



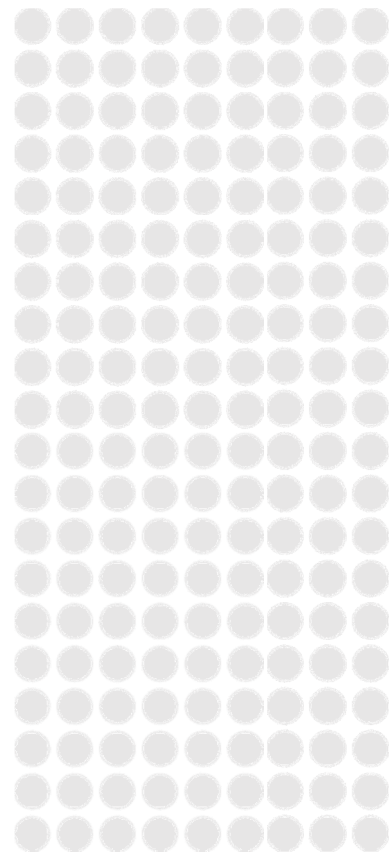
3 January 2017

victorian transmission system access arrangement.

Effective 1 January 2018 to 31 December 2022

APA VTS Australia (Operations) Pty Ltd

ABN 65 083 009 278



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1 Introduction

1.1 General

This Access Arrangement is established pursuant to the National Gas Law and Part 8 of the National Gas Rules and sets out the policies and the terms and conditions of Service Provider applying to third party access to the Victorian Transmission System (VTS).

Under the National Gas Rules, the owner or operator of a Covered Pipeline is required to lodge an Access Arrangement with (and have it approved by) the Australian Energy Regulator.

An Access Arrangement must, as a minimum, contain the elements described in Rule 48. These include:

- (a) the terms and conditions on which Service Provider will provide each Reference Service; and
- (b) capacity trading and queuing requirements, as well as how extensions and expansions will be treated for the Pipeline.

The Access Arrangement must be accompanied by applicable Access Arrangement Information (Rule 43).

1.2 VTS Service Provider

The VTS is owned by Service Provider. If a different entity becomes Service Provider of the VTS during the Access Arrangement Period, then that new entity will be the new Service Provider.

Service Provider makes this Access Arrangement for itself and on behalf of APA VTS (NSW) as owners of the VTS. However, Service Provider and APA VTS (NSW) are not partners. Where relevant, all references to Service Provider are taken to be references to each of Service Provider and APA VTS (NSW) severally.

Importantly, AEMO is not a service provider for the purposes of the National Gas Law, despite the fact that it controls and operates the VTS. Under section 8(2) of the National Gas Law, if AEMO controls or operates (without at the same time owning) a pipeline, AEMO is not for that reason to be taken to be a service provider.

1.3 Description of the VTS

The VTS is a high pressure gas transmission network which transports natural gas within Victoria and to New South Wales and South Australia. As at 1 January 2018, the VTS:

- (a) comprised over 2000km of pipelines;
- (b) had five main injection points at:
 - (i) Longford, being:
 - (A) the site of the Esso/BHP Billiton processing facility;
 - (B) VicHub (the interconnection with the Eastern Gas Pipeline);
and
 - (C) TasHub (the interconnection with the Tasmanian Gas Pipeline)
 - (ii) Culcairn (the interconnection with the Moomba-Sydney Pipeline System);
 - (iii) Port Campbell, being:
 - (A) the injection point for WUGS and various production fields;
and
 - (B) the interconnection with the SEA Gas Pipeline (including the Mortlake Pipeline), the Otway and Minerva gas processing plants;
 - (iv) Dandenong (the site of the LNG facility); and
 - (v) Pakenham (the injection point for gas sourced from the Yolla fields).

The VTS is described more fully in Schedule E of this Access Arrangement. A map of the pipeline can be viewed at <https://www.apa.com.au/our-services/gas-transmission/east-coast-grid/victorian-transmission-system/>

1.4 Commencement

This Access Arrangement commences on 1 January 2018.

1.5 Review

The Review Submission Date is 1 January 2022 (**Review Submission Date**).

The nominated Revision Commencement Date is 1 January 2023 (**Revision Commencement Date**).

Service Provider may also at any time between the commencement of this Access Arrangement and the Revisions Submission Date, submit revisions to this Access Arrangement to the AER under Rule 52.

1.6 Definitions and Interpretation

Schedule B to this Access Arrangement sets out the defined terms used in this Access Arrangement and the rules of interpretation that apply.

1.7 Structure of this Access Arrangement

This Access Arrangement is set out as follows:

- Section 1:** **Introduction** sets out an overview of this Access Arrangement including its structure, commencement date and revisions date.
- Section 2:** **Pipeline Services** describes the Services offered under this Access Arrangement and the procedure to obtain access to the Services.
- Section 3:** **Determination of Total Revenue** describes the Rules relevant for determining the Total Revenue requirement, and additional matters regarding New Capital Expenditure.
- Section 4:** **Reference Tariffs** describes the components of the Reference Tariff, and Reference Tariff Adjustment Mechanism.
- Section 5:** **Capacity Trading** refers to relevant arrangements under the Victorian Declared Wholesale Gas Market Rules.
- Section 6:** **Queuing** refers to relevant arrangements under the Victorian Declared Wholesale Gas Market Rules.
- Section 7:** **Extensions and Expansions** describes the manner in which extensions or expansions to the VTS will be dealt with under this Access Arrangement.



- Section 8:** **Fixed Principles** sets out Fixed Principles to apply in next and later Access Arrangement Periods.
- Schedule A** **Details - Initial Transmission Tariffs and Billing Parameters**
- Schedule B** **Definitions and Interpretation**
- Schedule C** **Injection and Withdrawal Zones**
- Schedule D** **Scheduled Reference Tariff Variation**
- Schedule E** **Description of the VTS**
- Schedule F** **Payment Deed Terms**

2 Pipeline Services

2.1 Relationship with AEMO

Service Provider owns the VTS and AEMO operates the VTS.

The transmission pipelines which comprise the VTS are Covered Pipelines, and access to the VTS is governed by the National Gas Rules. In order to obtain access to the VTS, a User must register with AEMO as a Market Participant (Shipper) under the National Gas Rules. The National Gas Rules also require that Shippers enter into an agreement with Service Provider that provides for the payment of the Transmission Tariffs to Service Provider.

In order to provide access to the VTS under the National Gas Rules, AEMO obtains the availability of the VTS from Service Provider. Service Provider and AEMO are parties to the Service Envelope Agreement, under which:

- (a) Service Provider:
 - (i) makes available the entire VTS to AEMO; and
 - (ii) provides a range of supporting services to AEMO; and
- (b) AEMO operates the VTS in accordance with the National Gas Rules.

2.2 Reference Service

Service Provider will provide one Pipeline Service under this Access Arrangement, being the Reference Service comprising the Tariffed Transmission Service.

2.3 Terms and Conditions

The terms and conditions on which Service Provider will supply the Tariffed Transmission Service are:

- (a) in respect of making the VTS available to AEMO, the same terms as those set out in the Service Envelope Agreement and the National Gas Rules; and
- (b) in respect of entering into agreements with Shippers for the payment of the Reference Tariffs, terms and conditions which reflect the principles in Schedule F.

2.4 Existing contractual obligations

The Service Envelope Agreement includes firm and binding contractual obligations of Service Provider and AEMO.

Service Provider is not required to provide any services or take any steps that are inconsistent with or that adversely affect the performance of:

- (a) Service Provider's obligations under the Service Envelope Agreement;
or
- (b) AEMO's obligations under the Service Envelope Agreement.

2.5 Availability of Service Envelope Agreement

Service Provider agrees to make available to a Shipper, upon request, a copy of the Service Envelope Agreement.

3 Determination of Total Revenue

3.1 Principles

Total Revenue is calculated using a building block approach in accordance with Rule 76.

In addition, Total Revenue may vary during the Access Arrangement Period, as Reference Tariffs are varied (see section 4).

Reference Tariffs were determined using a nominal weighted average of the return on equity and the return on debt resulting in an allowed rate of return on capital over the Access Arrangement Period as detailed in the Access Arrangement Information.

The expected revenue has been allocated to Reference Tariffs on the basis of Rule 95.

3.2 New Capital Expenditure

The Reference Tariff has been determined on the basis of:

- (a) the Capital Base; and
- (b) New Capital Expenditure that is part of the Covered Pipeline that is forecast to occur within the Access Arrangement Period and is reasonably expected to satisfy the requirements of Rule 79 (**Forecast Capital**).

Service Provider may increase the Capital Base for the Pipeline for any part of the New Capital Expenditure that satisfies Rule 79.

Service Provider may undertake New Capital Expenditure that does not satisfy Rule 79. Where Service Provider does so, Service Provider may increase the Capital Base for any part of that New Capital Expenditure that does satisfy Rule 79. Service Provider may also increase the Capital Base for Capital Contributions under Rules 82(2) and (3).

The amount that does not satisfy the requirements of Rule 79, to the extent that it is not to be recovered through a Surcharge on Users or a Capital Contribution, may form part of the Speculative Capital Expenditure Account (as contemplated by Rule 84). Service Provider may increase the Capital

Base in accordance with Rule 84(3) if a part of the Speculative Capital Expenditure Account subsequently satisfies the requirements of Rule 79.

Any increase in the Capital Base under this section 3.2, or in accordance with Rule 80, may only take effect from the Revisions Commencement Date, or in accordance with the operation of the Cost Pass-through Reference Tariff Variation Mechanism.

3.3 Surcharges

Service Provider may charge Users a Surcharge where permitted by the National Gas Rules. Service Provider will notify the AER of any proposed Surcharge to be levied on Users of incremental services and designed to recover non-conforming capital expenditure or a specified portion of non-conforming capital expenditure. Non-conforming capital expenditure which is recovered by means of a Surcharge will not be rolled into the Capital Base.

3.4 Capital Contributions

Service Provider may charge Users a Capital Contribution to new capital expenditure where permitted by the National Gas Rules (see Rule 82).

3.5 Capital Redundancy Mechanism

In accordance with Rule 85, the AER may review, and if necessary, adjust the Opening Capital Base at 1 January 2023 based on the following principles:

- (a) any assets that cease to contribute as a whole to the delivery of the Reference Service to Users shall be removed from the Capital Base; and
- (b) costs associated with a decline in the volume of sales of the Reference Service provided by means of the VTS will be shared between Service Provider and Users.

Subject to the New Capital Expenditure criteria under Rule 79, if, after the reduction of the Capital Base by the value of assets identified as redundant, the assets later contribute to the delivery of the Reference Service (however described at the time), the assets will be treated as New Capital Expenditure (for the purposes of Rules 79, 81 and 84) equal to the value of the assets identified as redundant increased annually on a compounded basis by the weighted average cost of capital from the time the assets identified as redundant were removed from the Capital Base.

3.6 Incentive Mechanism

As contemplated by Rule 98, this Access Arrangement incorporates an incentive mechanism that permits Service Provider to retain certain returns (if any) from the Reference Tariffs during the Fifth Access Arrangement Period that exceed the level of returns expected at the beginning of the Fifth Access Arrangement Period.

In particular, this Access Arrangement incorporates a rolling carryover incentive mechanism that permits Service Provider to retain efficiency gains from the Fifth Access Arrangement Period in the Sixth Access Arrangement Period as discussed in section 8.2.

3.7 Fixed Principles

The Fixed Principles applying to the Sixth Access Arrangement Period are set out in section 8.

3.8 Depreciation for opening Capital Base for next access arrangement period

The depreciation schedule for establishing the Opening Capital Base at 1 January 2023 will be based on forecast capital expenditure.

4 Reference Tariffs

4.1 Components of Reference Tariff

The Reference Tariffs comprise:

- (a) the Injection Tariffs, being the tariffs for Injections into the VTS; and
- (b) the Withdrawal Tariffs, being the tariffs for Withdrawals from the VTS.

The Injection Tariff applicable to an Injection into the VTS is determined by reference to the location of the Injection and, if necessary, the deemed location of the Matched Withdrawal.

The principles for determining the applicable Injection Zone and Matched Withdrawal Zone are discussed below in sections 4.2 and 4.3 respectively.

4.1.1 Withdrawal Tariffs

The Withdrawal Tariff applicable to a Withdrawal from the VTS is determined by reference to the location of the Connection Point at which the Withdrawal occurs and the nature of the Withdrawal.

The principles for determining the applicable Zone in which a Connection Point is located and the nature of a Withdrawal are discussed below in sections 4.2 and 4.4 respectively.

4.2 Assignment of Zones

Each Withdrawal at a Connection Point is taken to occur in the Withdrawal Zone to which the Connection Point is allocated in accordance with Schedule C.

Each Injection at a Connection Point is taken to occur in the Injection Zone to which the Connection Point is allocated in accordance with Schedule C.

4.3 Assignment of Withdrawals to Injection locations

- (a) For the purposes of Schedule A, Withdrawals by a Shipper in a Withdrawal Zone on a Gas Day are deemed to have been Injected:
 - (i) at the closest Injection Zone at which the Shipper injected gas, to the extent that such Injections have not been deemed to have

been Withdrawn at a closer Withdrawal Zone to that Injection Zone;

- (ii) to the extent that Shipper's Withdrawals have not been allocated under subsection (i), at the next closest Injection Zone at which the Shipper Injected gas on that Gas Day, to the extent that such Injections have not been deemed to have been Withdrawn at a closer Withdrawal Zone to that Injection Zone; and
 - (iii) to the extent that Shipper's Withdrawals have not been allocated under subsection (i) or subsection (ii), at further Injection Zones, in increasing order of distance, at which the Shipper Injected gas on that Gas Day, to the extent that such Injections have not been deemed to have been Withdrawn at closer Withdrawal Zones to those Injection Zones, until all Withdrawals by a Shipper are allocated to Injection Zones or all gas Injected by the Shipper on that Gas Day has been allocated, in which case subsection (b) below applies.
- (b) If a Shipper's total Withdrawals on a Gas Day are greater than its total Injections on that Gas Day, then the applicable Withdrawal Tariff for Withdrawal quantities greater than Injections (after the allocation under subsection (a)) will be the Withdrawal Tariff (which is not subject to matching) in the Withdrawal Zone at which the gas is Withdrawn.
- (c) If:
- (i) the quantity of gas that a Shipper has Injected at an Injection Zone on a Gas Day is greater than that Shipper's Matched Withdrawals between and including that Injection Zone and the Metro South East and Metro North West Withdrawal Zones for that Gas Day; and
 - (ii) that excess is Withdrawn from one or more of the LaTrobe, Tyers, Lurgi, West Gippsland, Western, South West or Geelong Withdrawal Zones,

then all such excess gas will be subject to the applicable Cross System Withdrawal Tariff, in addition to any applicable Injection or Withdrawal Tariffs.

- (d) For the purposes of this section 4.3:

- (i) the distance between an Injection Zone and a Withdrawal Zone is measured by pipeline distance (and not geographic distance);
- (ii) within each Withdrawal Zone, gas subject to Transmission Delivery Tariff V is allocated before gas subject to Transmission Delivery Tariff D;
- (iii) withdrawals at a Connected Transmission Pipeline subject to a System Export Tariff within a Withdrawal Zone are deemed to be closer to the Injection Point than other Withdrawals from that Withdrawal Zone;
- (iv) all Injections and Withdrawals will be as determined by AEMO under the National Gas Rules;
- (v) withdrawals in the Metro (South East) Zone are deemed to be closer to the Pakenham Injection Point than those at the LNG Storage Facility;
- (vi) a Shipper who injects gas at an Injection Zone may assign that gas for the purposes of calculation of Matched Withdrawals relating to that Injection Zone to any other Shipper who Withdraws gas from a Withdrawal Zone to which a discounted Injection Tariff for that Injection Zone applies; and
- (vii) assignment of gas under section 4.3(d)(vi) must be evidenced by letters from both parties to Service Provider received by Service Provider no later than 18 Business Days after the month in which the gas flowed.

4.4 Allocation to Tariff D and Tariff V

Withdrawals at a Connection Point are allocated to Tariff D and Tariff V as follows.

- (a) If the Connection Point services an individual Consumer, then all gas delivered through that Connection Point is allocated to Transmission Delivery Tariff D.
- (b) If the Connection Point is a connection with a transmission system, then all gas delivered through that Connection Point is subject to Transmission Delivery Tariff D.

- (c) If the Connection Point services a distribution system, then the volume of gas subject to Transmission Delivery Tariff D is the sum of the gas delivered from that distribution system, subject to Distribution Tariff D, plus the applicable benchmark DUAFG allowance (if any), as applied by AEMO. Where the allocation of gas cannot be made at an individual Connection Point, the data is aggregated at the Withdrawal Zone level.
- (d) All gas subject to a Transmission Refill Tariff is allocated to Tariff D.
- (e) In any other case, the Withdrawal is subject to Transmission Delivery Tariff V.

4.5 Initial Reference Tariffs

The initial Reference Tariffs (excluding GST) to apply from 1 January 2018 to 31 December 2018 are set out in Schedule A.

The Reference Tariffs comprise:

- (a) the rules and billing parameters set out in Schedule A;
- (b) the GST-exclusive tariffs set out in Schedule A or as amended in accordance with this Access Arrangement; plus
- (c) an additional amount of GST calculated by multiplying the relevant GST exclusive tariffs by the prevailing GST rate.

4.6 Reference Tariff Variation Mechanism

Reference Tariffs may be varied during the Access Arrangement Period through the operation of the Reference Tariff Variation Mechanism which comprises:

- (a) a Scheduled Reference Tariff Variation Mechanism - which applies in respect of each Regulatory Year of the Access Arrangement Period after the First Regulatory Year; and
- (b) a Cost Pass-through Reference Tariff Variation Mechanism - under which Service Provider may seek to vary the Reference Tariffs as a result of a Cost Pass-through Event.

4.6.1 Scheduled Reference Tariff Variation Mechanism

The Reference Tariffs may be varied during the Fifth Access Arrangement Period in accordance with a specified formula.

The relevant formula is set out in Schedule D.

4.6.2 Scheduled Reference Tariff Variation process

Service Provider will notify the AER in respect of any Reference Tariff variation such that variations occur on the first of January of each Regulatory Year after the First Regulatory Year. The notification will be made at least 50 Business Days before the date of implementation and include:

- (a) an explanation and details of how the proposed adjustments have been calculated;
- (b) the cost of the Cost Pass Through Events previously approved by the AER;
- (c) the updated Trailing Average Portfolio Return on Debt to be used in the Post-Tax Revenue Model to determine the Total Revenue for the Regulatory Year for which the Reference Tariffs are to be varied;
- (d) the updated forecast of inflation to be used in the Post-Tax Revenue Model to determine the Total Revenue for the Regulatory Year for which the Reference Tariffs are to be varied;
- (e) the X factor for the Regulatory Year for which the reference tariffs are to be varied, which is calculated in the Post-Tax Revenue Model; and
- (f) the Reference Tariffs for the Regulatory Year for which Reference Tariffs are to be varied.

If Service Provider proposes variations to the Reference Tariffs and those variations have not been approved by the next 1 January, then the existing Reference Tariffs will apply until such time varied Reference Tariffs consistent with the access arrangement are approved by the AER.

If a past annual tariff adjustment contains a material error or deficiency because of a clerical mistake, accidental slip or omission, miscalculation or mis-description, the AER may change subsequent tariffs to account for these past issues.

Within 20 business days of receiving Service Provider's tariff adjustment notice, the AER will inform Service Provider in writing of whether or not it has verified the proposed Reference Tariffs.

The 20 business day period may be extended for time taken by the AER to obtain information from Service Provider, obtain expert advice or consult about the notification. However, the AER must assess a cost pass-through application within 90 business days, including any extension of the decision making time.

4.6.3 Cost Pass-through Reference Tariff Variation Mechanism

Subject to the approval of the AER under the National Gas Rules, Reference Tariffs may be varied after one or more Cost Pass-through Event/s occurs, in which each individual event materially increases or materially decreases the cost of providing the Reference Service. Any such variation will take effect from the next 1 January.

If a carbon cost event occurs, Service Provider must apply to the AER for a cost pass through if the carbon cost event materially decreases the cost of providing the Reference Service. Any such adjustment will take effect from the next 1 January.

For the purpose of any defined event, an event is considered to materially increase or materially decrease costs where the incurred or expected costs of that individual event meet the Materiality Threshold defined below.

Cost Pass-through Events are:

- a carbon cost event;
- an Insurance Cap Event;
- an insurer credit risk event;
- a natural disaster event;
- a new gas market structure development event;
- a regulatory change event;
- a service standard event;
- a tax change event; and
- a terrorism event.

Where:

Carbon cost event—means:

An event that occurs if, for a given Regulatory Year of the Access Arrangement Period, the Service Provider becomes liable for a carbon cost (part of which may be an estimate) in complying with a mechanism that is designed or intended to reduce or manage carbon emissions, or to otherwise reduce or manage greenhouse gas emissions. The carbon cost event is taken to have occurred at the time liability for carbon costs is established. Actual carbon costs and associated revenues are to be reconciled at the time that it is possible for Service Provider to calculate the carbon costs it has incurred for a Regulatory Year without use of estimation.

Insurance Cap Event—means:

An event whereby:

- a. Service Provider makes a claim or claims and receives the benefit of a payment or payments under a relevant insurance policy;
- b. Service Provider incurs costs beyond the relevant policy limit; and
- c. the costs beyond the relevant policy limit increase the costs to Service Provider of providing the Reference Service.

For this Insurance Cap Event:

- d. a relevant insurance policy is an insurance policy held during the Access Arrangement Period or a previous period in which access to the pipeline services was regulated; and
- e. Service Provider will be deemed to have made a claim on a relevant insurance policy if the claim is made by a related party of Service Provider in relation to any aspect of the pipeline or Service Provider's business.

Note for the avoidance of doubt, in making a determination on an Insurance Cap Event, the AER will have regard to, amongst other things:

- i. the insurance policy for the event;
- ii. the level of insurance that an efficient and prudent service provider would obtain in respect of the event; and
- iii. any assessment by the AER of Service Provider's insurance in approving the access arrangement for the VTS for the relevant period.

Insurer credit risk event—means:

An event where:

- a. An insurer of Service Provider becomes insolvent, and
- b. As a result, in respect of an existing, or potential, claim for a risk that was insured by the insolvent insurer, Service Provider:
 - i. is subject to a higher or lower claim limit or higher or lower deductible than would have otherwise applied under the insolvent insurer's policy; or
 - ii. incurs additional costs associated with self-funding an insurance claim, which would otherwise have been covered by the insolvent insurer.

Note for the avoidance of doubt, in making a determination on an Insurer Credit Risk Event, the AER will have regard to, amongst other things:

- i. Service Provider's attempts to mitigate and prevent the event from occurring by reviewing and considering the insurer's track record, size, credit rating and reputation; and
- ii. in the event that a claim would have been made after the insurance provider became insolvent, whether Service Provider had reasonable opportunity to insure the risk with a different provider.

Natural disaster event—means:

Any natural disaster including but not limited to fire, flood or earthquake that occurs during the access arrangement period and materially increases the costs to Service Provider in providing the Firm Service,

provided the fire, flood or other event was not a consequence of the acts or omissions of the Service Provider.

Note for the avoidance of doubt, in making a determination on a Natural Disaster Event, the AER will have regard to, amongst other things:

- a. whether Service Provider has insurance against the event; and
- b. the level of insurance that an efficient and prudent service provider would obtain in respect of the event.

New gas market structure development event—means as event whereby:

- a. a decision is made to develop and/or implement a new gas market structure in Victoria; and
- b. Service Provider incurs costs in developing and/or implementing systems, processes and procedures made necessary by the decision to develop and/or implement a new gas market structure.

Costs to be passed through are limited to prudent and efficient costs for the development and/or implementation of systems, processes and procedures made necessary by the decision to develop and/or implement a new gas market structure in Victoria.

Regulatory change event—means:

A change in regulatory obligation or requirement that:

- a. falls within no other category of Cost Pass-through Event; and
- b. occurs during the course of an Access Arrangement Period; and
- c. substantially affects the manner in which Service Provider provides the Reference Service; and
- d. materially increases or materially decreases the costs of providing the Reference Service.

Service standard event—means:

A legislative or administrative act or decision that:

- a. has the effect of:
 - (i) substantially varying, during the course of an Access Arrangement Period, the manner in which Service Provider is required to provide the Reference Service; or
 - (ii) imposing, removing or varying, during the course of an Access Arrangement Period, minimum service standards applicable to the Reference Service; or
 - (iii) altering, during the course of an Access Arrangement Period, the nature or scope of the Reference Service, provided by Service Provider; and
- b. materially increases or materially decreases the costs to Service Provider of providing the Reference Service.

Tax change event—means:

A tax change event occurs if any of the following occurs during the course of the Access Arrangement period for Service Provider:

- a. a change in a relevant tax, in the application or official interpretation of a relevant tax, in the rate of a relevant tax, or in the way a relevant tax is calculated;
- b. the removal of a relevant tax;
- c. the imposition of a relevant tax; and

in consequence, the costs to Service Provider of providing the Reference Service are materially increased or decreased.

Terrorism event—means:

An act (including, but not limited to, the use of force or violence or the threat of force or violence) of any person or group of persons (whether acting alone or on behalf of in connection with any organisation or government), which:

- a. from its nature or context is done for, or in connection with, political, religious, ideological, ethnic or similar purposes or reasons (including the intention to influence or intimidate any government and/or put the public, or any section of the public, in fear); and

- b. increases the costs to Service Provider of providing the Reference Service.

Note for the avoidance of doubt, in making a determination on a Terrorism Event, the AER will have regard to, amongst other things:

- i. whether Service Provider has insurance against the event;
- ii. the level of insurance that an efficient and prudent service provider would obtain in respect of the event; and
- iii. whether a declaration has been made by a relevant government authority that an act of terrorism has occurred.

4.6.4 Materiality threshold

For the purpose of a defined Cost Pass-through Event which has a materiality threshold of materially increasing or decreasing the costs to Service Provider of providing the Reference Service, an event is considered to materially increase or materially decrease costs where that event is reasonably expected to have an impact of one per cent of the smoothed forecast revenue specified in the Access Arrangement Information, in the years of the Access Arrangement Period that the costs are incurred. The defined Cost Pass-through Events with this materiality threshold are: Insurance Cap Event; insurer credit risk event; natural disaster event; regulatory change event; service standard event; tax change event; and terrorism event.

No materiality threshold applies to the Carbon Cost Event.

4.6.5 Notification and approval of cost pass through events

Service Provider will notify the AER of a Cost Pass-through Event within 90 business days of the Cost Pass-through Event occurring, and of whether the Cost Pass-through Event would lead to an increase or decrease in Reference Tariffs.

When the costs of the Cost Pass-through Event incurred are known (or able to be estimated to a reasonable extent), then those costs shall be notified to the AER. When making such notification to the AER, Service Provider will provide the AER with a statement, signed by an authorised officer of Service Provider, verifying that the costs of any pass through events are net of any payments made by an insurer or third party which partially or wholly offsets the financial impact of that event (including self-insurance).

The AER must notify Service Provider of its decision to approve or reject the proposed adjustments within 90 business days of receiving the notification. This period will be extended for the time taken by the AER to obtain information from Service Provider, obtain expert advice or consult about the notification.

However, if the AER determines the difficulty of assessing or quantifying the effect of the relevant Cost Pass-through Event requires further consideration, the AER may require an extension of a specified duration. The AER will notify Service Provider of the extension, and its duration, within 90 business days of receiving a notification from Service Provider.

An approved pass through amount from a Cost Pass-through Event is to be incorporated into the Reference Tariffs via the formula of the Scheduled Reference Tariff Variation Mechanism (in the way set out in Schedule D.3).

4.7 Pass through amounts which incorporate a forecast

For the purposes of calculating the benefit sharing allowance under section 8.2 and in applying the Reference Tariff Variation Mechanism in Schedule D, an amount passed through as a result of a Cost Pass-through Event which incorporates a forecast will be updated so as to reflect the actual Cost of the Event (when known).

4.8 Reference Tariffs after 31 December 2022

In the event that the Revision Commencement Date is later than 31 December 2022, the tariff in effect at 31 December 2022 shall continue to apply to the provision of the Reference Service between 31 December 2022 and that later Revisions Commencement Date.

5 Capacity Trading

5.1 Governing provisions

Service Provider is registered as a participant in the Victorian Declared Wholesale Gas Market. As such, under Rule 105, any transfer of capacity must be undertaken in accordance with rules or procedures governing the Victorian Declared Wholesale Gas Market.

There are no applicable capacity trading requirements for the purposes of Rules 48(1)(f) or 105 of the NGR.

5.2 Change of receipt or delivery point by user

The change of a User's receipt or delivery point is governed by Part 19 of the National Gas Rules and the Gas Scheduling Procedures. Under these rules and procedures, Service Provider's consent is not required for a User to change its receipt or delivery point.

6 Queuing

6.1 Queuing requirements - determination of the order of priority

The order of priority between prospective Users of spare or developable capacity is determined on a daily basis in accordance with Part 19 of the National Gas Rules.

7 Extensions and Expansions

7.1 Extensions to the pipeline

- (a) If Service Provider proposes an extension of the Covered Pipeline, it must apply to the AER for the AER to decide whether the proposed extension will be taken to form part of the Covered Pipeline such that this Access Arrangement would apply to the incremental services provided by the proposed extension.

The application given by Service Provider under this section 7.1 must:

- (i) be in writing
- (ii) state whether Service Provider intends for the proposed pipeline extension to be covered by this Access Arrangement
- (iii) describe the proposed pipeline extension and describe why the proposed extension is being undertaken; and
- (iv) be given to the AER before the proposed pipeline extension comes into service.

Subject to section 7.1(b), after considering Service Provider's application, and undertaking such consultation as the AER considers appropriate, the AER will inform Service Provider of its decision on Service Provider's proposed coverage approach for the pipeline extension.

The AER's decision referred to above, may be made on such reasonable conditions as determined by the AER consistent with the National Gas Objective and will have the effect stated in its decision on Service Provider's proposed coverage approach for the pipeline extension.

Service Provider is not required to apply to the AER under this section 7.1(a) to the extent that the cost of the proposed pipeline extension has already been included and approved by the AER in the calculation of Reference Tariffs.

- (b) An application made under section 7.1(a) may be accompanied by an application made under Rule 80 for the AER to make an advance

determination on whether the proposed extension will meet the new capital expenditure criteria.

Where the AER determines that the proposed extension does not meet the new capital expenditure criteria, the incremental capacity provided by that extension will not to be covered by this Access Arrangement where Service Provider elects for it not to be.

- (c) Where following application of section 7.1(a), this Access Arrangement applies to the incremental Services provided by an extension, Service Provider may elect to derive a new tariff zone in respect of reference services provided by that extension within the Access Arrangement period. Incremental revenue earned as a result of that extension will not be included in Target Revenue under Schedule D of this Access Arrangement.
- (d) This Access Arrangement will not apply to new services provided as the result of the interconnection of a new lateral to the pipeline to serve a market or connect a source of gas without an existing connection to the VTS.

7.2 Expansion of capacity above existing capacity

- (a) Subject to section 7.2(b), in the event that Service Provider expands the capacity of the VTS during the course of this Access Arrangement, this Access Arrangement will apply to the incremental Services provided as a result of the Expansion at the time it comes into operation, unless Service Provider proposes and the AER agrees that this Access Arrangement will not apply to the incremental Services provided as a result of that Expansion.
- (b) A proposal made under section 7.2(a) may be accompanied by an application under Rule 80 for the AER to make an advance determination on whether the proposed expansion will meet the new capital expenditure criteria.

Where the AER determines that the proposed expansion does not meet the new capital expenditure criteria, the incremental capacity provided by that expansion will not to be covered by this access arrangement where Service Provider elects for it not to be.

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- (c) Where following application of section 7.2(a), this Access Arrangement applies to the incremental Services provided by an expansion, Reference Tariffs will vary in accordance with Schedule D.

8 Fixed Principles

In making a determination in relation to the Reference Tariff (or Reference Tariffs) with respect to Service Provider for the Fifth Access Arrangement Period, the AER must adopt the following Fixed Principles.

8.1 Carry-forward amount

The AER must include in the Reference Tariffs for the Sixth Access Arrangement Period:

- (a) an allowance for FCA (as defined in Schedule D); and
- (b) an allowance for SCA (as defined in Schedule D).

8.2 Benefit sharing allowance

- (a) In each of the first five years after 2022, the Reference Tariffs must be determined in a manner that includes, in addition to all other amounts required or permitted under the Rules or Service Provider's Access Arrangement, a benefit sharing allowance calculated in accordance with this section.
- (b) The benefit sharing allowance (B_t) in each year (t) is equal to the sum of the efficiency gains (E_t) in selected prior years, as given in the following table:

Year	B_t
2023	$E_{2018} + E_{2019} + E_{2020} + E_{2021}$
2024	$E_{2019} + E_{2020} + E_{2021}$
2025	$E_{2020} + E_{2021}$
2026	E_{2021}
2027	

- (c) The efficiency gain for 2018 is to be calculated in accordance with the following formula:

$$E_{2018} = (F_{2018} - A_{2018}) - (F_{2017} - A_{2017}) + (F_{2016} - A_{2016})$$

where:

E_{2018} is the Service Provider's efficiency gain in 2018

F_{2018} is the Service Provider's forecast operating costs for 2018 as specified in section 8.2(f)

A_{2018} is the Service Provider's actual operating costs for 2018 as specified in section 8.2(e)

F_{2017} is the Service Provider's forecast operating costs for 2017 as specified in section 8.2(f)

A_{2017} is the Service Provider's actual operating costs for 2017 as specified in section 8.2(e)

F_{2016} is the Service Provider's forecast operating costs for 2016 as specified in section 8.2(f)

A_{2016} is the Service Provider's actual operating costs for 2016 as specified in section 8.2(e).

- (d) The efficiency gains or losses (E_t) for each of 2019, 2020, and 2021 are calculated in accordance with the following formula:

$$E_t = (A_{t-1} - A_t) - (F_{t-1} - F_t)$$

where:

A_t is the Service Provider's actual operating costs for year (t) as specified in section 8.2(e)

A_{t-1} is the Service Provider's actual operating costs for the year prior to year (t) as specified in section 8.2(e)

F_t is the Service Provider's forecast operating costs for year (t) as specified in section 8.2(f)

F_{t-1} is the Service Provider's forecast operating costs for the year prior to year (t) as specified in section 8.2(f)

- (e) In each case, A_t , A_{t-1} and A_{2016} , A_{2017} and A_{2018} must be determined:

- (i) using the same cost categories and methodology used to calculate the total forecasts in Table 11.1 of Service Provider's Access Arrangement Information;
 - (ii) without adjustments for volume.
- (f) Service Provider's forecast operating costs for any year, are equal to:
- (i) the forecast operating costs for that year as shown in Table 11.1 of Service Provider's Access Arrangement Information; plus
 - (ii) the aggregate of all costs associated with a Cost Pass-through Event with respect to that year; plus
 - (iii) additional operating and maintenance costs associated with Extensions and Expansions which are included in Service Provider's Capital Base at the commencement of the Sixth Access Arrangement Period, but which are not included in the forecast capital expenditure for 2018 to 2022.
- (g) For the purposes of calculating the benefit sharing allowance (B_t) in the years 2023 to 2026, the actual and forecast operating costs in 2018 to 2021 must be reduced to real 2016 dollars. The calculated allowance (B_t) in each year must then be adjusted by the actual and forecast CPI change between 2016 and that year (2023 to 2026).

8.3 Pass through carry forward

If:

- (a) a Cost Pass-through Event occurs in the Fifth Access Arrangement Period; and
- (b) the financial effect of the Cost Pass-through Event is not included in Reference Tariffs that applied in the Fifth Access Arrangement Period because the timing of the Cost Pass-through Event did not permit Service Provider to notify the AER of the event and / or the AER to assess the notification in time for the financial effect to be incorporated in those Reference Tariffs,

then Service Provider may include costs associated with that Cost Pass-through Event in a notification made under section 4.6.5 in the Sixth Access Arrangement Period if Service Provider did not make such a notification in the Fifth Access Arrangement Period (as if section 4.6.5 continued to apply in

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the Sixth Access Arrangement Period in respect of Cost Pass-through Events occurring in the Fifth Access Arrangement Period), with those costs, if approved by the AER, being reflected in the Reference Tariff to apply from the following 1 January.

For the purposes of:

- (a) Cost Past Through Events carried forward under this fixed principle; and
- (b) amounts passed through in the fifth Access Arrangement as a result of a Cost Pass-through Event which incorporate a forecast,

the intent of section 4.7 is to be given effect in the Sixth Access Arrangement Period.

A Details - Initial Transmission Tariffs and billing parameters

A.1 Details

Covered Pipeline	Victorian Transmission System (VTS)
Service Provider	APA VTS Australia (Operations) Pty Ltd
ABN	65 083 009 278
Address	PO Box 423, Flinders Lane, VIC 8009
Website	www.apa.com.au
Telephone	(03) 8626 8400
Fax	(03) 8533 2053
Attention	Commercial Manager

A.2 Injection Tariffs

(a) Injection at Longford Injection Zone

Matched Withdrawal Zone	Injection Tariff (\$/GJ, for the 10 Day Injection Volume)	2019-2022 annual X-factor
All Withdrawal Zones except LaTrobe, Maryvale, Tyers, West Gippsland and Lurgi	2.1400	6
LaTrobe & Maryvale	0.4296	6
West Gippsland	1.2840	6
Tyers & Lurgi	0.6147	6

(b) Injection at Culcairn Injection Zone

Matched Withdrawal Zone	Injection Tariff (\$/GJ, for the 10 Day Injection Volume)	2019-2022 annual X-factor
All Withdrawal Zones except Interconnect	1.3598	6
Interconnect	0.3304	6

(c) Injection at Port Campbell Injection Zone

Matched Withdrawal Zone	Injection Tariff (\$/GJ, for the 10 Day Injection Volume)	2019-2022 annual X-factor
All Withdrawal Zones except Western, South West and SEAGas Pipeline	2.1410	6
Western and SEAGas Pipeline	-	-
South West	0.7652	6

(d) Injection at Pakenham Injection Zone

Matched Withdrawal Zone	Injection Tariff (\$/GJ, for the 10 Day Injection Volume)	2019-2022 annual X-factor
All Zones	0.3449	6

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(e) Injection at Dandenong Injection Zone

Matched Withdrawal Zone	Injection Tariff (\$/GJ, for the 10 Day Injection Volume)	2019-2022 annual X-factor
All Zones	-	-

A.3 Withdrawal Tariffs

(a) Transmission Delivery Tariff

Subject to the exceptions in clauses A.3(b), A.3(c), A.3(d), A.3(e) and A.3(f) of this Schedule, the Withdrawal Tariffs are as follows:

Withdrawal Zone Number	Withdrawal Zone Name	Transmission delivery tariff D (\$/GJ)	Transmission delivery tariff V (\$/GJ)	2019-2022 annual X-factor
1	LaTrobe	0.1618	0.1589	6
2	West Gippsland	0.1947	0.2141	6
3	Lurgi	0.2276	0.2694	6
4	Metro North West	0.3335	0.3600	6
5	Calder	0.7975	1.0057	6
6	South Hume	0.3089	0.3745	6
7	Echuca	0.6575	1.1314	6
8	North Hume	0.8164	1.2354	6
9	Western	0.6505	0.9058	6
21	Warrnambool	0.1024	0.1725	0
22	Koroit	0.2157	0.6470	0
10	Murray Valley	0.7009	1.0569	6
11	Interconnect	0.8369	1.6040	6
13	South West	0.1592	0.1587	6

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17	Wodonga	0.9230	1.6040	6
18	Tyers	0.2039	0.2030	6
19	Culcairn	1.0645	NA	0
20	Metro South East	0.3335	0.3600	6
24	Geelong	0.2501	0.2916	6
25	Maryvale	0.0593	NA	0

(b) System Export Tariff

Where a Connection Point in an Injection Zone services an export of gas from the VTS to a Connected Transmission Pipeline, gas Injected at that Injection Zone and Withdrawn through that Connection Point is subject to the System Export Tariff specified below, instead of the Withdrawal Tariff specified in clause A.3(a) of this Schedule.

Withdrawal Zone Number	Connected Transmission Pipeline Name	System Export Tariff (\$/GJ)	2019-2022 annual X-factor
31	VicHub	0.0000	6
33	SEA Gas Pipeline	0.0205	6

(c) Transmission Refill Tariff

Where a Connection Point services a Storage Facility, all gas Withdrawn through that Connection Point is subject to the Transmission Refill Tariff specified below, instead of the Withdrawal Tariff specified in clause A.3(a) of this Schedule.

Withdrawal Zone Number	Storage Facility Name	Transmission Refill tariff (\$/GJ)	2019-2022 annual X-factor
23	LNG	0.0539	0
32	WUGS	0.0789	0

(d) Cross System Withdrawal Tariff

If:

(i) gas is Withdrawn at a Connection Point, other than a Connection Point servicing a Storage Facility, located on an Injection Pipeline other than the Interconnect Pipeline; and

(ii) that Withdrawal is a Matched Withdrawal with respect to an Injection Zone other than the Injection Zone for that Injection Pipeline,

then the Withdrawal is subject to the following Cross System Withdrawal Tariff in addition to the applicable Injection Tariff and Withdrawal Tariff.

Injection Pipeline	Cross System Withdrawal Tariff D (\$/GJ)	Transmission delivery tariff V (\$/GJ)	2019-2022 annual X-factor
All	0.1743	0.2013	6

(e) Matched Withdrawals - Culcairn

If a Withdrawal in one of the following Zones is a Matched Withdrawal relating to Injections in the Culcairn Zone, then the following Matched Withdrawal Tariffs apply instead of the tariffs described in clause A.3(a) of this Schedule:

Withdrawal Zone Number	Withdrawal Zone Name	Transmission delivery tariff D (\$/GJ)	Transmission delivery tariff V (\$/GJ)	2019-2022 annual X-factor
8	North Hume	0.3158	0.4194	6
11	Interconnect	0.1592	NA	6
17	Wodonga	0.1842	0.2072	6

(f) Matched Withdrawals - Metro (South East)

If a Withdrawal in the Metro South East Zone is a Matched Withdrawal relating to Injections in the Pakenham Zone, then the following Matched

Withdrawal Tariffs apply instead of the tariffs described in clause 1.3(a) of this Schedule:

Withdrawal Zone Number	Withdrawal Zone Name	Transmission delivery tariff D (\$/GJ)	Transmission delivery tariff V (\$/GJ)	2019-2022 annual X-factor
20	Metro South East	0.1654	0.1858	6

A.4 Billing parameters

Transmission Tariffs are charged in accordance with the billing parameters defined below.

- (a) Except where otherwise agreed between Service Provider and the Shipper, the Shipper will be charged monthly.
- (b) Withdrawal Tariffs are charged in accordance with the following procedure:

Charges are levied monthly in arrears where the monthly charge for month *m* for each Shipper is calculated by applying the following, summed over all Zonal Withdrawal Tariffs for each Shipper separately (1 to *n*):

$$MCA = \sum_{1}^{n} (MV_e * TC)_D + (MV_e * TC)_V + (MV_e * TC)_R + (MV_e * TC)_C$$

where:

MCA is the charge for the billing period;

MV_e is the estimated monthly volume for month *m* Withdrawn in the relevant Zone subject to the relevant tariff as provided by AEMO at day *M*+18;

TC is the applicable Zonal Withdrawal Tariff;

D refers to Transmission Delivery Tariff D;

V refers to Transmission Delivery Tariff V;

R refers to Refill Withdrawal Tariffs;

C refers to Cross System Tariffs

And adjustment charges are levied monthly

Where:

ADJ is the adjustment charge for month m-5.

Where:

$$ADJ = \sum_1^n ((MV - MV_e) * TC)_D + ((MV - MV_e) * TC)_V + ((MV - MV_e) * TC)_R + ((MV - MV_e) * TC)_C$$

where:

MV is the monthly volume for month m Withdrawn in the relevant Zone as provided by AEMO at day M+118.

- (c) Injection Tariffs applying to the Peak Period are charged in aggregate for each Shipper according to the following procedure:
- (i) for a billing period between January and October, the monthly charge is calculated by applying the relevant tariff to EMC, where:
 - (A) **EMC** is a monthly allocation of 10 Day Injection Volume for Regulatory Year "t", using a quantity agreed by Service Provider and the Shipper or, failing agreement:
 - (1) a load profile, based on the Shipper's actual annual Withdrawal load profile for Regulatory Year "t-1"; or
 - (2) if the Shipper has no load profile for Regulatory Year "t-1", the average system load profile for Regulatory Year "t-1"; and
 - (B) the 10 Day Injection Volume for Regulatory Year "t" is based on a prorata allocation across each Shipper based on injections from the previous year of the annual 10 Day Injection Volume applied as part of the annual tariff adjustment to Transmission Tariffs in accordance with Schedule D for Regulatory Year "t".

- (ii) for the November and December billing periods, the monthly charge is calculated by applying the following formula:

$$MC = (AAC - CBTD)/2$$

MC is the charge for each of the November and December billing periods in Regulatory Year “t”.

CBTD is the sum of the charges for all prior billing periods of Regulatory Year “t”.

AAC is the annual charge calculated by applying the relevant Transmission Tariff components to EAD.

where:

EAD is the actual 10 Day Injection Volume for Regulatory Year “t”.

B Definitions and Interpretation

B.1 Definitions

The following meanings apply unless the contrary intention appears. Capitalised terms used in this Access Arrangement which are not defined have the meaning given to those terms in the National Gas Rules.

10 Day Injection Volume means, in relation to each Injection Zone, a quantity of gas (in GJ) Injected on behalf of a Shipper at that Injection Zone during the 10 Gas Days in the Peak Period when the 10 highest quantities of gas (in GJ) were Injected at that Zone.

Access Arrangement has the meaning given to it in the National Gas Law and refers to this Access Arrangement.

Access Arrangement Information has the meaning given to it in the National Gas Law and refers to the Access Arrangement Information approved by the AER for the VTS.

AEMO means the Australian Energy Market Operator Limited ACN 072 010 327.

AEMO Services has the meaning given to it in the Service Envelope Agreement.

AER or **Regulator** means the Australian Energy Regulator.

Affected Party has the meaning given to it in clause 10 of Schedule F.

APA VTS (NSW) means APA VTS Australia (NSW) Pty Ltd ABN 14 079 136 413 (formerly APA GasNet Australia (NSW) Pty Ltd).

Applicable Law means any legislation, delegated legislation (including regulations), codes, licences or guidelines associated with the Tariffed Transmission Service, and includes the National Gas Rules.

Approval means the consents, authorisations, registrations, certificates, permissions, permits, licences, approvals, registrations, determinations, administrative decisions or exemptions which are required from, by or with any Authority or under any law (including any conditions or requirements under any of them).

Authority means any government or regulatory department, body, instrumentality, minister, agency or authority (including AEMO and the Regulator) or any body which is the successor to the administrative responsibilities to that department, body, instrumentality, minister, agency or authority.

Business Day means a day other than a Saturday or Sunday or a day proclaimed as a public holiday in Melbourne.

Capital Contribution is a contribution made by a User under Rule 82.

Change in Control of an entity occurs if a person who did not previously do so acquires or holds, directly or indirectly:

- (a) securities conferring 50% or more of the voting or economic interests in the entity;
- (b) the power to control the appointment or dismissal of the majority of the entity's directors; or
- (c) the capacity to control the financial or operating policies or management of the entity.

Connected Transmission Pipeline means the pipelines named as "connected transmission pipelines" in clause A.3(b) of Schedule A.

Connection Point means a point where gas may be Injected into or Withdrawn from the VTS.

Consumer means a person who consumes or proposes to consume gas transported through the VTS.

Corporations Act means the Corporations Act 2001 (Cth).

Cost Pass-through Event has the meaning given in section 4.6.3.

Cost Pass-through Reference Tariff Variation Mechanism has the meaning given in section 4.6.3.

Counterparty Default Event means the default by a Shipper in respect of an amount or amounts payable by the Shipper to Service Provider under the relevant agreement for payment of the Transmission Tariffs.

Covered Pipeline has the meaning given to it in the National Gas Law.

CPI means the Consumer Price Index All Groups, Weighted Average of Eight Capital Cities published by the Australian Bureau of Statistics.

Cross System Withdrawal Tariff means the tariff specified in clause A.3(d) of Schedule A, as amended in accordance with this Access Arrangement.

Custody Transfer Meter means a gas measurement facility meeting the requirements of Subdivision 4 of Part 19 of the National Gas Rules

Day means a period of 24 consecutive hours beginning at 8:00 am Australian Eastern Standard Time.

Distribution Tariff D means the relevant gas distribution tariff of that name or, if no such tariff exists, a reasonable replacement nominated by Service Provider and approved by the Regulator.

Distribution Tariff V means the relevant gas distribution tariff of that name or, if no such tariff exists, a reasonable replacement nominated by Service Provider and approved by the Regulator.

DUAFG means distribution unaccounted for gas.

EDD means the Effective Degree Days being a measure of coldness incorporating temperature, sunshine hours, chill and seasonality used by AEMO to model the gas demand – weather relationship.

Expansion has the meaning given to it in the Service Envelope Agreement.

Extension has the meaning given to it in the Service Envelope Agreement.

FCA has the meaning given to it in clause D.6 of Schedule D.

Fifth Access Arrangement Period means the Access Arrangement Period expected to commence on 1 January 2018, and end on 31 December 2022.

First Regulatory Year means the period 1 January 2018 to 31 December 2018.

Fixed Principles means the fixed principles set out in section 8.

Forecast Capital has the meaning given in section 3.2.

Fourth Access Arrangement Period means the Access Arrangement Period from 1 July 2013 to 31 December 2017.

Gas Scheduling Procedures means the Wholesale Market Gas Scheduling Procedures (Victoria) dated 1 April 2011 and made by AEMO under Rule 206(4) of the National Gas Rules, as amended from time to time.

Good Engineering and Operating Practice means generally accepted practices, methods, acts and omissions practised in the Australian pipeline industry at the relevant time to operate, maintain and repair a pipeline, exercising reasonable judgement, lawfully, safely, reliably, efficiently and economically, having regard to the type, size, design, configuration, location and other attributes and operating conditions of the applicable pipeline.

Gross Negligence/Wilful Misconduct means an intentional and conscious breach of any obligation owed by the relevant person or such wanton and reckless conduct or action, or failure to act, as constitutes an utter disregard of, or wanton indifference to, the harmful, foreseeable and avoidable consequences which such person or entity knew, or should have known, would have resulted from that conduct, action or inaction, but does not include any error of judgement or mistake made in good faith.

GST means the tax imposed by the GST Act and the related imposition Acts of the Commonwealth.

GST Act means A New Tax System (Goods and Services Tax) Act 1999 including all amendments made to the Act and any other regulations and other instruments made under the Act.

Information Interface means any secure, web-based interface operated by Service Provider and used by the User for the purposes of receiving information regarding billing and payment under the Transmission Payment Deed.

Injection means an injection of gas into the VTS (and Inject and Injected have corresponding meanings).

Injection Pipeline means, in relation to an Injection Zone, the corresponding pipeline or pipelines and, to avoid doubt, includes:

- (a) in relation to the Longford Injection Zone, any or all of the pipeline from Longford to Pakenham;
- (b) in relation to the Port Campbell Injection Zone, any or all of the pipeline from Iona to Lara; and

(c) in relation to the Culcairn Injection Zone, any or all of the pipeline from Culcairn to Barnawartha.

Injection Tariffs means the tariffs for Injections of gas into the VTS calculated in accordance with clause A.2 of Schedule A, as amended in accordance with the Access Arrangement.

Injection Point means a Connection Point at which gas may be Injected into the VTS.

Injection Zone means the Injection Point or Injection Points identified in clause C.1 of Schedule C as an "Injection Zone".

Interconnect Pipeline means the pipeline owned by Service Provider from Barnawartha in Victoria to Culcairn in New South Wales.

Insurance Cap Event has the meaning given in section 4.6.3.

Insurer Credit Risk Event has the meaning given in section 4.6.3.

LNG Storage Facility means the LNG storage facility owned by Service Provider which is located at Dandenong.

Matched Withdrawal means, in relation to any gas Injected into the VTS, the corresponding Withdrawal (if any) to which the gas is allocated under the rules set out in section 4.3.

Matched Withdrawal Zone means the Withdrawal Zone for a Matched Withdrawal.

Materiality Threshold has the meaning given in section 4.6.3.

MIRN means meter identification registration number.

Month means the period beginning on the first Day of the calendar month and ending on the first Day of the succeeding calendar month.

National Gas Law (NGL) means the gas law implemented under the National Gas (South Australia) Act 2008 in South Australia and made applicable in the relevant jurisdiction (other than South Australia) under the relevant mirror application legislation.

National Gas Rules (NGR) has the meaning given to it in the National Gas Law and Rules has a similar meaning.

Natural Disaster Event has the meaning given in section 4.6.3.

New Capital Expenditure has the meaning given to it under Rule 79.

Opening Capital Base has the meaning given to it under Rule 77.

Party means either the Service Provider or the User and Parties means them collectively.

Peak Period means the period of 1 June to 30 September of a calendar year.

Post-Tax Revenue Model means the financial model used to determine the Total Revenue for each Regulatory Year of the Fifth Access Arrangement Period (including, for Regulatory Years after the First Regulatory Year, the Total Revenue resulting from changes in the return on debt estimated using a methodology of the type referred to in Rule 87(9)(b)).

Real Vanilla WACC means the real vanilla weighted average of the return on equity and return on debt calculated in the Post Tax Revenue Model.

Reference Service has the meaning given to it in section 2.2.

Reference Tariff has the meaning given to it in section 4.1.

Reference Tariff Variation Mechanism means the Annual Scheduled Reference Tariff Variation Mechanism and the Cost Pass-through Reference Tariff Variation Mechanism.

Regulatory Change Event has the meaning given in section 4.6.3.

Regulatory Year means each year during the Fifth Access Arrangement Period including the First Regulatory Year and otherwise beginning on 1 January and ending on 31 December.

Related Body Corporate means a related body corporate as defined in the Corporations Act.

Relevant Tax means any Tax payable by Service Provider, other than:

- (a) income tax and capital gains tax;
- (b) stamp duty, financial institutions duty and bank accounts debits tax;
- (c) penalties, charges, fees and interest on late payments, or deficiencies in payments, relating to any tax; or

(d) any tax that replaces or is the equivalent of or similar to any of the taxes referred to in paragraphs (a) and (b) (including any State equivalent tax).

Review Submission Date has the meaning given in section 1.5.

Revision Commencement Date has the meaning given in section 1.5.

SCA has the meaning given to it in clause D.7 of Schedule D.

Scheduled Reference Tariff Variation Mechanism has the meaning given in section 4.6.1.

Service Envelope Agreement means the agreement of that name entered into between AEMO, APA VTS (NSW) and Service Provider dated 2 November 2006, as amended from time to time.

Service Provider means APA VTS Australia (Operations) Pty Ltd ABN 65 083 009 278.

Service Standard Event has the meaning given in section 4.6.3.

Shipper means a person who transports gas on the VTS.

Sixth Access Arrangement Period means that Access Arrangement period expected to start on 1 January 2023.

Speculative Capital Expenditure Amount has the meaning given in Rule 84.

Storage Facility means a facility for the storage of gas including the LNG Storage Facility and underground storage.

Supply Point has the meaning given in the Gas Industry (Residual Provisions) Act 1994 (Vic).

Surcharge has the meaning given to it in Rule 83.

System Export Tariff means the tariff, specified in clause A.3(b) of Schedule A, as amended in accordance with the Access Arrangement.

Tariffed Transmission Service means making available the VTS on the same terms as those set out in the Service Envelope Agreement and entering into agreements with Shippers in accordance with section 327 of the National Gas Rules.

TasHub means the licensed transmission pressure gas pipeline joining the VTS to the Tasmanian Gas Pipeline in the vicinity of Longford.

Tax means any tax, levy, impost, deduction, charge, rate, rebate, duty, fee or withholding which is levied or imposed by an Authority.

Tax Change Event has the meaning given in section 4.6.3.

Terrorism Event has the meaning given in section 4.6.3.

Third Access Arrangement Period means the Access Arrangement Period commencing on 1 January 2008 and ending on 30 June 2013.

Total Revenue has the meaning given in Rule 76.

Trailing Average Portfolio Return on Debt means the return on debt which is to be updated annually in the Post-tax Revenue Model, and which has been estimated:

- (a) in a way which results in a return (and consequently the Allowed Rate of Return) being, or potentially being different for different Regulatory Years in the Fifth Access Arrangement Period; and
- (b) using a methodology designed to result in a return reflecting the average return that would have been required by debt investors in a benchmark efficient entity if that entity were to have raised debt over an historical period prior to the commencement of Regulatory Year for which the return on debt is to be updated.

Transfer Procedures means the Wholesale Market AMDQ Transfer Procedures (Victoria) dated 1 July 2010 and made by AEMO under Rule 331(1) of the National Gas Rules, as amended from time to time.

Transmission Delivery Tariff means Transmission Delivery Tariff D or Transmission Delivery Tariff V.

Transmission Delivery Tariff D means the tariffs identified as “transmission delivery tariff D” in clause A.3(a) of Schedule A, as amended in accordance with the Access Arrangement.

Transmission Delivery Tariff V means the tariffs identified as “transmission delivery tariff V” in clause A.3(a) of Schedule A, as amended in accordance with the Access Arrangement.

Transmission Payment Deed means a deed of that name entered into between Service Provider and a Shipper in accordance with Rule 327.

Transmission Refill Tariff means the tariffs specified in clause A.3(c) of Schedule A, as amended in accordance with the Access Arrangement.

Transmission Tariffs means the tariffs for the Tariffed Transmission Service, calculated in accordance with this Access Arrangement.

User has the meaning given to it in the National Gas Law.

VicHub means the licensed transmission pressure gas pipeline joining the VTS to the Eastern Gas Pipeline in the vicinity of Longford.

Victorian Declared Wholesale Gas Market means the declared wholesale gas market declared from time to time under section 43 of the National Gas (Victoria) Act 2008.

VTS means the 'APA GasNet System' as defined in the Service Envelope Agreement, but for the purposes of this Access Arrangement, excludes:

- (a) any Extension that Service Provider elects not to be covered by this Access Arrangement in accordance with section 7.1(b); and
- (b) any Expansion that Service Provider elects not to be covered by this Access Arrangement in accordance with section 7.2(b) .

Withdrawal means a withdrawal of gas from the VTS (and Withdraw has a corresponding meaning).

Withdrawal Point means a Connection Point at which gas may be Withdrawn from the VTS.

Withdrawal Tariffs means the tariffs for Withdrawals of gas from the VTS calculated in accordance with clause A.3 of Schedule A, as amended in accordance with the Access Arrangement.

Withdrawal Zone means the Withdrawal Point or Withdrawal Points identified in clause C.2 of Schedule C as a "Withdrawal Zone".

WUGS means the western underground gas storage facility located at Iona.

Year means a period of 365 consecutive Days but, for any Year which contains a date of 29 February, means 366 consecutive Days.

Zone means a Withdrawal Zone or an Injection Zone.

B.2 Interpretation

Unless the contrary intention appears, a reference in this Access Arrangement to:

- (a) (variations or replacement) a document (including this Access Arrangement) includes any variation or replacement of it;
- (b) (sections, clauses and schedules) a clause, section or schedule is a reference to a clause in, section of or schedule to this Access Arrangement;
- (c) (reference to statutes) a statute, ordinance, code or other law includes regulations and other instruments under it and consolidations, amendments, re-enactments or replacements of any of them;
- (d) (singular includes plural) the singular includes the plural and vice versa;
- (e) (executors, administrators, successors) a particular person includes a reference to the person's executors, administrators, successors, substitutes (including persons taking by novation) and assigns;
- (f) (dollars) Australian dollars, dollars, A\$ or \$ is a reference to the lawful currency of Australia;
- (g) (calculation of time) if a period of time dates from a given day or the day of an act or event, it is to be calculated exclusive of that day;
- (h) (meaning not limited) the words "include", "including", "for example" or "such as" are not used as, nor are they to be interpreted as, words of limitation, and, when introducing an example, do not limit the meaning of the words to which the example relates to that example or examples of a similar kind.
- (i) (reference to a 'Rule') a reference to a 'Rule' is a reference to a Rule of the National Gas Rules.

B.3 APA VTS (NSW)

Service Provider makes this Access Arrangement for itself and on behalf of APA VTS (NSW) as owners of the VTS. However, Service Provider and APA VTS (NSW) are not partners. Where relevant, all references to Service Provider



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are taken to be references to each of Service Provider and APA VTS (NSW) severally.

C Injection and Withdrawal Zones

C.1 Injection Zones

The Injection Zones are as described below.

An Injection Point forms part of an Injection Zone if the Injection Point is designated by a MIRN identified with respect to an Injection Zone, as follows.

Injection Zone	Meter No.	MIRN	Site Name
Port Campbell	M139	30000168PC	SEA Gas
	NA	30000154PC	Iona
	NA	30000181PC	Otway Gas
	NA	30000197PC	Mortlake
Longford	M001	30000001PC	Longford
	M137	30000167PC	Vic Hub
	M172	30000214PC	TasHub
Dandenong	M108	30000101PC	Dandenong (LNG 2750)
Pakenham	M138	30000170PC	Pakenham
Culcairn	M126	20000001PC	Culcairn

Any Injection Point that is not described above will be allocated by Service Provider to a new or existing Injection Zone consistent with the existing allocations.

C.2 Withdrawal Zones

The Withdrawal Zones are as described below.

A Withdrawal Point forms part of a Withdrawal Zone if the Withdrawal Point is designated by a MIRN identified with respect to a Withdrawal Zone, as follows.

Meter No.	Site Name	MIRN
1 LaTrobe		
M078	Rosedale	30000072PC
M079	Sale	30000073PC
M085	Traralgon	30000079PC
M167	Traralgon North	30000204PC
M134	EMEAL (Loy Yang)	30000164PC
M155	Valley Power	30000183PC
2 West Gippsland		
n/a		
3 Lurgi		
M062	Drouin	30000057PC
M070	Longwarry	30000065PC
M075	Moe	30000069PC
M084	Trafalgar	30000078PC
M090	Warragul (Works)	30000084PC
M092	Yarragon	30000086PC
M098	Cloverlea (Darnum)	30000092PC
4 Metro North West		
M008	Brooklyn Compressor Station	30000010/11PC
M009	West Melbourne (Footscray)	30000012PC
M011	Melbourne (Queens Wharf Rd)	30000013PC

M013	Spotswood	30000015/16PC
M014	West Melbourne (N. Melbourne)	30000017/18PC
M026	Derrimut City Gate	30000026PC
M027	Melton South City Gate	30000027PC
M028	Laverton North City Gate	30000028PC
M029	Hoppers Crossing (Forsyth Rd)	30000029PC
M030	Hoppers Crossing (Heaths Rd)	30000030PC
M031	Werribee (Old Sneydes Rd)	30000031PC
M032	Werribee (Lock Av)	30000032PC
M045	Sunbury	30000043PC
M048	Diggers Rest	30000044PC
M049	Sydenham	30000045PC
M087	Wallan	30000081PC
M103	Newport Power Station	30000096PC
M107	Laverton North (Coogee Methanol)	30000100PC
M115	Keon Park East	30000107/108PC
M116	Keon Park West	30000109/110PC
M117	Craigieburn	30000111PC
M118	Epping (O'Herns Rd)	30000112PC
M121	Rockbank	30000117PC
M125	Mernda (Laurimar Park)	30000145PC
M135	Somerton Power Station	30000165PC

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M142	Whittlesea	30000172PC
M143	Laverton Power Station (Snowy Hydro)	30000175PC
M148	Yarra Glen	30000177PC
M154	Plumpton	30000192PC
M158	Beveridge	30000194PC
M159	Wyndham Vale	30000196PC
M162	Yarra Glen - Lilydale	30000199PC
M165	Qenos	30000200PC
M168	Donnybrook	30000205PC
M169	Mount Cottrell	30000208PC

5 Calder

M052	Bacchus Marsh	30000047PC
M053	Ballan	30000048PC
M054	Ballarat	30000049PC
M057	Bendigo	30000052PC
M059	Castlemaine	30000054PC
M061	Daylesford	30000056PC
M068	Kyneton	30000063PC
M073	Maryborough	30000067PC
M086	Wallace	30000080PC
M099	Carisbrook	30000093PC
M149	Lancefield	30000180PC

M150	Woodend	30000179PC
<hr/>		
6 South Hume		
M058	Broadford	30000053PC
M064	Euroa	30000059PC
M066	Kilmore	30000061PC
M077	Seymour (Supply to Puckapunyal)	30000071PC
M080	Seymour (Telegraph Rd)	30000074PC
M174	Wandong Heathcote Junction	30000213PC
<hr/>		
7 Echuca		
M063	Echuca	30000058PC
M067	Kyabram	30000062PC
M074	Merrigum	30000068PC
M081	Shepparton	30000075PC
M082	Tatura	30000076PC
M083	Tongala	30000077PC
<hr/>		
8 North Hume		
M055	Benalla	30000050PC
M056	Benalla (Supply to Monsbent)	30000051PC
M088	Wangaratta	30000082PC
M089	Wangaratta East	30000083PC
M100	Chiltern	30000094PC
<hr/>		
9 Western		

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M093	Cobden	30000087PC
M094	Hamilton	30000088PC
M096	Portland	30000090PC
M144	Iluka Minerals Plant	30000174PC

10 Murray Valley

M111	Rutherglen	30000103PC
M112	Yarrawonga	30000104PC
M113	Cobram	30000105PC
M114	Koonoomoo	30000106PC

11 Interconnect

M130	Walla Walla	20000003PC
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13 South West

M133	Colac	30000161PC
M170	Winchelsea	30000209PC

17 Wodonga

M091	Wodonga	30000085PC
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18 Tyers

M060	Churchill	30000055PC
M071	Morwell (Firmin's Lane)	30000066PC
M076	Morwell (Porter's Rd)	30000070PC
M102	Jeeralang Power Station	30000095PC

19 Culcairn

M126	Culcairn	20000002PC
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20 Metro South East		
M002	Dandenong T.S. (Peninsula)	30000002PC
M003	Dandenong (Henty St)	30000003/4PC
M004	Murrumbeena	30000005/6PC
M005	Dandenong T.S. (Lurgji)	30000007PC
M006	Dandenong (LNG 700)	30000159/160PC
M007	Dandenong T.S. (Edithvale)	30000009PC
M012	St. Kilda (Aughtie Dr)	30000014PC
M015	Noble Park	30000019PC
M016	Clayton	30000020PC
M017	Oakleigh	30000021PC
M018	Malvern (Ewart St)	30000022PC
M019	St. Kilda East (Orrong Rd)	30000023PC
M023	Port Melbourne (Howe Pde)	30000024PC
M024	Port Melbourne (Lorimer St)	30000025PC
M033	Healesville	30000033PC
M034	Gembrook	30000034PC
M035	Lyndhurst	30000035PC
M036	Cranbourne (Huon Park Rd)	30000036PC
M037	Cranbourne (Narre Warren Rd)	30000037PC
M038	Clyde North (Tuckers Rd)	30000038PC

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M040	Pakenham (Koo Wee Up Rd)	30000039PC
M042	Hampton Park	30000040PC
M043	Narre Warren	30000041PC
M044	Berwick	30000042PC
M105	Port Melbourne (Unichema)	30000098PC
M109	Dandenong (LNG 7000)	30000102PC
M138	Bass Gas	30000171PC
M147	Seville East	30000176PC
M157	Officer	30000193PC
M173	Pakenham (Thewlis Road)	30000212PC

21 Warrnambool

M097	Allansford	30000091PC
22 Koroit		
M095	Koroit	30000089PC

24 Geelong

M051	Avalon	30000046PC
M065	Corio	30000060PC
M069	Lara	30000064PC
M171	Bannockburn	30000210PC

25 Maryvale

M104	Maryvale (Ampcor)	30000097PC
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31 Vic Hub

M137	Vic Hub	30000166PC
32 Iona		
NA	Iona (WUGS)	30000156PC
33 SEA Gas		
M139	SEA Gas	30000169PC
34 Otway Gas		
NA	Otway Gas	30000182PC
35 TasHub		
NA	TasHub	30000215PC

C.3 Allocation of Supply Points to Withdrawal Zones

For the purpose of allocation of Supply Points to Withdrawal Zones:

- Supply Points served directly from the VTS are individually allocated based on the custody transfer meter providing supply to that Supply Point;
- Supply Points assigned to Distribution Tariff D are individually allocated based on the Custody Transfer Meter providing supply to that Supply Point; and
- Supply Points assigned to Distribution Tariff V are allocated to Withdrawal Zones on the basis of the Custody Transfer Meter providing supply to that Supply Point. The following table shows indicative Withdrawal Zones for various postcodes.

Withdrawal zone	Postcodes
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Number	Name	
1	LaTrobe	3844, 3847, 3850, 3851, 3854, 3856, 3857, 3859, 3860, 3873
2	West Gippsland	3831
3	Lurgi	3816, 3818, 3820, 3822, 3823, 3824, 3825
4	Metro North West	3000, 3002, 3003, 3005, 3008, 3011, 3012, 3013, 3015, 3016, 3018, 3019, 3020, 3021, 3022, 3023, 3024, 3025, 3026, 3027, 3028, 3029, 3030, 3031, 3032, 3033, 3034, 3036, 3037, 3038, 3039, 3040, 3041, 3042, 3043, 3044, 3045, 3046, 3047, 3048, 3049, 3050, 3051, 3052, 3053, 3054, 3055, 3056, 3057, 3058, 3059, 3060, 3061, 3062, 3063, 3064, 3065, 3066, 3067, 3068, 3070, 3071, 3072, 3073, 3074, 3075, 3076, 3078, 3079, 3081, 3082, 3083, 3084, 3085, 3087, 3088, 3089, 3090, 3091, 3093, 3094, 3095, 3096, 3097, 3099, 3121, 3211, 3231, 3232, 3235, 3335, 3337, 3338, 3427, 3428, 3429, 3430, 3431, 3432, 3750, 3751, 3752, 3754, 3755, 3759, 3760, 3761, 3763, 3775
5	Calder	3334, 3340, 3341, 3342, 3345, 3350, 3351, 3352, 3355, 3356, 3357, 3363, 3364, 3370, 3437, 3444, 3446, 3447, 3448, 3450, 3451, 3453, 3458, 3460, 3461, 3462, 3463, 3464, 3465, 3472, 3515, 3550, 3551, 3555, 3556
6	South Hume	3433, 3434, 3435, 3442, 3521, 3522, 3607, 3608, 3658, 3659, 3660, 3662, 3663, 3664, 3665, 3666, 3753, 3756, 3757, 3758, 3762, 3764
7	Echuca	2731, 3561, 3564, 3614, 3616, 3617, 3618, 3620, 3621, 3622, 3623, 3624, 3629, 3630, 3631, 3633, 3647
8	North Hume	3669, 3670, 3672, 3673, 3675, 3677, 3678, 3682, 3683, 3725, 3726, 3732, 3733, 3735, 3746, 3747, 3749
9	Western	3264, 3265, 3266, 3267, 3268, 3270, 3284, 3285, 3286, 3287, 3289, 3300, 3301, 3302, 3303, 3304, 3305
10	Murray Valley	2646, 2647, 2712, 2713, 2714, 3635, 3636, 3637, 3638, 3640, 3641, 3644, 3649, 3685, 3687, 3728, 3730
11	Interconnect	2658, 2659, 2660
13	South West	3235, 3236, 3241, 3242, 3243, 3249, 3250, 3254, 3260, 3321, 3331
17	Wodonga	2640, 2641, 2642, 2643, 3688, 3690, 3691, 3693, 3694
18	Tyers	3840, 3842, 3869
19	Culcairn	NA
20	Metro South East	3004, 3006, 3101, 3102, 3103, 3104, 3105, 3106, 3107, 3108, 3109, 3111, 3113, 3114, 3115, 3116, 3122, 3123, 3124, 3125, 3126, 3127, 3128, 3129, 3130, 3131, 3132, 3133, 3134, 3135, 3136, 3137, 3138, 3139, 3140, 3141, 3142, 3143, 3144, 3145, 3146, 3147, 3148, 3149,

		3150, 3151, 3152, 3153, 3154, 3155, 3156, 3158, 3159, 3160, 3161, 3162, 3163, 3165, 3166, 3167, 3168, 3169, 3170, 3171, 3172, 3173, 3174, 3175, 3177, 3178, 3179, 3180, 3181, 3182, 3183, 3184, 3185, 3186, 3187, 3188, 3189, 3190, 3191, 3192, 3193, 3194, 3195, 3196, 3197, 3198, 3199, 3200, 3201, 3202, 3204, 3205, 3206, 3207, 3765, 3766, 3767, 3770, 3777, 3781, 3782, 3783, 3785, 3786, 3787, 3788, 3789, 3791, 3792, 3793, 3795, 3796, 3802, 3803, 3804, 3805, 3806, 3807, 3808, 3809, 3810, 3812, 3813, 3814, 3815, 3910, 3911, 3912, 3913, 3915, 3916, 3918, 3919, 3920, 3921, 3922, 3923, 3926, 3927, 3928, 3929, 3930, 3931, 3933, 3934, 3936, 3937, 3938, 3939, 3940, 3941, 3942, 3943, 3944, 3975, 3976, 3977, 3978, 3980, 3981, 3984, 3987
21	Warrnambool	3277, 3278, 3279, 3280, 3281
22	Koroit	3275, 3276, 3282, 3283
23	Geelong	3212, 3214, 3215, 3216, 3217, 3218, 3219, 3220, 3221, 3222, 3223, 3224, 3225, 3226, 3227, 3228, 3230, 3240

Note:

All gas delivered through Zones 11 (Interconnect), 19 (Culcairn) and 25 (Maryvale) are allocated to Distribution Tariff D.

D Scheduled Reference Tariff Variation

D.1 Revenue control principles

- (a) Individual components of the Transmission Tariffs may be adjusted up or down for a given Regulatory Year after the First Regulatory Year provided that:
 - (i) the NPV of the actual revenues (AR) (determined in accordance with clause D.2 below) achieved is no greater than the NPV of the adjusted target revenues (ATR) (determined in accordance with clause D.3 below); and
 - (ii) no component of the Transmission Tariffs can be increased by more than $(CPI - X) * (1 + Y)$ for any Regulatory Year, where:
 - (A) X is the tariff path factor prescribed for that Transmission Tariff component in the Access Arrangement; and
 - (B) Y is 2%.
- (b) All monetary calculations and figures used in calculations in this Schedule D are to be expressed in real dollar values using a CPI indexed at December 2017, and using the best estimate of the CPI at December of each year of the Fifth Access Arrangement Period.
- (c) All calculations and figures used in this Schedule D for determination of any price control formula component at any particular time must be the best estimate of that component at the relevant time using reported or actual (as the case may be) values where available and the best estimates of forecast values where required. For the purposes of this paragraph (c), the price control formula components include revenues, volumes, CPI, EDDs, costs passed through under the Cost Pass-through Reference Tariff Adjustment Mechanism, etc).
- (d) The NPV is to be calculated using a discount rate equal to the Real Vanilla WACC as approved for the Fifth Access Arrangement Period.
- (e) Separately report actual injection volume under of the price control model.

D.2 AR

Each determination of AR will be equal to the best estimate of the actual revenues received for the whole of the Fifth Access Arrangement Period at the time of calculation, using both actual data (Actual Revenues) (where available) and best estimates of forecast revenues (Forecast Revenues) where required.

For example, for a determination of AR in November 2018, the best estimate of actual revenues will be the Actual Revenues in 2017 and the Forecast Revenues expected for the remainder of the Fifth Access Arrangement Period. A determination of AR in subsequent years will use the Actual Revenues received where available, and the best revised forecasts for the remaining years, where the revised forecasts may differ from those forecasts made at earlier determinations.

D.3 ATR

For the price control formula, the target revenue (TR) for First Regulatory Year is \$126.16 million in nominal 2018 dollars. Further, the total volume withdrawn from the VTS for the First Regulatory Year, excluding NRRV, is 213.83 PJ.

$$\text{ATR} = \text{VATR} + \text{RODA} + \text{PTA} + \text{CFA}$$

where:

VATR is volume adjusted target revenue calculated in accordance with clause D.4;

RODA is the return on debt adjustment for the Regulatory Year for which the components of the Transmission Tariffs are to be adjusted;

PTA is the approved pass through amount from a Cost Pass-through Event; and

CFA is, for the First Regulatory Year, the second carry-forward amount SCA calculated in accordance with clause D.7 of the access arrangement for the VTS applicable during the Fourth Access Arrangement Period, and is, for all other Regulatory Years in the Fifth Access Arrangement Period, zero.

Notes:

1. $\text{RODA} = \text{NPVDIFF} \cdot (1 + \text{RVWACC})^n$ where:

- (a) NPVDIFF is the difference between:
 - (i) the net present value of the total revenue from the Post-Tax Revenue Model after updating the Trailing Average Portfolio Return on Debt for the Regulatory Year for which the components of the Transmission Tariffs are to be varied; and
 - (ii) the net present value of the total revenue from the Post-Tax Revenue Model immediately prior to updating the Trailing Average Portfolio Return on Debt for the Regulatory Year for which the components of the Transmission Tariffs are to be varied;
 - (b) RVWACC is the Real Vanilla WACC as approved for the Fifth Access Arrangement Period; and
 - (c) n is the number of Years between the start of the Fifth Access Arrangement Period and the Regulatory Year for which the components of the Transmission Tariffs are to be varied.
2. The best estimates of the CFA costs are included in the forecast of operating expenditure Non-Capital Costs (as defined in the Code) for the Fifth Access Arrangement Period, but the correct values for these factors will not be known until the first year of the Fifth Access Arrangement Period.
 3. CFA and PTA may be positive or negative.

D.4 VATR

$$\text{VATR} = \frac{\text{TR}}{\text{TV}} \times \text{WAAV}$$

where:

- TR** is the target revenue as set out in Table 12.1 of the Access Arrangement Information, excluding NRRV;
- TV** is the total volume withdrawn from the VTS as set out in section 4 of the Access Arrangement Information, excluding NRRV;

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WAAV is the weather adjusted actual volume, calculated in accordance with clause D.5; and

NRRV is, for the purposes of TR, the target revenue and for the purposes of TV, the volume, associated with:

- (i) any transmission refills at WUGS or the LNG Storage Facility; and
- (ii) the incremental Murray Valley tariff.

D.5 WAAV

$$\mathbf{WAAV = (VW + TS \times (TargetEDD - ActualEDD))}$$

where:

VW is the actual withdrawal from the VTS excluding NRRV:

;

TS is the target weather sensitivity, being the increase in annual gas volumes for an increase of one in the annual EDD, as set out in Table 4.4 of the Access Arrangement Information;

Target EDD is the measure of annual EDD as expected in a Regulatory Year as set out in Table 4.4 of the Access Arrangement Information ; and

Actual EDD is the actual measured EDD for a Regulatory Year, as reported in the AEMO APR or otherwise made available by AEMO.

D.6 First Carry-Forward Amount FCA

The first carry forward amount (FCA) will be calculated in the last year of the Fifth Access Arrangement Period. It will be included as a building block component in the first year of the Sixth Access Arrangement Period.

FCA will be determined according to the following formula:

$$\mathbf{FCA = ATR - AR}$$

where AR and ATR are to be calculated using the best estimates and available data at the time of the determination of FCA.

For inclusion in the building block calculation for 2023, the FCA will be escalated for inflation from December 2017 to December 2023.

D.7 Second Carry-Forward Amount SCA

The second carry forward amount (SCA) will be calculated in the first year of the Sixth Access Arrangement Period as a correction to the determination of the FCA, using the correct actual values of all factors required in the determination of FCA. It will be included as a CFA in the determination of tariffs for 2023.

SCA will be determined according to the following formula:

$$\text{SCA} = \text{Recalculated FCA} - \text{FCA}$$

where Recalculated FCA is the same calculation as for FCA, except that it is to use the actual values for AR, ATR, AV, EDD, CPI and PTA.

For inclusion in the building block calculation for 2023, the SCA will be escalated for inflation from December 2017 to December 2023.

E Description of VTS

Pipeline Licence	Location/Route	Length (km)	Pipe Diameter (mm)	MAOP (kPa)
Longford to Dandenong/Wollert System				
Vic:68	Healesville-Koo-Wee-Rup Rd	1.2	80	2760
Vic:68	Healesville-Koo-Wee-Rup Rd	1.2	150	2760
Vic:91	Anderson St, Warragul	4.8	100	2760
Vic:107	Pound Rd to Tuckers Rd	2.0	100	2760
Vic:50	Supply to Jeeralang	0.4	300	2760
Vic:50	Morwell to Dandenong	127.0	450	2760
Vic:75	Longford to Dandenong	174.2	750	6890
Vic:117	Rosedale to Tyers	34.3	750	7070
Vic:120	Longford to Rosedale	30.5	750	7070
Vic:120	Longford to TasHub	0.7	300	6890
Vic:135	Bunyip to Pakenham	18.7	750	7070
Vic:141	Pakenham to Wollert	93.1	750	6890
Vic:121	Tyers to Morwell	15.7	500	7070
Vic:67	Maryvale	5.4	150	6890
Wollert to Wodonga/Echuca/Bendigo System				
Vic:101	Keon Park to Wollert	14.1	600	2760
Vic:202	Keon Park East - Keon Park West	0.6	450	2760
Vic:101	Wollert to Euroa PRS	124.2	300	8800
Vic:101	Euroa PRS to Wodonga	145.2	300	7400
Vic:101	Trawool to Mangalore	16.1	400	15300
Vic:101	Wangaratta North to Barnawartha	39.1	400	15300
Vic:101	Mangalore to Euroa PRS	49.8	400	15300
Vic:101	Wandong to Broadford	17.3	400	15300

victorian transmission system
access arrangement.

Vic:101	Euroa PRS to Glenrowan PRS	68.5	400	15300
Vic:101	Wollert to Wandong	27.8	400	15300
Vic:101	Broadford to Trawool	13.9	400	15300
Vic:101	Glenrowan PRS to Wangaratta North	25.5	400	15300
Vic:101	Euroa to Shepparton	34.5	200	7400
Vic:132	Shepparton to Tatura	16.2	200	7390
Vic:136	Tatura to Kyabram	21.3	200	7390
Vic:152	Kyabram to Echuca	30.7	150	7390
Vic:143	Wandong to Kyneton	59.5	300	7390
Vic:128	Mt Franklin to Kyneton	24.5	300	7390
Vic:131	Mt Franklin to Bendigo	50.8	300	7390
Vic:78	Ballan to Bendigo	90.8	150	7390
Vic:125	Guildford to Maryborough	31.4	150	7390
Vic:238	Somerton Pipeline	3.4	250	2760
Vic:176	Chiltern Valley to Rutherglen	14.7	200	7400
Vic:182	Rutherglen to Koonoomoo	88.8	200	7400
Vic:178	Barnawartha to Murray River	5.5	450	10200
NSW:24	Murray River to Culcairn	57.0	450	10200
Brooklyn to Ballarat System				
Vic:78	Brooklyn to Ballan	66.6	200	7390
Vic:78	Ballan to Ballarat	22.7	150	7390
Vic:134	Ballan to Ballarat	22.8	300	7390
Vic:122	Derrimut to Sunbury	24.0	150	7390
Vic:122	Truganina to Plumpton	8.4	500	10200
Brooklyn to Geelong System				
Vic:81	Brooklyn to Corio	50.7	350	7390
Vic:162	Laverton to Coogee	1.6	150	2760
Vic:253	Lateral to Snowy Hydro	1.6	350	10,200
Dandenong to West Melbourne/Brooklyn System				
Vic:36	Dandenong to West Melbourne	36.2	750	2760

Vic:108	South Melbourne to Brooklyn	12.8	750	2760
Vic:129	Princess Hwy to Henty St	0.2	500	2760
Vic:129	Dandenong to Princess Hwy	5.0	750	2760
Vic:36	Princess Hwy to Regent St	0.8	200	2760
Vic:164	Supply to Bay St To Unichema	0.4	150	2760
Vic:124	Supply to Newport Power Station	1	450	2760
Western Network				
Vic:145	Paaratte to Allansford	33.3	150	9890
Vic:155	Allansford to Portland	100.4	150	9890
Vic:168	Curdievale to Cobden	27.7	150	9890
Vic:171	Codrington to Hamilton	54.6	150	9890
Vic:252	Lateral to Iluka Plant	1.1	100	9,890
South West Pipeline				
Vic:227	Iona to Paaratte	7.8	150	7400
Vic:231	Iona to Lara	143.9	500	10200
Vic:266	Brooklyn to Lara	58.0	500	10,200

F Transmission Payment Deed terms

F.1 Term

The deed comes into effect when signed and continues until terminated. For the avoidance of doubt, the terms of any Transmission Payment Deed entered into on or after the Revision Commencement Date of this Access Arrangement must be consistent with the terms of this Schedule F (as amended from time to time in any subsequent Access Arrangement).

F.2 Billing and Payment

Market Participant promises to pay the Reference Tariffs, together with any applicable surcharge approved by the Regulator.

Service Provider will:

- (a) within two Business Days of the eighteenth Business Day of each Month, invoice Shipper for the Withdrawal Tariffs payable by the Shipper in respect of the preceding Month;
- (b) within two Business Days of the tenth Business Day of each Month, invoice the Shipper for the Injection Tariffs payable by Shipper in respect of the preceding Month; and
- (c) from time to time, invoice the Shipper to recover additional amounts which Service Provider is entitled to recover from Shipper or to make an adjustment for amounts which were invoiced to or paid in error by Shipper.

The Shipper will pay Service Provider's tax invoices within 10 Business Days after receipt of each invoice. Late payment will attract an interest charge payable at the Commonwealth Bank corporate overdraft reference rate plus two percentage points.

Any disputed amount which is subsequently found to be payable by or repayable to the Shipper will be due and payable no later than 14 Days after issue of an adjustment note by Service Provider (such note must be issued within 28 Days of resolution regarding the disputed amount), together with interest calculated at the Commonwealth Bank corporate overdraft reference rate plus two percentage points on that amount.

If an error is discovered in any tax invoice, then the error will be adjusted, with interest calculated at the Commonwealth Bank corporate overdraft reference rate plus two percentage points, on the next tax invoice provided to the Shipper after the error is discovered. However, no adjustment will be made for errors discovered more than 12 months after the date of the delivery of gas to which the erroneous tax invoice relates.

F.3 Adjustments to Rates and Charges/ Additional Payments

The Reference Tariff payable under a Transmission Payment Deed may be varied in accordance with the Reference Tariff Variation Mechanism set out in section 4 of this Access Arrangement.

F.4 Prudential Requirements

Service Provider may:

- (a) require the Shipper to provide, prior to commencement of the Tariffed Transmission Service and thereafter as reasonably required, financial security in the form of a parent company guarantee, bank guarantee or similar security as reasonably determined by Service Provider for the performance of the Shipper's obligations under the Transmission Payment Deed; and
- (b) where the Shipper:
 - (i) fails to pay when due any amounts payable under the Transmission Payment Deed, excepting any contested amounts; or
 - (ii) fails to obtain and maintain any Approvals required to meet its obligations under the Transmission Payment Deed; or
 - (iii) has a material adverse change to its credit rating or credit worthiness during the term of the Transmission Payment Deed and does not provide Service Provider with additional financial security as reasonably required to reflect this change in circumstance,
- (c) subject to providing at least 7 days written notice to the Shipper, refuse to provide or suspend the provision of the Tariffed Transmission Service, without liability to the Shipper.

F.5 Dispute Resolution

Either Party may propose to refer, for determination by a specified independent expert, an issue in respect of the Transmission Payment Deed in dispute between the Parties that is only capable of determination by audit or by reference to accounting, engineering or scientific knowledge and practice, to the extent that it does not otherwise involve the interpretation of the Transmission Payment Deed. If the Parties agree on the referral to that independent expert then the issue will be referred to the independent expert for consideration. However, if the Parties are unable to agree on the identity of an independent expert within 10 days of the proposed referral, the Parties must request that the Institute of Arbitrators and Mediators nominate a person with appropriate commercial, technical and practical experience to determine the issue.

The independent expert's decision, in the absence of manifest bias or error, is final and binding upon the Parties.

Once a dispute is referred to an independent expert for determination then neither Party may commence or continue court proceedings (except where seeking interlocutory relief) in relation to that dispute until the dispute is determined by the independent expert.

F.6 Information Interface

Service Provider retains ownership of and all intellectual property rights in the Information Interface and grants the Shipper a non-exclusive, non-assignable, non-transferable right to access the Information Interface solely for the purposes of receiving information regarding billing and payment under the Transmission Payment Deed.

Only the Shipper's employees authorised by Service Provider may use the Information Interface pursuant to the above right of access. The Shipper is liable for any loss incurred by Service Provider resulting from use of the Information Interface other than to the extent such loss is caused by the negligence of Service Provider.

F.7 Limitation of Liability & Indemnity

Service Provider's liability, if:

- (a) the AEMO Services are not provided to the User.

- (b) the Tariffed Transmission Services are not supplied to AEMO, whether in whole or in part, is limited to uplift payments under Rule 240 of the National Gas Rules, subject to any conditions on the level of such payments provided for in the Service Envelope Agreement between Service Provider and AEMO.

Where AEMO Services are provided in part the User must pay Service Provider for those services actually provided.

The deed is for the purpose of establishing payment and security arrangements for the Tariffed Transmission Service and does not impose an obligation on Service Provider to provide transmission services to a User.

F.8 Termination

- (a) The Transmission Payment Deed may, by written notice, be terminated or suspended by Service Provider, where the Shipper defaults in the performance of any of its material promises or obligations under the Transmission Payment Deed, after a 7 Business Day cure period.
- (b) Clause F.8(a) does not apply to a failure to pay an amount where Service Provider has included that amount in an invoice issued under clause F.2 and the Shipper has notified Service Provider of its dispute, until such time as it is determined that the disputed amount is required to be paid.
- (c) In addition to the above right to terminate or suspend the Transmission Payment Deed the Service Provider may also sue for damages or exercise any other available legal or equitable remedy.
- (d) Either party may terminate the Transmission Payment Deed if:
- (i) the Market Participant ceases to be a Market Participant;
 - (ii) the other party becomes insolvent; or
 - (iii) the Service Envelope Agreement between Service Provider and AEMO expires or is terminated.
- (e) Termination of the Transmission Payment Deed will not affect any rights or obligations which may have accrued prior to termination.

F.9 No right or title to facilities

The Shipper does not acquire any right to, title to, or interest in the VTS or any part of the VTS pursuant to the Transmission Payment Deed.

F.10 Assignment

A Party must not assign, novate, transfer or otherwise dispose of (in this clause F.10, "assign") the whole or part of its rights or obligations under the Transmission Payment Deed without the prior written consent of the other Party, which consent must not be withheld unreasonably in the case of an assignee that is technically and financially capable of performing the assigned rights and obligations.

The Shipper may assign its rights under the Transmission Payment Deed to a Related Body Corporate, provided that the Shipper first demonstrates to Service Provider's reasonable satisfaction that the proposed assignee:

- (a) is a Market Participant; and
- (b) either:
 - (i) the Shipper can demonstrate that it has an investment grade credit rating, or that the performance of its payment obligations under the Transmission Payment Deed is guaranteed (on terms reasonably acceptable to Service Provider) by another entity which has an investment grade credit rating; or
 - (ii) where Service Provider would at the time of the assignment be entitled to require the assignor to provide credit support, delivers to Service Provider credit support for its obligations under the Transmission Payment Deed.

Execution by the assignee of a covenant to be bound by the Transmission Payment Deed, in a form satisfactory to the non-assigning party acting reasonably, is a condition precedent to any assignment permitted under this clause.

If:

- (a) there is a Change in Control of a Party (Affected Party) or its ultimate holding company;

- (b) neither the Affected Party or its ultimate holding company is listed on a recognised public securities exchange; and
 - (c) the Change in Control is not imposed by law,
- then:
- (d) the Affected Party cannot enforce the Transmission Payment Deed unless and until it procures the written consent of the other Party (which consent must not be unreasonably withheld);
 - (e) paragraph (d) does not affect the Affected Party's obligations under the Transmission Payment Deed; and
 - (f) the other Party may terminate the Transmission Payment Deed if consent under paragraph (d) is not obtained within 60 Business Days of the earlier of the date on which the Affected Party first notifies the other Party of the Change in Control and the date on which the other Party becomes aware of the Change in Control.

F.11 Confidentiality

A Party receiving Confidential Information may use it solely for the purposes of performing its obligations under the Transportation Agreement or for internal purposes related to the governance of the Party or its Related Bodies Corporate.

A Party must obtain the prior written consent of the other Party in order to use or disclose Confidential Information for any other purpose except where disclosure is required by law or lawfully required by an Authority or if the information is at that time lawfully generally available to the public, other than as a result of a breach of the Transmission Payment Deed, or disclosure is required in order to comply with the listing rules of a recognised stock exchange.

The Service Provider must comply with any confidentiality requirements imposed on it pursuant to the National Gas Law and the National Gas Rules (Part 16).