

# 5MS & GS Dispatch Focus Group

Monday 29<sup>th</sup> June 2020

**WebEx only: \*\*Please disconnect from your workplace VPN for the WebEx call\*\***

**PLEASE NOTE THIS MEETING WILL BE RECORDED FOR THE PURPOSE OF PREPARING MINUTES**

**This slide pack was developed for the 5MS Dispatch Focus Group meeting. This version of the slides has been annotated with notes from the meeting. These additional notes are on new slides that have a yellow background.**

# AEMO Competition Law Meeting Protocol

AEMO is committed to complying with all applicable laws, including the Competition and Consumer Act 2010 (CCA). In any dealings with AEMO regarding proposed reforms or other initiatives, all participants agree to adhere to the CCA at all times and to comply with this Protocol. Participants must arrange for their representatives to be briefed on competition law risks and obligations.

Participants in AEMO discussions **must**:

1. Ensure that discussions are limited to the matters contemplated by the agenda for the discussion
2. Make independent and unilateral decisions about their commercial positions and approach in relation to the matters under discussion with AEMO
3. Immediately and clearly raise an objection with AEMO or the Chair of the meeting if a matter is discussed that the participant is concerned may give rise to competition law risks or a breach of this Protocol

Participants in AEMO meetings **must not** discuss or agree on the following topics:

1. Which customers they will supply or market to
2. The price or other terms at which Participants will supply
3. Bids or tenders, including the nature of a bid that a Participant intends to make or whether the Participant will participate in the bid
4. Which suppliers Participants will acquire from (or the price or other terms on which they acquire goods or services)
5. Refusing to supply a person or company access to any products, services or inputs they require

Under no circumstances must Participants share Competitively Sensitive Information. Competitively Sensitive Information means confidential information relating to a Participant which if disclosed to a competitor could affect its current or future commercial strategies, such as pricing information, customer terms and conditions, supply terms and conditions, sales, marketing or procurement strategies, product development, margins, costs, capacity or production planning.

# Agenda

NO	TIME	AGENDA ITEM	RESPONSIBLE
1	10:00am – 10:05am	Welcome, introduction and apologies	Michael Sanders
2	10:05am – 10:15am	Status update on 5MS dispatch workstream	Ian Devaney
3	10:15am – 10:30am	5MS testing approach	Tui Grant
4	10:30am – 10:40am	Recap and update on transition approach	Michael Sanders
5	10:40am – 10:50am	Duration of transition period	Michael Sanders
6	10:50am – 11:00am	Industry Bidding Transition Plan: Approach	Emily Brodie
7	11:00am - 11:45am	Industry Bidding Transition Plan: Development of activities	Michael Sanders
8	11:45am – 12:00pm	Next steps and general questions	Michael Sanders

# Attendees

Organisation	Attendee
AGL	Annett Reitmann
AGL	Marc L'Estrange
AGL	Pieter Wijtzes
Alinta	Chris Pratt
Arrow Energy	Jocelyn Morris
CS Energy	Damien Herd
CS Energy	Henry Gorniak
EnergyAustralia	Jeremy Mendoza
Engie	Andrew Lenga
Engie	Greg Fawcett
ERM Power	Ron Logan

Organisation	Attendee
EvoEnergy	Jeff Roberts
Infigen	Stephanie Easton
Metering Dynamics	Cindy Matthews
Mondo	Justin Stute
Neoen	Hal Jorgensen
Origin Energy	Brendan Twiddy
Origin Energy	Craig Keenan
Origin Energy	Frances Espiritu
Origin Energy	Greg McLeod
Origin Energy	Methsiri Aratchige
Snowy Hydro	Audrey Follett

Organisation	Attendee
Snowy Hydro	Hugh Macfarlane
Snowy Hydro	Sandra Ho
Stanwell	Roselle Abano
Telstra	Chris Murphy
Telstra	Piera Lorenz
Callide	Stephen Beauchamp
Stanwell	Andrew Gordon
AEMO	Anne-Marie McCague
AEMO	Armando Estrella
AEMO	Austin Tan
AEMO	Carol Bosnjak

Organisation	Attendee
AEMO	Emily Brodie
AEMO	Greg Minney
AEMO	Ian Devaney
AEMO	Michael Sanders
AEMO	Naomi Byrnes
AEMO	Pierre Fromager
AEMO	Rahul Singh
AEMO	Sangeeta Pai
AEMO	Tom Butterworth
AEMO	Tui Grant
AEMO	Vijay Krishna

Some attendees were unable to be identified during the WebEx call. If this applies, please advise us via [5MS@aemo.com.au](mailto:5MS@aemo.com.au) to add your name to the list of attendees.

# Status update on 5MS dispatch workstream

Ian Devaney

# Systems Workstream – Dispatch & Operations

Current as at 15-05-2020





5 MINUTE SETTLEMENT SYSTEMS TRACKING	TIMING									
	Internal HLIA	Focus/Group	SWG Engagement	External HLIA	Draft Tech Spec	Final Tech Spec	User Guides	SMS Staging	Preprod	Production
<b>DISPATCH and OPERATIONS</b>										
<b>PACKAGE 1 - Bidding FTP and API</b>										
Transition	Aug-18	Oct-18	Aug-18	Nov-18	Dec-18	2-Apr-19	31-Oct-19	29-Nov-19	29-Nov-20	1-Apr-21
Bidding Data Model	Aug-18	-	Sep-18	Mar-19	Dec-18	2-Apr-19	31-Oct-19	29-Nov-19	29-Nov-20	1-Apr-21
Bidding Format	Aug-18	-	Sep-18	Nov-18	Dec-18	2-Apr-19	31-Oct-19	29-Nov-19	29-Nov-20	1-Apr-21
<b>PACKAGE 2 - Bidding Web UI</b>										
Bidding Web UI and APIs	Aug-18	Nov-18	Dec-18	Jan-19	Mar-19	31-Jul-19	16-Dec-19	29-Nov-19	29-Nov-20	1-Apr-21
<b>PACKAGE 3 - Dispatch, Pre-dispatch and PASA</b>										
Dispatch	Aug-18	-	Oct-18	Nov-18	Oct-18	2-Apr-19	-	29-Nov-19	29-Nov-20	1-Apr-21
Predispatch P30/7DAY	Aug-18	-	Oct-18	Nov-18	Oct-18	2-Apr-19	-	29-Nov-19	29-Nov-20	1-Apr-21
Predispatch P5	Nov-18	Oct-18	Nov-18	TBC	TBC	TBC	-	TBC	29-Nov-20	1-Apr-21
ST and PD PASA	Aug-18	-	Oct-18	Nov-18	Oct-18	2-Apr-19	31-Oct-19	29-Nov-19	29-Nov-20	1-Apr-21
<b>PACKAGE 4 - Pricing and Miscellaneous</b>										
Trading Price / Price Revision	Aug-18	-	Feb-19	Nov-18	Mar-19	31-Jul-19	-	15-May-20	29-Nov-20	1-Apr-21
Administered Pricing and CPT	Aug-18	-	Feb-19	Dec-18	Mar-19	31-Jul-19	-	15-May-20	29-Nov-20	1-Apr-21
Suspension Pricing	Sep-18	-	Feb-19	Dec-18	Mar-19	31-Jul-19	-	15-May-20	29-Nov-20	1-Apr-21
Negative Residue Management	Sep-18	-	Feb-19	Dec-18	Jun-19	31-Jul-19	-	15-May-20	29-Nov-20	1-Apr-21
RERT	Oct-18	-	-	-	-	-	-	-	-	-
<b>PACKAGE 5 - Full Data Model</b>										
Full Data Model	Sep-18	Ongoing	Ongoing	Apr-19	Ongoing	31-Jan-20	16-Mar-20	29-Nov-19	29-Nov-20	1-Apr-21

# Level 2 Milestones - Dispatch

Current as at 15-05-2020

Domain	Initiative	2019				2020				2021													
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4										
Dispatch			L2-D1	L2-D2 L2-D12	L2-D3	L2-D13	L2-D5 L2-D4																
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct

Key Milestones (Program)				
ID	Milestone	Target Date	Expected Date	Status
L2-D1	Final technical specifications for Package 1 published by AEMO	2-Apr-2019	2-Apr-2019	Complete
L2-D2	Final technical specifications for Package 2 published by AEMO	31-Jul-2019	31-Jul-2019	Complete
L2D12	Final technical specifications for Package 4 published by AEMO	31-Jul-2019	31-Jul-2019	Complete
L2-D3	Software drop for Packages 1,2 & 3 in 5MS Staging Environment	29-Nov-2019	29-Nov-2019	Complete
L2-D13	Final technical specifications for Package 5 published by AEMO	31-Jan-2020	16-Mar-2020	Complete
L2-D5	Software drop for Package 4 in 5MS Staging Environment	15-May-2020	15-May-2020	Complete
L2-D4	Development completed (internal)*	31-May-2020	31-May-2020	Complete

-  Milestone complete
-  Milestone on track
-  Milestone at risk
-  Milestone not achieved

\* Gzip and Deflate compression has been fully tested and is now available in Staging.

# 5MS Bidding Transition

- On track ●
- At risk ●
- Delayed ●
- Complete ✓

## STAGING ENVIRONMENT

• 29 Nov 2019

- ✓ P1: Bidding FTP & API
- ✓ P2: Bidding Web UI
- ✓ P3: Dispatch, Pre-dispatch and PASA

• 15 May 2020

- ✓ P4: Pricing & Miscellaneous

## PRE-PRODUCTION

• 29 Nov 2020 ●

- 5-min Bidding (all packages)

## PRODUCTION GO-LIVE

• 1 Apr 2021 ●

- 5-min Bidding (all packages)

## TRANSITION

- 1 Apr 2021 to 30 Jun 202X
- Submit 5-min or 30-min bids
- 5-min bids must be in JSON format
- Each 5-min bid within each half hour must be identical, giving the same effect as the submission of a 30-min bid

## 5MS START

- From 1 July 202X
- Only 5-min bids in JSON format



# Notes

AEMO responded to clarifying questions from several participants:

- Is the dispatch engine based on the 5-minute bids during the transition period? Yes. AEMO will have transitioned all bids to the 5-minute tables before the transition period starts.
- Could you swap over from a 30min bid to a 5-min bid so long as it is for the full 30 minute period. Yes, however bids need to be for entire trading day.
- Will there be validation on the API to ensure all 5-minute values are the same during the transition period? Yes. Bid validation will occur during the transition period. 5-min bids will be rejected if they are not identical within a 30-minute period.
- Is there a mitigation of risks to ensure a participant does not “miss” an interval period during transition? Bids need to be for an entire trading day, and will be invalid if an interval is “missed”. Submitting 5-minute bids ahead of 5MS start will mitigate any risk.
- The NER apply to the time the offer is made, and not the trading day to which the offer applies i.e. any bid made before 5MS start must use 30-minute profiles:
  - 30-minute bid profiles mean that all 5-min bids within a 30-minute period must be identical
  - 5-minute bid profiles may start from 5MS go-live where 5-min bids within a 30-minute period do not have to be identical

# Notes

AEMO can now clarify that:

- 30-min bidding and re-bidding will be available during the bidding transition period via the web screens in the market portal.
- Further details on web bidding during the transition period will be presented in an upcoming RWG/SWG.

# 5MS testing approach

Tui Grant

# Options for market testing

Type of market testing	Description
Industry testing	Self-testing of functionality such as connectivity, and/or coordinated multiparty testing of functional scenarios
Market trial	AEMO Coordinated multi-party end-to-end testing of business process scenarios.

# 5MS Bidding testing approach

Assuming 5MS starts 1 Jul 21:



Date	Functionality	Environment	Test type
Now	5MS go-live state	5MS staging	Industry testing
29 Nov 20	Transition state	Pre-production	Industry testing
01 Apr 21	Transition state	Production	n/a
06 Apr 21	5MS go-live state	Pre-production	Market trial
01 Jul 21	5MS go-live state	Production	n/a

## Transition State:

Allows participants to continue entering 30-min bids or commence using the 5-min bidding functionality with the restriction that all 5-min bids for the 30-min period are the same value.

## 5MS Go Live State:

Only 5-min bids will be accepted and can be of any value within a 30-min period.

**Note:** No requests have been received for any additional testing support for Dispatch and Bidding during this period e.g. settlement runs.

# Recap and update on transition approach

Michael Sanders

# Background

- On 22 October 2018, the 5MS Dispatch Focus Group met and agreed an approach to the industry transitioning to 5-minute bidding.
- This approach has been the basis of AEMO's bidding system development.
- Details of the discussion can be found here: [Dispatch focus group notes](#) (slides 19 – 36)

# Bidding transition developed by DFG (2018)

- Before 01-Apr-21:
  - Only 30-min bids may be submitted for any trading day
  - If a bid submitted prior to 01-Apr-21 applies to a trading day after 01-Apr-21, it will be converted into a set of identical 5-min bids.
- Between 01-Apr-21 and 30-Jun-21 (transition period), either 5-min or 30-min bids may be submitted:
  - If 5-min bids are submitted for a trading day within the transition period then the bids for each 5-min within each half hour **must be identical**, giving the same effect as the submission of a 30-min bid.
  - ~~• If 5 min bids are submitted for a trading day after 1/7/21, then the bids for each 5 min within each half hour do not have to be identical, allowing 5 min profiling of bids.~~
  - If a 30-min bid is submitted, this will also be converted to a set of identical 5-min bids and stored that way. This applies equally to bids applying to trading days within the transition period and after 01-Jul-21
- After 01-Jul-21, only 5-min bids may be submitted. 30-min bids will be rejected.



# Latest rules interpretation

- Current NER:
  - an *offer / bid* must specify for each of the 48 *trading intervals* in the *trading day* ...
- 5MS rule change:
  - an *offer / bid* must specify for each of the 288 *trading intervals* in the *trading day*
- Neither clause specifies the trading day to which the bid / offer applies.
- This means that the 30-minute or 5-minute nature of a bid / offer depends only on whether it is submitted under the current rules or the 5MS rules i.e. before or after 5MS commencement.
- Therefore all 5-minute bids submitted within the transition period must use a 30-minute profile, i.e. bids for each 5-minutes within each half hour must be identical, independent of the trading day to which the bid applies.
- In other words, 5-minute bids submitted before 5MS commencement for trading days after 5MS commencement must still emulate a 30-minute bid.

# Bidding transition current status

As at 22 June 20

- Before 01-Apr-21:
  - Only 30-min bids may be submitted. This is independent of the trading day to which the bid applies.
  - If a bid submitted prior to 01-Apr-21 applies to a trading day after 01-Apr-21, it will also be converted into a set of 5-min bids.
- Between 01-Apr-21 and 5MS commencement (transition period), either 5-min or 30-min bids may be submitted:
  - If 5-min bids are submitted **within the transition period** then the bids for each 5-min within each half hour **must be identical**, giving the same effect as the submission of a 30-min bid. This is independent of the trading day to which the bid applies.
  - If a 30-min bid is submitted, this will be converted to a set of identical 5-min bids and stored that way. This is independent of the trading day to which the bid applies.
- After 5MS commencement, only 5-min bids may be submitted. 30-min bids will be rejected.

# Notes

AEMO responded to several questions from attendees:

- Regardless of any 5MS delay, the system will allow those participants that are ready to submit 5-min bids, and those that are not ready to continue with 30-min bids? Yes.
- Does 30-minute profiling apply if on 29<sup>th</sup> June, you're submitting a bid for 1 July? All bids submitted during transition must have a 30-min profile. From 1 minute into 5MS start, bids and rebids using 5-min bid profiles can be made. i.e. if you want to use a 5-min profile for 1 July or later, then need to make a bid or rebid after 5MS commencement.
- What happens between midnight 30 June and 4am on 1 July? Until midnight, 30-min bid profiling is required. After midnight, you can rebid for 00:00 to 04:00 and use 5min profile.
- Will we see the same bid in both data model tables BIDPEROFFER and BIDOFFERPERIOD for a 30-min bid during transition? No. If you submit a 30-min bid, you get a 30-min report back. If you submit a 5-min bid, you get a 5-min report back.
- How does AEMO treat a rebid affecting intra 30 minute period (for example 10:15 to 10:30 rebid performed at say 10:12)? Same as now. The rebid, even though it applies to the remainder of the half hour, is recorded as if it applied to the entire half hour. Prior to 1 July, 30-min bid profile is required. From 1 July, a 5-min bid profile is required. The late rebidding period only affects the records that participants need to keep, not the bid.

# Duration of transition period

Michael Sanders

# Impact to bidding transition of proposed 12-month delay

- The proposed 5MS delay would:
  - Have no impact on the deployment timeframes of AEMO's 5MS bidding system changes:
    - Some bidding capability is already in the staging environment
    - Deployment into pre-production is on track for 29-Nov-20
    - Deployment into production on track for 01-Apr-21.
    - From 01-Apr-21, 5-min capability will be available alongside 30-min capability until 5MS commencement.
  - Provide the option of extending the 5-min bidding transition period
- The DFG initially indicated that a transition period shorter or longer than 3 months would be undesirable:
  - Too short and there would be insufficient time for participants to adapt; too long and it would give some participants an unfair advantage
  - This assumed that 5-min bidding would allow 5-min profiling of bids during the transition period, which is not the case
  - To be compliant with the NER, 5-min bids submitted before the 5MS start must give the same effect as the submission of a 30-min bid i.e. the bids for each 5-min within each half hour trading interval **must be identical**.
- **Discussion: What are the impacts (if any) of changing the duration of the transition period on the basis that 5-min bids cannot be profiled within a 30-min trading interval prior to 5MS start?**

# Notes

- Participants asked whether/when they would have access to test bidding with 5min profiles in pre-prod. AEMO will communicate the release date for bidding with 5-min profiles in pre-prod once the 5MS deferral has been confirmed.

# Industry Bidding Transition Plan: Approach

Emily Brodie

# BTP: Proposed objectives

- 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 Market readiness strategy.
- The Industry bidding transition plan (BTP):
  - Supports both objectives by providing coordinated guidance on the bidding transition for 5MS and GS.
  - Outlines the expected responsibilities, activities, dependencies and timeframes for completion for elements of the bidding transition.



# BTP: Proposed scope

## In scope

- Transition to NEM 5-minute bidding by scheduled and semi-scheduled generators, scheduled loads and MNSPs, as required by the 5MS rule.

## Out of scope

- Changes other than bidding that are within the scope of the 5MS program, such as change activities that relate to NEM dispatch.
- Any future changes within the BTP timeframe that are not related to 5MS but are made to support other NER or procedure bidding changes.

# Industry transition and go-live strategy principles

The Industry transition and go-live strategy principles apply to the Bidding transition plan:

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

# Proposed additional BTP principles

NEM participants and AEMO:

1. Will use the BTP as the basis of their implementation plans, and will develop individual plans that have regard to the key activities and dates set out in the BTP
2. Will complete their bidding implementation activities by the transition end dates outlined in the BTP
3. Must continue to fulfil all regulatory and compliance obligations during transition and system cutover periods
4. Are to communicate any issues with meeting their BTP responsibilities in writing as soon as possible

# Proposed BTP structure

#	Transition activity	Transition activity objective	Assumptions/ comments	Responsibility	Dependencies	Activity transition start date	Activity transition end date	Rule timing
BTA#	Describes the Bidding transition activity	Outlines the objective of the transition activity	Lists any assumptions or comments related to the activity	Assigns leadership and responsibility of the activity to a specific participant type	Lists any dependencies related to the activity	Lists the transition start date for this activity. When no transition start date is specified for an activity, participants may commence the transition at any time prior to the transition end date for that activity.	Lists the transition end date of this activity. It is expected that all relevant participants have completed the activity by this date.	Lists the commencement date of the 5MS rule requirement that the activity supports

# Industry Bidding Transition Plan: Development of activities

Michael Sanders

# BTA1: Deploy 5-min bidding capability in production

Transition activity objective	Assumptions/ comments	Responsibility	Dependencies	Activity transition start date	Activity transition end date	Rule timing
Enable 5-min bidding transition period for industry	Bid validation will require each 5-min bid within each half hour to be identical, giving them the same profile as 30-min bids, independent of the trading day to which the bid applies.	AEMO		01-Apr-21	01-Apr-21	5MS start*

# BTA2: 5-min bids submitted (in JSON format) during the transition period

Transition activity objective	Assumptions/ comments	Responsibility	Dependencies	Activity transition start date	Activity transition end date	Rule timing
Provide participants the option of submitting 5-min bids ahead of 5MS start.	Bids for each 5-min within each half hour must be identical, independent of the trading day to which the bid applies.	Scheduled and semi-scheduled generators, scheduled loads and MNSPs	BTA1	01-Apr-21	5MS start*	n/a

# BTA3: 30-min bids can continue through transition period

Transition activity objective	Assumptions/ comments	Responsibility	Dependencies	Activity transition start date	Activity transition end date	Rule timing
Provide participants the option of continuing to submit 30-min bids ahead of 5MS start.	30-min bids will be stored as usual, but will also be converted to and stored as a corresponding 5-min bid. This is independent of the trading day to which the bid applies.	Scheduled and semi-scheduled generators, scheduled loads and MNSPs		01-Apr-21	5MS start*	n/a



# BTA4: 5-min bids submitted (in JSON format) from 5MS start

Transition activity objective	Assumptions/ comments	Responsibility	Dependencies	Activity transition start date	Activity transition end date	Rule timing
Enable 5-min bidding in accordance with the 5MS rule	Bids for each 5-min within each half hour do not have to be identical, allowing 5-min profiling of bids.	Scheduled and semi-scheduled generators, scheduled loads and MNSPs	BTA1	5MS start*	n/a	5MS start*

# BTA5: AEMO rejects 30-min bids from 5MS start

Transition activity objective	Assumptions/ comments	Responsibility	Dependencies	Activity transition start date	Activity transition end date	Rule timing
Prevent 30-min bidding in accordance with 5MS rule	Participants submitting 30-min bids will receive CPT messages explaining that 30-min bidding is no longer allowed.	AEMO		5MS start*	n/a	5MS start*

# BTA6: Monitor for valid 5-min bids before the start of the transition period

Transition activity objective	Assumptions/ comments	Responsibility	Dependencies	Activity transition start date	Activity transition end date	Rule timing
Support AEMO's and participants system implementations	All latest valid bids must be available in 5-min format at the start of the transition period. Very few participants submit bids more than two weeks in advance. This means that almost all latest valid bids will be in 5-min format at the start of the transition. However, some participants have already submitted bids beyond 1 Apr 21; and a few participants' latest valid bids are years old.	AEMO		Underway	30-Nov-20	n/a

# NOTES

AEMO clarified that:

- Any participant can submit bids for any trading day into the future to the extent that systems allow.
- Problems will arise if a 30-min bid in AEMO's system at the start of the transition period is not also in 5-minute tables, as the system won't pick up the bid. Activity BTA6 is to ensure all valid bids are in 5-min tables by the start of the transition period.

# BTA7: Request updated 30-min bids from relevant participants

Transition activity objective	Assumptions/ comments	Responsibility	Dependencies	Activity transition start date	Activity transition end date	Rule timing
Support AEMO's and participants system implementations	From the monitoring in BTA6 AEMO will request updated 30-min bids to populate the 5-min bidding tables under BTA3.	AEMO	BTA6	Aug-20	30-Nov-20	n/a

# BTA8: Submit valid 30-min bid

Transition activity objective	Assumptions/ comments	Responsibility	Dependencies	Activity transition start date	Activity transition end date	Rule timing
Support AEMO's and participants system implementations	Participants may respond to an AEMO request under BTA6 to update their 30-min bids.	Scheduled and semi-scheduled generators, scheduled loads and MNSPs	BTA7	Aug-20	30-Nov-20	n/a

# NOTES

- AEMO will be asking some participants to submit valid 30-min bids so that they can be replicated in 5-minute format. This activity will run from August 2020 to November 2020.
- Resubmitting bids in 5-minute format will not be possible until AEMO starts accepting 5-minute bids (1 April 2021).
- Participants will only need to make a valid bid in the production environment.
- AEMO clarified that the 5MS transition includes Energy and FCAS bids.

# BTA9: Manual translation of 30-min bid into 5-min bid if no updated 30-min offer submitted in accordance with BTA8

Transition activity objective	Assumptions/ comments	Responsibility	Dependencies	Activity transition start date	Activity transition end date	Rule timing
Support AEMO's 5MS implementation in accordance with 5MS transitional rule		AEMO		01-Dec-20	31-Mar-21	5MS start*



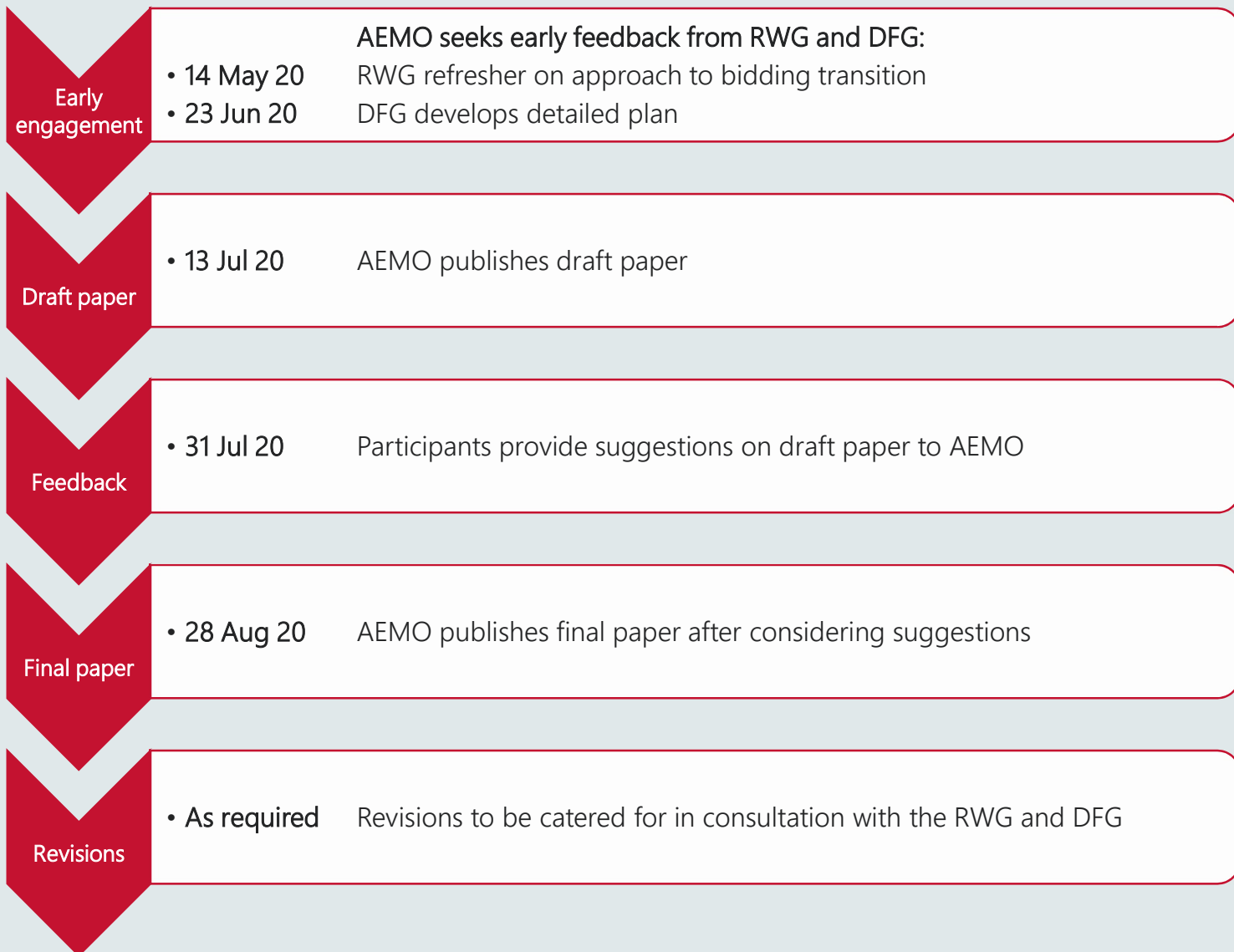
# Other activities?

Transition activity objective	Assumptions/ comments	Responsibility	Dependencies	Activity transition start date	Activity transition end date	Rule timing

# Next steps and general questions

Michael Sanders

# BTP consultation approach



# Feedback



Please get in touch at [5ms@aemo.com.au](mailto:5ms@aemo.com.au)

