AER - Rule 80 application by APA

EXECUTIVE SUMMARY

Victoria's gas system is undergoing a structural transition driven by declining domestic production, sustained peak winter demand, and increasing reliance on diverse supply sources to maintain system reliability and affordability during the energy transition. While natural gas will continue to play a critical role in supporting households, industry, and transport, the effectiveness of future supply solutions will increasingly depend on the adequacy, flexibility, and resilience of the Victorian Transmission System (VTS).

Australian Energy Market Operator (AEMO) forecasts indicate that by 2029 Victoria will face a material winter peak gas supply shortfall as production from the Bass Strait, particularly Longford, declines significantly. Without additional effective supply and transmission capacity, this shortfall is expected to be of the order of [redacted] under peak winter conditions. Addressing this gap will require timely investment in both new sources of supply and the transmission infrastructure needed to deliver gas into the VTS.

Vopak Victoria Energy Terminal Pty Ltd (Vopak) proposes to develop a floating liquefied natural gas (LNG) import terminal capable of supplying approximately 630 to 750 TJ/day of regasified natural gas from 2029. The Project aligns with national and state energy policy frameworks and is intended to provide a secure, flexible, and transitional source of supply during Victoria's pathway to net zero. However, the benefits of this additional supply — and of other emerging supply sources — cannot be realised unless sufficient transmission capacity exists within the South West Pipeline (SWP) to deliver gas into the VTS.

APA's Rule 80 application proposes a limited augmentation of the South West Pipeline, primarily through additional compression, resulting in a maximum deliverable capacity of approximately 615 TJ/day by winter 2028. Vopak considers that this proposal does not adequately address Victoria's foreseeable supply and system requirements and does not represent an efficient, optimal, or sustainable response in the context of the National Gas Objective.

In particular, the proposed augmentation does not provide sufficient capacity to offset the forecast decline in Longford production or to accommodate the scale of new supply required by 2029. Transmission constraints therefore remain a binding limitation on system outcomes, irrespective of supply availability. Further, reliance on incremental compression does not adequately account for the increasing complexity of system operations as Victoria transitions from a predominantly production-based supply model to one characterised by multiple, geographically dispersed, high-pressure injection points, including offshore production, onshore storage withdrawals, and LNG imports. Under these conditions, compression-only solutions risk exacerbating pressure interactions and constraining effective system flexibility during peak demand periods.

The proposed approach also gives rise to material investment coordination and timing risks. Large-scale, capital-intensive supply projects require credible, timely, and scalable transmission capacity as a precondition to reaching Final Investment Decision. Deferring substantive transmission augmentation until after supply projects are committed creates a

circular dependency that increases investment risk and may delay or deter otherwise efficient supply investments. This outcome is inconsistent with efficient system planning and with the National Gas Objective, which seeks to promote efficient investment in anticipation of reasonably foreseeable demand.

From an access and competition perspective, maintaining a constrained transmission corridor and relying on compression to manage flows risks creating access outcomes that are increasingly dependent on pressure conditions and timing. This may favour certain supply sources over others and limit equitable access to shared pipeline capacity, potentially undermining competitive market outcomes and the efficient utilisation of new supply sources.

While APA characterises its proposal as the lowest-cost augmentation option, lowest upfront cost does not equate to efficient investment under the National Gas Objective. Efficient transmission investment requires a forward-looking assessment of foreseeable demand, supply diversity, system operability, resilience, and long-term consumer outcomes. In this context, alternative augmentation options — including physical capacity expansion through looping of the South West Pipeline — warrant comprehensive consideration, given their ability to deliver greater capacity sufficiency, improved hydraulic performance, shared access, scalability, and long-term system resilience.

Accordingly, Vopak submits that APA's Rule 80 application does not sufficiently demonstrate that the proposed augmentation of the South West Pipeline is fit for purpose in meeting Victoria's foreseeable gas supply needs. A broader and more holistic assessment of augmentation options is required to ensure that transmission investment decisions support timely supply development, reliable and secure system operation, and the long-term interests of Victorian gas consumers, consistent with the National Gas Objective.

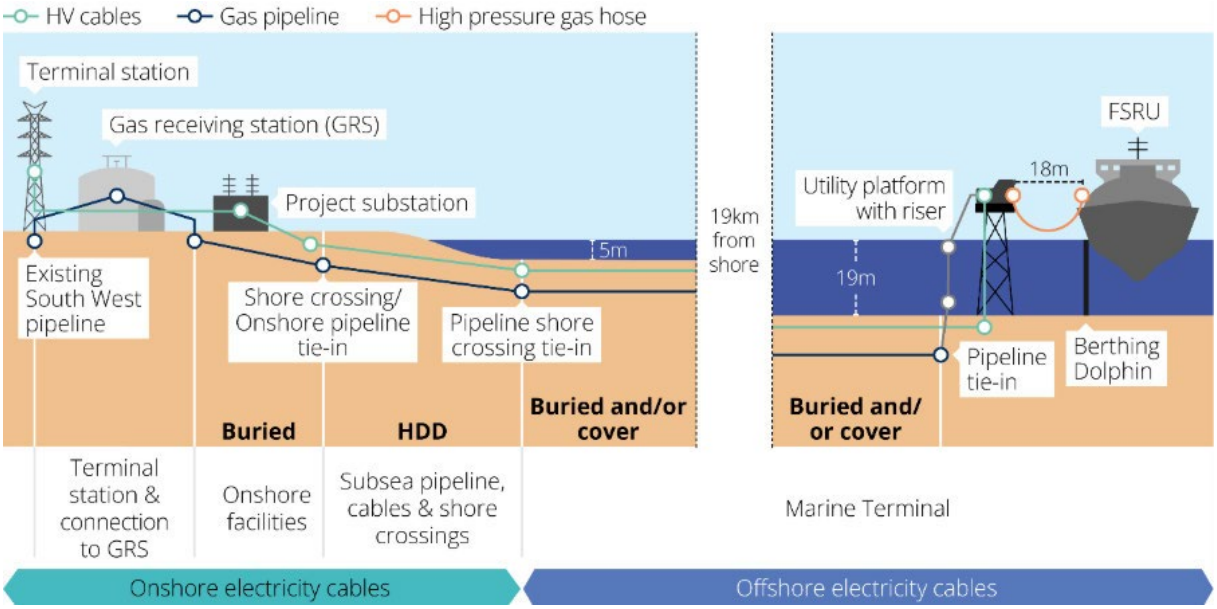
Vopak Victoria Energy Terminal

As Victoria transitions toward an increasingly renewable-based energy system, natural gas will continue to play a critical role in ensuring energy security, system reliability, and operational flexibility for households, transport, and industrial users. National and State policy frameworks - including the Future Gas Strategy (2024), Victoria's Gas Substitution Roadmap (2024), and the Gas Security Statement (2025) - identify liquefied natural gas (LNG) import terminals as a key component of a broader strategy to address forecast supply shortfalls while supporting affordability. Further, it will ensure system resilience on the East Coast of Australia and provide certainty for economic growth.

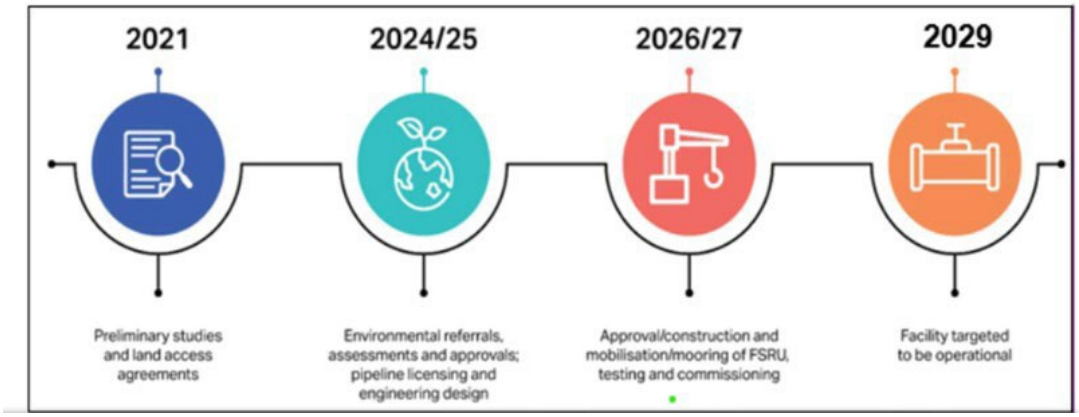
In response to forecast gas supply shortfalls and the need to maintain system reliability during the energy transition, Vopak Victoria Energy Terminal Pty Ltd (Vopak) proposes to develop a floating liquefied natural gas (LNG) import terminal in Victoria. The Project aligns with Victorian Government energy policy objectives and is intended to respond to emerging supply risks while maintaining regulatory consistency and market responsiveness. Importantly, it will only be required temporarily during the transition to net-zero.

The project comprises a Floating Storage and Regasification Unit (FSRU), being a floating vessel designed to receive LNG and convert it back into its gaseous state. The FSRU would

be moored at an existing designated anchorage approximately 20 kilometres offshore from Avalon in Port Phillip Bay. Specialised LNG carriers would berth alongside the FSRU to deliver LNG cargoes. Once transferred, the LNG would be regasified onboard the FSRU and supplied as natural gas for use by residential, commercial, and industrial customers. An overview of the Project is provided in **Figure 1.**



Construction of the Project is expected to take approximately 24 to 27 months, subject to construction staging and regulatory approvals. The Project is proposed to operate for a minimum period of 10 years, with commercial operations anticipated to commence in 2029. An indicative project schedule is provided in **Figure 2**.



Vopak's project is designed to receive and supply up to approximately four million tonnes of LNG per annum, corresponding to an estimated regasification capacity of approximately 630 to 750 terajoules per day (TJ/day). By comparison, average winter day gas demand in Victoria currently is approximately 900 to 1,000 TJ/day.

South West Pipeline connection

Vopak Victoria Energy Terminal will require a gas connection point between the GRS and the South West Pipeline to supply natural gas into the Victorian Transmission System (VTS).

The final section of the onshore gas pipeline would connect the VTS to the South West Pipeline, which is owned and operated by the Australian Pipeline Authority (APA) (Pipeline Licence No. 231). The connection works would be designed and constructed by APA and would be undertaken using a hot-tap connection methodology to minimise operational disruption.

Forecast supply and demand outlook

In 2025, Victoria experienced an average winter peak gas demand of approximately 1,300 terajoules per day (TJ/day). This demand was met through a combination of domestic gas production from Bass Strait (Longford), gas supplied via Dandenong LNG, and pipeline flows delivered through the South West Pipeline (SWP), including supply originating from the Otway Basin at Lochard.

By 2029, winter peak gas demand is forecast by AEMO to increase to approximately 1,340 TJ/day, as illustrated in figure 3. However, over the same period, gas supply from the Longford facility is expected to decline significantly. This reduction in domestic production will create a material supply shortfall that must be addressed either through the development of new legacy long distance pipeline infrastructure from northern Australia or through the establishment of a virtual supply network enabled by a gas import terminal.

Figure 3, based on AEMO data, illustrates the forecast supply position under different scenarios and highlights the scale of the emerging shortfall without SWP expansion.

Source of Supply	2025 (TJ/d)	2029 - Without Vopak (TJ/d)	2029 - With Vopak (TJ/d)
Longford	690	285	285
South West Pipeline (SWP)	520	615	615
Dandenong LNG	90	90	90
Vopak LNG Import Terminal (Basis of Design)	–	–	700
Total expected supply	1300	990	1690

System Demand (Peak winter day)	**1300**	**1340**	**1340**

Source: AEMO VGPR March 2025 (https://www.aemo.com.au/energy-systems/gas/gas-forecasting-and-planning/victorian-gas-planning-report)

Assessment of APA's rule 80 application – South West Pipeline

Without an increase in effective supply and transmission capacity to offset the forecast decline in production from Longford, Victoria is expected to face a shortfall of approximately [redacted] TJ/day during peak winter conditions by 2029. This shortfall represents a material risk to gas supply adequacy and energy system security.

While the introduction of Vopak's proposed LNG import terminal would materially increase available supply to Victoria, the benefits of this additional supply cannot be realised unless there is sufficient transmission capacity within the South West Pipeline (SWP) to deliver gas into the Victorian Transmission System (VTS). Transmission constraints therefore represent a binding limitation on system outcomes, irrespective of supply availability.

APA's current application to the Australian Energy Regulator under Rule 80 proposes a limited augmentation of the SWP, primarily through the installation of additional compression. Under this proposal, the maximum deliverable capacity of the SWP in 2029 would remain constrained at approximately 615 TJ/day. Vopak considers that this level of augmentation is insufficient to address the forecast supply shortfall and does not represent an efficient, optimal, or sustainable solution in the context of Victoria's evolving gas supply mix.

Investment timing and coordination risk

In assessing APA's Rule 80 application, it is also important to consider the investment sequencing and coordination implications of the proposed approach.

APA has indicated that major transmission upgrades would generally be progressed once projects have reached Final Investment Decision (FID). While this approach may be appropriate for smaller or incremental developments, it presents challenges for large-scale, capital-intensive projects, such as LNG import terminals, which require firm and credible transmission capacity as a pre- condition to reaching FID.

In practical terms, Vopak's LNG regasification terminal is unlikely to reach FID in the absence of a clear commercial and regulatory pathway to sufficient expansion of South West Pipeline capacity to ensure that Vopak's terminal is used efficiently. Uncertainty regarding the timing, scale and deliverability of SWP expansion materially increases investment risk and may prevent otherwise efficient gas supply projects from proceeding. This creates a circular dependency whereby supply investment is deferred due to constrained or uncertain

transmission capacity, while transmission investment is deferred pending supply project commitment.

From a system planning perspective, this outcome risks delaying or deterring the timely delivery of new supply required to address forecast shortfalls and is inconsistent with the National Gas Objective, which seeks to promote efficient investment in anticipation of reasonably foreseeable demand.

Accordingly, the timing and scale of the proposed SWP augmentation should be evaluated against the broader system need to facilitate timely and efficient supply investment consistent with the National Gas Objective and not against only existing committed projects.

Inadequate consideration of system wide requirements

The proposed upgrade does not adequately account for the broader system wide requirements of the VTS, particularly under conditions where multiple high pressure gas supply sources are injecting concurrently. As Victoria transitions from a predominantly domestic production-based system to one increasingly reliant on diverse and geographically dispersed supply sources, the transmission network must be capable of accommodating multiple injection points without creating operational conflict or congestion.

The current Rule 80 application for expansion of VTS SWP appears to be assessed largely in isolation, without sufficient consideration of how competing injections - such as those from offshore production, onshore storage withdrawals, and LNG import facilities - interact wholistically within the system. In practice, reliance on incremental compression alone risks increasing pressure differentials and exacerbating constraints at key injection and offtake points. This would especially apparent during peak demand periods.

As a result, the proposed expansion (compression) may reduce effective system flexibility, despite increasing nominal compression capacity. This is a sub optimal outcome that is inconsistent with the National Gas Objective, which requires efficient investment in, and operation of gas services for the long term interests of consumers with respect to price, quality, safety, reliability and security of supply.

Implications for access and competition

From an access and competition perspective, the proposed upgrade may also create unintended consequences. By maintaining a constrained transmission corridor and relying on compression to manage flows, the system may increasingly favour certain injection points over others, depending on pressure conditions and timing of supply. This outcome risks undermining equitable access to shared pipeline capacity and could limit the ability of new supply sources - such as LNG imports to compete effectively in the Victorian gas market.

In this context, Vopak considers that the proposed Rule 80 application by APA does not sufficiently demonstrate that it represents the least-cost, technically efficient means of

meeting foreseeable demand and supply patterns for the state, as required under the regulatory framework.

Looping as a more efficient and sustainable alternative

By contrast, looping of the South West Pipeline would provide an optimal and more materially robust solution. It decreases the risk of supply not being met during peak demand events. Looping increases physical pipeline capacity, improves hydraulic performance, and enables multiple supply sources to inject gas concurrently without creating adverse pressure interactions. Importantly, looping supports shared access to transmission capacity and facilitates efficient balancing across the VTS, particularly during peak demand events.

Looping also provides a scalable and future proof investment pathway. As additional supply sources come online or demand patterns evolve, a looped pipeline offers greater operational flexibility than compression-only solutions and reduces the risk of repeated incremental upgrades that may ultimately prove inefficient or suboptimal.

Vopak therefore considers that APA's current Rule 80 application will not adequately address the broader system needs of Victoria, nor does it sufficiently assess alternative augmentation options that may better meet the National Gas Objective. A more holistic assessment - incorporating supply diversity, competing injections, system balancing requirements, and long-term market development - is required to ensure that investment decisions deliver efficient, secure, and equitable outcomes for Victorian gas consumers.

Timing and sufficiency of the proposed augmentation

In assessing APA's Rule 80 application, it is important to consider not only the timing of the proposed augmentation, but also whether the scale and form of the upgrade are sufficient to address foreseeable supply and system requirements.

APA has indicated that its proposed augmentation of the South West Pipeline would be delivered by winter 2028 and represents the lowest cost option from a build perspective. Vopak acknowledges this stated delivery timeframe. However, even if delivered as proposed, the augmentation would result in a maximum SWP capacity of approximately 615 TJ/day, which remains insufficient to address the forecast decline in Longford production and the resulting winter peak supply shortfall expected by 2029. As such, with all other factors considered it is not a genuine lowest cost option.

From a system perspective, delivery of a constrained augmentation by 2028 does not resolve the underlying capacity limitation facing the VTS. In particular, the proposed solution does not adequately accommodate the emergence of multiple supply sources, nor does it provide sufficient flexibility to manage competing injections during peak demand conditions.

Further, reliance on incremental compression does not provide the same system resilience, shared access benefits or scalability as physical pipeline expansion. As a result, even if

delivered on APA's stated timeline, the proposed upgrade risks entrenching a situation in which additional supply investments cannot be efficiently accommodated, thereby limiting the system's ability to respond to predicted supply risks.

The National Gas Objective requires efficient investment in gas services that promotes reliable and secure supply when it is needed, not merely the delivery of the lowest cost asset under a narrow set of assumptions. Accordingly, the Rule 80 assessment should consider whether the proposed augmentation provides sufficient capacity and system functionality to meet reasonably foreseeable demand and supply conditions, rather than deferring more substantive solutions to a later period, especially given that that later period will be after AEMO's forecast shortage of 2029.

Conclusion

Based on the analysis set out in this submission, Vopak considers that APA's Rule 80 application does not adequately demonstrate that the proposed augmentation of the South West Pipeline is fit for purpose in meeting Victoria's foreseeable gas supply needs.

While APA's application presents a lowest cost augmentation option within a narrow assessment framework, it does not sufficiently address whether the proposed investment delivers adequate capacity, operational flexibility and system resilience in a transmission network that is undergoing structural change. In particular, the application does not demonstrate that the proposed approach enables efficient entry of new supply sources, supports equitable access to shared capacity or avoids the risk of repeated, incremental upgrades over a short timeframe.

The National Gas Objective requires transmission investment decisions to promote the long-term interests of consumers through efficient, sufficient and forward looking investment, having regard to foreseeable demand, supply diversity and system operability. In Vopak's view, these considerations have not been fully reflected in the current Rule 80 application.

Accordingly, Vopak submits that the AER should require a broader and more holistic assessment of augmentation options for the South West Pipeline, including consideration of alternatives that provide greater capacity sufficiency, shared access, scalability and long term system resilience, consistent with the National Gas Objective. In its current form, APA's Rule 80 application is a solution that is sub-optimal and will create conditions that will open the VTS to considerable risk of requiring supply constraints.