UNI list. IEGA submits that the Authority is not able to decide the USI list. Its argument is that: • Transpower has applied a test that is inconsistent with the grid reliability standard (GRS) for non-core grid, which should relate to economic reliability rather than N-1 security. • Transpower identifies voltage stability on the West Coast and USI as being an issue in its Transmission Planning Reports in 2015 and 2017, but suggests consumers do not seek improved reliability so transmission investment is not justified.

	However, without DG there would be a reduction in reliability, which must pass the economic reliability test. Therefore, Transpower needs to determine if ACOT payments to DG that could prevent voltage collapse would be less than the cost of lost load in such an event. This has not been addressed by Transpower's technical adviser's reports. • Managing voltage stability under N-1 was a significant factor affecting DG in the UNI's inclusion on the UNI list. IEGA also notes concern that: • the low inclusion rate of DG in the USI list appears inconsistent with: - the Authority's earlier comment that the USI is the region with the most reliability risks and most likely to have avoided transmission benefits - Transpower's recent focus on managing constraints in the South Canterbury region - Transpower's Transmission Planning Report, which suggests several embedded generators in the USI are required for reliability that are not captured in the lists. • The GRS analysis covers an arbitrary assessment period of 1 April 2017 to 31 March 2020, and this has a significant impact on the list for the USI, as there is 13 MW of generation behind four GXPs that are required for winter 2021. IEGA therefore questions how sensitive the results are to (for example) changes in the assumed level of demand over the period. • The GRS analysis for the USI uses the 2017 Transmission Planning Report, whereas earlier lists used the 2015 Transmission Planning Report. This is inconsistent, and some of the changes between reports are likely to result in the exclusion of some DG in favour of Transpower's own proposals. Furthermore, there is no evidence DG would not be lower cost than those Transpower proposals. • With some DG in the USI no longer eligible for ACOT payments under the regulated terms, current efforts to minimise peak demand in the USI will be undermined. It suggests the Authority has ignored the benefits that DG provides in this regard. It refers to a report by Energy Link (commissioned by Pioneer Energy and attached to IEGA's submission), which it suggests indicates the potential for higher spot prices if DG in the USI no longer generates in peak demand periods. • Owners of DG and potential investors are subject to an unprecedented and disproportionate amount of uncertainty, noting the Authority's suggestions of further review of the ACOT arrangements. In its cover email, the IEGA expressed its interest in discussing its submission with the Authority Board.
Inchbonnie Hydro	Inchbonnie Hydro supports the submissions made by the IEGA and Kawatiri Energy. It specifically states: • it agrees with those submitters' concerns about the potential for changes in DG operation on the West Coast to have implications for voltage stability, which may be a detriment to consumers • It is concerned that the Dobson GXP is essential from winter 2021, and Transpower will not have enough time before then to invest in any necessary grid infrastructure to maintain grid reliability • the Authority should request a sensitivity analysis of the USI results to changes in the demand inputs to see how much

	regional demand behind the Dobson GXP would have to change to require the DG to support grid reliability. Inchbonnie Hydro notes that the West Coast's power supply was recently impacted by large storms, and that the area is a focus for the Government's regional development plans, which may not be reflected in the Authority's theoretical approach. Inchbonnie says it would welcome the opportunity to discuss the above with Authority Board members.
Kawatiri Energy	Kawatiri Energy notes that it owns and since 2013 has operated a 4.2 MW hydro station in the Buller region, which covers some 30% of local demand requirements, and that in its Transmission Planning Report, Transpower explicitly includes Kawatiri generation in its planning for operating and maintaining the grid to the required standards. Kawatiri Energy submits that Transpower did not meet its Code obligation in its report to the Authority. Transpower's n-1 analysis is not the same thing as analysing DG that is required to ensure the GRS. There is good reason to believe this has led Transpower to come to the wrong conclusions about eligible distributed generation. Kawatiri Energy refers to clause 2 of Schedule 12.2 of the Code, and states that clause 2(2)(b) does not apply to the non-core grid, and hence by applying the N-1 test to the non-core grid Transpower has not met the Code. Kawatiri Energy states for non-core grid, the economic reliability test under sub-clause 3(2) of schedule 12.2 applies, but Transpower's assessment was entirely based on N-1 criteria. Kawatiri Energy refers to voltage stability in the USI as an example of where Transpower would likely have come to the wrong conclusion by applying the N-1 test. Kawatiri Energy suggests DG in the USI region provides voltage support and dynamic reactive support, and any reduction in that contribution would result in a reduction in the service level and must pass an economic investment test. It suggests that Transpower's technical adviser, Mitton ElectroNet, raised concerns about voltage stability in its report but did not investigate as it was not part of its brief. Kawatiri Energy further submits that the USI list may have been affected by: • the Authority's inclusion of a fixed date for DG (6 December 2016) but not for transmission – Transpower has been able to use updated assumptions around demand, supply, and transmission projects through use of its updated transmission planning reports. Kawatiri Energy suggests this inequivalence is contrary to natural justice • the Authority's decision to implement the Code amendment for the USI last. Transpower's Transmission Planning Report assumptions have changed significantly between 2015 and 2017 for the region, so implementing the Code amendment in a different order could have resulted in significantly different results, suggesting that this is not a robust, best practice outcome for a credible regulator • the Authority's arbitrary assessment period of 1 April 2017 to 31 March 2020, as there is 13 MW of generation behind four GXPs that are required for winter 2021, and their exclusion is likely to be sensitive to the change in demand assumption between the 2015 and 2017 Transmission Planning Reports.

	Kawatiri Energy considers its exclusion from the USI list is counter-intuitive, because the Authority placed the USI region last for ACOT implement due to it being most likely to have the greatest reliability risk, yet due to Transpower subsequently rebasing its assumptions for the region its conclusion was that not much DG is required for grid reliability. Kawatiri recommends the Authority discards its draft USI list, and instruct Transpower to apply the correct GRS test using the same baseline grid configuration and input assumptions as used for the first region.
Marlborough Lines	Marlborough Lines states that it supports the 2016 Code change and agrees with the analysis that DG is not required at the Blenheim GXP to support the GRS. However, Marlborough Lines notes its concern about the approach of identifying all DG behind a GXP to be eligible for ACOT payments if any supports the GRS, as it ignores factors such as the ability of individual DGs to be dispatched when required. It submits that a review of the policy and methodology should be undertaken to ensure that outcomes are meeting policy requirements, particularly if a new TPM is implemented.
Mercury	Mercury states that it agrees with the lists and does not consider any changes are necessary.
Meridian	Meridian reiterates the general points it has made in its submissions on lists for the LNI and LSI– being that: • DG that contributes to ACOT should be identified at an individual level, there should be a minimum size threshold for eligibility, and eligibility should be limited to the time period the DG is required to support grid reliability • the basis for measuring ACOT is highly inaccurate, and results in subsidies that create costs for consumers. It suggests the arrangements should be revisited given the delays in correcting the issues via the TPM review.
Network Tasman	Network Tasman comments on the technical analysis that Transpower used to write its report, to support its view that the DG at the 33 kV GXP at Stoke do not meet the requirements to be eligible for ACOT payments, and should hence not be included in the list. Its view is that: • the technical report shows the GRS are not met regardless of the presence of the DG at that GXP, so the DG does not allow Transpower to meet the GRS, and hence does not satisfy clause 2 of schedule 6.4 of Part 6 of the Code • the DG at the Stoke 33 kV GXP is not firm or material enough to defer investment • the assessment does not take into account agreements between Transpower and Network Tasman regarding a protection issue that proves the DG has no impact on the need for investment at the Stoke 33 kV GXP. Network Tasman also notes that the transformers are currently being upgraded at the Stoke 66 kV GXP, which will make the DG at that GXP redundant from 2020 onwards.

Northpower	Northpower submits that DG that is less than 10 kW in size should be excluded from the lists because: • it is unlikely this DG would qualify for ACOT under distributors' policies regarding payment • their inclusion is likely to increase administration costs and workload for distributors needing to field enquiring from customers about DG and ACOT payments • it would make the lists more manageable • it would be consistent with the observation that 98% of DG comes from plant that is larger than 10 kW, and thus that smaller DG makes a negligible contribution. Further, Northpower: • notes that distributors' approach of paying DG on the basis of avoided transmission *charges* reflected that there was no established methodology on which to assess their contribution to transmission *costs*. • asks if a consumer at an ICP that is on the ACOT list changes its configuration after December 2016, such as by adding a battery to a solar installation, should the distributor assess the ACOT solely on the capabilities that existed at that ICP in December 2016?
Orion	Orion raises concerns that it notes are similar to those it submitted in respect to the LNI list, which were that the Code amendments lead to potentially inefficient and inconsistent outcomes. Specifically, Orion: • queries the relative shortness of the USI list compared to the UNI and LNI lists, despite the USI being a region that is perhaps closest to needing grid investment to support growth • notes as a result of the USI list, it will be ending its payments to DG for their contribution at peak and reducing the payments for consumers that export at those times, which will increase by a small amount peak demand in the USI. • considers the fundamental problem to be the way the Code was changed, particularly its focus on identifying DG that are "required" for the GRS, which does not relate to how transmission charges are set and applied, and is not a useful measurable "cost" . Also it does not acknowledge other ways DG might contribute to lower transmission costs, for example, by helping to defer investment. • states that the Code process does not allow consideration of alternatives – for example demand response - to meet the GRS at lower cost than the DG, which would presumably make the eligible lists shorter • considers that the Authority should have consulted on how best to meet its objectives for ACOT before changing the Code.
Pioneer Energy	Pioneer Energy submits that DG installed at the Auckland District Hospital at Grafton (PEN0331) was incorrectly excluded from the UNI list, and the details specified for the plant need to be included.
Transwaste	Transwaste Canterbury does not believe the lists will contribute to the Authority's statutory objective as it will lead in the long

Canterbury	term to weakened security of supply. • It notes its disappointment at being excluded from the USI list. It has invested on the basis of the price signals it had received, which included ACOT payments. • It states that ACOT payments for existing assets should be grandfathered; as retrospective changes do not create an efficient market. Retrospective removal of the payment undermines responses to Transpower's pricing signals that require investment, which is not in the long-term interests of consumers. • It suggests the Authority has not proceeded with its proposed TPM change because of opposition to changes to treatment of historic assets. ACOT payments were designed to encourage DG, DG assets have long lives, and part of the business case for building them was due to ACOT payments. Transwaste Canterbury also notes concerns with the validity and timing of the data used in Transpower's reports on which the list is based that it considers should be addressed before confirming the list. Specifically, its concerns are that: • the use of the top 20 demand periods within a specific date range does not capture significant events outside those date ranges, such as storms in April 2018 that affected UNI networks • the report relies on Transpower's 2017 grid reliability report, though more up-to-date data is available, and should be used.
Trustpower	Trustpower submits that it has no specific comments on the lists for the UNI or USI. However, Trustpower: • considers the Authority should focus on providing the necessary investment signals to incentivise generators to assist Transpower in solving grid issues in the UNI, rather than just eroding what signals currently exist • notes that Trustpower works very closely with Westpower and Transpower particularly in the West Coast South Island region supporting the grid, with voltage support, flexible generation, assisting with the coordination of outages, and minimising transmission losses yet the Authority has failed to recognise the importance and significance of the services provided • suggests the Authority should now undertake a post-implementation review of the Code amendment to determine if it has achieved what was intended.