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Dear Scott

Feedback for proposal for VTS 2023-27 Access Arrangement

AEMO welcomes the opportunity to provide feedback to APA's first look at proposal for the VTS Access Arrangement for the period 2023-2027.

As the system operator of the VTS, AEMO has responded to the questions relating to system operation, supply adequacy and system planning. AEMO is currently forecasting a tight gas supply-demand balance in Victoria and the other southern states; a supply-demand balance which may or may not be resolved by a number of proposed projects which are currently in varying states of approval. AEMO has provided no feedback on tariffs, cost allocation and accelerated depreciation.

If you have any questions on the feedback provided, please contact Yvonne Tan on 0433432112 or Yvonne.Tan@aemo.com.au.

Yours sincerely



Matthew Clemow
Group Manager, Gas Real Time Operations

Attachments: AEMO's response to questions for stakeholders (below)

APA Questions for Stakeholders	AEMO Response
<p>Do you have any comments on the stakeholder engagement undertaken by APA on the VTS 2023-2027 access arrangement? Did you find it informative? Do you feel your concerns were taken into consideration, so far?</p>	<p>The Access Arrangement Roundtable discussions were an effective way for APA to communicate their proposal to stakeholders. However, the pre-meeting materials were often sent on the day. Receiving the material at least one day earlier would have provided sufficient time to go through the material.</p>
<p>Do you have any comments on the summary of what we heard and how we have considered your feedback? In particular, should we give more or less emphasis to key themes that have emerged?</p>	<p>No comments.</p>
<p>Do you have any comments about tariff scenario analysis?</p>	<p>No comments.</p>
<p>Do you have any comments about the indicative bill impacts?</p>	<p>No comments.</p>
<p>Do you have any comments on the adjustments APA has made to the AEMO GSOO analysis and graphs?</p>	<ul style="list-style-type: none"> • The 2021 GSOO states that if the Port Kembla Gas Terminal is delayed, or gas cargoes are delayed once operational, greater reliance would be placed on storages, and gas shortfalls of up to 100 TJ per day in the southern states may eventuate in winter 2023 under extreme conditions. • The adjustments APA has made to resolve this shortfall in winter 2023, by increasing the gas available to be delivered from Iona

	<p>storage, are inconsistent with APA's later statement in 5.4.2 that the SWP expansion would only be potentially required from winter 2024.</p> <ul style="list-style-type: none"> • Furthermore, with only the 29 TJ/day increase in the Moomba to Sydney Pipeline capacity, there is still up to a 71 TJ shortfall in winter 2023.
<p>Do you accept that the SWP expansion would be prudent to meet the demand requirements as we know them today? What timing might you suggest for that project?</p>	<ul style="list-style-type: none"> • The 2021 VGPR highlighted that the forecast decline in Victorian production capacity during the Access Arrangement period is also expected to reduce system resilience. • Peak day supply capacity currently exceeds peak day demand, providing sufficient margin for the operational management of equipment trips, unplanned maintenance, and demand forecast errors. • The 2021 VGPR noted that the supply forecasts provided to AEMO advised that the depletion of key legacy gas fields that supply the Longford Gas Plant is expected to occur prior to winter 2023. • With declining Gippsland gas supplies in Victoria, more reliance is placed on existing storages, such as Iona UGS, to provide much needed capacity. SWP expansions would increase the daily transportation capacity. However, this option on its own would not provide sufficient monthly winter gas supply to replace the reduced Gippsland production capacity, but it could improve system resilience for managing supply disruptions.

Do you have any views about the long-term supply term supply adequacy for Victoria?

- The 2021 VGPR reported that the Gippsland zone maximum daily production capacity is forecast to reduce from 1,072 TJ/d in 2021 to only 561 TJ/d prior to winter 2023 (a 412 TJ/d reduction) without new supply due to the depletion of the large legacy gas fields that supply the Longford Gas Plant. Unless new production is developed, there will be a greater reliance on storages and gas supply from outside Victoria to meet a 1-in-2 and 1-in-20 system demand day.
- Following significant industry consultation, AEMO has prepared the 2021 *Inputs, Assumptions and Scenarios Report* (IASR) which contains key scenarios and relevant data which will be used for all AEMO forecasting and planning reports. For the current suite of inputs, assumptions and scenarios, AEMO modelled five scenarios and a notable sensitivity. Four of these scenarios show various pathways to net zero carbon emissions by 2050.
- While some of these scenarios suggest that a large amount of the current gas heating load will be electrified by 2030 or 2050, others look at consumers continuing to rely on gas for heating well into the future. AEMO will consider all five scenarios in the 2022 ISP and some in the 2022 GSOO. No single scenario represents AEMO's position on forecast electrification. High electrification scenarios are also likely to rely on high rates of flexible gas supply from time to time to supply Victorian gas powered generation (GPG) during extended periods of low wind and solar generation output.

<p>Do you have any comments on APA’s proposed approach to risks of decarbonisation by using accelerated depreciation and removing indexation of the regulatory asset base?</p>	<p>No comments.</p>
<p>Do you have views about measures to facilitate orderly transition to meet Victorian Government policy?</p>	<p>No comments.</p>
<p>Do you wish to know more about APA’s Cost Allocation Method?</p>	<p>No comments.</p>
<p>Do you have any comments about APA’s SOCI requirements?</p>	<p>AEMO is supportive of APA taking their cyber security responsibility as required by the SOCI Act 2018. However, AEMO agrees with the feedback that there should be greater clarity on principles for allocating the costs between APA’s regulated and unregulated pipelines and to ensure that the allocation is fair and reasonable.</p>
<p>Do you have any suggestions for cost allocation principles related to SOCI?</p>	<p>No comments.</p>
<p>Do you have any comments about APA’s replacement capital expenditure proposal?</p>	<p>The Brooklyn Compressor Station (CS) is one of the two most utilised compressor stations within the VTS. Brooklyn CS is a critical site as it is the only way to supply gas to Ballarat on a peak winter day (otherwise curtailment would be required). Any future investment at Brooklyn CS should be undertaken in a way that is consistent with the long-term plan for this facility and therefore its remaining life.</p> <p>The compression requirements at Brooklyn are expected to reduce once the WORM is commissioned. Once the WORM is in service, there would</p>

	<p>be less compression required at Brooklyn and we would expect the VTS to be less reliant on the three older units (8, 9 and 10) as demand in the south west can be more efficiently supplied via the Outer Ring Main and the WORM.</p> <p>The Brooklyn Centaurs will still be used to support winter demand, especially Brooklyn Ballart Pipeline demand, provide higher pressure supply to the Laverton North Power Station, and contribute to the SWP withdrawal capacity on higher demand days.</p> <p>AEMO is supportive of working with APA to achieve APA's pigging program including the unpiggable programs to ensure the ongoing safe operation of the VTS.</p>
<p>Do you have any comments about APA's proposed approach to the investing in the SWP?</p>	<p>No comment.</p>
<p>How will you or your customers be impacted by the proposed SWP?</p>	<p>No comment.</p>
<p>Do you have any comments about the WORM project?</p>	<p>The 2019 VGPR reported that the WORM had become a committed project and that commissioning was targeted for June 2021. The VGPR noted that the WORM will reduce the refilling risk for the Iona UGS facility and help support peak day GPG demand.</p> <p>In the 2021 VGPR, the completion of the WORM expansion was expected to be completed by late 2022. However, in this Access Arrangement proposal, APA's target completion date is mid-2023. The reduction in available Gippsland production is forecast to reduce for winter 2022 before reducing significantly prior to winter 2023 due to the decline in</p>

	<p>existing supply from several legacy Gippsland Basin Joint Venture (GBJV) fields, that supply the Longford Gas Plant.</p> <p>Supply from the Port Campbell region will increase to 468 TJ/d with the commissioning of the WORM. If the WORM is not available, supply from Port Campbell will remain at 445 TJ/d, the existing Port Campbell injection capacity.</p>
<p>How will you or your customers be impacted by the WORM?</p>	<p>The WORM provides a number of system security, capacity and operability benefits to the VTS. These include:</p> <ul style="list-style-type: none"> • Increased SWP transportation capacity from the Port Campbell gas facilities towards Melbourne that would result in increased security of supply to Melbourne in the event of a supply interruption from Longford. • Address the separation of the VTS that currently does not allow gas from Port Campbell to physically supply demand in the Northern Zone and the Longford to Melbourne Pipeline including the (Eastern) Outer Ring Main, i.e. the WORM reduces the likelihood or extent of curtailment in these zones if there is low or no gas supply from Longford. • Increase SWP transportation capacity towards Port Campbell to support refilling the Iona UGS reservoirs • Increased linepack closer to Melbourne improves the capacity of the VTS to manage variable gas demand.

	<ul style="list-style-type: none"> Increased capacity to support Victorian GPG demand, which also tends to peak during the morning and evening when residential gas demand peaks.
<p>Do you have any comments about the proposed assessment for hydrogen?</p>	<p>AEMO considers that the proposed assessment for hydrogen compatibility of the VTS pipeline is beneficial. It will provide information about possible future use of these pipelines as Australia decarbonises.</p> <p>As the pipelines in the VTS are interconnected, if hydrogen is blended into one pipeline, it will most likely disperse into the other pipelines. Therefore, the approach should be to assess all the VTS pipelines.</p> <p>AEMO's 2022 ISP is currently being developed. AEMO suggests that the AER considers the information on hydrogen in the 2022 ISP as part of its assessment.</p>
<p>Do you have any views about the role of hydrogen in meeting future energy needs?</p>	<ul style="list-style-type: none"> Biofuels, hydrogen and electrification are all seen to play a role in AEMO's scenarios and key sensitivity to a varying degree. Hydrogen has the potential to meet some of Australia's energy needs once it is economically competitive and the possible challenges to efficient sector integration are resolved. There are varied potential opportunities and future pathways for the domestic development of hydrogen. New hydrogen transmission pipelines and existing distribution pipelines may be able to provide energy storage opportunities using hydrogen. Embedded electrolyzers (utility-scale or distributed) may be able to support power system security,

	<p>operability and reliability, depending on their location and operating environment and the technical capabilities of the plant.</p> <ul style="list-style-type: none"> • Approximately half of Victoria’s large commercial and industrial gas use is unlikely to be able to be electrified, including hard-to-abate industrial sectors such as steelmaking. This means that hydrogen or biogas would need to be used to replace natural gas to meet decarbonisation objectives. • Hydrogen’s role in the power system will result in an increased coupling between the electricity and gas sectors, ranging from power system demand management through to zero emissions power generation. • The Australian Government is investing \$1.2 billion into building a hydrogen industry and many jurisdictions are also contributing to the industries development.
Do you have any comments about the proposed Transformation and Technology plans?	No comments.
Do you have any comments about the proposed approach to operating expenditure forecasts?	No comments.
Do you have any views about the tariff scenario analysis? Are there other scenarios we should consider?	No comments.
Do you have any comments about the calculation of the draft revenue requirements?	No comments.

Are there any other matters that you wish to raise about the draft VTS access arrangement proposal?

In the Access Arrangement proposal, APA listed three projects proposed to bring more gas into Victoria, which may require some investment in the VTS.

Another trigger that should be considered is the closure of Yallourn Power Station or other major power station closure. This could trigger more peaking gas power generation demand which may require investment in the VTS.