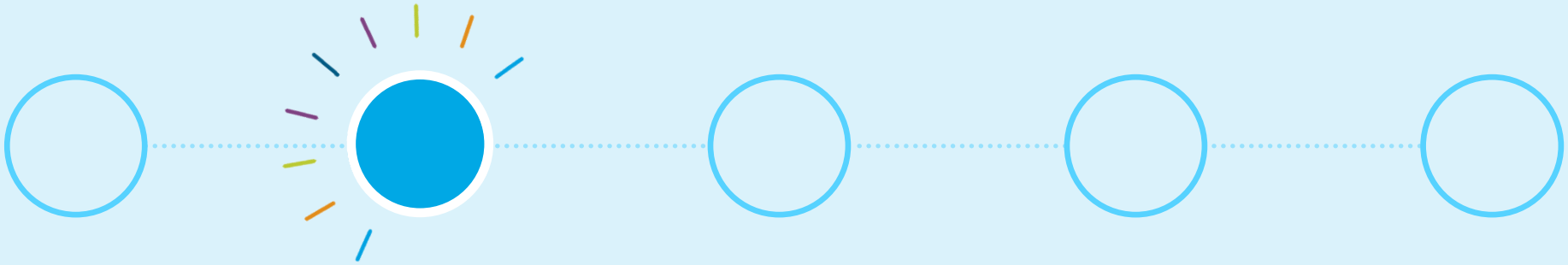
2024 Transmission Access Reform Project Plan

March 2024

AEMC

Contents

KEY MILESTONES & HIGH-LEVEL TIMELINE



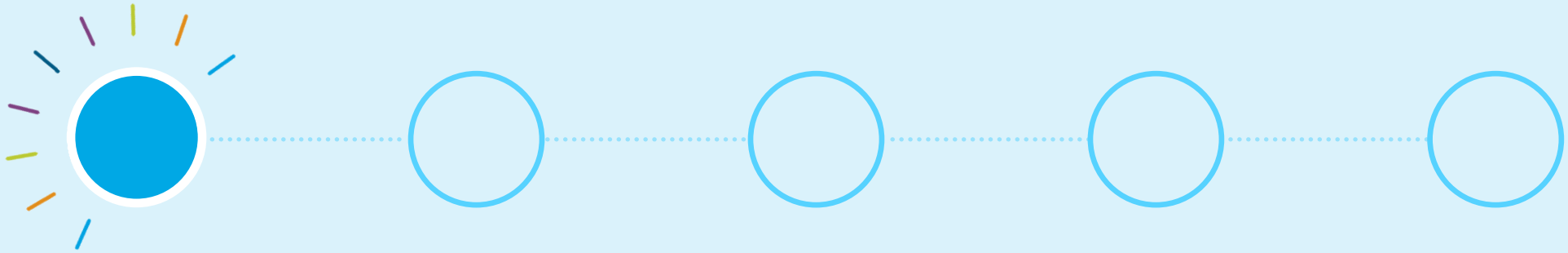
Proposed milestones and timeframes

	Q4 2023		Q1 2024			Q2 2024			Q3 2024			Q4 2024		
	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
AEMC Deliverables														
Hybrid model						Publication of paper on draft design on CRM & priority access	**Stakeholder consultation**	Review submissions			Final Recommendations due to Ministers			
CRM (Workstream 1)					Policy development – outstanding issues	Rules mapping	Consultation period	Review submissions Rules mapping	Refinement of policy positions	Refinement of policy positions				
Priority access (Workstream 2)					Policy development – policy issues	Test case results set out in publication	Consultation period Advice from modelling advisory firms	Review submissions	Refinement of policy positions	Refinement of policy positions				
Interlinkages between CRM and PA (Workstream 3)					Comms material developed	Consideration of links between CRM and PA model designs		-		Assessment of the model against objectives				
Jurisdictions					Jurisdictional workshops		Jurisdictional workshops		Jurisdictional workshops					
Industry					Technical working group	Technical working group	Formal consultation period	Technical working group	Technical working group					

Proposed publications and timeframes

- **March 2023:** AEMC to publish Terms of Reference as well as consultation plan, setting out next steps.
- **April 2023:** AEMC to publish a TAR Consultation Paper setting out:
  - Test Case results, including limitations, summary of results for all cases (complex scenarios as well as less complex scenarios), commentary on the impacts of dispatch outcomes of new entrants and incumbents (based on the NEMDE prototype test case results)
  - Detailed design of CRM i.e. overview of preferred model design and overview of outstanding policy issues
  - Detailed design of priority access, including design options for queue, and at what point in the connection / REZ process generators would receive priority access .
- **September 2024:** AEMC to provide final recommendations to Energy Ministers on the final detailed design of the hybrid model and the way forward (in consultation with AEMO and the AER).
- **Q2 2025:** AEMC to present a Final Package of draft Rules on the TAR hybrid model to Ministers – subject to Ministers agreeing to proceed.

Background



Context

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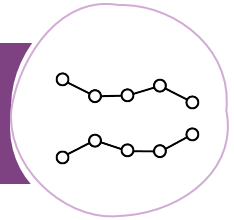


In February 2023, Energy Ministers agreed on the development of a voluntary congestion relief market and priority access model.

The ESB has recently completed its latest phase of work on transmission access reform (TAR).

At their meeting on **24 November 2023**, Ministers agreed that:

- The AEMC, working collaboratively with the AER and AEMO, will progress the agreed transmission access reform and congestion management through further design work, having considered advice from the EAP and stakeholder engagement.

Purpose of this pack:

This project plan sets out:

- The key questions the AEMC, in collaboration with the AER and AEMO, will answer to ensure it has the information it needs to provide final recommendations to Ministers in 2024.
- The key workstreams the AEMC will set up to investigate outstanding issues and answer the key questions.
- The key milestones and timeframes, including key publications to facilitate formal stakeholder engagement.

Background – transmission access reform objectives

The hybrid model that we have been asked to further develop by Ministers, is designed to address congestion issues in the investment and operational timeframes.

These issues are articulated in the following objectives, that were developed by the ***Energy Security Board*** (ESB) in conjunction with jurisdictions and stakeholders.

INVESTMENT TIMEFRAMES

The level of congestion in the system is consistent with the efficient level.

OPERATIONAL TIMEFRAMES

When congestion occurs, we dispatch the least cost combination of resources that securely meets demand.

1

Investment efficiency: Better long-term signals for market participants to locate in areas where they can provide the most benefit to consumers, taking into account the impact on overall congestion.

2

Manage access risk: Establish a level playing field that balances investor risk with the continued promotion of new entry that contributes to effective competition in the long-term interests of consumers.

3

Operational efficiency: Remove incentives for non-cost reflective bidding to promote better use of the network in operational timeframes, resulting in more efficient dispatch outcomes and lower costs for consumers.

4

Incentivise congestion relief: Create incentives for demand side and two-way technologies to locate where they are needed most and operate in ways that benefit the broader system.

Background – benefits of reform

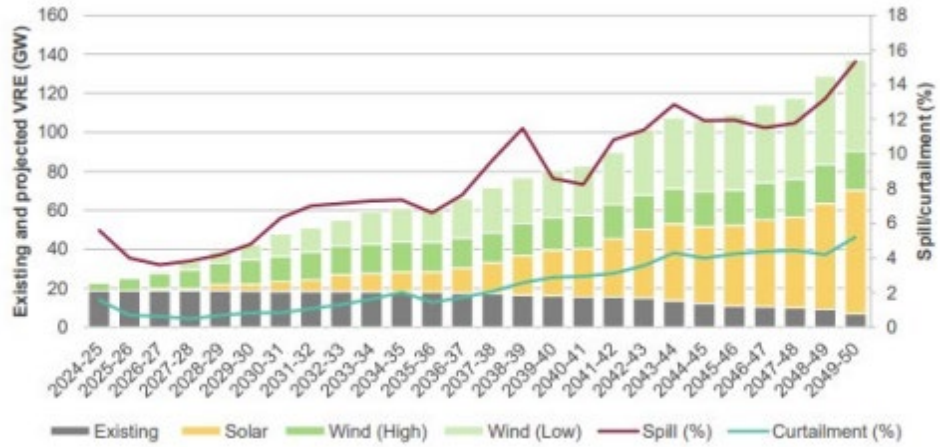
Transmission access reform has the following benefits:

- Long term reforms to provide a market-based approach to manage congestion.
- Provide locational signals for generation, storage and flexible load.
- Support REZs and give investors more certainty.
- Long term interest of consumers
  - Maximise the use of transmission and avoid unnecessary investment.
  - Avoid counter price flows between NEM regions.
- TAR is part of the suite of ECMC reforms needed to reach decarbonisation goals.

- The ESB's cost-benefit analysis (published February 2023) estimates that the benefits of the hybrid model are around $2.7b–7.4b (inclusive of carbon emission reductions) in NPV terms.
- This is an order of magnitude higher than the estimated costs of $165m – $350m.
- We note that the benefits case is dependent on participation rates in the CRM (which is a voluntary scheme) and priority access leading to improved locational signals and investment certainty for market participants. These matters will be explored in detail in the next phase of work.

Previous modelling published by the ESB demonstrated that congestion across the NEM is increasing:

Figure 4 Projected utility-scale VRE in REZ for the NEM, economic spill and transmission curtailment



Source: AEMO, Appendix 3 Renewable Energy Zones 2022 ISP for the National Electricity Market, June 2022, p. 14.

Background – overview of hybrid model

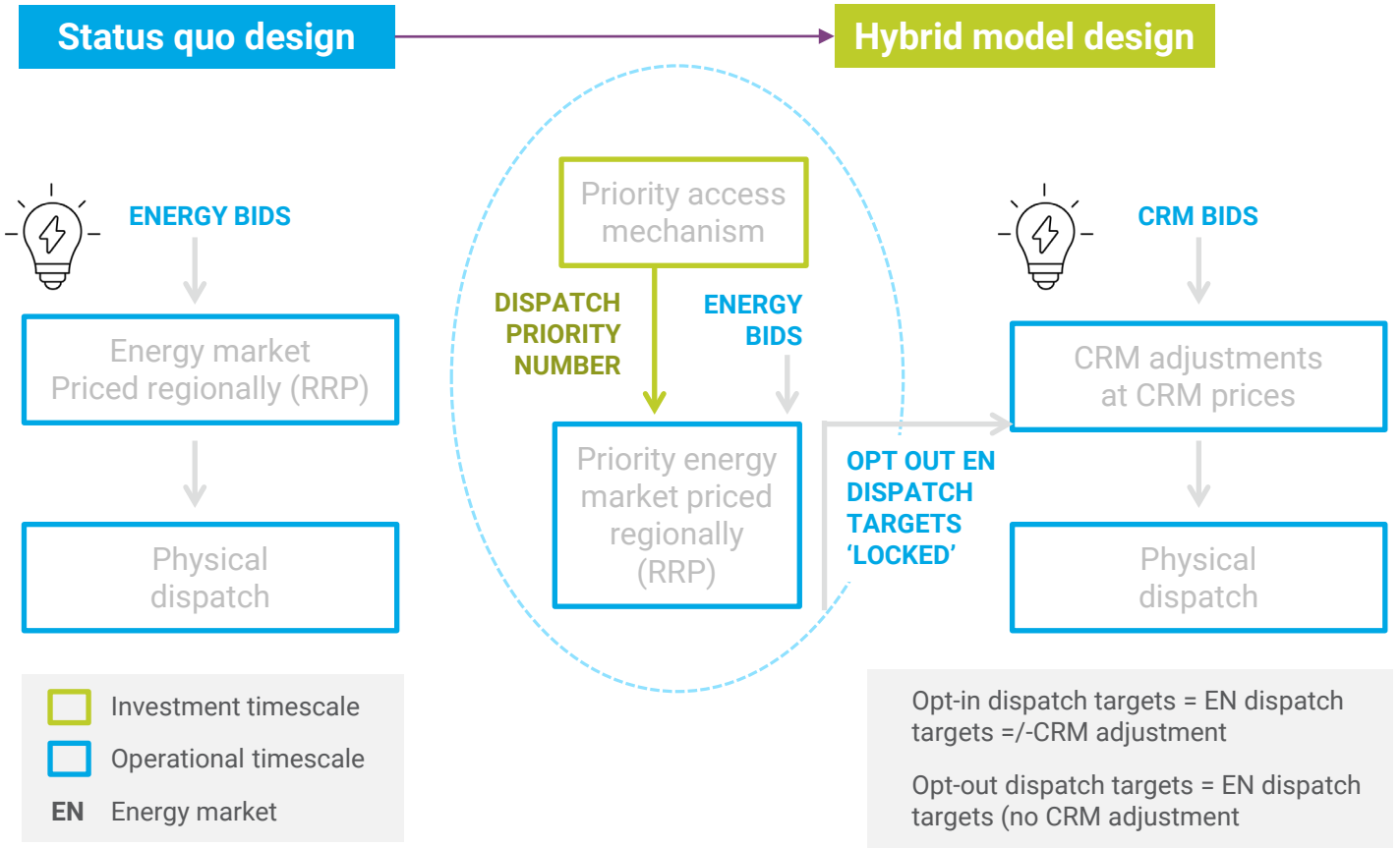
The hybrid model aims to address the four key objectives across both the investment and operational timeframes as set out on slide 8.

Priority access provides a locational signal for (1) investment efficiency and enables investors to (2) manage congestion risk more effectively.

A generator is assigned a priority level up front which is factored into the project's investment and siting decision.

The CRM provides bidding incentives for generators to bid more cost reflectively and achieve a more efficient dispatch (3).

It incentivises storage and demand response providers to locate and operate (4) where they can relieve congestion with benefits to the whole system.

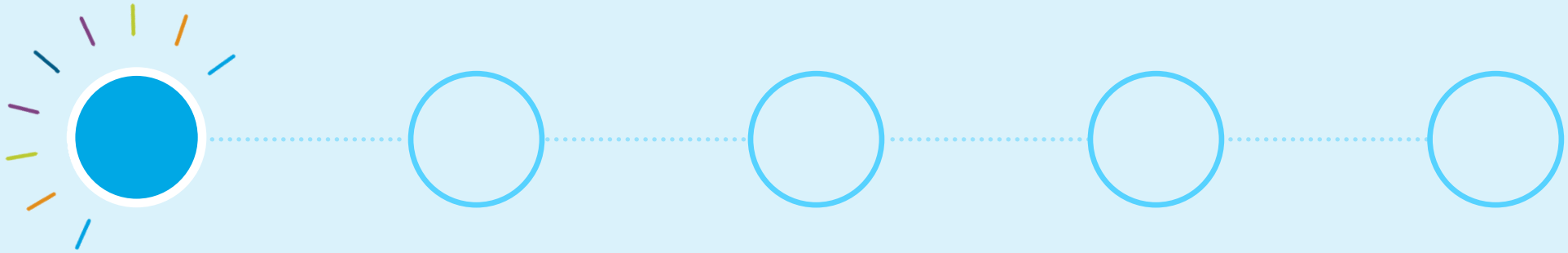


Background – current status of work

Work undertaken by the EAP to date shows:

- We have developed a **CRM model** to a good level of a detailed design. The next level of design choice for the CRM relates to **technical detail to be refined in the rule-making process**. There is also a question around whether CRM should be pursued on its own if priority access fails to progress.
- On **priority access**, we have focussed on an adjusted bid price floor (BPF) approach integrated with the current CRM design. Several issues have emerged through our recent work to test the practical implementation and operation of priority access using the BPF method, including its **ability to realise the intent of the reforms**. There is also a need to **continue engagement** with stakeholders and jurisdictions to manage the critical intersection between priority access and jurisdictional REZ schemes.
- Our recent testing of the current design of the **hybrid model** has revealed that there are several important specific design decisions which – if implemented – may materially limit the benefits of the reform. Further work is therefore required to **continue to refine and test the hybrid model design** to understand whether some of the problems can be addressed through alternative design choices, thereby allowing the reform to achieve the reform objectives more meaningfully. This work will include further consideration of **options for allocating priority levels** such as batching by time-window and a two-tier approach. We will also consider a **co-optimised dispatch model for implementing the hybrid model** more generally.

WORKSTREAMS



Objective of this next phase of development

Aim of this stage:

- Ensure stakeholders are fully consulted and feel they've had every opportunity to participate and have their views heard.
- Ensure Ministers and stakeholders have all the information (data, analysis, modelling etc) they need to be fully informed.

Problem statement

What is the preferred design of the hybrid model to deliver the transmission access objectives and so policy outcomes?

Q1. What is the preferred design of the CRM, including preferred implementation approach? (see slide 14)

Q2. What is the preferred design of priority access model, including preferred implementation approach? (see slide 15)

Q3. Can we satisfactorily mitigate and/or address stakeholders' key concerns with certain features of the hybrid model? (see slide **16**)

Key tasks and deliverables

- **MAR:** AEMC to publish modified version of project plan on website and seek interest from stakeholders in TWG.
- **FEB – MAR:** AEMC to develop and assess priority access model options.
- **FEB – MAR:** AEMC/AEMO to consider technical feasibility and policy implications of co-optimised dispatch approach to implementing the hybrid model.
- **APR:** AEMC/AEMO to set out and consult on test case work to understand localised effects of PA under different model options.
- **APR – MAY:** Consultation with industry/jurisdictions on model options, prototyping and CBA.
- **APR:** Advice from market modelling advisory firms to understand effects of prioritisation on locational decisions.

Key questions to be resolved in congestion relief market

What is the preferred design of the CRM, including preferred implementation approach?

Question 1 on slide 13

CRM-1

What are the outstanding issues with the existing CRM design and implementation approach (ie based on two sequential dispatches) and how material are these?

CRM-2

Is there a feasible alternative to implementing the CRM?

CRM-3

What are the preferred design choices for the CRM, under each implementation approach (assuming the co-optimised dispatch approach is feasible)?

CRM-4

Which CRM implementation option (if any) best meets the reform objectives?

Proposed work / areas of investigation

- Are there any unintended consequences of using the RRP (EN), or RRP (CRM)?
- What are the implications of this for the priority access model and the hybrid model more broadly?
- Note: we know the answers to these questions, but this has not yet been shared or tested with stakeholders.

Note: the intention is for:

- AEMO to explore the technical feasibility of co-optimising dispatch which may avoid some of the issues present in having two sequential dispatches.
- AEMC to explore the policy implications of progressing a co-optimised dispatch approach to implementing the CRM.

- Under the existing CRM design (where most design decisions have been "locked in"). Outstanding issues include:
  - Whether/how to deal with market power in the physical (ie, CRM) dispatch
- Under a co-optimised dispatch approach (noting that this assumes a positive answer to CRM-2):
  - What constraints should be included in dispatch (eg, FCAS)?
  - Should the two dispatches be tethered?
  - Should interconnectors be clamped in the EN dispatch?
  - Whether/how to prevent the effects of disorderly leaking between the two dispatches, given they are co-optimised?

- Is expected participation in CRM high enough to deliver the expected benefits (and justify the expected costs)?
  - Based on the design, how many/what types of market participants should have an incentive to participant, how readily can they understand and respond to those incentives?
- If the answer to CRM-2 is positive, then consider: What is the expected cost of implementation of a co-optimised dispatch approach? What are the expected benefits of implementing a co-optimised dispatch approach relative to the sequential dispatch approach (particularly in terms of the approach to calculating RRP)?

Key questions to be resolved in priority access

What is the preferred design of priority access model, including preferred implementation approach?

Question 2 *on slide 13*

PA-1

What options are available for assigning priority levels to generators and REZs?

PA-2

Which priority access allocation option (if any) best addresses the problem of cannibalisation (ie by new entrant generators of incumbent generators access)?

PA-3

Which priority access allocation option (if any) best meets the reform objectives?

PA-4

For the priority access allocation options, what are the preferred design choices?

Proposed work / areas of investigation

Note: Intention is to explore the following options:

- Option 1: Queue based model decided by jurisdictions
- Option 2: Queue based model by time
- Option 3: Hybrid

(This will include exploration of a dynamic grouping approach to allocating priority access)

- Using the NEMDE prototype, what are the implications of each priority access allocation option on dispatch outcomes for incumbents and new entrant generators?
  - For a simple constraint(s)?
  - For a more complex constraint(s)?

- Will the option support the design of, and enhance the value of, jurisdictional REZ schemes?
- Will the option improve locational signals for new entrants? What impacts will this have on investment?
  - Will new entrant generators be able to model outcomes under prioritisation in a way to meaningfully influence investment decisions?
- Will the option improve the ability of incumbents to manage their congestion risk?
- What are the impacts on the RRP? Are there ways that these impacts can be mitigated?

- How long will generators and REZs be allocated priority access (ie what is the duration of access)?
- How will priority access be allocated to incumbents?
- When in the planning/investment process will priority access be allocated to generators and REZs?

Key stakeholder concerns

Can we satisfactorily mitigate and / or address stakeholders' key concerns with certain features of the hybrid model?

Question 3 on slide 13

S–1

Can participants meaningfully model the impact of priority access for new projects in a way that provides more efficient locational signals to investors?

S–2

To what extent to which the inclusion of unpredictable constraints e.g. outage / system strength in priority access create unacceptable risks for participants and, if so, how could this be addressed?

S–3

What are the impacts of the hybrid model on PPAs? Including reopening contracts, and whether maximum generation obligations could result in unintended consequences?

S–4

How will the hybrid model impact the electricity financial market?

S–5

Risk of priority access being allocated late in a generator's investment and planning process, creating risks for investors.

Proposed work / areas of investigation

- Write up results of test cases for stakeholder consultation in Apr consultation paper to help stakeholders consider how this may impact them and their investment decisions. Intent is to use NEMDE prototype to set out the implications of the allocation option on dispatch outcomes for incumbents and new entrant generators?
  - For a simple constraint(s)?
  - For a more complex constraint(s)?
- Engage a consultant to provide advice on how this may factor into investment decisions to understand that it provides incentives to locate in REZs, as well as efficient investment outside REZs.
- Seek to qualitatively test the materiality of this issue e.g. by workshopping with TWG; considering how other reforms may address this issue.
- Articulate how current technical design has this as a given.
- Test whether there are model design options that could reduce/mitigate the risk (if found to be material).

- Set out AEMC legal advice on PPA issues for consultation in Apr consultation paper.
- Set up a series of bilateral meetings with key parties to stakeholders to work through specific circumstances.
- Consider extent to which transitional provisions could mitigate any risks arising with PPAs and interactions with the contract market.

- Engage directly with AFMA to better understand concerns and how this might impact them.
- Set up bilateral meetings with traders at gentailers to understand their concerns and questions.
- Consider the extent to which transitional provisions could mitigate any risks.

- Revisit preferred approach with TWG and set up a series of meetings with AEMO's connections team and key people from the CEC/AEMO connections reform initiative to test the current preferred approach and understand how this is likely to play out in practice.
- Write up outcomes for broader stakeholder consultation in Apr consultation paper.
- Consider the extent to which transitional provisions could mitigate any risks.

Relates to PA-2 and PA-3

Workstreams 2024

The AEMC will initiate three workstreams to run over 2024, to gather additional information to inform the final recommendations on the design of the hybrid model. Note, the proposed approach to stakeholder concerns (set out on slide 16) are flagged in the relevant workstream for info.

*Interlinkages between CRM and PA

Workstream 1 CRM

- **Policy development for outstanding design issues for CRM, including consideration of a co-optimised dispatch approach to implementing the hybrid model.** The CRM model has been developed to a good level of detailed design. The next stage of work involves refining the technical detail. The intent is for such detail to be set out for stakeholder feedback in the upcoming APR consultation paper. AEMO will also provide an assessment of the technical feasibility of the co-optimised dispatch approach. **CRM-1, CRM-3, S-1, S-2**
- **Rules drafting for the CRM to continue**. We will begin to developing draft rules for this component in parallel with the design work to enable detailed aspects of the design to be considered and to preserve the option of timely implementation should Energy Ministers decide to proceed with the reforms. **CRM-1 to CRM-4**
- **Next milestone:** APRIL Consultation with industry on detailed design of preferred CRM model and outstanding issues **CRM-1 to CRM-4** and **S-2 to S-4.**

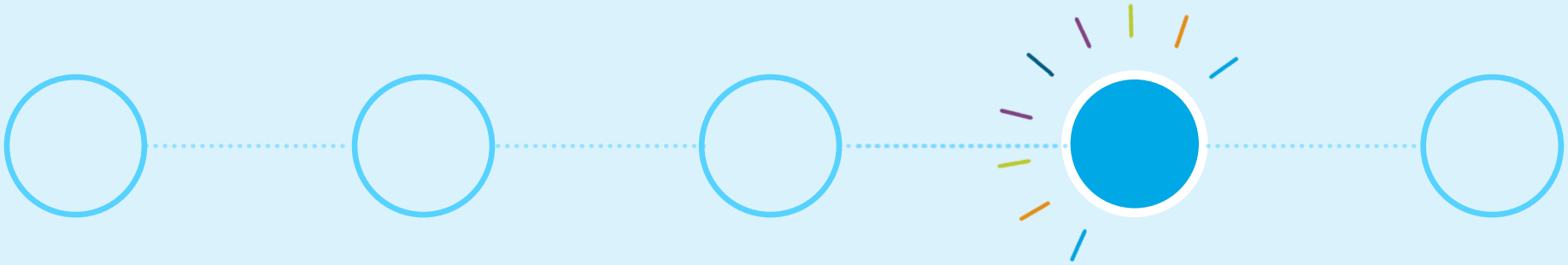
Workstream 2 Priority access

- **Policy development focused on priority access allocation model options.** Consideration of three options for how the queue could be allocated will be progressed: queue allocated by time; queue allocated by jurisdictions; hybrids of the two approaches including a dynamic, sequential grouping. There are also key policy elements to progress such as when in the connection / REZ process do you receive priority access etc. The next stage of work is to set out the detail on this for stakeholder feedback in the upcoming APR consultation paper. **PA-1; S-1; S-3.**
- **Feedback on test case work.** We have run numerous test cases – we want to set this out (along with its limitations) for stakeholders for formal consultation to test how they see what this means for them and investment certainty. **PA-3; S-1; S-2.**
- **Advice from modelling advisory firms** to understand effects of prioritisation on locational decisions. **S-1.**
- **Next milestone:** APRIL Consultation with industry/jurisdictions on priority access allocation model options **PA-1 to PA-5; S-1; S-3 to S-5.**

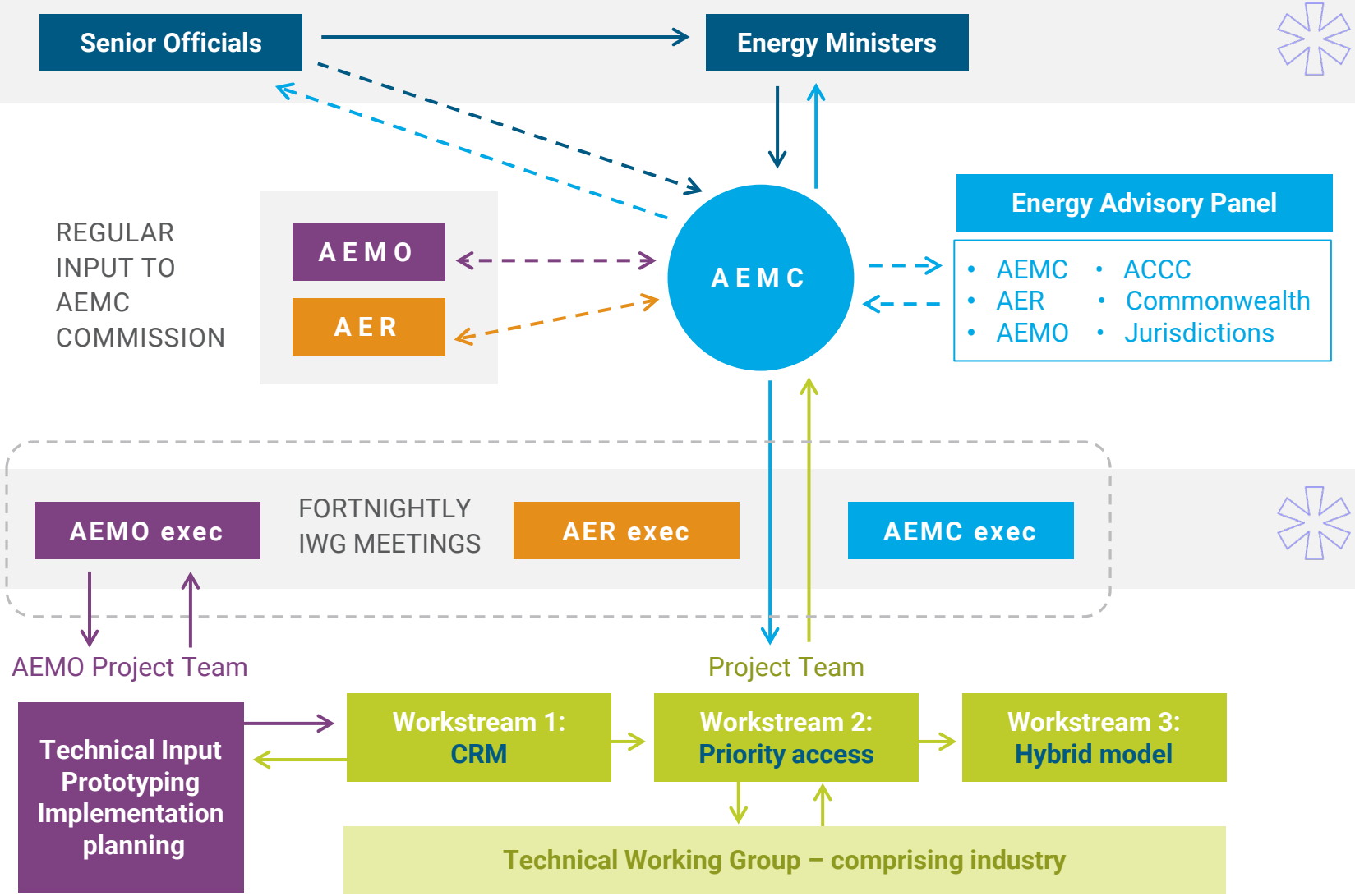
Workstream 3 Hybrid model*

- **Consideration of the links between the CRM and priority access components of the reform.** We will consider the implications of certain design choices made in one reform area, on outcomes in the other reform area, to ensure the design is optimal overall. This will include consideration of how alternative implementation options impact both aspects of the model, and what a minimum viable product is.
- **Statement of the counterfactual.** We will revisit and restate the counterfactual, having regard to the broad suite of recent reforms being pursued by governments to decarbonise the NEM. The intention is to use this as a touchstone for the AEMC, AEMO and the AER, and for stakeholders, as we move forward.
- **Assessment of the hybrid model against the reform objectives.** Once the preferred model for CRM is confirmed, and the preferred model for priority access identified, a key task for the AEMC will be to assess qualitatively the final hybrid model against the operational and investment timescale reform objectives, to understand whether the reform promotes the NEO. This task will be undertaken having regard to the outcomes in all three workstreams. **CRM-4; PA-5.**
- **Communications**: We are aware the reform is technical and complicated. A key element of this workstream moving forward will be focussing on developing accessible communications. We will leverage the visualisation work that was undertaken earlier in the process; we also want to further test assumptions used in this with stakeholders.
- **Stylised network model:** We will develop a stylised network model which would be a simple model of the hybrid model for stakeholders to interact with.

GOVERNANCE



Governance structure



Role

DECISION MAKER ON WHETHER TO PROCEED TO IMPLEMENTATION

AEMC:

- Provides final recommendations to **Energy Ministers.**
- Provides regular updates to **Senior Officials** and transmission working group and **Energy Advisory Panel.**
- Decision maker on design choices.

Energy Advisory Plan:

- Consulted with on **AEMC** work for feedback and input.

AEMO + AER

- Views on final recommendations provided to **Energy Ministers**, with regular input along the way.

REGULAR MARKET BODY CONSULTATION THROUGH EXECUTIVE LEVEL IWG FORUM

Detailed development and carriage of three workstreams, including consultation with industry through the technical working group and jurisdictions through transmission working group AEMO to have a dedicated component on technical input, prototyping and implementation planning.

AEMC