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ACCC Electricity Communication No.046 - Framework for transmission expansion

Drayton Analytics (DA) provided the substantive comment and analysis on the Residual Supply Index (RSI) approach. And it is on this topic that we seek some revisions to the ACCC draft decision ("Review of the Regulatory Test for network augmentations"), "the report", which states:

> *"Taking into account comments provided by interested parties, the Commission proposes to define "competition" benefits in the regulatory test as outlined below:*
>
> *The change in the benefits arising from the following two network scenarios:*
>
> - *the "augmented network" with bidding assumed to be the same as in the status quo network; and*
> - *the "augmented network" with bidding which accurately and fully reflects any market power in the augmented network."*

DA agrees with this statement. However, as pointed out below, the reports conclusions about RSI are completely inconsistent with it, and require revision.

Consider the following points:

1. RSI is *not a stand-alone technique for measuring market power or competition benefits* in the way that HHI or some of the other proposed methods are. It is a technique for producing dynamic bidding *inside a market simulation application*. Thus the ACCC, by recommending that market simulations form the basis for measuring competition benefits, cannot disregard RSI outright. In fact if ACCC is to disregard RSI, it must also disregard any market simulation approach that uses observations of historical bidding to make any conjecture about future bidding behavior. Such a conclusion would be totally inconsistent with the above quoted statement, thus RSI must not be eliminated.
2. At the time of the initial DA review, the RSI technique was under development by the California ISO (CAISO) and DA. Contrary to the wording of the ACCC draft report, DA made no conclusion about RSI being unsuitable. On the contrary, the DA public presentation to the ACCC presented simulation results for the NEM based on RSI that were very encouraging. We believe that ACCC in its

conclusion was referring to some theoretical analysis we provided of RSI on a small test case in which two regions are interconnected without any previous history of interconnection. This case was simply designed to illustrate that, as with any approach, there are pathological cases in which the technique might struggle. It was not intended to be interpreted as an overall problem with RSI.

3. Since the time of the initial review, CAISO and DA have worked extensively on the RSI framework inside the PLEXOS simulation model. RSI is currently providing results for the WECC system in the United States for the CAISO TEAM effort – evaluation of the economic benefits of new transmission upgrades.

In light of the above, DA recommends that the ACCC in their final report:

1. Recognizes that RSI is a technique to produce dynamic bidding inside a market simulation model based on observed historical bidding patterns, and not a technique on its own that measures market power or competitive benefits.
2. Thus RSI is consistent with the ACCC recommendation that competition benefits get measured in a market simulation environment.
3. Acknowledge that RSI is an emerging technique, but that DA presented encouraging results from RSI as applied to the NEM during the public paper presentations on this matter, and that RSI is now providing results to the CAISO TEAM effort.

Further, if the ACCC is to insist on its current conclusions, DA must similarly insist that the ACCC remove any reference to DA in the RSI section of the report. We do not in any way support or endorse the draft recommendation on RSI.

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