



SA Profile Nomination Guideline

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**Australian Energy Market Operator (AEMO)
Gas Retail Market System (GRMS)**

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1 Introduction

1.1 Purpose

This AEMO document provides guidelines for the creation, selection and management of daily nomination profiles as required in Clause 209 of the Retail Market Procedures (the “Procedures”).

The profiles discussed in this document are for use by AEMO in its compliance with obligations in Rule 209.

1.2 Summary

This document provides the reader with 3 sections covering:

- The guidelines for the creation of daily profiled pipeline and sub-network nomination profiles for each sub-network in the SA market for each gas day as required under Clause 209(a) and as detailed in Division 5.4.2 – Before the Start of the Gas Day being clauses 201 to 208 inclusive.
- The principles on which the selection of the daily profiled pipeline and sub-network nominations for use by AEMO in its compliance with obligations in Clause 209(b).
- The management of the daily profiled nominations in its compliance with obligations in Clause 209(c).

1.3 Change Forecast

This document will be maintained following its first definitive release.

1.4 References

Retail Market Procedures (SA) v6.0

Dated: 1 January 2014.

1.5 Abbreviations

Abbreviations are fully expanded at their first place of inclusion in the document, and are referenced by the abbreviation thereafter.

2 Daily Nomination Profiles

2.1 Procedure Requirements

2.1.1 AEMO publishes profiled daily nomination forecasts

Clauses 205, 206 and 207 in the Retail Market Procedures (SA) require AEMO to publish at least 17 hours before the start of the gas day the profiled sub-network, shipper and pipeline nomination forecasts respectively.

2.1.2 AEMO determines profiles

Rule 209 (as shown below) requires AEMO to publish guidelines which set out the principles on which profiles are based, including the selection and storage of profiles in the Gas Retail Market System (“GRMS”).

209. AEMO determines profiles

- (1) AEMO may determine from time to time, as a *reasonable and prudent person*, the *profiles* to be used in this Division 5.4.2.
- (2) AEMO must, from time to time, publish guidelines which set out:
- a) the principles on which the *profiles* referred to in clause 209(1) are based; and
 - b) the principles which AEMO applies in the selection of a *profile* for a *gas day*; and
 - c) AEMO’s policy on the retention and management of the *profiles* referred to in clause 209(1) in a *profile* library.

2.2 Profile Principles

In accordance with Clause 209, AEMO is required to provide profiled daily nominations to participants in the SA Market for all sub-networks for each gas day.

The profiles are required for the provision of gate point energy data files (GPENGPROF) files that are provided to all market participants as well as the profiling of sub-network nominations (NPF).

The profiles are developed by analysis of historical sub-network gate point data and are reviewed on a frequency determined by AEMO to ensure that the profiles reasonably reflect the energy flows at the gate point.

2.3 Profile Creation

Profiles are created to reflect the hourly energy flows on the sub-network for the gas day allocated across the 24 hours of the day.

Profile figures represent the hourly percentage of the total MJ value on the pipeline or sub-network such that the total of the hourly percentages sum to 100%.

2.3.1 Sub-network profile creation

The GRMS receives hourly metered MJ values for all pipelines on a sub-network in the SA Market on a daily basis. These values provide an input source data for the calculation of the sub-network profiles.

Sub-network profiles will be categorised by day of the week and HDD value for each of the 7 days of the week. The profile for each gas day will be created by averaging each of the 24 hourly values for 4 historical gas days of the same day of the week within each of the four HDD ranges.

These averages will be calculated as a percentage of the averaged total values of the 4 historical gas days.

Calculated percentages will be rounded to integers and normalisation carried out to ensure that the total of the percentage values sums to 100%.

2.4 Profile Selection

2.4.1 Selection

Profiles are stored in the Forecasting and Profiling Entity (FPE) as part of the GRMS application.

Profile criteria are defined for the full life of the system, from year 1999 to year 4000. Every sub-network has 4 Profile_Criteria records per day each with a defined HDD range. See section 2.7 for an example of 3 days of the week for sub-network 2101.

Profiles stored in the Profile tables will be selected on the basis of a day of the week and where the HDD fits into one of the 4 HDD ranges defined for each day of the week.

All sub-networks are defined with 4 HDD ranges for each of the 7 days of the week.

2.5 Profile Storage

Profiles are stored in the Forecasting and Profiling Entity (FPE) database as part of the GRMS application.

There are a set of tables in the FPE database, NETWORK_SECTION, PROFILE and PROFILE_CRITERIA in which the data is stored.

The profiles are referenced by Sub-Network, Day of the Week and HDD range and have a version number to handle the update of an already defined profile period.

The messages are provided to the GRMS database for storage with the PIPPRF transaction as identified in Section 10.4.2 of the SAWA Interface Control Document.

2.6 Sub-Network Entities in Profiled Tables

	OBJ_ID	NETWORK_SECTION_ID	NETWORK_SECTION_DESC	START_DATE
1	110190	2101	Sub-Network SA2101	1/01/1999
2	110192	2102	Sub-Network SA2102	1/01/1999
3	110194	2103	Sub-Network SA2103	1/01/1999
4	110196	2104	Sub-Network SA2104	1/01/1999
5	110198	2105	Sub-Network SA2105	1/01/1999
6	110200	2106	Sub-Network SA2106	1/01/1999
7	110202	2107	Sub-Network SA2107	1/01/1999
8	110204	2108	Sub-Network SA2108	1/01/1999
9	110206	2109	Sub-Network SA2109	1/01/1999
10	110210	2111	Sub-Network SA2111	1/01/1999
11	110212	2112	Sub-Network SA2112	1/01/1999

12	110214	2113	Sub-Network SA2113	1/01/1999
13	110216	2114	Sub-Network SA2114	1/01/1999
14	110208	2210	Sub-Network SA2210	1/01/1999

2.7 Sample Profile_Criteria records for 2101

4 Profiles per day select a Profile record (See 2.8 below) based on a HDD range

START DATE	END DATE	SUB-NET	DAY NO	HDD MIN	HDD MAX	PROFILE ID
1/01/1999	31/12/4000	2101	1	-100	0	1181
1/01/1999	31/12/4000	2101	1	0	2	1182
1/01/1999	31/12/4000	2101	1	2	6	1183
1/01/1999	31/12/4000	2101	1	6	100	1184
1/01/1999	31/12/4000	2101	2	-100	0	1185
1/01/1999	31/12/4000	2101	2	0	2	1186
1/01/1999	31/12/4000	2101	2	2	6	1187
1/01/1999	31/12/4000	2101	2	6	100	1188
1/01/1999	31/12/4000	2101	3	-100	0	1189
1/01/1999	31/12/4000	2101	3	0	2	1190
1/01/1999	31/12/4000	2101	3	2	6	1191
1/01/1999	31/12/4000	2101	3	6	100	1192

2.8 Sample Profile record for 2101 for Profile_Criteria 1181

PROFILE_ID	PROFILE_HR01	PROFILE_HR02	PROFILE_HR03	PROFILE_HR04	PROFILE_HR05	PROFILE_HR06
1181	4	7	7	6	5	5
	PROFILE_HR07	PROFILE_HR08	PROFILE_HR09	PROFILE_HR10	PROFILE_HR11	PROFILE_HR12
	5	4	5	4	4	5
	PROFILE_HR13	PROFILE_HR14	PROFILE_HR15	PROFILE_HR16	PROFILE_HR17	PROFILE_HR18
	6	6	5	4	3	3
	PROFILE_HR19	PROFILE_HR20	PROFILE_HR21	PROFILE_HR22	PROFILE_HR23	PROFILE_HR24
	2	2	2	2	2	2