

Industry Test Plan

Fast Frequency Response



Overview

- The **FFR** rule introduces two new Contingency FCAS markets:
 - Very fast raise contingency FCAS
 - Very fast lower contingency FCAS
- They are to operate more rapidly than the existing fast raise and fast lower services in response to the locally sensed frequency of the power system in order to arrest a rise and fall in frequency respectively.
- The market arrangements for these new market ancillary services will be the same as those for the existing fast raise and fast lower services.

FFR industry testing approach

Objectives

To optionally provide participants the opportunity to:

- prove their updated systems against AEMO's market systems.
- test end-to-end scenarios of updated processes and procedures.
- to contribute to their assessment of overall industry readiness for rule commencement.

Approach

Industry test allows industry participants to further test their system with AEMO's.

In particular to:

- perform pre-prod demonstration of ability to submit bids for Very Fast FCAS as part of the Registration process to provide the new very fast FCAS services. (Applicants established in Pre-prod to perform this demonstration.) Submit and verify FCAS bids via the FTP, API, or Markets Portal 'Energy & FCAS 5min Bids' capability.
- ingest pre-dispatch and dispatch instructions, FFR enhancements to Wholesale Data Interchange MMS Data Model (DISPATCH, P5MIN, PREDISPATCH, TRADING_DATA, FORCE_MAJEURE packages).
- regression test bid, dispatch, and Wholesale Data Interchange functionality (participating and non-participating providers for the new services).
- test bidding processes and automated energy/FCAS trading tools are working correctly.
- ingest Settlement changes for generators and load market customers showing recovery calculations for the new service i.e., Settlement reports and data model via Wholesale Data Interchange (Settlement and Billing packages) and download via Settlements Direct (Markets Portal application). This will not enable full reconciliation but will enable participants to test ingestion of new settlements report data.

High-level Changes

Function	Description	Reference
API	Adds new LOWER1SEC and RAISE1SEC values	NEM Dispatch Bidding Open API Specification Reference
Portfolio Management System	The web interface now includes the new LOWER1SEC and RAISE1SEC fields on the Portfolio and Applications screens	Portfolio Management System
Bids/Dispatch	<p>The Bidding interfaces includes two new service types i.e., LOWER1SEC and RAISE1SEC.</p> <p>Pre-dispatch, Dispatch Instruction and affected NEMReports available via Wholesale Data Interchange includes two new service types i.e., changes to DISPATCH, P5MIN, PREDISPATCH, TRADING_DATA, FORCE_MAJEURE packages.</p> <p>Participants who have opted to receive FCAS targets via SCADA, service include raise and lower 1 sec instructions.</p>	<p>Energy and FCAS Bids</p> <p>EMMS - Technical Specification - Data Model v5.2 - May 2023</p>

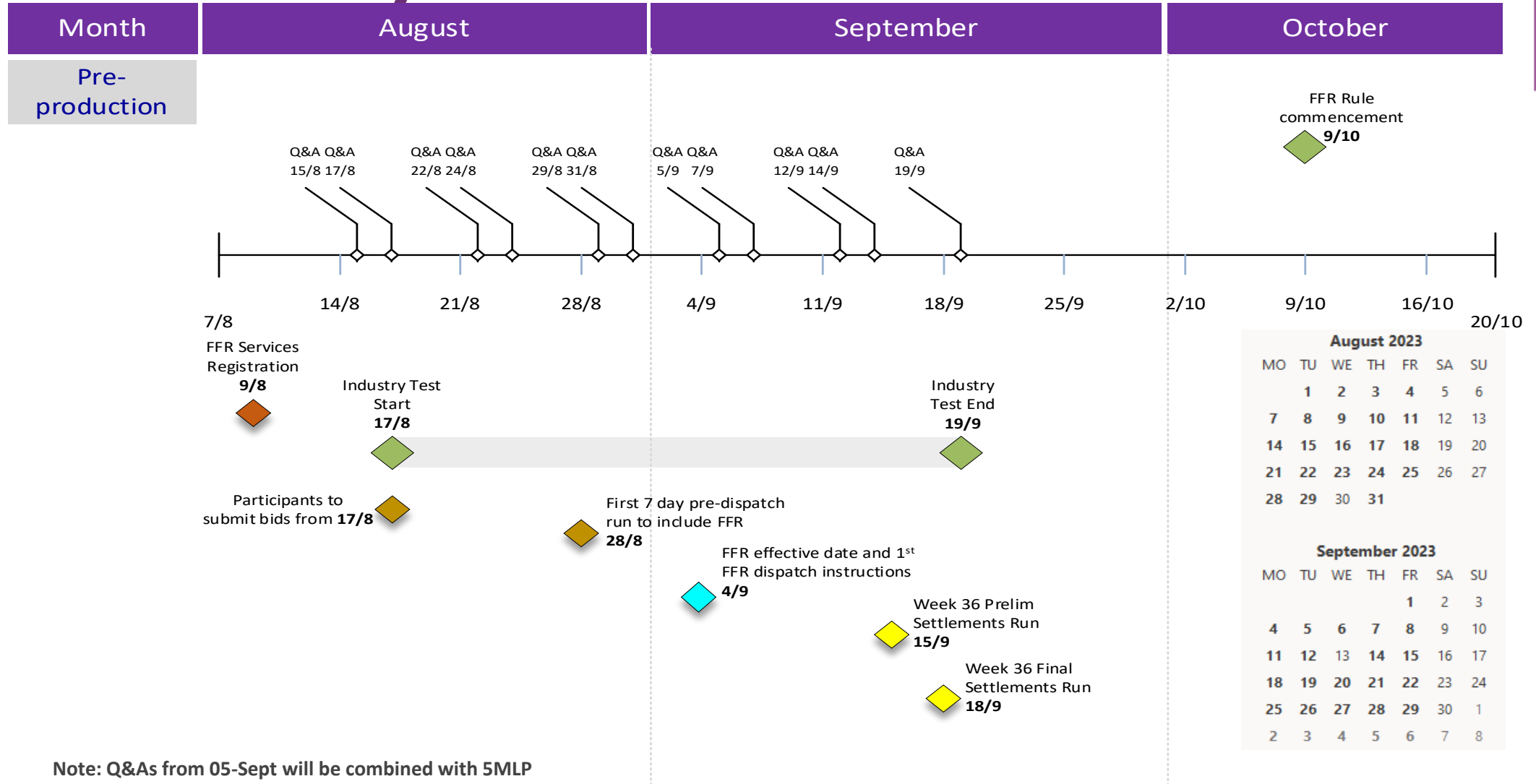
High-level Changes

Function	Description	Reference
Settlements	Updates to Settlements Report (SR) covering payment and recovery amounts for the two new FCAS Services (new rows and columns). Changes to EMMS confidential and public Settlements Reports (new columns) to display the two new FCAS Services.	EMMS - Technical Specification - Data Model v5.2 - May 2023
EMMS Data Model v5.2	New and updated tables in BILLING, DISPATCH, SETTELEMENT_DATA, P5MIN, PREDISPATCH, TRADING_DATA, FORCE_MAJEURE, packages	EMMS - Technical Specification - Data Model v5.2 - May 2023

FFR industry testing – August 2023

WHO?	Interested Participants, including all energy and FCAS providers Interested participants are strongly encouraged to submit Registration applications as soon as possible from 09 August.	
WHEN?	From 09 Aug	FFR services registration. Successful registrations will be added to pre-prod for industry test.
	17 Aug to 19 Sept 2023	FFR industry test period • Participants to submit bids from 17 Aug
	28 Aug 2023	7-day Pre-dispatch to include FFR offers
	03 Sept 2023	5min Pre-dispatch to include FFR offers
	04 Sept 2023	FFR offers included in Dispatch instructions
	15 Sept 2023	Week 36 Prelim Settlements Run
	18 Sept 2023	Week 36 Final Settlements Run
WHAT?	Industry Testing	
NEXT STEPS	<ul style="list-style-type: none"> • AEMO will hold twice-weekly Q&A sessions commencing from 09 Aug inclusive of overview of issues/defects. • AEMO will communicate to participants about settlement runs in the Pre-prod environment. • AEMO will manage issues found during industry testing. 	

FFR Industry Test Timeline



Note: Q&As from 05-Sept will be combined with 5MLP

Key Dates

Date	Activity	Comment	Affected Interfaces
9 August	FFR services registration	<p>Participants interested in provision of new services can make a registration application.</p> <p>Successful registrations will be added to pre-production environment for industry test.</p> <p>Interested Participants, including all energy and FCAS providers, can commence offer submission i.e., for participant regression testing purposes for the period before or after simulated Rule commencement date (04/09/23).</p>	Markets Portal > Portfolio Management System
17 August	Industry Test Commences	Industry Test commences	Not applicable
	FFR Offer submission in pre-production	Registered FFR providers can commence submission of raise and lower 1 second offers with effective date/time from 4am on 04/09/2023 and consumption of FFR offer related data via the Data Interchange i.e., BIDS package.	<ul style="list-style-type: none"> Markets Portal Web Bid and JSON File Upload Submit Bids/offers API service Submit Bids/offers FTP service Wholesale Data Interchange (BIDS package)
28 August	First 7-day Pre-dispatch in Pre-production	Continuous Pre-dispatch runs inclusive of FFR to commence inclusive of consumption of Pre-dispatch instructions via the Data Interchange i.e., PREDISPATCH	Wholesale Data Interchange (PREDISPATCH packages)

Key Dates

Date	Activity	Comment	Affected Interfaces
3-4 Sept	First 5min Pre-Dispatch in Pre-Production	5MinPD will reach the first periods of the simulated Rule Commencement Date (i.e., 11pm on 03/09), with successive cases spanning into commencement date.	Wholesale Data Interchange (P5MIN package)
4 Sept	Dispatch FFR constraints enablement	Systems effective date/time to enable Dispatch FFR constraints i.e., mirrors the Rule Commencement date (9/10).	Not applicable
	Dispatch Instructions include FFR	FFR dispatch instructions (Data interchange and SCADA) where offer date is equal to or greater than 4am on the 4 Sept. Note: for Pre-prod, FFR constraints will be enabled at Midday i.e., during business hours.	<ul style="list-style-type: none"> Wholesale Data Interchange (DISPATCH, P5MIN, PREDISPATCH, TRADING_DATA, FORCE_MAJEURE packages) SCADA Dispatch Instructions
15 Sept	Preliminary Wholesale Settlements Run	Provide participants opportunity to ingest settlement reports i.e., based on week one of 'dispatch' data for week 36 (03/09 to 09/09). Note: Settlement produced will only provide limited comparability to same results to actual settlement week.	<ul style="list-style-type: none"> Wholesale Data Interchange (Settlement and Billing packages) Settlements Direct (Markets Portal application)
18 Sept	Final Wholesale Settlements Run	Final Settlements Run (week 36) executed based on same input data as preliminary.	<ul style="list-style-type: none"> Wholesale Data Interchange (Settlement and Billing packages) Settlements Direct (Markets Portal application)
19 Sept	Industry Test Concludes	End of test period	Not applicable

Issue/defect Management

- Participants can raise an issue via:
 - Via NEMReform@aemo.com.au
 - Twice-weekly Q&A sessions
- Issue/defect updates will be communicated via:
 - Q&A sessions

More Information

- More information to support participants in preparing for VF FCAS commencement can be found at [AEMO | Fast Frequency Response](#), including AEMO's [FFR Service Commencement Plan](#).
- Technical information regarding a facility's eligibility for VF FCAS can be found at [AEMO | Market ancillary services specification and FCAS verification tool](#). This includes [FAQ](#) to clarify the technical requirements for market participants seeking to register in the Very Fast FCAS markets or amend their maximum registered Fast FCAS capacity to comply with version 8.0 of the Market Ancillary Services Specification (MASS)