30 May 2023 - BBCs for generation located further away from load

Question

A question I get asked a fair bit internally is why are generators choosing to build new wind farms at the bottom of the South Island (e.g. Contact near Gore), when it must be more economic from a whole-of-system perspective for generation plant to be built closer to load in the North Island.

My response has always been that, with the new TPM, these generators do now have to pay their share of the transmission costs for the major lines that take their energy to the North Island. That was a major part of the EA's problem definition. So a wind farm at the bottom of the SI will only get built if its all-in cost plus the cost of the tx charges is cheaper than the all-in cost plus tx of a similar project in the NI.

What I'm not sure of (because I haven't been following that closely lately) is where is the best chart/table that shows that working in practice? You presumably don't have charts of LRMCs etc, but I'd love to be able to see a table of all the BBCs for (say) White Hill vs the BBCs for Waipipi, for example, broken down by tx asset (or ideally MWh). I guess one the confusion is that pre-23, the SI generators were paying for the whole DC link, whereas now they only pay a share of it.

Are there any links you can send me please?

Response

We have not calculated the LRMC of new generation throughout the grid to account for the BBC. However, we agree that, over time, generation located further away from load will likely receive greater BBCs than generation located close to load.

For example, there are four high-value (>$20m) market BBIs for which we have calculated starting allocations – all of which result in significant allocations to South Island and/or lower North Island generators but no allocation to generators in the upper North Island:

- The Clutha and Upper Waitaki Lines Project (decision Sep 22).
- The Pole 2 convertor transformer refurbishment BBI (consultation Jan-Mar 2023)
- The HVDC Reactive Support and Central North Island BBIs (submissions closing 8 June)

We are currently working on how to keep this type of information about BBCs (allocations and covered cost) current and available to all stakeholders for all BBIs (standard method, simple method and Appendix A).

There are a number of other locational factors that generation investors consider, including the capacity factors achievable at different locations, the ease of consenting, land prices,

access to site, and the existing capacity of the grid to connect new generation. It is possible these factors outweigh the increase in BBCs for the generators you mentioned below.