INTEGRATING ENERGY STORAGE SYSTEMS:
Readiness approach for June 2024 releases
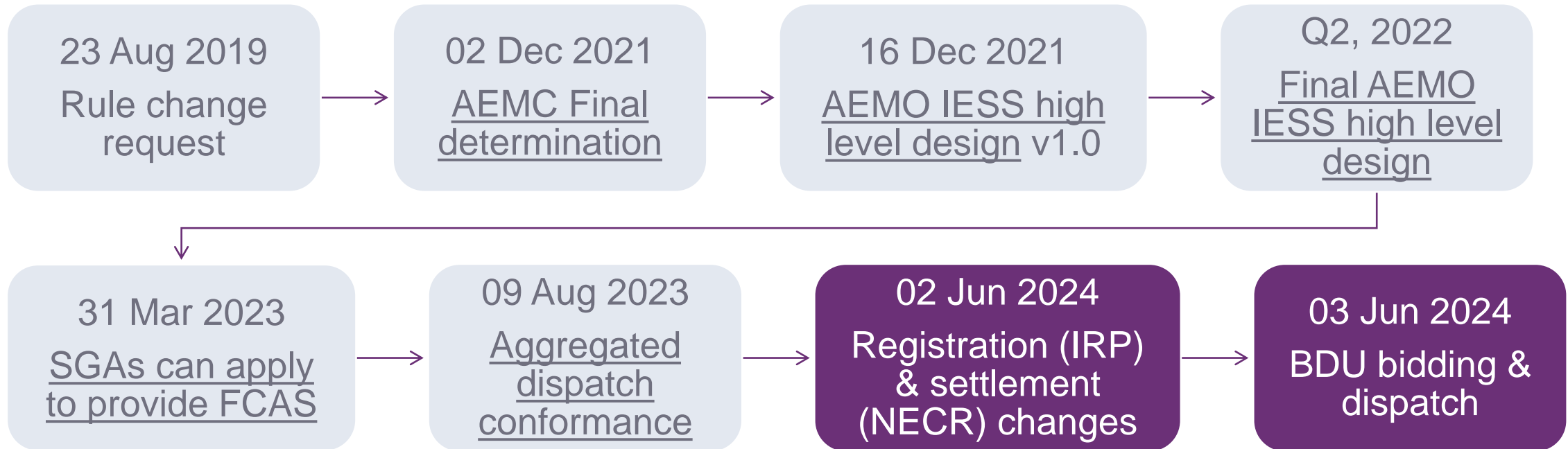
V1.1 October 2023

IESS Glossary

Term	Definition
5MPD	5-minute pre-dispatch
AGC	Automatic generation control
ASL	Ancillary service load
ASU	Ancillary service unit
B2B	Business-to-business
B2M	Business-to-market
BDU	Bi-directional unit
BESS	Battery energy storage system
CR	Change request
CRMP	Cost recovery market participant
DRSP	Demand response service provider
DUID	Dispatchable unit identifier
FRMP	Financially responsible market participant
IESS	Integrating Energy Storage Systems rule
IRP	Integrated resource provider

Term	Definition
IRS	Integrated resource system
MSATS	Market settlements and transfer solutions
MSGA	Market small generation aggregator
MT PASA	Medium-term PASA
NCC	NMI classification code
NECR	Non-energy cost recovery
NEMDE	National electricity market dispatch engine
NMI	National metering identifier
PAE	Profiling and allocation engine
PASA	Projected assessment of system adequacy
PD	Pre-dispatch
PMS	Portfolio management system
SCADA	Supervisory control & data acquisition
SoC	State of charge
UFE	Unaccounted for energy
WDRU	Wholesale demand response unit

IESS: High-level Timeline

23 Aug 2019	02 Dec 2021	16 Dec 2021	Q2, 2022
Rule change request	AEMC Final determination	AEMO IESS high level design v1.0	Final AEMO IESS high level design

31 Mar 2023	09 Aug 2023	02 Jun 2024	03 Jun 2024
SGAs can apply to provide FCAS	Aggregated dispatch conformance	Registration (IRP) & settlement (NECR) changes	BDU bidding & dispatch

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

Feedback: Industry readiness

FEEDBACK	NEXT STEPS (as at Sep 2023)

General feedback provided by participants (~Q2/Q3 2023) highlighted the tight timeframes to achieve compliance with the IESS rule dates and requested early engagement on implementation activities.
 	
KEY ITEMS:
• Clear milestone timing
• Tech specs and data model needs to be released as early as possible
• A development environment should be provided to assist participants' development activity ahead of market trials and industry testing period (pre-prod)
• Generally bring forward any AEMO deliverables where possible to give participants longer lead times.
	• Project schedule has been baselined to meet June 2024 IESS rule commencement, with L1/L2 milestones set
	• Tech specs etc are being published earlier than originally scheduled, aligned with updated project schedule
	• A participant development environment is being provided for support prior to the market trials and industry testing period (pre-prod)
	• AEMO will facilitate periodic participant workshops and support 1to1 conversations where needed
	• AEMO will provide ongoing and transparent reporting of the IESS project's status, progress and risks/issues
	• Develop transition approaches for NCC changes and BDU
	• Participant support:
	  → For IESS Settlements: Data transition support will be available until ~Q2, 2024
	  → For IESS IRP/BDU: A longer and more flexible transition period is available to 03 Mar 2025

Participants are encouraged to contact iess@aemo.com.au with any questions

Context: NEM Reform program industry strategy

NEM REFORM READINESS STRATEGY (ALL INITIATIVES)

IESS JUNE 2024 READINESS APPROACH

Initiative Readiness Criteria	Initiative Testing & Market Trial	Participant Development Support	Transition & Go-Live
Individual participant readiness approach ✗	Industry testing approach ✓	Technical specifications & procedures ✓	Transition plan/s ✓
AEMO readiness criteria ✓	Test plans and coordination ✓	Environment availability ✓	Deployment, go-live plan/s ✓
		IT development support ✓	Registration plan* ✓

Individual participant (or participant category) readiness is **NOT** a dependency for go-live.

- AEMO Market systems updated and tested
- AEMO business needs to be ready to operate
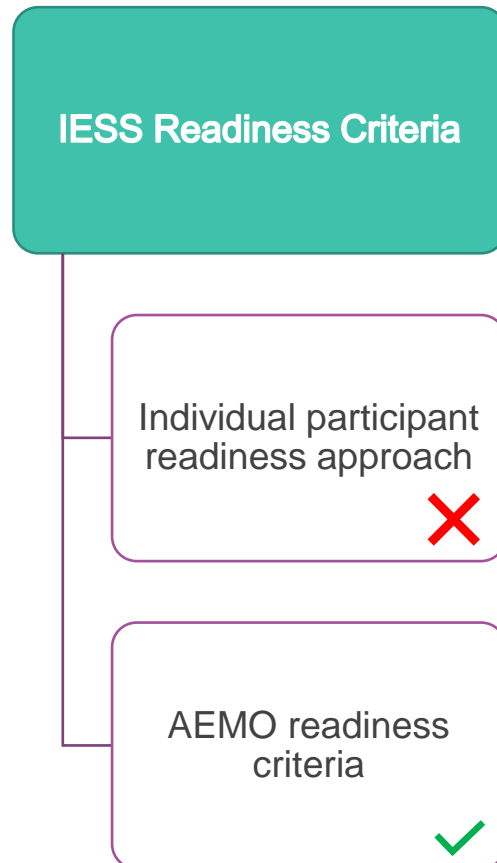- AEMO IT support needs to be in place
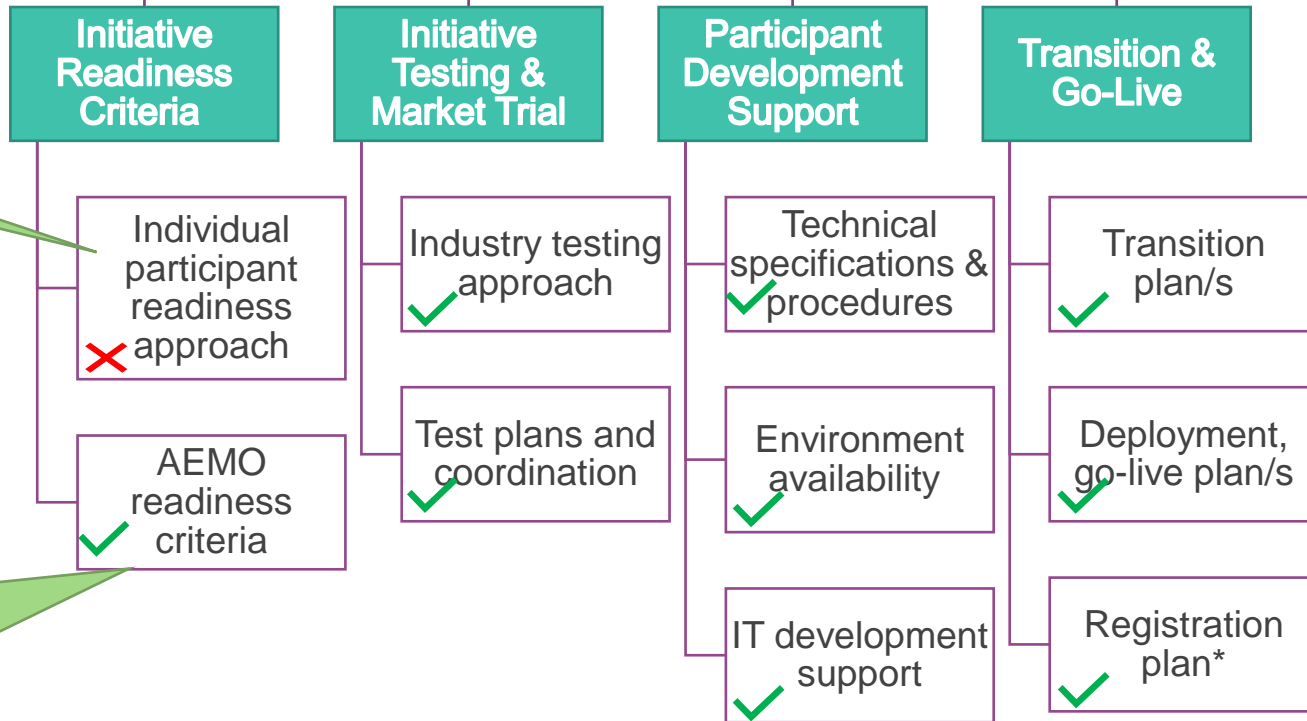
IESS readiness approach adopts the standard NEM Reform program framework

Reaccreditation not required for existing participants

RISK & CONTINGENCY MANAGEMENT ✓

INITIATIVE READINESS REPORTING & GO-LIVE CRITERIA MANAGEMENT ✓

Elements of IESS readiness approach: IESS readiness criteria

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IESS Readiness Criteria
├── Individual participant
│   readiness approach     ❌
│
└── AEMO readiness
    criteria               ✓
```

For IESS to go-live:

- AEMO must design, build & test the solution/s

- AEMO business must be ready to operate

- AEMO IT support must be in place

- Participant readiness is **not** a dependency for go-live.

  - For the uninterrupted and reliable operation of the NEM, only AEMO needs to be ready for the June 2024 release/s

  - Participants should plan for timely system/process changes in managing their operations to achieve compliance with the IESS rule.

These criteria will be defined further to form the basis of go-live criteria management.

Elements of IESS readiness approach: IESS testing and market trial

IESS testing and market trial

Industry testing approach ✔

Test/trial plans and coordination ✔
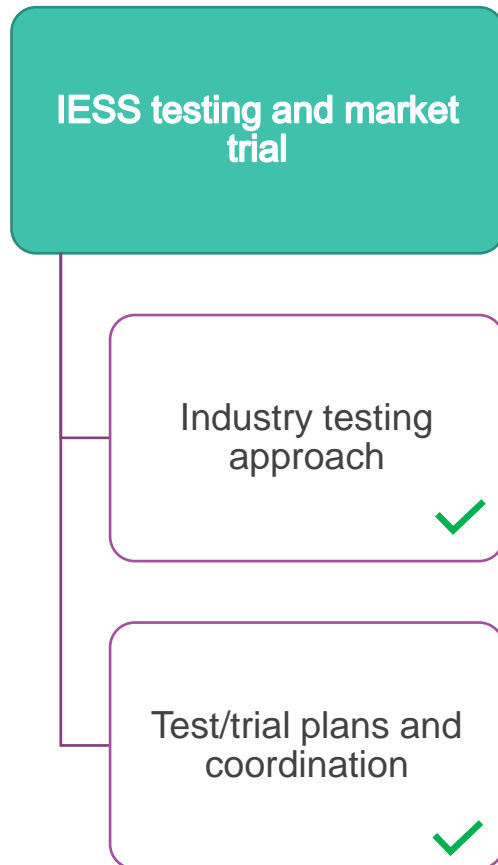
Early thinking on IESS testing/trial approach includes:

- Pre-Production to be available for Industry Testing April 2024
- Market Trial is appropriate given scale of changes across participant types and settlement impacts

Market trial scheduled 02 Apr to 24 May 2024. Scoping and planning will occur:

- In consultation with participants
- With alignment to the project schedule
- Include Market Trial Strategy and detailed test plan/s

Elements of IESS readiness approach: IESS participant development support

Participant development support

- Technical specifications and procedures ✓
- Environment availability ✓
- IT development support ✓
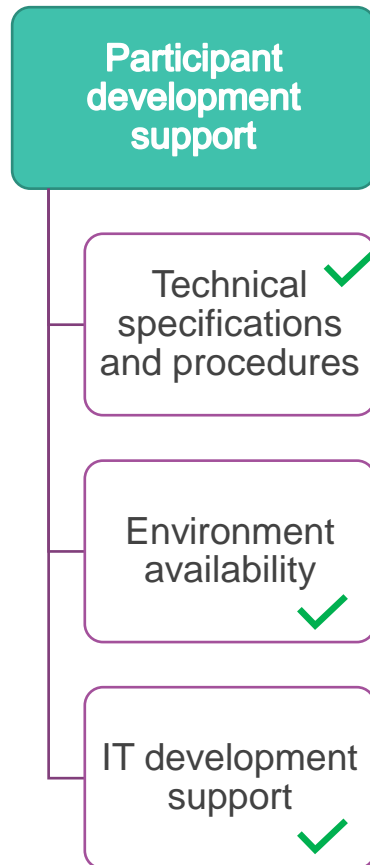
- Key IESS procedure changes required for:
  - Retail
  - Bidding & dispatch
  - Settlements & prudentials

- Participant impact assessment conducted to highlight impacted areas for participant

- EMMS and MSATS tech specs/data models will be available by published milestone dates

- A participant development environment will be provided to support participant development of changes against "beta" versions of market systems capability. Timing of releases included as external milestones:
  - Dec 2023: Settlement-related support
  - Jan 2024: BDU implementation environment support

- Development support activities: Workshops/Q&As aligning to milestone deliverables or more frequently as required.

Elements of IESS readiness approach: IESS transition and go-live

IESS transition & go-live

- Transition plans ✓
- Deployment / go-live plans ✓
- Registration plan ✓
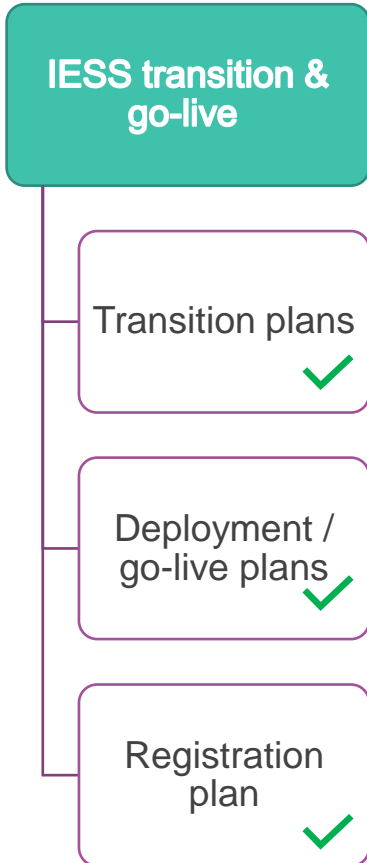
TRANSITION PLANS will be needed for:

- Transfer of registration to new **IRP** registration category for SGAs and Generators/ Customers with BDUs

- Transitioning participants with **BDUs** to 'single DUID' bidding and dispatch
  - NOTE: An extended transition period of 9 months (ends 03 Mar 2025) will be available for all BDU registered prior to 03 June 2024, and other BDU on a case-by case basis.

- **Settlements** Implementation approach
  - Selected legacy settlement reports will be populated until the following data model release to support participants' systems migration to updated structures
  - Approach will be supported via Technical Specification and Data model updates, along with overview and workshop material

- AEMO to transition existing **NMI classification codes** where a new code needs to apply at go-live
  - NSPs will not have an obligation to *transition* NMI classification codes
  - Ongoing from June 2024 non-registered NMI Classification Codes [LARGE, SMALL & NREG] will be applied by the NSP to create NMIs. AEMO will then apply the new NMI classification code once an installation is registered as component of BAU process.

DEPLOYMENT / GO-LIVE PLANS will be produced for:

- Introducing new NMI classification codes

- Data model changes

- Bidding format changes

- Alignment of participant and AEMO system deployments

REGISTRATION / ACCREDITATION PLANS

- Registration changes relate to reclassifying some participants to IRP category. This will be addressed through transition plans (above).

- IESS does not introduce or trigger any additional accreditation requirements

Elements of proposed IESS readiness approach: IESS readiness reporting & go-live criteria management

IESS READINESS REPORTING & GO-LIVE CRITERIA MANAGEMENT

Market readiness activities are intended to:
1) address readiness challenges and support the prudent implementation of NEM changes
2) safeguard the integrity of NEM processes across the various IT system go-lives or market starts, given the market's size, value, complexity and need for continuous operation.

Participant readiness reporting is used when there is a need for AEMO and industry to have an accurate assessment of participant readiness for:
- system deployments,
- completion of transition activities, and/or
- rule commencements.

Participant readiness reporting is not needed

For the uninterrupted and reliable operation of the NEM, AEMO needs to be ready for:

- **02 Jun 2024**: Registration and settlement/NECR changes. AEMO will deploy system changes to introduce IRP registration category and settlement changes.

- **03 Jun 2024**: BDU bidding and dispatch changes. AEMO will deploy system and process changes to enable BDU bidding and dispatch.

While participants will likely need to make timely system/process changes in managing their operations and to comply with the IESS rule, AEMO does not propose to run formal participant readiness reporting.

Readiness and go-live criteria management

AEMO will develop IESS readiness and go-live criteria in discussion with the industry.

AEMO will report to industry:

- Progress against agreed milestones

- Checkpoints on go-live criteria in the lead-up to implementation.