

23 November 2016

Clarification of issues raised at DWGM Review public forum

On 14 November 2016, the Australian Energy Market Commission (AEMC) hosted a public forum as part of its Review of the Victorian Declared Wholesale Gas Market.

At the forum, there was a discussion regarding whether the Southern Hub recommended by the AEMC, and European entry-exit markets on which the Southern Hub design is based, are voluntary or mandatory markets.

This note, prepared by AEMC staff, seeks to provide clarity about what the AEMC means by “mandatory” and “voluntary” markets.

The note also provides clarification of the consequences of AEMO buying gas at specific locations in order to manage certain system security issues.

Mandatory and voluntary gas markets

The AEMC characterises the DWGM as a mandatory market

The AEMC characterises the DWGM as a mandatory market because in order for a market participant to inject gas into or withdraw gas from the DTS for the upcoming or current gas day, it is required to offer all of its gas into the DWGM and bid to take gas out of the DWGM.

In effect, market participants offer all of their gas to AEMO, which then purchases the requisite gas to meet total forecast demand and then immediately sells this gas onto buying market participants. In many cases, AEMO “purchases” gas from and “sells” gas to the same market participant.

A reason that this approach is taken is because capacity and commodity are simultaneously allocated through the DWGM process. In the event of a capacity constraint, the approach provides AEMO’s market clearing algorithm the information it needs to determine the lowest cost combination of gas (from all available gas) to schedule to meet demand, subject to the constraint.¹

The AEMC characterises the Southern Hub and European Entry-Exit markets as voluntary markets

In contrast, the AEMC characterises the Southern Hub and European Entry-Exit markets as voluntary. Market participants may trade none, some or all of their gas inside the DTS, including through an exchange based on the Gas Supply Hub design.² AEMO would not be an intermediary to trades.

Nevertheless, while *trading* would be voluntary, there would be a number of elements of the Southern Hub design that would be required of market participants. This is consistent with European Entry-Exit markets. Market participants would be required to:

- nominate their required flows of gas into and out of the DTS, consistent with their entry and exit rights, to enable the system operator to securely manage physical gas flows on the DTS;³ and

¹ AEMC, *Review of the Victorian Declared Wholesale Gas Market*, Draft Final Report, October 2016, pp. 18-19.

² *Ibid.*, p. 31.

- participate in a balancing regime.⁴

To the best of the AEMC's knowledge, there are no requirements in the British or other European markets for all trades to:

- be conducted solely at the virtual hub (eg, National Balancing Point (NBP) in Great Britain);
- be conducted through the exchange; or
- reference the price at the virtual hub (eg, the NBP in Great Britain).

Similarly, the AEMC has recommended no such requirements for the Southern Hub. Market participants would be free to continue to trade gas on an over-the-counter basis, either at the virtual hub or outside the hub (for example, at Longford).

Different approaches to balancing

As noted above, market participants would be required to participate in a balancing regime.

A continuous balancing regime such as the Dutch approach does not require market participants to always be in balance, nor for them to be in balance on a very frequent basis (eg, hourly). Instead, under this approach, market participants would only be financially incentivised to be in balance at those times when the system operator undertakes residual balancing action.

This contrasts with the balancing regime adopted in Great Britain (among other European markets). Under this approach, market participants are mandatorily cashed out (forced to buy or sell gas at the prevailing price) on a regular (eg, daily or hourly) basis based on their position at a pre-determined time (eg, the end of the gas day), regardless of whether residual balancing action costs are incurred (or not) by the system operator.

To date, the Commission has favoured a continuous balancing regime for the Southern Hub, substantially based on the Dutch approach. This preference is in large part because a daily balancing period may result in the system becoming problematically out of balance within the day, with no incentives for market participants to be in balance during the period. A shorter balancing period would mitigate this issue, but would incentivise market participants to be in balance frequently, even if there are no system security issues. Compared to continuous balancing, daily balancing has the possible advantage of concentrating liquidity into simple daily or balance of day products which market participants would require to stay in balance.

The pros and cons of regular (eg, daily or hourly) and continuous balancing are discussed in more detail in the draft final report.⁵

Locational gas

Under the proposed Southern Hub model, the system operator would be able to buy or sell gas through the exchange at specific locations (eg, buy gas from the Dandenong liquefied natural gas

³ Ibid., pp. 31, 64-65.

⁴ Ibid., pp. 32, 62-63.

⁵ Ibid., p. 63, 93.

facility) in order to address local linepack issues.⁶ This is consistent with approaches taken in European markets, including Great Britain.

Under these circumstances, the price of gas paid by AEMO to market participants would vary by location, based on the best price that AEMO could secure for gas at that location.

This is consistent with the current arrangements, whereby constrained on market participants (those who are scheduled despite offering gas at a price above the market price, because by being scheduled they address system security issues) are compensated the margin between the market price and their offer price through ancillary payments. Ancillary payments are made in addition to being paid the market price, so that in total constrained on market participants receive their offer price.

Under the DWGM, the cost of ancillary payments is recovered through a variety of different uplift charges. Congestion uplift and surprise uplift are targeted to specific market participants which contributed to the costs arising, while untargeted costs are smeared across all market participants through common uplift.

Under the proposed Southern Hub, congestion uplift would largely be replaced by the system of entry and exit rights, consistent with European markets including Great Britain. Under the proposed Southern Hub model, the amount of firm rights released should be consistent with the underlying physical capacity of the system on any given day, so congestion of this nature should not commonly arise. Additional interruptible capacity would then be released to the market on a daily basis, reflecting the likely amount of capacity available for the upcoming day.

Alternatively, some European markets, including the British market, release more firm capacity than is expected to be available on any given day, and then use the revenue from the sale of this capacity to buy back firm capacity from market participants on those days where there is congestion.

In either approach, the cost of congestion is reflected in the price of capacity, and not through the price of gas. This allows for a single price of gas within the virtual hub and the pooling of liquidity.

The target model described in the report does not currently contain any charging mechanism equivalent to surprise uplift in the current market, with costs of this nature being offset by other income streams for the system operator or smeared across market participants.

While accurately reflecting cost-to-cause is an important consideration, the more costs are accurately allocated between market participants, the more complex the design and the more costly the required market systems. Furthermore, a charging mechanism equivalent to surprise uplift may also result in a divergence in price paid by market participants for gas at times of congestion, with potential to split liquidity, even within the virtual hub. The Commission is considering this matter further.⁷

⁶ Ibid., pp. 70-71.

⁷ Ibid., pp. 70-71; AEMC, *Review of the Victorian Declared Wholesale Gas Market*, Draft Final Technical Report, October 2016, pp. 32-34.