12 September 2019

Attention: Declan Kelly
Australian Energy Market Commission
SYDNEY
Submitted online to: www.aemc.gov.au

Submission: AEMC Draft Rule Determination
Wholesale Demand Response Mechanism

CS Energy welcomes the opportunity to provide a submission on the Australian Energy Market Commission's (**AEMC**) Wholesale Demand Response Mechanism Draft Rule Determination (**Draft Rule**).

About CS Energy

CS Energy is a Queensland energy company that generates and sells electricity in the National Electricity Market (**NEM**). CS Energy owns and operates the Kogan Creek and Callide coal-fired power stations and Wivenhoe, a pumped-storage, hydro-electric peaking plant. CS Energy sells electricity into the NEM from these power stations, as well as electricity generated by other power stations that CS Energy holds the trading rights to.

CS Energy also operates a retail business, offering retail contracts to large commercial and industrial users in Queensland, and, is part of the South-East Queensland retail market through our joint venture with Alinta Energy.

CS Energy is 100 percent owned by the Queensland government.

General comments

CS Energy supports the AEMC's proposed Draft Rule to implement the Wholesale Demand Response Mechanism (**WDRM**). CS Energy retails to large commercial and retail customers and actively markets demand side response to customers. CS Energy considers demand response can manage reliability and security in a more affordable way than capital intensive peaking generation and network capacity built to meet peak load.

CS Energy has some concerns around the proposed design of the WDRM, in particular the calculation of the reimbursement rate and baseline information available to retailers. While it is appreciated that the AEMC has made several trade-offs in the design, if retailers are left materially out of pocket the effectiveness of the proposals will be reduced if ultimately retailers increase tariffs to recover these costs.

Brisbane Office
PO Box 2227
Fortitude Valley BC Qld 4006
Phone 07 3854 7777
Fax 07 3854 7300

Callide Power Station
PO Box 392
Biloela Qld 4715
Phone 07 4992 9329
Fax 07 4992 9328

Kogan Creek Power Station
PO Box 41
Brigalow Qld 4412
Phone 07 4665 2500
Fax 07 4665 2599

Wivenhoe Power Station
PO Box 38
Fernvale Qld 4306
Phone 07 5427 1100
Fax 07 5426 7800

CS Energy Ltd ABN 54 078 848 745 **www.csenergy.com.au**

Our detailed submission on the Draft Rule is set out in the Attachment.

Yours sincerely

Teresa Scott
Market Policy Manager

Enquiries: Teresa Scott, Market Policy Manager
Telephone 07 3854 7447

ATTACHMENT

1. Proposed Wholesale Demand Response Mechanism

CS Energy supports the AEMC's proposed Draft Rule to implement the WDRM.

CS Energy retails to large commercial and retail customers and actively markets demand side response to customers. Contrary to concerns raised by some stakeholders that consumers are unable to undertake demand response due to the absence of offers being made available by retailers, CS Energy 's experience is that offers for demand response are not aggressively being taken up by customers. Notwithstanding this experience, CS Energy takes seriously its commitments to customer affordability and this is demonstrated through its participation as a foundation signatory to The Energy Charter. Through the charter, CS Energy recognises that affordable energy is essential for Australian households and businesses and we are committed to making energy more affordable. CS Energy believes the proposed WDRM will facilitate greater access by consumers to demand response, and CS Energy is supportive of this.

Additionally, CS Energy considers demand response can manage reliability and security in a more affordable way than building new peaking generation and network capacity, both of which are capital intensive. The WDRM provides a mechanism for consumers to reduce their consumption in response to spot prices. CS Energy has previously set out its support for demand side participation having greater exposure to real time price signals in its submission to the Reliability Review, dated 28th May 2018.

2. Reimbursement rate

The Draft Rule provides that retailers will recover the difference between what they bill the customer (actual consumption) and what they settle in the wholesale market (baseline consumption) from the demand response service provider (**DRSP**), via AEMO's settlement process. The amount will be calculated based on a wholesale demand response reimbursement rate, which under the Draft Rule is proposed as the load weighted *average* spot price for the previous 12 months, calculated quarterly.

The AEMC has clarified at the workshops that the reimbursement rate is intended to compensate the retailer for the wholesale cost component of the retail tariff. CS Energy submits that the load weighted average spot price is unsuitable for determining this wholesale cost. Retail tariffs are set by reference to prices in the contract market, with a retailer using a variety of products to mitigate its exposure to the spot price (including base load swaps, peaking swaps and caps).

If a retail customer provides demand response under the WDRM, CS Energy anticipates customers will request two quotes from the retailer by reference to:

- the wholesale cost to cover the customer's baseline load [a]; and
- the wholesale cost to cover the actual load [b].

The difference between the two [a-b] is the additional wholesale cost to cover the delta between the customer's baseline and actual. The customer can then compare this to their marginal benefit from consuming to the baseline level [c] (their opportunity cost).

They can also compare it to the offer price made by the DRSP [d], for the customer to provide demand response under the WDRM.

If the WDRM is intended to promote efficient consumption of electricity, economic efficiency will be maximised when decisions are made using marginal costs. Therefore, the delta [a-b] must be priced at the marginal retail costs not average retail costs.

Demand response is likely to be dispatched during periods of peak demand and consequently high pool prices. The additional wholesale costs to serve load in these periods should be determined by reference to a mix of peak prices and cap prices. That is, the retailer will buy more peaking swaps and caps to mitigate the spot price exposure to the difference between the baseline and actual. Off-peak contracts or base load swaps will not mitigate the retailer's risk for the delta between the baseload and actual (ie [a-b]), and therefore should not be used in determining the retailer's wholesale costs during these periods.

CS Energy submits the reimbursement rate should be determined by reference to average peak prices for the previous 12 months in the forward contract market, calculated quarterly. For simplicity, we have not recommended including caps as an element of the cap price is implicit in the peak price. A reimbursement rate set by reference to average peak prices in the forward contract market more accurately reflects the wholesale cost to retailers, and the instances of over-recovery and under-recovery are more likely to balance out over time.

As a final comment on the reimbursement rate, while CS Energy supports the proposed Draft Rule, as a general principle we do not support administered or regulated prices as regulated pricing typically leads to distorted outcomes. CS Energy acknowledges however the AEMC's efforts in developing the model and the balance it has struck between the imperfections arising from the use of the reimbursement rate and the otherwise significant and costly changes to retailer's billing systems.

3. Baseline methodology

The Draft Rule provides that wholesale demand response will be settled through the wholesale market with reference to the baseline which will be centrally determined. Load participating in the WDRM must have a baseline methodology, which will be developed in accordance with AEMO'S wholesale demand response guidelines.

CS Energy acknowledges the AEMC has sought to establish a robust framework for determining the baseline so that it is accurate, unbiased, not susceptible to gaming and will adapt to changes in customer characteristics. CS Energy continues however to be concerned with the use of a baseline as part of the WDRM. The NEM has been designed on the principle that market participants receive spot price based on a measurable quantity. As recognised in the Draft Rule determination, the baseline is a counterfactual which can never be measured.

CS Energy believes that the key to ensuring the baseline demonstrates the attributes of a "good" baseline is that the baseline methodology is regularly reviewed, tested and updated as necessary. Circumstances where this is likely to be particularly relevant are as follows.

- If load participates in demand response, the total energy for the day is likely to remain unchanged with the displaced energy simply shifting to another period of the same day. If this is happening regularly, and over a long period of time then the customer's load profile will now include the regular actioning of demand response. The customer will have changed its typical operations and this should be reflected in a new determination of baseline. Load should be unable to continue participating in demand response in the same manner if the service is no longer being provided.

- As businesses grow, downsize or change operations, the baseline should respond to changes in historical consumption with the baseline methodology revised or updated accordingly.

The Draft Rule requires AEMO to report annually on the WDRM including potential improvements to the baseline methodology or underlying baseline methodology metrics. The report must include the timing and process for making any improvements. CS Energy submits that the reporting requirements are not sufficiently robust to ensure the baseline is updated following this review. The process should include:

- a positive obligation on AEMO to revise the baseline methodologies and baseline methodology metrics if improvements are identified; and
- the process to revise the methodology and/or metrics should be commenced at the same time the report is published, as until revised, the market will continue to settle on a baseline which AEMO has identified as requiring improvement.

If the baseline methodologies and/or baseline methodology metrics are not promptly updated following AEMO's review, CS Energy believes industry confidence in valuing the wholesale demand response being provided may be undermined.

4. Information provision to retailers

Where a retailer's customer participates in the WDRM through a third-party DRSP, retailers will be provided with the following information:

- the customer is engaged with a DRSP; and

- the baseline methodology.

CS Energy has raised at the AEMC's workshops that its preference is to have access to the baseline, however understands that the baseline will be calculated ex-post and will be calculated only in respect of a wholesaled demand response unit (**WDRU**) dispatched in the trading interval. Retailers will see the baseline determination in the relevant settlement statement.

CS Energy's preference remains that it has access to the baseline ex-ante so that it can appropriately manage its spot exposure to the baseline. We appreciate the AEMC has designed the WDRM to determine the baseline on an ex-post basis as this will reduce the amount of data required to be produced by AEMO (ie a baseline will only be produced if the WDRU is dispatched, instead of a baseline for each of the 288 trading intervals in a day, which may also vary from day to day).

However, as retailers will need a baseline number to appropriately manage their exposure, this design simply shifts the ex-ante determination of the baseline to the retailer. The customer's load forecast cannot simply be substituted for the baseline, given firstly, forecasts are typically aggregated across the retail book and secondly, the baseline determination is in accordance with a set methodology.

Retailers will face increased costs (such as analytics and IT costs) to determine the baseline ex-ante. For CS Energy, whether these costs are material will depend upon the number of our customers participating in the WDRM.

There is also a concern that a baseline calculated by the retailer ex-ante may not match AEMO's determination of the baseline for the WDRU dispatched. If there is a material discrepancy and this mismatch is not addressed over time (eg the underlying baseline methodology is revised so that similar baselines will be determined if the methodology is applied by different parties), retailers are likely to price this discrepancy into retail tariffs, ultimately leading to increased costs for consumers.

5. System changes and implementation costs

CS Energy appreciates the AEMC's efforts to design the WDRM so that it significantly reduces the changes required to retailers billing systems and the associated implementation costs. Implementation of the WDRM will however require:

- changes to data management systems to manage increased data;
- some IT changes;
- additional analytics; and
- amendments to retail contracts.

CS Energy is unable to comment at this stage on the extent of these changes or the likely implementation costs.

6. Timeframe for implementation

CS Energy supports the AEMC's proposed implementation date of 1 July 2022.

Retail contracts are typically a two to three-year term and this will allow time for those contracts to roll off and for new contracts entered into to include appropriate provisions addressing engagement by the customer of a third party DRSP. CS Energy would expect these provisions to be similar to provisions typically found in retail contracts that deal with the installation by the customer of embedded generation at the customer's site (eg the retailer may require the customer to provide notice as to when wholesale demand response may be dispatched so that the retailer can better manage its baseline risk).

If appropriate provisions are not included in retail contracts prior to commencement of the WDRM, retailers may seek to trigger change in law provisions to recover any additional costs it incurs. This is a costly and time-consuming process which all parties typically would rather avoid.

Additionally, although significant system changes are not required, the substantial resources and time dedicated to the implementation of 5-minute settlement and global settlement would make it difficult to manage implementation risks if the commencement date for the WDRM was brought forward.