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Victorian Transmission System Stakeholder Engagement Group 2023-27 access arrangement

Workshop – Capital issues

29 July 2021



Today's workshop

Agenda & format		
1	Welcome & Acknowledgement of Country	
2	Purpose of workshop	5 min
3	What is APA's objective on capital expenditure?	5 min
4	Drivers influencing APA's capital planning for VTS	30 min
5	Let's hear from you...	30 min
6	What does it all mean? <ul style="list-style-type: none">• Draw together the implications for VTS access arrangement proposal	20 min

Purpose of capital issues workshop

Purpose of today's discussion is to inform, consult and involve stakeholders

- Provide you with better understanding of drivers influencing capital plans for VTS
- Provide an opportunity for you to ask us questions
- Provide opportunity for you to provide input and feedback to us
- Provide visibility of APA's decision-making process and demonstrate its reasonableness.

Objective for capital expenditure proposal

Objective is to prepare a capital expenditure program that meets the requirements of gas customers and consumers and National Gas Rule requirements (especially Rule 79).

Conforming capital expenditure – as incurred by a prudent service provider acting efficiently, in accordance with accepted good industry practice, to achieve the lowest sustainable cost of providing services...

AND

Overall economic value of the expenditure is positive.

OR

Maintain and improve **safety** of services; or maintain **integrity** of services; or comply with a **regulatory obligation** or **maintain capacity** to meet existing levels of demand for services.

Drivers influencing APA's capital planning for VTS

Demand & supply forecasts

Government energy policy

Safety, integrity, maintain capacity & regulatory obligations

Market direction – future fuels, renewables

Lowest sustainable cost

Customer expectations – other drivers?

Government energy policy spectrum

Commonwealth policy processes

Gas-led recovery (Federal Government press release 15 September 2020). Undertaking further consultation to inform two key Gas-Fired Recovery measures:

- **National Gas Infrastructure Plan (NGIP)**
- **Future Gas Infrastructure Investment Framework**

National Gas Infrastructure Plan - Interim report released May 2021.

- identifies the priority infrastructure developments required to alleviate forecast southern gas supply shortfalls in the near-term
- Identified **South West Pipeline expansion** as a critical infrastructure project.

Victorian policy processes

Victoria's Gas Substitution Roadmap

- Public consultation on gas substitution pathways
- Reliability
- Renewable gases
- Fugitive emissions
- Infrastructure Victoria (IV) review

Infrastructure Victoria Towards 2050: Gas infrastructure in a zero emissions economy

- Interim report released 19 July 2021
- Various gas/electrification scenarios being considered.

APA position on energy policy reforms

Natural gas is essential for energy security

- Gas will play a critical role in the energy transition:
 - Fast and firm dispatchable generation
 - Energy for hard to abate businesses
 - Gas pipelines are a vital energy store
 - Recent events (Longford, Callide, Yallourn) demonstrate the important role gas plays.

Decarbonisation of the economy should be considered as a whole

- Electricity generation mix in the NEM, and in Victoria in particular, has a higher carbon profile than natural gas
- Through our Pathfinder program we are investigating how hydrogen and other technologies can support a lower carbon future.

Utilising existing assets is a more efficient option

- In Victoria, peak gas demand 1300 TJ/day (primarily due to winter heating) is equal to twice the peak electricity consumption.
- Electrifying gas load will require significant investment.



Oakley Greenwood

Victorian DTS Stakeholder Forum VTS Demand & Supply Study

APA
July 2021

Objective of our study and today's session

- To identify, and wherever possible quantify, the impact that recent announcements affecting the eastern Australian gas market might have on:
 - AEMO's GSOO/VGPR annual and peak demand forecasts for Victoria; and
 - Likely requirements for new gas supplies.
- To identify how the above:
 - Might impact APA's potential future investment requirements in Victoria, and
 - Might impact on APA's broader Victorian gas business - including its economic life (for regulatory purposes).

We are seeking to explore the key issues affecting supply and demand in more detail, and hear your thoughts on these issues...

Key Issues for consideration and discussion

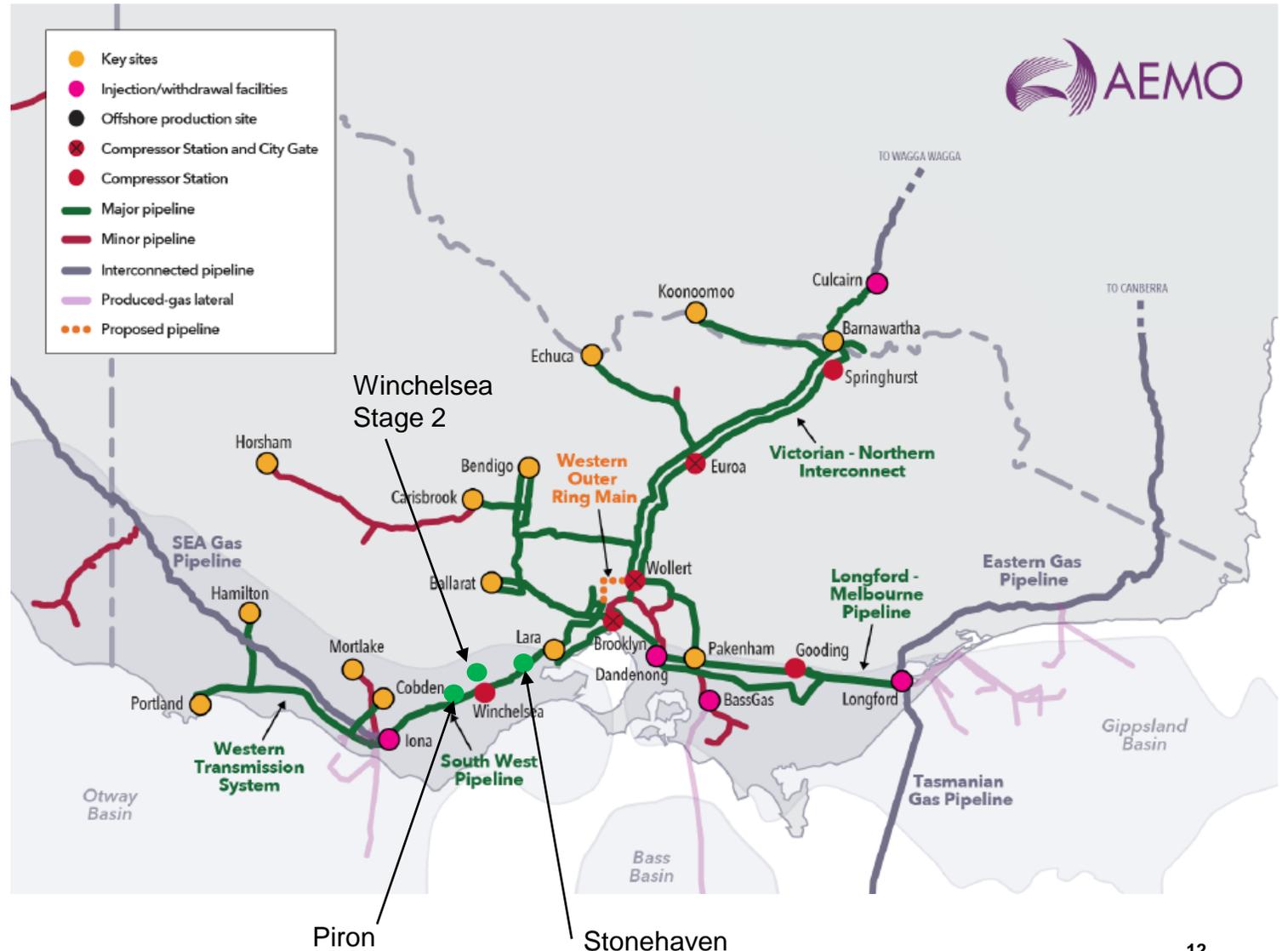
- Demand-side changes not otherwise included in AEMO's 2021 GSOO
 - Altona's closure (pivot to an import terminal)
 - QENOS' reduction in operations (closure of ~50% of operations)
 - Both affect both average and peak demand.
 - Potential changes in Government policy - particularly with regards to the use of renewable gases and a move to electrify existing gas loads
 - Gas Substitution RoadMap (including detailed modelling of pathways to decarbonise Victoria's Gas Networks)
 - Approaches to incentivise increased uptake of renewable gas
 - Others - for comment?

Key Issues for consideration and discussion

- Supply-side issues
 - SWQP upgrade
 - - ~100TJ/day increase in capacity, enabling more gas to be transported from QLD to NSW (potentially freeing up capacity that might have otherwise been used to provide gas to NSW, to be pivoted towards supplying other markets, including Victoria)
 - Declining supplies to Longford
 - Timing and magnitude uncertain
 - IONA utilisation
 - Impact of WORM on re-fill rates
 - Potential for upgrades to withdrawal capacity
 - Impact of LNG import terminals
 - Port Kembla in NSW
 - VIVA Energy at Lara
 - Vopak at Avalon
 - Other options?
 - Use demand-response to cover low probability events?
 - Upgrade Dandenong LNG?

APA Victorian Transmission System – Capacity Study update

- APA Southwest Pipeline supply capacity 468TJ/D Post WORM *
- Iona CPP 530TJ/D, 570TJ/D, 670TJ/D
- Access, Culture, Heritage and Environment desk top report underway
- Early capacity study outcomes
 - Compressor Locations
 - Stonehaven
 - Winchelsea 2nd stage
 - Piron (near Colac)
 - Looping
- Indicative CAPEX for the options
- Project schedule for the options



* Data from AEMO VGPR 2021

Future fuels

Infrastructure Victoria recently reported:

Under all scenarios that we considered, the opportunity to repurpose existing natural gas infrastructure over the long term (beyond 2040) is limited.

- This suggests a reduction in the remaining economic life for gas pipeline assets is required
 - This will have implications for the WORM and any SWP expansion

A reduction in asset lives in the upcoming AA need not be a permanent reduction – it would be possible to further revise asset lives as circumstances change in the future.

Refer to the Economic Regulation Authority [decision](#) on the Dampier-Bunbury Pipeline (¶1354 et seq)

There may be opportunity for gas pipelines to carry other gases, notably hydrogen, in a decarbonised future.

- If successful, and if hydrogen becomes a replacement fuel, there may be scope for asset lives to be extended in the future.
- APA is currently undertaking engineering research to ascertain the suitability of gas pipelines to carry hydrogen
- **Would you support APA including the cost of undertaking a “hydrogen capability” study on the pipelines making up the VTS? Your views?**

Consumer perspective on Victorian Gas substitution roadmap (Gavin Dufty, SVDP)

- Support the development of a gas substitution plan particularly as Victorian households rely significantly on reticulated natural gas as a heating source.
- important to explore renewable opportunities – such as hydrogen from renewable sources - before we start to decommission the gas network – to allow opportunities for renewable alternatives to the current fuel source.
- However, believe it would be pertinent for Government to develop policies that support the potential for the decommissioning or significant switch away from the reticulated gas network for domestic heating
- Victorians have made significant long-term investments in the current natural gas infrastructure.
As such, consideration should be given to the need for, timing of and, appropriate path for accelerated depreciation of the current gas assets – to ensure we don't burden future generations
- If renewable gas sources are injected into the gas network (in part or in full) we believe there should be
 - strong regulatory guidelines and guidance around these injections, ensuring that the current service standards and fuel quality is maintained
 - guidance should also include a clear policy framework to support any household appliance change overs or fit outs needed – including disposal of legacy gas appliances
- Gas substitution roadmap must include a complementary strategy for the electricity system to ensure it has the ability to take up, in whole or in part, the energy needs that were to be met by reticulated natural gas.
- Such a strategy should not solely focus on building out the electricity system but should include strategies that reduce reliance on electricity infrastructure - energy efficiency, network tariff and pricing reform (including by bi-directional pricing), a distributed energy integration framework and encouraging self-consumption for those household's small-scale generation / storage.

Submissions to Capital Issues paper

Lochard – owner of Iona Storage Facility

- Important to adequately address system security and resilience needs
- Iona current capacity is 530 TJ/d
- Iona expansion works will enable Iona to reach 570 TJ/d of SWP injection capacity from 2023. This project had reached FID late 2020. Further SWP capacity expansion required beyond 468 TJ/d (post WORM)
- Lochard (with its customers) is advancing the planning works required for building further capacity at Iona for additional storage and plant capacity.
 - These works could deliver up to another 130 TJ/d of SWP injection capacity during 2023-2027 period
- Sharing of SWP between Iona and (potential) LNG importing terminal and the dependency on offtakers' nomination and market scheduling will create uncertainty and complication for both facilities and compromise security of supply as a result
- What capacity will be required in the WORM, as well as downstream augmentations, to cater for both Iona and LNG Importing Terminal capacity?
- Cost of SWP expansion to users could be compared with the cost of gas shortfalls or curtailment, which the expansion will contribute to reducing
- Keep an open dialogue with VTS facility operators in its planning of VTS on hydrogen/biomethane front - coordination will be essential between Iona and VTS in transitioning to the new gases
- Time required to deliver any augmentation projects is a critical factor that needs to be considered by APA in its draft proposal to AER.

Submissions to Capital Issues paper

- Urge APA to consider this information and work with stakeholders to reach decisions on:
 - Further analysis required or commercial conditions to be met to justify including the augmentation in the VTS 2023-27 Capital Program
 - If inclusion cannot be justified prior to submission of the AA to AER, options for subsequent approval by AER following further developments, eg the 2022 GSOO or commercial announcements.

Red Energy / Lumo

- Support the development of the Western Outer Ring Main (WORM) project.
- Support the additional expenditure that APA has undertaken to develop an Environment Effects Statement (ESS) which has been requested by the Victorian Minister of Planning on the condition that it is efficient and complies with Rule 79 of the NGR.
- Support an expansion of the VTS to accommodate a Floating Storage and Regasification Unit (FSRU). In the first instance, we prefer that APA have the capital expenditure approved by the AER under Rule 79.
- However, it is probably unlikely that the AER will approve an expansion of the VTS to accommodate a FSRU without it reaching a Final Investment Decision. It could therefore be worthwhile investigating other ways to expand the South West Pipeline to accommodate a FSRU.

We'd like to hear from you

Open discussion

What's your reaction to all this?

What else should we be taking into account in our planning?

What are the most important things you want us to consider in our capital plans – affordability/ security / integrity/ future proofing/ decarbonising?

Are there any other matters about the VTS capital program that you wish the raise?

Implications for the VTS Access Arrangement

Assessing the need for SWP capacity development

- **Victorian gas supply dynamics**
 - Longford production declining
 - Golden Beach – Culcairn injection – Port Kembla LNG – APA East Coast Grid expansion
- **Potential gas supply developments west of Melbourne**
 - Iona underground storage expansion
 - VIVA FSRU – Geelong
 - Vopak FSRU - Avalon
- **SWP as a constraint**
 - AEMO, Vic and Federal government commentary
 - Iona current deliverability v. SWP capacity
- **Increasing capacity on the SWP**
 - How much capacity is required? When? For how long?
 - What capex is required to develop that capacity?
 - Cost to develop capacity

Underwriting SWP capacity development capex

- **The DWGM and bilateral contracting**
- **The VTS Access Arrangement and forecast capex**
 - NGR Rule 79
 - “No regrets” capex
- **NGR Rule 80 application**
 - 3 parts - Timing – Triggers?
 - Will require APA Board approval
 - Capex pass-through application
 - AER and AEMC stated views
- **Interaction with Victoria decarbonisation policy**
 - Regulatory asset life
 - A new asset class
 - Asset stranding risk – capital redundancy provisions
 - Access Arrangement Fixed Principles

Next steps

- Roundtable 8 on Wednesday 18 August (2.30pm AEST)
- Feedback loop on today's workshop
- First look at total revenue, revenue allocation and tariff structures
- A look at the VTS Access Arrangement.

Reminder WORM EES published [environment effects statement | APA Group](#)

**Thank you very much for participating today,
See you in August.....**

For further information

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