



23RD MAY 2019

To: AEMC
By Online Submission
Reference: ERC0259

Infigen Energy Limited

Level 17, 56 Pitt Street
Sydney NSW 2000
Australia
T +61 2 8031 9900
F +61 2 9247 6086
www.infigenenergy.com

Re: Response to Short Term Forward Market

Infigen Energy (Infigen) welcomes the opportunity to make a submission to the Short Term Forward Market (STFM). Infigen owns a 670 MW portfolio of wind capacity across New South Wales, South Australia, Victoria and Western Australia, is constructing a 25 MW / 52 MWh battery in South Australia and has entered PPAs to provide an additional c90 MW of capacity in Victoria.

In their rule change request, AEMO has proposed the implementation of a short term forward market, which would:

- trade standardised short term electricity contracts with bids and offers matched continuously based on price and linked to each regional reference price in \$/MWh
- trade contracts daily on a rolling basis for a day ahead of the trading day and up to seven days in advance (D+1 to D+8)
- be voluntary to participate in
- be operated by AEMO
- operate on the Trayport platform, the same platform AEMO uses to operate the Gas Supply Hubs and Capacity Trading Platform
- where practicable, use NEM settlement, clearing and prudential frameworks

Infigen broadly supports efforts to investigate the introduction of a market for trading short term forward contracts for electricity. Similar to how traded quarterly futures prices influence market expectations over the next three years, a liquid STFM may help reveal more information about market expectations in the coming day to week. This could be valuable to an evolving market, providing market led information as certainty of the level of renewable energy production, demand and fuel resources increases.

However, we note that the utilisation and (hence) value of the Short Term Forward Market will depend heavily on its design. As discussed below, design elements that maximise liquidity will be critical, including allowing broad participation. We also note that while a voluntary participant-to-participant market may be useful, a mandatory



participant-to-operator market would be onerous, less useful, and impose new investment risks on debt and equity providers. We would also encourage AEMO to provide greater clarity around the projected implementation costs, and note that there may be overlap with this proposal and the ESB's Post-2025 Market Design for the National Electricity Market which should be considered by the AEMC.

We have responded to the AEMC's specific questions in the sections below.

1. QUESTION 1

QUESTION 1: CURRENT RISK MANAGEMENT FOR INTERMITTENT RENEWABLE GENERATORS

1a) How do VRE generators currently manage their spot price risk in the short term? Is there a preference for fully hedging around price and/or volume risk, or an actively managed risk model?

1b) Would a STFM assist VRE generators to manage their risk? If so, how (in particular given the expectation that short term contract prices will approach the spot price closer to the delivery period)? What benefits are there? What products should be listed?

Infigen is a vertically integrated market participant that manages spot price risk through multiple channels. These include Power Purchase Agreements (PPA's), retail contracts with Commercial and Industrial (C&I) customers, and wholesale contracts. Our portfolio is an actively managed risk model, and Infigen is always seeking new ways to manage risk and deliver low-cost firm energy to customers.

Infigen can see value in a STFM as another tool for managing risk for companies with variable renewable energy portfolios, allowing them to buy and sell firming products when more information on our portfolio's production is known.

A liquid STFM may provide the benefit of revealing more information about the spot market in the coming day to week, when certainty of the level of renewable energy production increases. For example, there are naturally periods where Infigen will be short capacity and other parties long, and vice versa. While the NEM spot market naturally provides a balancing service (in real time), there would be value in being able to manage positions ahead of time.

As outlined by the AEMC, Infigen supports the decision to follow the European style ahead market, rather than the American-style ahead market. We see a mandatory participant-to-operator market as posing significant risk to Infigen's business, increasing the complexity of managing variable renewable generation and customer loads day ahead, including potentially being required to contract above efficient levels. Forced offers into an ahead market of uncontracted expected generation is a fundamental distortion of the NEM design, and would create new risks to equity and debt participants in funding businesses. On the other hand, a voluntary participant-to-participant ahead market may increase Infigen's ability to manage our portfolio without increasing complexity and risk. In short, we consider that participants are

best placed to manage their risk, but that tools such as an STFM can be of assistance.

Infigen sees usefulness in intra-day products. Some intra-day products Infigen would find useful are daily peak and off-peak, solar and anti-solar profiles and evening peak products. However, more intra-day products may reduce liquidity; starting with a small number of products (e.g., peak and off-peak products aligned with existing futures products) might be sensible.

2. QUESTION 2

QUESTION 2: CURRENT RISK MANAGEMENT FOR PEAKING GENERATION

2a) Would the introduction of a STFM improve the risk management capability of a gas powered generator? If so, how (in particular given the expectation that short term contract prices will approach the spot price closer to the delivery period)? Are there any OTC products that currently exist that serve a similar purpose? What kind of products would be beneficial to be listed?

2b) Would the introduction of a STFM assist in optimising spark spreads for gas powered generators?

2c) Are there any reasons the STFM would not be used by gas powered generators? Would the differential between expected value of selling a short term product and trading directly on the spot be sufficient to warrant the use of the short term product? How often and for what volume (proportion of a portfolio) would this assist?

Infigen agrees with the AEMC's assessment of these issues.

3. QUESTION 3 (END USERS) AND 4 (OPERATION)

Infigen has not responded to these questions.

4. QUESTION 5

QUESTION 5: MARKET PARTICIPANTS AND LIQUIDITY

5a) Which parties should be allowed to participate in the STFM? What would be the impact on the benefits and costs of an STFM if only market participants (notably, generators and market customers) could participate in the market?

5b) What products should be offered on the market, additional to those previously suggested? What should be the process for adding/removing products?

Infigen supports opening participation in the STFM to any party with the correct licencing and approvals to maximise liquidity in the market, and potentially facilitate trading by financial intermediaries.

Limiting the STFM to only market participants would necessarily reduce the liquidity and supply of hedges available in the market, which would in turn reduce the value of the STFM. Linking the STFM to physical production and consumption is unnecessarily restrictive; if broader participation cannot be achieved on AEMO's systems, for example, then this would be an argument for a third party to operate the market.

5. QUESTION 6

QUESTION 6: INTEGRATION OF STFM

6a) Will there be cost savings to participants by using AEMO's systems as opposed to a third party? If so, what systems should the STFM integrate into?

6b) Under an AEMO-operated STFM, is there a specific prudential treatment that would be beneficial to participants? How would this differ to an ASX-operated STFM? How could the choice between prudentials in each market affect the participation in a STFM? Would options that allow leveraging of existing prudentials for use in the STFM increase the prudential risk or default risk that AEMO is managing?

We agree that there are potential benefits for participants trading through AEMO to be able to pool, to various extents, prudentials with the NEM spot market prudentials. Generators would be able to use their generation to minimise collateral provided, and this would seem to be the key argument for an AEMO operated STFM. It would be helpful if AEMO would propose more information on how prudential requirements and reallocations might be calculated between the different markets.

If the ASX (for example) operated the STFM, participants would have to post initial and variation margins, which cannot be offset by generation. For smaller participants working capital requirements may limit their ability to trade in multiple markets. Additionally, many clearers have minimum trading amounts and volumes to clear on a party's behalf on the ASX.

Conversely, some third-party participants (e.g., banks and insurance providers) as well as some market participations are likely more familiar with the ASX operated system for trading their derivatives; participation may be higher on such a market platform.

6. QUESTION 7

QUESTION 7: IMPLEMENTATION COSTS

7a) What are the likely types of costs (and scale of those costs) incurred from the introduction, and operation of, the STFM proposed by AEMO (and other potential models)?

7b) Would the requirement to attain an AFSL be a significant barrier to operating in the STFM?

7c) If the STFM were to be implemented, what other operational and implementation issues may arise? How much time is required for market bodies and participants to prepare for the introduction of an operational STFM?

7d) Is the proposed assessment framework appropriate? Should any criteria be added or removed?

We expect that implementation costs for most businesses would likely be low, assuming they already have experience with the platform chosen (either AEMO's systems or the ASX – with more potential participants likely familiar with the latter).

A more pressing question is the potential implementation costs by AEMO/ASX/etc., and who they would be borne by, which has not been well articulated. We would encourage AEMO to provide greater clarity around the projected costs.

As a voluntary scheme, we expect comparatively little lead time is required in practice (although sufficient notice should be given to help maximise participation from the start).

7. CONCLUSION

We look forward to the opportunity to engage with the AEMC. If you would like to discuss this submission, please contact Dr Joel Gilmore (Regulator Affairs Manager) on joel.gilmore@infigenenergy.com or 0411 267 044.

Yours sincerely



Dr Joel Gilmore
Regulatory Affairs Manager