

NEM Reform Electricity Wholesale Consultative Forum (EWCF)



Meeting #9

19 September 2023



1. Welcome

We acknowledge the Traditional Owners of country throughout Australia and recognise their continuing connection to land, waters and culture.

We pay respect to their Elders past, present and emerging.

Agenda

#	Time	Topic	Presenter(s)
1	1:00pm – 1:05pm	Welcome	Chris Muffett
2	1:05pm – 1:10pm	Actions & Feedback from Previous Meeting	Chris Muffett
3	1:10pm – 1:40pm	Reform Spotlight <ul style="list-style-type: none"> Fast Frequency Response (FFR) Enhancing information in MT PASA 	Carla Ziser & Chris Muffett
4	1:40pm – 2:00pm	In-flight Reform Update: <ul style="list-style-type: none"> Integrated Energy Storage System (IESS) Frequency Performance Payments (FPP) 	Emily Brodie & Oliver Derum
5	2:00pm – 2:15pm	Other Reforms <ul style="list-style-type: none"> IDAM, IDX & PC SCADA Lite 	Ulrika Lindholm & Chris Muffett
6	2:15pm – 2:30pm	Consultation Update <ul style="list-style-type: none"> ST PASA – verbal update MLF update 	Chris Muffett & Johnny Mangala
7	2:30pm – 2:40pm	Procedures Consultation Roadmap	Nicole Nsair
8	2:40pm – 2:45pm	Upcoming Engagements	Paul Johnson
9	2:45pm – 2:55pm	NEM Wholesale Improvement <ul style="list-style-type: none"> Objectives & principles Issues / Change form process Next steps 	Chris Muffett
10	2:55pm – 3:00pm	General Questions and Other Business	Chris Muffett

Appendix A: Competition law meeting protocol and AEMO forum expectations

Appendix B: Fast Frequency Response Initiative - Excerpts from the Service Commencement Plan

"Please note that this meeting will be recorded by AEMO and may be accessed and used by AEMO for the purpose of compiling minutes. By attending the meeting, you consent to AEMO recording the meeting and using the record for this purpose. No other recording of the meeting is permitted"

2. Actions & Feedback from Previous Meeting

Actions & Feedback from Previous Meeting

(Item = Meeting # – Agenda # – Reference)

Item	Topic	Action	Responsible	Notes
8.3.0.1	Fast Frequency Response (FFR)	AEMO to present at next EWCF on FFR market start and transition, including how the new 1-second markets will work alongside the existing 6-second markets. Interested participants are encouraged to review AEMO's FFR Service Commencement Plan prior to the next EWCF.	AEMO	Covered under agenda item 3
8.3.0.3	Enhancing Information in MT PASA	AEMO to provide examples for MT PASA and present at the September EWCF meeting.	AEMO	Covered under agenda item 3
8.8.0.1	Dispatch and Pricing Process Improvement	AEMO to provide a briefing on implementation of the ICF process for industry-initiated issues and changes at the next EWCF meeting.	AEMO	Covered under agenda item 9

The latest meeting minutes and materials are available on the [NEM Reform Electricity Wholesale Consultative Forum](#) webpage.

3. Reform Spotlight

Fast Frequency Response (FFR)

Carla Ziser

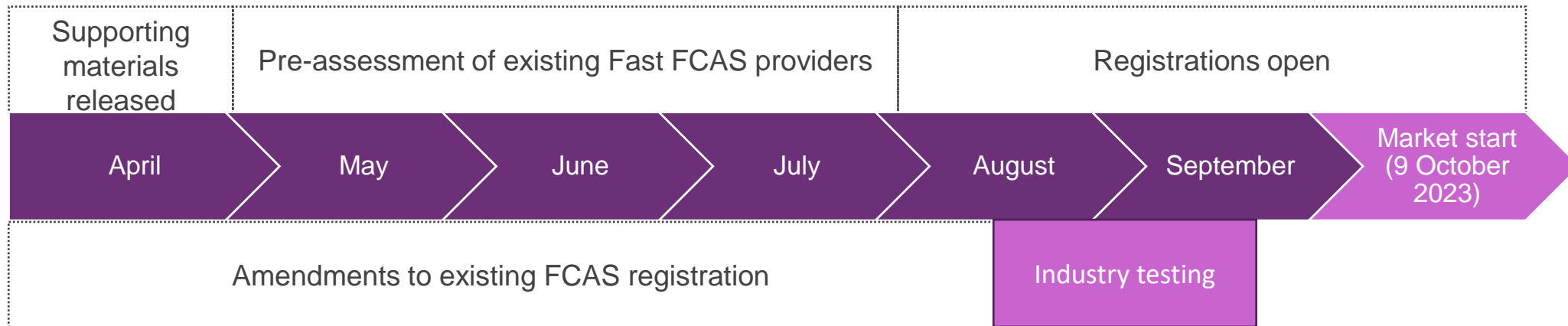
Refresher on the FFR Rule

- Recap on the objective:
 - The AEMC has made a [final rule](#) to introduce two new services to help control frequency as the inertia of the power system reduces
 - The services will provide “very fast” contingency response, alongside the existing fast, slow and delayed services
 - They will also foster innovation in faster responding technologies, which become more important to support the energy transition
- The new very fast services will come into effect from 9 October 2023, at which time AEMO will implement a “requirement” for the services and FCAS providers will be enabled through dispatch processes

Procedures Update

PROCEDURE	TIMING
<p>Market Ancillary Services Specification (MASS) – this sets out the definition of the very fast service, and the technical requirements for providers.</p>	<p>The MASS consultation was finalised in October 2022. Minor consultation on revision of Tasmanian settings for Very Fast FCAS is complete - final version was published 28 July 2023.</p>
<p>Constraint Formulation Guidelines (CFG) – this sets out how AEMO will formulate FCAS requirements for the very fast service, as part of operating the dispatch, pre-dispatch and PASA processes.</p>	<p>Final version of CFG published 22 June 2023.</p>
<p>Constraint Implementation Guidelines (CIG) – update to set out how constraint equations are implemented for the very fast service.</p>	<p>Final version published on 20 April 2023.</p>
<p>Market Suspension Pricing Methodology (MSPM) – minor update for very fast service.</p>	<p>Final report published on 2 March 2023.</p>

Key activities



As at 5 September, 11 facilities are progressing through AEMO’s registration process for raise and/or lower 1 second service provision.

Industry testing:

- Proceeding per schedule
- No outstanding defects as at 7 September

Available information

Participating in VF FCAS

- [Go Live Plan \(draft\)](#)
- [Service Commencement Plan](#)
- [Initiative FAQs](#)
- [EMMS technical specification – August 2023](#)

Amending existing FCAS registration

- [Service Commencement Plan](#)
- [Technical FAQs](#)
- [MASS consultation \(October 2022\)](#)

Understanding settlement changes

- [Initiative FAQs](#)
- [EMMS technical specification – August 2023](#)

Understanding industry testing

- [Industry test plan](#)



FFRConsultation@aemo.com.au



[AEMO | Fast Frequency Response](#)

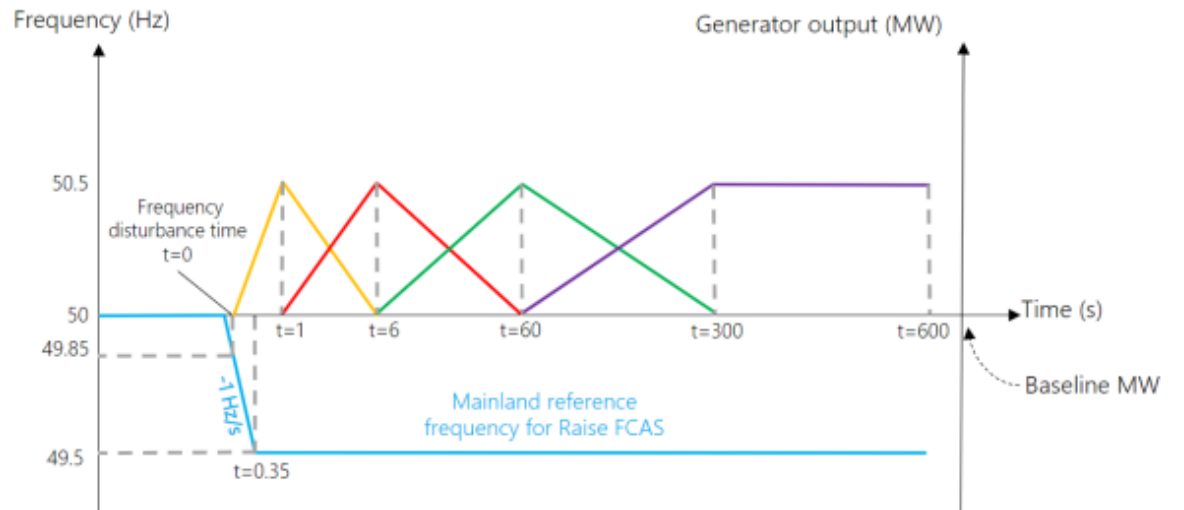
Recognising very fast response

Q: Why won't the R6 requirement reduce when R1 is introduced?

Version 8 of the MASS introduces separate measurement of FFR, or VF FCAS response.

- Procurement of VF FCAS will occur for each dispatch interval as a separate, 'always-on' contingency FCAS service.
- VF FCAS response will be measured separately and alongside other Contingency FCAS services.
- No changes are being made to the approach for setting the R6 and L6 requirements.
 - This is because the amount of response required at 6s remains the same

Figure 8 Measurement timeframes for Raise Contingency FCAS for the Mainland and Tasmania



There are several existing fast FCAS providers that can respond more quickly to frequency deviations than the current fast (6 second) measurement timeframes require.

From market commencement, these providers (once registered) can be enabled in the VF FCAS markets, effectively guaranteeing a response within 1 second.

	Current (MASS Version 7)	Future (MASS Version 8)
Fast service	<ul style="list-style-type: none"> • 6 second response • Measured from t=0 to t=6s 	<ul style="list-style-type: none"> • 6 second response • Measured from t=1 to t=6s
Very fast service	Implicitly provided via 6 second service enablement	<ul style="list-style-type: none"> • 1 second response • Measured from t=0 to t=1s

Industry testing - dispatch observations

- Expect to see periods of global L1 requirement being zero.
- AEMO has monitored dispatch outcomes in preproduction when the L1s requirement is zero:
 - In cases where the requirement is zero, NEMDE may choose to dispatch 'free' enablement (i.e. that offered at \$0.00).
 - In cases where the requirement and dispatch are zero, there are multiple possible pricing outcomes, including 'phantom pricing'.





Enhancing Information in MT PASA

Chris Muffett

What is changing?

- Existing MT PASA requirements:
 - Generators indicate how many megawatts (MW) they could make available each day over the medium term horizon (this is between seven days and 36 months into the future)
 - Availability includes generating capacity in service as well as can be delivered with 24 hours notice
- The AEMC has made a final rule to **improve the quality and transparency** of information that is collected and published about the future availability of generators as part of MT PASA
- Generators will be required to provide additional daily **unit state information** and **unit recall times**, which AEMO will collect and publish
- AEMO is implementing the rule through changes to procedures and systems, with the new arrangements **commencing 9 October 2023**

Required information

Unit state:

- The reason for a scheduled generating unit's availability or unavailability
- State the list of unit states is developed based on IEEE standard 762-2006
- Where there are multiple potential reasons for the PASA availability submitted, participants should submit the reason code that is most dominant

Unit recall time:

- The period in which the plant could be made available under normal conditions after a period of unavailability
- Whole days advance notice required to make the unit available for normal operation
- Normal operation: the typical capacity submitted for the time of year, assuming no outages.
- For unit states that indicate an outage for economic reasons, other than a 'retired' state, the submission of a recall time is mandatory.

Unit state

Unit state definitions consistent with IEEE762-2006

Unit state	Reason	Definition
Inactive reserve	E	Unavailable for service but can be brought back in a relatively short period of time, typically measured in days
Mothballed	E	Unavailable for service but can be brought back with appropriate notification, typically weeks or months
Retired	E	Unavailable for service and not expected to return to service in the future.
No deratings	n/a	Available with no deratings, or only seasonal deratings.
Basic planned deratings	P	Planned derating as originally scheduled and with a predetermined duration.
Extended planned deratings	P	Planned derating that is an extension of the basic planned derating beyond its predetermined duration.
Unplanned forced deratings	P	Unplanned derating that cannot be deferred beyond the end of the next weekend
Unplanned maintenance deratings	P	Unplanned derating that can be deferred beyond the end of the next weekend but required before next planned derating.
Basic planned outage	P	Planned outage as originally anticipated and with a predetermined duration.
Extended planned outage	P	Planned outage that is an extension of the basic planned outage beyond its anticipated duration.
Unplanned forced outage	P	Unplanned outage that cannot be deferred beyond the end of the next weekend.
Unplanned maintenance outage	P	Unplanned outage that can be deferred beyond the end of the next weekend but required before next planned outage.

Examples

1. A participant has made a decision to mothball a unit of a power station, due to the ongoing financial viability of the unit. Under normal conditions, the unit could be recalled to normal operations with six months notice. In this case, the participant should submit daily information, for the period of the planned mothballing:
 - PASA availability of zero,
 - Unit State of 'Mothballed'
 - Recall Time of 180 days
2. Following the identification of a fault that makes operation at full capacity impossible, a participant has undertaken an unplanned forced derating that will take three weeks to fix. Until this fault is fixed, the unit is unable to operate at full capacity. The participant should submit, for the period over which the unplanned forced derating is expected to occur:
 - PASA availability reflecting the reduced operating capacity, that is available within 24hours notice.
 - Unit State of 'Unplanned forced deratings'
 - Recall Time of NULL

More information

- AEMC rule change:
<https://www.aemc.gov.au/rule-changes/enhancing-information-generator-availability-mt-pasa>
- MT PASA project page:
<https://www.aemo.com.au/initiatives/trials-and-initiatives/enhanced-mt-pasa-information>
- Procedure consultation was finalised on 24 April:
<https://www.aemo.com.au/consultations/current-and-closed-consultations/2022-reliability-forecasting-guidelines-and-methodology>
- Enhanced MT PASA Post Deployment Assessment and Q&A Session **Friday 6 October 2023, 1.30pm to 2.00pm (AEDT)**.
- If you would like to attend or have any questions, please contact:
NEMReform@aemo.com.au

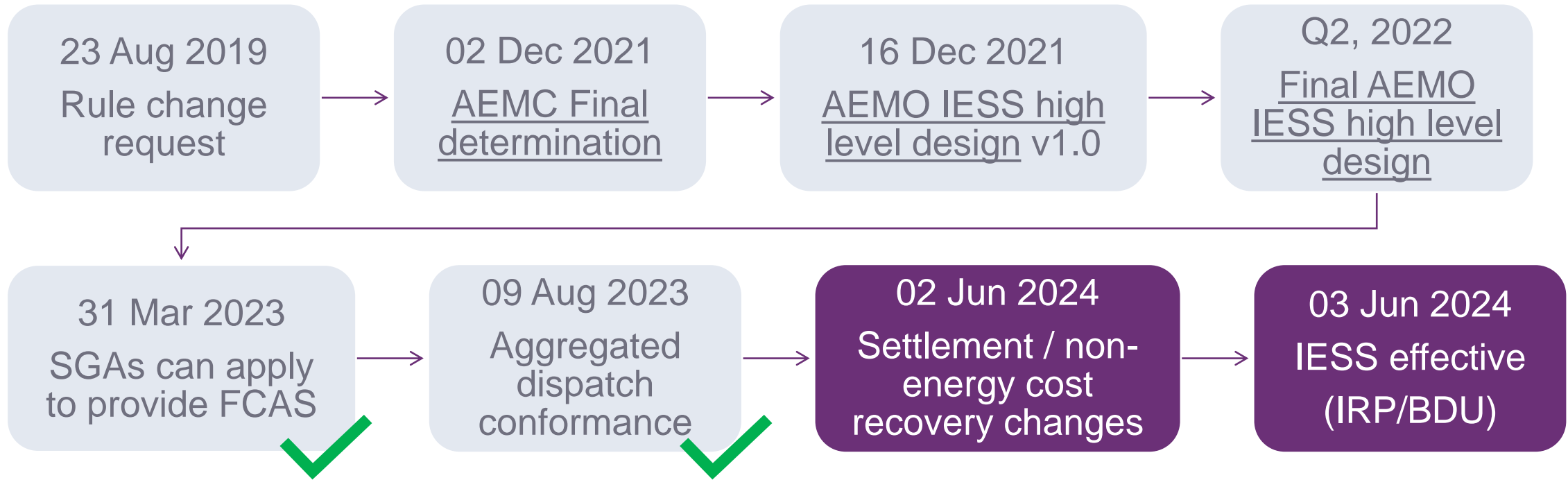
4. In-flight Reform Update



Integrating Energy Storage Systems (IESS)

Emily Brodie

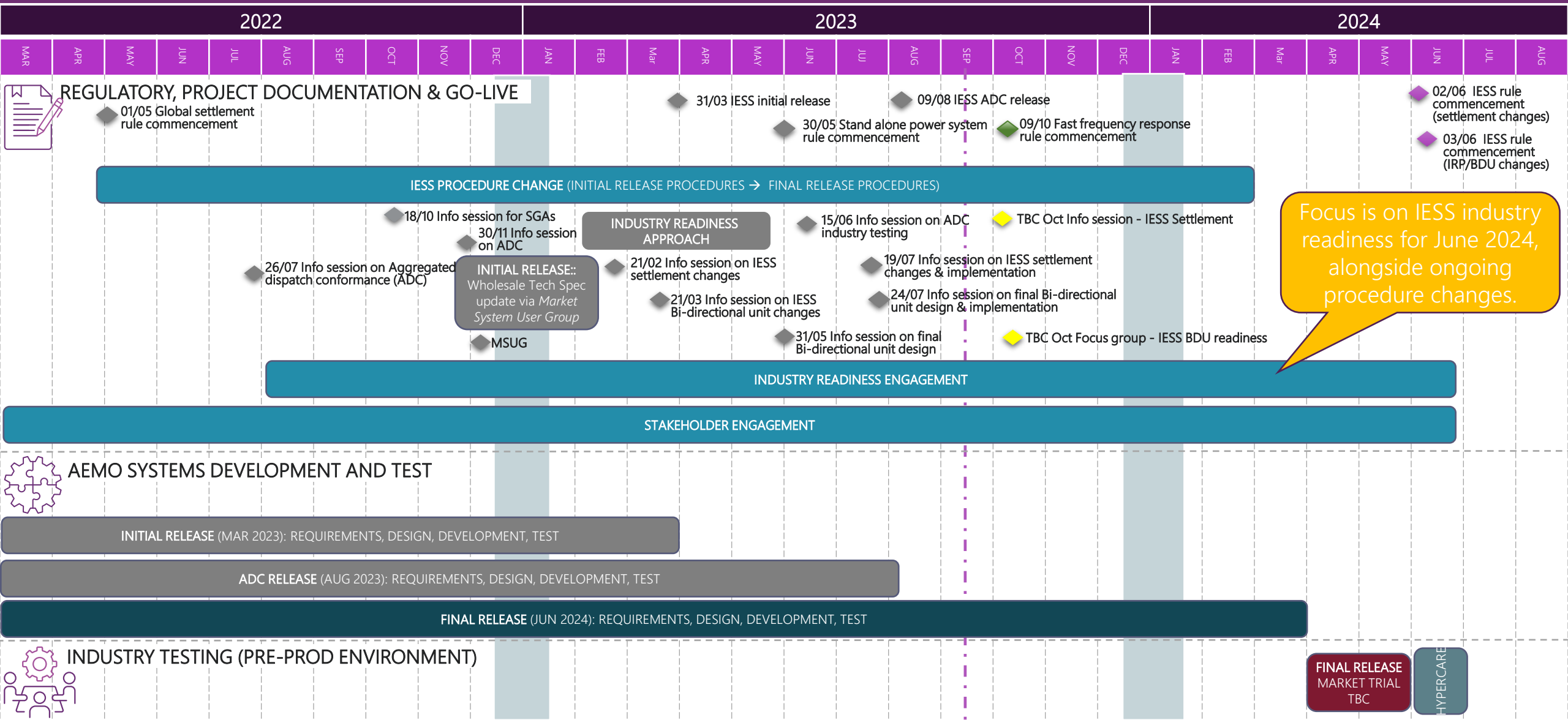
IESS: High-level Timeline



SGA	Small generation aggregator
FCAS	Frequency control ancillary service/s
IRP	Integrated resource provider
BDU	Bi-directional unit

- REFERENCES**
- [AEMC IESS rule change](#)
 - [AEMC Implementing IESS rule change](#)
 - [AEMO IESS High Level Design and Implementation Strawperson](#)
 - [AEMO IESS Participant Toolbox](#)

IESS – Indicative Industry Timeline



Focus is on IESS industry readiness for June 2024, alongside ongoing procedure changes.

- ◆ IESS Confirmed
- ◆ IESS Indicative
- ◆ Concurrent initiatives
- ◆ Completed activities
- Summer holiday periods: Avoid industry IESS activities where possible
- Market trial: Details TBC

I ESS project update

Since last EWCF meeting

<p>✓ August</p>	<ul style="list-style-type: none"> • Project schedule is now baselined to meet the June 2024 IESS rule commencement dates. • Industry readiness preparations commenced via Implementation Forum
<p>✓ Aug/Sep</p>	<ul style="list-style-type: none"> • Credit limit procedures consultation started <ul style="list-style-type: none"> • First round submissions due Fri 22 Sep • Elec market documents released for feedback <ul style="list-style-type: none"> • Comments due Fri 29 Sep • Retail procedures final determination expected Mon 18 Sep

Key upcoming activities



IESS PROCEDURES
 IESS consultation starts for:

- Operations planning
- Electricity Market documents #2
- NEM Connections



INDUSTRY READINESS ACTIVITIES
 Development of go-live plans, transition plans and market test/trial strategy to support June 2024 industry readiness
 (via Implementation Forum and other sessions as appropriate)

I ESS project contact



I ESS@aemo.com.au



[AEMO | Integrating Energy Storage Systems project](#)

Frequency Performance Payments (FPP)

Oliver Derum

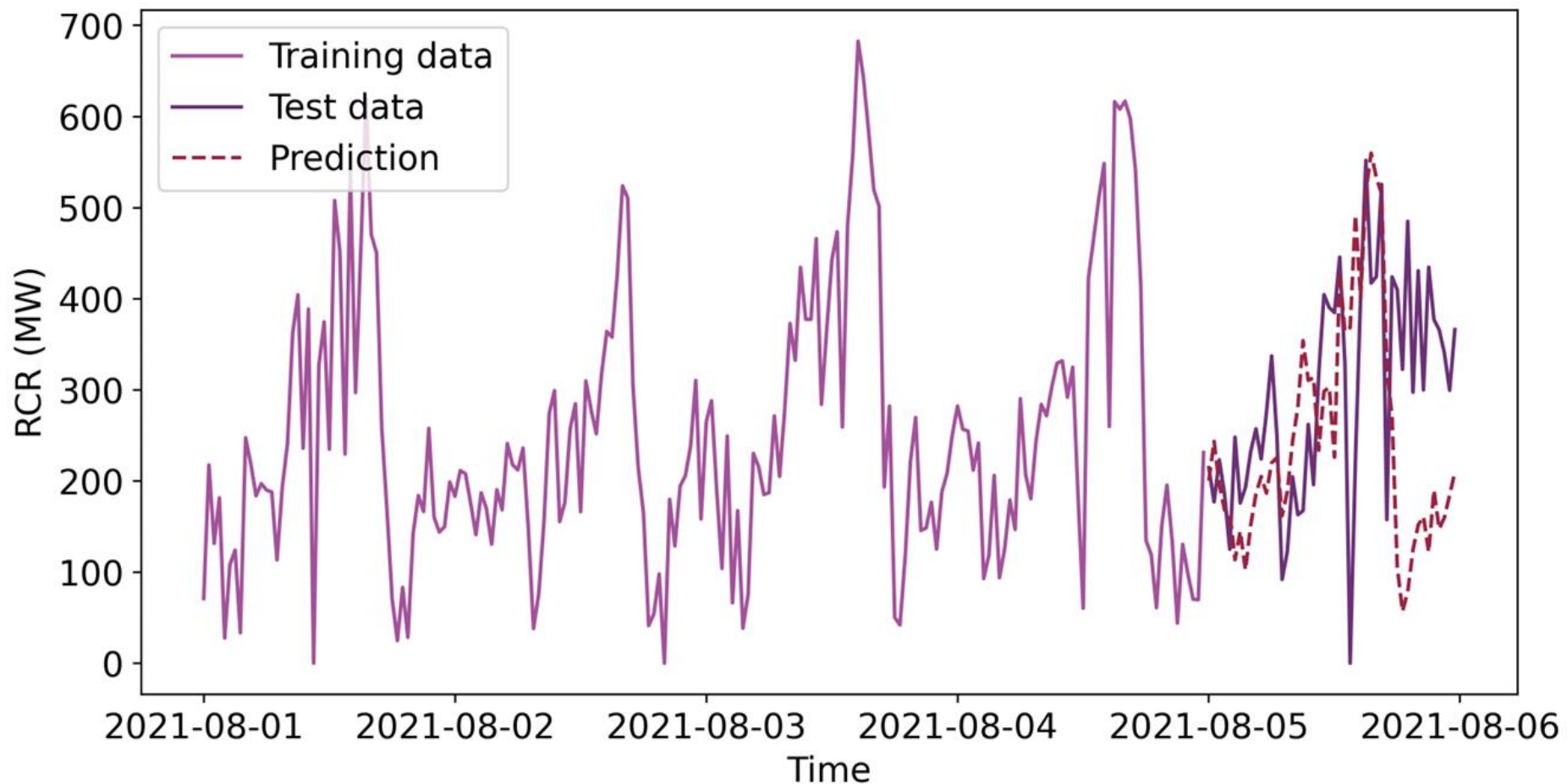
Workshop on pre-dispatch and P5min FPP estimates

- Workshop was held with participants on 4 September. Representatives of five NEM participants, plus the AEMC, attended.
- AEMO presented on a simple method for developing pre-dispatch and P5min estimates of FPP outcomes (see examples on following slides).
- AEMO invited participants to indicate whether such estimates would be of benefit to industry.
- Limited feedback on the value of such estimates was provided in the session.
- Written feedback is invited by COB Friday, 29 September, to FPPconsultations@aemo.com.au

AEMO will only consider producing FPP pre-dispatch and P5min estimates if there is sufficient industry support.

Pre-dispatch estimates

Estimate the RCR, Usage, and Performance values based on their average of the past 7 days using a daily mean method

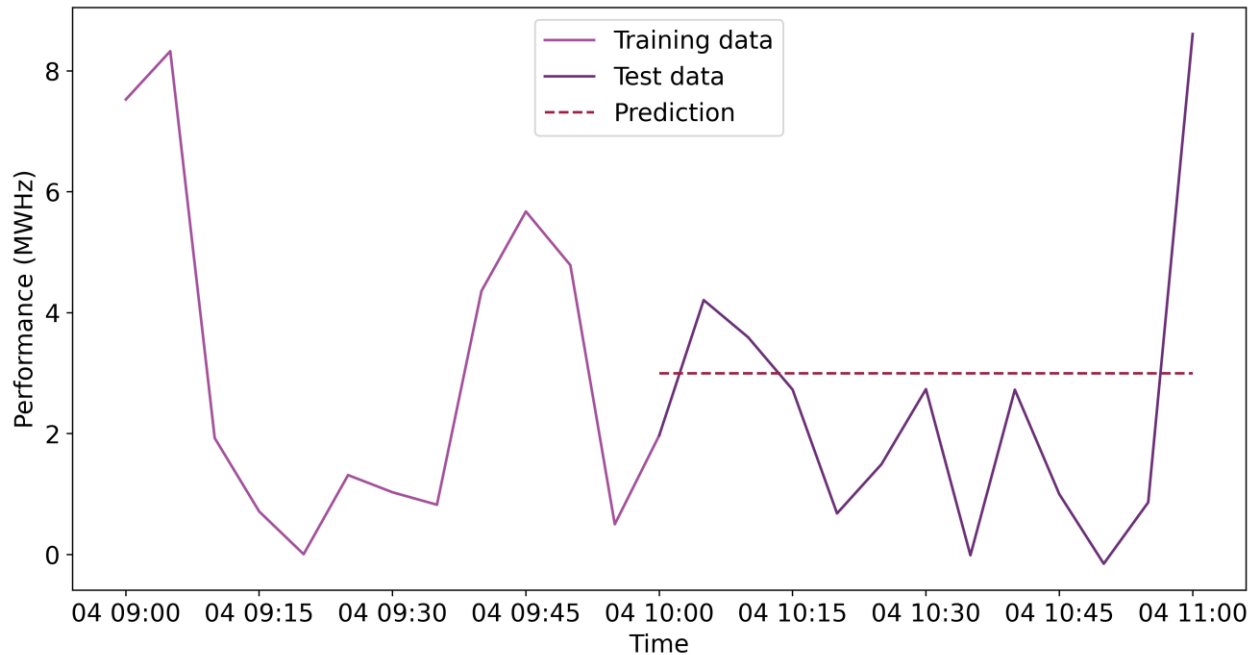


Example of estimates for a mainland raise requirement

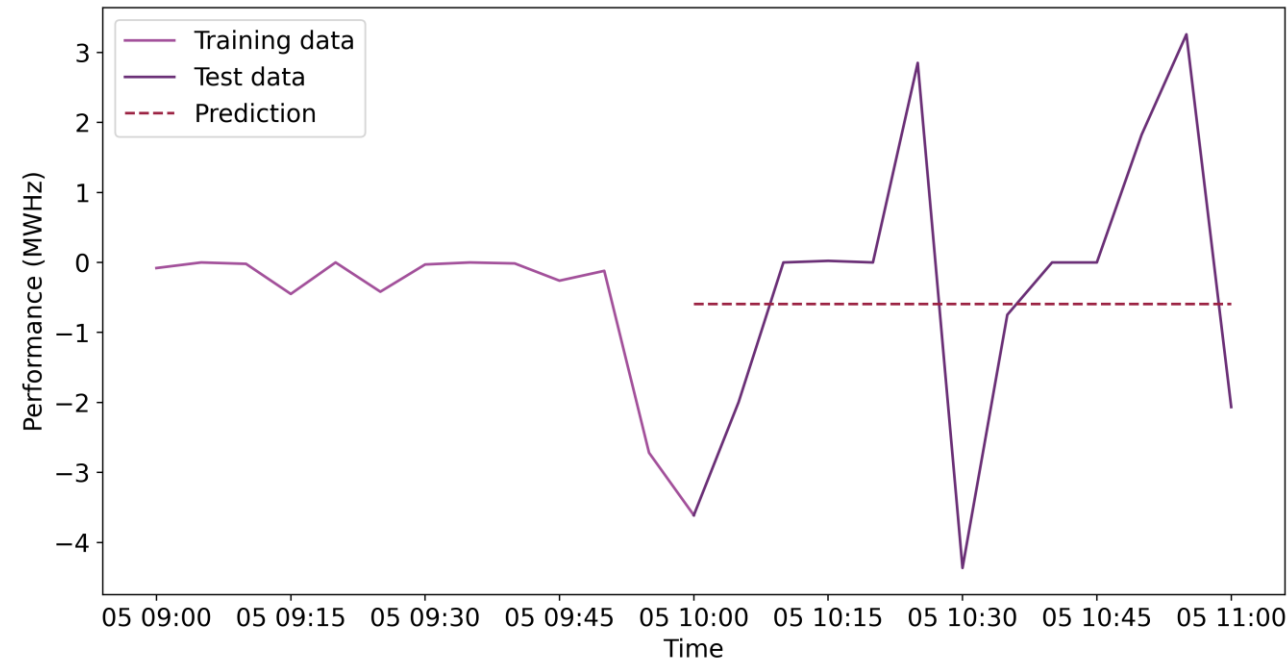
P5min estimates

Estimate the RCR, Usage, and Performance values based on their average of past 12 trading intervals using a simple mean method

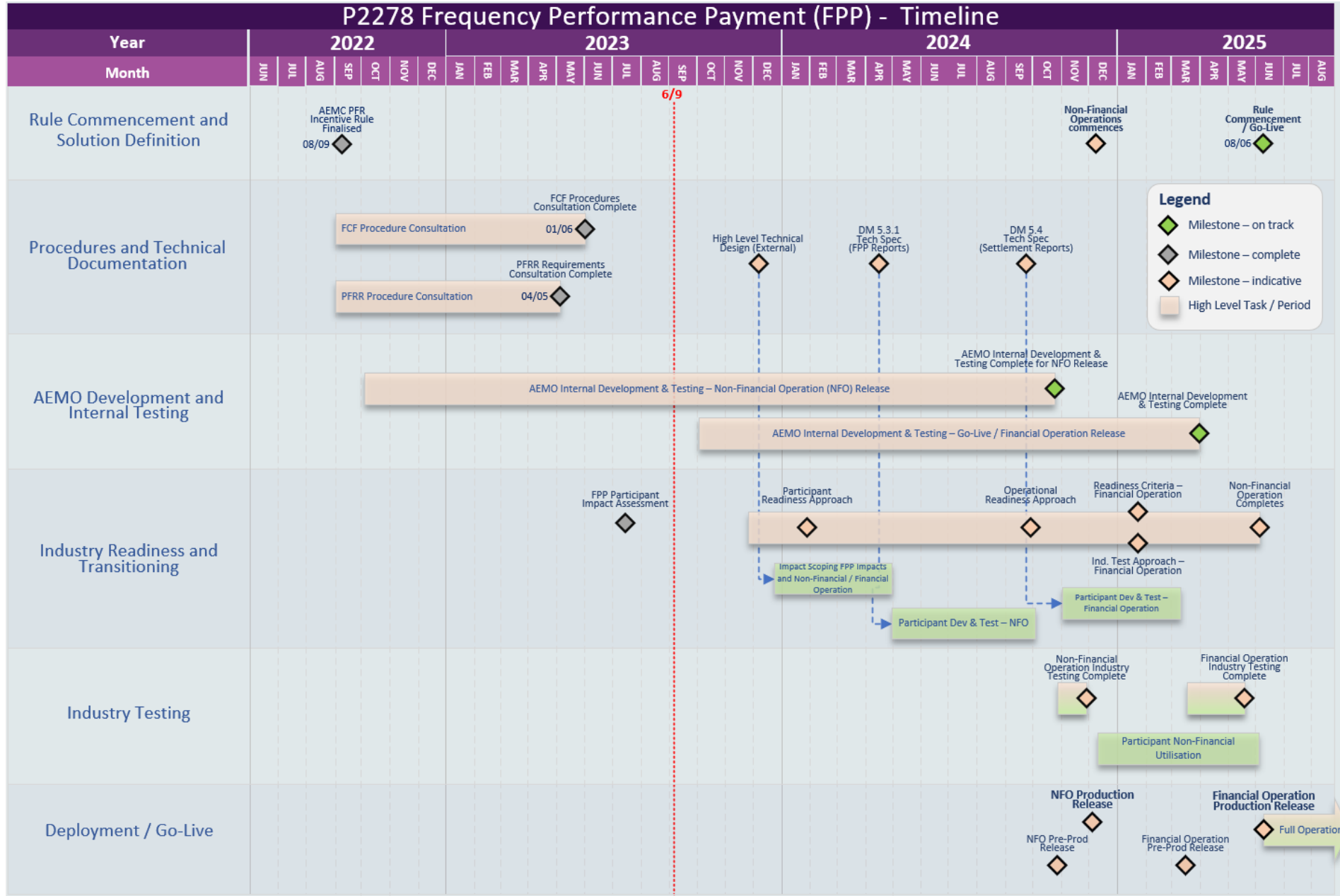
Example of estimates for a thermal unit



Example of estimates for a wind farm



FPP development and testing timeline



FPP – Further Information

Frequency Contribution Factors page (contains Procedure and Tuning Parameters)

- [AEMO | Frequency contribution factors](#)

AEMO FCFP consultation page

- [AEMO | Frequency Contribution Factors Procedure](#)

FPP project page

- [AEMO | Frequency Performance Payments project](#)

AEMC rule

- [AEMC | Primary frequency response incentive arrangements](#)

Email inbox

- FPPconsultation@aemo.com.au

5. Other Reforms

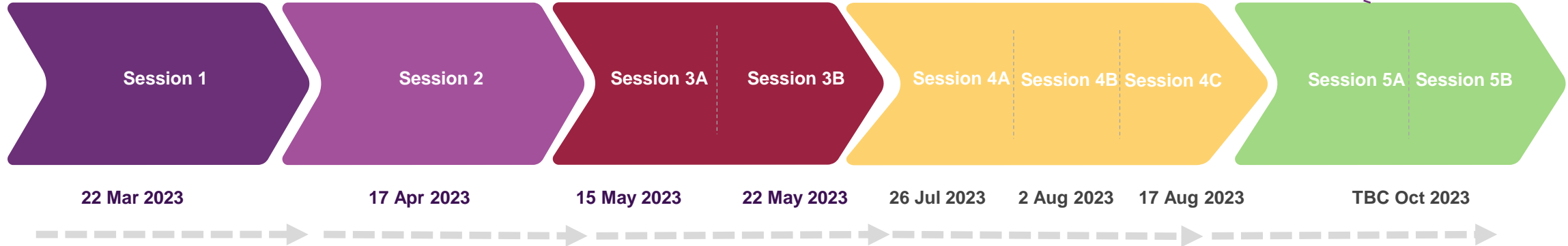
IDAM, IDX and PC

Ulrika Lindholm

Process to date with industry

- Transition strategy workshops with industry concluded*.
- 1to1 conversations held late Aug/early Sep to work through feedback and support preparation for business case workshops.
- Additional time needed for meaningful cost assessments for AEMO and industry.
- Update on the forward schedule to be communicated to Focus Group by 15 September.

Note that dates for business case workshops will be communicated to Focus Group by 15 September.



Session	Introduction – IDX, IDAM & PC	Discovery Workshops – IDAM and PC	Target State Discussion	Transition Strategy	Conclusions and Business Case
Agenda	<ul style="list-style-type: none"> • Introduce initiatives • Outline workshop plan 	<ul style="list-style-type: none"> • Pain points and benefits • Survey 	<ul style="list-style-type: none"> • Concept walkthrough • Survey 	<ul style="list-style-type: none"> • Transition Strategy • Impacts & Benefits • Survey 	<ul style="list-style-type: none"> • Walkthrough of draft • Assessment and completion

*Published information and materials:

- [Target state](#) – published 10 July
- [Target state feedback summary](#)
- Transition strategy – draft shared with focus group 18 July (final expected published at completion of followups with stakeholders in Aug/early Sep)
- Focus Group webpage: <https://aemo.com.au/en/consultations/industry-forums-and-working-groups/list-of-industry-forums-and-working-groups/nem-reform-foundational-and-strategic-initiatives-focus-group>



Initial insights from Transition strategy phase

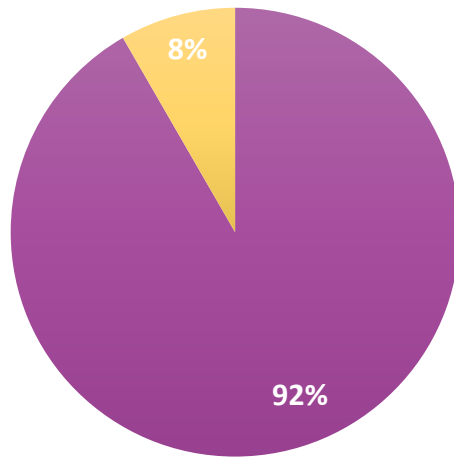
Information provided for noting.

Questions welcome to NEMReform@aemo.com.au

IDAM & Portal Consolidation sentiment

IDAM

Are you aligned with the key principles and Transition tranches and sequencing for IDAM?

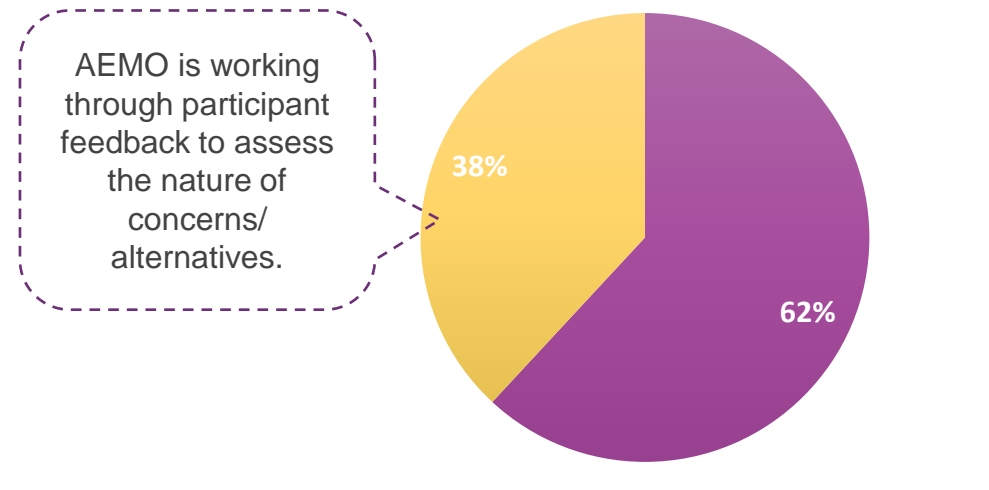


■ Yes% ■ No%

- A participant alignment check was done with the focus group, indicating a strong majority alignment on IDAM.
- Results from in-session polls with industry participants in transition strategy discussion 26 July and 2 August.
- Consolidated to show 1 organisation, 1 vote.

Portal Consolidation (in progress)

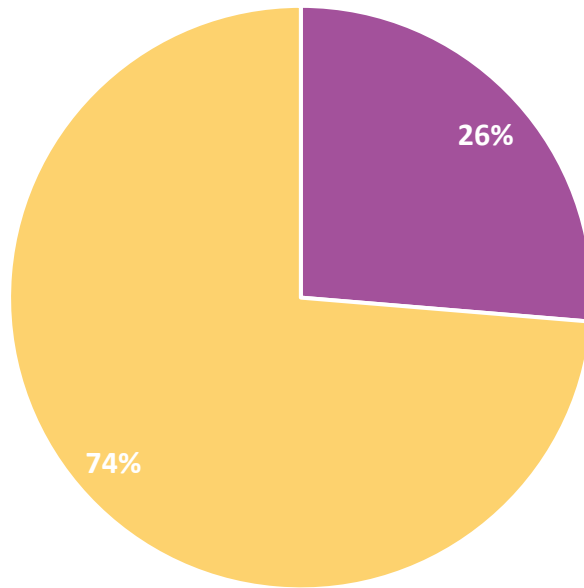
Are you aligned with the key principles, Transition strategy and Sequencing for Portal Consolidation initiative?



■ YES ■ NO

- A participant alignment check was done with the focus group, indicating a smaller majority alignment for Portal Consolidation.
- Results from in-session polls with industry participants in transition strategy discussion 2 August and 17 August.
- Consolidated to show 1 organisation, 1 vote. Note this is initial result; AEMO seeking clarification from participants.

IDX investment phasing (in progress)

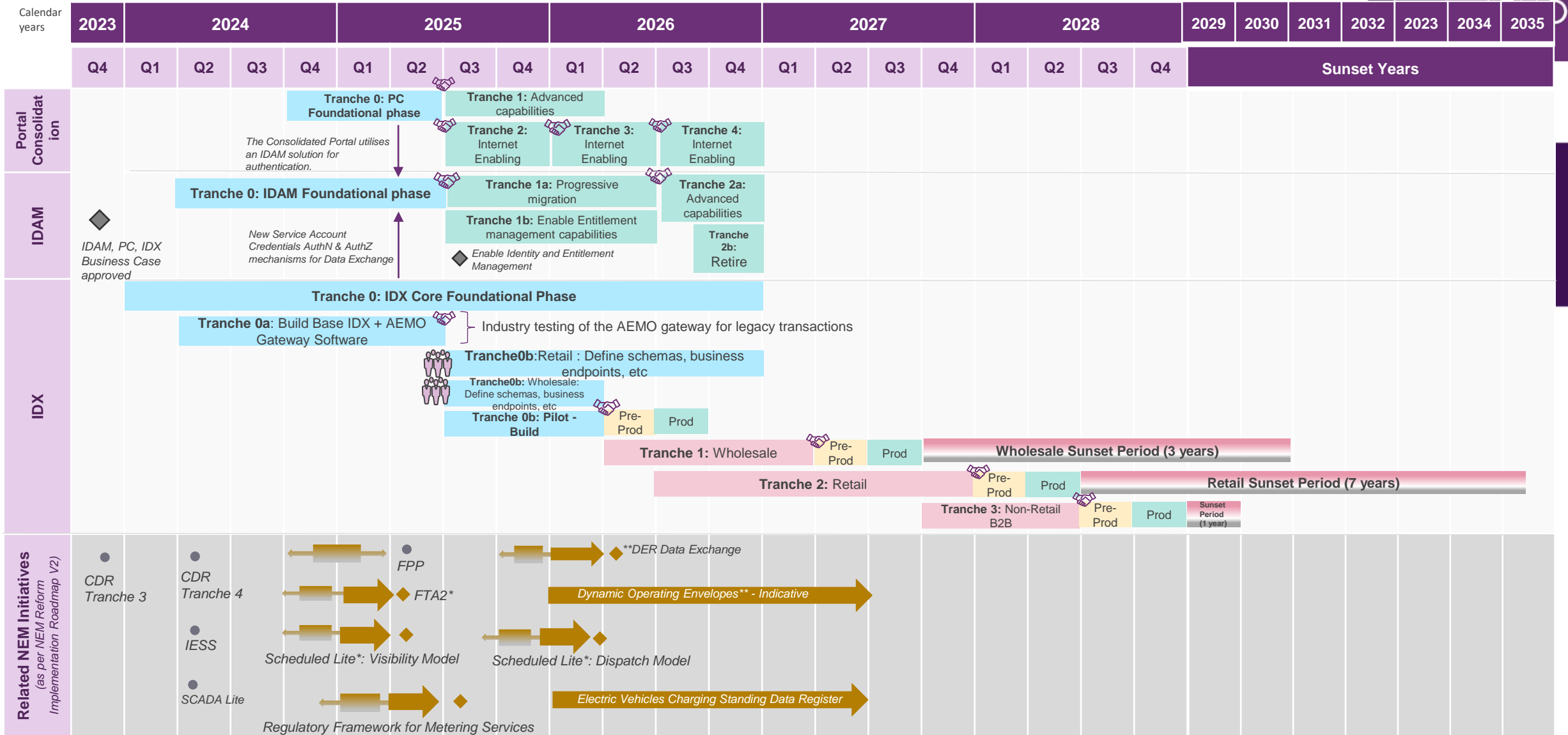


- Option 1: Package up all of IDAM and all of PC and Tranche 0 of IDX
- Option 2: Package up all of IDAM and all of PC and all of IDX

Workshop 4C outcomes:

- IDAM and PC received identified industry support for all tranches to be included in the first investment phase.
- Two packaging options for IDX investment phasing were assessed:
 - Option 1 only the foundational tranche required for new NEM reforms
 - Option 2 both the foundational tranche for new NEM reforms as well as tranches for NEM Wholesale and NEM Retail existing business services
- Participants in attendance identified a preference for investment and planning certainty, noting Option 2 provides significant flexibility for 'opt in' participant defined transition
- Participants who missed the poll have been asked to submit their preference to ensure all parties are able to contribute to establishing the direction of industry phasing.
- Results have been consolidated to provide one vote per organisation. AEMO seeking clarification from one participant whose representatives provided divergent views.

Consolidated Strawman Roadmap (in collaboration with the Industry)



Foundational Tranches - based on the assumed timeline | IDX Tranche Build | Industry Testing | T3A Milestone | **New Service | Working group | Committed effective date | Estimated effective date | Industry testing and trials

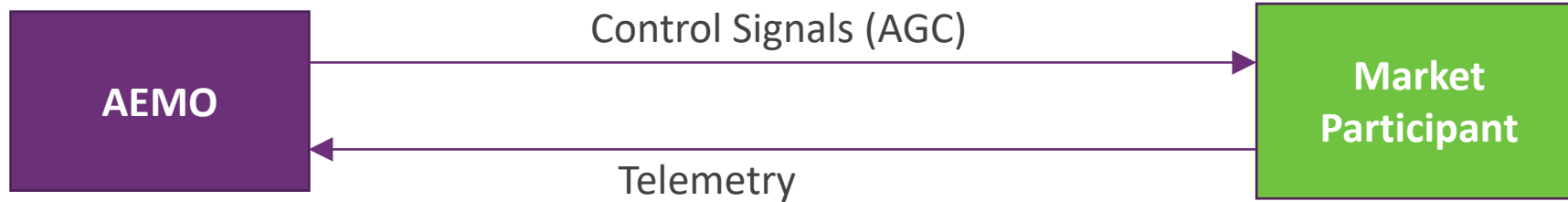
* Indicative timeline likely to be pushed out from what is assumed within V2 NEM Reform Roadmap

Timelines for the related NEM Reforms have been taken from V2 of NEM Reform Implementation Roadmap

SCADA Lite

Chris Muffett

Initiative summary: SCADA Lite Mar 24 release



Provide a capability for a market participant to establish a bi-directional communication path to exchange telemetry data and control signals with AEMO such that they can participate in the wholesale market. Specifically:

- Demand Response Service Providers (DRSP) providing Wholesale Demand Response (WDR).
- Generators or Integrated Resource Providers not able to exchange information or controls with AEMO via an NSP.

Project Context - Why is it needed?

- The evolving and transitional NEM market will involve several new non-NSP (Network Service Provider) Participants in addition to the already existing traditional ones (such as NSPs and Generators).
- It has been onerous for these non-NSP Participants to establish a telemetry connection with AEMO using the ICCP (Inter-control Centre Communications Protocol) protocol that AEMO currently supports.
- SCADA Lite solution will deliver the requirements defined in both the [WDR Guidelines](#) (Version 1.0, Effective Date: 24 June 2021) and [Power System Data Communication Standard](#) (Version 3.0, Effective Date: 3 April 2023).
- New Reform initiatives such as [Integrating price-responsive resources into the NEM](#) will soon open new market opportunities for non-NSP Participants once accessible telemetry exchange channels are available.

SCADA Lite: High-level impacts - DRAFT

The information presented here is general in nature. AEMO encourages industry participants to undertake their own due diligence to assess energy market reform impacts on their respective organisations.

AFFECTED TECHNOLOGY & PROCESSES	INDICATIVE PARTICIPANT CHANGE IMPACTS	AFFECTED PARTICIPANTS				
		IRP	GEN	DRSP	TNSP	DNSP
REGISTRATION	<ul style="list-style-type: none"> Required: DRSPs seeking to register >5MW of WDR from a single site/aggregation who do not provide telemetry via an NSP will require a SCADA lite connection Optional. IRPs or Generators seeking a transitional SCADA Lite connection where the NSP does not support the service. <p>MEDIUM</p> <ul style="list-style-type: none"> Provide required data and undergo required certification Direct annual fees for a SCADA Lite connection 	0	0	✓		
DISPATCH	<p>MEDIUM:</p> <ul style="list-style-type: none"> OPTIONAL - Operational systems could be upgraded to receive/respond to instruction signals from a SCADA Lite feed. 	0	0	0		
TECHNOLOGY	<p>MEDIUM for non-NSP participants:</p> <ul style="list-style-type: none"> Potential for new technology and hardware will be required to enable the bidirectional communication link with AEMO to provide telemetry and optionally receive instruction signals. 	0	0	✓		

* Refer to [SCADA Lite Stakeholder Workshop Presentation – 23 August 2023](#) for technical overview

DRSP	Demand Response Service Provider
GEN	Scheduled Generators
IRP	Integrated Resource Providers

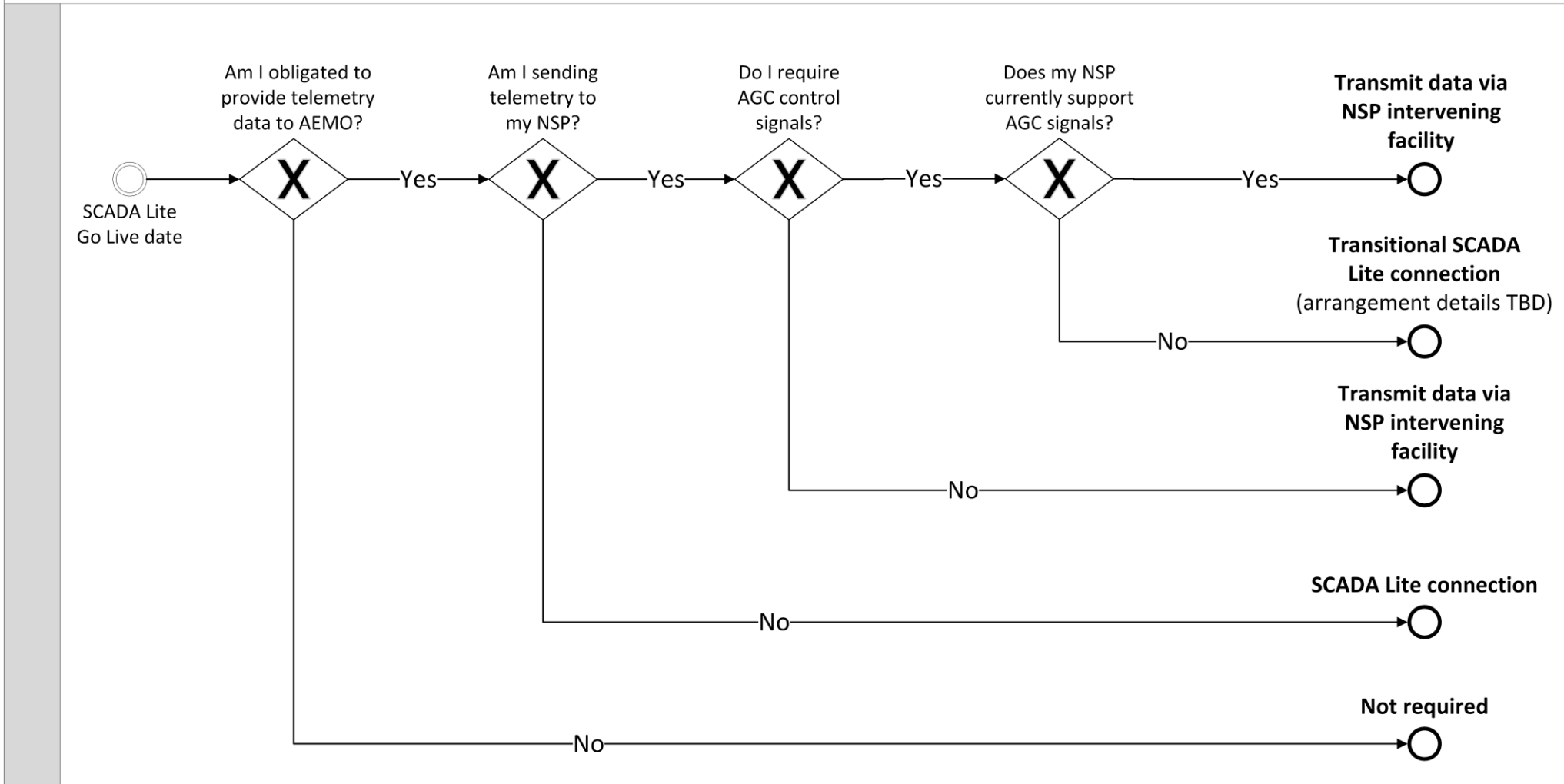
TNSP	Transmission network service provider
DNSP	Distribution network service provider

Eligibility map

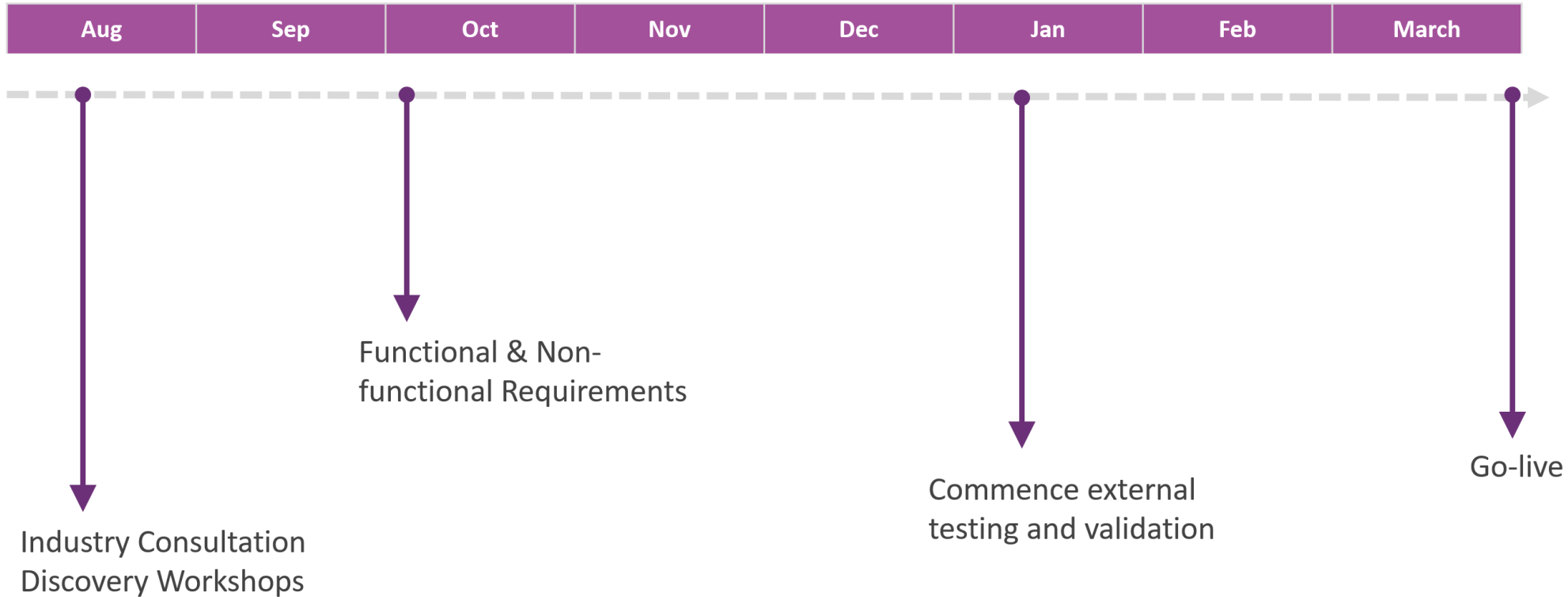
SCADA Lite Decision Tree – Do I need a SCADA Lite Connection?

Decision points to determine if a SCADA Lite connection is required

Version 1.0



Implementation Roadmap



AEMO will develop milestones in line with NEM Reform standard process including participant required guidelines and processes and AEMO progress milestones.

6. Consultation Update

ST PASA – verbal update

Chris Muffett

MLF update

Johnny Mangala

TPRICE – Dispatch & MLF Replacement Engines

TPRICE is a legacy system that is reaching its end of life.

AEMO aims to design and implement a more flexible, robust solution, that can adapt to the changing energy market.

The replacement of TPRICE is to occur in two stages:

1. replacement of **supply and demand balancing (minimal extrapolation)** component.
2. replacement of the **AC load flow (derivation of loss factors)** component.

Intended benefits:



Greater transparency for market participants.



Greater configurability, allowing for timely responses to variations in NEM dynamics.





Appropriate reflection of market behaviour with inclusion of looped flows.

Stage 1 - Key points

Stage 1 aims to replace the **supply and demand balancing** component of TPRICE.

- Highly configurable **linear optimisation** (also known as linear programming) based solution.
- Improved ability to **implement both inter- and intra-regional constraints** via the utilisation of distribution factors.
- **Compliant with current version** of the Forward-looking Transmission Loss Factors (FLLF) methodology. The configurable nature allows for material variations in future FLLF methodology revisions.
- The linear optimisation solution will be implemented for the **2024-25 FY draft/final MLF outcomes**.
- Further detail pertaining to stage 1 and potential solutions for stage 2 to be provided in **December 2023 MLF Forum**.

Stakeholder engagement

Stage	Stakeholder engagement
<p style="font-size: 48pt; text-align: center;">1</p>	<div style="display: flex; align-items: center; justify-content: center;">  <p> Raise awareness at: <ul style="list-style-type: none"> • Electricity Wholesale Consultative Forum (Sept 2023) Detailed presentation: <ul style="list-style-type: none"> • MLF Forum (Dec 2023) </p> </div>
<p style="font-size: 48pt; text-align: center;">2</p>	<div style="display: flex; align-items: center; justify-content: center;">  <p> Raise awareness: <ul style="list-style-type: none"> • MLF Forum (Dec 2023) Detailed engagement: <ul style="list-style-type: none"> • Stakeholder engagement (Mid 2024) </p> </div>

Next Steps

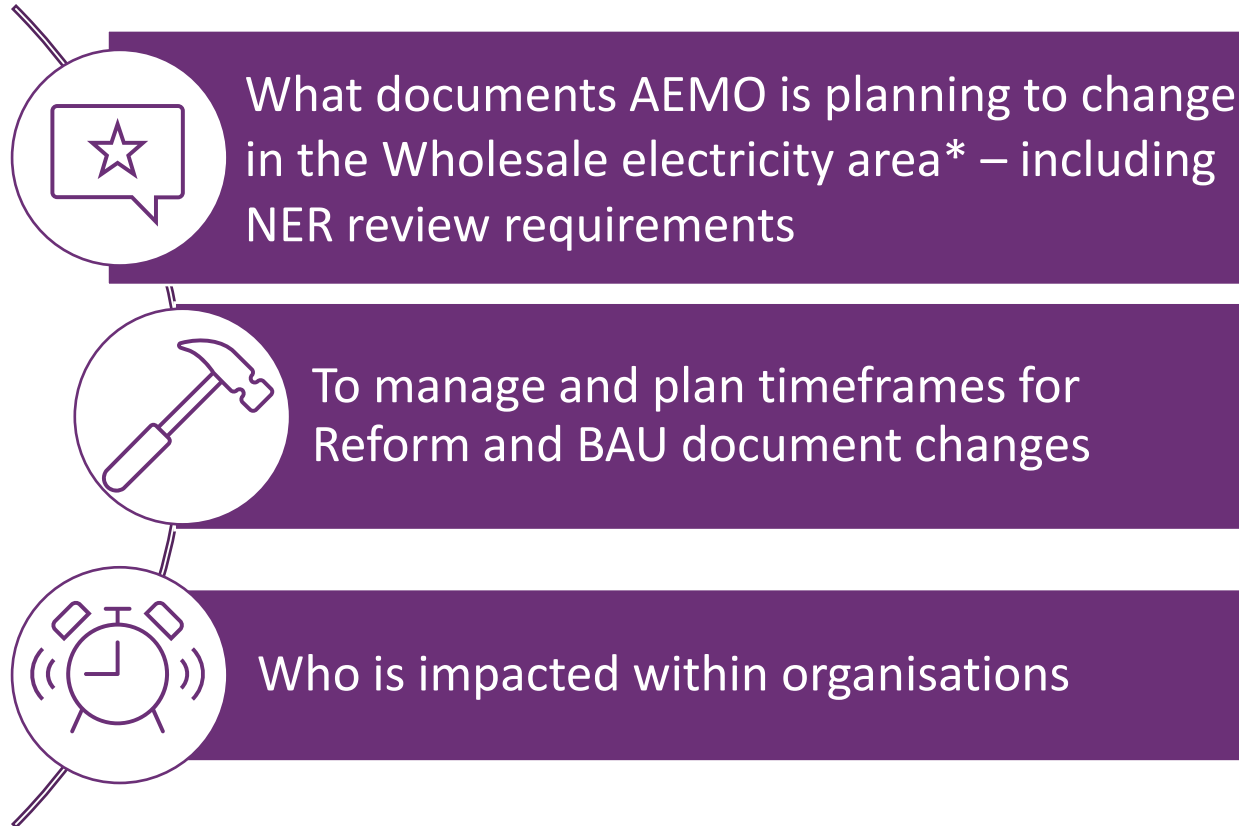
- Please attend the **December 2023 MLF Forum** for further information on the replacement of TPRICE.
- Further information relating to the commencement of the expanded consultation (future configuration of stage 1, solution of stage 2) will be provided toward the **middle of 2024**.

We are welcoming initial feedback, please forward any relevant questions and/or feedback to:

MLF_Feedback@aemo.com.au

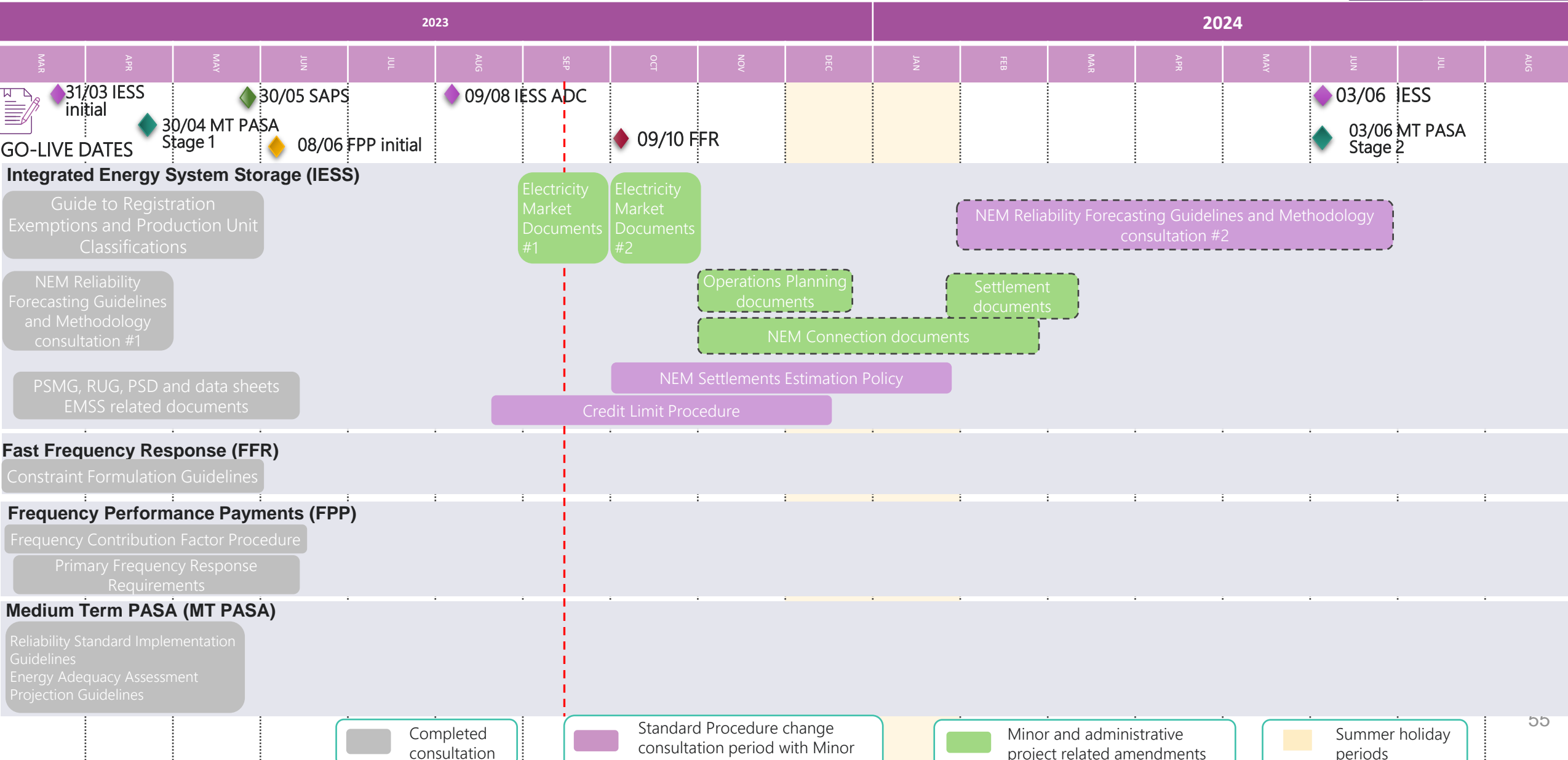
7. Procedures Consultation Roadmap

Procedures Consultation Roadmap



***Note:** Retail procedure changes are discussed through the Electricity Retail Consultative Forum (next meeting 28 August)

Reform Indicative Procedure Change Timeline



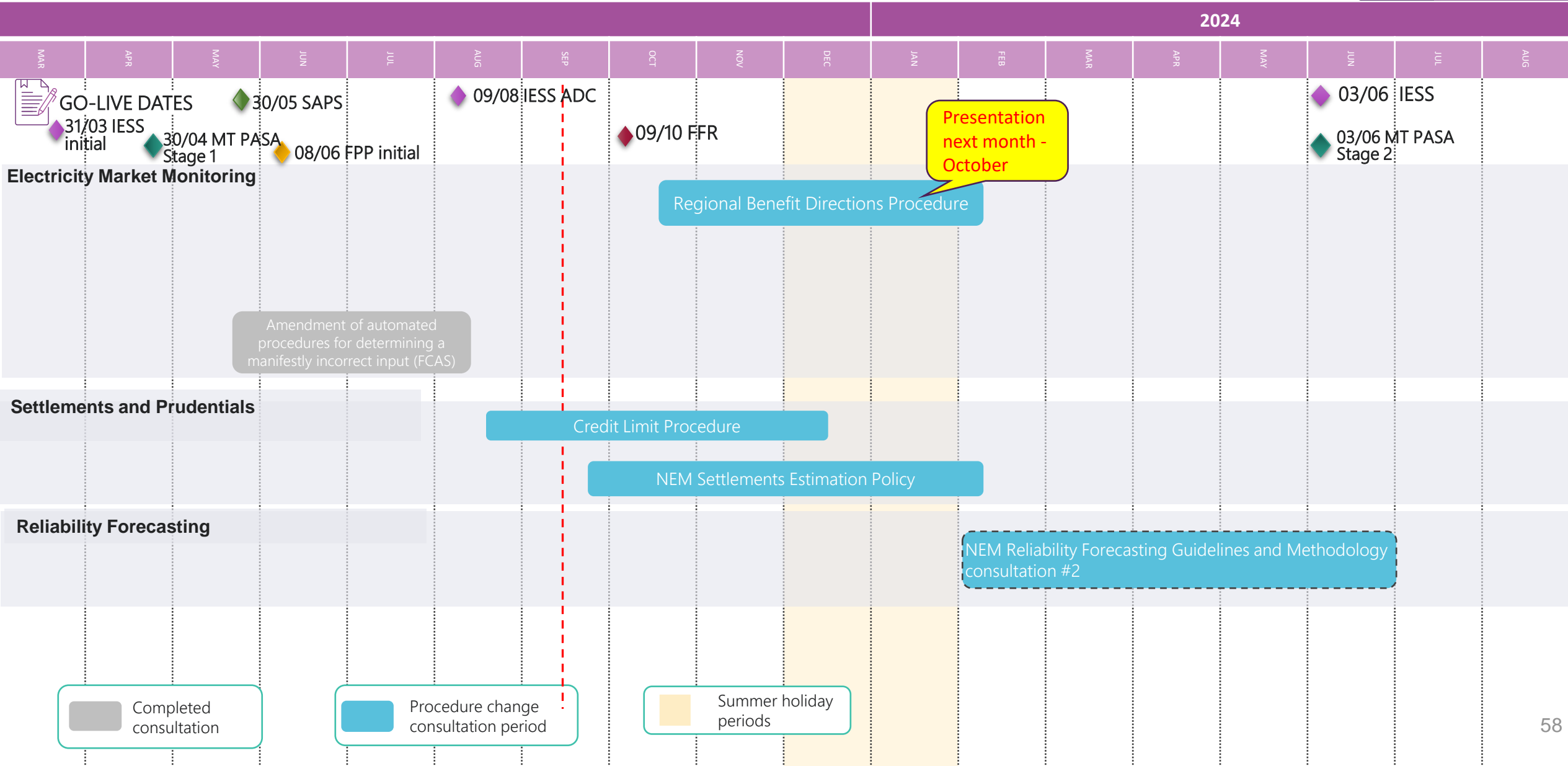
Document Changes Summary – Reform Inflight projects

In-flight projects	Consultation packages*	Consultation Type	Key dates
Integrated Energy System Storage (IESS) * See next slide for detailed consultation scope	Credit Limit Procedure	Standard (terminology update for IESS)	Commencement – 14 Aug 2023 Submissions due – 22 September 2023
	NEM Settlements Estimation Policy	Standard (terminology update for IESS)	Commencement – Mid August 2023
	Electricity Market Documents #1	Minor and administrative (terminology update for IESS)	Commencement – 4 Sept 2023 Submissions due – 29 September 2023
	Electricity Market Documents #2	Minor and administrative (terminology update for IESS)	Commencement – Mid Sept 2023
	Retail Procedures consultation	Standard	Submissions closed – 10 July 2023 Final report – 18 September 2023
	Operations Planning documents	Minor and administrative (terminology update for IESS)	Commencement – Q3 2023
	NEM Connections documents	Minor and administrative (terminology update for IESS)	Commencement – Q3 2023
	Settlement documents	Minor and administrative (terminology update for IESS)	Commencement – Jan 2024
	NEM Reliability Forecasting Guidelines and Methodology consultation #2	Standard (terminology update for IESS)	Commencement – Jan 2024

Detailed Consultation Scope - IESS

CONSULTATION PACKAGES	DOCUMENTS TO BE CHANGED
Electricity Market Documents #1	<ul style="list-style-type: none"> • Spot Market Operations Timetable • Intervention Pricing Methodology • Market Suspension Compensation Methodology • SO_OP_3707: Procedures for issue of directions and clause 4.8.9 • Forward Looking Loss Factor Calculation Methodology • SO_OP_3717 Procedure for the exercise of RERT
Electricity Market Documents #2	<ul style="list-style-type: none"> • SO_OP_3705 Dispatch Procedure • Regulation FCAS Contribution Factors Procedure
Operations Planning documents	<ul style="list-style-type: none"> • List to be confirmed
Settlement documents	<ul style="list-style-type: none"> • Methodology for the allocation and distribution of settlements residue • NEM Settlements Revision Policy • Settlements guide to ancillary service payments and recovery • NEM Direction Compensation Recovery • NEMAS Recovery Reconciliation File – Overview • NEM Daily Energy Summary • UFE Fact Sheet • AEMO Statement Layouts • Wholesale Demand Response Guidelines
NEM Connection documents	<ul style="list-style-type: none"> • Generation alterations in the NEM except Victoria process map • Clarification of Generator Technical Performance Requirements (S5.2.5) • Generator Connection Application Checklist • Generator Connection R1 Submission Checklist • Dynamic Model Acceptance Test Guideline
NEM Reliability Forecasting Guidelines and Methodology consultation #2	<ul style="list-style-type: none"> • Connection point forecasting methodology • Demand Side Participation Information Guidelines • DSP forecasting methodology • Electricity demand forecasting methodology information paper • Reliability forecast guidelines

AEMO BAU INDICATIVE Document Change Timeline



8. Upcoming Engagements

Upcoming Engagements



SEPTEMBER 2023

- PCF (13 September)
- EWCF (19 September)
- ERCF (25 September)
- Implementation Forum (26 September)
- ITWG (28 September)

OCTOBER 2023

- PCF: (11 October)
- IESS Settlements Transition & Q&A session (early October)
- IESS BDU Transition Focus Group (mid October)
- EWCF: (17 October)
- ERCF: (23 October)
- ITWG: (26 October)
- MSUG: (31 October)

Q4 2023

- IESS BDU Transition Focus Group (monthly)
- Foundational & Strategic business case workshops
- RDC Collaborative Workshop; (1 November)
- PCF: (8 November)
- EWCF: (21 November)
- ERCF: (27 November)
- MSUG: (28 November)
- RDC Meeting: (28 November)
- ITWG: (30 November)
- PCF (13 December)
- EWCF (19 December)

Glossary

- ERCF:** Electricity Retail Consultative Forum
- EWCF:** NEM Reform Electricity Wholesale Consultative Forum
- FPP:** Frequency Performance Payments
- IESS:** Integrating Energy Storage Systems
- ITWG:** Industry Testing Working Group
- MSUG:** Market Systems Users Group
- PCF:** NEM Reform Program Consultative Forum
- RDC:** NEM Reform Delivery Committee

Stakeholder enquiries and forum nominations may be sent to:
NEMReform@aemo.com.au.

- To learn more about these events, please visit AEMO's [Industry meeting calendar](#) or contact the program at NEMReform@aemo.com.au.
- To learn more about AEMC calendar activities, please visit the [AEMC calendar](#).

Action Item Reminder: Non-formal consultations inclusion on AEMO Consultation page update.

Upcoming Engagements

September						
S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

October						
S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

November						
S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

December						
S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

NEM Reform Program Committees/Forums	
NEM Reform Program Consultative Forum	
NEM Reform Delivery Committee	
NEM Reform Delivery Committee - Collab W	
NEM Reform Implementation Forum	
NEM Reform Electricity Wholesale Consultative Forum	
NEM Reform Executive Forum	
NEM Reform Industry Testing Working Group	
NEM Reform Initiative Specific	
Foundational and Strategic Initiatives	
Other Forums	
AEMO Consumer Forum	
Market Systems User Group (MSUG)	
General & Roadmap Briefing	
Electricity Retail Consultative Forum	
Other	
Natioanl Public Holiday	
State/Territory Public Holiday	
AEMO Office Closed	

To learn more about these events, please visit AEMO's [Industry meeting calendar](#) or contact the program at NEMReform@aemo.com.au.

9. NEM Wholesale Improvement

Objectives & principles

- To establish a mechanism that allows industry-initiated improvements to NEM arrangements, e.g.:
 - Raise issues with existing processes
 - Identify changes that will improve processes
- May involve changes to AEMO's systems and/or processes (without the need for a rule change)
- Where an improvement is found to require a rule change, the existing AEMC-led process would then need to be initiated
- Key principle is to identify improvements that align with the National Electricity Objective

Issue / Change Form process

- The EWCF will leverage the existing process used by the ERCF:
https://aemo.com.au/-/media/files/stakeholder_consultation/working_groups/retail_meetings/ercf/2020/ercf-change-process.pdf?la=en
- The existing Issue / Change Form (ICF) will be used as a way to capture the proposal, and AEMO will assign a unique number for each
- ICFs will be circulated as part of the EWCF meeting cycle, with time set aside to seek input on the proposal
- AEMO will consider the proposal and provide additional information and implementation impact on a best endeavours basis

Next steps

- An EWCF ICF template will be circulated with the minutes, and included on the EWCF web page:
<https://aemo.com.au/en/consultations/industry-forums-and-working-groups/list-of-industry-forums-and-working-groups/electricity-wholesale-consultative-forum>
- Completed ICFs to be sent to NEMReform@aemo.com.au
- Agenda item included for subsequent meetings to table ICFs, and to discuss benefits and impact

10. General Questions & Other Business



NEMReform@aemo.com.au



[NEM Reform Electricity Wholesale
Consultative Forum](#)



Appendix A: Competition law meeting protocol and AEMO forum expectations

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**:

- Ensure that discussions are limited to the matters contemplated by the agenda for the discussion
- Make independent and unilateral decisions about their commercial positions and approach in relation to the matters under discussion with AEMO
- 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:

- Which customers they will supply or market to
- The price or other terms at which Participants will supply
- Bids or tenders, including the nature of a bid that a Participant intends to make or whether the Participant will participate in the bid
- Which suppliers Participants will acquire from (or the price or other terms on which they acquire goods or services)
- 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.

AEMO Forum and Meeting Expectations

This charter explains expectations regarding participation and behavior in the Australian Energy Market Operator (AEMO)'s stakeholder forums.

Meeting Expectations

All participants will:

- Respect the diversity of the group.
- Speak one at a time – refrain from interrupting others.
- Share the oxygen – ensure that all attendees who wish to have an opportunity to speak are afforded a chance to do so.
- Maintain a respectful stance towards all participants.
- Listen to others' points of view and try to understand others' interests.
- Share information openly, promptly, and respectfully.
- If requested to do so, hold questions to the end of each presentation.
- Remain flexible and open-minded, and actively listen and participate in meetings.
- Abide by COVID-Safe workplace guidelines, if attending a meeting on AEMO's premises.

Roles and Responsibilities

Forum stakeholders agree to:

- Be specific and fact-based in their feedback on a specific workstream or emerging issue;
- Review and provide feedback on papers and reports;
- Relay information to their colleagues or constituents after each meeting and gather information/feedback from their colleagues or constituents, as practicable, before each meeting;
- Maintain a focus on solutions or outcomes that benefit all energy consumers.

AEMO agrees to:

- Provide technical expertise in a manner that is considerate of the audience and their level of expertise;
- Assist participants in understanding issues enough to represent their views;
- Provide all participants the opportunity to voice their views.

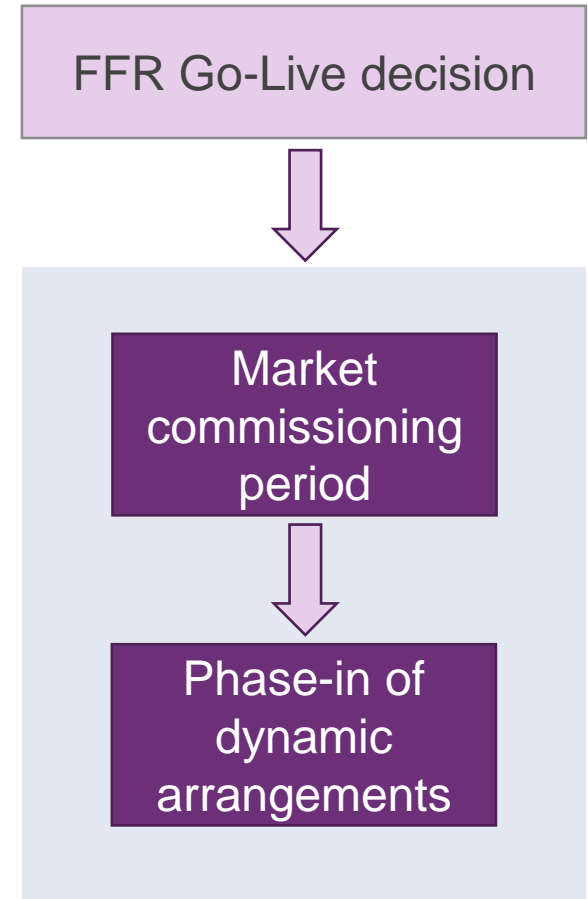
Appendix B: Fast Frequency Response Initiative - Excerpts from the Service Commencement Plan

Transitional approach

AEMO plans to introduce the VF FCAS markets as a two-stage process:

- 1** Commencing market operation with a system normal mainland NEM requirement for each of Raise and Lower Very Fast FCAS services at a commissioning volume limit of 50 MW for an initial period of 2 weeks.

 - The purpose of this commissioning period is to establish market operations and allow AEMO to respond if issues arise.
 - Commencing this stage is subject to the FFR Go-Live decision, including confirmation of participant registration and commitment to provide FFR.*
- 2** Phasing in the dynamic calculation of VF FCAS requirements, progressively increasing allowed requirement volumes while ensuring that sufficient capacity is registered and committed for VF FCAS market participation, with the objective of avoiding extended periods of supply shortage.



Phase-in of dynamic arrangements

A progressive transition is being planned primarily to manage uncertainty around the timing and rate of transition of existing FFR-capable providers, from participation in the Fast FCAS markets to registration and participation in both Fast and Very Fast FCAS markets.

- The intention is to progressively increase VF FCAS requirements at regular, fortnightly intervals.
- The size of increments and length of transition period will be dependent on the level of registered capacity and participant commitment to participation in the VF FCAS services. Both registrations information and market (pre-dispatch) information will be used in these assessments.
- Increments to the amounts required across groups of regions will be made separately, recognising that the volume of VF FCAS registered to support local versus global requirements may differ. As a consequence, the length of transition period may differ.
- AEMO will regularly monitor Contingency FCAS performance throughout the transition and may revise these plans if any unexpected outcomes are noted.

Participants will be notified of VF FCAS requirement increments via AEMO Market Notices.

System security during the transition

Power system security requirements will continue to be met throughout the transition.

- In the short term, AEMO does not expect a physical change to the power system. Inertia, primary frequency response and other power system characteristics should remain materially unchanged, and changes to Fast FCAS control systems are not expected immediately following market start.
- The power system is currently operating within boundaries specified in the FOS, both for normal conditions and following contingencies. This indicates a degree of resilience to frequency disturbances, beyond the minimum level ensured by the FCAS markets.
- AEMO therefore believes a staged approach to introducing changes to FCAS procurement levels is feasible and prudent.
- AEMO will increment the allowed requirement volumes, towards ultimate requirements, once confidence in market operation is established and sufficient VF FCAS-capable facilities register to participate in VF FCAS markets.

AEMO continues to assess the effectiveness of its frequency management practices on an ongoing basis and as the power system evolves.



For more information visit

aemo.com.au