DWGM Technical Specification - May 2024

1.01 February 2024

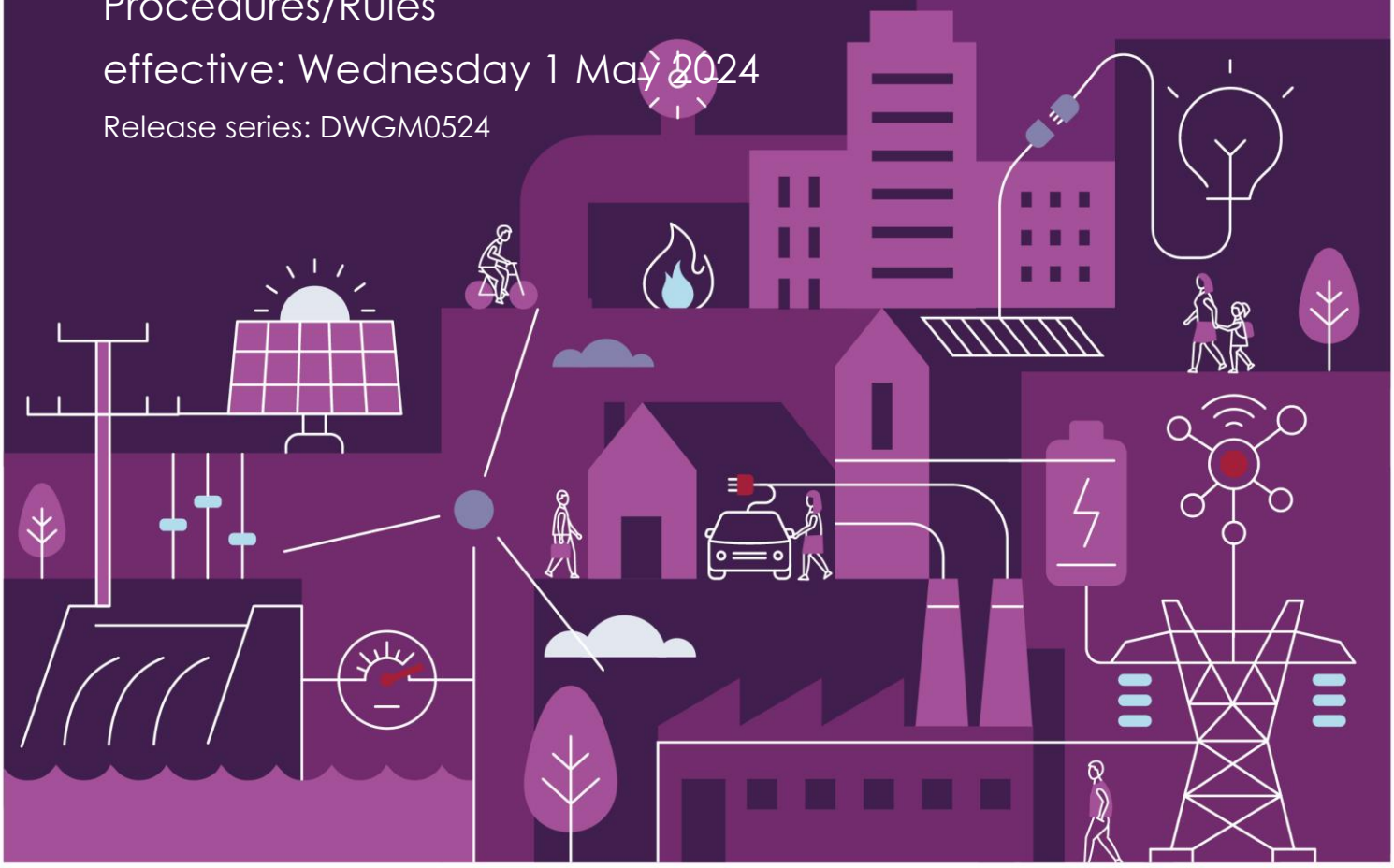
Pre-production 1: Monday 16 October 2023

Pre-production 2: Wednesday 3 April 2024

Production: Wednesday 1 May 2024

Procedures/Rules effective: Wednesday 1 May 2024

Release series: DWGM0524



Important notice

Purpose & audience

This document describes the technical changes required to participant's systems for the System Name 00.00.0 Technical Specification - Month Year (Release). The Australian Energy Market Operator (AEMO) provides this information as a service targeting business analysts and IT staff in participant organisations. It provides guidance about the changes to their market systems under the National Gas Rules, as at the date of publication.

How to use this document

- If you have questions about the business aspects of these changes, please see Consultations on AEMO's website.
- The references listed throughout this document are primary resources and take precedence over this document.
- Unless otherwise stated, you can find resources mentioned in this guide on AEMO's website.
- **Text in this format** is a link to related information. Some links require access to MarketNet.
- **Text in this format**, indicates a reference to a document on AEMO's website.
- **Text in this format** is an action to perform in the Markets Portal.
- This document is written in plain language for easy reading. Where there is a discrepancy between the Rules and information or a term in this document, the Rules take precedence.
- Glossary Terms are capitalised and have the meanings listed against them in the Glossary.
- Rules Terms have the meaning listed against them in the **National Gas Rules**.

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Distribution

Available to the public.

Document Identification

Prepared by: AEMO Digital

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Version History

1.01 See Changes in this version.

Documents made obsolete

The release of this document changes only the version of DWGM Technical Specification - May 2024.

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Contents

1 Introduction

1.1 Audience

AEMO provides this information as a service targeting business analysts and IT staff in Registered Participant companies.

1.2 Objective

The DWGM Technical Specification - May 2024 (Release) describes the projects planned by AEMO from a participant perspective and includes any system related changes for participants.

1.3 Status

Version	Status
1.01	Added transition plan information and changes to INT126 DFS Data MIBB report

1.4 Release dates

Scheduled for implementation in:

- Pre-production 1: Monday 16 October 2023 for INT139A, INT188, INT140 and INT176 reports
- Pre-production 2: Wednesday 3 April 2024 for INT 240, INT241 and INT126 reports
- Production: INT126 on Monday 15 April 2024
- Production: Wednesday 1 May 2024

1.5 Projects and enhancements

Changes and enhancements for this Release include:

No.	Functionality	Change	Affected interface	Reference
1	Additional and revised MIBB reports	See **DWGM Hydrogen and Renewable Gases**	n/a	User Guide to MIBB Reports
2	Demand Forecasts MIBB reports	See **Demand Forecasts**	n/a	User Guide to MIBB Reports

1.6 Rule and procedure changes

Title	Project	Version/status	Effective
AEMC Review into extending the regulatory frameworks to hydrogen and renewable gases	DWGM Hydrogen and Renewable Gases	Final	1 May 2024
AEMC DWGM distribution connected facilities	DWGM Hydrogen and Renewable Gases	Final	1 May 2024
Amendments to Victorian Declared Wholesale Gas Market and Retail Market – 1 May 2024 release	DWGM Hydrogen and Renewable Gases	IIR	1 May 2024

1.7 Related documents

Once published, these resources take precedence over this technical specification

These guides and resources are updated according to this technical specification and published for the pre-production Release Date.

Title	Description	Status
User Guide to MIBB Reports	The User Guide to MIBB Report details the content of reports for the DWGM and Gas Retail Markets in Victoria, Queensland and South Australia.	Updated

1.8 Approval to change

No approval or agreement to change required. MIBB reports changes is implemented as a result of the **Hydrogen rule change** and the **Distribution Connected Facility rule change**.

1.9 Version numbers

AEMO releases new versions of this document as the technical requirements are streamlined.

Incremental version numbers such as 1.01, 2.01 and so on mean there is a minor change to the technical specification.

Major version numbers such as 1.00, 2.00 means there are substantial changes to the technical specification. Participants must carefully review these changes, detailed below.

1.10 Changes in this version

- For INT126 DFS Data MIBB report, revised dates for null value in fields
- Added production release date for INT126 DFS Data MIBB report
- Updated implementation information in Transition
- Updated pre-production refresh information

2 Proposed Timeline

Milestone	Date	Description
Revised Technical Specification	September 2023	AEMO releases new versions of this document as the technical requirements are streamlined. During the project this document is the source of truth From the pre-production release, the technical specification is no longer updated, the **related documents** become the source of truth **Release schedules and technical specifications**
Related Documents publication	Monday 16 October 2023	Release of guides and resources mentioned in Related on page 2
Pre-production refresh	4 March 2024 – 8 March 2024 Refreshed with production data from 7 February, 2024	Refresh of the pre-production system with data refreshed from the production system. An outage of up to five days can occur to the pre-production environment during this period. Participant access is not restricted, however, AEMO do not guarantee the pre-production data content or system availability. During the refresh, access to other AEMO systems such as AWEFS, EMMS, OPDMS, and STTM may be intermittently affected For details, see **Pre-production Refresh** in the Technical Specification Portal
Pre-production 1 implementation	Monday 16 October 2023	AEMO implements INT139A, INT188, INT140 and INT176 reports to pre-production for participant testing AEMO has full access to the system during this period Participant access is not restricted; however, the data content or system availability is not guaranteed
Pre-production 1 available	Monday 16 October 2023	Testing period begins for participants Data changes (e.g. new Heating Value Zones) are applied on 1 November 2023. New heating zone values are incorporated in MIBB reports published from 2 November 2023 (for gas day 1 November 2023 onwards).

Milestone	Date	Description
Participant/Industry Testing 1	17 October 2023 – 21 November 2023	Unstructured participant testing in the pre-production environment
Pre-production 2 implementation	2 April 2024	AEMO implements INT 240, INT241 and INT126 reports to pre-production for participant testing. AEMO has full access to the system during this period Participant access is not restricted; however, the data content or system availability is not guaranteed.
Pre-production 2 available	Wednesday 3 April 2024	Testing period begins for participants
Production	Monday 15 April 2024	INT126 report is available to participants.
Production implementation	Tuesday 30 April 2024	AEMO implements the release to production
Production reports available	Wednesday 1 May 2024	New and updated reports available to participants. Data changes including new Heating Value Zones are applied on 1 May 2024. New heating zone values are published in MIBB reports from 2 May 2024 (for gas day 1 May 2024 onwards). See Transition for more information.
Cutover to new Zonal Heating Values	1 May 2024	Participants to use new Zonal Heating Values in energy content calculations

3 DWGM Hydrogen and Renewable Gases

3.1 Goal

The **AEMC's review** documented legislation changes into extending the regulatory frameworks to allow Distribution Connected Facilities, hydrogen and other renewable gases for blending into the DWGM.

AEMO is implementing zonal heating values (HVs) for Tariff V consumers to facilitate renewable hydrogen gas blending in Victoria.

Currently, the Victorian Gas Retail Market uses state-wide heating values (HV) to bill Tariff V customers for their gas use. The Victorian government has requested the move to zonal heating values. For more information, see Transition.

AEMO is adding and updating MIBB reports to include these changes.

3.2 High-level changes

Function	Description	Reference
MIBB reports	New and updated MIBB reports*	Pre-production: **vicgas.preprod.marketnet.net.au - /Public_Dir/** Production: **vicgas.prod.marketnet.net.au - /Public_Dir/**

*AEMO's public MIBB reports from Production are replicated to AEMO's website via NEMWEB. See **https://nemweb.com.au/Reports/Current/VicGas/**.

AEMO originally planned a production release of the new MIBB reports INT188 and INT139a for 1 February 2024. This release is cancelled as these reports would produce data for the existing ~40 heating value zones, but NULL value data for the new ~140 heating value zones. The new heating value zones will be implemented on 1 May 2024.

Participants should use the INT188 and INT139a reports produced in pre-production (available from 1 November 2023) for the purpose of system change and development. These reports are subject to the DWGM Procedure change consultation.

3.3 INT139a Daily Zonal Heating Value

Trigger Type	Event triggered
Published	Completion of daily zonal heating value calculations
Audience	Public
Output file name	int139a_v[n]_daily_zonal_heating_value_1~yyyymmddhhmmss.csv

A report providing the heating value for each heating value zone used to determine the energy content of gas consumed within Victoria. This is consistent with the Energy Calculation Procedures.

Section 2.6.1 of the Retail Market Procedures (Victoria) provided details on how heating value zones for the basic meter that changes during the measurement period are to be applied.

The daily zonal heating value calculation is expected to be triggered at approximately 9:30AM each day.

3.3.1 Audience notes

The reported values are the volume-weighted average HVs of each of Victoria's heating value zones.

The values in this report may be subject to revision by AEMO.

This report contains heating values zones for DTS connected DDS and non-DTS connected DDS (i.e. Non-DTS Bairnsdale, South Gippsland and Grampians regions).

3.3.2 Content notes

This report is generated daily. Each report displays the daily volume weighted average HV for each heating value zone in Victoria over the previous 90 gas days (not including the current gas day).

Each row in the report provides the heating values for a:

- Heating value zone.
- Specific gas date.

Since the heating value (HV) is calculated based on hourly HV readings, the latest HV available is for the previous full gas day. Therefore, the HV is always published one day in arrears.

In the event an hourly HV wasn't available or deemed invalid, it would be substituted according to the set substitution rules. Unresolved substitutions are reviewed at the end of each month.

3.3.3 Data content

Name	Data type	No nulls	Primary key	Cq	Comments
gas_date	Varchar(20)	True	True	N	Starting hour of gas day being reported, example:. 30 Jun 2007
hv_zone	Integer	True	True	N	Heating value zone id number
hv_zone_desc	Varchar(40)	False	False		Heating value zone name
heating_value	Numeric(5,2)	True	False	Y	Daily volume flow weighted average heating value (GJ/1000 m(3)) rounded to 2 decimal places
current_datetime	Varchar(20)	True	False	N	Date and time report is produced Example: 30 Jun 2007 06:00:00

Example:

```
gas_date,hv_zone,hv_zone_desc,heating_value,current_date
28 Aug 2023,21,On Site Hv,38.49,29 Aug 2023 14:32:40
28 Aug 2023,29,Iona,37.91,29 Aug 2023 14:32:40
28 Aug 2023,402,VIC DTS (Peninsula),38.28,29 Aug 2023 14:32:40
28 Aug 2023,403,VIC Dandenong North,38.31,29 Aug 2023 14:32:40
28 Aug 2023,404,VIC Murrumbeena,38.29,29 Aug 2023 14:32:40
28 Aug 2023,405,VIC DTS (Lurgi),38.26,29 Aug 2023 14:32:40
28 Aug 2023,408,VIC Brooklyn,38.22,29 Aug 2023 14:32:40
28 Aug 2023,409,VIC W.Melbourne (Footscray),38.29,29 Aug 2023 14:32:40
28 Aug 2023,411,VIC Melbourne (QWR),38.27,29 Aug 2023 14:32:40
28 Aug 2023,412,VIC St Kilda,38.27,29 Aug 2023 14:32:40
```

3.4 INT188 CTM to Heating Value Zone Mapping

Trigger Type	Time triggered
Published	Daily at 3:30 am
Audience	Public
Output file name	int188_v[n]_ctm_to_hv_zone_mapping_[p]~yyyymmddhhmmss.csv

3.4.1 Report purpose

A report containing the DWGM's Custody Transfer Meter (CTM) to Heating Value Zone mapping.

3.4.2 Audience notes

The report provides the mapping of active DTS CTMs to the Heating Value Zones. The mapping of non-DTS CTM to heating value zone mapping for South Gippsland, Bairnsdale and Gippsland regions are also provided.

3.4.3 Data content

Name	Data type	No nulls	Primary key	Cq	Comments
mirn	Varchar(10)	True	True	N	CTM meter
site_company	Varchar(100)	True	False	N	CTM name
hv_zone	Integer	True	False	N	The heating value zone number
hv_zone_desc	Varchar(40)	True	False	N	The heating value zone name
effective_from	Varchar(12)	True	False	N	Date when the HV zone is effective for the MIRN, Example: 01 Aug 2023
current_date	Varchar(20)	True	False	N	Time report produced, Example: 30 Jun 2007 06:00:00)

Example:

```
mirn,site_company,hv_zone,hv_zone_desc,effective_from,current_date
20000001PC,Culcairn Injection,21,On Site HV (21),09 Nov 2000,25 Aug
2023 15:47:00
20000002PC,Culcairn Withdrawal,21,On Site HV (21),09 Nov 2000,25 Aug
2023 15:47:00
20000003PC,Walla Walla,530,VIC Walla Walla,01 Aug 2023,25 Aug 2023
15:47:00
30000001PC,Longford,21,On Site HV (21),01 May 1998,25 Aug 2023
15:47:00
30000002PC,DTS (Peninsula),402,VIC DTS (Peninsula),01 Aug 2023,25 Aug
2023 15:47:00
30000003PC,Dandenong North,403,VIC Dandenong North,01 Aug 2023,25 Aug
2023 15:47:00
30000004PC,Dandenong North,405,VIC DTS (Lurgi),01 Aug 2023,25 Aug 2023
15:47:00
30000005PC,Murrumbeena,404,VIC Murrumbeena,01 Aug 2023,25 Aug 2023
15:47:00
30000006PC,Murrumbeena,404,VIC Murrumbeena,01 Aug 2023,25 Aug 2023
15:47:00
30000007PC,DTS (Lurgi),405,VIC DTS (Lurgi),01 Aug 2023,25 Aug 2023
15:47:00
30000009PC,DTS (Edithvale),21,On Site HV (21),01 May 1998,25 Aug 2023
15:47:00
30000010PC,Brooklyn,408,VIC Brooklyn,01 Aug 2023,25 Aug 2023 15:47:00
```

3.5 INT140 Gas Quality

Trigger type	Time triggered
Published	Hourly
Audience	Public
Output file name	int140_v[n]_gas_quality_data_[p]~yyyymmddhhmmss.csv

This report provides a measure of gas quality and composition at injection points as outlined in Division 3/ Subdivision 3 Gas Quality of the NGR. It is important for the Distribution Network Operators as they have the right to refuse the injection of out of specification gas into their distribution networks.

3.5.1 Audience notes

Most of the data provided are hourly average values, although some are spot (instantaneous) readings.

Not all gas quality measures are provided for each injection point. The data provided for a particular injection point differs by the gas source for and monitoring equipment at the point.

3.5.2 Content notes

This report is generated each hour. Each report displays gas quality and composition details for the previous 3 hours at least. For example, the report published at 1:00 PM contains details for:

- 12:00 (ti=7)
- 11:00 (ti=6)
- 10:00 (ti=5).

Time interval which shows each hour in the gas day, where 1 = 6:00 AM to 7:00 AM, 2 = 7:00 AM to 8:00 AM, until the 24th hour.

3.5.3 Data content

Name	Data type	No nulls	Primary key	Cq	Comments
mirn	Varchar(10)	True	True	N	Meter Installation Registration Number. Note: Data type amended to what is described in v16.0 User Guide to MIBB Reports
gas_date	Varchar(20)	True	True	N	Gas day being reported, e.g. 30 June 2007
ti	Integer	True	True	N	Time interval of the gas day (1-24)

Name	Data type	No nulls	Primary key	Cq	Comments
quality_type	Varchar(20)	True	True	N	Types including: Gas quality ---------- Wobbe index Hydrogen Sulphide Total sulphur Temperature Heating value Relative Density Odorisation Gas Composition ---------- Methane Ethane Propane N-Butane I-Butane N-Pentane I-Pentane Neo-Pentane Hexanes Nitrogen Carbon Dioxide Hydrogen
unit	Varchar(9)	False	False	N	
quantity	Numeric(18,3)	False	False	Y	Some values are averaged instantaneous values for the hour
meter_no	varchar(10)	False	False	N	CTM meter number
site_company	varchar(100)	True	False	N	Company name
current_date	varchar(20)	True	False		Date and time report is produced (e.g. 30 Jun 2007 06:00.00)

The gas quality data provided for a particular injection point differs by the gas source and monitoring equipment at the point.

Example:

```
mirn,gas_date,ti,quality_type,unit,quantity,meter_no,site_company,curr
ent_date
20000001PC,18 Aug 2023,4,Carbon Dioxide,MOLE%,0.550,M126,Culcairn
Injection,18 Aug 2023 12:05:10
20000001PC,18 Aug 2023,5,Carbon Dioxide,MOLE%,0.403,M126,Culcairn
Injection,18 Aug 2023 12:05:10
20000001PC,18 Aug 2023,6,Carbon Dioxide,MOLE%,0.376,M126,Culcairn
Injection,18 Aug 2023 12:05:10
20000001PC,18 Aug 2023,6,Ethane,MOLE%,2.683,M126,Culcairn Injection,18
Aug 2023 12:05:10
20000001PC,18 Aug 2023,5,Ethane,MOLE%,2.691,M126,Culcairn Injection,18
Aug 2023 12:05:10
20000001PC,18 Aug 2023,4,Ethane,MOLE%,2.866,M126,Culcairn Injection,18
Aug 2023 12:05:10
20000001PC,18 Aug 2023,4,Heating Value,MJ/m3,38.085,M126,Culcairn
Injection,18 Aug 2023 12:05:10
20000001PC,18 Aug 2023,6,Heating Value,MJ/m3,38.101,M126,Culcairn
Injection,18 Aug 2023 12:05:10
20000001PC,18 Aug 2023,5,Heating Value,MJ/m3,38.105,M126,Culcairn
Injection,18 Aug 2023 12:05:10
20000001PC,18 Aug 2023,6,Hexanes,MOLE%,0.000,M126,Culcairn
Injection,18 Aug 2023 12:05:10
20000001PC,18 Aug 2023,5,Hexanes,MOLE%,0.000,M126,Culcairn
Injection,18 Aug 2023 12:05:10
20000001PC,18 Aug 2023,4,Hexanes,MOLE%,0.000,M126,Culcairn
Injection,18 Aug 2023 12:05:10
```

3.6 INT176 Gas Composition Data

Trigger type	Time triggered
Published	Sunday at 10:47
Audience	Public
Output file name	int176_v[n]_gas_composition_data_[p]~yyyymmddhhmmss.csv

This public report provides the gas composition daily average corresponding to the heating value zone.

The INT176 Gas Composition Data report includes a new hydrogen column (highlighted).

3.6.1 Audience notes

The gas composition daily average in the report has considered the total delay hours from the injection source to the heating value zone.

The data in this report applies to the VIC wholesale gas market.

3.6.2 Content notes

All gas composition values used in the daily average calculation are taken as at top of hour.

This report contains data for the past 60 gas days (such as, 60 gas days less than report date).

Only the Victorian heating value zones are included in this report.

Gas composition values are in molecule percentage units, except for Specific Gravity (which does not have a unit).

Gas composition data will be reported to 5 decimal places.

The gas composition daily average is calculated using the following formula:

- SUM (hourly gas composition values) / COUNT (hours)
- Where hours is the number of hours used to calculate the total gas composition for the day
- Where no value is available for an hour, the report skips the hour in the calculation and continues on to the next hour. If no hourly values are available for the entire day, a NULL is displayed.

3.6.3 Data content

Name	Data type	No nulls	Primary key	Cq	Comments
hv_zone	Integer	True	True	N	The heating value zone number
hv_zone_desc	Varchar(100)	True	False	N	The heating value zone
gas_date	Varchar(20)	True	True	N	The gas date (e.g. 30 Jun 2011)

Name	Data type	No nulls	Primary key	Cq	Comments
methane	Numeric(9,5)	False	False	Y	The daily average of methane
ethane	Numeric(9,5)	False	False	Y	The daily average of ethane
propane	Numeric(9,5)	False	False	Y	The daily average of propane
butane_i	Numeric(9,5)	False	False	Y	The daily average of butane
butane_n	Numeric(9,5)	False	False	Y	The daily average of butane (N)
pentane_i	Numeric(9,5)	False	False	Y	The daily average of pentane
pentane_n	Numeric(9,5)	False	False	Y	The daily average of pentane (N)
pentane_neo	Numeric(9,5)	False	False	Y	The daily average of pentane (Neo)
hexane	Numeric(9,5)	False	False	Y	The daily average of hexane
nitrogen	Numeric(9,5)	False	False	Y	The daily average of nitrogen
carbon_dioxide	Numeric(9,5)	False	False	Y	The daily average of carbon dioxide
hydrogen	Numeric(9,5)	False	False	Y	The daily average of hydrogen. If no hourly values are available for the entire day, NULL is displayed.
spec_gravity	Numeric(9,5)	False	False	Y	The daily average of specific gravity
current_date	Varchar(20)	True	False	N	The date and time the report is produced (e.g. 29 Jun 2012 01:23:45)

Example:

```
hv_zone,hv_zone_desc,gas_date,methane,ethane,propane,butane_i,butane_n
,pentane_i,pentane_n,pentane_neo,hexane,nitrogen,carbon_dioxide,hydrog
en,spec_gravity,current_date
1,LaTrobe A,17 Jun
2023,92.45252,4.25400,0.27193,0.01094,0.01806,0.01198,0.01112,0.00002,
0.01821,0.74247,2.20402,,0.60395,16 Aug 2023 10:59:14
1,LaTrobe A,18 Jun
2023,93.16266,4.34071,0.28060,0.01262,0.02150,0.01252,0.01019,0.00002,
0.02122,0.80746,1.32573,,0.59637,16 Aug 2023 10:59:14
1,LaTrobe A,19 Jun
2023,85.08741,3.98389,0.28241,0.00847,0.01725,0.01017,0.00837,0.00001,
0.01964,0.73223,1.51244,,0.54966,16 Aug 2023 10:59:14
1,LaTrobe A,20 Jun
2023,92.15079,4.38156,0.42769,0.01187,0.01895,0.01070,0.01110,0.00001,
0.02053,0.78841,2.17354,,0.60605,16 Aug 2023 10:59:14
1,LaTrobe A,21 Jun
2023,92.37367,4.41529,0.51009,0.03061,0.03858,0.01720,0.02149,0.00003,
0.02796,0.80122,1.75902,,0.60416,16 Aug 2023 10:59:14
1,LaTrobe A,22 Jun
2023,92.21416,4.42200,0.43186,0.01240,0.01754,0.01516,0.01703,0.00000,
0.02588,0.79013,2.04899,,0.60543,16 Aug 2023 10:59:14
1,LaTrobe A,23 Jun
2023,91.66302,4.68025,0.65655,0.02094,0.02036,0.01963,0.02772,0.00000,
0.03322,0.81819,2.05527,,0.60972,16 Aug 2023 10:59:14
1,LaTrobe A,24 Jun
2023,92.32129,4.32538,0.39589,0.00844,0.01645,0.01308,0.01513,0.00000,
0.02222,0.83637,2.04096,,0.60446,16 Aug 2023 10:59:14
1,LaTrobe A,25 Jun
2023,92.15509,4.36688,0.47023,0.01128,0.01662,0.01484,0.01804,0.00000,
0.02699,0.82309,2.09207,,0.60610,16 Aug 2023 10:59:14
```

3.7 Discontinued MIBB reports

- On 1 May 2024, INT139 Declared Daily State Heating Value and INT439 Published Daily Heating Value Non-PTS report is superseded by INT139A Daily Zonal Heating.
- INT139 Declared Daily State Heating report and INT439 Published Daily Heating Value Non-PTS report produces data up to 1 May 2024 and will be decommissioned in December 2024.

4 Demand Forecasts

4.1 Goal

The information provided by AEMO to Distributors under the Wholesale Market Distribution Operation Procedures includes demand forecasts at each CTM, or group of CTMs that is defined as the demand node in the NGR.

4.2 High-level changes

Function	Description	Reference
MIBB reports	New and updated MIBB reports	In development

4.3 INT240 Disaggregated Demand Forecasts

Trigger type	Time triggered
Published	10 minutes past the hour
Audience	Distributors
Output file name	int240_v[n]_disaggregated_demand_forecasts_[p]~yyyymmddhhmmss.csv

This report is created at 10 minutes past the hour. The report provides an hourly demand forecast by CTM or CTM group, as required under the Wholesale Market Distribution Operational Coordination Procedures. For information about Disaggregated Demand Forecast CTM Groups, see **INT241 Disaggregated Demand Forecasts CTM Groups**.

A Distributor uses the demand forecasts in the DDS constraints methodology to determine a distribution supply and demand point constraints for a distribution connected facility.

4.3.1 Audience notes

This demand forecast is a separate forecast to INT153 Demand Forecast.

4.3.2 Content notes

The report provides details of all the demand forecasts created up to the report generation time on the current gas day.

A report contains demand forecasts for:

- The current day.
- 1-day ahead.
- 2-days ahead.

A distributor can only view their relevant disaggregated demand forecasts.

4.3.3 Data content

Name	Data type	No nulls	Primary key	Cq	Comments
forecast_date	Varchar(20)	True	True	N	Gas date of forecast e.g. 30 June 2007
mirn	Varchar(10)	True	True	N	CTM meter or ctm_group Note: Data type amended to what is described in v16.0 User Guide to MIBB Reports
ti	Integer	True	True	N	Time interval (1-24)
forecast_demand_gj	Integer	False	False	Y	forecast total hourly demand (in GJ/hour)
current_date	Varchar(20)	True	False	N	Date and time report produced

4.4 INT241 Disaggregated Demand Forecasts CTM Groups

Trigger type	Event triggered
Published	Update to CTM groups
Audience	Distributors
Output file name	int241_v[n]_disaggregated_ctm_group_[p]~yyyymmddhhmmss.csv

Multiple meters feeding a single distribution network are forecast as a group. This report identifies the CTMs used in each of the forecasting CTM groups. This report is updated when there is a change to the CTMs in the forecasting groups. The report provides mapping of individual CTMs to CTM group.

4.4.1 Audience notes

CTM groups are only used in the demand forecasts provided in INT153a Disaggregated Demand Forecasts. They are not used in INT153 Demand Forecast.

4.4.2 Content notes

This report is generated when AEMO updates the group mapping used to produce disaggregated demand forecasts.

A distributor can only view their relevant CTMs.

4.4.3 Data content

Name	Data type	No nulls	Primary key	Cq	Comments
ctm_group	Varchar(20)	True	True	N	ctm_group name used in INT153a
mirn	Varchar(10)	True	True	N	CTM meter
effective_from	Varchar(20)	True	False	N	Date last changed
current_date	Varchar(20)	True	False	N	Date and Time report generated For example 30 Jun 2007 06:00:00

4.5 INT126 - DFS Data

Trigger type	Event triggered
Published	Production of nodal demand forecast
Audience	Public
Output file name	int126_v[n]_dfs_data_[p]~yyyymmddhhmmss.csv

4.5.1 Report Purpose

This report provides AEMO's calculated effective temperature, effective degree day (EDD) and total system demand forecast (representing system demand and site specific demand) for the DWGM from AEMO's Demand Forecasting System (DFS).

This data can be used to validate forecasting methodologies against AEMO's DFS. It is also used to validate AEMO’s demand forecast where there has been a demand override in the scheduling process.

4.5.2 Audience Notes

Not every demand generated by the AEMO DFS is used in the scheduling process. Participants should reference INT108 Schedule Run Log to determine the Demand Forecasts used for each schedule.

The INT108 forecast_demand_version identifies the forecast used by AEMO in generating a schedule.

4.5.3 Content Notes

This report contains data for:

- the current gas day
- 1-day ahead
- 2 days ahead
- the previous 7 days.

Each report therefore can contain data for up to 10 days.

Each row of the report contains data for one generated nodal forecast.

From 15 April 2024, AEMO has a new weather forecast data provider, so the following fields will be NULL:

- previous_day_min
- max
- overnight_min
- average_wind_speed
- sunshine

4.5.4 Data Content

Name	Data type	No nulls	Primary key	Cq	Comments
dfs_version	integer .	True	True	N	Demand forecast version
gas_date	varchar 20.	True	True	N	Gas Day Date temperature data applies to (e.g. 30 Jun 2007)

Name	Data type	No nulls	Primary key	Cq	Comments
last_update_datetime	varchar 8.	True	False	N	Time data obtained and loaded into AEMO's database (e.g. 05:00:00)
previous_day_min	Numeric(4,1)	False	False	N	Previous day over night minimum temperature This value is NULL from 15 April 2024
max	Numeric(4,1)	False	False	N	Daily maximum temperature This value is NULL from 15 April 2024
overnight_min	Numeric(4,1)	False	False		Overnight minimum temperature This value is NULL from 15 April 2024
average_wind_speed	Numeric(4,1)	False	False	N	Average wind speed (knots) This value is NULL from 15 April 2024
sunshine	integer .	False	False	N	Hours of sunshine This value is NULL from 15 April 2024
effective_temperature	Numeric(3,1)	True	False	Y	Effective temperature calculated by AEMO's Demand Forecasting System (DFS).
dfs_edd	Numeric(3,1)	True	False	Y	Effective Degree Day (EDD) calculated by AEMO's Demand Forecasting System (DFS).
total_demand_forecast	integer .	True	False	Y	AEMO's total daily demand forecast for the gas day calculated by AEMO's Demand Forecasting System (DFS).
current_date	varchar 20.	True	False	N	Date and Time report produced e.g. 30 June 2005 1:23:56

5 Implementation

You can use the pdrBatcher and pdrLoader to load INT reports into your Data Interchange instance. For help, see **Data Interchange Online Help**.

5.1 Transition

Transition commences on 15 April 2024:

- Changes described in DWGM and Hydrogen Renewable Gases are available in production for gas day 1 May 2024.
- Demand Forecasts MIBB reports are available in production on 1 May 2024.

AEMO is cutting over the existing ~40 heating values zone to ~140 heating value zones on 1 May 2024. This change impacts the Victorian MIBB reports that incorporate the hv_zone and heating_value_zones fields.

The impacted reports are:

- INT047 - Heating Values
- INT055 - Metering Registration Data
- INT055a - Metering Registration Data for 1 Month
- INT142 - Meter Validation and Substitution Parameters
- INT176 - Gas Composition Data
- INT188 - CTM to Heating Value Zone Mapping (new report released on 1 May 2024)
- INT250 - Allocation Agent Metering Registration
- INT316 - Operational Gas
- INT139a - Daily Zonal Heating Value (new report released on 1 May 2024)
- INT455 - Non-PTS Metering Registration Data
- INT456 - Non-PTS Metering Registration Data
- INT604 - RoLR basic meter metering data

The change in heating values is applied to INT047, INT142, INT188 and INT139a MIBB reports in the DWGM pre-production environment to facilitate participants testing the new zonal heating values.

AEMO is currently working with the Distributors, as detailed in the **Transition Plan - Sync of Victorian Heating Value Zones** to determine which basic meters and interval meters will be assigned to each new heating value zone. As such, INT055, INT055a, INT455, INT456 and INT604 are not using the updated HV zones.

AEMO is applying data changes to MIBB reports for gas day 1 May 2024 onwards. Data for gas day 30 April 2024 published on 1 May 2024 will not include the updated heating value zones. Data for gas day 1 May 2024 published on 2 May 2024 will include the updated heating value zones.

Energy calculations prior to gas day 1 May 2024 must use the Statewide Heating Value. From gas day 1 May 2024, Zonal Heating Value must be used. AEMO publishes:

- INT139 on 1 May 2024 for gas day 30 April 2024. It should be used to determine energy content for gas flows up to and including 30 April 2024.
- INT139a on 2 May 2024 for gas day 1 May 2024. It should be used to determine energy content for all gas day flows from 1 May 2024 onwards.
  - Clause 2.6.1 (b) of the **Retail Market Procedures** describes the process to be applied if the heating value formation is not available. In the event of an issue with AEMO publishing the new heating value zones in INT139a, Distributors can use the statewide heating value published on 30 April. This is a substitute for the zonal heating value until the new heating value zones are published.
- INT188 showing:
  - the existing heating value zones prior to 1 May 2024.
  - the new heating value zones from 1 May 2024 onwards.

6 Glossary

You can find a full list of AEMO glossary terms in **Industry Terminology** on AEMO

Abbreviation/Term	Explanation
AEST	Australian Eastern Standard Time
CTM	Custody Transfer Meter
EDD	Effective Degree Day
GJ	gigajoule
GRCF	Gas Retail Consultative Forum
GWCF	Gas Wholesale Consultative Forum
ITDF	IT Development Forum
Heating value	The amount of heat released through burning a quantity of supplied gas.
MIBB	Market Information Bulletin Board
MIRN	Meter Installation Registration Number
MJ	megajoule
NGR	National Gas Rules
Release	DWGM Technical Specification - May 2024
Release Dates	Pre-production: Monday 16 October 2023 Production: Thursday 1 February 2024
TBC	To be confirmed

A1. Version history

V1.00

- Revises INT126 DFS Data MIBB report details
- Updates implementation information in Transition

V0.04

- Corrects pre-production 1 release date
- Adds transition plan information in 5.1 Transition
- Adds changes to INT126 DFS Data MIBB report details

V0.03

- Revises triggers for INT139a – Daily Zonal Heating Value and INT188 – CTM to Heating Value Zone Mapping
- Revises output file name for INT139a – Daily Zonal Heating Value and INT188 – CTM to Heating Value Zone Mapping
- Revises decommission date for INT139 Declared Daily State Heating report
- Adds decommission date for INT439 Published Daily Heating Value Non-PTS report
- Removes production release scheduled for 1 February 2024. See High-level changes and Proposed Timeline for details. There is one production release on 1 May 2024
- Amends MIRN data type for INT140 Gas Quality and INT240 Disaggregated Demand Forecasts

V0.02

- Adds INT240 Disaggregated Demand Forecasts report
- Adds INT241 Disaggregated Demand Forecasts MIRN Groups
- Updates INT188 CTM to Heating Value Zone Mapping with an effective from date field
- Revises trigger type for INT139a – Daily Zonal Heating Value and INT188 – CTM to Heating Value Zone Mapping

V0.01

Initial draft release.