

# Integrated Resource Provider (IRP) information session

Integrating Energy Storage Systems  
29 November 2023





# 1. Welcome

Ulrika Lindholm

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.**

# Introductions

## Objectives

- Equip affected market participants with information, to enable preparations for transition to the Integrated Resource Provider (IRP) registration category in June 2024.
- Inform market participants of NEM fee charging arrangements for IRPs.

## Ways of collaborating

- Questions and comments are welcome, either in the chat or by raising your virtual hand. AEMO will answer questions throughout the presentation, as well as at dedicated Q&A time at the end.
- Please introduce yourself (name & organisation) in any interactions.
- Before attending, participants should peruse the appropriate meeting protocol. Please visit: <https://aemo.com.au/en/consultations/industry-forums-and-working-groups>

# AGENDA

#	Timing (AEDT)	Topic	Objective	Presenter(s)
1	1:00-1:05pm	<b>Welcome</b>		Ulrika Lindholm
2	1:05-1:10pm	<b>Context</b>	<ul style="list-style-type: none"> <li>• Overview of IESS scope and timeline.</li> </ul>	Ulrika Lindholm
3	1:10-1:20pm	<b>Overview of the Integrated Resource Provider (IRP) category</b>	<ul style="list-style-type: none"> <li>• Overview to provide context</li> </ul>	Emily Brodie
4	1:20-1:40pm	<b>IRP transition</b> <ul style="list-style-type: none"> <li>- Small generation aggregators</li> <li>- Pumped hydro</li> <li>- Grid scale batteries</li> </ul>	<ul style="list-style-type: none"> <li>• Clarify participant impact for each participant types</li> <li>• Clarify activities required for participants and AEMO to transition</li> </ul>	Emily Brodie Carla Ziser
5	1:40-2:05pm	<b>IRP NEM fee charging arrangements</b>	<ul style="list-style-type: none"> <li>• Provide overview of how AEMO intends to charge IRPs in its fees</li> <li>• Walk through of calculation example</li> </ul>	Reena Kwong Darren Gatty
6	2:05-2:30pm	<b>Q&amp;A</b>		Ulrika Lindholm
7	2:30pm	<b>Session close</b>		Ulrika Lindholm

## Appendix

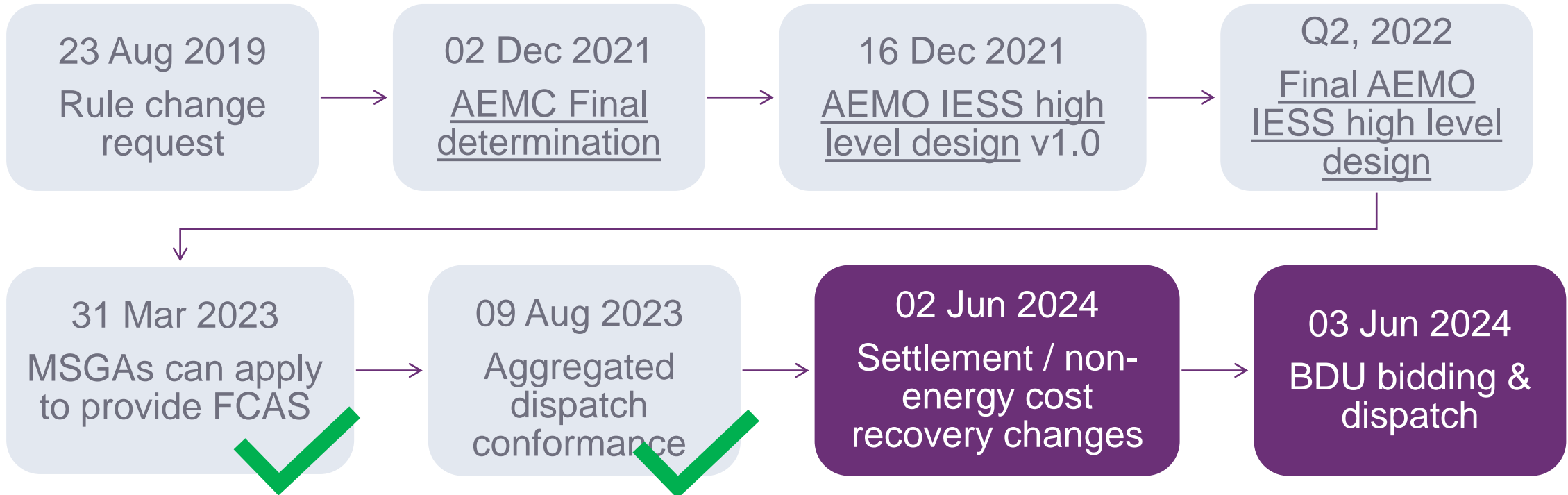
<b>A</b>	IESS Glossary
<b>B</b>	AEMO Competition Law – Meeting Protocol
<b>C</b>	IRPs and which AEMO fee they can be charged
<b>D</b>	Industry readiness support
<b>E</b>	NEM Reform Program Engagement calendar

*“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. Context

Ulrika Lindholm

# BACKGROUND: IESS high-level Timeline

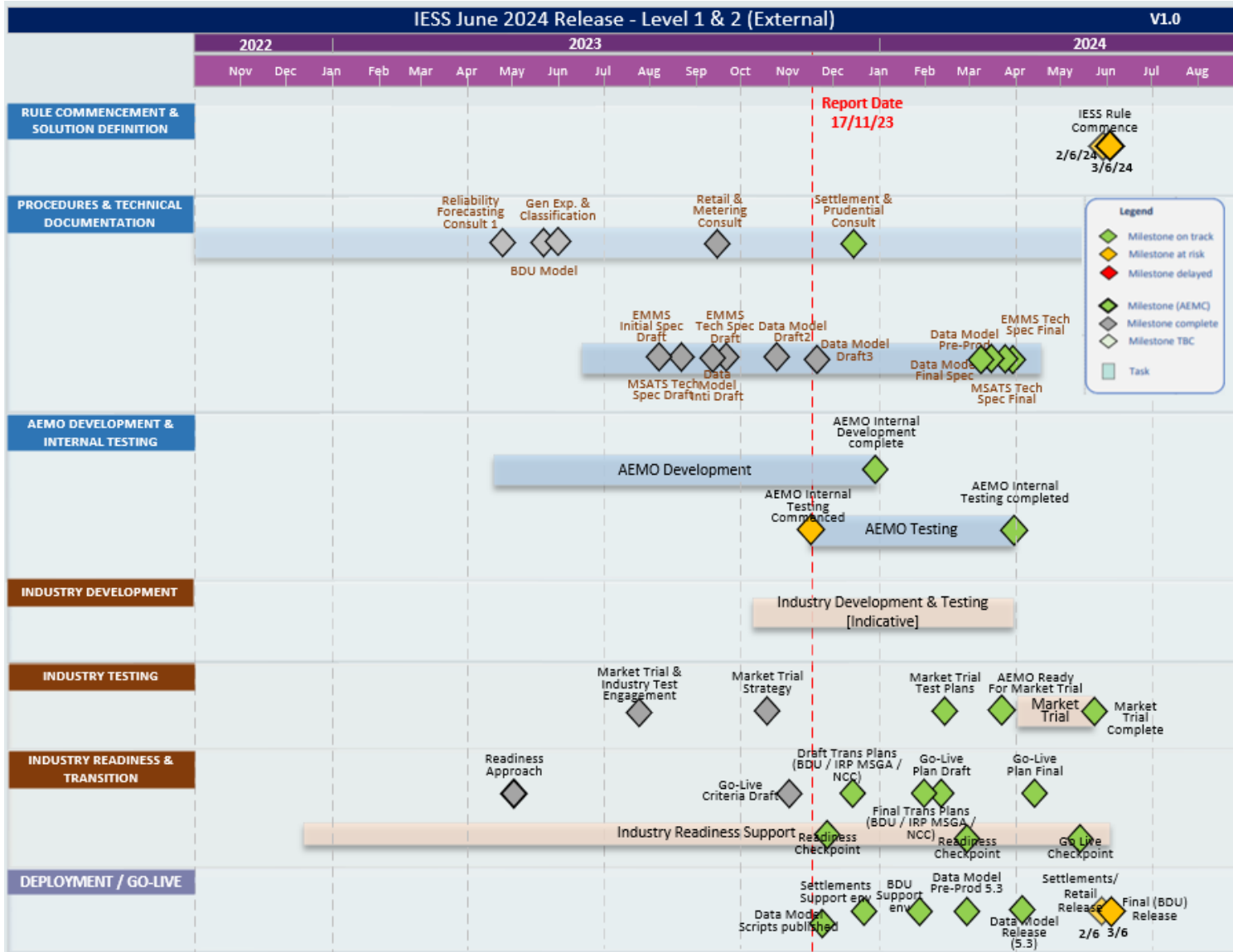


<b>MSGA</b>	Market small generation aggregator
<b>FCAS</b>	Frequency control ancillary service/s
<b>IRP</b>	Integrated resource provider
<b>BDU</b>	Bidirectional unit

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

# IESS timeline

\*Updated monthly for the [Implementation Forum](#)



## RELEASE COMMENTARY

- Although most components of the schedule are green, the **overall project status** is rated **AMBER**. This recognises no schedule contingency for complex AEMO delivery program. Interim milestones and progress will continue to be tightly managed against go-live criteria.
- AEMO development** is scheduled to complete for all participant facing components on schedule in December
- AEMO integration testing** execution started 3-4 days late due to environment preparation over-run. Execution schedule will absorb with no impact to planned completion date.
- Procedures consultation** in progress via EWCF/ ERCF\* and on track.
- Tech specs** on track:
  - Updated [EMMS tech spec Data Model v5.3](#) published Mon 20 Nov
- Industry testing**
  - [PDSE fact sheet](#) and access survey published Tue 14 Nov
  - Market trial planning (discussed below)
  - Draft Data model scripts for PDSE released Wed 22 Nov
  - PDSE on track for IESS settlements development support Fri 15 Dec
- Industry readiness:**
  - [Readiness check point](#) this meeting against go live criteria
  - All transition planning on track (discussed below)
  - Updated [Data Model Settlements mapping explainer](#) published Fri 17 Nov
  - Contingency planning started

\*Electricity wholesale / retail consultative forums



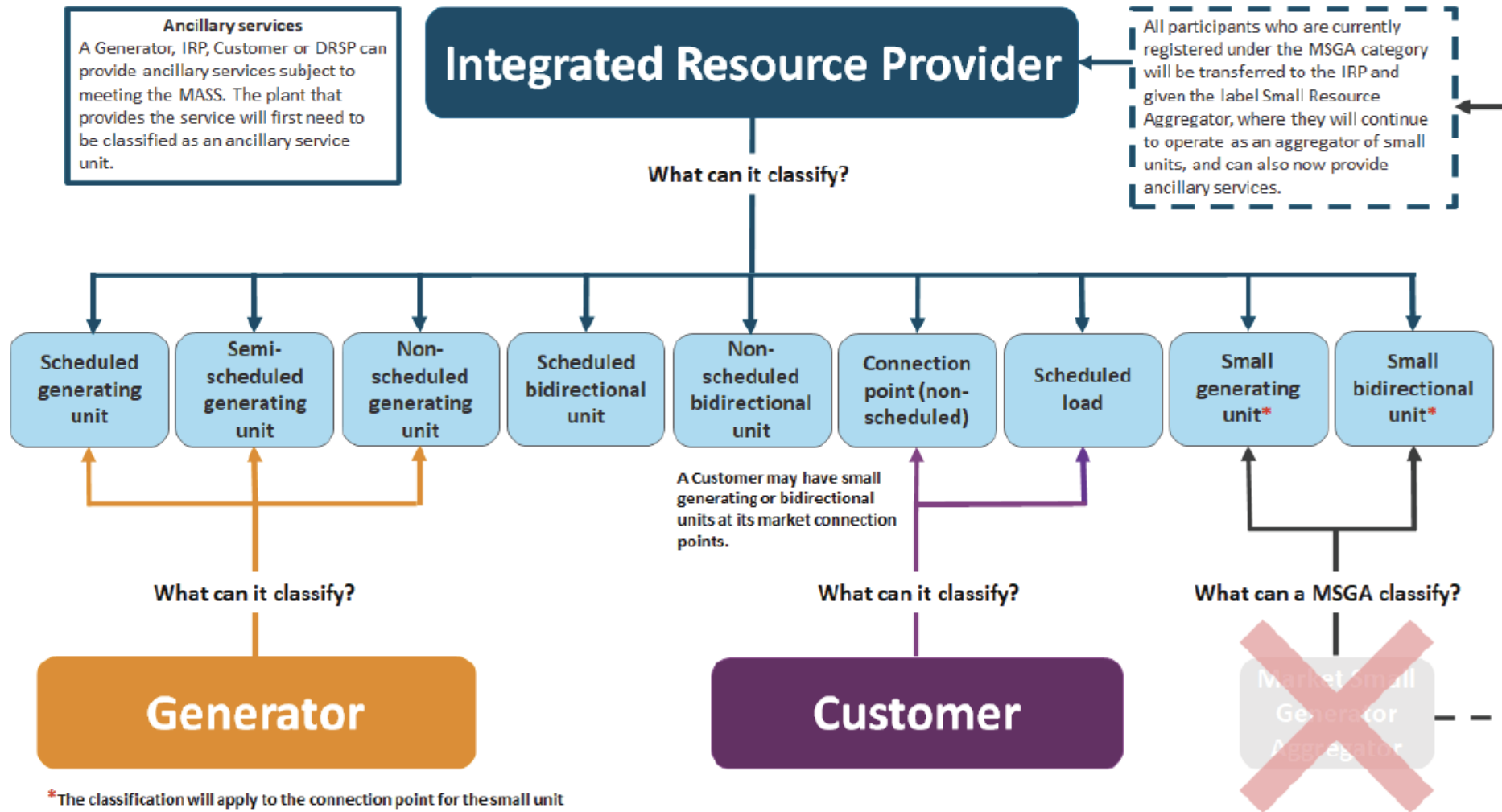
# 3. Overview of the Integrated Resource Provider category

Emily Brodie

# Changes introduced by the IESS rule

Implementation date	Change	Description
<b>Sun 02 Jun 2024</b>	IESS retail and settlement changes	<p>Significant changes to the calculation method to be used for Non-Energy Cost Recovery (NECR):</p> <ul style="list-style-type: none"> <li>• Recovery calculations are to consider the gross (consumption separate from generation) energy amounts of all participants, rather than current approach using net energy (generation – consumption) of specific participant types</li> <li>• Major settlements database structure changes are required to enable the new calculations, these changes will flow into the Data Model and affect: <ul style="list-style-type: none"> <li>– Participant reconciliation and reporting activities</li> <li>– AEMO data provision</li> <li>– Embedded network management changes to ensure that the parent has the appropriate gross energy volumes available for settlement.</li> </ul> </li> </ul>
<b>Sun 02 Jun 2024 (SGAs)</b> <b>On and from Mon 03 Jun 2024 (other)</b>	Registration changes	<p>Introduction of Integrated Resource Provider (IRP) participant type for:</p> <ul style="list-style-type: none"> <li>• IRS Participants (mainly BESS participants)</li> <li>• Small Generator Aggregators</li> <li>• Participants with pumped hydro</li> <li>• Non-customer load participants</li> </ul>
<b>Mon 03 Jun 2024</b>	Bidding and dispatch changes	Bidirectional unit (BDU) bidding and dispatch, with impacts for BDU participants and bidding system vendors/developers.

# AEMC final rule – IRP classifications



# Key IESS terms

TERM	SUMMARY OF MEANING		NER REFERENCE
BDU	Bidirectional unit	<p>A production unit that also consumes electricity. Consumption of electricity:</p> <ul style="list-style-type: none"> <li>• includes the use of electricity to charge a production unit or to pump water for a pumped hydro production unit</li> <li>• excludes auxiliary load</li> </ul> <p>Clause 2.2.2(b2) provides for the classification of a BDU that is not capable of transitioning linearly from consuming to producing electricity and vice versa e.g. pumped hydro</p>	<ul style="list-style-type: none"> <li>• Chapter 10 Glossary</li> <li>• 2.2.2(b2)</li> </ul>
IRS	Integrated resource system	<ul style="list-style-type: none"> <li>• A system comprising one or more bidirectional units (and which may also comprise one or more generating units or other connected plant that is not part of a bidirectional unit)</li> <li>• A system comprising one or more generating units where the connection point for the system is used to supply electricity for consumption on the system side of the connection point.</li> </ul>	Chapter 10 Glossary
IRP	Integrated resource provider	<p>A person that intends to classify any of the following:</p> <ul style="list-style-type: none"> <li>• Integrated resource system</li> <li>• Generating system</li> <li>• Connection point</li> <li>• Small resource connection point</li> </ul>	<ul style="list-style-type: none"> <li>• Chapter 10 Glossary</li> <li>• 2.1B.2</li> </ul>
<b>New IRS</b>		IRS registered between 09 Dec 2021 and 02 June 2024	11.145.1 Definitions
<b>Existing IRS</b>		IRS registered prior to 09 Dec 2021	11.145.1 Definitions
<b>Transitioning generating system</b>		<i>Generating system</i> (as defined under the old rules) in relation to which there is also a <i>scheduled load</i> classification (whether for the system or a part of the system, its <i>connection point</i> or for consumption of electricity used by or in relation to the system).	11.145.1 Definitions
<b>Non-customer load participant</b>		Person who immediately before the commencement date, is the <i>financially responsible Market Participant</i> for a <i>scheduled load</i> but is not a <i>Market Customer</i> in respect of that <i>scheduled load</i> .	11.145.1 Definitions

# Who needs to transition to the IRP category and when?

AEMO will not charge a registration fee for participant types transitioning to the IRP category via NER 11.145.2, 11.145.3 and 11.145.4

TRANSITIONING PARTICIPANT TYPE	EXAMPLE	IESS RULE	TRANSITION TIMING
Small generation aggregators	Small generation aggregator	11.145.4	On <u>Sun 02 Jun 2024</u> , aligning with IESS settlement commencement Under NER 11.145.4 and from IESS commencement, these participants will be “taken to be registered as an Integrated Resource Provider” for the <i>small generating units</i> for which it was the SGA immediately prior to IESS commencement.
New IRS participants	BESS or pumped hydro registered from 09 Dec 2021	11.145.3	On <u>Mon 03 Jun 2024</u> Under NER 11.145.3, these participants will be “taken to be registered as an Integrated Resource Provider in relation to the integrated resource system” from IESS commencement.
Existing IRS	BESS or pumped hydro registered prior to 09 Dec 2021	11.145.2 (c), (d), (f)	From <u>Mon 03 Jun 2024</u> to 03 Dec 2024 Must apply to register as an IRP by 03 Sep 2024 and must have completed IRP registration by 03 December 2024.
Non-customer load participants	Participant who prior to 09 Dec 2021 is the FRMP for a scheduled load but is not a Market Customer. This rule is resolving a legacy status. Excludes any scheduled load that is being reclassified as a BDU under the Existing IRS group.		
Non-transitioning generating systems	Semi-scheduled generator with non-scheduled battery		

**Optional**, from Mon 03 Jun 2024 to 03 Dec 2024

If choosing to transfer registration, these participants should apply to register as an IRP by 03 Sep 2024 and must have completed IRP registration by 03 December 2024.

# 4. IRP transition

Carla Ziser

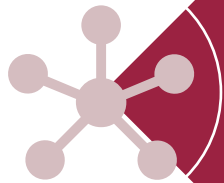
Emily Brodie

# IRP transition plan timeline

IRP transition plan details the expected responsibilities, activities, dependencies, and timeframes for transitioning affected participants to the IRP registration category.

DATE	ACTION
Wed 29 Nov	<ul style="list-style-type: none"> <li>• IRP information session for participants transitioning to IRP registration category i.e. SGAs, BESS, pumped hydro and some niche participant types.</li> <li>• Agenda includes:               <ul style="list-style-type: none"> <li>– Overview of changes</li> <li>– IRP transition under IESS</li> <li>– IRP NEM fee charging arrangements</li> <li>– Q&amp;A</li> </ul> </li> </ul>
Fri 15 Dec (aiming for early Dec)	Publish DRAFT IRP transition plan for comment
Fri 19 Jan	Participants to provide feedback on draft plan
Wed 31 Jan	AEMO publishes FINAL IRP transition plan

# Participant types with mandatory transition to IRP category



Small generation aggregators



New IRS



Existing IRS participants and non-customer load participants



# Proposed SGA transition approach

**Affected participants: all SGAs**

**Number of affected participants: ~40**



- Under NER 11.145.4 and from IESS commencement, these participants will be “taken to be registered as an Integrated Resource Provider” for the small generating units for which it was the SGA immediately prior to IESS commencement.
- Participants do not need to apply to AEMO to re-register as an IRP, however AEMO may require some information from participants to implement the transition
- AEMO will update their registration category to IRP in its market systems in for IESS commencement
- AEMO will:
  - Enable affected participants to undertake test activities under the new registration category (this is optional for participants)
  - Update affected participants’ registration category to IRP in its market systems (subject to receiving satisfactory and complete information) for Sun 02 Jun 2024
  - Notify the participant immediately beforehand that registration category change is occurring
  - Notify the participant immediately after that change is complete.

# Proposed SGA transition plan



#	AEMO ACTIONS	INDUSTRY IMPACTS & ACTIONS	PLANNED TIME (MARKET TIME)	COMMUNICATION CHANNEL
<b>TRANSITION PLANNING</b>				
1	AEMO to identify and validate list of SGAs	Participant to review IESS Rule and communicate with AEMO if they are affected by the transition, particularly to confirm/update contact person	Nov 2023	n/a
2	AEMO to engage with affected participants (SGAs) and the Implementation Forum on the IRP transition plan i.e. what is changing and why; and when and how those changes will occur.	Participants can choose to provide feedback on the IRP transition plan	Late Nov 2023 to late Jan 2024	<ul style="list-style-type: none"> <li>Email to NEM Reform Implementation Forum members and affected participants</li> </ul>
<b>PREPARE PRE-PRODUCTION ENVIRONMENT FOR INDUSTRY TESTING AND MARKET TRIAL</b>				
3	AEMO to update and validate registration category to IRP for all SGAs in pre-production	No action required	TBC for April 2024	n/a
4	AEMO to notify affected participants of re-registration as IRP in pre-prod	Affected participants can choose to undertake test activities under the new registration category	TBC for April 2024	<ul style="list-style-type: none"> <li>Support Hub Notification</li> <li>Email to NEM Reform Implementation Forum members and affected Participants</li> </ul>
5	<b>Industry testing and market trial commences in pre-production</b>		Tue 02 Apr 2024	<ul style="list-style-type: none"> <li>Email to NEM Reform Implementation Forum members and affected Participants</li> </ul>
<b>PREPARE PRODUCTION ENVIRONMENT FOR IESS COMMENCEMENT</b>				
6	IESS settlements release	No action required	TBC For Sun 02 Jun 2024	<ul style="list-style-type: none"> <li>Support Hub Notification</li> </ul>
7	<b>IESS settlement changes commence</b>		Sun 02 Jun 2024	<ul style="list-style-type: none"> <li>Support Hub Notification</li> <li>Email to NEM Reform Implementation Forum members and affected Participants</li> </ul>
8	AEMO to update and validate registration category to IRP for all SGAs in production	No action required	Update to be effective on Sun 02 Jun 2024	n/a
9	AEMO to notify affected participants of re-registration as IRP in production	Affected participants accommodate new registration category in their NEM activities	Sun 02 Jun 2024	<ul style="list-style-type: none"> <li>Support Hub Notification</li> <li>Email to NEM Reform Implementation Forum members and affected Participants</li> </ul>

# New IRS participant transition approach

**Affected participants:** only BESS have been identified  
**Number of affected participants:** ~14



- Under NER 11.145.3, these participants will be “taken to be registered as an Integrated Resource Provider in relation to the integrated resource system” from Mon 03 June 2024 onwards
- Participants do not need to apply to AEMO to re-register as an IRP
- AEMO will update their registration category to IRP in its market systems in for IESS commencement
- AEMO may require some information from participants to complete this activity. In particular, storage capacity information is required to establish the single BDU DUID.
- AEMO will:
  - Enable affected participants to undertake test activities under the new registration category (this is optional for participants)
  - Update affected participants’ registration category to IRP in its market systems (subject to receiving satisfactory and complete information) for Mon 03 Jun 2024
  - Notify the participant immediately beforehand that registration category change is occurring
  - Notify the participant immediately after that change is complete.

**NOTE:** BESS participants must transition to the IRP category before cutting over to single BDU DUID operations.

# Proposed transition plan for new IRS (1/2)

#	AEMO ACTIONS	INDUSTRY IMPACTS & ACTIONS	PLANNED TIME (MARKET TIME)	COMMUNICATION CHANNEL
<b>TRANSITION PLANNING</b>				
1	AEMO to identify and validate list of affected participants	Participant to review IESS Rule and communicate with AEMO if they are affected by the transition	Nov 2023	n/a
2	AEMO to engage with affected participants (new IRS participants) and the Implementation Forum on the IRP transition plan i.e. what is changing and why; and when and how those changes will occur.	Participants can choose to provide feedback on the IRP transition plan	Late Nov 2023 to late Jan 2024	<ul style="list-style-type: none"> <li>Email to NEM Reform Implementation Forum members and affected participants</li> </ul>
3	AEMO to make available the necessary Transition forms for completion by participants. The information provided in these forms will be the used to establish the BDU DUID in AEMO's pre-production and production systems.	No action required	Early 2024	<ul style="list-style-type: none"> <li>Individual communications to each known affected participant</li> </ul>
4	n/a	Affected participants to complete and return Transition forms to AEMO.	<ul style="list-style-type: none"> <li>If participating in Market Trial, return paperwork by 08 Mar 2024</li> <li>If not participating in Market Trial, return paperwork at least 30 days prior to preferred BDU cutover week</li> </ul> <p><b>NOTE:</b> BDU cutover process and timing is described in the <b>BDU transition and cutover plan</b></p>	
5	AEMO to receive and process participant Transition forms	n/a	Either in time for participation in market trial or in time BDU cutover.	

# Proposed transition plan for new IRS (2/2)

#	AEMO ACTIONS	INDUSTRY IMPACTS & ACTIONS	PLANNED TIME (MARKET TIME)	COMMUNICATION CHANNEL
<b>PREPARE PRE-PRODUCTION ENVIRONMENT FOR INDUSTRY TESTING AND MARKET TRIAL</b>				
6	AEMO to update and validate registration category to IRP for affected participants (new IRS participants) in pre-production	No action required	TBC for April 2024	n/a
7	AEMO to notify affected participants of re-registration as IRP in pre-prod	Affected participants can choose to undertake test activities under the new registration category	TBC for April 2024	<ul style="list-style-type: none"> <li>Support Hub Notification</li> <li>Email to NEM Reform Implementation Forum members and affected Participants</li> </ul>
8	<b>Industry testing and market trial commences in pre-production</b>		Tue 02 Apr 2024	<ul style="list-style-type: none"> <li>Email to NEM Reform Implementation Forum members and affected Participants</li> </ul>
<b>PREPARE PRODUCTION ENVIRONMENT FOR IESS COMMENCEMENT</b>				
9	IESS releases	No action required	TBC For Sun 02 and Mon 03 Jun 2024	<ul style="list-style-type: none"> <li>Support Hub Notification</li> </ul>
10	<b>IESS changes commence</b>		Sun 02 Jun 2024 for Settlement Mon 03 Jun 2024 for BDU	<ul style="list-style-type: none"> <li>Support Hub Notification</li> <li>Email to NEM Reform Implementation Forum members and affected Participants</li> </ul>
11	AEMO to update and validate registration category to IRP for affected participants (new IRS participants) in production	No action required	Update to be effective on Mon 03 Jun 2024	n/a
12	AEMO to notify affected participants of re-registration as IRP in production	Affected participants accommodate new registration category in their NEM activities	Mon 03 Jun 2024	<ul style="list-style-type: none"> <li>Support Hub Notification</li> <li>Email to NEM Reform Implementation<sup>21</sup> Forum members and affected Participants</li> </ul>

# Proposed transition approach for Existing IRS and non-customer load participants

AFFECTED PARTICIPANTS	#	APPROACH
BESS	~ 9	<ul style="list-style-type: none"> <li><i>Must</i> apply to register as an IRP by 03 Sep 2024 and must have completed IRP registration by 03 Dec 2024.</li> </ul>
Pumped hydro	~ 2	<ul style="list-style-type: none"> <li>AEMO to prepare registration documentation and make available to affected participants</li> <li>Participant to complete and submit registration documentation on or before 03 Sep 2024</li> </ul>
Non-customer load participants	1	<ul style="list-style-type: none"> <li>AEMO will:               <ul style="list-style-type: none"> <li>– Enable affected participants to undertake test activities under the new registration category (this is optional for participants)</li> <li>– Re-register the participant (subject to receiving satisfactory and complete information)</li> <li>– Notify the participant immediately beforehand that re-registration is occurring</li> <li>– Notify the participant immediately after that re-registration is complete</li> </ul> </li> </ul> <p><b>NOTE: BESS participants must transition to the IRP category before cutting over to single BDU DUID operations.</b></p>
Non-transitioning generating systems	TBC, if any	<p><i>May</i> apply to register as an IRP by 03 Sep 2024 and must have completed IRP registration by 03 December 2024.</p> <p>Need to self-identify to AEMO if seeking to move into the IRP registration category.</p>

# Proposed transition plan for Existing IRS and non-customer load participants (1/2)

#	AEMO ACTIONS	INDUSTRY IMPACTS & ACTIONS	PLANNED TIME (MARKET TIME)	COMMUNICATION CHANNEL
<b>TRANSITION PLANNING</b>				
1	AEMO to identify and validate list of affected participants	Participant to review IESS Rule and communicate with AEMO if they are affected by the transition	Nov 2023	n/a
2	AEMO to engage with affected participants (existing IRS and non-customer load participants) and the Implementation Forum on the IRP transition plan i.e. what is changing and why; and when and how those changes will occur.	Participants can choose to provide feedback on the IRP transition plan	Late Nov 2023 to late Jan 2024	<ul style="list-style-type: none"> <li>Email to NEM Reform Implementation Forum members and affected participants</li> </ul>
3	AEMO to make available the necessary IRP registration application forms for completion by participants.	No action required	Early 2024	<ul style="list-style-type: none"> <li>Individual communications to each known affected participant</li> </ul>
4	n/a	Affected participants to complete and return IRP registration application forms to AEMO.	<ul style="list-style-type: none"> <li>If participating in Market Trial, submit application by 08 Mar 2024</li> <li>If not participating in Market Trial, return paperwork at least 30 days prior to preferred BDU cutover week, and by 03 Sep 2024.</li> </ul> <p><b>NOTE:</b> BDU cutover process and timing is described in the <b>BDU transition and cutover plan</b></p>	
5	Receive and process IRP registration application forms	No action required	Either in time for participation in market trial, in time BDU cutover or end of registration grace period (03 Dec 2024)	

# Proposed transition plan for Existing IRS and non-customer load participants

#	AEMO ACTIONS	INDUSTRY IMPACTS & ACTIONS	PLANNED TIME (MARKET TIME)	COMMUNICATION CHANNEL
<b>PREPARE PRE-PRODUCTION ENVIRONMENT FOR INDUSTRY TESTING AND MARKET TRIAL</b>				
6	AEMO to update and validate registration category to IRP for affected participants (existing IRS and non-customer load participants) in pre-production	No action required	TBC for April 2024, if participating in IESS Market Trial	n/a
7	AEMO to notify affected participants of re-registration as IRP in pre-prod	Affected participants can choose to undertake test activities under the new registration category	TBC for April 2024, if participating in IESS Market Trial	<ul style="list-style-type: none"> <li>Support Hub Notification</li> <li>Email to NEM Reform Implementation Forum members and affected Participants</li> </ul>
8	<b>Industry testing and market trial commences in pre-production</b>		Tue 02 Apr 2024	<ul style="list-style-type: none"> <li>Email to NEM Reform Implementation Forum members and affected Participants</li> </ul>
<b>PREPARE PRODUCTION ENVIRONMENT FOR IESS COMMENCEMENT</b>				
9	IESS releases	No action required	TBC For Sun 02 and Mon 03 Jun 2024	<ul style="list-style-type: none"> <li>Support Hub Notification</li> </ul>
10	<b>IESS changes commence</b>		Sun 02 Jun 2024 for Settlement Mon 03 Jun 2024 for BDU	<ul style="list-style-type: none"> <li>Support Hub Notification</li> <li>Email to NEM Reform Implementation Forum members and affected Participants</li> </ul>
11	AEMO to update and validate registration category to IRP for affected participants (existing IRS and non-customer load participants) in production	No action required	From 03 Jun 2024 to 03 Dec 2024, timing dependent on when participant submits IRP registration application form (step #4)	n/a
12	AEMO to notify affected participants of re-registration as IRP in production	Affected participants accommodate new registration category in their NEM activities	From 03 Jun 2024 to 03 Dec 2024	<ul style="list-style-type: none"> <li>Support Hub Notification</li> <li>Email to NEM Reform Implementation Forum members and affected Participants</li> </ul>



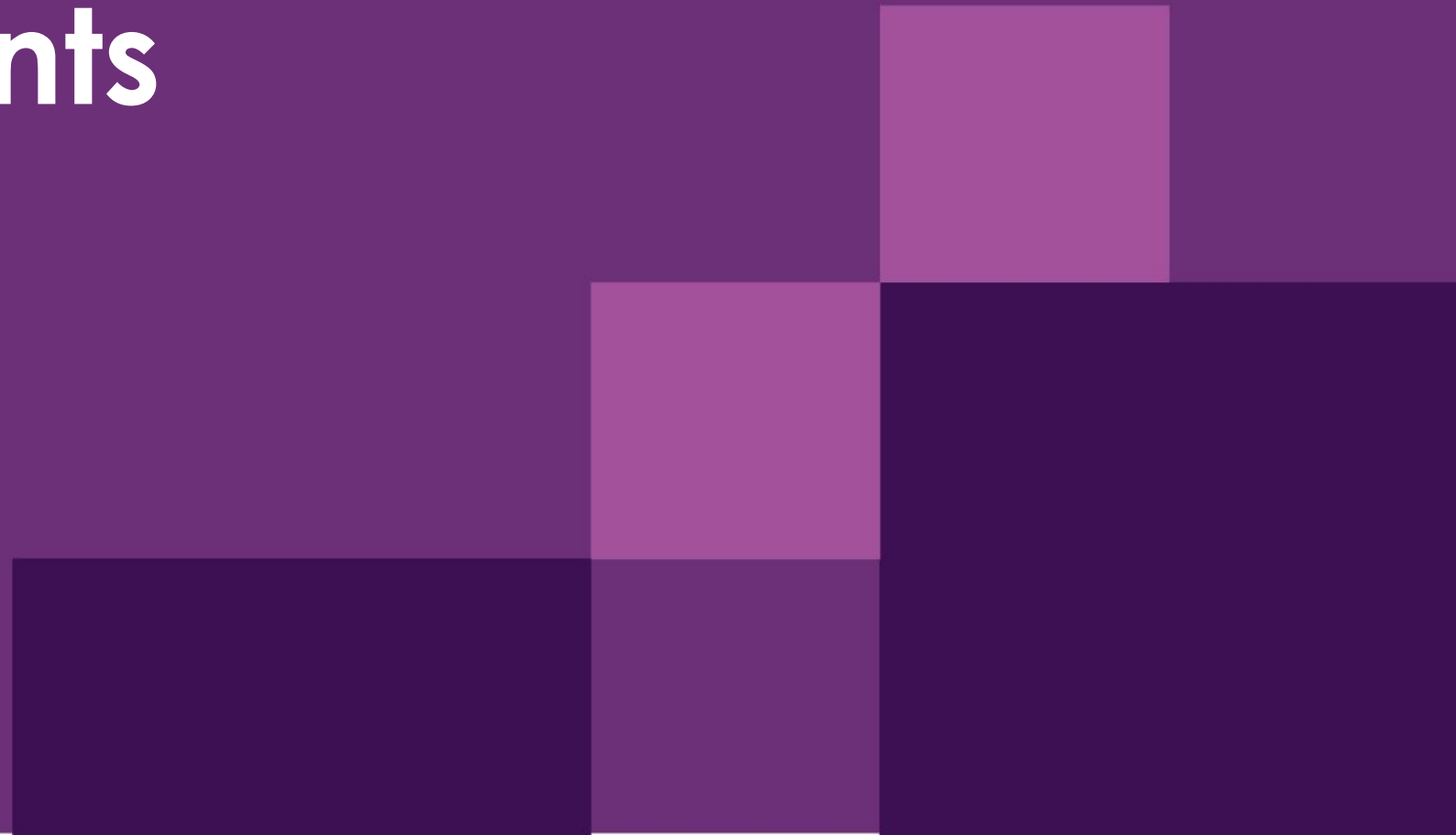
# Next steps

- AEMO to publish draft IRP transition plan before Fri 15 Dec
- Please review the draft plan and provide feedback by Fri 19 Jan
- AEMO to publish final IRP transition plan by Wed 31 Jan
- Please direct feedback and queries to [iess@aemo.com.au](mailto:iess@aemo.com.au)

# 5. IRP NEM fee charging arrangements



Reena Kwong  
Darren Gatty



# Background and Context

- The [AEMC's IESS Final Rule](#) introduces a new Registered participant category the Integrated Resource Provider (IRP) from 3 June 2024, which can include:
  - a generating unit
  - plant as scheduled load
  - a bi-directional unit (new type of unit)
  - end user's connection point (non-scheduled load)
  - a small resource connection point (previously small generating unit)
- As part of the Final Rule's transitional arrangements, AEMO may, if it considers necessary or desirable, amend and publish an update to its current participant fee structures (e.g. Core NEM fees) to account for the new IRP participant category from 3 June 2024.

# Approach to charging NEM General Fees



- AEMO’s 2021 participant fee determination accounted for the possibility of new participants categories coming into existence and signalled our intentions to leverage or map those categories to the existing fee buckets of Wholesale Participant, Market Customer and TNSP should this occur
- Specifically, this final determination introduced the term ‘Wholesale Participant’ to replace the previous ‘Generators’ category terminology to capture participants other than Scheduled and Semi-scheduled generators. For example, MASPs, SGAs, as well as intending new participants resulting from the energy transition and evolving NEM resources
- From 3 June 2024, once the IRP participant category is effective, **AEMO will charge IRP’s general NEM fees in the same manner that they are currently** i.e., either as a Market Customer (if consuming) or Wholesale Participant (if generating)
- This is consistent with AEMO’s proposal for recovering **NEM2025 Reform Program costs** and the **AEMC’s final determination on the IESS Rule for IRP classifications**

Electricity Fee Structures

March 2021

Final Report and Determination

A final report and determination on electricity fee structures to apply to Participant fees from 1 July 2021

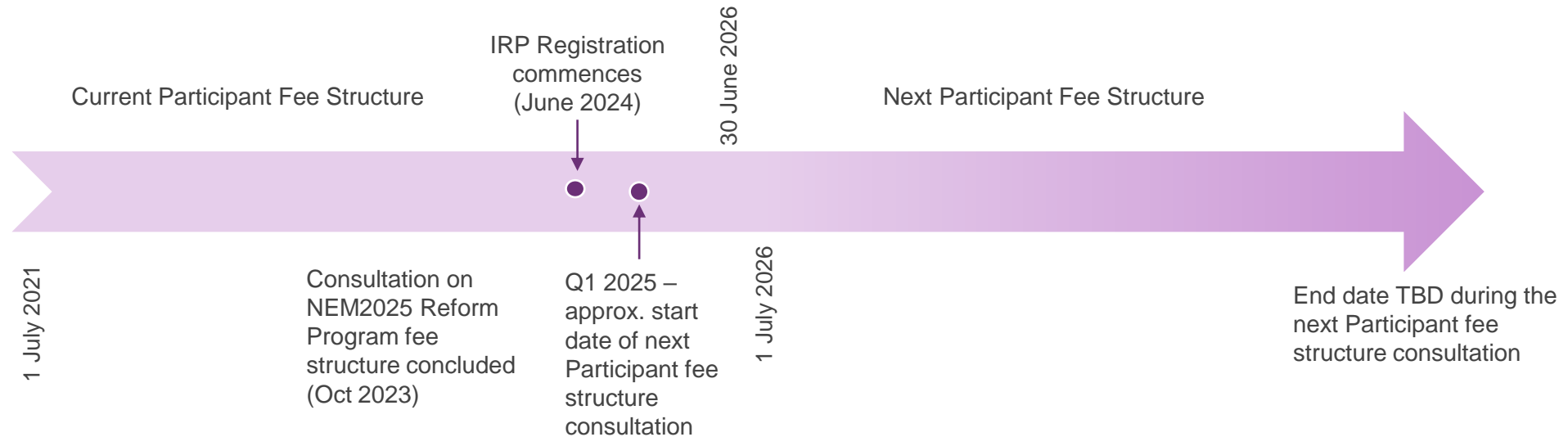
For those participants who register or re-register voluntarily or otherwise we therefore propose no changes to the way they are or would have been charged had the IRP not come into existence – i.e. effectively treating them as Wholesale Participants or Market Customers

# NEM2025 Reform Program fee – Final Determination

- On 6 October 2023, following consultation with stakeholders, AEMO published its [Final Determination](#) on a fee structure for the NEM2025 Reform Program
- As part of this consultation AEMO considered the impact of introducing a new IRP participant category and if, and how, the costs of the NEM2025 Reform Program should be recovered from IRPs
- AEMO's final determination provided that from 1 July 2024 (commencement of the NEM2025 Reform Program fee structure), costs would be recovered from both Wholesale Participants (27.5%) and Market Customers (72.5%) in a manner consistent with existing fee structures on a per initiative basis
- As part of this determination AEMO concluded costs from the NEM2025 Reform Program are to be recovered from IRPs (existing/re-registered and new) as either Wholesale Participants (if generating) or Market Customers (if consuming)
- AEMO noted this approach:
  - Is simple to understand as the approach utilises existing fee metric approaches;
  - Aligns with the reflective of involvement principle as those IRP units with generation data will be charged accordingly as Wholesale Participants, and those with consumption data will be charged accordingly as Market Customers;
  - Charging IRPs both Wholesale Participant and Market Customer fees is not discriminatory because IRPs would be charged for when they are either generating or consuming; and
  - Is a reasonable and efficient longer-term solution (consistent with the NEO) as it caters for the different classifications of IRPs that can register as either a 'Generator' or 'Customer', particularly when it is not currently clear the volume of registrations expected for each classification of an IRP

# Consultation process for AEMO's NEM fees

- The next general NEM participant fee structure consultation is due to commence early 2025, i.e. six months after the IRP participant category becomes effective.
- This consultation will allow stakeholders to provide input on the structure of all of AEMO's electricity fees from 1 July 2026.



# Post IESS Fee Calculation

- The new settlements table structure has been designed to allow the calculation of the fee amounts to continue in the same way they are currently calculated.
- As an example, batteries currently only have their consumption recorded in setcpdata so the generation is ignored in the calculation of the customer \$/MWh fees, which are currently charged on the absolute value of the net energy (generation – consumption) in setcpdata.
- Post IESS go live a new fee id will be created to charge the same fee \$/MWh amount, but only on the ACE value of the batteries, so the calculation will continue to ignore the generation.

- A new field METER\_TYPE in the new SET\_ENERGY\_TRANSACTIONS table enables this functionality. This field is a mapped value of the NMI Class Code from MSATS, the reads of all the NMIs with the same Meter Type will be aggregated together, at the connection point level.

NMI CLASS CODE	METER_TYPE
GENERATR	GENERATOR
DGENERATR	GENERATOR
TIRS	BDU
DIRS	BDU
NREG	NREG
SMALL	CUSTOMER
LARGE	CUSTOMER
DWHOLSAL	CUSTOMER
WHOLSAL	CUSTOMER
NCONUML	CUSTOMER

# Post IESS Fee Example

- Example data for the new SET\_ENERGY\_TRANSACTIONS table is shown below, along with the calculated fee amounts, assuming the fee is \$0.10/MWh.
  - XXCUST1 is charged the fee on their **CUSTOMER** Total\_MWh net energy volumes as currently occurs
  - XXCUST2 is charged the fee on their **NREG** Total\_MWh net energy volumes as currently occurs
  - XXSGA1 is not charged the fee on their **NREG** energy volumes as the MSGA's are charged the daily 'generator' type fees
  - XXSGA2 is charged the fee on their **CUSTOMER** Total\_MWh net energy volumes, an IRP can have more connection types
  - XXBATT is charged the fee on their **BDU** ACE\_MWh energy volume only
  - XXGEN is not charged the fee on their **GENERATOR** energy volumes as they are charged the daily 'generator' type fees

Settlement Date	Version No	Period Id	Participant Id	Connection PointId	Region Id	CE_MWh	DME_MWh	UFEA_MWh	ACE_MWh	ASOE_MWh	Total_MWh	RRP	TLF	ACE_Amount	ASOE_Amount	Total_Amount	Case_Id	Meter_Type	Aggregate_Read_Flag	Individual_Read_Flag	LastChanged	\$/MWh Fee
2/06/2024	5	1	XXCUST1	VTNI	VIC1	-50	-50	-6.4	-56.4	5	-51.4	\$10	0.98	-\$552	\$49	-\$503	9999	CUSTOMER	Y	N	3/06/2024	-\$5.14
2/06/2024	5	1	XXCUST2	VTNI	VIC1	-2	-2	-0.3	-2.3	8	5.7	\$10	0.98	-\$22	\$78	\$56	9999	NREG	Y	N	3/06/2024	-\$0.57
2/06/2024	5	1	XXSGA1	VTNI	VIC1	-1	-1	-0.1	-1.1	20	18.9	\$10	0.98	-\$11	\$196	\$185	9999	NREG	Y	N	3/06/2024	\$0.00
2/06/2024	5	1	XXSGA2	VTNI	VIC1	-5	-5	-0.6	-5.6	2	-3.6	\$10	0.98	-\$55	\$20	-\$36	9999	CUSTOMER	Y	N	3/06/2024	-\$0.36
2/06/2024	5	1	XXBATT	VCPID1	VIC1	-20	-20	-2.5	-22.5	30	7.5	\$10	0.98	-\$221	\$294	\$73	9999	BDU	N	Y	3/06/2024	-\$2.25
2/06/2024	5	1	XXGEN	VCPID2	VIC1	-0.5	-0.5	-0.1	-0.6	40	39.4	\$10	0.98	-\$6	\$392	\$386	9999	GENERATOR	N	Y	3/06/2024	\$0.00



# 6. Q&A

Ulrika Lindholm

# Stakeholder questions

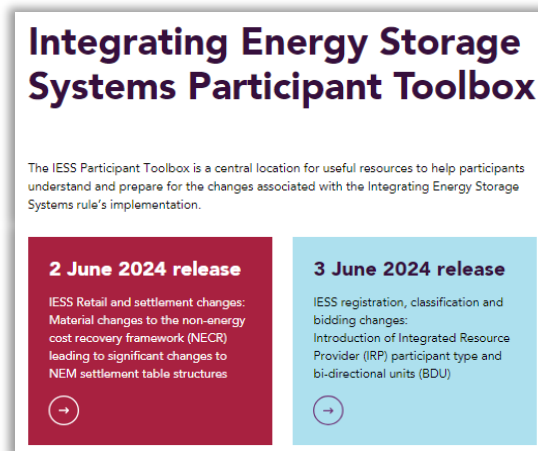
#	Pre-submitted questions	AEMO's initial response
1	Would the IRP Registration allow a Standalone Storage to have multiple DUIDs?	IRP Registration type refers to the participant category, allowing that participant to classify most facility types (see diagram on slide12). If a “Standalone Storage” refers to a single BESS, then this would only be configured with a single DUID, reflecting the new BDU requirements. More information about the BDU changes are available via the IESS Participant Toolbox: <a href="https://aemo.com.au/initiatives/major-programs/integrating-energy-storage-systems-project/integrating-energy-storage-systems-faqs/june-2024-registration-classification-and-bidding-release">https://aemo.com.au/initiatives/major-programs/integrating-energy-storage-systems-project/integrating-energy-storage-systems-faqs/june-2024-registration-classification-and-bidding-release</a>
2	Whether the IRP model requires the same ownership for all DUID assets. It would be beneficial if each DUID asset could have different SPVs but all owned by the same holding company.	As per current arrangements, person must not engage in the activity of owning, controlling or operating a generating system connected to the interconnected national electricity system, unless the person is registered or exempted in relation to that generating system or integrated resource system. AEMO recommends that participants obtain their own detailed legal advice in respect of any applicable laws, procedures or policies.
3	How will a hybrid plant (SF+BESS) or (WF+BESS) be registered and how will DUIDs be allocated for dispatch purposes?	This will depend on the design and structure of the hybrid plant. The IESS rule allows for hybrid plants to be registered as a single DUID where a ‘DC-Coupled system’ or for multiple DUIDs to be registered behind the single connection point of the hybrid plant. Please refer to the <a href="#">Guide to Registration Exemptions and Production Unit Classifications</a> (effective from 03 June 2024), particularly Appendix A which provides examples of classifications.
4	Is it mandatory to convert registrations (from scheduled generator (market generator)/scheduled load (market customer)? And who initiates the process, AEMO or the participant?	Please refer to sections 3 and 4 of this meeting pack.

# Stakeholder questions

#	Pre-submitted questions	AEMO's initial response
5	How are the BESS dual DUIDs/NMIs to be transitioned to a single one - will one of the current ones be kept?	This process will be described in the BDU transition and cutover plan. A new DUID will be created, while one of the existing NMIs will be kept. For the relatively few BESS currently configured with 2 TNIs, one of the existing TNIs will also be kept. AEMO will be publishing a draft of the BDU transition and cutover plan for stakeholder comment on 15 December. Document will be available via the IESS Participant Toolbox: <a href="https://aemo.com.au/initiatives/major-programs/integrating-energy-storage-systems-project/integrating-energy-storage-systems-faqs/june-2024-registration-classification-and-bidding-release">https://aemo.com.au/initiatives/major-programs/integrating-energy-storage-systems-project/integrating-energy-storage-systems-faqs/june-2024-registration-classification-and-bidding-release</a>
6	Can you please explain/confirm the registration changes required for existing bi-directional units with exemptions such as Pumped Hydro.	Please refer to section 3 of this meeting pack
7	Registration Process, Registration Forms, Would NMIs be assigned as per BAU process or would there be a special process for IESS?	NMI changes outside of BAU only occurring for BESS when they cutover from 2 DUID operations to BDU single DUID operations. This is described in the BDU transition and cutover plan with some current hybrid facilities requiring a special process for their transition. This will be discussed with the impacted participants. AEMO will be publishing a draft of the BDU transition and cutover plan for stakeholder comment on 15 December. Document will be available via the IESS Participant Toolbox: <a href="https://aemo.com.au/initiatives/major-programs/integrating-energy-storage-systems-project/integrating-energy-storage-systems-faqs/june-2024-registration-classification-and-bidding-release">https://aemo.com.au/initiatives/major-programs/integrating-energy-storage-systems-project/integrating-energy-storage-systems-faqs/june-2024-registration-classification-and-bidding-release</a>
8	I'd like to understand how Small Generation Aggregators are intended to transition to IRP.	Please refer to section 3 and 4 of this meeting pack. This transition will be automated via a bulk update on 2 June 2024.

# FAQs

Note that FAQs are available through the IESS Participant Toolbox at AEMO's website. These are updated on an ongoing basis.



**Integrating Energy Storage Systems Participant Toolbox**

The IESS Participant Toolbox is a central location for useful resources to help participants understand and prepare for the changes associated with the Integrating Energy Storage Systems rule's implementation.

<b>2 June 2024 release</b> IESS Retail and settlement changes: Material changes to the non-energy cost recovery framework (NECR) leading to significant changes to NEM settlement table structures	<b>3 June 2024 release</b> IESS registration, classification and bidding changes: Introduction of Integrated Resource Provider (IRP) participant type and bi-directional units (BDU)
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Link: <https://aemo.com.au/initiatives/major-programs/integrating-energy-storage-systems-project/integrating-energy-storage-systems-faqs>

Or contact the project directly at [IESS@aemo.com.au](mailto:IESS@aemo.com.au)

# 7. Session close



[IESS@aemo.com.au](mailto:IESS@aemo.com.au)



[AEMO | IESS Participant toolbox](#)



# APPENDIX A

Glossary



# IESS Glossary

Term	Definition
<b>5MPD</b>	5-minute pre-dispatch
<b>ADC</b>	Aggregated Dispatch Conformance
<b>ADG_ID</b>	Aggregate Dispatch Group identifier for an Aggregate System
<b>AGC</b>	Automatic generation control
<b>ASL</b>	Ancillary service load
<b>ASU</b>	Ancillary service unit
<b>B2B</b>	Business-to-business
<b>B2M</b>	Business-to-market
<b>BDU</b>	Bidirectional unit
<b>BESS</b>	Battery energy storage system
<b>CR</b>	Change request
<b>CRMP</b>	Cost recovery market participant
<b>DRSP</b>	Demand response service provider
<b>DUID</b>	Dispatchable unit identifier
<b>FRMP</b>	Financially responsible market participant
<b>IESS</b>	Integrating Energy Storage Systems rule
<b>IRP</b>	Integrated resource provider

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

# APPENDIX B

AEMO Competition Law – Meeting Protocol





# 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, all participants agree to adhere to the CCA at all times and to comply with appropriate protocols where required to do so.

AEMO has developed meeting protocols to support compliance with the CCA in working groups and other forums with energy stakeholders. Before attending, participants should confirm the application of the appropriate meeting protocol.

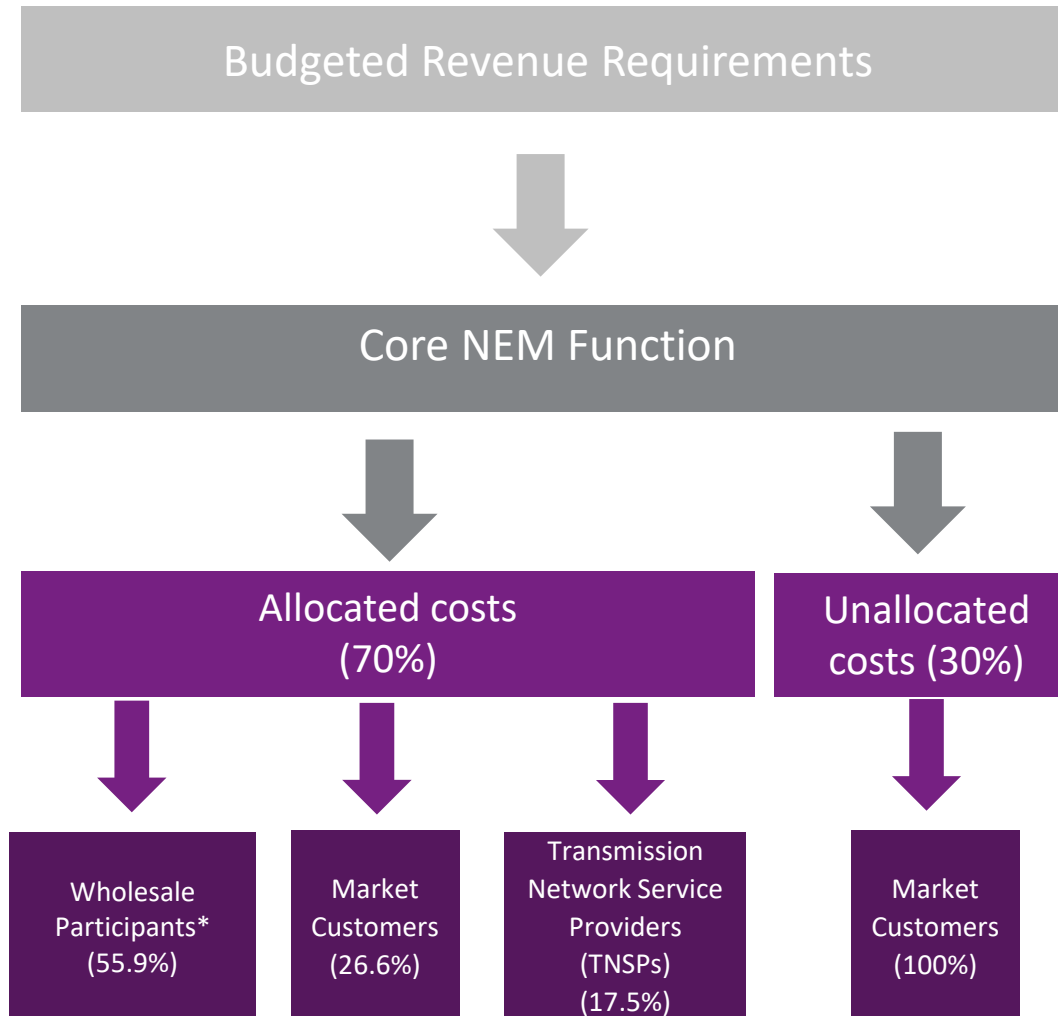
Please visit: <https://aemo.com.au/en/consultations/industry-forums-and-working-groups>

# APPENDIX C

IRPs and which AEMO fee they can be charged



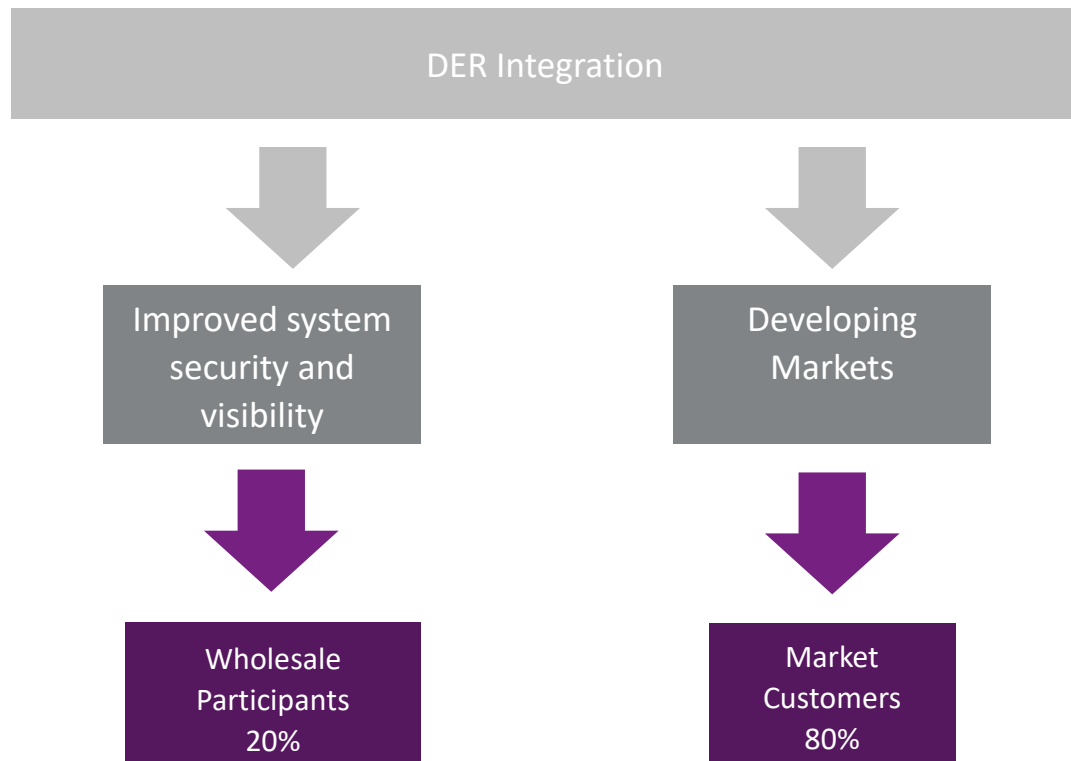
# Core NEM fee (existing structure)



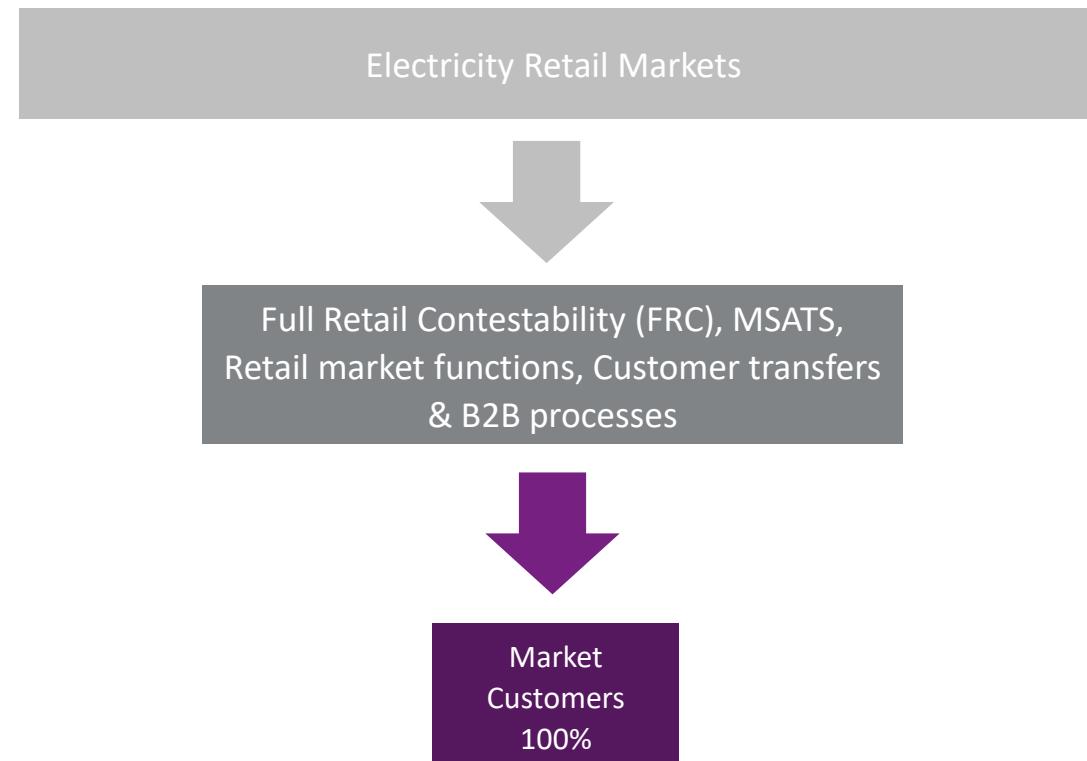
\*Generators / Market Network Service Providers / Market Ancillary Service Providers / Small Generator Aggregators

# Other existing fee structures relevant to the IRP participant category

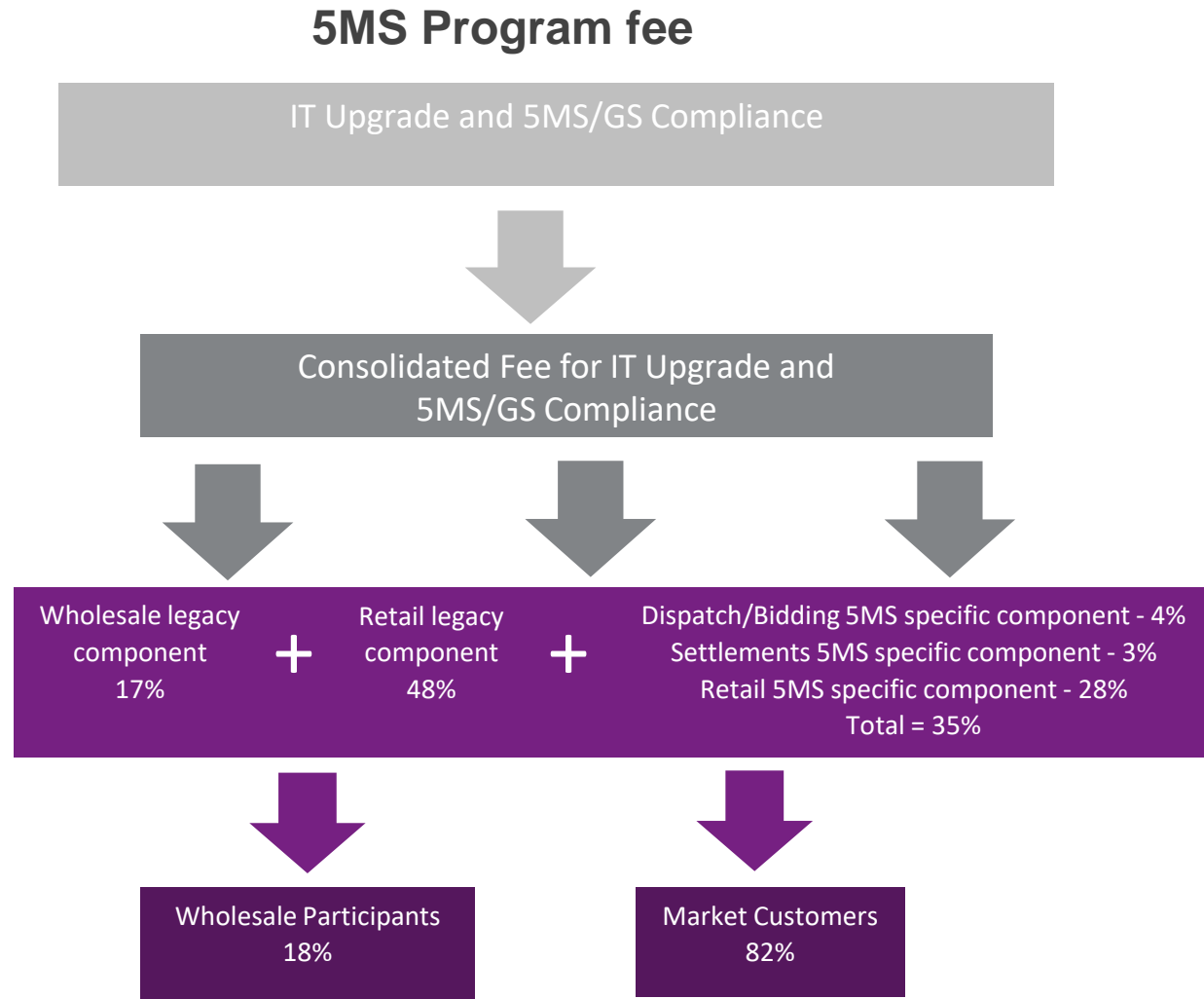
## DER Integration Program fee



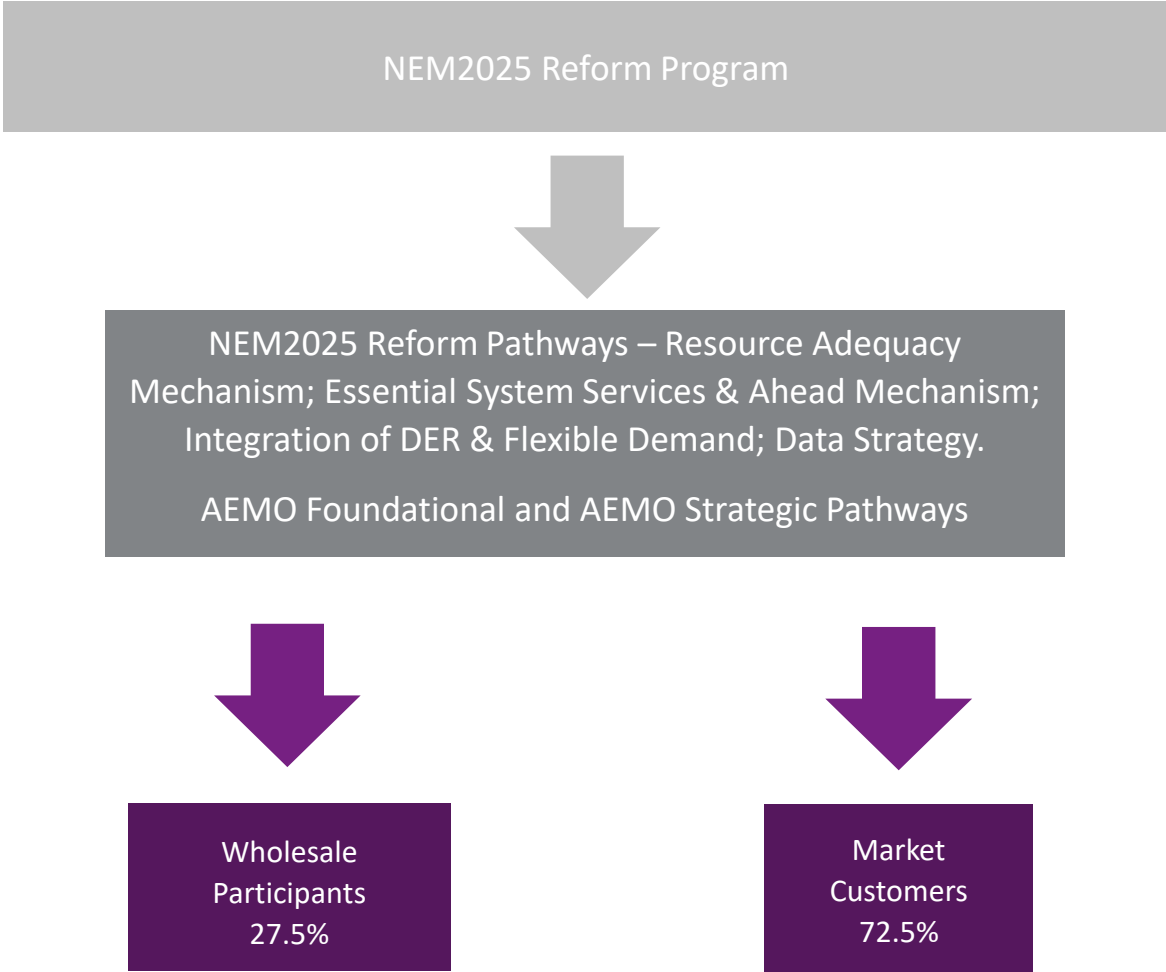
## Electricity Retail Markets fee



# Other existing fee structures relevant to the IRP participant category



# NEM2025 Reform Program Fee



# IRP charging metric

- For Wholesale Participants:
  - 50% is charged as a daily rate based on aggregate of the higher of the greatest registered capacity and greatest notified maximum capacity (of energy or FCAS markets) in the previous calendar year of units from Wholesale Participants; and
  - 50% is charged as a daily rate based on MWh energy, or in the case of MASPs/DRSPs the equivalent FCAS enablement, scheduled or metered (in previous calendar year).
- For Market Customers allocated general NEM fees:
  - 50% is charged as a rate per MWh for a financial year based on AEMO's estimate of total MWh to be settled in the spot market transactions by Market Customers during that financial year. The rate is applied to the actual spot market transactions in the billing period; and
  - 50% is charged on a per connection point basis per week.
- For Market Customers allocated NEM2025 Reform Program fees:
  - Different to the general NEM fee Market Customer metric as majority of the NEM2025 Reform Program initiatives impact the retail sector.
  - 37% is charged as a rate per MWh for a financial year based on AEMO's estimate of total MWh to be settled in the spot market transactions by Market Customers during that financial year. The rate is applied to the actual spot market transactions in the billing period; and
  - 63% is charged on a per connection point basis per week.

# APPENDIX D

Industry readiness support





# Key areas of participant support

- ✓ Engagement via forums, workshops, 1to1 discussions etc
- ✓ Technical documentation\*
- ✓ Transition, test and go-live plans\*
- ✓ Participant support environment
  - ✓ Settlements 15 Dec 2023
  - ✓ Bidirectional Units 22 Jan 2024
- ✓ Market trial (pre-production) from 02 Apr to 24 May 2024

\*Publication dates available on following slide and via monthly [Implementation Forum](#)

# Where to access available resources

## Fact sheets

- [IESS Participant Development Support Environment fact sheet](#)

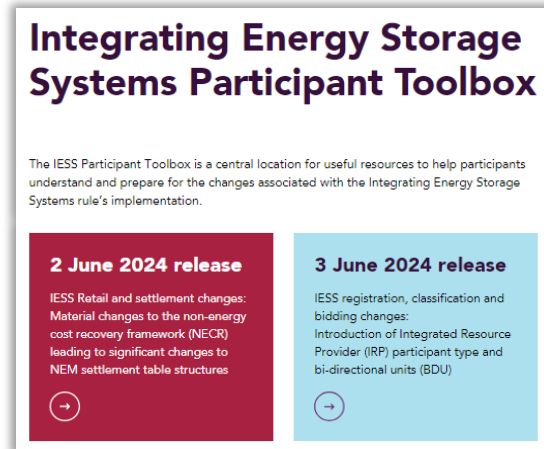
## Industry readiness & Go-Live

- [Participant impact assessment](#)
- [IESS June 2024 Readiness & Go Live criteria](#)
- [IESS June 2024 industry test and market trial strategy](#)

## Technical documentation

- [EMMS Technical Specification - June 2024](#)
- [MSATS Technical Specification - June 2024](#)
- [EMMS - Technical Specification - Data Model v5.3](#)

Resources available through IESS Participant Toolbox at AEMO's website




**Integrating Energy Storage Systems Participant Toolbox**

The IESS Participant Toolbox is a central location for useful resources to help participants understand and prepare for the changes associated with the Integrating Energy Storage Systems rule's implementation.

<p><b>2 June 2024 release</b></p> <p>IESS Retail and settlement changes: Material changes to the non-energy cost recovery framework (NECR) leading to significant changes to NEM settlement table structures</p> <p>→</p>	<p><b>3 June 2024 release</b></p> <p>IESS registration, classification and bidding changes: Introduction of Integrated Resource Provider (IRP) participant type and bi-directional units (BDU)</p> <p>→</p>
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Link: <https://aemo.com.au/initiatives/major-programs/integrating-energy-storage-systems-project/integrating-energy-storage-systems-faq>  
 Or contact the project directly at [IESS@aemo.com.au](mailto:IESS@aemo.com.au)

# NEM Reform Program Forums

Forums	Forum focus 	Cadence	Approach
Executive Forum	Program overview and status update	Trice yearly	Nomination
Reform Delivery Committee (RDC)	Long term strategic perspective	Quarterly	Nomination
Program Consultative Forum (PCF)	Inflight initiatives status & co-ordination	Monthly	Open
Implementation Forum	Implementation of reforms	Monthly	Open
Electricity Wholesale (EWCF) & Electricity Retail (ERCF) Consultative Forums	Procedures working groups	Monthly	Open
Testing working group	Testing	Monthly	Open
Focus groups	Initiatives	As appropriate	As appropriate

## Focus/working Groups for initiatives include:

Initiative working groups

Strategic and foundational focus groups (IDX/IDAM/PC)



To learn more and get involved, please visit

- [AEMO | NEM Reform Program Forums](#)
- [AEMO | Industry meeting calendar](#)
- or contact the program at [NEMReform@aemo.com.au](mailto:NEMReform@aemo.com.au).

# APPENDIX E

NEM Reform Program Engagement calendar



# Upcoming engagements

January						
M	T	W	T	F	S	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				

February						
M	T	W	T	F	S	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			

March						
M	T	W	T	F	S	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

April						
M	T	W	T	F	S	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					

NEM Reform Program Committees/Forums	
Executive Fourm	
Reform Delivery Committee	
Reform Delivery Committee Collaborative Workshop	
Program Consultative Forum	
Electricity Wholesale Consultative Fourm	
Implementation Forum	
Industry Testing Working Group	

Other Forums	
Electricity Retail Consultative Forum	

Other	
National Public Holiday	
State/Territory Public Holiday	

AEMO's office closure 26 Dec – 29 Dec 2023.

Note: All NEM Reform related committees, forums and working group invitations for CY2024 have been issued and are referenced on [AEMO's industry calendar](#).