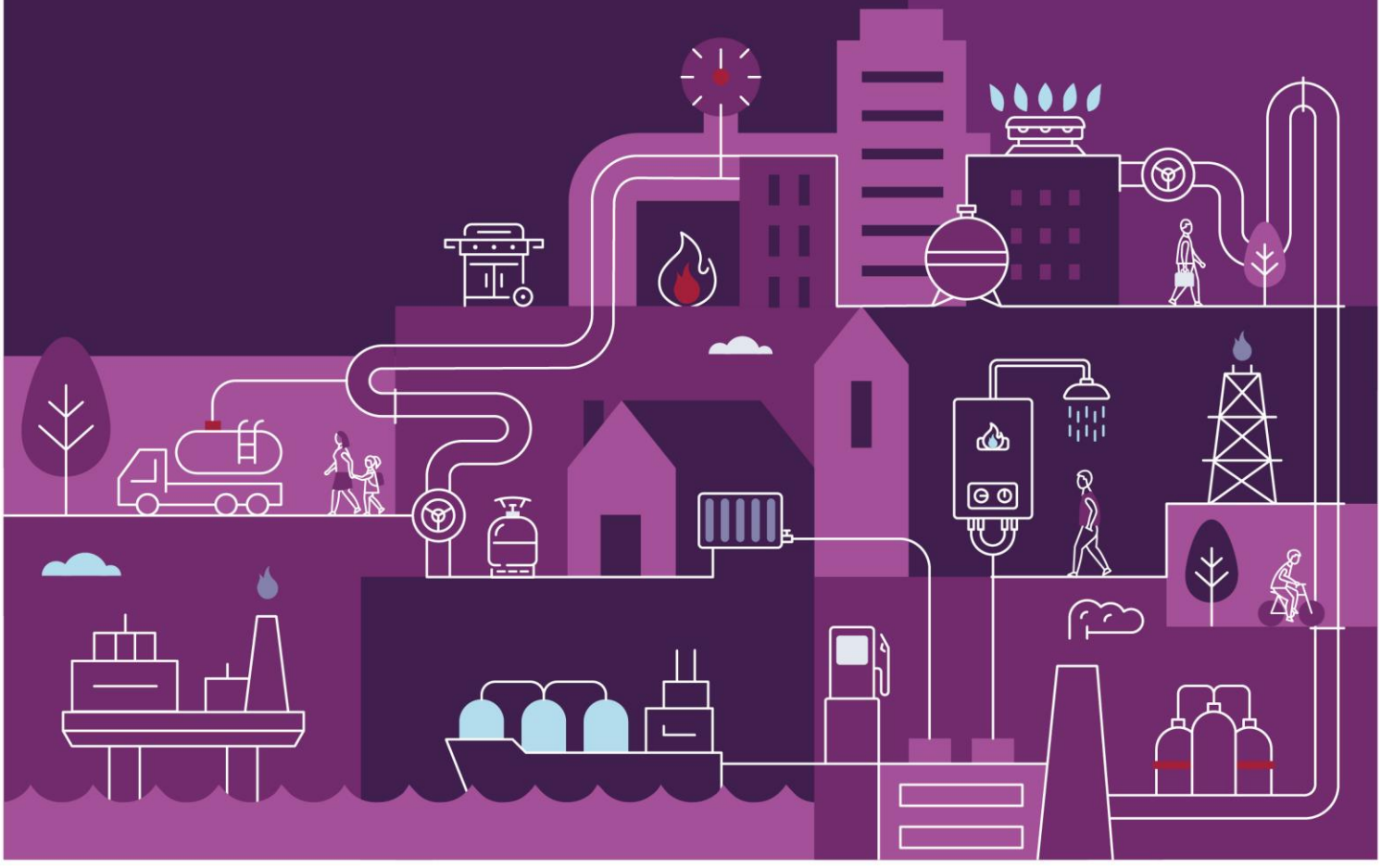
AEMO
AUSTRALIAN ENERGY MARKET OPERATOR

AEMO Draft Report

March 2022

Hydrogen Blends and Renewable Gases
Procedures Review



Important notice

Purpose

Energy Ministers have directed AEMO under 91c of the National Gas Law, to conduct a review of the National Gas Rules, National Gas Procedures and any other subordinate instruments that AEMO is responsible for administering. AEMO's review is part of a broader review being undertaken by jurisdictions and the Australian Energy Market Commission into the measures needed to extend the national gas regulatory framework to hydrogen blends & renewable gases.

This draft report provides AEMO's view on potential changes that may be required to the Procedures for the Short Term Trading Markets (STTM), Declared Wholesale Gas Market (DWGM) and Retail Markets Procedures (RMP) in Victoria, NSW and ACT, Queensland and South Australia to facilitate hydrogen blends and renewable gases.

Disclaimer

This document or the information in it may be subsequently updated or amended. This document does not constitute legal or business advice, and should not be relied on as a substitute for obtaining detailed advice about the National Gas Law, National Gas Rules or any other applicable laws, procedures or policies. AEMO has made every effort to ensure the quality of the information in this document but cannot guarantee its accuracy or completeness.

Accordingly, to the maximum extent permitted by law, AEMO and its officers, employees and consultants involved in the preparation of this document:

- make no representation or warranty, express or implied, as to the currency, accuracy, reliability or completeness of the information in this document; and
- are not liable (whether by reason of negligence or otherwise) for any statements or representations in this document, or any omissions from it, or for any use or reliance on the information in it.

Version control

Version	Release date	Changes
1	31/03/2022	

Contents

1 Overview

1.1 Background

In August 2021, Energy Ministers agreed that the national gas regulatory framework be reviewed and extended to accommodate hydrogen blends, biomethane and other renewable gases. As part of the agreement, Energy Ministers decided to prioritise extending the regulatory framework to low-level hydrogen blends and other renewable gases that can be used in existing natural gas appliances.

Following the August 2021 agreement, Energy Ministers formally requested that AEMO[1] conduct a review of the National Gas Rules (NGR), National Gas Procedures (Procedures) and other subordinate instruments to identify the changes that would be required to ensure that the facilitated markets and regulated retail gas markets can continue to operate as intended if hydrogen and renewable gases are brought within scope of the national framework. AEMO has also been requested to implement any changes to its Procedures or systems required to facilitate hydrogen and renewable gases following any changes made to the National Gas Law (NGL) and NGR.

In parallel to AEMO's review jurisdictional officials (Officials) are reviewing the NGL, National Energy Retail Law (NERL) and the Regulations made under the NGL and NERL; and the AEMC is reviewing the NGR and the National Energy Retail Rules (NERR).

This draft report provides AEMO's initial view on the scope of potential changes required to the Short Term Trading Market Procedures (STTM), Declared Wholesale Gas Market (DWGM) Procedures and the Retail Market Procedures (RMP) in Victoria, NSW and ACT, Queensland and South Australia. It should be read in conjunction with:

- the Officials' consultation paper on the refined approach to extending the national gas regulatory framework and required changes to the NGL, NERL and National Regulations
- the AEMC's draft recommendations on the required changes to the NGR and NERR flowing its review into extending the regulatory frameworks to hydrogen and renewable gases
- the AEMC's draft determination on the DWGM distribution connected facilities (DDCF) rule change.

1.2 AEMO's review and terms of reference

The terms of reference provided to AEMO by Energy Ministers requests that AEMO identify any changes to the STTM, DWGM and regulated retail market Procedures to:

- Ensure that settlement and metering within these markets operates as intended.
- Address any other material gaps in these markets that may be identified through consultation with market participants, other market bodies and government officials.

AEMO was also asked to work with the AEMC in identifying any required changes to the NGR.

AEMO will be responsible for implementing any necessary changes to the Procedures (including subordinate instruments) and systems following changes to the NGL and NGR.

1.3 National framework terminology and application to gas products

In keeping with the approach that was taken in the Officials' initial consultation paper, AEMO's original consultation paper used the following terminology to describe the gases that may be captured by the facilitated and regulated retail gas markets:

- 'natural gas equivalent' (NG equivalent or NGE) described low-level hydrogen-natural gas blends and other renewable gases that are suitable for consumption in existing natural gas appliances.
- 'constituent gas' referred to any gases that are blended with natural gas (e.g. hydrogen) to create an NGE or other gas product but are themselves not suitable for consumption.
- 'other gas products' (OG products or OGs) described higher-level blends or gases that are not suitable for consumption as natural gas (because they would require appliance changes for example).

In response to feedback on the initial consultation paper, Officials are now proposing to:

- List all the gases that could fall within the scope of the NGL, which would collectively be called 'covered gases'. The proposed list of covered gases comprise:
  - 'primary gases', which is the term used to refer to natural gas, biomethane, synthetic methane, hydrogen and any other gas specified in the National Gas Regulations to be a primary gas; and
  - 'gas blends', which is the term used to refer to a blend of any primary gases (e.g. a natural gas-hydrogen blend, a natural gas-biomethane blend or a biomethane-hydrogen blend).

  As a result of this change, the terms NGE, constituent gas and OG products are no longer utilised in the NGL.
- Enable the facilitated and regulated retail gas markets, as well as the market transparency mechanisms, to be extended to covered gases from the commencement of the reforms through changes to the NGR.

Consistent with these changes, this draft report now uses the term 'covered gas'[2] to collectively refer to the primary gases and gas blends specified in the NGL.

The Officials are proposing, for the DWGM, STTM and regulated retail gas markets, that:

- in the case of the DWGM and STTM, where the NGL provides for mandatory registration, the natural gas registration categories and obligations to provide information would extend to the equivalent covered gas facilities and blend processing facilities;
- for the DWGM and STTM, the NGL would allow these markets to deal with the wholesale supply of any covered gas, including by means of facilities connected to distribution pipelines, with corresponding registration obligations and market body powers and functions;
- a retail market for any covered gas would remain a retail gas market within the meaning of the NGL and permitted registrable capacities in the NGL would be modified to accommodate particular covered gases;

[2] Officials, Extending the national gas regulatory framework to hydrogen and renewable gases and blends: Proposed changes to NGL, NERL and National Regulations, 31 March 2021, pp. 19-21.

- the NGL would allow rules to be made to require registration under the RMPs for activities relating to covered gases and give AEMO the power to deal with covered gases in the RMP if required.

The AEMC in turn is consulting on changes to the NGR to accommodate the supply of any covered gas through the STTM or DWGM and the supply of NGEs to customers in the regulated retail gas markets.

These are important changes for stakeholders to consider in reviewing this draft report as the Procedures will need to also accommodate primary gases, notably unblended hydrogen. While AEMO does not anticipate an impact on previous Procedures analysis, specific feedback is sought from stakeholders to validate this assessment.

Consistent with the Officials' consultation paper, AEMO's draft report will use the term 'covered gas' to refer to any of the gases and blends that could be within scope of the STTM, DWGM and regulated retail markets.

1.4 Coordination with the AEMC and Officials

Usually, the process of amending Procedures is sequential and follows both law and rules changes. However, the tight timeframes associated with the Review have meant that amendments to laws, regulations, rules, procedures and other instruments are having to be considered in parallel by multiple parties (i.e. Officials, AEMC and AEMO). When coupled with the fact that the Officials and AEMC positions are still in draft form, AEMO is unable to be as definitive as it would usually be in scoping the suite of changes required to its Procedures.

To ensure that this draft report is as complete as possible, AEMO has worked closely with Officials and the AEMC to understand the approach to extending the national gas regulatory framework. In particular, AEMO has regularly discussed the review and the DDCF rule change with the AEMC to inform its policy development, proactively identify issues and identify impacts on AEMO Procedures. Consistent with the Terms of Reference, AEMO has also advised the AEMC of some changes that may be required to the NGR.

AEMO anticipates that it will initiate formal consultation on the STTM, DWGM and Regulated Retail Market Procedures in the latter half of 2022, following Energy Ministers' agreement on the required changes to the NGL. At this point AEMO will have a full and definitive package of changes to consult with industry on, per usual Procedure change processes.

While the Terms of Reference only asked AEMO to focus on the required changes to the STTM, DWGM and regulated retail market Procedures, AEMO understands that changes to other Procedures, such as the Gas Bulletin Board (GBB) and Gas Statement of Opportunities (GSOO) Procedures, are likely to be required, given the AEMC's proposal to extend the gas market transparency mechanisms.

The AEMC are recommending that the scope of the GBB, GSOO and Victorian Gas Planning Report (VGPR) are extended to include other covered gases. This will result in additional reporting on the GBB for facilities, producing, transporting and storing covered gases. In addition, the AEMC are recommending that distribution pipelines be subject to reporting on the GBB. In general, the AEMC are proposing to extend the same reporting obligations that currently apply to natural gas facilities to other covered gases. However, there are some new reporting requirements for gas blends that are being considered. The proposed changes to the scope of the GSOO and VGPR will require AEMO to review the information it gathers for these reports to ensure that they appropriately capture other covered gases.

Consultation on the changes required to these transparency related procedures will occur in the latter half of 2022 once the AEMC has completed its review.

1.5 Approach and assumptions

In reviewing the STTM, DWGM and retail market related Procedures, AEMO has applied an approach and assumptions that are consistent with the overarching review of the regulatory framework and AEMO's terms of reference. AEMO's draft recommendation should be read in the context of the framework and assumptions outlined in the following subsections.

Gases covered by the review

Consistent with the refined approach set out in the Officials' consultation paper and the AEMC's draft recommendations, this review is focusing on 'covered gases'.. A core assumption of the review is that any gas being injected into a retail or wholesale market is "on-spec" and therefore is suitable for transport and consumption.

Policy intent and the national framework

AEMO assumes that, for the time being, participants that supply, consume, or trade covered gases, as well as facilities involved in producing primary gases or creating a gas blend, are to be accommodated by existing market rules and Procedures wherever possible and on the same terms as natural gas. This is consistent with the approach being considered in the Officials' consultation paper where the existing natural gas regulatory framework is effectively being extended to encompass all covered gases. In making this assumption AEMO has attempted to assess whether existing requirements in the Procedures are fit for purpose for hydrogen, renewable gases as well as natural gas. AEMO has not considered broader more fundamental changes to the market design that may be required to accommodate covered gases.

Jurisdictional regulations and legislation

Some of AEMO's Procedures refer to regulatory requirements that are defined in jurisdictional instruments and, where this occurs, the relevant instrument is typically specified in the Procedures. AEMO has not reviewed jurisdiction-level regulations or legislation to ensure they are fit for purpose for NGEs. AEMO has assumed that each responsible jurisdiction will review, and amend as necessary, its regulations or legislation.

Regulatory responsibility for determining the gas product

AEMO assumes that all future facilities are compliant with the relevant jurisdictional instruments. The regulatory responsibility for determining whether a facility can inject a primary gas or gas blend into the gas network will sit with the relevant jurisdiction under its regulations.

Registration categories and NGR definitions

AEMO assumes that registration categories and their definitions relevant to covered gases will be established in the NGL and Part 15A of the NGR, consistent with the usual approach to Procedures for the facilitated markets. Further, AEMO assumes that the existing NGR registration categories in Part 15A will be reviewed, and updated as necessary, to accommodate covered gases, consistent with the approach being proposed in the NGL. Any NGR changes to registration categories may lead to further Procedure changes that are difficult to identify at this stage. AEMO has liaised closely with the AEMC on potential changes the AEMC is considering to the NGR to understand the impact for AEMO's Procedures and systems.

Facilities will participate and inject at the distribution level

Consistent with the approach being taken in the Officials' consultation paper, a core assumption is that facilities producing renewable gases or hydrogen blends will be injecting directly into distribution networks. Transmission-connected facilities and their associated impacts have not been considered in this report[3]. As such, the Procedures are being reviewed in this context to determine whether they are fit for purpose for distribution-level supply.

1.6 AEMO consultation paper

On October 18, 2021, AEMO published a consultation paper setting out AEMO's preliminary view on changes that may be required to the Procedures to cover renewable gases and hydrogen blends in DWGM, STTM and Regulated Retail Market Procedures. Considering the scope and timing of AEMO's review, only limited changes were identified. In its consultation paper, AEMO concluded that:

- The retail and wholesale markets are settled on an energy basis, with settlement amounts calculated by multiplying gigajoules supplied (or consumed) by price. By requiring covered gas facilities to bid, be allocated and settled in gigajoules, significant changes to settlement and approach, systems and Procedures are not required.
- Primarily, changes are required to the Procedures to ensure that their application extends to facilities injecting covered gases directly into distribution systems.
- Changes to the DWGM Procedures will primarily be required as a consequence of the AEMC's DDCF rule change, with only minor changes as an outcome of this review. These changes primarily relate to integrating distribution connected facilities into the market, rather than changes required to facilitate specific primary gases or blends.

A comprehensive summary of stakeholder feedback to AEMO's consultation paper and AEMO's responses can be found on the AEMO website[4].

1.7 Purpose of this draft report

This draft report sets out AEMO's draft recommendations on the changes to be made to the STTM, DWGM and Regulated Retail Market Procedures. The recommendations are based on the findings in AEMO's October 2021 consultation and stakeholder feedback received. The draft report sets out the likely changes that AEMO will make to its Procedures following the enactment of changes to the NGL and NGR.

Industry feedback on this draft report will inform the development of any changes to AEMO's Procedures for formal consultation and the recommendations in AEMO's final report.

[3] As per action 3.15 of the National Hydrogen Strategy: "Agree to not support the blending of hydrogen in existing gas transmission networks until such time as further evidence emerges that hydrogen embrittlement issues can be safely addressed. Options for setting and allowing for ongoing updates of safe limits for hydrogen blending in transmission networks will form part of the review in 2020."

[4] https://www.aemo.com.au/-/media/files/stakeholder_consultation/consultations/gas_consultations/2021/hydrogen-blends-and-renewable-gases-procedures-review/collated-phase-one-stakeholder-feedback-and-aemo-response.pdf?la=en

1.8 Next Steps and timeline

As set out in AEMO's terms of reference, this review has a several key milestones following consultation on this paper, namely:

- Final recommendations (considering any industry feedback) on Procedure changes being made by September 2022.
- Initiation of formal consultation on the Procedures in the latter half of 2022, following Energy Ministers' agreement on the required amendments to the NGL.
- Implementation of any changes to the Procedures once the changes to the NGL and NGR have been made.

Feedback to this paper

Written feedback to this paper should be sent via email to **GWCF_Correspondence@aemo.com.au** via the provided response template and the subject should include: *Hydrogen blends and renewable gases Procedures review***.** The closing date for submissions to this consultation paper is **5:00 PM AEDT Thursday May 19.**

2 Declared Wholesale Gas Market

Overview of the DWGM

The DWGM operates in Victoria over the declared transmission system (DTS) under Part 19 of the NGR. The DWGM facilitates the wholesale trading of gas between market participants. AEMO is the market operator of the DWGM and the system operator for the DTS. Key features of the DWGM include:

- Market carriage transportation framework.
- Market is scheduled on-the-day with intraday reschedules.
- Mandatory participation – participants must bid all gas into the DWGM that flows through the DTS.
- AEMO centrally schedules the market, settles participants, and operates the transmission system under the Rules and Procedures.

2.1 Impact of the DWGM Distribution Connected Facility (DDCF) Rule Change on AEMO's review

On 8 September 2021, the Victorian Minister for Energy, Environment and Climate Change submitted the DWGM Distribution Connected Facility (DDCF) rule change request. The rule change request proposed to expand the scope of the DWGM to include distribution-connected injection facilities. The AEMC is progressing the DDCF rule change in parallel to its more general review into extending the NGR and NERR to hydrogen and renewable gases ('Review'). On 31 March 2022, the AEMC published a draft determination in respect of the rule change request.

At the time of preparing this Draft Report AEMO has not formally reviewed the AEMC's DDCF draft determination. However, AEMO has worked closely with the AEMC to assist in informing its draft determination and through this process has liaised with the AEMC ahead of the publication of the draft determination to understand the potential impact of changes to AEMO Procedures. AEMO understands that the most significant changes to the DWGM Procedures will be as a consequence of the DDCF rule change, with only minimal changes to Part 19 of the NGR expected as an outcome of the Review.

Given the overlapping processes and timeframes AEMO is only providing a high-level assessment of the likely impacts of the draft DDCF rule determination on AEMO's Procedures and is seeking preliminary feedback from participants on potential changes. AEMO encourages participants to provide feedback to the AEMC's draft DDCF rule determination. AEMO expects that once a final determination is made on the DDCF rule change, it will undertake a round of procedure consultation to implement any changes made to the NGR, as is standard process following a rule change.

2.2 AEMO consultation paper and feedback received

Though its consultation paper AEMO received feedback on two matters relevant to the DWGM, as summarised below.

Distribution UAFG Procedures

In its consultation paper, AEMO identified that it is likely that the distribution UAFG Procedures will need to be updated to incorporate scheduled injections from distribution connected injection facilities into the calculations. Participants were asked to give feedback on whether the process for determining and allocating distribution UAFG in the Procedures should be changed.

AEMO received mixed feedback on this matter from respondents. AGIG, APA and Ausnet Services expressed a view that the methodology should be changed to be similar to the arrangements in other jurisdictions where distributors are responsible for procuring gas to offset UAFG. Lumo/Red were of the view that the current arrangements are appropriate for NGEs.

A fundamental change to UAFG arrangements would require comprehensive and broader change to the regulatory and economic framework, most of which sits outside of AEMO's Procedures and the NGR. Further it is not clear that such a change is required purely as a consequence of NGEs being injected into the gas network given that UAFG can be offset with natural gas as well. AEMO has therefore determined that a change to the UAFG framework is out of scope for its review into the Procedures. AEMO will be making changes to ensure that the existing calculations remain appropriate for distribution level injections, however the fundamental methodology will remain similar to the current arrangements.

Other matters

AEMO also requested participants to identify any other issues that AEMO should consider in its review. APA suggested the review be expanded to consider the implications for transmission-connected NGE supply. In particular, APA highlighted the need to determine the most cost-effective locations for injections, whether transmission systems need could be compartmentalised to support flow dynamics and the most efficient metering arrangements. While AEMO agrees with APA's overall comments, consideration of transmission connected supply is out of scope of the review in accordance with the terms of reference set by Energy Ministers.

AEMO agrees that the Procedures should be flexible to accommodate potential future NGE supply from transmission. At this stage AEMO has not identified any proposed changes to its Procedures that would prevent development at the transmission level. AEMO also recognises that this review is an initial examination of the regulatory arrangements to identify and address any gaps in the short term. AEMO notes that APA is seeking to get testing for hydrogen on the DTS approved as part of its access arrangement approval process for capital expenditure with the AER[5]. AEMO may undertake a further review of its Procedures following a safety and integrity assessment for the DTS that demonstrates what is technically feasible with respect to accommodating hydrogen in the transmission network.

[5] APA Business Case – Capital Expenditure: Evaluating and mitigating hydrogen safety and integrity risks on the VTS: https://www.aer.gov.au/system/files/APA%20VTS%20-%20Access%20Arrangement%202023-27%20-%20Business%20Case%20200%20-%20Hydrogen%20Safety%20and%20Integrity%20-%20December%202021.pdf

2.3 Expected Procedure changes

2.3.1 Terminology and minor interpretation changes

As a consequence of definitional and interpretation changes in the NGL and NGR, there are several new terms that will have implications for the DWGM Procedures. Specifically, AEMO considers that the Procedures will need to be amended to accommodate the following changes:

- DDS injection point – means a receipt point on a declared distribution system. The AEMC proposes to introduce this term to accommodate injections into a DDS.
- Market injection point – a market injection point means a system injection point or a DDS injection point or both. In its draft determination, the AEMC proposes to introduce this new term to capture the two different types of "injection points" in the DWGM. As AEMO's Wholesale Market Procedures use the term system injection point to refer to receipt points on the DTS, a number of minor changes will need to be made to reflect the new definition. Some Procedures will need to differentiate between a system injection point and a DDS injection point.
- Definition of gas and natural gas – Officials are recommending that the NGL recognise covered gases which comprise primary gases and gas blends. AEMO expects that the term "gas" that is used in the Procedures will now be interpreted as meaning a covered gas in accordance with the changes being made in the NGL and NGR. However, a number of DWGM Procedures use the term gas and natural gas interchangeably. AEMO will review whether the use of natural gas in its Procedures is appropriate. In reality, AEMO expects that most of the references to natural gas in the Procedures will be amended to gas, which will be taken to mean 'covered gas'.
- Blend processing service provider – Officials are considering amending the DWGM registration categories in the NGL and the AEMC are considering amending the NGR to include blend processing service providers. Where DWGM facility operators are separately defined in the DWGM Procedures, changes will need to be made to accommodate blend processing service providers.
- Distribution connected facility and distribution connected facility operator – In its draft determination, the AEMC has recommended that a new category of facility be introduced to Part 19 known as a distribution connected facility. This new facility definition may result in minor changes to Procedures that apply to DWGM facilities and facility operators to ensure that, where appropriate, application is consistent across transmission and distribution connected facilities.

AEMO encourages stakeholders to consider the AEMC's draft determination and the Officials' consultation paper for further information on the above changes.

2.3.2 Expected DWGM Procedure changes

The DWGM Procedures are split over a large number of instruments. For ease of reading, this section groups the DWGM Procedures into the following categories:

- Market and Settlement Procedures
- Operational Procedures
- Connection and Maintenance Procedures

- Metering Procedures

2.3.3 Market and Settlement Procedures

Market and settlement Procedures relate to the operation of the wholesale market and the settlement of market outcomes for participants. They include:

- Wholesale Gas Market Accreditation Procedures (Victoria)
- Wholesale Gas Market Ancillary Payment Procedures (Victoria)
- Wholesale Gas Market Uplift Payment Procedures
- Wholesale Gas Market Administered Pricing Procedures (Victoria)
- Capacity Certificates Auction and Transfer Procedures
- Wholesale Gas Market Compensation Procedures (Victoria)
- Wholesale Gas Market Electronic Communication Procedures (Victoria)
- Wholesale Market Rule Consultation Procedures (Victoria)
- Wholesale Market Distribution UAFG Procedures (Victoria)
- Wholesale Gas Market Ownership Rules

AEMO anticipates only minor changes to the Market and settlement Procedures as a consequence of the AEMC DDCF rule change and Review. This is because, as identified in the AEMO consultation paper, the DWGM is settled on an energy basis (i.e. dollars multiplied by gigajoules) and settlement will function irrespective of the type of covered gas that is injected into the market.

Primarily, changes are expected to ensure that the scope of the existing requirements in the Procedures are appropriately expanded to cover distribution connected facilities and their injections, consistent with the AEMC's determination. The table below provides preliminary recommended Procedure changes based on AEMO's current understanding of the consequences of amendments proposed under the DDCF rule change or the Review. AEMO will undertake a comprehensive assessment of the required Procedure changes once the AEMC has made a final determination.

Table 1: DWGM Market and Settlement Procedures

Procedure	Procedure description	Expected changes/impact	AEMO Comments
Wholesale Gas Market Accreditation Procedures (Victoria)	This Procedure outlines the requirements for participants to be accredited for controllable quantities at system withdrawal and injection points.	Primarily definitional changes are expected to align the terminology used in the Procedures with the new NGR *market injection point* term. This change will clarify that the accreditation Procedures apply to all market injection points, including distribution points. No specific changes to accreditation application process or constraints have been identified.	As highlighted in AEMO's consultation paper, the Procedures are expected to apply in the same way to all facilities injecting covered gas and therefore only definitional and scope changes have been identified.
Wholesale Gas Market Ancillary	This Procedure defines how ancillary payments are	No change.	The draft determination for the DDCF rule change has not recommended any changes to ancillary payments.

Procedure	Procedure description	Expected changes/impact	AEMO Comments
Payment Procedures (Victoria)	calculated and allocated in the DWGM.		Further, the Ancillary Payment Procedures do not refer to facility type or facility operators.
Wholesale Gas Market Uplift Payment Procedures (Victoria)	This Procedure defines how Uplift payments are calculated and allocated in the DWGM.	No change.	The draft determination for the DDCF rule change has not recommended any changes to uplift payments. Further, the Uplift Payment Procedures do not refer to facility type or facility operators.
Wholesale Gas Market Administered Pricing Procedures (Victoria)	These Procedures specify the administered price cap for the DWGM and describe AEMO's processes for declaring and ending administered price periods in the Market in accordance with the Rules.	No change	It is not expected that administered price cap, the cumulative price threshold or the cumulative price period or the notification process would change as a consequence of the DDCF rule change.
Wholesale Gas Market Compensation Procedures (Victoria)	The purpose of these Procedures is to describe the principles and methodology upon which compensation amounts are to be determined by the dispute resolution panel under Rule 238.	Changes to clauses 4a and 4b for the award of compensation to clarify that compensation may be for injections into the DTS or a DDS.	The current clauses limit compensation to injections for the DTS. The DDCF draft determination recommends that injections from distribution connected facilities are included in the market and they will be subject to directions from AEMO. The compensation Procedures should therefore be extended to cover participants injecting at these facilities.
Capacity Certificate Auction and Transfer Procedures	These Procedures define how the capacity certificates auction operates and the system capability and modelling requirements used to determine auction quantities.	No changes are expected to the operation of the capacity certificates auction. Changes will be required to the modelling requirements to ensure that distribution connected facilities are included in the modelling processes and assumptions.	The DDCF draft determination recommends that distribution connected facilities are able to use capacity certificates for injection bids. Therefore, changes to the modelling assumptions and framework are required to ensure that distribution connected facilities are included in this Procedure. In addition, the CC zones will need to be created to accommodate injection sources from both transmission and distribution connected sources. AEMO does not expect changes will be required for the facility proposed at Albury-Wodonga, as it can be accommodated in the proposed northern zone with Culcairn. AEMO will need to review the CC zones for any new facilities.
Wholesale Gas Market Electronic Communication Procedures (Victoria)	These Procedures govern the operation of the DWGM electronic communication system, as per NGR 319(4), under which: (a) information must be provided by Registered Participants to AEMO; (b) information must be provided by AEMO to Registered Participants; and (c) information published on the Market Information Bulletin Board may be accessed by Market Participants.	No change	No changes expected.

Procedure	Procedure description	Expected changes/impact	AEMO Comments
Wholesale Market Rule Consultation Procedures (Victoria)	The Wholesale Market Rule Consultation Procedures (Victoria) developed under the rule 357(2) provides information on how AEMO consults on proposals for changes to Part 19 of the NGR submitted by a person other than AEMO under rule 356.	No change	No changes expected to the Process to amend the NGR.
Wholesale Market Distribution UAFG Procedures (Victoria)	These Procedures govern the distribution unaccounted for gas ("DUAFG") process. This consists of business rules and data formats which will enable the exchange of required information between Distributors and Market Participant	Changes are expected to the injection calculations to accommodate distribution level injections: • Changes to how CTM injections are calculated; and • Changes to injection data. No changes to the methodology for the UAFG process.	The current Procedures define injections as being from the DTS to a DDS. The existing calculations and Procedures therefore assume that there is a one-to-one relationship between DTS CTM injections and distribution withdrawals. This will no longer be the case once distribution connected facilities are injecting gas into a DDS. AEMO will therefore need to modify the Procedures to ensure that calculations for UAFG account for all supply. AEMO considers that broader changes to the UAFG framework are out of scope for this review.
Wholesale Gas Market Ownership Rules	These Procedures outline the rules for transferring title through the market from injectors to withdrawers of gas.	Changes to expand the title transfer approach to include injections into a declared distribution system from a production or blending processing facility.	The current rules transfer title at the point of withdrawal from the DTS at a system withdrawal point. The approach needs to be modified to cater for injections at a DDS.

Question One: DWGM Market and Settlement Procedures.

Do you agree with AEMO's recommended changes for the DWGM Market and Settlement Procedures? If not, what changes do you believe are required? Please state the Procedure and clause where possible.

2.3.4 Operational Procedures

Operational Procedures relate to the operation of the DTS and in this draft report include:

- Gas Scheduling Procedures
- Gas Market System Security Procedures
- Gas Quality Guidelines
- Gas Quality Standard and Monitoring Guidelines

In addition, under the DDCF rule change, the AEMC proposes that AEMO develop the following new Procedures:

- Distribution Operations Coordination Procedures
- Gas Quality Monitoring Procedures.

AEMO will develop initial consultation drafts for these new Procedures following the publication of the final determination. The new Gas Quality Monitoring Procedures will be primarily based on the existing AEMO Gas Quality Standard and Monitoring Guidelines. Stakeholders can refer to the AEMC's draft determination for further detail on the intended coverage of these Procedures.

At a high level, changes to the operational Procedures and guidelines are expected to be required to accommodate distribution-level supply e.g. constraints, scheduling etc and the different physical characteristics of Hydrogen and other primary gases from natural gas. The table below provides a preliminary assessment of the likely changes based on the draft outcomes of the review and the DDCF rule change.

Table 2: DWGM Operational Procedures

Procedure	Procedure description	Expected changes/impact	AEMO Comments
Gas Scheduling Procedures	These Procedures govern the operation of the DWGM.	Updates to: • constraints • inputs to scheduling • definitions and scope, to incorporate distribution connected facilities into the scheduling process.	In its draft determination, the AEMC recommends that distribution connected facilities are included in the DWGM and scheduled by the market. As such, the Gas Scheduling Procedures will need to accommodate these facilities. AEMO expects that the Gas Scheduling Procedures will need to be updated to consider how constraints that apply to distribution connected facilities are managed in the market, including: • blending constraints • facility constraints • network constraints Where applicable, existing constraint types will be expanded to include distribution connected facilities.
Gas Market System Security Procedures	These Procedures represent general principles applicable to the operation of the DTS in a way that averts or minimises threats to system security. Note that these do not cover every possible situation. Where a contingency is of such severity that it cannot be managed using the principles and strategies detailed in these Procedures, AEMO may be required to implement other elements from the Emergency Protocol.	Changes are primarily expected to the scope of these Procedures to accommodate distribution connected facilities into the DDS. The fundamental system security provisions and the way that AEMO operates the DTS and manages threats to system security are expected to be similar.	AEMO will continue to be responsible for managing system security and the operation of the DTS. Distribution system service providers continue to be responsible for operation of their networks.
Gas Quality Guidelines	These guidelines establish AEMO's response to short-term excursions from the standard gas quality specifications, in order to balance the risks of the supply of off-specification gas with the risks associated with curtailment of injection, subsequent system disruption and re-lights in gas consumer premises. While not an instrument under the NGR, these provide a transparent and consistent approach for accepting or rejecting off-specification gas events by AEMO and are generally adhered to by participants.	No change.	The DDCF draft determination proposes that arrangements for off-specification gas in the DDS be largely aligned with those existing for the DTS. AEMO proposed that one approach would be to reference these guidelines in the NGR and apply to both DTS and DDS. However, given that the proposed approach is to align with DTS arrangements there is no requirement for the guidelines to become a Procedure.
Gas quality standard and monitoring guidelines	These Guidelines provide additional guidance and transparency to participants	Guidelines to be superseded by proposed new Gas Quality Monitoring Procedures.	AEMO developed these Guidelines based on operational requirements. Some of the wording in the NGR with

Procedure	Procedure description	Expected changes/impact	AEMO Comments
	about key gas quality matters. This document provides an overview of the standard of gas quality required at all system injection points connected to the DTS and covers gas quality standards; requirements for approving all gas quality monitoring systems; and requirements for a Gas Quality Monitoring Plan.		respect to the gas quality framework is ambiguous. This is an issue because the additional requirements for gas quality, required for the safe operation of the DTS, covered in the guideline may not be NGR compliance obligations, despite being required under other legislative instruments or being deemed necessary by the DTS Service Provider or AEMO. AEMO is discussing this matter with the AEMC as part of the distribution connected facility rule change.
Distribution Operations Coordination Procedures	This new AEMO Procedure is proposed to facilitate operations between AEMO and distributors with distribution connected facilities.	This Procedure will be required to provide for: • submission, assessment, acceptance and review of methodologies for determining supply point constraints applicable at DDS injection points • arrangements for provision of information between AEMO and Distributors	AEMO will consult with stakeholders, including distributors regarding the requirements of this Procedure.
Gas Quality Monitoring Procedures	This new AEMO Procedure is proposed to provide for a range of matters relating to gas quality monitoring, including monitoring standards, the use of gas quality monitoring systems, and any matters AEMO considers necessary.	This Procedure will be primarily based on the AEMO Gas Quality Standard and Monitoring Guidelines, with additions per the new Rule. New components include: • equipment to be included in gas quality monitoring systems and equipment standards; • process for making an election responsible for establishing and maintaining approved gas quality monitoring arrangements • arrangements for applying for temporary or permanent modifications approved gas quality monitoring arrangements • testing of gas quality monitoring systems and the costs of tests • other matters AEMO reasonably considers necessary or desirable.	Some of the requirements for the new Procedure are dealt with in the existing Guideline so there is some precedent for approach, while others will be new and will require some development. All changes, particularly new requirements, will be subject to rigorous assessment and consultation by AEMO. It is noted that AEMO may include information relating to the application of the standard gas quality specifications in a DDS, and as such AEMO may consider relevant DDS matters.

Question Two: DWGM Operational Procedures.

Do you agree with AEMO's recommended changes for the DWGM Operational Procedures? If not, what changes do you believe are required? Please state the Procedure and clause where possible.

2.3.5 Metering Procedures

The Wholesale Market Metering Procedures (Victoria) incorporate:

- Metering Uncertainty Limits and Calibration Requirement Procedures
- Energy Calculation Procedures
- Metering Communication Procedures

- Metering Register Procedures
- Data Validation Procedures

The Metering Procedures require updates to reflect the DDCF rule change to ensure that new distribution connected facilities are captured for metering and settlement purposes. In addition, the Procedures need to ensure that the different physical requirements for primary gases are met for metering and measurement purposes.

In addition, under the DDCF rule change, the AEMC proposes that AEMO develop the following new Procedures:

- Metering installation coordination Procedures.

At the request of the Victorian Energy Minister, AEMO is currently reviewing its Procedures to implement zonal heating values in Victoria for customers on basic meters[6]. AEMO expects that this process will require changes to the Energy Calculation Procedures. AEMO is separately consulting on this matter through the Gas Retail Consultative Forum.

Table 3: DWGM Metering Procedures

Procedure	Procedure description	Expected changes/impact	AEMO Comments
Metering Uncertainty Limits and Calibration Requirement Procedures	The Procedures in this chapter are made under rule 297 of the NGR. They apply to all metering installations where gas is injected into or withdrawn from the DTS and apply to responsible persons in the DWGM.	Change scope to include: • metering installations for distribution connected facilities • connection points between DDS of different Distributors. Review uncertainty limits and calibration requirements to ensure they are compatible with hydrogen blends, hydrogen and renewable gases. Update the frequency with which calibration must be carried out by a responsible person. AEMO will consider the need for further guidance in the Procedures relating to instances where AEMO becomes aware that the accuracy of metering installation used for settlements does not comply.	The proposed DDCF rule change has decreased the frequency with which AEMO must review the calibration requirements contained these Procedures, to intervals not exceeding five years and not more than once a year. AEMO will therefore look at participant requirements with a view to balancing the reduced frequency of its review with the need to ensure that reviews can be conducted if required (i.e. potentially after less than five years).
Energy Calculation Procedures	The Procedures in this chapter are made under rule 303(6) of the NGR and relate to the calculation of natural gas energy at distribution delivery points. These procedures do not cover metering installations directly connected to the AEMO-operated gas transmission system, as the "Gas Metering – CTM Data Requirements" document, covers these meters.	Updates to technical parameters including Pressure Correction Factors. The energy calculation formula will be amended so that the Procedures are appropriate for all covered gases.	AEMO will undertake a technical assessment of its Energy Calculation Procedures to understand what is necessary to accommodate various covered gases e.g. whether multiple pressure correction factors are required or whether a single factor is still appropriate for hydrogen. AEMO will work with distributors and other interested parties to understand what is required and what is feasible for systems and processes.
Metering communication Procedures	These Procedures are established under NGR 308(1) and set out the requirements for AEMO to collect metering data for any metering installation where data is required for settlement purposes.	Scope and definitional changes to capture distribution connected facilities.	Consistent with the AEMC's rule change, AEMO anticipates that the data requirements and data exchange processes that currently apply to DTS metering installations would be extended to distribution-connected facilities without requiring many bespoke differences.

[6] Renewable Gas Blending in Victoria - Gas Heating Values: https://aemo.com.au/initiatives/trials-and-initiatives/renewable-gas-blending-in-victoria

Procedure	Procedure description	Expected changes/impact	AEMO Comments
Metering register Procedures	The Rules specify that AEMO must maintain a register of all metering installations that provide data used for settlement purposes. The purpose of these Procedures is to set out the metering information that is to be contained in the metering register for the DWGM in accordance with Part 19 of the Rules.	Terminology changes are required to reflect NGR definitional changes including market injection point.	Minor changes only, the scope and functioning of these Procedures will remain the same.
Data validation Procedures	The procedures in this chapter are made under rule 314(2) of the NGR. They cover the automated validation and substitution parameters to be applied to CTMs, DMs and Gas Chromatographs for which AEMO is the MDA	No change	No change
Metering Installation Coordination Procedures	This new AEMO Procedure is proposed to provide for providing for the obligations of the responsible person with respect to the prescribed matters relating to metering installations for system points and transfer points between declared distribution system points.	This Procedure will be required to provide for: • temporary changes to metering installations • addressing the consequences of temporary metering data failures • monitoring of metering installations • audit requirements, and the cost of audits • investigation and reporting	To be aligned with new responsibilities and obligations in DDCF rule change.

Question Three: DWGM Metering Procedures.

Do you agree with AEMO's recommended changes for the DWGM Metering Procedures? If not, what changes do you believe are required? Please state the Procedure and clause where possible.

Question Four: DWGM Procedures.

Are there any other matters that you think AEMO should consider for the DWGM Procedures?

3 Short Term Trading Markets (STTM)

3.1 Overview of the STTM

The STTM is a wholesale market for the trading of natural gas operated by AEMO under part 20 of the NGR. The STTM currently comprises three hubs located at Adelaide, Sydney and Brisbane. While each hub is scheduled, priced and settled separately, all hubs operate under the same set of rules and procedures. The key features of the STTM include:

- a mechanism for participants to trade gas at a transparent price ahead of the gas day,
- a market based balancing mechanism (known as market operator service) for settling deviations, and
- a framework for balancing supply and demand if there is a physical shortfall or surplus when normal market mechanisms are unable to do so (known as contingency gas).

Participation in the STTM is mandatory for any facilities (STTM Facilities), shippers, or users (Trading Participants) who inject or withdraw gas at an STTM hub. The STTMs overlay the existing contract carriage framework that operates at STTM facilities and trading participants must have the appropriate contractual arrangements in place with STTM facility operators. AEMO's role in the STTM is to act as market operator. The scheduling and operation of an STTM facility is the responsibility of the relevant STTM facility operator in accordance with the Rules, Procedures, jurisdictional regulations and the facility operator's own commercial arrangements.

All AEMO procedures relating to the STTM are covered by a single document, the STTM Procedures.

3.2 Stakeholder feedback to the consultation paper

In its consultation paper, AEMO identified a small number of potential changes to the STTM Procedures. AEMO concluded that the STTM Procedures are largely fit for purpose for covered gases for settlement and the operation of the market. The consultation paper asked for feedback on several minor potential Procedure changes and also sought industry's view on whether AEMO's proposed scope of changes for the STTM was appropriate. The feedback received is summarised below.

STTM Hub definitions

Under the current Procedures, whenever a new custody transfer point (CTP) is added to an STTM hub, AEMO must change the Procedures. To change the Procedures AEMO must undertake a full Procedure consultation utilising the approved process under Part 15B of the NGR requiring multiple rounds of consultation and at least 3 months. In the past, for Procedure changes of this nature, AEMO has generally received only limited stakeholder feedback. The current approach would mean that whenever a new NGE facility connects to an STTM hub, AEMO be required to run a standard consultation process to update its Procedures. If a large number of small facilities are expected to connect to STTM hubs this process could be overly onerous for little value. As such, AEMO requested feedback on whether the STTM hub definition Process should be streamlined and removed from the Procedures. Such a change would also require an update to the NGR, and the AEMC also consulted on this question.

All respondents to this question (AGIG, ENA, Bioenergy Australia and Jemena Gas Networks) supported the establishment of a more streamlined change process. AEMO also agrees that the benefits of the current process are limited and may not justify the time and cost required to run a full public consultation. As such, AEMO is supportive of removing this requirement from the NGR and Procedures. AEMO and the AEMC have been collaborating on the most effective way to make this change in the regulatory framework. The AEMC are further consulting on potential changes to the NGR in their paper and readers are encouraged to review the AEMC's recommendations on this matter.

STTM market operations

AEMO's consultation paper concluded that the current operation and design of the STTM does not need significant change to facilitate the participation of covered gases (i.e. primary gases and Gas blends). AEMO sought industry feedback regarding this assessment and any further changes that might be required.

AGIG, APA, Bioenergy Australia and ENA all agreed with AEMO's assessment and did not identify any changes. APA's feedback was qualified on the basis that any covered gases are measured and transacted on an energy basis. Jemena Gas Networks also agreed that the market operations do not need to change. However, Jemena believed that changes to the participation framework could help facilitate NGEs. Jemena suggested that a materiality threshold for exempting small NGE facilities from registration could be developed and that there should be an ability to aggregate NGE facilities under common operation. Jemena suggested that the rules for exemption should look to align with the rules in place for the National Electricity Market where appropriate. The potential changes suggested by Jemena are matters for the NGR and are being considered by the AEMC.

Administered Market States

AEMO asked whether the threshold for significant constraints for a trading participant should be changed to reflect that NGE producing facilities are likely to be relatively small in size and may be the sole source of supply for their shipper. AEMO received mixed feedback on this matter with responses received from AGIG and Bioenergy Australia that the threshold be reduced; APA that the same rules should apply across all facilities; and Jemena that no change should be made.

AEMO has considered this parameter further and notes that if the threshold is reduced, this could potentially lead to an administered market state being triggered more frequently for events that are arguably non-material. At this stage, AEMO does not consider that a change is required for NGE facilities and therefore no recommendation is made.

Other STTM matters

AEMO's consultation paper also requested feedback on whether there were other STTM matters that should be considered in the review of the Procedures. The only comment was from APA who stated that:

> "Consideration may need to be given to scheduling and curtailment mechanisms and how these specifically relate to scheduling of injections to create blended products and maintain blends within the tolerance range. For instance, it may now be that in facilitated markets, the market is not only solving for quantity of supply and price, but also ensuring that a suitable blending tolerance range is scheduled and maintained."

In AEMO's view, a change to optimise blending constraints in the STTM schedule would represent a fundamental change to the market design. AEMO does not consider a change of this nature is required to facilitate initial limited NGE supply into the market and that this would be a matter better considered at a later stage and would

need to be pursued through a rule change. As the industry develops, and if blended products represent a more significant share of supply, it may be appropriate to review the fundamental market design.

3.3 Overview of recommended changes to the STTM Procedures

Terminology and minor changes consistent with the AEMC's review of the NGR

As part of its review into the regulatory framework, the AEMC has been considering potential changes to the NGR that may be required to facilitate covered gases. AEMO and the AEMC have been collaborating closely to understand the potential impact of respective recommendations. This section provides a high-level overview of potential Procedure changes that may result from the AEMC's draft report recommendations. Stakeholders are encouraged to review the AEMC's draft report for the Review and note that the draft recommendations below are subject to change depending on where the AEMC gets to in its final report.

Key STTM amendments proposed by the AEMC are as follows:

- **Blending processing facility operator** – the definition of STTM shipper will expanded to apply to a party to a contract with a blending facility operator for delivery of gas to an STTM hub. The broadening of the STTM shipper definition is not expected to have a direct impact on the Procedures but will extend existing Procedure obligations to new parties.
- **Injection Facility category** – The AEMC proposes to replace the 'STTM production facility' and 'STTM storage facility' definitions with a new single category – 'STTM injection facility'. The STTM Procedures primarily use the term STTM facility, which applies to all facilities in the STTM. However, there are some references to specific facility types that will need to be updated to reflect this new definition.
- **Capacity information provided under rule 414** - The AEMC proposes that a materiality threshold be applied to STTM facility hub capacity provided by STTM facility operators. The STTM Procedures may need to be modified to clarify what information is used in the event that the facility operator has not submitted new information (i.e. the last submission). The default gas day capacity and maximum gas day capacity Procedures will be reviewed to ensure that they are consistent with any modification to the NGR made by the AEMC.
- **Facility aggregation** – The AEMC is consulting on a recommendation to enable STTM facilities that are operated by a single party to be aggregated for submission of offers and STTM information. AEMO would therefore be required to approve applications from STTM facility operators and publish information on aggregated facilities. AEMO would need to develop new Procedures to cover this process.
- **Streamlining the Custody Transfer Point amendment process** – Both the AEMC and AEMO have consulted on simplifying the Process for updating CTPs and such a change will require changes to both the NGR and Procedures. The approach the AEMC is considering would require AEMO to maintain a register of CTPs for STTM hubs. The STTM Procedures would outline the CTP register and would need to set out the arrangements required for AEMO to make changes to the register.

Proposed changes to STTM Procedures

Consistent with its consultation paper, AEMO has only identified minor changes to the STTM Procedures.

Table 4: STTM Procedures - expected changes

Ref#	Procedure Clause	Procedure overview	Expected changes	Assumptions AEMO Comments
1	2-Hubs	This Procedure defines the STTM hubs at Sydney, Adelaide and Brisbane. The Procedure provides each hub's list of constituent CTPs. When a new CTP is added to an STTM hub, this Procedure clause is modified to include the update and to reflect the characteristics of the new CTP.	• Remove the connection point definitions for each STTM hub. • Retain high-level description of each STTM hub e.g. geographic coverage and physical assets in accordance with any requirements from 371 (2).	The purpose of this change is to streamline the process to update CTPs. This change is dependent on the AEMC amending 371(2) of the NGR to remove the requirement for CTPs to specified in the STTM Procedures. The AEMC is consulting on this matter in their paper.
	New	Procedure to outline the STTM CTP register.	• Define the contents of a new subordinate instrument that will specify the CTPs that comprise an STTM hub • Define the change process for the new subordinate instrument.	AEMC is considering a requirement for AEMO to maintain a register of CTPs for STTM hubs.
2	3 – STTM Facilities and Distribution System Information	These Procedures govern the determination of default facility capacities and the publication of facility information by AEMO.	• Create a requirement for AEMO to use the last submitted facility hub capacity by the facility operator. *Note this requirement already exists but may need to be reviewed and linked more closely to the new Rule.* • Review current Procedures for maximum and default capacities to ensure they are consistent with the new rule.	The AEMC is consulting on potential changes to the NGR that would result in facility operators not having to submit an update to facility hub capacities unless the change in capacity exceeds a threshold as defined in the NGR.
3	New – Aggregation of STTM facilities	A new Procedure may be required to define the requirements for aggregating STTM facilities as the AEMC is considering would require AEMO to maintain a register of CTPs for STTM hubs.	• Outline application process and the information AEMO requires. • Set timeline for AEMO to respond to an application. • Create process for AEMO to seek further information from an applicant including timeframes. • Specify notification process. • Define how AEMO will publish the relationship between individuals facilities and the aggregated STTM facility.	That the registration provisions will be amended in the NGR to create a framework for aggregating related STTM facilities.

Question Five: STTM recommended Procedure changes

Do you agree with AEMO's recommended changes for the STTM Procedures? If not, what changes do you believe are required? Please state the Procedure and clause where possible.

Question Six: STTM Procedures.

Are there any other matters that you think AEMO should consider for the STTM Procedures?

4 Regulated Retail Markets

4.1 Overview of the retail markets

The regulated retail gas markets in NSW/ACT, Queensland, South Australia and Victoria allow licensed retailers to sell natural gas to residential and business customers and are designed to facilitate retail competition. In these markets, AEMO is the retail market operator and is responsible for:

- managing customer transfers and associated market data between retailers, and between retailers and distribution businesses;
- managing the daily allocation of gas to retailers to enable settlement; and
- operating the central IT systems that facilitate retail market services.

4.2 Stakeholder feedback to the consultation paper

In general, there was broad support for the overall scope of changes identified by AEMO in its consultation paper, this section provides a summary of the key issues raised by stakeholders.

Overview of RMP scope of change

AEMO is required by the NGL to develop and maintain Retail Market Procedures (RMPs) for each of the regulated retail gas markets and each market operates under its own specific set of Procedures. While each of the RMPs is a standalone instrument and are drafted differently, they tend to cover common concepts and processes. AEMO consulted on the topics that are common across all of the RMPs. AEMO's consultation paper concluded that only minor changes to the RMPs are required to facilitate the participation of covered gas producing facilities and their participants.

A summary of areas of potential change is provided in the table below – note that Procedures have been grouped by common headings across the various instruments.

Table 5: Scope of change to the RMP

Procedure Heading	Matters covered	Expected changes/impact
General	• Definitions • Interpretation • Parties covered by the procedures • Technical protocol and full retail competition hub obligations.	AEMO identified a small number of definitional changes that are required across the RMPs. These changes: • Remove legacy references to natural gas and align terminology with that proposed through the national framework. • Clarify (where appropriate) that the obligations and definitions in the RMPs apply to covered gases being injected directly into a distribution system (from a production or blend processing facility) not just a transmission pipeline.

Procedure Heading	Matters covered	Expected changes/impact
Databases	• Allocation of Meter Installation Registration Numbers (MIRN)s to Distributors. Management of AEMOs and Distributors databases	No changes are expected to these processes or Procedures as they relate to management of databases.
Metering	• Meter Management • Site access • Meter reading (basic and interval[7]) including scheduling, site access, frequency, timing, transfer reads; historical data • Other reads such as special and customer reads. • Methodologies including validation, estimation and substitution • Calculation and provision of energy data (Distributors, Retailers and AEMO) • Heating value • Profiling • Data changes • Gate point data.	No changes are expected to these processes or Procedures as they relate to customer metering processes for retail billing, not technical metering parameters. Note that the heating value model for basic meters in Victoria is being changed via a separate consultation process at the request of the Victorian government.
MIRN Discovery Process	• MIRN discovery requests and response information, • Assistance in searching.	No changes are expected to the MIRN discovery process that facilitates retail competition.
Customer Transfer Process	• Describes the life cycles of the various stages of the customer transfer process which includes preconditions, initiation, objections registration • Bulk Customer Transfer • Customer transfer in error correction process.	No changes are expected to the customer transfer process.
Retailer of last resort (ROLR)	• Provision of customer data to AEMO • Sets out the processes for managing a RoLR event.	No changes are expected to retailer of last resort processes.
Allocation, reconciliation/balancing, and settlements	• Sets out the processes for managing the daily allocation of gas usage. • Manifest data errors.	The allocation, reconciliation/balancing, and settlements will need to remain whole if covered gases are directly injected into distribution systems (as opposed to via transmission pipelines). AEMO has identified minor definitional changes that are necessary to ensure that the scope of the obligations in the procedures will extend to covered gases and production facilities injecting into distribution systems. AEMO is not proposing any changes to the actual allocation, balancing or settlement methodologies or processes.
Distribution Unaccounted for Gas	• Calculation of unaccounted for gas and determination of payments.	AEMO recognises that distributors may want to use different covered gases to offset their UAFG amounts. AEMO has not identified a need to change any of the Procedures or processes to facilitate the procurement UAFG amounts from alternate supply sources and so no changes are proposed.

[7] "For Victoria, the interval metering provision for declared distribution system are described in the Part 19 of NGR. Click here to view. See rules 290 to 316. For non-declared distribution systems (South Gippsland, Grampians and Bairnsdale) interval metering arrangements between AEMO and the Distributor for these systems are described in "Agreed Services" Agreements between these parties"

Definitions and concepts in the retail market procedures

In its consultation paper, AEMO identified a number of terms across the RMPs that need to be amended for consistency with national regulatory framework and to ensure that the scope of the RMPs will apply to all covered gases facilities injecting into distribution networks. In general there was broad support from respondents to AEMO's proposed changes. Specific feedback was received on the following matters:

- Definition of network receipt point in NSW RMP – JGN provided feedback that in its view the current definition of network receipt point is adequate to capture NGE facilities outside of the STTM networks. AEMO has reviewed this matter and agrees with Jemena's feedback that no change is required.
- Definition of UAFG Provider in Queensland RMP – AGIG and APA suggested that the definition of UAFG provider in the Queensland RMP be broadened to allow distributors to engage with parties other than retailers in procuring UAFG. AEMO has determined that this proposal is outside the scope of its current review. That is, it is not a change arising as a consequence of covered gases being injected into the system, nor is it required to facilitate participation of covered gases. Given the review scope and the broader economic and regulatory framework that relates to UAFG provision, its like that a policy determination would need to be made prior to any change to the RMPs.
- SA gate point coding – AGIG and APA raised a potential need to amend the gate point coding in the South Australian retail market. The final character E indicates the transmission pipeline the gate is connected to a generic code for downstream supplies. AEMO's initial understanding of the issue is that under the current RMP, AGIG only provides AEMO with the aggregate gate point metering data (e.g. total for the pipeline).

Ability for users and distributors to meet their obligations under the RMP

In its consultation paper, AEMO sought feedback on whether distributors and users would be able to provide AEMO with information on injections and withdrawals for any facilities that connect into a retail market. Bio Energy Australia, AGIG, Jemena Gas Networks and Ausnet Services all expressed a view that, in general, the existing provisions in the RMPs for metering, balancing and allocations are adequate and that distributors should be able to meet their obligations to provide information on injections and withdrawals if NGE facilities connect to their networks.

Metering

In its consultation paper, AEMO asked for feedback on whether the existing metering provisions in the RMP are able to accommodate NGEs. In general respondents agreed that the current provisions in the Procedures are adequate. However, APA and AGIG raised that it could be clearer who the responsible party is for NGE meter facility metering and the provision of data to STTM and retail market systems. This is a matter that AEMO intends to investigate further and if necessary clarify in the Procedures.

Distribution UAFG

In its consultation paper AEMO proposed that the distribution UAFG Procedures in the RMPs did not require changes to facilitate the participation of NGEs in the market. AEMO asked for feedback on whether industry agreed with this assessment. All respondents agreed that the current UAFG process in the RMPs remained fit for purpose for distribution UAFG. Consistent with feedback provided regarding definitions, AGIG and APA considered that the definition of UAFG provider in Queensland should be expanded to include parties other than retailers.

Other matters

AEMO sought feedback on whether any other matters should be considered in its review. APA highlighted the importance of heating values to be measured on a zonal basis to ensure accurate billing. APA raised the potential to harmonise arrangements across jurisdictions. AEMO notes that outside of Victoria, heating values are currently calculated on a zonal basis and broad harmonisation is not in scope for AEMO's review. At the request of the Victorian government AEMO is currently undertaking a separate process to transition the Victorian RMP from a state-wide calculation of heating values for basic meters to a zonal model bringing the approach in line with other jurisdictions. No other material feedback was received to this question.

4.3 Overview of recommended changes to the RMPs

Terminology and minor changes consistent with the AEMC's review of the NGR

RMP-related amendments proposed by the AEMC are as follows:

- **Expanding the definition of self-contracting user** – In the NSW/ACT, South Australia and Queensland Retail Markets, the AEMC is recommending that the definition of self-contracting user be expanded to include blend processing facilities. AEMO does not expect this to change to require significant changes to the Procedures but existing obligations may apply to new parties.
- **Expanding the definition of market participant other** – In Victoria, the AEMC is proposing to expand the definition of market participant other to include blend processing facilities so that participants operating at these facilities may be registered. AEMO does not expect this to change to require significant changes to the Procedures but existing obligations may apply to new parties.

Draft recommended potential changes

Consistent with its consultation paper and terms of reference, AEMO has identified limited direct changes for the RMPs as a result of the review into the regulatory framework. The changes largely seek to clarify legacy definitions and ensure that existing arrangements in the Procedures are extended to facilities or participants operating at facilities that inject into distribution systems.

Changes to the Victorian RMP as a consequence of the AEMC's rule change have not been considered as part of this paper and AEMO will consult on any changes following a final determination per its standard process.

Table 6: Expected Retail Market Procedure Changes

Ref#	Procedure Clause	Procedure overview	Expected changes	Assumptions and AEMO Comments
Victoria Retail Market Procedures				
1	Definitions	Definition of gas	Insert a new definition of gas that is aligned with definitions in the NGR and NGL. Italicise the word gas throughout the Procedures, where it is appropriate to do so.	The current RMP do not have an interpretation/definition for the term gas. This change seeks to align the Procedures with the broader regulatory framework.
	Definitions	Definition of Custody Transfer Meter	Either amend term or introduce new term to clarify that distribution connected facilities are also metered	Current definition limits the definition of CTM as metering injections between the DTS and a distribution system. Gas entering from a distribution connected facility will need to be captured and metered.

Ref#	Procedure Clause	Procedure overview	Expected changes	Assumptions and AEMO Comments
NSW/ACT Retail Market Procedures				
2	Definitions	Heating Value	Remove reference to hydrocarbons. Clarify the term technical parameters.	The current heating value definition includes legacy references to hydrocarbons and technical parameters that should be changed for clarity.
3	Definitions	Network receipt point	No change	AEMO has completed its review whether to changes the current definition for network receipt point being defined as A point at which gas enters a Network Operator's network, and concluded that this terms remains fit of for purpose for these RMPs (note – this was item #72 on consolidated feedback).
South Australia Retail Market Procedures				
4	Definitions	Injecting	Term to be amended to include all covered gases.	The current definition limits injecting to gas from a transmission pipeline. The change may be required so that users can meet their obligations under 8.2 that requires injections to match withdrawals within a subnetwork and the allocation provisions in 8.3.
5	Definitions	Energy inflow	Term to be amended to include all covered gases.	The current definition limits injecting to gas from a transmission pipeline.
6	Appendix D 14.12	Gate Point Coding	No change	AEMO has completed its review as to whether there is unintended consequence to do with the gate point coding in South Australian. In our consolidated feedback AEMO had indicated that under the current RMP AGIG only provides AEMO with the aggregate gate point metering data (e.g. total for the pipeline). AEMO compared this with NSW/ACT process is that AEMO receives aggregated value from Network Operator. AEMO did not received any further feedback when participants were invited provide feedback in February 2022. AEMO has concluded that there should be no unintended consequence, hence no change.
Queensland Retail Market Procedures				
7	Definition	Custody Transfer Meter	Clarified to ensure that covered gases that are injected directly into a distribution network are metered.	The current definition is transmission pipeline specific. There is some ambiguity concerning responsibility for metering of any distribution-connected injection facility outside of the STTM. The term custody transfer meter is used in determining a user's aggregated injections and therefore needs to encompass all supply sources.

Question Seven: Retail Market Procedures recommended changes

Do you agree with AEMO's recommended changes for the Retail Market Procedures? If not, what changes do you believe are required? Please state the Jurisdiction, Procedure and clause where possible.

Question Eight: Retail Market Procedures.

Are there any other matters that you think AEMO should consider for the Retail Market Procedures?