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## Victorian Transmission System Stakeholder Engagement Group. 2023-27 access arrangement (AA6).

### Roundtable 12 – Our proposal and stakeholder influence

22 November 2021



# Today's discussion & format

	Topics	Times
1	Welcome & Acknowledgement of Country	1.30pm
<i>Vale David Headberry</i>		
2	Format for today	
3	Recap of VTS engagement program	
4	Our proposed positions & stakeholder influence	
5	Feedback on engagement (poll survey)	3.00pm
6	Wrap up	

**Note that the meeting will be recorded to assist updating issues register.  
Video will not be distributed outside of APA.**

**Purpose of today's discussion is to consult & involve.  
We do encourage your views and feedback today**

# Format for today



- We are presenting our proposed positions on the 2023-2027 access arrangement proposal
- We sent you the First Look document on 15 October. Past few days we received two written submissions - Lochard consortium and Brotherhood of St Laurence
- We have considered the submissions as well as the comments from the previous roundtables in forming our positions
- We have also considered AER information paper titled 'Regulating gas pipelines under uncertainty' (15 November 2021)
- Today, we wish to
  - Gauge level of support from stakeholders on our proposed positions
  - Get your views on the stakeholder engagement process.

# Recap of the VTS engagement process

- We started stakeholder engagement in October 2020
- We released the draft Engagement Plan with information about APA, VTS, regulatory framework, engagement principles, indicated timelines and topics. We asked for feedback on the draft Plan and received feedback during roundtables
- Engagement principles - no surprises; clear, accurate and timely communication; easy to understand; transparent; and influence
- We have had 12 roundtables, one capital issues workshop and a hydrogen information session
- Each roundtable has been attended by an average of 40-60 stakeholders
- We have endeavoured to be flexible to best meet the needs of the stakeholder group
- The VTS access arrangement revision is characterised by complexity ....in policy National Gas Infrastructure Plan, AEMO drivers, Victorian policy on electrification, decarbonisation, future gas demand and supply uncertainty. None of these issues are easy
- Recognising the range of views held by stakeholders (which in some cases are opposing), we didn't set out to get agreement from stakeholders rather we wanted to understand everyone's point of view. And to the extent possible reconcile opinions and positions, and incorporate them as much as possible into our proposal
- We will be conducting a quick poll at the end of the roundtable to gauge views.

# Proposed positions & stakeholder influence

# The access arrangement proposal balance

Our access arrangement proposal has needed to balance conflicting objectives:

### Declining forecast volumes:

- per AEMO GSOO/VGPR forecasts
- 2021 IASR and 2022 GSOO?
- Victoria Net Zero 2050 initiatives
- Victoria Gas Substitution Road Map

### Asset stranding

- Near term
- Longer term

### Safety and Integrity

- Ongoing maintenance
- Pigging
- Hydrogen safety

### Security of Supply

- Near term peak day security
- VGPR Threat to System Security
- Longer term supply adequacy
- National Gas Infrastructure Program

### Need for new and ongoing investment

- Safety, integrity, reliability

### Ageing asset

- Urban development  
High consequence areas
- Change in definition of “natural gas” to include H2 blends

### Tariff impacts

- Short term
- Long term
- Intergenerational equity

## Proposed tariff and impact on customer bills

Year	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	
Volumes (PJ)	220	229	222	225	206	206	203	201	197	198	
Target revenue (\$m nominal)	108	110	111	112	113	115	122	128	135	143	
System wide average tariff	\$ 0.49	0.48	0.50	0.50	0.55	0.56	0.60	0.64	0.69	0.72	
Composite tariff over the 5 year period:										0.641	
Annual cost per residential customer	\$ 27	26	27	27	30	31	33	35	37	39	2.9%
Average residential customer bill											1,350
Annual cost per business customer	\$ 246	239	249	248	274	280	300	319	344	361	3.8%
Average business customer bill											9,426

# Volume forecasts

Volume forecasts are a significant element of the AA:

- Volumes have a significant effect on tariff outcomes
  - Declining volumes puts significant upward pressure on tariffs
- Volume forecasts drive the need for security of supply capex.

We have adopted the AEMO 2021 GSOO/VGPR volume forecasts:

- Extrapolated beyond VGPR 2025 limit based on AEMO forecast portal total volumes
- We will update these forecasts in our revised proposal for the 2021 IASR and 2022 GSOO/VGPR.

We have added NSW Export volumes at current average volumes:

- AEMO does not forecast exports.

We have reinstated a provision in the AA that shares volume risk, relative to forecast between VTS and shippers:

- If actual weather-adjusted volumes are more than 5.5% greater than forecast, customers benefit through lower tariffs
- VTS carries the impact of volume declines down to -5.5%.



**Table 18 Annual system consumption by SWZ (Tariff V and D split) (PJ/y)**

Annual system consumption by SWZ (Tariff V and D split) (PJ/y)							APA Extrapolated	
SWZ		2021	2022	2023	2024	2025	2026	2027
Ballarat	Tariff V	8.9	9.0	9.0	9.0	9.2	8.5	8.6
	Tariff D	1.7	1.6	1.6	1.6	1.6	1.6	1.6
	<b>SWZ total</b>	<b>10.6</b>	<b>10.6</b>	<b>10.6</b>	<b>10.6</b>	<b>10.7</b>	<b>10.0</b>	<b>10.1</b>
Geelong	Tariff V	11.5	11.6	11.6	11.6	11.7	10.9	11.0
	Tariff D	9.1	9.1	8.9	8.8	8.6	8.7	8.7
	<b>SWZ total</b>	<b>20.6</b>	<b>20.6</b>	<b>20.4</b>	<b>20.3</b>	<b>20.3</b>	<b>19.6</b>	<b>19.7</b>
Gippsland	Tariff V	5.9	5.9	5.9	6.0	6.0	5.6	5.6
	Tariff D	8.1	7.9	7.7	7.4	7.1	7.5	7.5
	<b>SWZ total</b>	<b>14.0</b>	<b>13.8</b>	<b>13.6</b>	<b>13.4</b>	<b>13.2</b>	<b>13.1</b>	<b>13.1</b>
Melbourne	Tariff V	92.2	90.5	88.5	86.7	85.6	83.1	84.2
	Tariff D	35.5	35.3	34.9	34.5	33.9	34.2	34.1
	<b>SWZ total</b>	<b>127.7</b>	<b>125.8</b>	<b>123.4</b>	<b>121.2</b>	<b>119.5</b>	<b>117.3</b>	<b>118.2</b>
Northern	Tariff V	1.3	1.3	1.3	1.3	1.3	1.2	1.2
	Tariff D	2.7	2.7	2.7	2.7	2.7	2.7	2.6
	<b>SWZ total</b>	<b>4.0</b>	<b>4.0</b>	<b>4.0</b>	<b>4.0</b>	<b>4.0</b>	<b>3.9</b>	<b>3.9</b>
Western	Tariff V	11.3	11.3	11.3	11.3	11.4	10.6	10.7
	Tariff D	8.6	8.7	8.7	8.6	8.5	8.5	8.4
	<b>SWZ total</b>	<b>20.0</b>	<b>20.1</b>	<b>20.0</b>	<b>19.9</b>	<b>19.8</b>	<b>19.1</b>	<b>19.2</b>
	Total Tariff V	131.1	129.6	127.6	125.9	125.2	119.8	121.3
	Total Tariff D	65.7	65.3	64.5	63.6	62.4	63.1	62.9
	<b>Total</b>	<b>196.9</b>	<b>194.9</b>	<b>192</b>	<b>189.4</b>	<b>187.5</b>	<b>183.0</b>	<b>184.3</b>
	Export	18.9	11.4	13.9	13.9	13.9	13.9	13.9
	<b>Total</b>	<b>215.8</b>	<b>206.3</b>	<b>205.9</b>	<b>203.3</b>	<b>201.4</b>	<b>196.9</b>	<b>198.2</b>



# Supply Assumption & Proposed SWP570 capital expenditure

We acknowledge comments about our supply side assumptions.

Some thought we should include Port Kembla Gas Import Terminal because AEMO had included it in its forecast.

Others thought that it the status of the project was unclear and that it was an uncertain environment.

Others do not support investing in SWP - *Victoria should avoid investing in assets that are at risk of stranding where possible.*

- We propose to recognise projects that have publicly reached FID
  - APA East Coast Grid expansion; Lochard Iona 570
- We are proposing to invest in the SWP570 in 2023 and 2024.
- SWP570 expenditure forecast cost \$97.2 million
- You asked about staging the investment, and we listened
  - Stonehaven is now scheduled to come into service in 2024 and Pirron in 2025

Security of supply Unit	2023	2024	2025	2026	2027	Total
<b>SWP570</b> \$m, \$2022	36.9	53.1	7.3	0.0	0.0	<b>97.2</b>

- Tariff/ bill impact for both compressors is about 2.2¢/GJ
  - A little over \$1 per year on a domestic customer bill
  - About \$11 per year for business customers
- Business case will be submitted as part of the proposal.
- We can update at the revised proposal if circumstances change

# Proposed position - Asset lives and depreciation

In AER models, different asset classes have different lives.

APA VTS proposes an asset life capped at a maximum of 30 years

- This applies to all assets – new and old
- Assets that have a shorter lives will stay at the shorter lives.

Shortening assets lives is a way to bring forward the recovery of efficient costs.

At R11 discussions:

- Principle of reducing asset lives and accelerated depreciation was accepted - *"logic says ...start sooner rather than later, but make it a smaller amount all the way across"*
- Capping maximum lives at 25 years was considered reasonable
  - *To help reduce tariff impacts further, we propose a 30-year cap on asset life*
- Support for reviewing asset lives at every regulatory reset to assess economic lives should there be a change in circumstances (given uncertainties about future fuels and demand for gas).
- Impact on tariffs and customer bills:
  - Relative to a 25-year life, this reduces the system average tariff impact by about 3.5¢/GJ
    - about \$1.90 per year for domestic customers, \$17.50 per year for business.

## Comparison of actual and forecast expenditure in real terms (\$2022)

Capital expenditure	Unit	2018-2022	2023-2027	Change
Replacement	\$m, \$2022	77.5	122.9	45.4
Expansion	\$m, \$2022	169.9	140.0	-30.0
Other (SoCl. Hydrogen testing)	\$m, \$2022	3.7	53.2	49.5
Non-network	\$m, \$2022	42.4	13.3	-29.1
Capitalised overhead	\$m, \$2022	NA	22.5	22.5
<b>Total capital expenditure</b>	<b>\$m, \$2022</b>	<b>293.6</b>	<b>352.0</b>	<b>58.4</b>

Proposed capital program is \$58.4 million (20%) higher than expenditure in the current period

Replacement capital expenditure is \$45.4m (59%) higher than current period

Expansion is lower. Includes SWP570 and final years of expenditure on WORM

Other capital expenditure includes new programs:

- Hydrogen testing
- SoCl program.

# Proposed replacement capital expenditure

In R11 we were asked whether we would be reviewing our capital expenditure forecasts given AER concerns about the size of the capex budget and accelerated depreciation

In response we reviewed the replacement capex program

We reduced the scope of the encroachment program

We have revised down the forecast from by (adjusted \$140.4m to \$122.9m. This is \$17.4m (12%) lower.

## Replacement capital expenditure

- The replacement (stay-in-business) programs and programs focused on maintaining and improving the safety and integrity of VTS
- Program is in response to increased risk factors responding to increased risk factors
  - VTS is an ageing asset and combined with greater urban encroachment increases need for integrity and addressing unpiggable pipelines
  - Programs are aligned with safety obligations and good industry practice.

Replacement (SIB) program	Unit	2018-2022	2023	2024	2025	2026	2027	Total
<b>Total replacement</b>	\$m, \$2022	<b>77.5</b>	26.9	35.9	26.0	18.1	16.1	<b>122.9</b>
<b>Key programs</b>								
<b>BC258 Integrity management (in line inspections)</b>	\$m, \$2022	15.8	7.0	6.5	6.9	5.2	2.1	<b>27.6</b>
<b>BC259 Unpiggables</b>	\$m, \$2022	16.9	9.7	14.1	3.0	0.0	0.0	<b>26.8</b>
<b>BC204 Upgrade Brooklyn compressor</b>	\$m, \$2022	2.6	2.5	2.5	2.5	2.8	0	<b>10.3</b>

# Hydrogen safety and integrity testing

## Our consideration

- We acknowledge stakeholder interest in better understanding the safety implications of hydrogen; impact on customer appliances; and concerns about price impacts for customers
- Government policy is fast tracking consideration of bringing hydrogen and other renewable gas blends into the national energy regulatory framework
- There is an increasing likelihood that hydrogen will be transported via the VTS
- Government policy means that we need to ensure safety and integrity of pipelines so that any hydrogen injected into the system does not cause harm

## Proposed position

- There is a level of urgency to ensure that VTS pipelines can safely accept hydrogen without compromising integrity
- It is critical that we undertake technical assessments before any quantity of hydrogen gas enters the VTS network
- We are proposing to undertake hydrogen safety and integrity testing (39 pipelines in the VTS). This review will be complex and take five years to undertake
- Forecast cost of the testing is \$37.9 million
- The bill impact is about 2¢/GJ, which is:
  - about \$1.10 per year for domestic customers
  - and \$10.00 per year for business customers.
- Business case justifying testing will be submitted as part of our proposal
- We'd like to gauge the level of support for the testing from stakeholders.

# Forecasts for SoCI programs and Transformation & Technology

## Forecast for Security of Critical Infrastructure program:

Business case justifying program includes:

- Mandated obligation
- Gap analysis
- Costings
- Benefits.

SOCl programs	Unit	2023	2024	2025	2026	2027	2023-2027
SoCl cyber	\$m, \$2022	0.84	0.84	0.74	0.25	0.25	2.91
SoCl program	\$m, \$2022	0.34	0.42	0.08	0.08	0.08	1.01
SoCl physical security	\$m, \$2022	2.68	2.77	2.77	2.77	0.10	11.09
<b>Total</b>	<b>\$m, \$2022</b>	<b>3.85</b>	<b>4.03</b>	<b>3.60</b>	<b>3.10</b>	<b>0.42</b>	<b>15.01</b>

## Forecast for Transformation & Technology:

- As previously discussed, the VTS T&T allocation of corporate costs is based on cost allocation method submitted to the AER

Transformation & Technology	Unit	2023	2024	2025	2026	2027	2023-2027
Transformation Office	\$m, \$2022	2.05	2.05	1.23	0.41	0.41	6.16
Operational Technology	\$m, \$2022	0.79	0.78	0.64	0.65	0.67	3.53
Information Technology	\$m, \$2022	0.11	0.03	0.00	0.09	-	0.24
<b>Total</b>	<b>\$m, \$2022</b>	<b>2.96</b>	<b>2.86</b>	<b>1.87</b>	<b>1.16</b>	<b>1.08</b>	<b>9.93</b>

- More information will be provided in an Information Paper as part of the submission.

# Surveys

## Proposed questions (for customers, shippers, consumers)

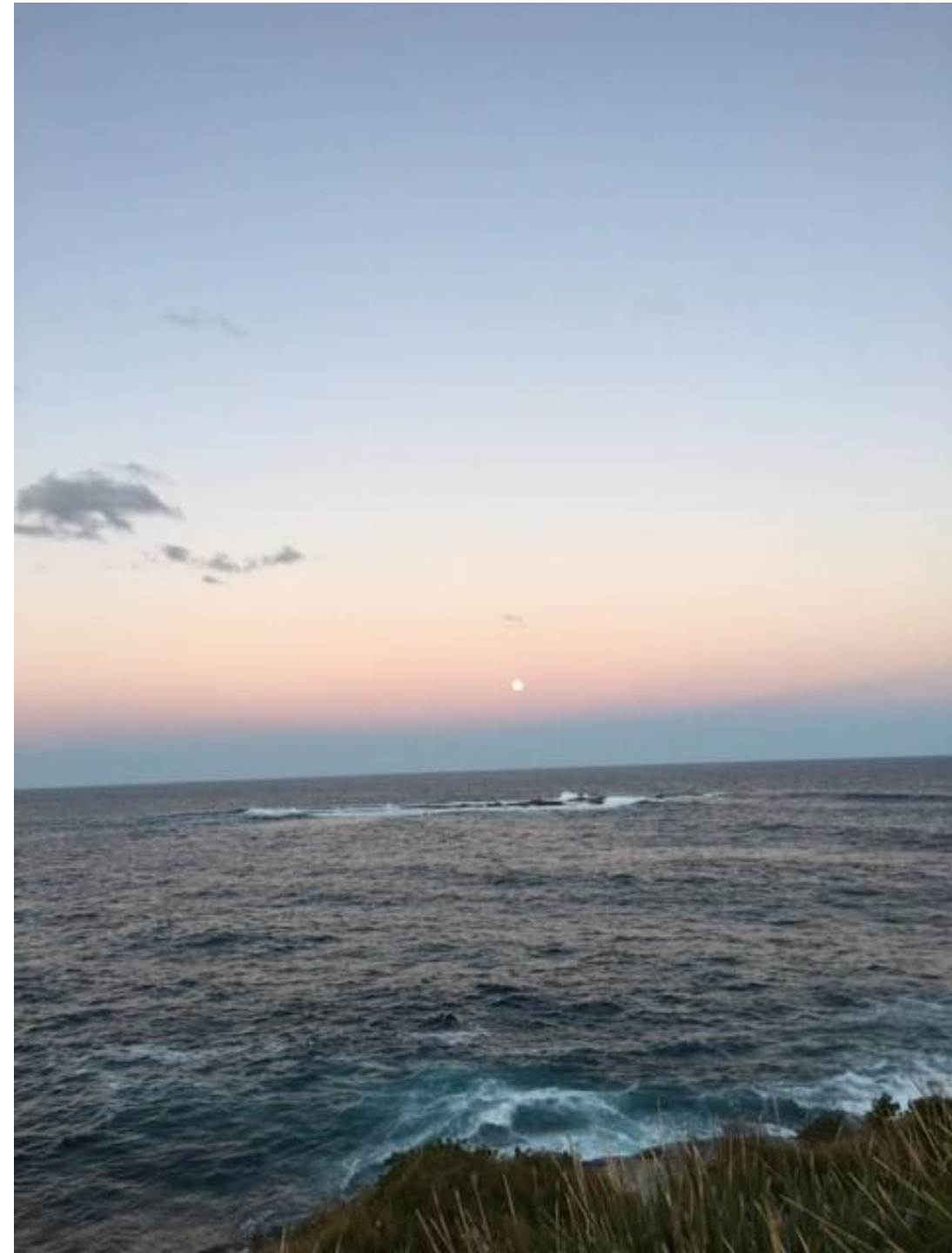
1	Was the information (slides, presentations, papers) for the VTS stakeholder engagement easy to understand?
2	Was information (slides, presentations, papers) for the VTS stakeholder engagement transparent?
3	Do you feel that you had influence? Did we take on board your feedback?
4	In a few words, how would you describe the stakeholder engagement? (multiple answers allowed)
5	Do you have suggestions for ways we could better engage? (multiple answers allowed)



# Wrapping up

- This is the final VTS stakeholder engagement roundtable before we submit 😊
- We are submitting the proposal to the AER 1 December
- On behalf of APA we sincerely thank you
- We truly appreciate your involvement and certainly grateful for the open and honest discussions
- We hope you have found it to be informative
- If people are interested in a roundtable post-submission please let us know.

Thank you for participating today!



# AER indicative timetable

Indicative dates for key milestones in the decision making process

Milestone	Date*
APA submits access arrangement proposal for the VTS	1 December 2021
Stakeholder submissions on VTS access arrangement proposal close	January 2022
AER publishes access arrangement draft decision	May 2022
APA submits revised access arrangement proposal	June 2022
Stakeholder submissions on revised access arrangement proposal and draft decision close	July 2022
AER publishes access arrangement final decision	30 September 2022

\*Date is based on AER receiving compliant proposals and may be altered if non-compliant proposals are received. Please note this timeline is subject to change.

**For further information**

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# Security of supply

**Short term:**

We propose to proceed with the SWP\_570 expansion

To accommodate committed peak day deliverability from Iona Gas Storage

We propose to stage this project

- Stonehaven Compressor scheduled for Winter 2024
- Pirron Compressor scheduled for Winter 2025

Total cost \$97m

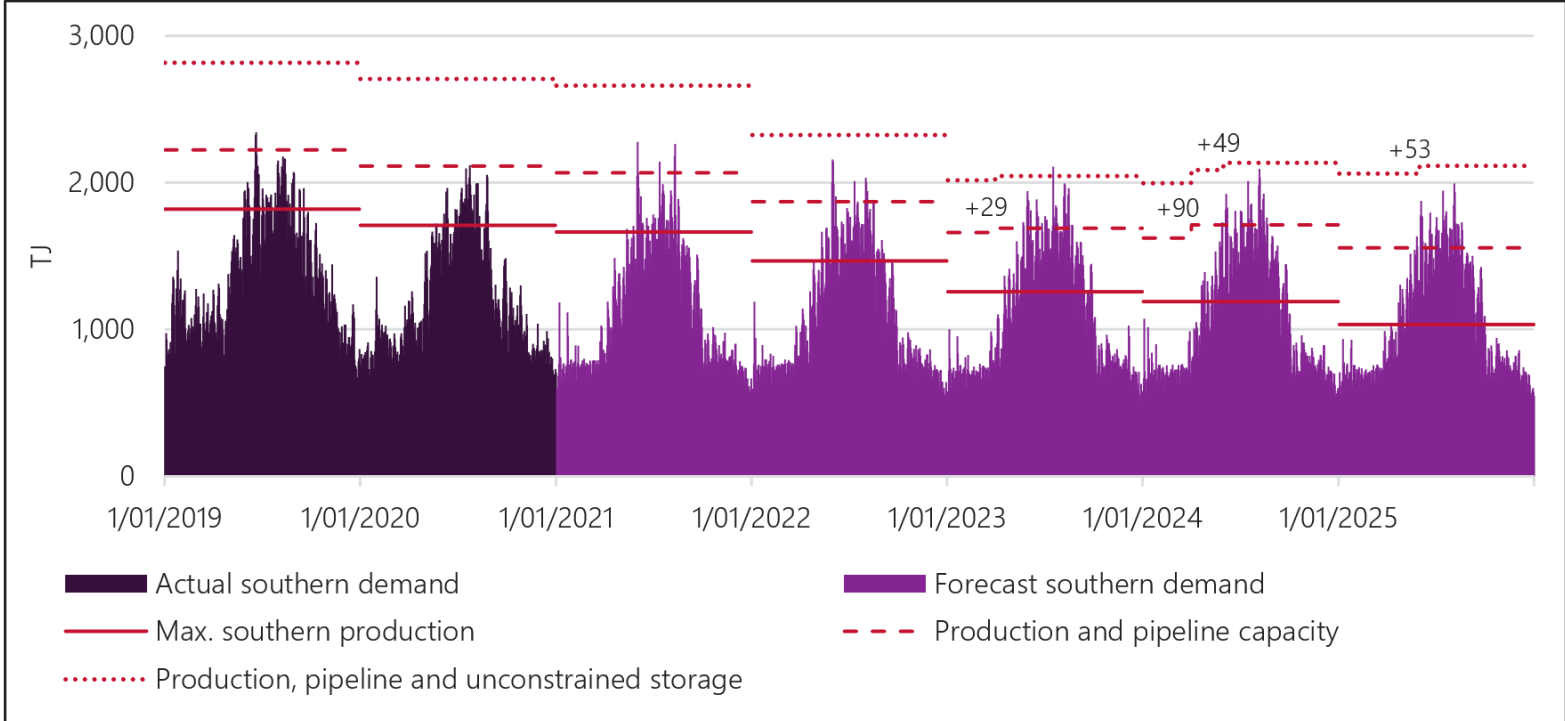
Tariff impact for both compressors is about 2.2¢/GJ  
 \$1.20 per year on a domestic customer bill of \$1350  
 \$11.00 per year for business customers

**Long term:**

We propose to lodge an application under Rule 80 for pre-approval of capex required to meet long term supply adequacy needs

- The costs of this expansion has not been included in the proposed tariffs

AEMO Figure 1 with APA East Coast Grid expansion and staged SWP\_570 expansion



# Asset stranding and the future of gas

We had discussed curtailing all asset lives to 25 years to align with the Victoria Government Net Zero 2050 Initiatives

While feedback suggested 25 years was sensible, there was concern regarding

- the near term tariff impacts;
- the longer term tariff impacts, particularly as they relate to vulnerable customers; and
- the impacts on intergenerational equity

Our principle remains -

- that we need to take action to reduce future revenue requirements in an effort to maintain tariff stability
- that we can not know precisely what we need to do to accomplish the transition
- that we will all be better served if we *start small, start early, and monitor regularly*

But we know we need to balance this against tariff impacts

## **We propose to cap all asset lives at 30 years**

This reduces the system wide average tariff by about 3.5¢/GJ  
(about \$1.90 per year for domestic customers, \$17.50 per year for business)

# Cost of capital and inflation

## Cost of capital

Based on AER 2018 Rate of Return Instrument

### Cost of Equity:

Placeholder Risk Free Rate: 1.243%  
 Beta 0.6  
 Market Risk Premium 6.1%  
 Cost of equity: 4.903%

### Cost of Debt:

Based on 10-year rolling average commencing in 2018  
 Applies most up-to-date annual cost of debt per current tariff variation  
 Forecast cost of debt based on 2021 current rate, 2.43%

**Gearing:** 60% debt, 40% equity

**Value of imputation credits (gamma):** 58.5%

**Vanilla WACC:** 4.27% declining over the period to 3.73%

## Inflation

We have continued to apply indexed straight line depreciation in this proposal

Forecast inflation has been drawn from the AER’s April 2021 electricity and gas Final Decisions:

Expected Inflation					
Year	2023	2024	2025	2026	2027
Expected Inflation	1.50%	1.75%	2.00%	2.25%	2.50%
Interim Calculation	1.0150	1.0175	1.0200	1.0225	1.0250
<b>Year</b>					
Inflation Rate	f	2023			
		2.00%			

# How do all the pieces fit together?

The regulated capital base increases by \$190m over the period, driven by the WORM and SWP\_570 expansion

Opex remains stable in real terms

– increases by opex for WORM and SWP\_570

Return on capital remains stable

-increasing RAB offset by falling cost of capital

Depreciation increases due to

shorter asset lives and low inflation

Composite tariff starts with a **zero P<sub>0</sub>**,

followed by increases of 3.4% per year

Total increase over 2022 tariffs is about 17¢/GJ

About \$9.25 per year (on \$1,350) for domestic customers

About \$85 per year (on \$9,426) for business customers

\$2022 m	2023	2024	2025	2026	2027
Forecast capital expenditure	130.6	110.9	49.6	32.2	28.8
Forecast operating expenditure	35.3	36.5	35.9	36.0	36.2

\$m nominal	2023	2024	2025	2026	2027
Opening Regulated asset base	1,139.6	1,249.2	1,330.1	1,339.7	1,326.5
WACC	4.3%	4.1%	4.0%	3.9%	3.7%
Return on Capital	48.7	51.7	53.2	51.7	49.4

\$m nominal	2023	2024	2025	2026	2027
Return on Capital	48.7	51.7	53.2	51.7	49.4
Return of Capital (regulatory depreciation)	25.1	35.6	43.5	48.4	45.6
Operating Expenditure	36.0	38.0	38.1	39.0	40.0
Revenue Adjustments	-	-	-	-	-
Net Tax Allowance	-	-	-	-	-
Total Revenue (unsmoothed)	109.8	125.2	134.7	139.2	135.0
Smoothed revenue requirement	115.5	121.8	128.5	135.5	142.9
X factors tariff revenue (%)	0	-3.4%	-3.4%	-3.4%	-3.4%

Year	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Volumes (PJ)	220	229	222	225	206	206	203	201	197	198
Target revenue (\$m nominal)	108	110	111	112	113	115	122	128	135	143
System Average tariff	0.49	0.48	0.50	0.50	0.55	0.56	0.60	0.64	0.69	0.72

# How does this proposal compare to the current AA?

Building Block Components (\$m, Nominal)						2022	2023	2024	2025	2026	2027
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Return on Capital		55.84	58.74	61.27	63.06	61.72	48.70	51.67	53.20	51.74	49.41
Return of Capital (regulatory depreciation)		12.93	15.73	17.81	21.41	17.04	25.10	35.60	43.50	48.43	45.63
Operating Expenditure		26.59	27.35	28.03	29.82	30.77	35.99	37.97	38.05	39.01	40.00
Revenue Adjustments		7.07	4.72	3.86	2.36	-	-	-	-	-	-
Net Tax Allowance		1.63	2.04	2.22	1.66	0.40	-	-	-	-	-
Annual Building Block Revenue Requirement (unsmoothed)		104.06	108.57	113.19	118.31	109.93	109.79	125.25	134.75	139.18	135.04

Revenue Cap Calculation (\$m, Nominal)						2022	2023	2024	2025	2026	2027	
Unsmoothed - Annual Building Block Revenue Requirement	103.20	104.06	108.57	113.19	118.31	109.93	113.19	109.79	125.25	134.75	139.18	135.04
		4.10	First year difference (\$m)				5.66	First year difference (\$m)				
		3.94%	First year difference (%)				5.15%	First year difference (%)				
Smoothed - Maximum Allowed Revenue	103.20	108.16	109.52	110.85	111.79	113.19	113.19	115.45	121.78	128.46	135.50	142.92
X Factors		P_0	X_02	X_03	X_04	X_05		Set rev_01	Set rev_02	Set rev_03	Set rev_04	Set rev_05
positive P0, X imply real decrease in revenue constraint		-2.30%	1.16%	1.21%	1.56%	1.17%		P_0	X_02	X_03	X_04	X_05
								0.00%	-3.41%	-3.41%	-3.41%	-3.41%