

Please note that the information presented in this document were developed to enable discussion at the Financial Consultation Committee and are draft only and subject to change.

# Financial Update 2021/22

Finance Consultation Committee  
4 February 2022

# Welcome

Julie Williams, EGM Finance



# Review of Minutes of Previous Meeting and Action Items

Julie Williams, EGM Finance

# Action Items from Meeting 1 (28 October 2021)

Item #	Action	Responsibility	Due Date
1.1	Review the current Committee interim Terms of Reference for any updates.	Committee Members	Next meeting planned for week starting 31 January 2022
1.2	Set the date for the second FCC meeting planned for the week starting 31 January 2022.	AEMO	Early November 2021

# Review of FCC Terms of Reference

Tony Chappel, EGM Corporate Affairs

# Performance Q2 December 2021 Update

Stuart Waters, Manager Corporate Finance

# Corporate KPI Performance – 6 Months to December 2021

Measure	Dec 21	
No region-wide system black events	●	
No significant deterioration in AEMO's health and safety performance	●	
No preventable load shedding	●	
Meet operational energy system security and reliability requirements	●	
Achieve forecast accuracy (Only including Short-term and Pre-dispatch forecasts included until April 2022)	●	
Achieve all material prudential supervision obligations	●	
Settlement statements issued and settled on time	●	
No loss of system and/or market suspension due to preventable cyber incidents impacting AEMO's systems	●	
Maintain IT availability for NEM, Gas and WA markets and systems	●	
Achieve all material legal and reporting obligations	●	
High priority regulatory reform programs delivered on time to approved budget	On-time	●
	To-budget	●
	Overall	●
Achieve FY2022 adjusted expenditure budget	●	
Achieve capital efficiency	●	

## Note

- The below KPIs will only be measured annually in Q4 FY22
- Achieve stakeholder satisfaction with AEMO engagement
  - Achieve improved stakeholder perception
  - Improve participant satisfaction with the connection process
  - Achieve year-on-year improvement in employee engagement

# Corporate Plan Performance – 6 Months to December 2021

## Workstream Status Update – December 2021

	Dec. Status		Dec. Status	
Priority 1: Operating today's systems and markets	System & Market Operations	●	●	
	Energy System & Market Insights	●	●	
	System & Market Technologies	●	●	
	Cyber Security	●	●	
Priority 2: Navigating the energy future	Forward Challenges & Opportunities	●	●	
	Reform Implementation	●	●	
	Reform Implementation – System Design	●	●	
	Reform Partner	●	●	
Priority 3: Engaging our Stakeholders	Transparency & Collaboration	●	●	
	Service Excellence	●	●	
	Grid Connections	●	●	
	Jurisdictional Support	●	●	
Priority 4: Evolving the way we work	Organisational Excellence - Finance	●	●	
	Organisational Excellence - HR	●	●	
	Organisational Excellence - Risk	●	●	
	Talent, Culture & Capability	●	●	
			Digital, Data & Technology	●



# Financial Performance

## – 6 Months to December 2022

### Income Statement Results Summary Q2 2021/22

Financial Overview (\$Million)	AEMO Total Enterprise			AEMO Excluding Vic TNSP			Vic TNSP		
	Budget FY22	Actual FY22	Variance	Budget FY22	Actual FY22	Variance	Budget FY22	Actual FY22	Variance
<b>REVENUE</b>									
Fees and Tariffs	127.3	129.1	1.8	127.3	129.1	1.8	-	-	-
TUoS Income	302.1	302.1	0.0	-	-	-	302.1	302.1	0.0
Settlement Residue	18.7	12.4	(6.3)	(0.0)	-	0.0	18.7	12.4	(6.3)
Other Revenue	38.5	50.0	11.4	10.0	17.2	7.2	28.5	32.8	4.3
Network Charges	(339.6)	(335.6)	4.0	-	-	-	(339.6)	(335.6)	4.0
<b>NET REVENUE</b>	<b>147.0</b>	<b>158.0</b>	<b>11.0</b>	<b>137.3</b>	<b>146.3</b>	<b>9.0</b>	<b>9.8</b>	<b>11.7</b>	<b>2.0</b>
<b>OPERATING EXPENDITURE</b>									
Net Labour	83.4	86.7	3.3	77.3	81.1	3.8	6.1	5.6	(0.5)
Expenditure	47.6	54.2	6.6	38.2	45.6	7.4	9.5	8.7	(0.8)
Depreciation and Amortisation	19.4	20.8	1.5	19.4	20.8	1.4	0.0	0.0	0.0
Borrowing costs	1.1	0.6	(0.5)	1.1	0.6	(0.5)	-	0.0	0.0
<b>TOTAL EXPENDITURE</b>	<b>151.4</b>	<b>162.3</b>	<b>10.9</b>	<b>135.9</b>	<b>148.1</b>	<b>12.2</b>	<b>15.5</b>	<b>14.3</b>	<b>(1.3)</b>
<b>SURPLUS / (DEFICIT)</b>	<b>(4.4)</b>	<b>(4.3)</b>	<b>0.0</b>	<b>1.4</b>	<b>(1.8)</b>	<b>(3.2)</b>	<b>(5.8)</b>	<b>(2.5)</b>	<b>3.2</b>

Budget Surplus/(Deficit)	Full Year	Accumulated
Total AEMO Enterprise	(11.9)	(41.0)
VicTNSP	(8.9)	13.4
AEMO Excluding VicTNSP	(3.0)	(27.6)
NEM Core	(13.1)	(94.2)

Total AEMO YTD on performance aligned with budget.

However, YTD performance and forecast trends are leading to a higher than budget full year deficit for AEMO; particularly coming through the NEM Core and 5MS entities due to higher than budget IT related expenditure, and lower than planned labour being capitalised, and the VicTNSP entity in relation to lower settlement residue revenue.

# Revenue

Half year 2022, \$11m favourable to Budget

Network Charges \$4m favourable due to timing variances.

Other Revenue \$11.4m favourable:

- AEMO Excl. VicTNSP \$7.1m
- VicTNSP \$4.3m.

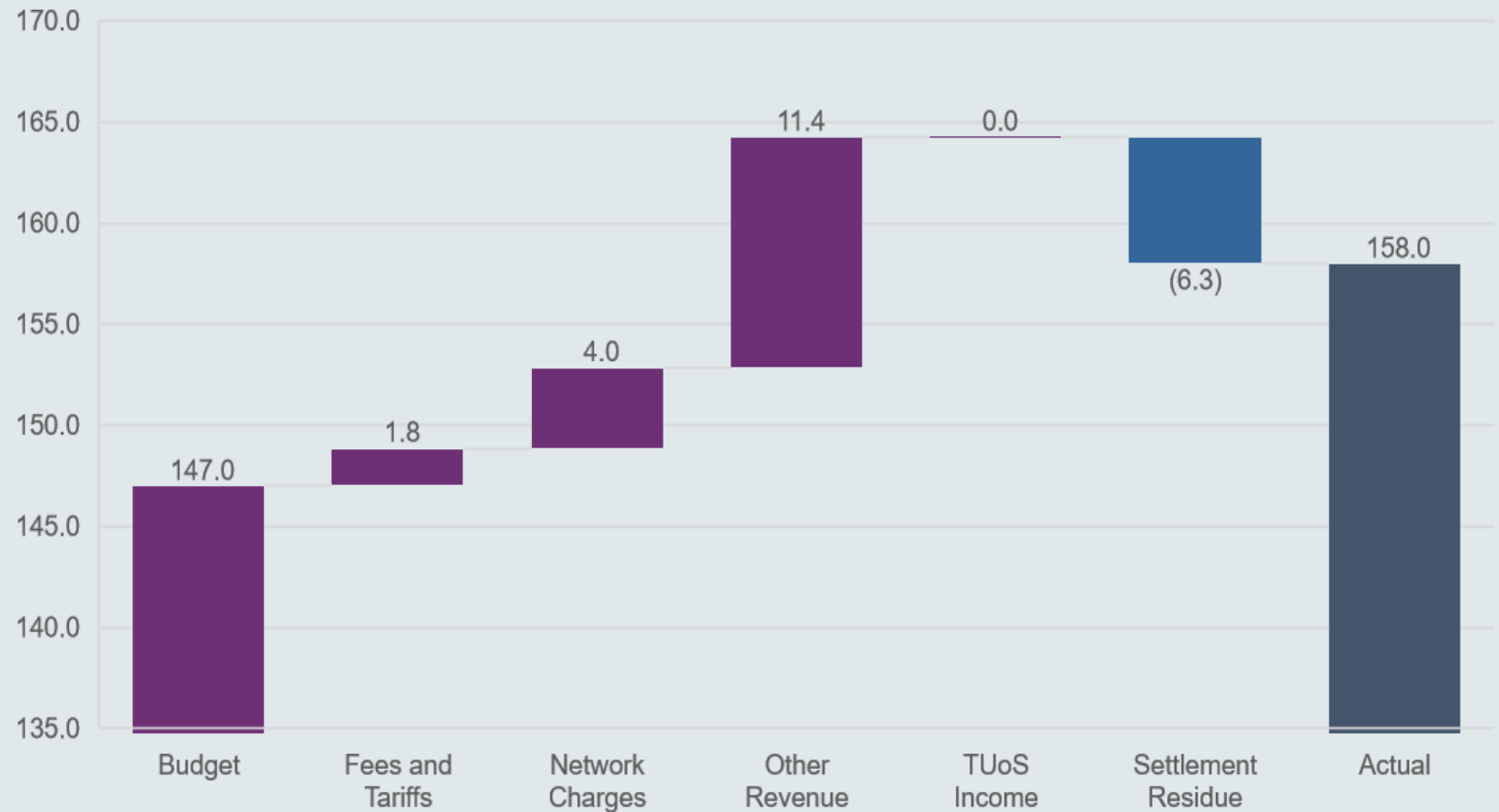
Largely resulting from:

- Vic and National Connections activities \$5.3m
- Jurisdictional contracted programs \$5.8m

Settlement Residue \$6.3m unfavourable reflecting lower Victorian market prices and inter-regional flows.

Full year forecast variance expected to be lower than half year based on Settlement Residue trend.

AEMO YTD Revenue Budget to Actual



# Expenditure

Half year 2022, \$10.9m unfavourable to Budget

Recoveries \$6.2m unfavourable due to increased expenditure against higher connections and jurisdictional activities – refer to higher revenue offset.

Net Labour \$3.3m unfavourable largely reflecting lower capitalisation of internal labour resources to capital projects due to the timing and mix of capital projects.

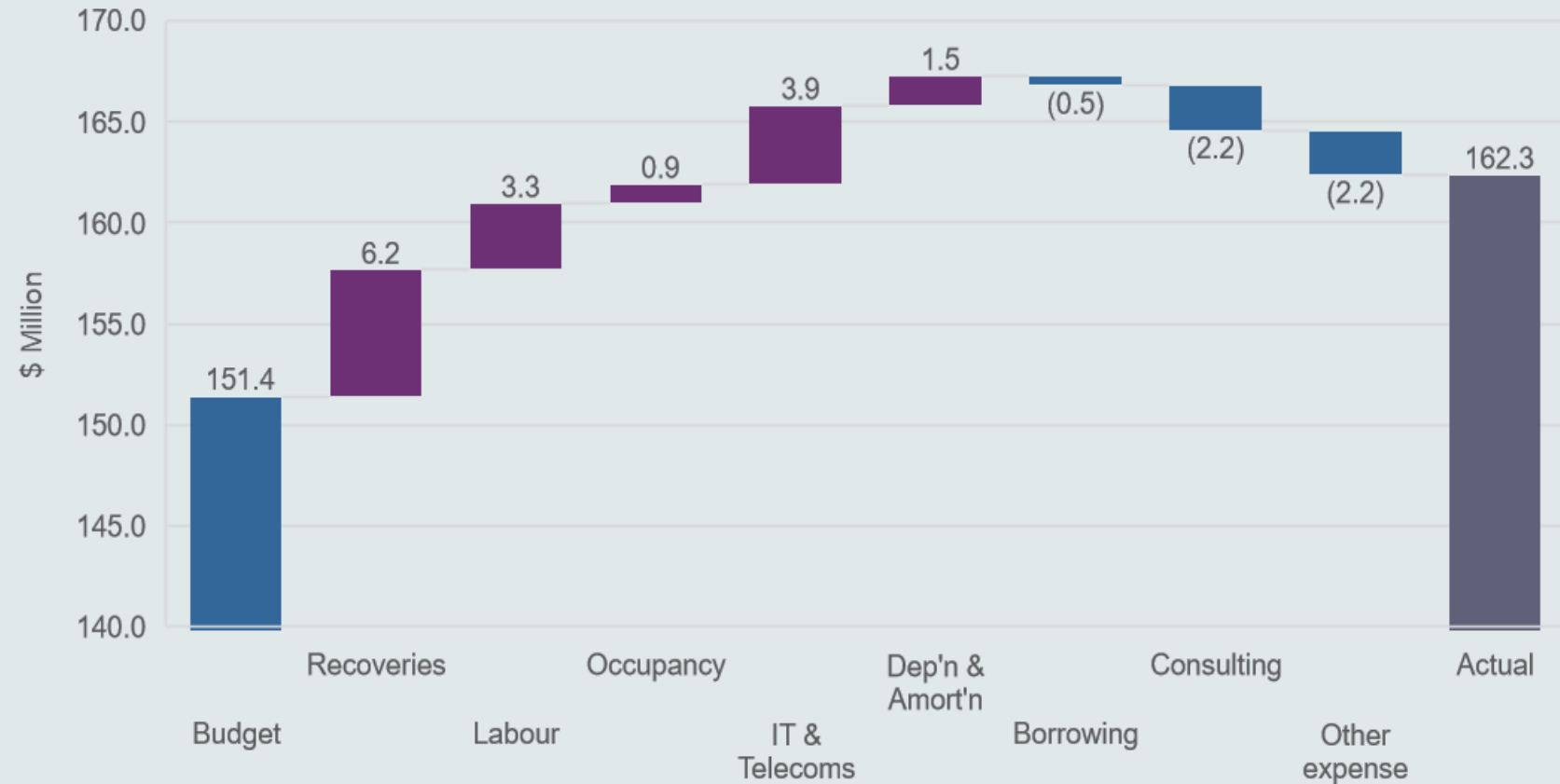
IT & Telecom \$3.9m unfavourable due cloud expenditure budgets being understated.

Consulting favourable due to lower VNI West expenditure

Other Expenses favourable reflecting continued COVID impacts.

Full year forecast variance expected to continue unfavourable due to IT cloud cost, and lower capitalisation of labour trends.

AEMO YTD Expenditure Budget to Actual



# Review of Draft Corporate Plan Priorities 2022/23

Tony Chappel, EGM Corporate Affairs

# Australia's Energy Landscape

- Australia's energy transition is continuing to accelerate, with AEMO's draft 2022 Integrated System Plan projecting:
  - a doubling of electricity demand
  - a nine fold increase in PV capacity
  - a five fold increase in utility scale VRE
  - an additional 45GW / 620 GWh of storage; and
  - approximately 16GW of dispatchable capacity (both hydro and gas) will be required in the NEM in 2050.
- All Australian governments have now committed to Net Zero by 2050.
- Energy Ministers have agreed to implement substantial market reforms to enable a cost-effective energy transition, though the Energy Security Board's agreed work streams on DER integration, essential system services and data, with further engagement underway to inform decision making in respect of potential capacity mechanisms and congestion management tools.
- Through deep industry engagement, AEMO's Engineering Framework is progressing collaborative work across the breadth of system and engineering issues requiring resolution for an energy system capable of harnessing up to 100% instantaneous renewable penetration (forecast to begin occurring by 2025).
- AEMO's corporate plan priorities seek to enable the cost effective, collaborative resolution of these challenges to ensure an investible NEM and deliver consumer benefits.

# Embracing the future: Corporate Plan 2022/23

AEMO is committed to a journey of change that is best reflected by the four priority areas introduced in our 2022 Corporate Plan.

- 1 Energy System and Market Operations:** AEMO is committed to maintaining secure and reliable operation of energy systems and markets, while maximising benefits in the interest of consumers.
- 2 Energy Transformation:** identify emerging issues, provide technical and economic expertise and support new and ongoing reforms.
- 3 Customers, Stakeholders and Members:** to be more transparent, efficient and customer focused.
- 4 Organisational Excellence:** to become a more efficient, leaner, stakeholder and customer-focused business with clear accountabilities.

AEMO's strategic response in 2022/23 will continue to embrace the challenges and opportunities of the advancing energy system through an ongoing focus on these four areas of priority. In addition, AEMO's foundational response will include:

- Balancing the books and placing AEMO on a stable financial footing going forward.
- Advancing cultural and workplace change to empower and develop staff, and make AEMO easy to do business with.
- Embedding a customer focus that enables outcomes for the industry and consumers, and ensures that we the meet evolving system and market needs.

# Draft Deliverables 2022/23

## 1 Operating today's energy systems and markets

### System and market operations

**Power system operations:** Undertake seasonal analysis and preparation, conduct emergency exercises and training.

**Critical power system risks:** Use critical risk analysis and insights to identify vulnerabilities in controls.

**Power system modelling:** Uplift confidence in real-time modelling and information.

**Operational Plans:** Have in place state-based operational plans.

### System and market performance and insights

**Performance monitoring:** Monitor and report on energy system and market performance.

**Reports and publications:** Deliver quality, timely reports and publications that are to the satisfaction of, and valuable to AEMO stakeholders.

### System and market technologies

#### **Operational Technology Roadmap:**

Progress the Operational Technology Roadmap for the NEM and WEM.

Implement the Real-time Frequency Stability Tool into WEM control rooms.

Enhance forecasting, systems and procedures to manage the energy system.

### Operational resilience

#### **Resilience of our system:**

Implement the Business Continuity Plan framework, track actions, identify gaps and seek pre-certification audit.

#### **Cyber:**

Prevent, detect, and respond to cyber threats impacting AEMO systems and the grids and markets that they operate.

Actively support governments and industry to strengthen cyber-resilience.

# Draft Deliverables 2022/23

## ② Navigating the energy future

### Future operating conditions

#### **Integrated System Plan (ISP):**

Commence development of the 2024 ISP and publish and consult on the Draft 2023 IASR.

#### **Engineering Framework**

Deliver prioritised initiatives identified in the initial Engineering Framework Roadmap.

Update the initial Engineering Framework Roadmap to reflect emerging and closed gaps.

### Reform delivery

**WEM reforms:** Progress implementation of WEM reforms.

**WA DER Roadmap:** Progress implementation of WA DER Roadmap.

**Energy Security Board (ESB) reforms:** Progress implementation of ESB reforms.

**Other reforms:** Implement Consumer Data Right – Tranche 1 November 2022, Tranche 2 May 2023.

### Future reform collaboration

**Reform investment pipeline:** In partnership develop and update as required a 3-5 year Regulatory and IT Implementation Roadmap.

**ESB reform development:** Work with ESB and industry to submit advice on agreed mechanisms.

**WEM – ETS:** Work with EPWA to submit advice on the scope and approach for the next stage of ETS.

### Grid Connections

**Connections Reform Implementation (CRI) Roadmap:** Deliver key initiatives identified in the CRI Roadmap, that was co-developed with the Clean Energy Council.

### AEMO Services (ASL) Consumer Trustee

**ASL:** Finalise the establishment of ASL, mature to full operations and deliver requirements under the EII Act for NSW



# Draft Deliverables 2022/23

## 3 Engaging our stakeholders

### Exceeding stakeholder expectations

**Engagement systems:** Embed a systematic way to listen to our members /stakeholders and act on their feedback.

**Transparency/cooperation:** Enhance our understanding of industry participants via active engagement and collaboration.

**Co-design/collaboration:** Co-design the ISP Engagement Strategy with the ISP Consumer Panel and other stakeholders.

**Member/participant experiences:** Make AEMO easier to do business with, through high-quality experiences and valuable interactions.

### Communications

Simplify communication to broaden the audience.

Increase the use of visual communications tools and methods.

Modernise external communication to be more visual, clear and engaging.

### Jurisdictional support

**Engagement and transparency with jurisdictions:** Ensure systematic and timely dissemination of information.

**Support for ASL:** Support the integration of ASL into AEMO to ensure efficient and economic outcomes for jurisdictions and members.

**Operating model for support:** Ensure our operating model and cost recovery mechanisms support jurisdictions and functions are delivered as required by governments at no cost or impact to core obligations.

# Draft Deliverables 2022/23

## 4 Evolving the way we work

### Purpose, vision and values

Deliver a culture change roadmap that communicates a shared understanding, and engages our people to deliver AEMO's purpose, vision, and values.

Establish a program to review internal documents for alignment, prioritising those inclusive of decision-making criteria.

### Talent, capabilities and culture

#### **Talent and Capabilities:**

Diagnose and build the capabilities, talent and resourcing required to deliver our obligations as the energy market transitions.

Further mature AEMO's Diversity, Equity and Inclusion.

**Culture:** Ensure that AEMO develops and maintains a great culture aligned to AEMO's vision and purpose.

### Efficiency and effectiveness

#### **Systems/ tools / processes:**

Transform our processes, systems and digital tools to improve business foundations and capacity.

Build internal capability to deliver ongoing efficiency and effectiveness, and drive innovation.

**Operating model:** Review operating model to deliver value opportunities.

**Convergence / consistency:** Build convergence and consistency across the East and West coast.

### Financial health

#### **Cost and Recovery:**

Establish cost and fee outcomes that deliver cost recovery annually and a pathway to recover historically accumulated deficits.

Agree the NEM Post 2025 fee recovery structure with all relevant stakeholders.

**Debt Funding:** Expand our commercial debt facility to enable funding of reform and operational investments.

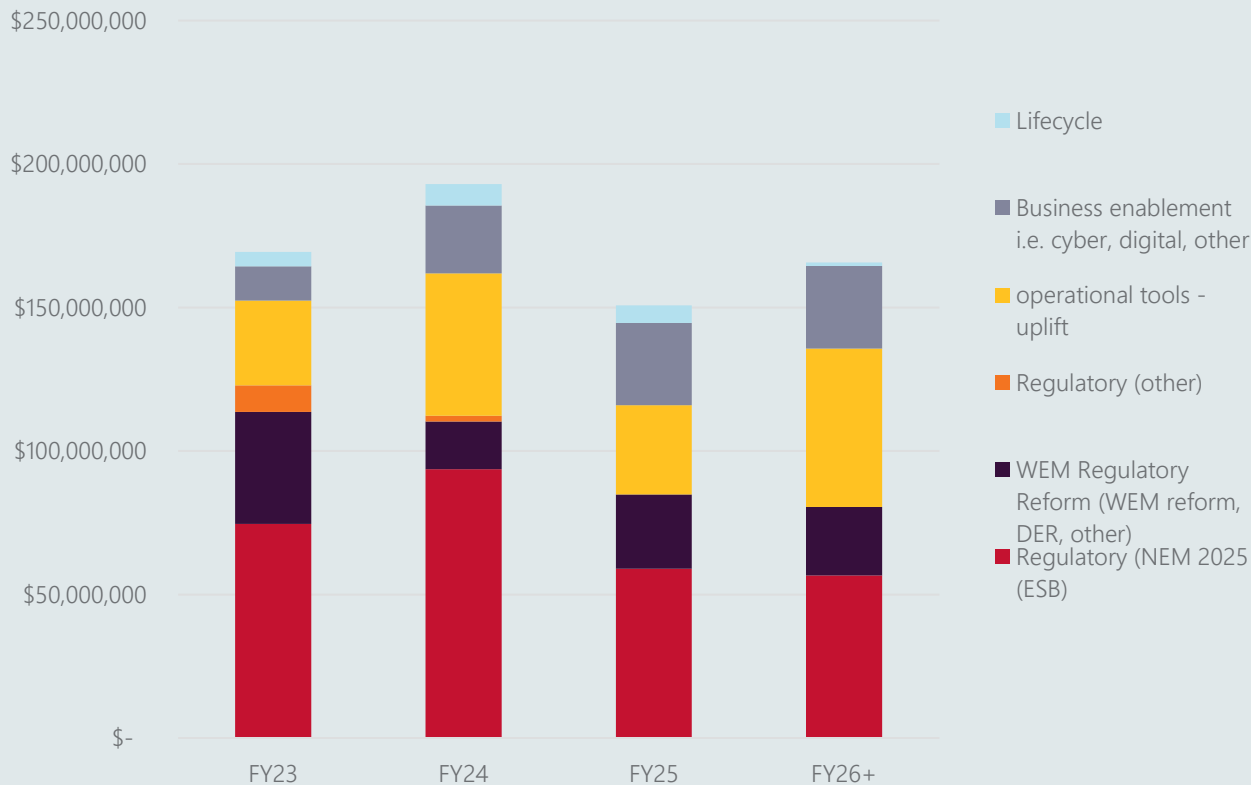
**Financial Acumen:** Drive financial acumen to improve the financial health of the business.

# Draft Capital Program 2022/23

Violette Mouchaileh, EGM Reform Delivery

# Draft Capital Program 2022/23

Draft potential capital portfolio



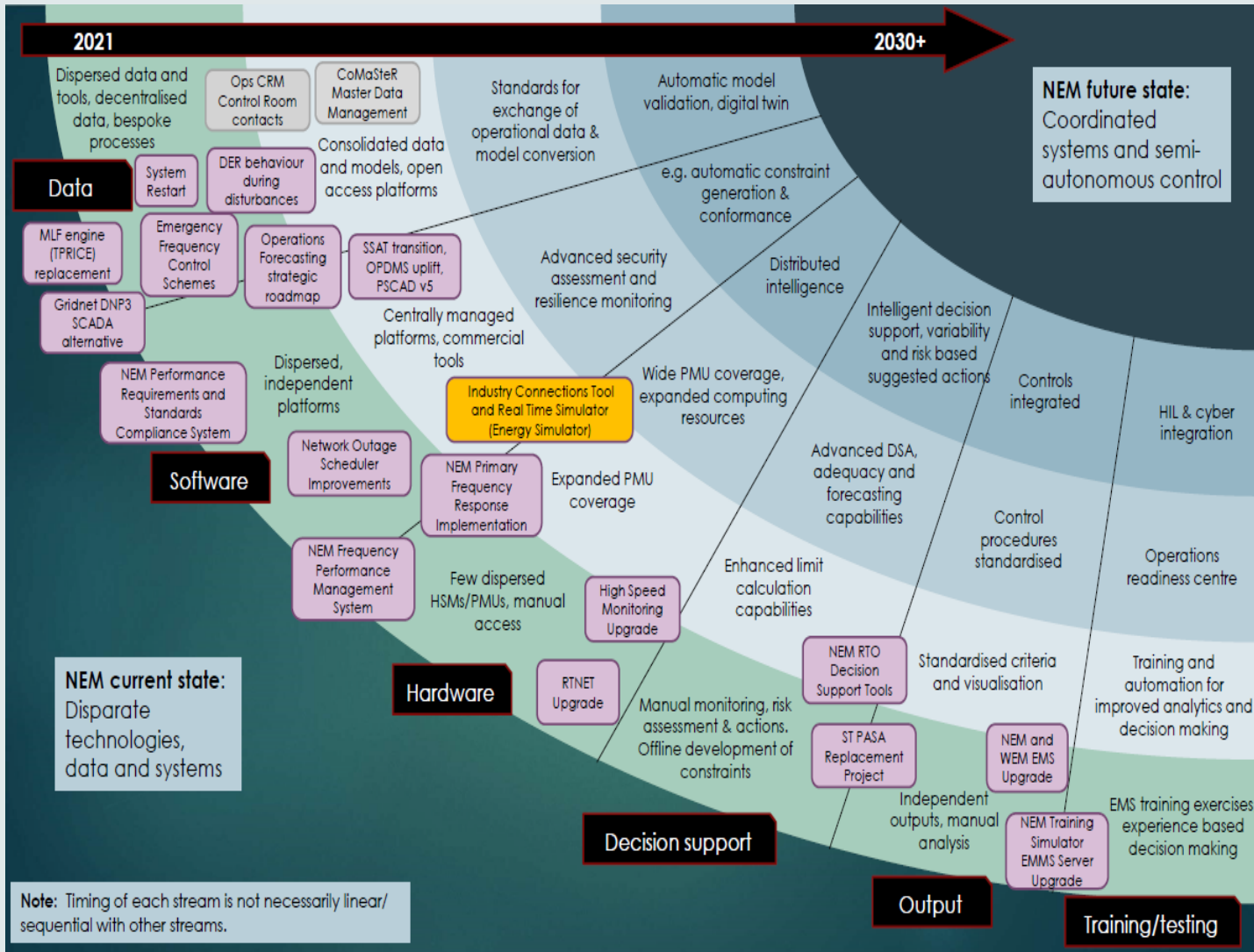
- 2021/22 saw AEMO in partnership with the industry deliver, and progress, a significant reform agenda.
- As the energy transition gathers pace, the forward investment expenditure reflects:
  - A material energy reform program (i.e. WEM reforms, ESB reforms, and other regulatory change.)
  - Capability uplift in system operator tools to manage a more complex and changing power system and digital investment (i.e. cyber).
  - Technology life-cycle refresh.
- These represent draft projections and require further work to develop an integrated portfolio pipeline. We are currently developing an Technology Roadmap, and in partnership with the industry through the Reform Delivery Committee developing an integrated Regulatory & IT Roadmap (discussed further below).
- The outputs will be reflected in the updated investment projections presented to the FCC in April 2022.

# NEM – 2025 Reforms

- National Cabinet approved the ESB reform recommendations on 29 October.
  - ESB and market bodies tasked with delivery of program of reforms.
  - Data strategy, essential systems services and distributed energy resource reforms to progress through to implementation.
  - ESB tasked to do further work on a capacity mechanism and congestion management model by end 2022. These have not been included in capital program.
- Initial cost estimates, reviewed by EY, have been developed for these reforms. Projects include:
  - “core projects” - directly relate to ESB recommendations
  - Pre-requisite projects – needed to support the delivery of one or more ESB recommendations. Some, not all, of the capability uplifts in operational tools has been identified as pre-requisite projects.
- We are working with the Reform Delivery Committee to review scope and timing of initiatives.

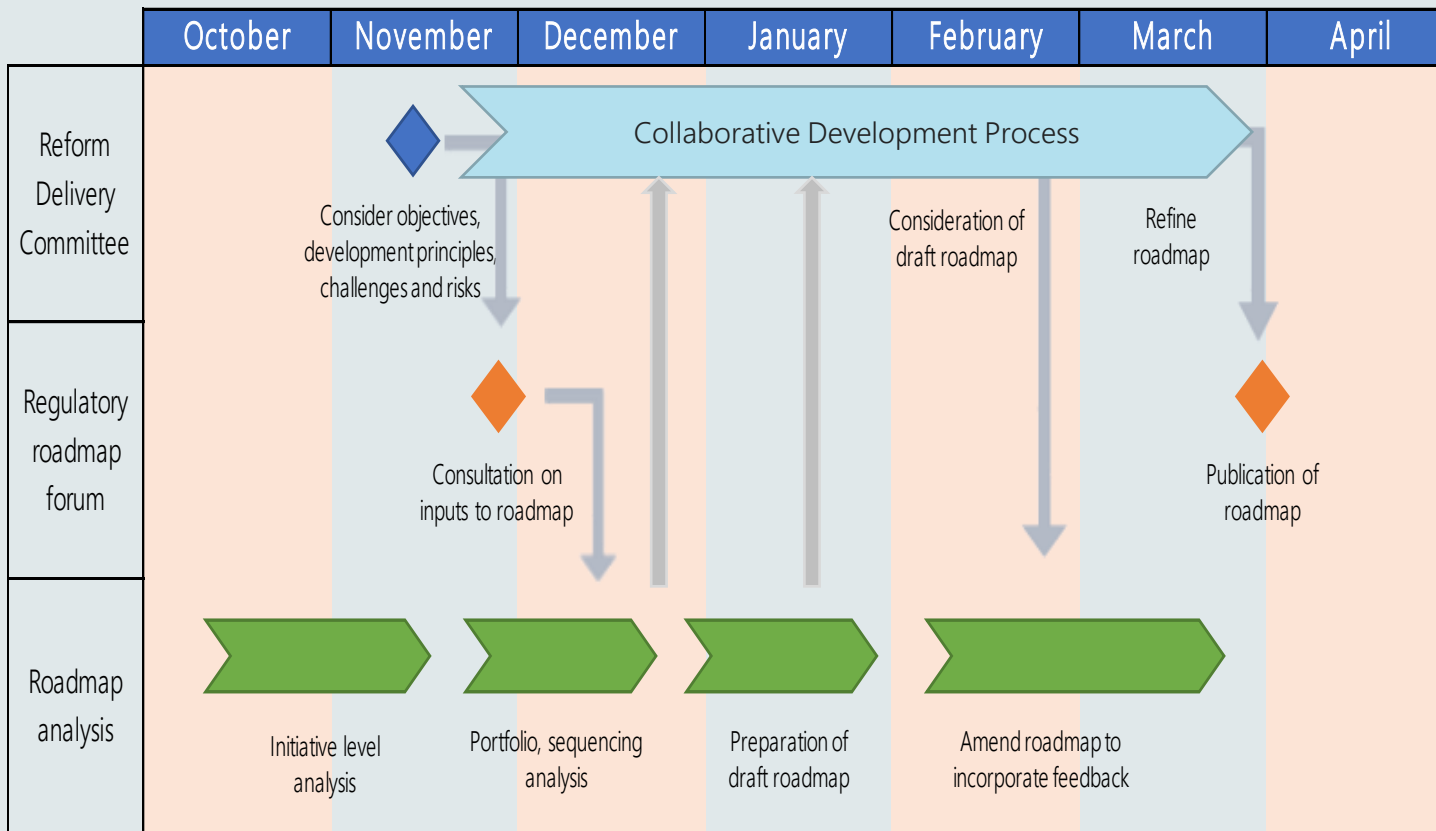
Reform Workstream	Projects
Essential System Services	<ul style="list-style-type: none"> <li>• Primary Frequency Control and incentives</li> <li>• Fast Frequency Response market</li> <li>• Operating Reserves</li> <li>• System Services market (UCS and SSM)</li> <li>• Uplift across forecasting platform, dispatch processes, bid/offer arrangements, and constraint management.</li> </ul>
Distributed Energy Resources	<ul style="list-style-type: none"> <li>• Integrating Energy Storage Systems</li> <li>• Flexible trading arrangements</li> <li>• Scheduling lite</li> <li>• Dynamic operating envelopes</li> <li>• Distribution/local services</li> <li>• Turn-up services for minimum system load</li> <li>• DER platform registry services</li> <li>• Market and system operator integration</li> <li>• Uplift across identity and access management, industry data exchanges, MSATS arrangement.</li> </ul>
Resource Adequacy Mechanisms	<ul style="list-style-type: none"> <li>• Increased MT PASA information</li> </ul> <p><i>Note: capacity mechanism not included in capital program. Awaiting Ministerial decision].</i></p>
Transmission and access	<p><i>Note congestion management mechanism has not been included in capital program. Awaiting Ministerial decision.</i></p>
Data Strategy	<ul style="list-style-type: none"> <li>• Data Services</li> <li>• Bill transparency</li> <li>• EVs in DER Register</li> </ul>

# Uplifting the tools used by the system operator



- The Engineering Framework identified significant change required to securely and efficiently transition to new operating conditions and prepare the power system for the futures envisioned by the Integrated System Plan.
- To support these futures, an uplift in our system operational tools will be required.
- To inform this, we have partnered with EPRI and G-PST to review our operational tools which includes:
  - Snapshot of existing technology used here and abroad
  - strategic development in different control rooms
  - Identifying needs and roadmaps associated with these.
  - benchmarking
- Provision has been made to enable this. Initial priorities for the first horizon have been identified (refer to figure).
- As noted previously, further work is required as part of the Technology Roadmap, which will be reflected in updates provided to the FCC in April 2022.

# Collaboration with industry to develop a Regulatory & IT Implementation Roadmap to enable cost effective delivery



- Key enabler for reforms is changes to IT systems and business processes across AEMO and the industry.
- Working collaboratively with the industry to develop an Regulatory & IT implementation Roadmap (Roadmap).
- The objective of the Roadmap is to enable careful planning for the delivery of reforms, avoid unnecessary or duplicative costs, and identify where strategic investments can be made to deliver efficient outcomes for AEMO, market participants and consumers.
- The Roadmap can be used by all stakeholders to assist in navigating the reforms over the coming few years, de-risk delivery and to inform regulatory implementation timings.
- To inform this, and consider broader system operation and market operation requirements, AEMO is developing a whole of IT system target architecture.
- AEMO has established a Reform Delivery Committee to progress this important work with industry to deliver a baseline Roadmap by Quarter 1 2022. Members of Committee nominated via associations.

# Draft Budget 2022/23 Discussion

Julie Williams, EGM Finance



# General Discussion

Tony Chappel, EGM Corporate Affairs



# Next meeting and any other business

Julie Williams, EGM Finance





**AEMO**

AUSTRALIAN ENERGY MARKET OPERATOR