

**Submission to the Australian Energy Regulator re
AER Draft Decision and APA's Revised VTS Access
Arrangement 2018-2022**



20th September 2017

Mr Chris Pattas
General Manager, Network Regulation
Australian Energy Regulator
GPO Box 520
Melbourne VIC 3001,

Submitted by email to: VicGAAR2018-22@aer.gov.au

Dear Mr Pattas,

APA VTS Access Arrangement 2018-2022

Lochard Energy, owner/operator of the Iona Underground Gas Storage in Western Victoria, wishes to provide comments on the AER's Draft Decision on the APA VTS Access Arrangement 2018-2022 and APA's Revised VTS Access Arrangement. The VTS Access Arrangement plays a central role in the further development of the gas market in Victoria and in the broader south-eastern Australian context. These comments are additional to the comments Lochard Energy has provided in conjunction with the Industry Consortium.

This submission follows our March submission, as part of the Consortium, on APA's Proposed VTS Access Arrangement, in which we expressed concern that that Access Arrangement did not sufficiently address the requirement for expansion of the VTS South West Pipeline capacity, to increase access to Iona Underground Gas Storage. We are pleased that APA subsequently addressed the first stages of this expansion by proposing to advance the construction of the Western Outer Ring Main and that AER's Draft Decision approved this proposal, subject to the views of stakeholders.

Lochard Energy fully supports construction of the WORM but notes that the planned expansion of our underground storage, requested by our customers and notified to AEMO, calls for South West Pipeline capacity expansion beyond that provided by WORM, within the 2018-2022 period to further add to gas security of supply. The submission below provides further details of these requirements and the substantial additional investment required in the VTS.

Lochard Energy also strongly supports the Consortium's current submission and the view that:

- It would be of value for the AER's final decision to note the desirability of the westbound expansion of SWP and WORM investments proceeding as planned and to encourage APA to include them in the Service Envelope Agreement (SEA) within 10 business days of the AER's Final Decision, as required by section 5.1 (a) of the SEA.
- APA's proposal to apply the cross-system tariff to all Iona refill gas is unfair to Iona gas that is reinjected into the VTS. The Consortium has put forward several alternatives and recommends the first option in which no cross-system tariff is applied for any Iona gas refill with a second option recommending a Refill Certificate concept, which will reimburse the cross-system tariff to gas that is reinjected into the VTS which is consistent with AER's Draft Decision.

If you wish to discuss any aspect of this submission further, please contact Vuong Nguyen at Vuong.Nguyen@lochardenergy.com.au or on 03 8646 0509.

Yours Sincerely,



Anthony Fowler
CEO, Lochard Energy

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Appendix A. Abbreviations

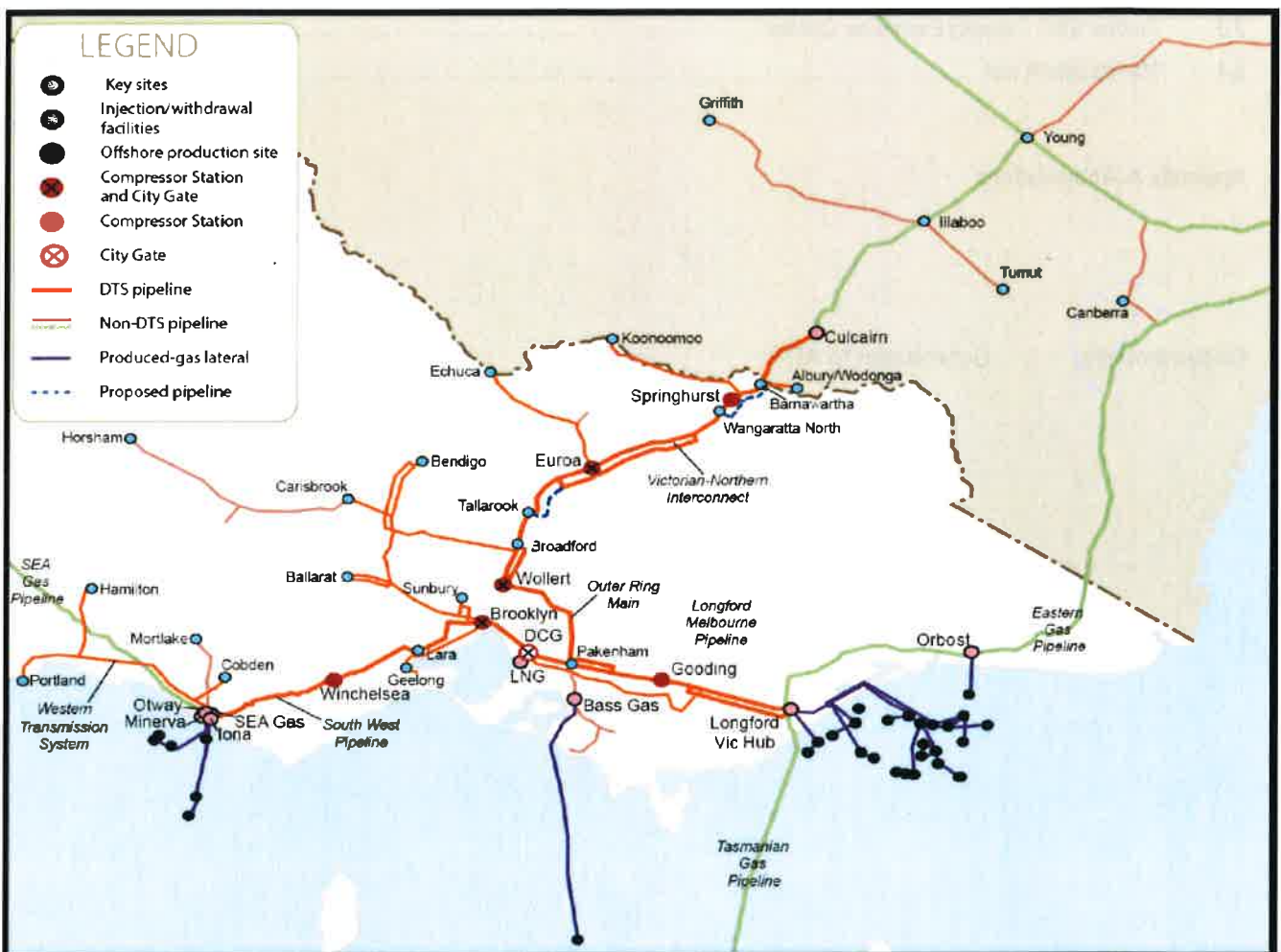
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1. Introduction

1.1 The APA VTS Access Arrangement

APA is the owner/operator of the Victorian Transmission System (VTS), a network of gas transmission pipelines serving Victorian gas users and linking with other pipelines that transport gas to markets in New South Wales, South Australia and Tasmania.

Figure 1-1 The Victorian Transmission System.



The VTS gas transmission network has the characteristics of a monopoly service provider and is regulated by the Australian Energy Regulator (AER), subject to the National Gas Law (NGL) and National Gas Rules (NGR). The VTS is a “covered” pipeline under the NGR and APA is required to periodically submit Access Arrangements (AAs), detailing the pipeline services offered and the proposed service tariffs, for AER approval.

In July 2017 AER released its Draft Decision regarding APA’s proposed VTS AA for the period 2018 to 2022. AER has requested interested parties to make submissions regarding the proposed VTS AA as part of its decision-making process. APA released a Revised VTS AA, responding to AER’s Draft Decision, on 14th August 2017.

1.2 Lochard Energy

Lochard Energy is the owner/operator of the Iona Gas Plant, a facility near Port Campbell in Western Victoria which comprises a gas processing plant and underground gas storage reservoirs, referred to as Iona Underground Storage or IUGS. The plant processes gas from offshore gas fields and the storage reservoirs and injects the gas into the VTS via the South West Pipeline (SWP) and into other connected pipelines. Lochard Energy's customers (gas retailers) use IUGS to store gas during low demand periods (typically in summer) and withdraw it from IUGS in high demand periods (typically in winter).

IUGS has the largest withdrawal capacity of all underground storages in Eastern Australia and has been expanded several times since it was constructed in 1998. It plays a key role in meeting higher gas demand in the southern Australian winter and during emergencies.

1.3 Content of this submission

Section 2 of this submission summarises:

- 1) Lochard Energy's customer requirements for additional SWP capacity
- 2) APA's proposed capital expenditure on SWP expansions
- 3) Further SWP capacity expansion options
- 4) Market benefits from further SWP expansion.

2. South West Pipeline Capacity Requirements

2.1 Lochard customer requirements

In the Consortium's March 2017 submission to AER it was noted that Lochard Energy's customers had indicated their combined need for a significant increase in SWP capacity (Table 2-1).

Table 2-1 Participants' SWP Requirements (towards Melbourne) (TJ/day)

2017	2018	2019	2020	2021
374	428	468	528	603

These requirements are driven by their need to access more storage, via SWP, as gas supply options decline and gas plant outages make contingency more valuable, together with declining load factor on the demand side. Accordingly, Lochard Energy plans to expand the Iona facility to meet market demand for storage services.

Details of the decline in gas supply were documented in both the Consortium's March 2017 submission and the submission by Marsden Jacob Associates¹ which the Consortium funded. Figure 2-1 provides an update on the contractual position of Eastern Australian domestic market participants, sourced from AEMO's 2017 Gas Statement of Opportunities. Compared to their 2016 position, which was reported in the Consortium's March Submission to AER, the participants' estimated contract cover has declined, notwithstanding their acute need for more cover.

This data shows that contracted production capacity supporting the southern Australian market (NSW, VIC, SA and TAS) will fall from 1350 TJ/day in 2017 to 784 TJ/day in 2018. Although AEMO's 2017 Victorian Gas Planning Report (VGPR) suggests that there is some prospective (uncontracted) MDQ supply available to meet some of the gap (refer to Table 2- below), Lochard Energy suspects that negotiations for this capacity may have already taken place and failed or been put on hold, owing to the high prices being asked by suppliers.

The high cost of alternatives is precisely the commercial motivation underlying Lochard Energy's customers' interest in contracting more IUGS capacity. If this IUGS capacity is not supported by further SWP capacity development, retailers will be obliged to take up higher cost options, with flow on effects to wholesale and retail prices.

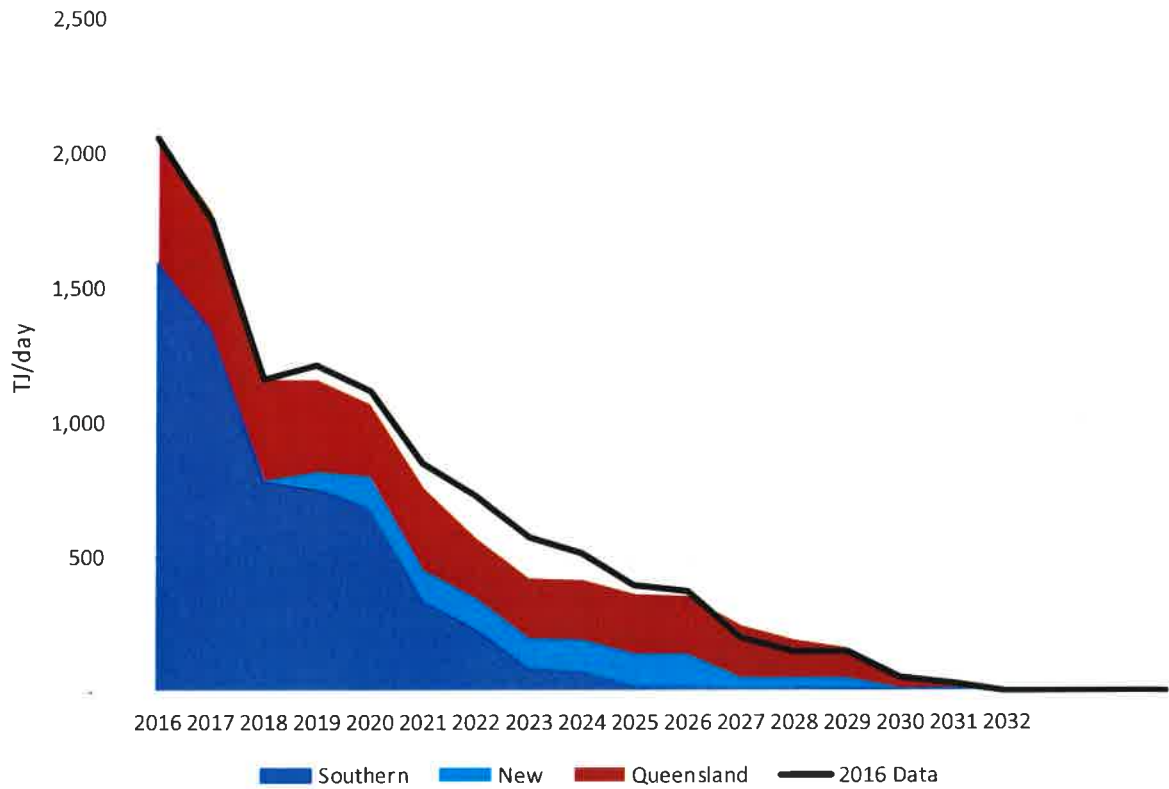
Table 2-2 AEMO Estimate of Prospective (Uncontracted) Peak Day Supply (TJ/day)

2017	2018	2019	2020	2021
0	252	242	262	635

Source: AEMO, 2017 Victorian Gas Planning Report, Table 3

¹ Marsden Jacobs Associates. Economics of SWP Expansion for the Access Arrangement Proposal (period 2018-2022)

Figure 2-1 Eastern Australian Peak Gas Supply Contracts, excluding storage (TJ/day)



Sources: Southern and Queensland, from AEMO 2017 GSOO; New from Cooper Energy and Strike Energy company communications.

2.2 APA Proposal

The APA Revised Access Arrangement contains two capital expenditure proposals that contribute to expanding the South West Pipeline capacity:

1. Westbound Expansion of the South West Pipeline²
 - a. Reconfiguration of the Brooklyn Compressor Station to enable concurrent compression of the Brooklyn Corio Pipeline and the Brooklyn Lara Pipeline at different pressures, thereby reducing compression to Geelong; and
 - b. Convert Winchelsea compressor to be bidirectional.

2. The Western Outer Ring Main (WORM)³
 - a. Pipeline: 49.3km (approx.) x 500mm Wollert to Plumpton
 - b. Compression: Additional Centaur 50 at Wollert Compressor Station B allocating compression from Pakenham to Wollert pipeline (existing connection) to the new WORM (new connection)
 - c. Regulator: A new interconnecting Pressure Reduction Station at Wollert connecting the Brooklyn Lara Pipeline (BLP) to the Pakenham-Wollert Pipeline

Note that technically this is stage 2 of WORM, Stage 1, 8.3km x 500mm from Rockbank to Plumpton was completed in 2012.

The Westbound Expansion of the South West Pipeline and WORM are scheduled to be completed in 2018 and 2020 respectively. The projected SWP capacities added by these projects are listed in Table 2-. The capacities stated are incremental, so that the augmented capacity is the sum of current capacity and all the capacities added.

Table 2-3 SWP Capacities Added by Expansion Projects (TJ/day)

Flow Direction	Current Capacity	Added by Brooklyn CS	Added by Winchelsea CS	Added by WORM	Augmented Capacity
Towards Melbourne	413	0	0	22	435
Away from Melbourne	104	30	15	73	220

Source: APA VTS Supplementary Capital Expenditure Submission, p12, consistent with the 2017 VGPR.

² APA Access Arrangement Revision Proposal Submission, p93-94

³ APA VTS Supplementary Capital Expenditure Submission, p12-13 and 19-20

These expansion projects, much as they are desirable to augment SWP capacity away from Melbourne to support IUGS Refill, do not even begin to meet Participants' requirements for incremental SWP capacity towards Melbourne. Table 2-4 summarises the annual increments of capacity that Participants have indicated on a combined basis need to be developed.

Table 2-4 Participants' Incremental SWP Capacity Requirements after WORM (additive, towards Melbourne) (TJ/day)

2017	2018	2019	2020	2021
N/A	15	40	60	53 ⁴

The insufficiency of the WORM alone for 'toward Melbourne' capacity was emphasised in the Marsden Jacobs Submission: *"This report identifies a need for greater expansion of SWP to Melbourne than the modest level of expansion under the options in the previous AEMO report and that this is a matter of priority within this 5-year period. The WORM should not delay the development of the shorter-term developments that are required as a matter of urgency"*.

2.3 Further SWP Capacity Expansion Options

The exact nature of the capacity expansion(s) required to meet Participants' requirements are not known. In the 2016 and 2017 VGPRs AEMO addressed SWP capacity expansion by means of the Westbound Expansion of the South West Pipeline and WORM plus a new bidirectional compressor at Lara costing \$44m in \$2016 terms.

The new compressor at Lara is therefore the only SWP expansion option considered by AEMO in the 2016 and 2017 VGPRs that APA has not proposed to construct during the 2018 -2022 Access Arrangement period. The capacity added by the Lara compressor is not clear: in the 2016 VGPR it is stated to add 37 TJ/day, taking SWP capacity to 472 TJ/day; the 2017 VGPR does not update the 472 TJ/day, even though the existing capacity is reduced from 429 TJ/day to 413 TJ/day. Whether the resulting SWP capacity is 472 TJ/day or somewhat less is almost immaterial however: it is very significantly less than the 603 TJ/day (refer Table 2-1) required by Participants.

Further capacity options for 'toward Melbourne' capacity must therefore be investigated and pursued as a priority. In earlier versions of the VGPR known as the VAPR, AEMO addressed longer term, 10-year outlook periods. In the 2012 VAPR it was stated that to meet high GPG load or when IUGS injections reached 520 TJ/d, SWP capacity expansion options would include duplication of the pipeline from Iona to Stonehaven, approximately 60% of its length. It seems clear from the limited SWP capacity available from additional compression that duplication will be necessary to meet the Participants' requirements, probably combined with additional compression.

The timescales for constructing the pipeline duplication are likely to be similar to those for constructing WORM, hence for this capacity to be available when required in 2020 and 2021, planning must begin immediately.

Lochard Energy believes that it is essential for APA and AEMO to investigate multiple additional SWP capacity expansion options as soon as possible. It must be determined whether an additional compressor should be constructed before or after pipeline duplication, where the compressor should be located and where the duplication should extend from and to. Given the scale of the expansion envisaged, it may also be prudent to

⁴ 75 TJ gross, less 22 TJ contributed by WORM

investigate whether the duplication would be more effective with a larger scale WORM, for example whether WORM should be built as a 600mm diameter pipeline rather than a 500mm diameter pipeline.

Lochard Energy intends to follow this up as expeditiously as possible with APA and AEMO.

Lochard Energy will strongly support construction of additional SWP capacity, whether it is an additional compressor or SWP duplication or by other means.

2.4 Market benefit test

The need for the gas supply capacity provided by the Iona Upgrade is demonstrated in Section 9 of the Marsden Jacobs Associates submission to AER (Figure 10). The cost of not providing this capacity will be curtailment of gas supply to parts of the Victorian Market (Large Industrial and/or Power Generation) for over 30 days annually, even without extreme demands. The annual volume curtailed would be about 3 PJ, with a value ranging from \$120m at \$40/GJ (the Victorian Market Administered price cap) to \$2.4bn at \$800/GJ (the Victorian Market price cap or Voll).

Avoidance of these costs would support very significant infrastructure programs, including SWP duplication. From the regulatory perspective, the key issues will be agreeing the level of SWP capacity required and the most cost-effective way to deliver that.

Appendix A. Abbreviations

AA	Access Arrangement
ACCC	Australian Competition and Consumer Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
APA	Australian Pipeline Trust
CSG	Coal seam gas (natural gas released from coal seams after drilling)
GJ, TJ, PJ	Giga-, Tera-, Petajoule (10 ⁹ , 10 ¹² , 10 ¹⁵ joules)
GPG	Gas powered generator
GPP	Gas processing plant
GSOO	Gas Statement of Opportunities
IUGS	Iona Underground Storage
LNG	Liquefied natural gas (gas cooled to -161C)
MJA	Marsden Jacobs Associates
NGL	National Gas Law
NGR	National Gas Rules
SEA	Service Envelope Agreement
SWP	South West Pipeline
VGPR	Victorian Gas Planning Report
VTs	Victorian Transmission System
WORM	Western Outer Ring Main

