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# Five-minute settlement and global settlement

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**December 2019**

**DRAFT** Industry readiness contingency plan

# Important notice

## PURPOSE

In relation to five-minute settlement and global settlement implementation, the Industry readiness contingency plan:

- Provides coordinated guidance for AEMO and National Electricity Market participants on contingency responses should a risk eventuate
- Is the basis for participants to develop and maintain their own contingency plans.

This publication has been prepared by AEMO using information available at 20 December 2019.

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## VERSION CONTROL

Version	Release date	Changes
# 0.1	20/12/2019	Draft released to the 5MS/GS Readiness Working Group for comment

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# 1. Introduction

This chapter explains the Australian Energy Market Operator's (AEMO) five-minute settlement (5MS) and global settlement (GS) implementation program in the National Electricity Market (NEM). It then details the purpose and context of the Industry readiness contingency plan.

## 1.1 AEMO's 5MS and GS implementation program

The Australian Energy Market Commission (AEMC) made the 5MS rule in November 2017 and AEMO's extensive 5MS implementation program began in early 2018. GS activities were incorporated into the program when the GS rule was made in December 2018 because aligning 5MS and GS implementation activities is intended to minimise costs for AEMO and market participants.

The program covers the procedural, IT system and market readiness arrangements needed to implement 5MS and GS using the following workstreams:

- Procedures – defines and implements the required changes to market procedures
- Systems – designs, develops, tests, and implements changes to AEMO's market systems
- Readiness – coordinates, assists and prepares AEMO and participants for the transition to 5MS and GS.

AEMO's 5MS and GS implementation program has entered the market readiness phase of the project. This plan relates to the transition and go-live phases of market readiness.

## 1.2 Industry readiness contingency plan

Contingency planning involves defining the actions to be taken if an identified risk event should occur despite having applied risk mitigations. Contingency responses are designed to lessen the impact of the risk once it happens.<sup>1</sup>

The Program Consultative Forum (PCF) developed and maintains the 'Industry risks and issues register' for the 5MS/GS implementation program.<sup>2</sup> The register facilitates the monitoring and reporting of industry risks and issues identified within the program.

### 1.2.1 Document purpose

In relation to 5MS and GS implementation, the Industry readiness contingency plan:

- Provides coordinated guidance for AEMO and NEM participants on contingency responses should an industry risk eventuate
- Is the basis for participants to develop and maintain their own contingency plans.

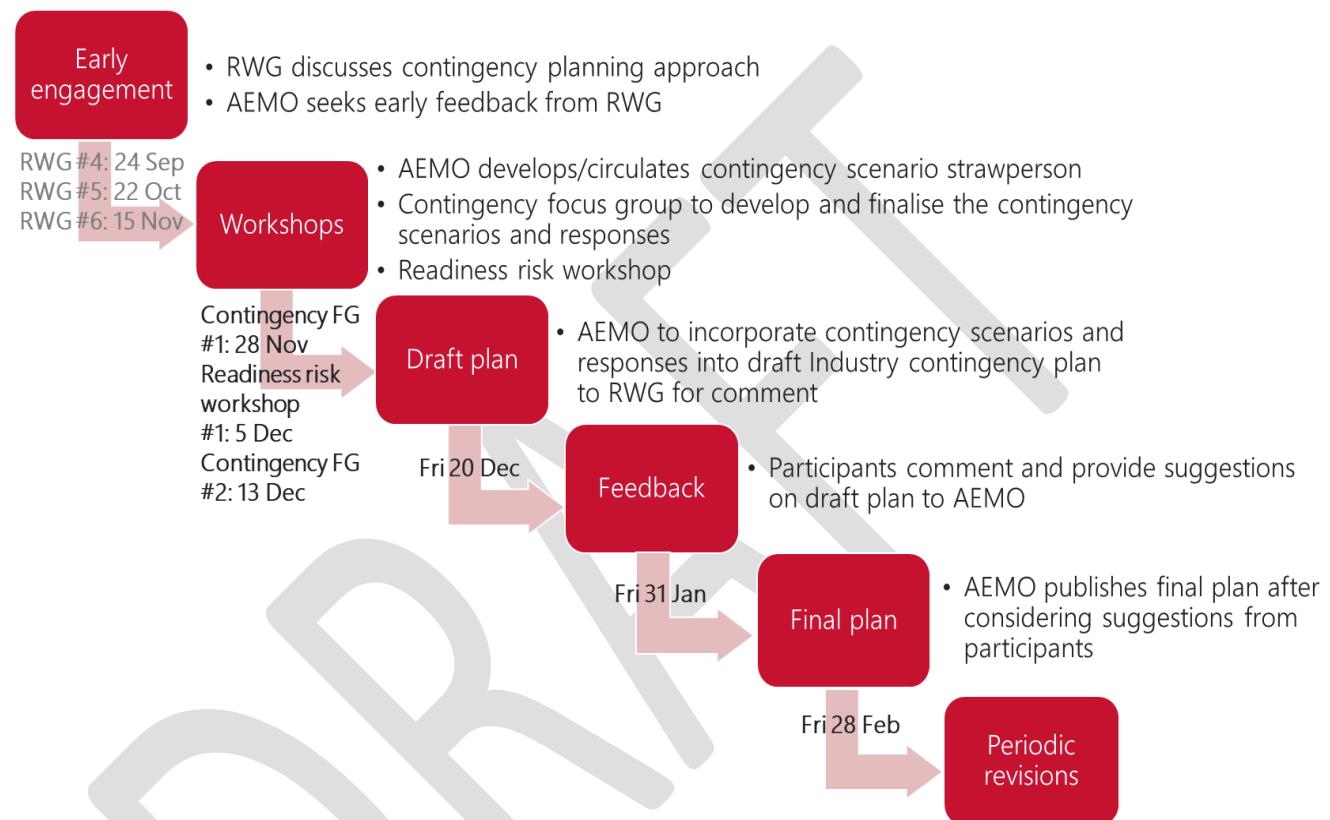
<sup>1</sup> Heimann, J. F. (2000). Contingency planning as a necessity. Project Management Institute. See also: <https://www.pmi.org/about>

<sup>2</sup> See Industry risks and issues register at: <https://aemo.com.au/Electricity/National-Electricity-Market-NEM/Five-Minute-Settlement/Program-Management/Program-Consultative-Forum>

## 1.2.2 Development approach

The Industry readiness contingency plan was developed in consultation with industry through the 5MS and GS Readiness Working Group (RWG) and its subsidiary Contingency Focus Group (CFG). Figure 1 illustrates AEMO's engagement approach and timeline for developing the plan. A further CFG meeting is planned for 7 February 2020 to discuss the draft plan.

**Figure 1 Engagement approach for developing the Industry readiness contingency plan**

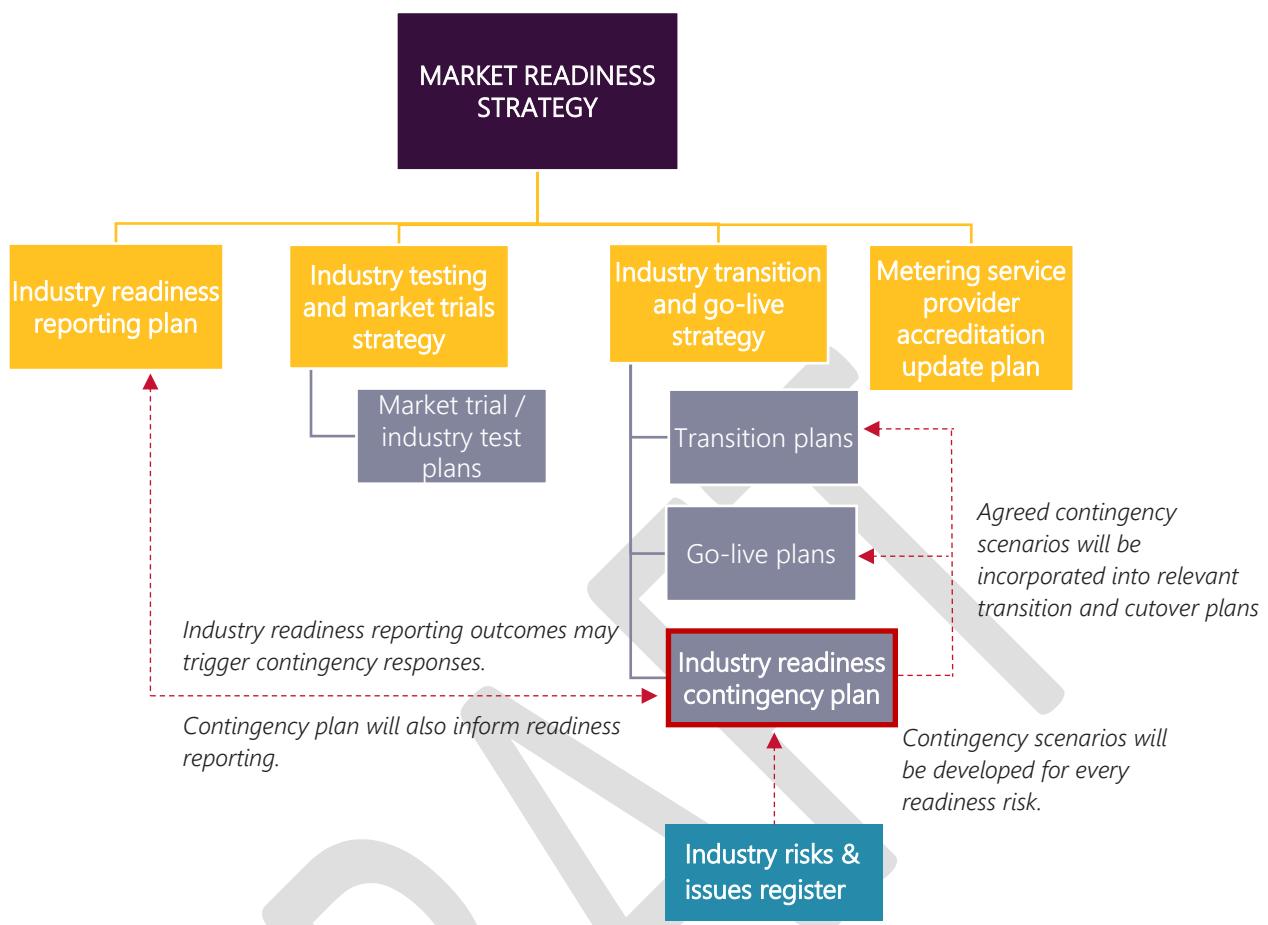


## 1.2.3 Related documents

The Industry readiness contingency plan is one of an integrated series of documents that support the 5MS and GS market readiness strategy,<sup>3</sup> as illustrated by Figure 2. More information on each document is provided in the 5MS and GS market readiness strategy. Table 1 then describes how the Industry readiness contingency plan interrelates with other key 5MS/GS readiness documents.

<sup>3</sup> For more information and access to 5MS and GS market readiness documents see: <https://aemo.com.au/Electricity/National-Electricity-Market-NEM/Five-Minute-Settlement/Readiness-Workstream/Key-Readiness-Documents>

**Figure 2 Relationships between 5MS and GS market readiness documents**



**Table 1 Relationship between Industry readiness contingency plan and other key readiness documents**

Related document	Description of relationship
<b>Industry transition and go-live strategy</b>	The strategy provides an overarching view and structure for the transition to 5MS/ GS across participants and market functions, including provision for contingency measures. The Industry readiness contingency plan provides the detailed support for managing contingency scenarios if they arise.
<b>Industry risks and issues register</b>	The register, maintained by the PCF, facilitates the monitoring and reporting of industry risks and issues identified within the 5MS/GS program. Contingency scenarios will be developed and maintained for every industry readiness risk in the register.
<b>Industry readiness reporting plan</b>	The reporting plan details the readiness reporting framework and criteria that will enable regular assessments of AEMO's and participants' 5MS/GS readiness. Industry readiness reporting outcomes may trigger contingency responses. The Industry readiness contingency plan will also inform readiness reporting.
<b>Transition plans and go-live plans</b>	These plans provide the detailed support for the transitions and cutovers. Agreed contingency scenarios will be incorporated into relevant transition and cutover plans.

# 2. Contingency framework

## 2.1 Objective

The Industry transition and go-live strategy objective for the 5MS and GS market reforms is:

*to provide coordinated guidance to NEM participants on transition and go-live activities and schedules as they transition from current market arrangements to 5MS and GS.*

This objective supports, and is consistent with, the market readiness objective set out in the overarching 5MS and GS Market readiness strategy.<sup>4</sup> The 5MS and GS Industry readiness contingency plan supports both objectives by providing coordinated guidance on contingency planning and implementation.

## 2.2 Principles

The Industry transition and go-live strategy principles apply to the Industry readiness contingency plan. These are:

1. Mandated 5MS and GS commencement dates should be met
2. NEM operations should be uninterrupted during periods of transition and go-live
3. Market system go-lives and 5MS and GS commencement risks should be minimised
4. More certainty for participants' project planning should be introduced
5. Participants should be provided with implementation flexibility where possible
6. Participants and AEMO are responsible for their own transition and go-live planning<sup>5</sup>

In addition, the following principles are specific to the Industry readiness contingency plan:

1. NEM participants and AEMO:
  - Will have a collaborative approach to contingency planning
  - Are responsible for developing their own internal contingency plans that have regard to the key activities and dates set out in the Industry readiness contingency plan
  - Must continue to fulfil all regulatory and compliance obligations during transition and system cutover periods
  - Are to communicate contingency issues as early as possible in writing.
2. Contingency scenarios will be developed for each readiness risk on the 5MS/GS Industry issues and risks register
3. Where possible, contingency responses will be the existing NEM contingency processes
4. The industry implementation approach will be based on a 'fix-on-fail/roll-forward' objective after systems cutovers and for 5MS and GS rule commencements
  - *System rollback* is an acceptable contingency response during the system go-live process, but not once the system is deployed

<sup>4</sup> For all 5MS and GS readiness documents, see: <https://aemo.com.au/Electricity/National-Electricity-Market-NEM/Five-Minute-Settlement/Readiness-Workstream/Key-Readiness-Documents>

<sup>5</sup> Full descriptions of each principle are set out in the Industry transition and go-live strategy at: <https://aemo.com.au/Electricity/National-Electricity-Market-NEM/Five-Minute-Settlement/Readiness-Workstream/Key-Readiness-Documents>

- AEMO and participants will commit to cutting over and avoiding *market* rollbacks by addressing any problems as and when they arise.

5. Contingency decisions will have regard to:
  - The materiality and impact on the reliable operation of the NEM
  - Impacts on the ability to meet mandated responsibilities
  - The suitability of contingency plans to mitigate the event from an overall market perspective.

## 2.3 Scope

### 2.3.1 In scope

This Industry readiness contingency plan applies to industry readiness risks that could occur as a result of the:

- transition and cutover to 5MS and GS
- ongoing operation of the NEM under 5MS and GS.

For example, scenarios:

- That may affect the reliable operation of the NEM
- That may affect the ability for the market to meet 5MS and GS commencement dates
- Associated with AEMO's market system go-lives and related transition and cutover activities
- That may occur after AEMO's market system go-lives or the rule commencement dates.

### 2.3.2 Out of scope

"Non-readiness" industry risks are out of scope. These are the risks in the Industry issues and risks register that are assigned to the 'program', 'procedures' and 'systems' workstreams.

The following types of scenarios are not related to the overall 5MS and GS readiness of the NEM, only to individual participant's own readiness. Therefore, they are *not* within the scope of this contingency plan:

- Commercial issues that do not affect 5MS/GS implementation. For example, a service level agreement between a metering data provider and a retailer
- Operational or 'business as usual' issues that do not affect 5MS/GS implementation. For example, a retailer being unable to consume a new settlement report format
- National Electricity Rules (NER) compliance matters that are the responsibility of individual market participants or AEMO.

### 2.3.3 Where scope is uncertain

As noted above, the Industry readiness contingency plan applies to the overall 5MS and GS readiness of the NEM, not to an individual participant's own readiness.

However, individual participant readiness will be considered as part of market readiness if a contingency matter arises that:

- is systemic and affects multiple participants
- affects overall NEM operations.

In these situations, the Readiness Working Group (RWG) will assess the contingency problem, decide whether it is a market readiness matter and recommend next steps for its resolution.

# 3. Industry readiness contingency plan

The Industry readiness contingency plan is set out in the attached spreadsheet.

In keeping with the Transition and go-live strategy objective and specific contingency principles, the Industry readiness contingency plan provides coordinated guidance for AEMO and participants on 5MS and GS contingency responses. Importantly, the Industry readiness contingency plan is the basis for participants to develop and maintain their own contingency plans. Participants will individually develop and maintain their own contingency activities based on the Industry contingency plan.

For every 5MS/GS industry risk, the Industry readiness contingency plan outlines related contingency scenarios. Each scenario is supported by several elements, as illustrated in Figure 3 and described further in Table 2.

**Figure 3 Industry readiness contingency plan structure**



**Table 2 Description of Industry readiness contingency plan elements**

<b>Industry readiness contingency plan element</b>	<b>Description</b>
<b>Industry risk</b>	References the industry readiness risk to which the contingency scenario relates
<b>Description</b>	Explains the scenario
<b>Category</b>	Assigns the scenario to either readiness, system implementation or production depending on its timing (through transition, at cutover or as part of ongoing NEM operation)
<b>Priority</b>	Reflects the scenario's participant impact and consequence
<b>Likelihood</b>	Indicates the probability of the scenario occurring
<b>Impacted stakeholders</b>	Lists the stakeholders affected by the contingency scenario
<b>Trigger</b>	Describes the conditions for activating the contingency scenario's response
<b>Monitoring mechanism</b>	<p>The method by which the triggers are identified. The monitoring mechanism is different for each implementation phase, generally:</p> <ul style="list-style-type: none"> <li>• Transition phase: monitoring through industry readiness reporting</li> <li>• Market system go-lives: monitoring through the related cutover plan and escalation where necessary</li> <li>• Ongoing operation (system production): AEMO and participant monitoring incorporated into existing processes.</li> </ul>
<b>Responses</b>	<p>Describes the necessary actions to mitigate the contingency event and the parties responsible for these actions.</p> <p>Where possible and appropriate, existing 'business as usual' contingency processes and procedures will apply.</p> <p>The timing of the responses will reflect the criticality of the contingency scenario and will be implemented immediately.</p>
<b>Comments</b>	Provides additional context for the scenario

### **Rollbacks**

The Industry readiness contingency plan allows for *system rollbacks* to address *cutover/go-live* contingency scenarios as a last resort. However, none of the contingency responses consider a *market rollback* because:

- The NER require 5MS and GS to operate from their respective commencement dates
- Market system go-lives are scheduled to occur prior to the rule commencement dates, providing a level of scheduling contingency
- BAU contingency processes are expected to be effective in managing identified contingency scenarios when 5MS and GS become operational.

### 3.1 Maintaining the Industry readiness contingency plan

The Industry readiness reporting plan details the readiness reporting framework and criteria that will enable regular assessments of AEMO's and participants' 5MS/GS readiness. As described above, Industry readiness reporting outcomes may be triggers for contingency responses, especially for transition phase contingencies. The Industry readiness contingency plan also informs readiness reporting criteria by identifying the triggers that need to be monitored.

Additionally, the Industry issues and risks register will be reviewed after each round of readiness reporting to ensure emerging readiness risks and issues are identified and managed. These points in time are also appropriate for reviewing and adjusting the Industry readiness contingency plan in response to readiness reporting results. This is important where a new risk has been identified and needs to have contingency scenarios developed for it. Table 3 sets out the indicative timing for each round of readiness reporting and the associated reviews of the risk register and contingency plan.

**Table 3 Indicative 5MS/GS risk and contingency reviews in relation to readiness reporting results**

<b>Readiness reporting results</b>	<b>Risk &amp; contingency reviews</b>
Feb-20	Mar-20
May-20	May-20
Jul-20	Jul-20
Sep-20	Sep-20
Nov-20	Nov-20
Jan-21	Feb-21
Mar-21	Apr-21
May-21	n/a

# Glossary

Term	Definition
5MS	Five-minute settlement
AEMO	Australian Energy Market Operator
GS	Global settlement
MDP	Metering data provider
MSP	Metering service provider. Includes MCs, MDPs and MPs.
NEM	National electricity market
NER	National electricity rules
PCF	5MS/GS program consultative forum
RWG	Readiness working group
Transition	Process of shifting from current to future operating state