

22 September 2017

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Via email: regulation.branch@comcom.govt.nz

Dear Keston

Re: Transpower capex input methodology review: emerging views on incentive mechanisms

Thank you for the opportunity to contribute to the Commerce Commission’s (Commission’s) consultation on ‘Emerging views on incentive mechanisms’ as part of the Transpower capex input methodology.

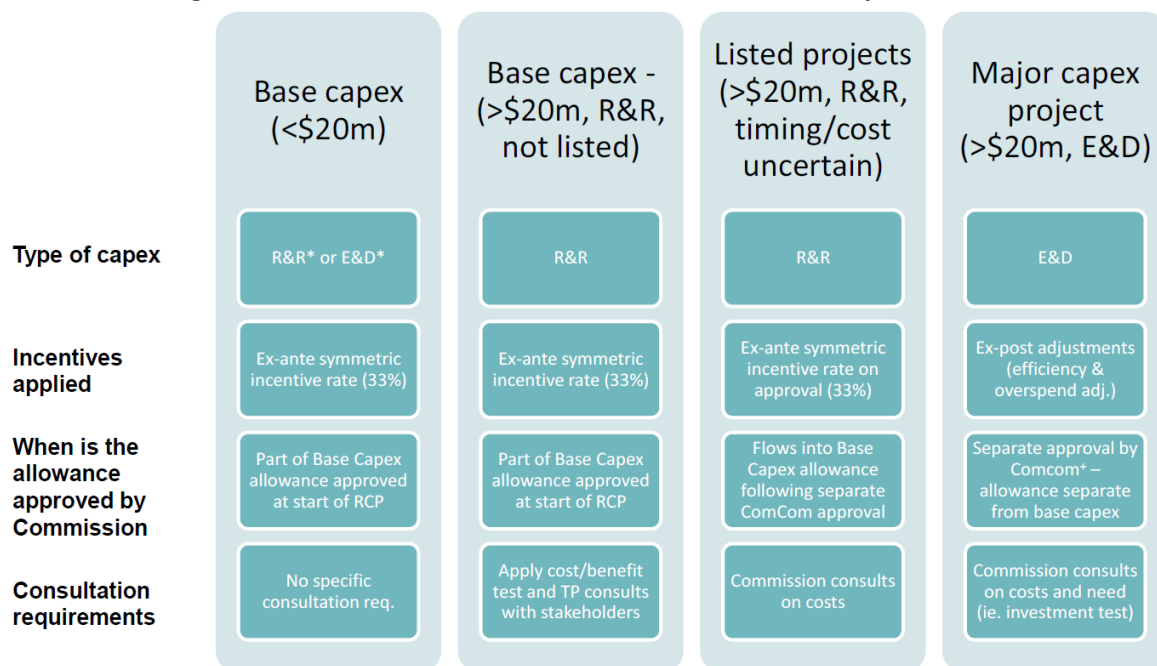
We commend the Commission for seeking additional views from stakeholders on its emerging views on these topics. Getting the right incentive mechanisms in place will ensure Transpower’s regulated capex and opex spend is optimised and that consumers will have access to robust transmission, while paying no more than they ought to be.

Our submission is focused on Transpower’s consideration of non-transmission solutions. As a general comment, we believe Transpower is doing an excellent job with its consultation and cost-benefit processes in relation to major capex and listed projects. However, given major capex and listed projects are becoming a smaller percentage of Transpower’s regulated spending (as highlighted in Transpower’s July 2017 Transmission Planning Report by the small number of major capex projects identified over the 15-year planning horizon¹), it is our view that the time is right to consider what the right level of external consultation on projects <\$20m is, so, to use the Commission’s words, “engagement is appropriately focused and does not impose unnecessary costs”.

¹ Transpower July 2017 Transmission Planning Report, section 4.4

We have based the following sections on the four different types of projects, as shown in the diagram below, that determine which process Transpower follows in making decisions in relation to its capex spending. The majority of this submission is focused on base capex <\$20m.

Figure 1 – Overview of incentives and consultation requirements



*R&R = Replacement and refurbishment , *E&D = Enhancement and Development

*Generally approved at P90 (Although not specified in the Capex IM)

Major capex projects

The Commission has proposed retaining the current \$20m growth capex threshold for major capex projects. In our view Transpower is productively engaging with third parties and considering non-transmission solutions for these projects. We agree that no change to the process is required.

Listed projects

Listed projects undergo a similar level of consultation and cost-benefit analysis to major projects capex. As such, we also believe this regime is fit for purpose and no change to the process is required.

Base capex >\$20m

We are unaware of how this process currently works, despite having sought information from Transpower, but at a principles level we think this process should align with the process for base capex <\$20m process.

Base capex <\$20m: develop a streamlined proposal focused on base capex

There is strong rationale for Transpower consulting on base capex spend <\$20m, including both for growth capex, and replacement and refurbishment capex. This includes the following:

- As a result of a reduction in demand growth and prior grid investment, major capex and listed projects are becoming a smaller percentage of Transpower's capex spend, creating a greater focus on managing and optimising the use of the existing grid.
- Future grid requirements are uncertain due to changing consumer preferences and the uptake of technology like solar PV, batteries and EVs. In this environment, there is additional value in non-transmission solutions giving Transpower the flexibility to defer larger capex decisions on 40+ year assets.
- Technology development is increasing the economics of numerous demand management solutions. This will increasingly provide Transpower with options not just for growth capex but also challenge assumptions on 'like for like' replacement.

We agree with the Commission that it would not "be appropriate to extend the engagement obligation on transmission alternatives to all projects below the base capex threshold".² We also don't believe the existing major capex consultation process is appropriate for projects <\$20m – as the Commission noted, "it provides significant scrutiny of investments and a comprehensive engagement process that is designed for major enhancements to the grid".³ A more efficient approach would involve developing a significantly streamlined consultation process, which enables the process to cover a larger proportion of Transpower's base capex. This process should be project-specific rather than prior to the start of an RCP.

² Commerce Commission, Emerging views on incentive mechanisms consultation paper, clause 71

³ Commerce Commission, Emerging views on incentive mechanisms consultation paper, clause 76

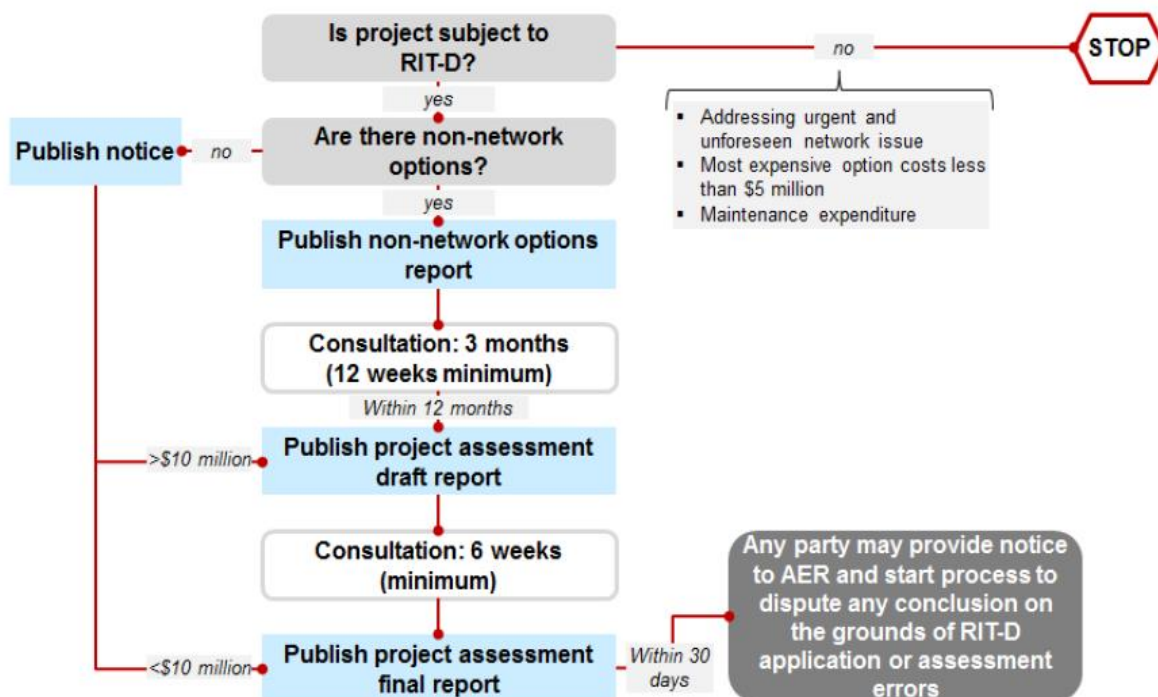
Our comments below provide a view on the development of an appropriately focused consultation process, including the following:

- *What's required for an efficient and effective consultation process?* We believe there are two essential stages: providing third parties with the information required to propose non-transmission solutions, and then an assessment of all options including a cost-benefit analysis.
- *What are appropriate minimum thresholds for consultation?* We don't believe that limiting consultation to particular asset types is a durable approach in the face of changing technology. We outline measures that can be utilised to ensure an efficient process for Transpower and third parties.
- *How can Transpower's existing major capex process be streamlined?* We provide our view on what's required and not required for base capex projects <\$20m. We believe a significantly streamlined process is practicable.

Base capex <\$20m: what's required for an efficient and effective consultation process?

In our view the consultation process for distributors in Australia includes only what is absolutely required and can provide a useful template to develop an appropriate process for Transpower. We note that the process in Australia for transmission operators and distribution operators is almost identical. However we have used the distribution process as an example due to the explicit ability it provides distributors to declare that non-network options are not feasible and significantly expedite the process. The key stages of the consultation process are shown in the diagram below.⁴

⁴ AEMC final rule determination on replacement expenditure planning arrangements, July 2017, page 64



Further detail on what’s required within each of the steps is provided in the diagram below.⁵

Screening test notice or	Non-network options report	Project assessment draft report	Project assessment final report
Reasons for determination that there is no non-network option	Description of identified need and underlying assumptions	Description of identified need and underlying assumptions	Summary of submissions to the project assessment draft report
Methodologies and assumptions	Technical characteristics of identified need	Summary of submissions to the non-network options report	
	Summary of all credible options	Description of each assessed credible option	
	Technical characteristics of each credible option	Market benefit for each credible option	
	Construction timetable and commissioning date for each credible option	Breakdown of operating and capital expenditure for each credible option	
	Indicative capital and operating costs for each credible option	Methodologies used in quantifying each class of cost and market benefit	
	Information to assist non-network providers to submit a non-network proposal	Net present value analysis of each credible option	
		Technical characteristics, costs and timetable for preferred option	

The screening test notice is an efficient way to enable networks to determine that there are no credible non-network options and expedite the consultation process. We

⁵ AEMC final rule determination on replacement expenditure planning arrangements, July 2017, page 6

support this approach and provide further comment in the section below on appropriate thresholds for consultation.

The non-network options report includes the information a third party provider requires in order to determine if they could develop a credible option, and propose it to the network. Two key elements are the technical characteristics required of the non-network solution, and the maximum value which could be made available to the non-network solution (based on the most credible traditional network option). Excerpts below are provided from a United Energy non-network options report⁶ from December 2014 which resulted in United Energy contracting with Greensync to provide demand response on the lower Mornington peninsula in Victoria.

Table 9 outlines the maximum amount of load reduction, or additional generation required to address the network limitations discussed in this paper. Non-network solutions must be provided in the Sorrento, Rosebud and/or Dromana supply areas.

Table 9 – Peak Demand offsets required from non-network solutions to address the identified need

Year	Pre-contingent requirements		Post-contingent requirements	
	Load at Risk (MVA)	Hours at Risk (hours)	Load at Risk (MVA)	Hours at Risk (hours)
2014-15	10	3	30	14
2015-16	9	3	29	12
2016-17	13	4	27	15
2017-18	18	5	32	23
2018-19	23	7	38	29
2019-20	25	10	41	33
2020-21	27	13	44	40
2021-22	31	18	48	47
2022-23	35	23	53	62

Proposed non-network options, at a minimum, must be capable of reducing demand in the lower Mornington Peninsula during summer holiday periods (typically from December to January inclusive).

The load curve in Figure 10 shows that the demand in the lower Mornington Peninsula remains high over the hours from 3:00 pm to 8:00 pm. Any pre-contingent non-network solution will therefore need to be capable of operating continuously over this period, until the demand declines.

Table 7 – Credible options under consideration

Option	Description
1	Install a new HGS-RBD 66 kV line

⁶ United Energy, Lower Mornington Peninsula non-network options report, December 2014

The estimated capital cost of this option is \$25.3 million (\pm 30%), in 2014-15 \$AUD. Annual operating and maintenance costs are anticipated to be around 0.5% of the capital cost.²²

The above-estimate includes the cost of the TBTS-HGS No.1 and No.2 feeder exit upgrade works which would be undertaken by AusNet Transmission Group.

The estimated commissioning date is before summer 2018-19.

The estimated total annual cost of this option is \$2,403,500. This cost provides a broad upper bound indication of the maximum contribution from UE which may be available to non-network service providers to avoid this augmentation.

Once any proposals for non-network options have been received, the distributor must prepare a project assessment draft report. Key elements of the report include an assessment of all credible options, a cost-benefit/NPV analysis and identification of a preferred option. This report is then made available for consultation. Excerpts below from United Energy's subsequent report⁷ show that the preferred solution involved Greensync demand management to defer the construction of a new line for four years.

Table 3 – Reasonable scenarios under consideration – Base, Low and High Demand Growth⁷

Sensitivity on Base Demand Growth Case	Net Economic Benefit (\$,000)					
	1-Network Investment	Timing	2-GreenSync + Network Aug	Timing	3-Aggreko + Network Aug	Timing
No Change (Base Case)	\$31,871	2021	\$32,142	2019	\$29,812	2020
Discount Rate 5.12%	\$37,407	2021	\$37,303	2019	\$34,454	2020
Discount Rate 7.12%	\$27,264	2022	\$27,715	2019	\$25,837	2020
Network Investment cost -10%	\$34,160	2021	\$34,166	2019	\$31,600	2020
Network Investment cost +10%	\$29,686	2022	\$30,118	2019	\$28,023	2020
VCR -15%	\$24,116	2022	\$24,126	2019	\$21,883	2020
VCR +15%	\$39,786	2021	\$40,159	2019	\$37,740	2020
Average Victorian spot price -50%	\$30,901	2022	\$31,261	2019	\$29,075	2020
Average Victorian spot price +50%	\$32,867	2021	\$33,024	2019	\$30,548	2020

This RIT-D assessment demonstrates that Option 2 maximises the present value of net market benefits under base case and majority of other reasonable scenarios considered. The preferred option for investment is therefore Option 2: Implementing GreenSync's four-year demand management solution by December 2018 followed by the commissioning of the new 66 kV line from Hastings to Rosebud zone substation by December 2022. This option satisfies the requirements of the RIT-D.

The final step in the consultation process is for the distributor to publish a project assessment draft report, which includes a summary of any submissions received. In the United Energy/Greensync example discussed above, no submissions on the draft

⁷ United Energy, Lower Mornington Peninsula draft project assessment report, December 2015

report were received, and United Energy has now proceeded with the Greensync demand management solution.

Base capex <\$20m: what are appropriate minimum thresholds for consultation?

In the consultation paper the Commission has provided a preliminary view on how the level of consultation could be managed for projects <\$20m. In particular:

72. For example, project cost threshold (for example, \$5 million) could apply to restrict engagement costs that are likely to outweigh any potential benefit. Transpower would then have discretion over the level of engagement for smaller projects below this threshold.

73. We consider that identifying projects (or types of projects) that may benefit from increased engagement would be less administratively burdensome to all parties and more efficient than lowering the base capex threshold to make more projects subject to the major capex engagement and scrutiny process.

With regards to clause 73, as discussed in the preceding section we agree that making more projects subject to the major capex engagement and scrutiny process would not be efficient, and outlined a more streamlined consultation process which could apply. In addition, including the ability for the network to determine that no credible non-network options exist and publishing a screening test notice setting out its reasons and assumptions will significantly reduce the amount of consultation required. Both of these factors should be taken into account in determining an appropriate minimum threshold (noting the Commission has used \$5m as an example in the consultation paper), and whether consultation should be restricted to only certain types of projects.

We believe that the minimum threshold should be no higher than \$5m. This level is in operation in Australia for distribution networks which have assets at comparable voltage and size to Transpower (noting the threshold is currently \$6m for transmission, and a number of parties have advocated to lower the limits). To evaluate whether a lower limit than \$5m is efficient, we believe the Commission should look at the size distribution of Transpower forecast projects – this analysis will show what a practicable level is that captures the majority of Transpower base capex, whilst minimising the number of projects which are subject to the external consultation process.

We don't believe only including particular asset types is necessary. The AER proposed a similar measure as part of the AEMC's rule change on replacement expenditure

planning arrangements and the AEMC dismissed it for a number of reasons⁸, including the following:

- Treating all capex the same way provides greater clarity and certainty for stakeholders.
- The regulatory burden of not exempting ‘like for like’ replacement is unlikely to be significant for a number of reasons. Firstly, the ability for networks to determine that no non-network options are feasible enables them to not publish and consult on either a non-network options report or a draft project assessment report, and go straight to a final report (as shown in the diagram earlier in this submission). Secondly, the AEMC stated that the amount of work required for a network to develop and publish a final report would not be significant when there is only one viable option and, for example, the network would have been expected to have calculated the costs and benefits of that option to make an investment decision anyway.

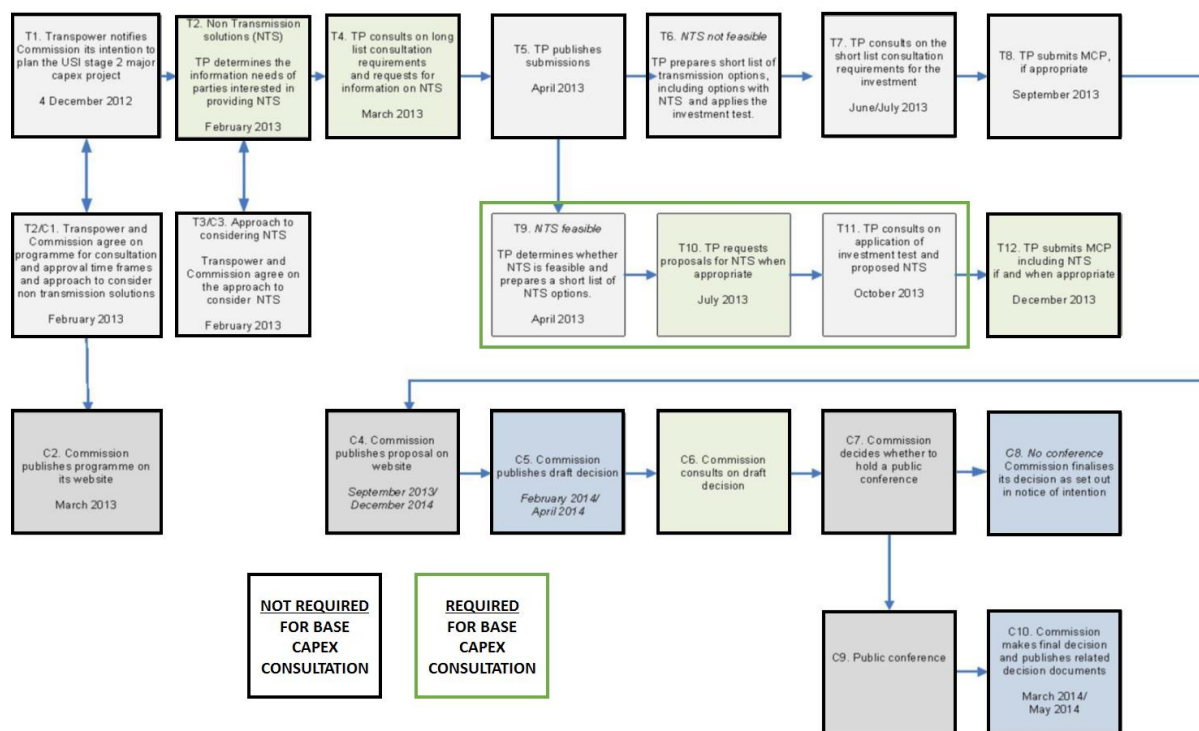
In addition to the reasons above, being prescriptive on asset types for consultation is not a durable approach, as technology solutions will continue to develop over time – so even though for a particular asset type the only viable solution today may be a ‘like for like’ replacement, that will not necessarily be the case the next time Transpower makes an investment decision for that asset type.

Base capex <\$20m: how can Transpower’s existing major capex process be streamlined

The diagram below shows the consultation programme Transpower developed for the Upper South Island Stage 2 major capex project. We have highlighted on the diagram which steps we believe need to be retained for the development of an appropriately focused consultation process for base capex projects <\$20m. We also provide further comments below on key elements of the consultation process.

⁸ AEMC final rule determination on replacement expenditure planning arrangements, July 2017, page 67

Upper South Island stage 2 major capex proposal consultation programme and approval time frames



Process step(s)	Comments
C1-C10 REMOVE	We don't believe the Commission needs to be involved. Engagement time frames can be set upfront. The Commission does not need to approve base capex projects which are subject to consultation. The process must include the ability for third parties to dispute Transpower's process and/or conclusions for a particular project, which would be managed by the Commission.
T2 REMOVE	There shouldn't be a need for Transpower to determine the information requirements of parties interested in providing NTS for each individual project. This should be set upfront and periodically reviewed if it becomes apparent that Transpower is not providing sufficient information.
T4-T5 REMOVE	We don't believe the longlist consultation is required, including for the following reasons: <ul style="list-style-type: none"> • The detail Transpower provides on forecast call profiles for demand response (including MW/MWh required, times, number of calls, length of calls, notice period, etc) could all be provided in the RFP for NTS. • The longlist consultation doesn't provide a view on the cost of the most credible traditional network options and the maximum contribution that could be made available to NTS providers. This is required for an NTS provider to evaluate whether it's worth submitting a proposal.

	<ul style="list-style-type: none"> • We don't see a need for Transpower to collect information upfront on what NTS solutions exist; an NTS RFP process will enable Transpower to take a technology agnostic approach to evaluating the most economic solution.
T6-T7 REMOVE	As discussed previously in this submission, if a 'screening test notice' is utilised at the beginning of the process and Transpower states that NTS is not an option, then no shortlist consultation should be required.
T9 RETAIN	Process step would be retained. Transpower determination on whether NTS is feasible would result in either issuing a 'screening test notice' or an RFP for NTS. We don't see a need for Transpower to prepare a shortlist of NTS options; the market will propose options based on Transpower's needs.
T10 RETAIN	Process step would be retained. We would be interested in how many Transpower RFPs have a NTS.
T11 RETAIN	Process step would be retained. Must identify Transpower's proposed option (rather than a 'shortlist') for consultation with interested stakeholders. We think Transpower should publish a shortlist prior to coming up with a solution.
T8/T12 MODIFY	Rather than Transpower submit a major capex proposal to the Commission, this step would be replaced with a Transpower final report for consultation, which would include details on any submissions and changes made post the draft report which identified Transpower's proposed option.

Once again we thank the Commission for seeking additional views from stakeholders on its emerging views on these topics and for, ultimately, seeking to get the best outcomes for consumers. We look forward to continuing to engage with you on this matter and welcome the opportunity to discuss any matter raised in this submission with you further.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Louise Griffin', with a stylized flourish at the end.

Louise Griffin
Head of Regulatory Affairs and Government Relations