SEM-19-024 Consultation Response
Captured Carbon Limited

12th July 2019

Introduction

Captured Carbon Limited (CCL) welcomes the opportunity to respond to the Balancing Market Options and Consultation Paper SEM-19-024 (the consultation paper). The paper outlines two distinct options for review:

1. Simple NIV Tagging in the Balancing Market (Simple NIV Tagging Option); and
2. Removal of Difference Charges where operational constraints are binding (CRM option).

In each case, a number of questions have been provided to guide feedback from participants. This paper is divided into two sections; each section addressed the questions raised in the consultation paper and provides CCL's views on the matters at hand.

Response to Consultation Questions – Simple NIV Tagging

Q1) Do you support this Simple NIV Tagging option and its implementation in the SEM?

No.

CCL have a number of concerns raised by analysis of the data provided as part of this consultation. These concerns are addressed further in response to question 2, but at a high level the key concerns are:

- There is a significant increase to the simple average and wind weighted average price which adversely affect participants through increased balancing costs, especially those exposed to underlying forecast error (e.g. wind, suppliers); and
- CCL have concerns that the significant decrease in volatility of the imbalance settlement price will adversely affect the effectiveness of this price as a signal in the short-run for balance responsibility and in the long-run as an investment signal for flexible technologies such as demand side units and batteries.

Among the key drivers mentioned in the paper for the proposed change is the impact of operational constraints on prices especially those below zero and above the RO strike price. CCL feels that the prices which are outturning, while volatile, are correctly reflective of the design of the market, the fundamental underlying conditions and commercial and technical offer data submitted to the balancing market.

Analysis of the data shows that when it is considered that Mod_09_19 addressed the prices seen on 24/01/2019, as per SEMO's analysis presented to the modifications committee along with that modification, that ignoring 24/01/2019, the Simple NIV Tagging option does not have a reduction on the number of instances prices above €500/MWh.

CCL acknowledges that the data provided shows a reduction in negative prices which the SEM Committee has expressed concern over. However, CCL note that this effect is not reflective of the underlying market conditions and is instead merely dampening the effect of these prices.

Overall, CCL is of the view that the consequences to the market of the Simple NIV Tagging option are too impactful and far reaching to address the relatively narrow concerns raised by the SEM Committee in relation to prices which are very high or very low. CCL is not in favour of implementing such a broad and detrimental change, especially with relatively little data available to assess such a fundamental market change. CCL feels that more targeted modifications such Mod_09_19 can be used to address specific concerns with clear justification and would favour an approach which addressed specific market behaviours rather than fundamental market-wide changes.

CCL are concerned that this change would primarily deal with the consequences of pricing outcomes which the SEM Committee are concerned about without dealing with the underlying causes of these pricing outcomes and would include consequences to all market participants and CCL does not support the Simple NIV Tagging option.

Q2) Do you have any concerns regarding moving to Simple NIV tagging in the balancing market including the risk of unintended consequences? If so, please explain these concerns.

Yes.

We have reviewed and analysed the datasets provided and there would appear to be, inter alia, the following primary impacts to the price:

1. A decrease in the number of instances of prices being above the strike price with an associated decrease of the overall maximum price;
2. A significant decrease in the number of instances of negative price with an associated increase of the overall minimum price;
3. A significant increase to the average balancing market price on both a time-weighted and wind-weighted basis; and
4. A significant decrease to balancing market price volatility along with the changes in correlation to data such as wind, load etc.

As regards point 1 above, there is a decrease in the number of instances of prices exceeding 500 from 9 instances to 5 instances. However, we note that four of those instances relate to 24/01/2019 and that it was established in the data presented to the modifications committee by SEMO in relation to Mod_09_19 that these prices would not have occurred if mod_09_19 had been in place on 24/01/2019. Accordingly, we note that in the context of Mod_09_19 being approved, simple NIV tagging would not have had additional change to the outcomes of 24/01/2019. Therefore, the data shows that ignoring these four instances, there would not be a change to the number of instances of the price exceeding the RO strike price. On this basis, if 24/01/2019 is ignored the impact on days which include is presented below.

Date	Average Original Price	Average NIV Tagging Price	Instances of strike price exceeded Original	Instances of strike price exceeded NIV Tagging
03/10/2018	111.15	220.79	1	4
09/10/2018	76.86	49.44	2	0
23/11/2018	133.82	156.39	1	0

While acknowledged within the paper, CCL would like to highlight that for the data relating to 03/10/2018 there were an additional 3 instances of the price exceeding the strike price and a 99% increase the average balancing market price across the day with the introduction of simple NIV tagging. These show that in some instances while Simple NIV tagging may remove instances of high prices, that it may have significant increases on the overall average balancing market price. This represents a significant unintended consequence.

In particular, the results of the Simple NIV Tagging data for 03/10/2019 indicate that the presence of high bid prices in participants commercial offer data can lead to high outturn imbalance prices and that the high prices are not solely driven by the effects of operational constraints or non-marginal flagging.

The second primary effect identified, the decrease to the number of instances of negative prices CCL feel to be less reflective of the system conditions and marginal prices. The drivers for the change in these prices is the inclusion of units which are at their lower operating limits or otherwise limited by binding operational constraints; such units cannot contribute the next unit of power increase or decrease and, therefore, do not reflect the true marginal cost of energy at that time. In the consultation paper, the SEM Committee have noted that these instances of negative prices are not the core issue at hand and that there is a view that aspects of the detailed design relating to priority dispatch bidding may not have been included in the trading and settlement code. CCL are aware that SEMO have raised a modification (Mod_10_19) in relation to the treatment of dispatchable priority dispatch which is related to implementing changes in this regard.

CCL is of the view that the market fundamental most in question in relation to this is whether priority dispatch units' decremental bids should be included in the imbalance price and that the results related to simple NIV tagging here only demonstrate the impact of dampening the impact of these prices rather than removing them. CCL are of the view that this dampening effect is less reflective of the marginal cost of energy. If the SEM Committee is concerned that a detailed design decision in relation to priority dispatch units' decremental bids was not implemented, CCL is of the view that this should be addressed through a targeted modification such as Mod_10_19 raised by SEMO to address the fundamental market issue rather than trying to manage the impact through an unrelated change. In this regard, CCL would view the decrease in instances of negative prices as an unintended consequence of Simple NIV tagging which contributes to significant increase in balancing market prices on average.

As regards point 3, CCL have concerns about the level of increase to the imbalance settlement price on both a time-weighted simple average (~8.6% increase) and wind-weighted (~9.6% increase). This represents a sizable increase overall to the imbalance settlement price and the cost of balancing to participants as whole. Taken with the decrease in volatility discussed further below, this leads to an increased cost with lower volatility. This means that those who are exposed to a baseline amount of imbalance through forecasting risk (e.g. wind units, supplier units) face an increased cost while the effectiveness of the imbalance settlement price as an incentive to be balance responsible in any particular period is reduced. CCL are concerned that this level of increased price will have serious adverse effects on the commercial position of wind units in the SEM and will be disproportionately adverse to variable units when compared to predictable units due to imbalances associated with forecasting error.

As regards point 4, within the consultation paper and the supplemental data, the introduction of Simple NIV Tagging in the dataset significantly reduces the volatility of the imbalance settlement price. In part this is due to the decrease in the overall range of the data with the reduction in instances of negative prices and reduction of the maximum prices. This greatly affects the sharpness of the imbalance price and how reflective this is of the underlying marginal cost of energy. This market fundamental is key to the effectiveness of the imbalance price as a signal. Based on the data presented, CCL have concerns that removing flagging and volatility disincentivises participants to be balance responsible and thereby has a knock-on effect on the incentives for ex-ante market participation potentially decreasing liquidity in ex-ante markets particularly intraday auctions and intraday continuous.

The intraday markets form an important part of market participation for mitigating balancing risk. This is of particular importance to wind units who inherently have a forecasting error which must be balanced. As these units will always bear some exposure to the imbalance settlement price, intraday liquidity is crucial in order to manage commercial risks. This decreased volatility in the price will be of more benefit to predictable generators who can better manage their imbalance risk while variable generators such as wind will have less benefit of reduced volatility and will be impacted by the aforementioned approximately 9.6% increase in the cost of balancing through increases to the wind-weighted average of the imbalance settlement price.

Finally, CCL would note that as removing flagging will remove the effect of operational constraints from the imbalance price, it will have a knock-on effect on the effectiveness of the long-term signalling of this price and the SEM as a whole. As currently stands, this impact is captured in the imbalance settlement price, this provides signals not just in the short-run regarding participants balance responsibility but also in the long-run in the markets' analysis of investment decisions.

Capturing the cost of operational constraints makes the imbalance settlement price more reflective of the true marginal cost of energy on the transmission system and provides a signal to participants and investors to potentially invest in technologies which can alleviate the impact of these operational constraints. This is a key consideration in considering investment in flexible technology which can help to facilitate the increased output of renewables such as demand side units and batteries. Such technologies will become increasingly needed in the coming years as renewable output increases in line with the department's aim of having 70% of generation from renewable sources by 2030.

Q3) Do you agree or disagree that Simple NIV tagging meets the I-SEM High Level Design, the I-SEM Detailed Design and the I-SEM market power mitigation decision? If you disagree, please explain why

Disagree.

We are of the view that there is no sufficient detail in the high level design, detailed design or market power mitigation decisions to stipulate explicitly that flagging and tagging would account for operational constraints or non-marginal flagging and furthermore acknowledge that the SEMC have highlighted that changes could be made to flagging and tagging to address concerns regarding volatility when providing decision on the trading and settlement code.

However, we would note that the implementation phase which followed on from these original decisions did implement flagging for TSO non-energy actions and when a unit is non-marginal. These decisions were made in line with the preference stated in the SEM Committee decisions for a marginal price for energy. As units which are limited by operational constraints and units which are subject to their own operating limits are not capable of producing the next unit of power production or consumption, we feel that the inclusion of TSO flagging and non-marginal flagging were more in line with the intent of having a marginal price for energy reflected in the imbalance price.

Q4) Do you agree or disagree with the SEM Committee's assessment that the pricing outcomes under Simple NIV Tagging are preferable, given market fundamentals? If you disagree, please explain why.

Disagree.

CCL note that outside of the upheld pricing disputes that the original prices were calculated in line with market fundamentals given the design. CCL is of the view that the analysis provided does offer good insight into the potential impact of the decision, but that greater clarity should be provided on what the market fundamentals against which to asses this data is.

By definition, Simple NIV Tagging will provide better correlation between the imbalance price and the NIV than the current Flagging and Tagging as it removes other factors which influence the price (e.g. non-marginal flags). However, CCL does not agree that this would provide a better view of the market fundamentals as the current flagging and tagging also reflects unit operating limits and transmission system operational constraints. These factors directly influence the ability of units to provide incremental or decremental changes to power output and reflecting these in the price provide a price which is more reflective of the fundamental marginal cost of energy in the SEM.

CCL is not of the view that the imbalance price being more easily forecasted or better correlated with the day-ahead market price are reflective of the market fundamentals. The day-ahead market and imbalance settlement are inherently different aspects of the overall design and a strong correlation between the two should not necessarily be reflected. The day-ahead market is unconstrained and a primary reason for the current lower correlation between the day-ahead price and imbalance settlement price is the presence of operational constraints and technical limits. However, these items do fundamentally affect the energy available to balance the system in real-time. Accordingly, CCL is of the view that benefits in terms of forecasting and correlation discussed in the consultation paper are not reflective of an imbalance settlement price which is intended to reflect the marginal cost of energy for balancing the system. CCL does not agree with the SEM Committee's assessment that the pricing outcomes under Simple NIV Tagging are preferable given market fundamentals.

Responses to Consultation Questions – Capacity Remuneration Mechanism

Q5) Do you support this capacity market option and its implementation in the SEM?

CCL is in favour of this capacity market modification. CCL feels that this is in line with the discussion and preferences of the industry working group relating to Mod_32_18 and notes that modification was withdrawn subject to the outcome of this consultation. CCL feels that this modification will reduce the residual risk to generators of TSO actions and allow generators to better manage risks associated with a RO contract which should lead to reduced capacity costs in the long run.

However, CCL note the concerns raised by Electricity Exchange in the working group meetings in relation to Mod_32_18 about the application of such an option to DSUs. CCL note the commitments of SEMO to review this and provide the necessary modifications in parallel to this consultation process but are of the view that the changes proposed by SEMO in the recommendations of the Mod_32_18 working group must be completed prior to implementation of this capacity market option.

Furthermore, CCL note SEM Committee decision SEM-19-029 in relation to Capacity Remuneration Mechanism DSU Compliance with State Aid will change the settlement of DSUs in the CRM on an interim basis. While the exact trading and settlement code modifications to implement SEM-19-029 have not yet been published, CCL urges that such modification should be mindful of the decision in relation to this consultation paper to ensure an equitable treatment regarding CRM settlement between DSUs and other generators when the interim solution is implemented.

Q6) Do you have any concerns regarding the removal of difference charges where operational constraints are binding, including the risk of unintended consequences? If so, please explain these concerns.

CCL notes the concern raised by the SEMC in the consultation paper about potential effects to the monies available to pay capacity difference payments and potential effects to the difference payment socialisation fund. However, there is limited data available to assess the full impact of this in the long run.

As the proposed option is limited in scope only to the settlement of difference charges, CCL is of the view that there is very little potential for any unintended consequences outside of the concerns raised in the consultation paper.

Q7) Do you consider this proposed change is in keeping with the broader CRM detailed design? Please explain your view

CCL is of the view that this change is in line with broader CRM detailed design. There is currently an acknowledgement within the design through the system service flag that RO holders should be exempted from difference charges for certain situations relating to TSO actions which are outside of their control. CCL is of the view that this option will merely extend the current system service flag to a broader range of operational constraints and will only take effect where such a constraint is binding on a particular generator.

CCL feel that this was discussed at length in the working group meetings in relation to Mod_32_18 and are comfortable based on these discussions that this option is in keeping with the broader CRM detailed design based on the above rationale.

Q8) Do you have any views on this option from a consumer perspective?

The primary effect of this option would be to reduce the risk facing holders of RO contracts. Specifically, this would reduce the residual risk of operational constraint on the system to better align the risks of holding an RO to items the RO holder has more control over via trading and operating the underlying unit(s). Such reduced risk should lead to revised bidding behaviour in future capacity auctions and potentially decrease the cost of capacity which would ultimately reduce consumer costs.

CCL acknowledges the points raised in the consultation that this would lead to a greater risk of under-funding of capacity difference payments and may lead to a need to increase the difference payment socialisation fund contributions of suppliers.

CCL is of the view that there is insufficient data to provide a quantitively backed view as to whether the potential consumer benefit of reduced capacity costs would outweigh the potential consumer cost of increased supplier cost.

Q9) Do you have a strong view regarding an alternative option which could be implemented, i.e. preferably requiring only a configuration change rather than a system change?

CCL is of the view that the capacity market option presented in the consultation paper is the preferred option. CCL notes that there has already been a level of detailed industry discussion on this issue through the working groups in relation to Mod_32_18 and that there were a number of options discussed in these working groups.

CCL is of the view that the alternative options discussed in these working groups would not provide as equitable a solution as the option in the consultation paper. In the working group there was much discussion of the EAI backed option which would extend the system service flag to other specific services such as RM8.

CCL are of the view that this option could potentially lead to adverse incentives and impacts on the capacity auction as it would provide different risk profiles to units which provide the system service over those which do not. As not all units are capable of providing all system services, this would introduce technology incentives to capacity auctions (i.e. technology which can provide the service would have access to a risk mitigation that other technologies do not).