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FIVE YEARLY REVIEW OF THE METHODOLOGY AND PROCESS FOR DETERMINING THE MAXIMUM RESERVE CAPACITY PRICE SUBMISSION

Dear Sir,

Thank you for the opportunity to comment on the Independent Market Operator's (IMO) Procedure Change Proposal, PC_2011_06, "5 Yearly Review of the Methodology and Process for Determining the Maximum Reserve Capacity Price", issued 6 September 2011.

In the first paragraph of the IMO's paper, "Market Procedure: Maximum Reserve Capacity Price", Version 5, the IMO states that, under the Market Rules, the Maximum Reserve Capacity Price (MRCP) is used as the price cap for the Reserve Capacity Auction, in the event that one is held, and as the basis for determining the price of uncontracted Capacity Credits in the case where the Reserve Capacity Auction is cancelled.

More importantly however, for investors such as Infratil and its debt providers, the MRCP, and the resulting Reserve Capacity Price (RCP), plays a critical role as the only visible price for capacity available in the market.

The importance to financiers of the absolute quantum of the MRCP and its minimal year to year variations in determining whether to invest in SWIS generating capacity should not be underestimated by the IMO (while the decision *when* to invest is related, it is separate and based on the forecast balance of generation supply versus consumer demand).

As suggested in our 2010 submission, we urge the IMO to give thought to methods for smoothing the annual MRCP (without blunting its price signal). Such methods might include a rolling, say, 3 year price or limiting the move (down) in price by, say, 5% from one year to the next.

That said, Infratil offers the following comments on the IMO's proposed procedure change.

Definition of the Power Station (clause 1.5)

Infratil notes that the power station definition has been augmented by the inclusion of a gas turbine inlet air cooling system. While an additional \$5.5m¹ has been allowed in the capital cost estimate of the power station for this inclusion, Infratil is concerned that this amount is inadequate to cover the fair cost of supplying demineralised water to this cooling system in the quantities necessary.

We believe the cost estimate should allow for the inclusion of:

- a water demineralisation plant suitably sized such that it can supply the needs of the gas turbine at full output;
- raw and demineralised water storage tanks;
- all water handling apparatus within the power station perimeter - pipe work, valves, pumps etc;
- a connection to a water pipeline and/or system than can supply at least 23 kl/hr, being the water consumption of a nominal 160MW gas turbine; and
- waste water disposal options such as evaporation ponds or pipelines.

Infratil also understands that controlling nitrous oxide emissions produced by gas turbines burning distillate is not possible using dry low NO_x burner technology with the preferred methods of control being either water injection into the combustion zone or external treatment of the GT exhaust via a selective catalytic reactor. We note that a nominal 160MW gas turbine would require water at a rate of 42 kl/hr for emissions control.

Transmission Connection Works (clause 1.8)

With reference to the SKM report, "Calculation Methodology to be Applied in Determining Deep Connection Costs", Revision 4, 23 June 2011, Infratil believes that:

- some of the assessment criteria developed by SKM are faulty;
- the option recommended by SKM, being backward looking, will not represent a fair and accurate cost of connecting a new 160MW OCGT power station to the SWIS for the market year under consideration; and
- the task of estimating deep connection costs (DCC) can only be carried out by Western Power system planning who have the knowledge, skills, tools and understanding to properly do the job.

¹ Refer to Page 5 of proposed procedure change PC_2011_06, \$5.5m is the difference between a power station with and without inlet cooling as determined by the IMO for the 2013/14 MRCP calculation

Assessment Criteria

SKM, (refer section 5.1.2 and 5.1.3 of its report) has developed its own criteria to assess the DCC calculation options. Infratil believes that SKM has erred in its definition of accuracy, “...as the extent to which the DCC calculation methodology drives the correct level of new capacity investment and supports the correct mix of generation technologies in the market as prescribed by the Market Objectives”.

It is definitely not the role of the DCC to “drive” the level of new generation investment in the market nor to support the correct mix. The timing of new investment is driven by the forecast balance of supply versus demand, as published in the Statement of Opportunities each year, and the resultant forecast of RCP which has been adjusted for excess capacity as per the Market Rules.

Infratil believes that the accuracy criterion should primarily concern itself with the extent to which the calculation option accurately reflects the cost of connecting a 160MW OCGT to the SWIS at a representative set of locations for the market year under consideration. On this fundamental basis, Infratil queries how option 2 is awarded a “tick” for accuracy.

Determining the extent of deep connection works at any location within the SWIS is a complex task that can only be done by Western Power system planners, the experts. A simplicity criterion that seeks “...to the extent that it is feasible, (to allow) participants other than Western Power to independently apply the methodology, therefore supporting their own investment modelling” will almost certainly end up with investors developing false expectations of the cost of connection.

Investors are best served by an early understanding of likely future connection costs, particularly in a power system where spare generation connection capacity is scarce. Investors will eventually face the true cost of connection when an application is made to Western Power so it is somewhat irrelevant whether they can independently model their own DCC. An MRCP, and resulting RCP, that reflects typical future connection costs will not only help an investor decide whether to invest in the SWIS but may also provide an initial guide as to where to locate this investment.

It is Infratil’s view that participants are better off having an unbiased expert produce the DCC rather than having the ability for an independent non-expert being able to replicate a weighted average DCC based on historical DCC contributions.

While Infratil is supportive of SKM’s view on certainty, that “...the methodology must be stable over time, therefore promoting regulatory certainty, and as a consequence, minimal investment risk”, such certainty could be achieved by constraining any year-on-year movement in the DCC as provided by Western Power to, say, 5%.

Preferred DCC Calculation Approach

SKM’s preferred option 2, of the four considered, is the only option that uses a backward looking approach. SKM has identified a number of issues with this approach including the “...ability (of the DCC estimate) to respond to rapid changes in actual connection costs”. The report went on to say “Western Power has indicated that they believe increasing constraints on the SWIS will result in a rapid increase in connection costs and have raised concerns that using

historic data may not be able to capture this". SKM did not think this an issue of concern as it believed that this rise in DCC was not reflective of the long term cost of connection, when actually it most probably is. This is driven by transmission utilisation continuing to increase and the regulatory framework only allowing Western Power to reinforce the system where transmission shortfalls are due to increasing customer demand (coupled with existing generation).

Infratil is supportive of options 3 and 4 which are forward looking and involve the expertise of Western Power. Infratil rejects the inference that these options are overly onerous for Western Power and suggests that they are merely an extension of the work already undertaken by Western Power in its ordinary course of business.

We believe that SKM's suggestion *"...that a forward looking method that embraces options analysis in a planning framework is overly onerous, a method that uses historical data with weights to give greater emphasis to current conditions may be an adequate compromise, and may reveal emerging condition.,* is flawed and that a weighted historical average grossed up by 15% will not be an adequate reflection of the true deep transmission connection cost of a future 160MW power station.

Proposed Market Procedure

With respect to the proposed market procedure for the Transmission Connection Works, (clause 1.8), Infratil:

- assumes that the reference to "relevant generators" in clause 1.8.1 (a) means generators greater than or close to a capacity of 160MW; and
- notes that clause 1.8.1 (b) says that *"For years which no historic data for relevant generators is available a connection cost will be calculated on the basis defined in clause 1.8.2."* but clause 1.8.2 no longer includes an estimate of deep connection costs.

Fixed Operating and Maintenance Costs (Clause 1.9)

An allowance for the fixed costs of supplying water to the power station for inlet cooling and emissions control should be included in the fixed O&M cost. This cost should consist of the cost of maintaining the incoming water and waste water processing, transport, storage and disposal infrastructure in addition to any standing charges from a water authority.

Infratil supports the inclusion of operating insurance costs but notes that the IMO's estimate of \$2,500 per MW² does not reflect the full cost of basic insurance required for a plant of this type. Specifically, the IMO estimate appears to:

- include property insurance only;
- exclude public and products liability insurance; and
- ignores the stamp duty costs of 10% and the 2% terrorism levy.

² Refer to Page 5 of proposed procedure change PC_2011_06

Infratil notes that it is a requirement of the Electricity Transfer Access Contract with Western Power for a generator to maintain public and products liability insurance of at least \$50million.

Legal, Financing, Insurance, Approvals, Other Costs and Contingencies (margin M) (clause 1.12)

Infratil suggests that, while the inclusion of a debt issuance cost in the formulation of the WACC is welcomed, it should not be considered as sufficient to cover the material costs incurred by the project as a result of the due diligence undertaken by debt financiers. The debt issuance cost set at 0.125% may be sufficient to cover the upfront fees charged by a debt financier when a project is financed or refinanced but not their due diligence costs.

Infratil suggests that clause 1.12 (b) is changed to *"financing costs associated with equity raising and debt raising due diligence"*.

Weighted Average Cost of Capital (clause 1.13)

Infratil believes that the allowance for funds used during construction (AFUDC) is insufficient based on its recent experience in building a peaking OCGT in the SWIS and refutes PwC's recommendation.

It is our experience that construction cash outflows do not occur in the manner described in PwC's document with material outflows required prior to the commencement of site works, specifically those associated with:

- the initial (and in some case multiple) payments for major items of plant;
- detailed engineering designs;
- debt raising due diligence;
- equity raising;
- project contract negotiations; and
- the securing of leases, licenses, access rights and easements.

Further, while site works may take as little as 12 to 14 months to complete, these works would be scheduled to be completed at least 3 months prior to the beginning of the Market Year on 1 October to allow for any construction over-run and the avoidance of loss of income and/or penalties.

Based on very recent experience, Infratil is of the view that a realistic construction period for the determination of AFUDC is 24 months with an "effective compensation period" of 12 months.

Infratil also notes and supports the inclusion of a debt issuance cost to allow for the fees charged by debt financiers initially and then at each subsequent refinance.

I trust you find the above comments constructive. Please feel free to contact either myself or Roger Crawford should you wish to discuss the issues raised in this letter further, our contact details are as follows:

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Yours faithfully

for and on behalf of
Infratil Energy Australia Pty Ltd



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