

Please note that the information presented in this document was developed to enable discussion at the Finance Consultation Committee and is a draft subject to final review



# Draft FY23 Budget & Fees, and NEM 2025 Reform

## Presentation to Finance Consultation Committee

29 April 2022



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

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

# Agenda

1. Introduction & Welcome
2. Draft FY23 Budget and Fees
3. NEM 2025 Reform Program – Declared NEM Project Consultation
4. General Discussion and Questions

# Summary

- AEMO has under-recovered its costs and run sustained operational deficits for NEM core operations in recent years, accruing a deficit of ~\$104m. This is not sustainable to continue.
- To reduce costs, AEMO has taken, and is continuing to implement actions to identify, quantify and reduce costs and drive effectiveness in operations. At the same time, AEMO needs to invest in core operations to ensure the safe, reliable and affordable energy system Australians expect.
- BCG has benchmarked AEMO against other system operators, finding:
  - i. AEMO's core costs are low compared to peers, and
  - ii. AEMO is underinvesting in some critical, central functions.
- In consultation with stakeholders, AEMO has produced a Corporate Plan to deliver on its obligations and priorities, noting the significant work required to ensure Australia has a capable system and market operator to help navigate a critical period in the Australian energy transition.
- The Corporate Plan drives AEMO's draft 2022/23 Budget, along with a set of principles appropriate to a non-profit entity. AEMO can not continue to operate with an annual deficit. Deficits accumulated also need to be recovered. The aim is for revenues to match costs for each function.
- Having engaged on these principles and issues with AEMO's Finance Consultation Committee (FCC), which includes representatives from industry and government members and consumers, AEMO is proposing to increase NEM Core fees for FY 23 to:
  - Eliminate annual operating losses;
  - Recognise some costs have risen due to the increasing complexity in delivering core obligations; and
  - Commence recovery of accumulated losses from recent years.
- AEMO is committed to improving efficiency in delivering our core functions, and ongoing transparency on our activities and costs.

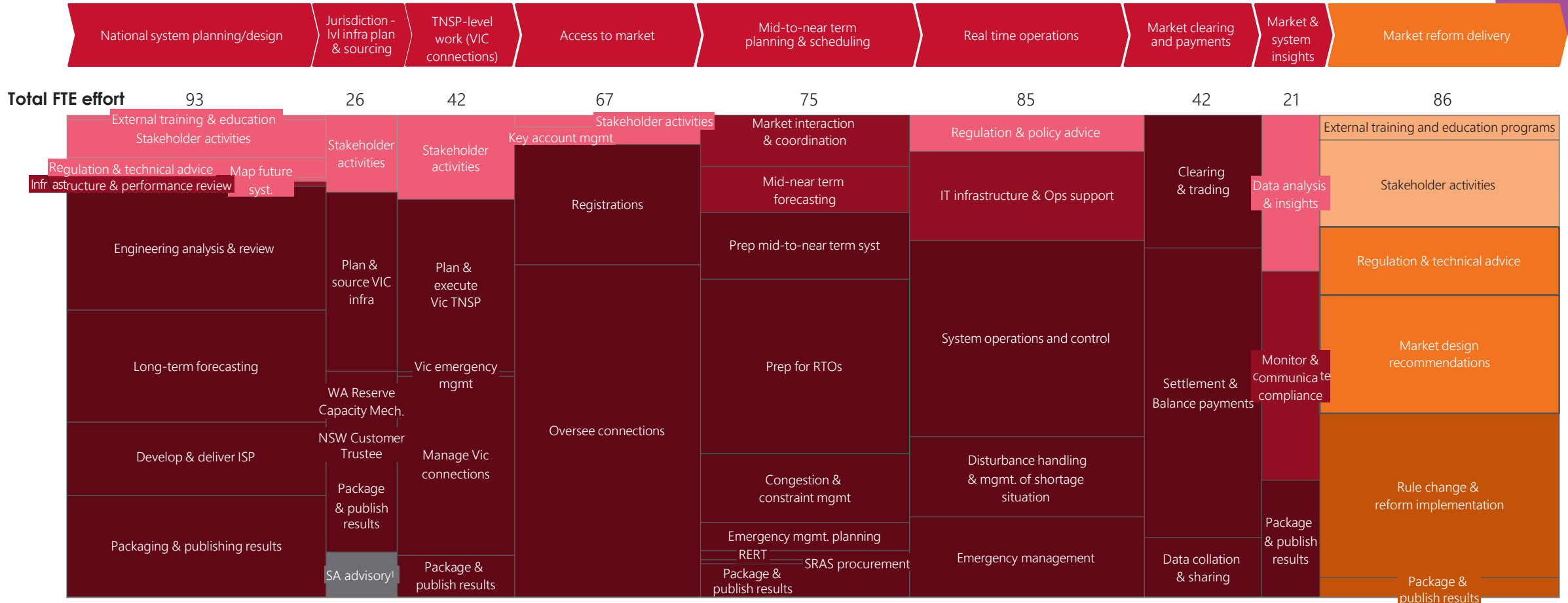
# BCG Benchmarking Assessment

- AEMO engaged BCG to assess organisational effectiveness and efficiency through two primary streams:
  - 1) a review of AEMO's operating model and;
  - 2) an analysis of how AEMO's effort is deployed.
- BCG compared the efficiency of different components of AEMO's activities against a range of external comparators.
- Approximately 2/3 of AEMO's effort and 1/2 AEMO's totex are dedicated to core/support activities. Within this:
  - AEMO's core activities are, in the majority, well-directed against its mandate and costs are comparable with peers
  - AEMO's support function effort is at the low end of benchmarks
  - AEMO's digital "run-the-business costs" are well above comparators, in part due to legacy tech debt.
- The remaining 1/3 of AEMO's effort and 1/2 of AEMO's totex are dedicated to business change and implementation of market reform. A separate deep-dive module looked at how AEMO could transform it's set-up for delivering change.
- The review established four main recommendations:
  - Re-align operating model for greater clarity and accountability
  - Transform the way AEMO governs, funds, and executes reform delivery
  - Build the basics in corporate support functions to improve effectiveness and modernise digital 'run-the-business' activities to redeploy cost
  - Invest in models/tools and rewire processes to manage increased complexity in core activities.

# Majority of core activity traceable to mandate

Core 'run' activities 451 FTE<sup>2</sup>

Change 86 FTE<sup>2</sup>

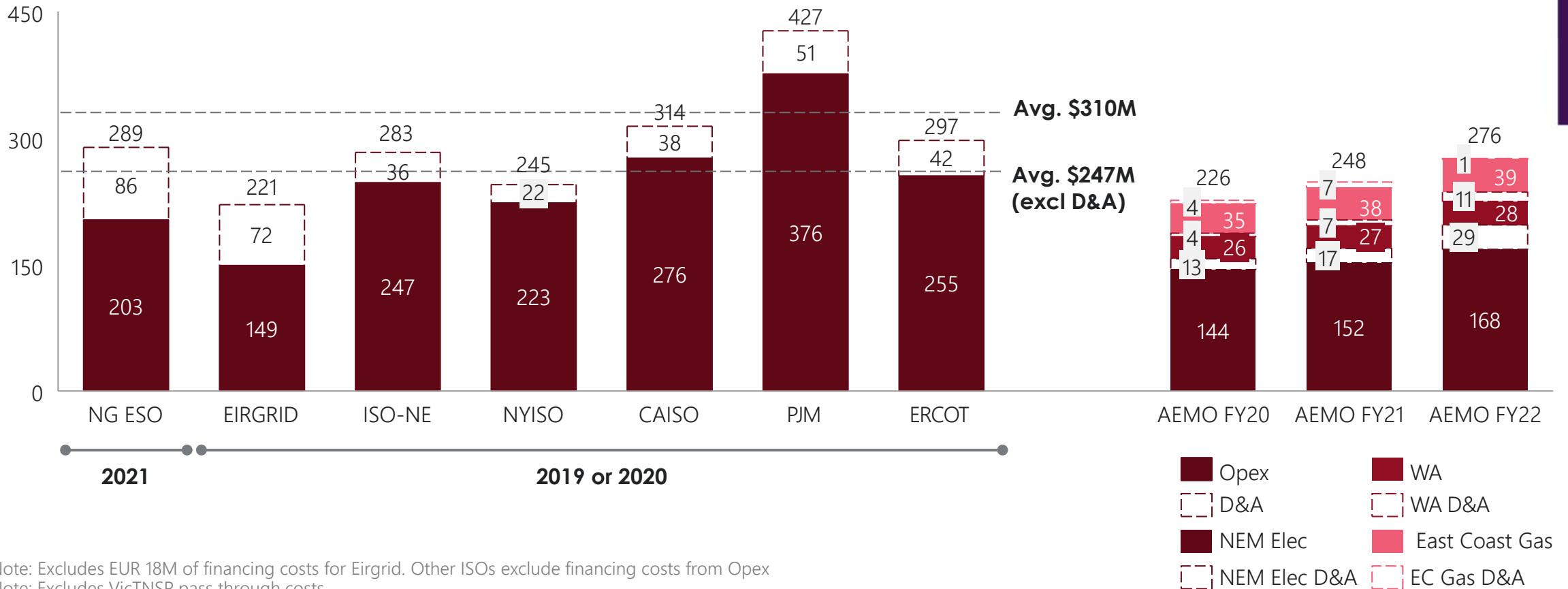


■ Mandated activity (national or jurisdictional)<sup>2</sup>  
■ 82% of core 'run' FTE effort
 ■ Enablement activity  
■ 8% of core 'run' FTE effort
 ■ Enhancement activity  
■ 10% of core 'run' FTE effort
 ■ 41% of change FTE effort
 ■ 39% of change FTE effort
 ■ 20% of change FTE effort

1. SA Advisory work is contracted, cost-recovered ~2.4 FTE (0.5% of core 'run' effort). 2. Overtime not included.  
 2. Mandatory obligations are prescribed by different mechanisms, depending on national or jurisdictional requirements / projects  
 Source: AEMO Activity Based Understanding Survey 9 Aug 2021, N = 66; AEMO Employee data 24 June 2021; AEMO website; AEMO services catalogue; Team analysis

# AEMO total operating expenses at low end of peer range

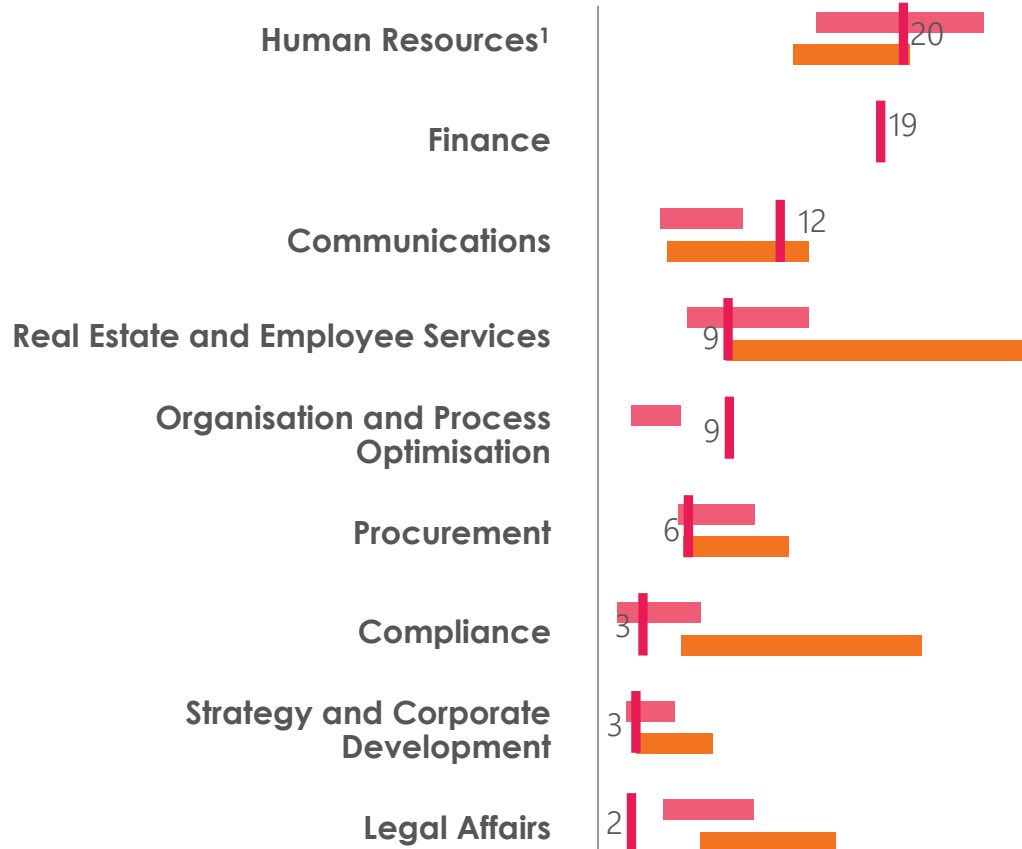
AUD \$M p.a.



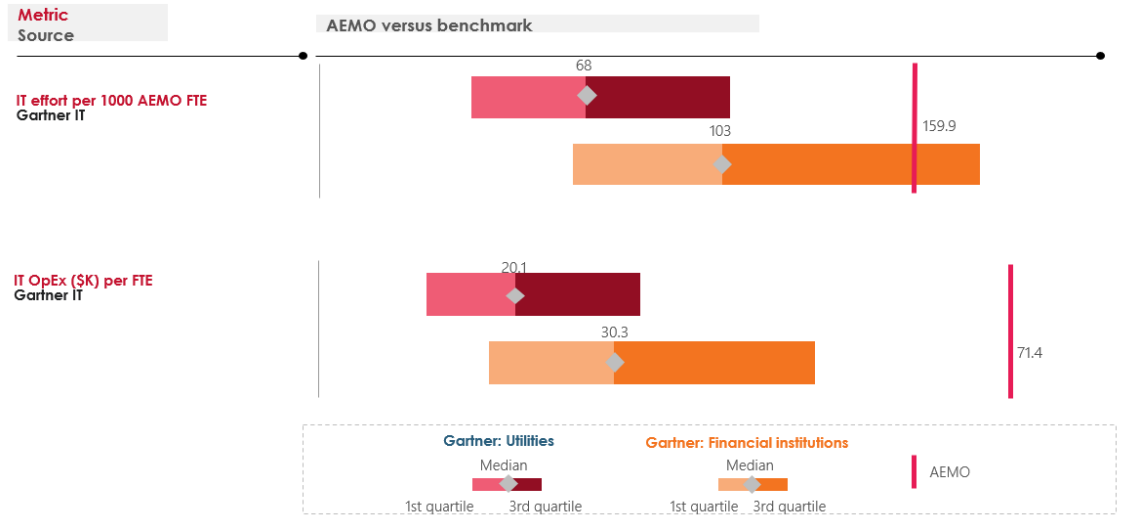
Note: Excludes EUR 18M of financing costs for Eirgrid. Other ISOs exclude financing costs from Opex  
 Note: Excludes VicTNSP pass through costs  
 FX rates applied are 1 USD = 1.45 AUD, 1 GBP = 1.83 AUD, 1 EUR = 1.6 AUD  
 Source: Annual reports, AEMO Analysis, Team analysis

# Support function costs at low end of benchmark range

AEMO versus benchmark (FTE per 1,000 FTE), effort across the organisation



## Digital 'run-the-business' costs higher than benchmarks Substantial Legacy Tech Debt





# Draft Corporate Plan 2022/23

For 2022/23, AEMO is proposing to continue to deliver on 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.

- **System and market operations:** Seasonal analysis and preparation, conduct emergency exercises and training, critical power system risks analysis, power system modelling and state based operational plans.
- **System and market performance insights:** Monitor and report on energy system and market performance. Deliver quality, timely reports and publications.
- **System and market technologies:** Progress the Operational Technology Roadmap. Enhance forecasting, systems and procedures to manage the energy system.
- **Operational resilience:** Implement the **Business Continuity Plan** framework, track actions, identify gaps and seek pre-certification audit. 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.

**2 Energy Transformation:** identify emerging issues, provide technical and economic expertise and support new and ongoing reforms.

- **Future operating conditions:** Integrated System Plan and the Engineering Framework
- **Reform delivery:** including WEM reforms, WA DER Roadmap, ESB reforms and other reforms such as the Consumer Data Right
- **Future reform collaboration:** Develop the Regulatory and IT Implementation Roadmap in partnership with industry and stakeholders
- **Grid connections:** Deliver key initiatives identified in the CRI Roadmap, that was co-developed with the Clean Energy Council.
- **AEMO Services (ASL):** Finalise the establishment of ASL, mature to full operating and delivery requirements under the EII Act for NSW

# Draft Corporate Plan 2022/23 cont'

## 3 Engaging our stakeholders: to be more transparent, efficient and customer focused.

### Exceeding Stakeholder expectations

- **Engagement systems:** Embed a systematic way to listen to our members /stakeholders and act on their feedback.
- **Transparency/collaboration:** Enhance our understanding of industry participants via active engagement and collaboration.
- **Member/participant experiences:** Make AEMO easier to do business with, through high-quality experiences and valuable interactions.

### Communications

- Simplify communication to broaden the audience and modernise 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

## 4 Evolving the way we work: to become a more efficient, leaner, stakeholder and customer-focused business with clear accountabilities.

- **Purpose, visions and values:** Deliver a culture change roadmap that communicates a shared understanding, and engages our people to deliver AEMO's purpose vision, and values.
- **Talent and capabilities:** Diagnose and build the capabilities, talent and resourcing required to deliver our obligations as the energy market transitions.
- **Efficiency and effectiveness:** 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. Review our operating model. Build convergence - East/West.

### Financial Health

- **Cost and Recovery:** Establish cost and fee outcomes that deliver cost recovery annually and a pathway to recover historically accumulated deficits.
- **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.

# Financial Principles

- As a non-profit entity, AEMO can not continue to operate with ongoing annual deficits. Deficits that have been accumulated over prior years also need to be recovered. The aim is not to turn a profit, but simply for revenues to match costs in each of our functions.
- AEMO's proposed financial principles guide the development of the budget and forecast.
- These principles include:
  - Demonstrate efficiency & cost-effective delivery
  - Full recovery of operating expenditures across entities – not-for-profit & not-for-loss
  - New investment programs to have accepted funding pathway prior to proceeding
  - Debt to assets ratio to remain under 100 percent
  - Liquidity ratio to remain above 50 percent
  - Transparent ringfencing of participant and member funds by function
  - No appetite or tolerance for financial/funding risk in relation to contracted activities
  - Where possible, facilitate the efficient pass through of AEMO costs to consumers (e.g. DMO, VDO, network pass throughs)

# AEMO

## Draft FY23 Budget and Fees

- What has changed since March – FY22 Forecast and FY23 Budget
- Draft FY23 Budget – revenue, opex, capex
- Updated Debt profile
- Updated segment profiles
- Sensitivity analysis

# FY22 Forecast Update – \$9M improved cost forecast offset by adverse shift in Settlement Residue

AEMO Enterprise	FY22 Forecast		
	4-Mar	29-Apr	Var
<b>REVENUE</b>			
Fees and Tariffs	251.3	251.9	0.7
PCF Fees	1.0	1.0	(0.0)
Connections Revenue	33.0	30.8	(2.2)
Other Revenue	23.2	12.7	(10.5)
<b>Net Revenue</b>	<b>308.4</b>	<b>296.3</b>	<b>(12.1)</b>
<b>OPERATING EXPENDITURE</b>			
Labour	(178.5)	(174.0)	4.4
Consulting	(15.0)	(15.3)	(0.3)
IT & Telecommunications	(60.2)	(56.9)	3.3
Other Expenditure	(39.4)	(38.3)	1.1
Depreciation and Amortisation	(45.8)	(45.8)	0.0
Borrowing costs	(1.8)	(1.8)	0.0
<b>TOTAL EXPENDITURE</b>	<b>(340.6)</b>	<b>(332.0)</b>	<b>8.6</b>
<b>ANNUAL SURPLUS/DEFICIT</b>	<b>(32.2)</b>	<b>(35.7)</b>	<b>(3.5)</b>
<b>Accumulated Surplus/Deficit</b>	<b>(62.5)</b>	<b>(66.0)</b>	<b>(3.5)</b>

## Key drivers of Variance between Forecasts

**Net Revenue** – the latest forecast is down \$12M on the forecast shown in early March. This is mainly driven by a drop in Settlement Residue revenue due to lower pool prices and increased transmission counter-price flows from NSW into Victoria.

**Total Expenditure** – the forecast has improved by \$8.6M due a combination of:

- Gross labour savings from rephasing new starters
- Reductions in Software Support costs (IT&T)
- Unrealised training and travel costs (Other)

Other initiatives are in train to further reduce costs in order to get expenditure back to Budget, including:

- Final reviews of labour capitalisation
- Reduction in cloud costs

# FY23 Budget Update – labour costs reduced, but additional D&A, borrowing costs and initiatives requiring consulting spend

AEMO Enterprise	FY23 Budget		
	4-Mar	29-Apr	Var
<b>REVENUE</b>			
Fees and Tariffs	377.1	374.0	(3.1)
PCF Fees		0.1	0.1
Connections Revenue	40.7	34.6	(6.1)
Other Revenue	32.1	42.9	10.8
<b>Net Revenue</b>	<b>449.9</b>	<b>451.5</b>	<b>1.6</b>
<b>OPERATING EXPENDITURE</b>			
Labour	(218.0)	(209.2)	8.8
Consulting	(23.9)	(31.8)	(7.9)
IT & Telecommunications	(69.3)	(71.5)	(2.2)
Other Expenditure	(37.1)	(42.5)	(5.5)
Depreciation and Amortisation	(66.0)	(69.0)	(3.1)
Borrowing costs	(2.3)	(6.7)	(4.4)
<b>TOTAL EXPENDITURE</b>	<b>(416.5)</b>	<b>(430.7)</b>	<b>(14.3)</b>
<b>ANNUAL SURPLUS/DEFICIT</b>	<b>33.4</b>	<b>20.7</b>	<b>(12.7)</b>
<b>Accumulated Surplus/Deficit</b>	<b>(29.3)</b>	<b>(45.6)</b>	<b>(16.3)</b>

## Key drivers of Variance between Budgets

**Net Revenue** – the Budget has improved by \$1.6M with the following key changes:

- Fees and Tariffs lower reflecting a slightly smaller year one increase in NEM Core and a reallocation of Gas Bulletin Board (GBB) charges to other revenue
- Connections revenue outlook down \$6.1M
- Other revenue is up due to higher Vic TNSP net revenue, revenue from the Connections Reform recoveries and inclusion of GBB revenue.

**Total Expenditure** – Budget costs rise by \$14.3M due a combination of:

- Gross labour savings from efficiency drive especially in Digital team
- Consulting increases include Operational reviews of power system, development of Connections Reform Initiative, and enhancing our Cyber capabilities; many of these are regulatory driven or funded separately
- IT&T increases including cloud cost increases to support new Connections Tool and some increases in Software Support Contract costs
- Other cost increases include additional costs to store 180TJ of gas (vs 60TJ today; Norwest FRC), and temporary costs associated with relocating offices
- D&A costs are higher due earlier assumed implementation of digital enhancements
- Borrowing cost increases reflect expected increase in interest rates

# Draft FY23 Budget by segment

Segment Annual Financial Surplus/(Deficit) (\$ Million)	Actual 2020/21	Forecast 2021/22	Budget 2022/23	Estimate 2023/24	Estimate 2024/25	Estimate 2025/26	Estimate 2026/27
<b>NEM</b>							
Revenue	148.9	199.3	311.7	344.5	391.2	415.3	433.4
Expenditure	(167.9)	(213.8)	(280.7)	(305.4)	(358.0)	(401.7)	(443.2)
Annual Surplus /(Deficit)	(19.0)	(14.6)	31.0	39.1	33.2	13.6	(9.8)
Accumulated Surplus / (Deficit)*	(84.9)	(100.7)	(70.0)	(31.1)	1.8	15.3	5.2
<b>East Gas</b>							
Revenue	43.0	44.6	47.0	47.6	48.0	49.5	53.7
Expenditure	(42.8)	(42.9)	(53.0)	(50.8)	(51.7)	(53.1)	(56.7)
Annual Surplus /(Deficit)	0.2	1.7	(6.0)	(3.2)	(3.7)	(3.7)	(3.0)
Accumulated Surplus / (Deficit) **	25.8	27.5	21.5	18.2	14.5	10.8	7.8
<b>WA</b>							
Revenue	34.6	35.0	44.5	57.4	63.7	66.8	77.6
Expenditure	(33.9)	(42.2)	(45.8)	(56.9)	(63.5)	(66.7)	(78.3)
Annual Surplus /(Deficit)	0.7	(7.2)	(1.3)	0.6	0.2	0.1	(0.8)
Accumulated Surplus / (Deficit)	7.6	0.4	(0.9)	(0.4)	(0.2)	(0.1)	(0.9)
<b>Corporate</b>							
Revenue	1.3	2.8	1.6	1.7	1.7	1.7	1.8
Expenditure	(1.3)	(2.9)	(0.7)	(1.7)	(1.7)	(1.7)	(1.8)
Annual Surplus /(Deficit)	0.0	(0.1)	0.9	0.0	(0.0)	(0.0)	(0.0)
Accumulated Surplus / (Deficit)	-	(0.1)	0.8	0.8	0.8	0.8	0.8
<b>AEMO Excluding Vic TNSP</b>							
Revenue	227.8	281.6	404.8	451.1	504.6	533.3	566.4
Expenditure	(245.9)	(301.7)	(380.3)	(414.7)	(475.0)	(523.2)	(580.0)
Annual Surplus /(Deficit)	(18.1)	(20.2)	24.6	36.4	29.6	10.0	(13.6)
Accumulated Surplus / (Deficit)*	(51.4)	(72.8)	(49.4)	(13.2)	16.2	26.0	12.1
<b>VicTNSP</b>							
Revenue	46.8	14.8	46.6	48.2	54.1	56.7	59.2
Expenditure	(25.0)	(30.3)	(50.5)	(51.3)	(54.0)	(56.6)	(59.1)
Annual Surplus /(Deficit)	21.8	(15.5)	(3.8)	(3.1)	0.0	0.1	0.0
Accumulated Surplus / (Deficit)*	22.3	6.8	3.0	(0.1)	(0.1)	(0.0)	0.0
<b>AEMO Including Vic TNSP</b>							
Revenue	274.6	296.3	451.5	499.3	558.7	590.0	625.6
Expenditure	(270.9)	(332.0)	(430.7)	(466.0)	(529.0)	(579.9)	(639.2)
Annual Surplus /(Deficit)	3.7	(35.7)	20.7	33.3	29.7	10.1	(13.6)
Accumulated Surplus / (Deficit)*	(29.1)	(66.0)	(45.6)	(12.5)	16.9	26.8	13.0



# AEMO Group (Standalone) – Draft FY23 Budget and 5 Yr. Plan

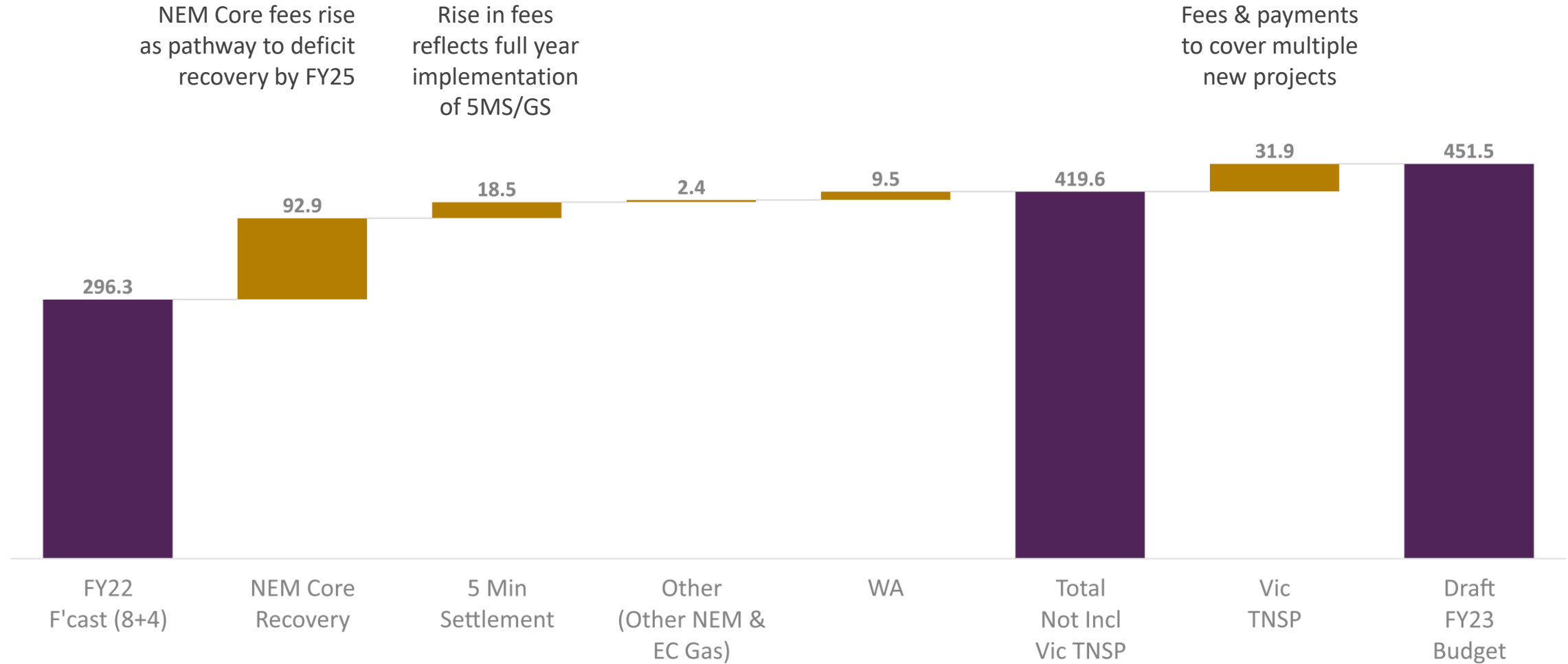


AEMO Enterprise (\$Million)	Actual 2020/21	Forecast 2021/22	Budget 2022/23	Estimate 2023/24	Estimate 2024/25	Estimate 2025/26	Estimate 2026/27
<b>REVENUE</b>							
Fees and Tariffs	201.4	251.9	374.0	419.5	472.2	500.1	532.4
PCF Fees	1.0	1.0	0.1	-	-	-	-
Connections Revenue	24.2	30.8	34.6	35.4	36.3	37.2	38.1
Other Revenue	48.0	12.7	42.9	44.4	50.1	52.7	55.0
<b>NET REVENUE</b>	<b>274.6</b>	<b>296.3</b>	<b>451.5</b>	<b>499.3</b>	<b>558.7</b>	<b>590.0</b>	<b>625.6</b>
<b>OPERATING EXPENDITURE</b>							
Labour	(163.3)	(174.0)	(209.2)	(226.9)	(236.1)	(246.0)	(263.2)
Consulting	(13.1)	(15.3)	(31.8)	(20.7)	(21.2)	(21.7)	(22.2)
IT & Telecommunications	(34.4)	(56.9)	(71.5)	(83.6)	(99.5)	(117.0)	(119.9)
Other expenditure	(30.3)	(38.3)	(42.5)	(42.4)	(43.5)	(45.0)	(46.5)
Depreciation and Amortisation	(29.3)	(45.8)	(69.0)	(82.8)	(117.1)	(138.1)	(171.7)
Borrowing costs	(0.4)	(1.8)	(6.7)	(9.7)	(11.6)	(12.0)	(15.6)
<b>TOTAL EXPENDITURE</b>	<b>(270.9)</b>	<b>(332.0)</b>	<b>(430.7)</b>	<b>(466.0)</b>	<b>(529.0)</b>	<b>(579.9)</b>	<b>(639.2)</b>
Percentage change	9%	23%	30%	8%	14%	10%	10%
<b>ANNUAL SURPLUS / (DEFICIT)</b>	<b>3.7</b>	<b>(35.7)</b>	<b>20.7</b>	<b>33.3</b>	<b>29.7</b>	<b>10.1</b>	<b>(13.6)</b>
PCF Fees Adjustment	(1.0)	(1.0)	(0.1)	-	-	-	-
Land Reserve Adjustment	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)
<b>ACCUMULATED SURPLUS / (DEFICIT)</b>	<b>(29.1)</b>	<b>(66.0)</b>	<b>(45.6)</b>	<b>(12.5)</b>	<b>16.9</b>	<b>26.8</b>	<b>13.0</b>



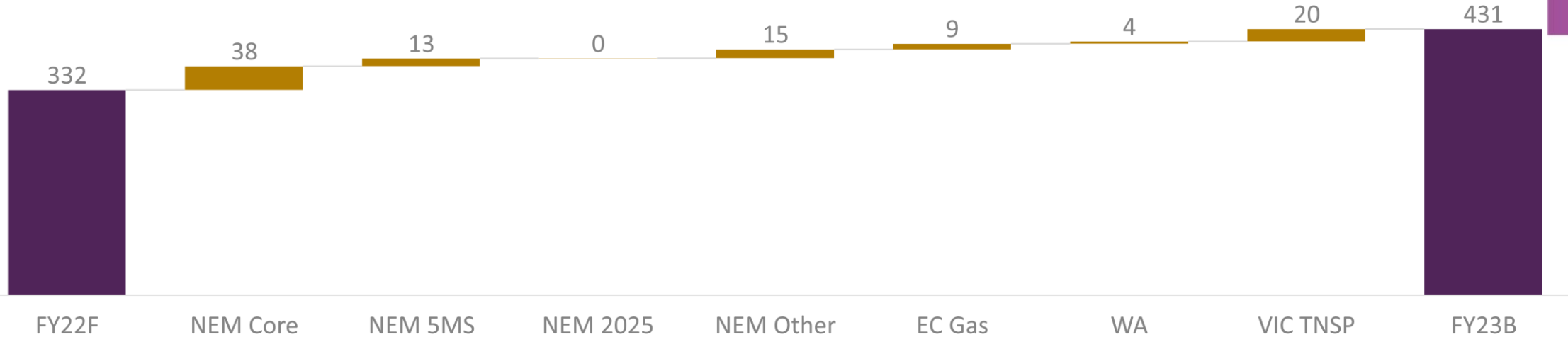
# Overall Revenue – up \$155M (52%) YoY mainly due to NEM Core fee increases to support deficit recovery

AEMO Enterprise Revenue, \$M



# Overall Opex – up \$99M (30%) YoY driven primarily by growth in NEM Core and VIC TNSP

Total expenditure, and YoY growth by segment (\$M)



## NEM

**NEM Core** cost increases include additional labour (direct and indirect) to support change or build capability; a range of consulting including for the Engineering Framework, and for operational studies (e.g. Power System Studies, Control Room Scoping); tech costs on SW support and Cloud; D&A reflecting wider investments; and financing costs

**NEM 5MS** cost increases were D&A and IT

**NEM 2025** costs in FY23 nearly are all capex

**NEM Other** includes the National Transmission Planner, Connection Reform Initiative and new connection tools, DER, FRC Electricity and Consumer Data Platform

## EC Gas & WA

EC Gas increase driven by

- Increase in Norwest FRC costs (60TJ to 180TJ stored)
- Increase in wider labour and tech costs, and to cover D&A

WA cost increase driven by WEM reform going live in October 2023 including labour, financing costs and IT

## VIC TNSP

Cost increases are being driven by Government directed projects and changes including:

- Vic-NSW Interconnector West
- REZ Development Plan
- Western Vic RIT-Transmission

These have led to increases in net labour, consulting and D&A

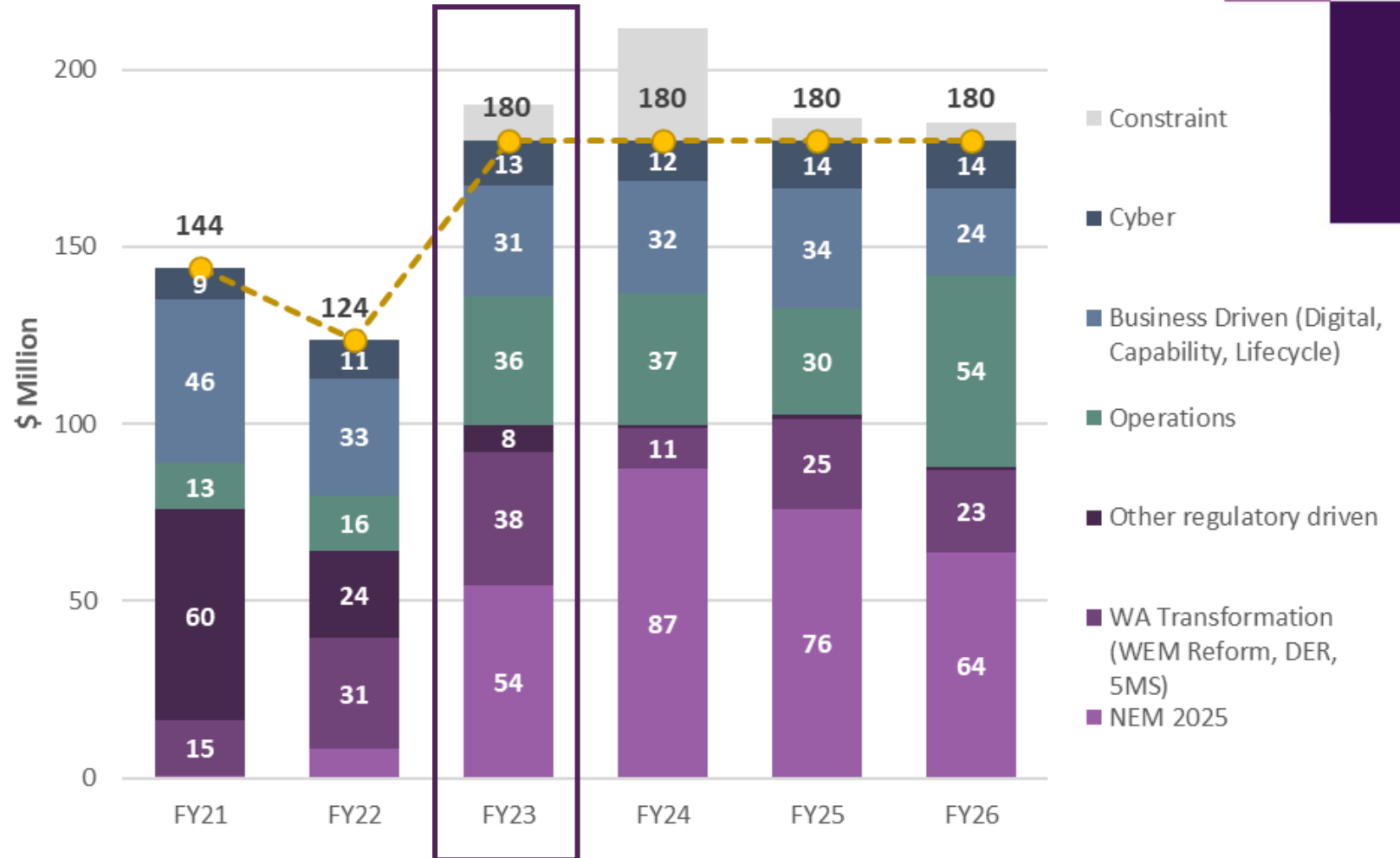
# Overall Capital Expenditure will rise \$56M (45%) YoY largely driven by NEM 2025, and be capped at \$180M until FY26

Total Capex by key project/objective (\$M)

The capital profile has an overall expenditure constraint of \$180m reflecting the business's delivery capacity and goal of demonstrating efficient delivery.

- Draft FY23 budget is currently \$190m unconstrained including carry-over of FY23 underspend.
- From FY23-25 ~\$100m pa of program is regulatory driven (purple segment)
- Remaining~ \$80m pa consists of operational enhancements and business driven projects.
- The portfolio will be subject to another round of prioritisation with further refinement of timing and scope of individual initiatives

The program provides funding to support the energy transition and continued investment in cyber and digital.



# AEMO Debt profile\* is forecast to rise to \$530M in FY23, and to \$660M by FY26, before falling

AEMO Debt Profile by year (\$M)

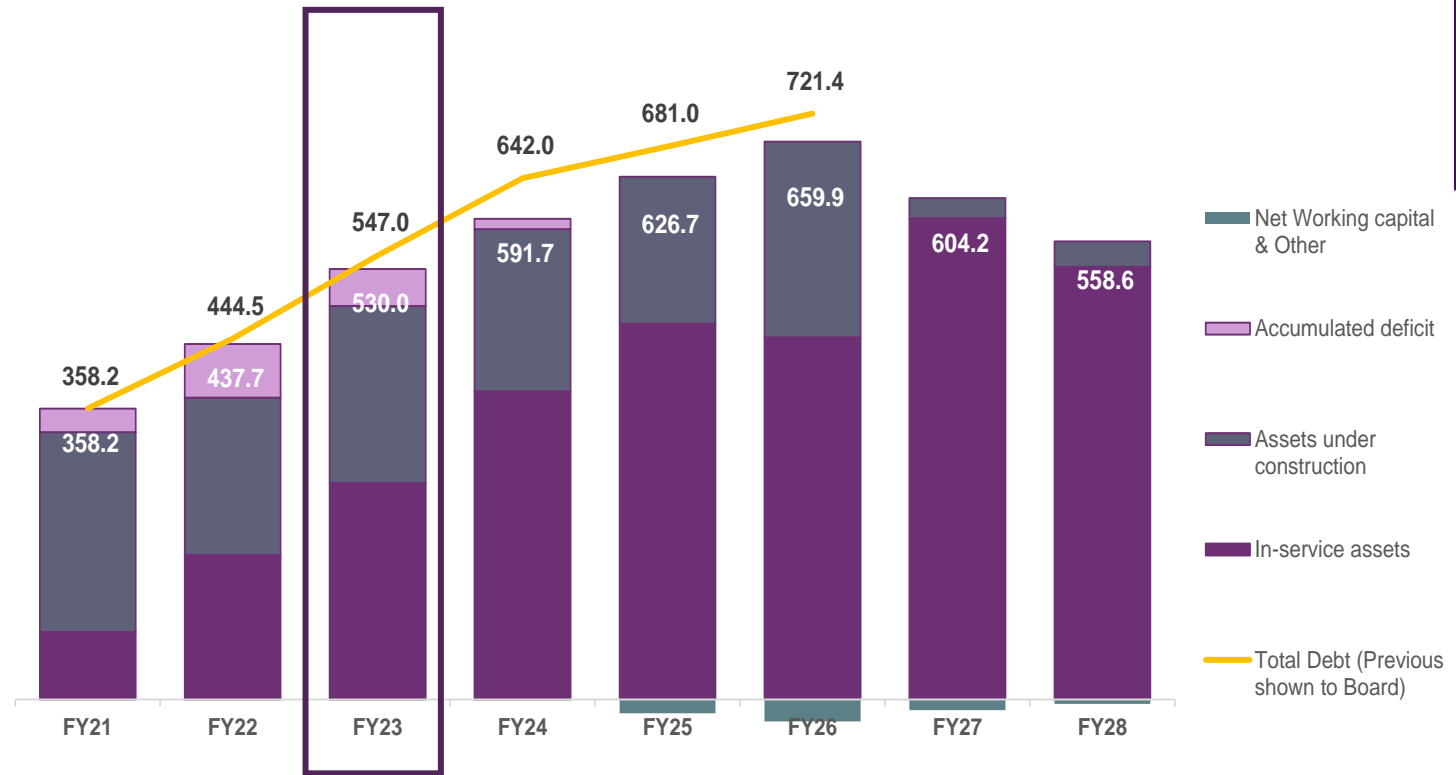
AEMO’s governance model requires:

- capital asset investments to be debt financed upfront by AEMO, which allows participants to pay over the life of the assets through tariffs and fees, and
- operating costs to be recovered annually.

A portion of AEMO’s current debt is funding prior years’ operating cost under recoveries and the FY22 forecast deficit, in addition to AEMO’s ‘in use’ capital assets.

As illustrated in the chart, AEMO’s debt is forecast to increase reflecting continued investment in assets to enable the energy transition. The FY23 Budget base case whereby the NEM Core accumulated deficit is recovered over three years, debt will peak in FY26 at \$660m.

From FY23 onwards AEMO is expected to complete implementation of a number of major investment programs and recover accumulated deficits. Debt will increasingly be used to fund in-service assets



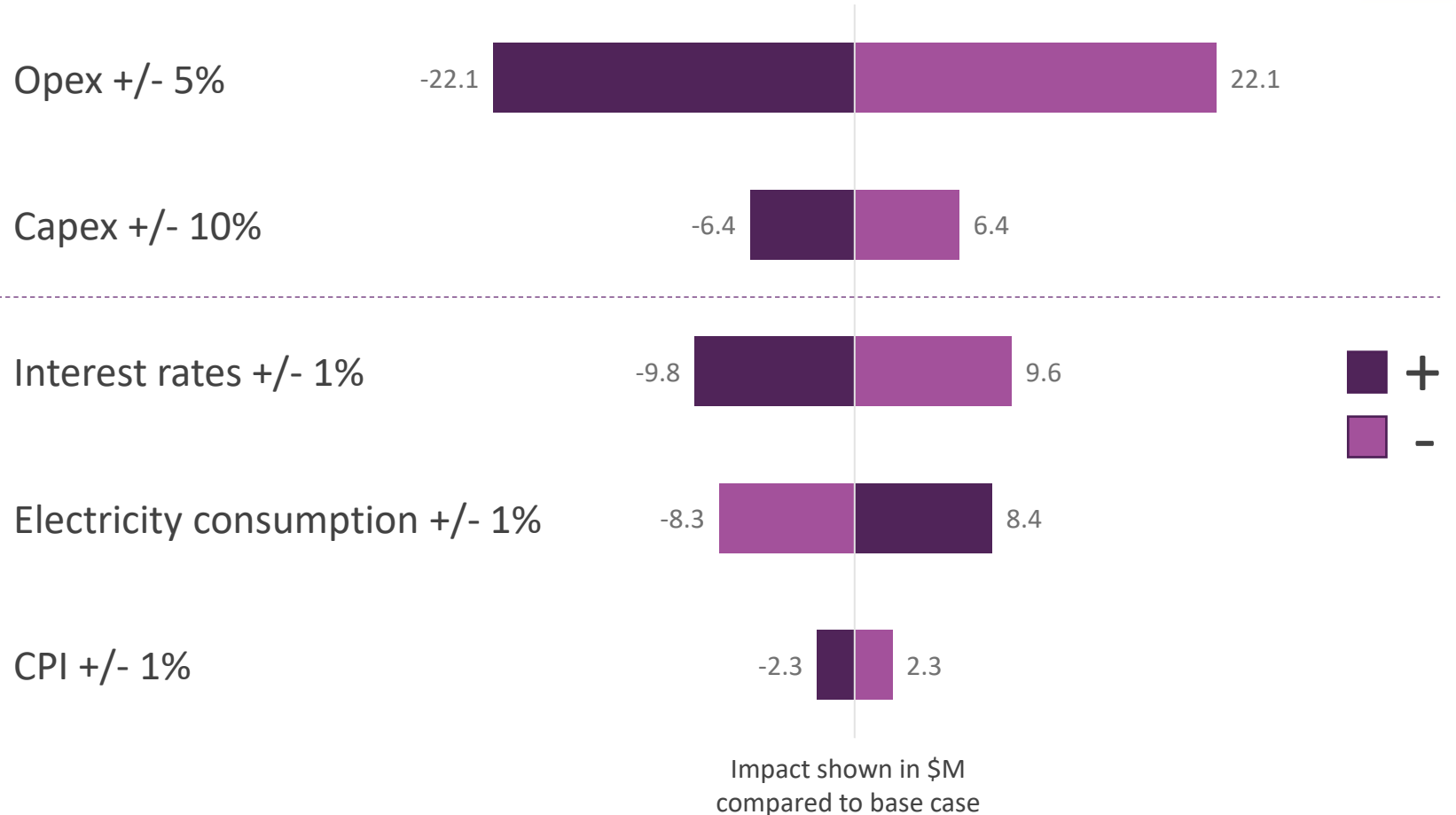
\* Note increases in debt facilities required to support the debt levels assumed in the Budget are subject to review and approval by the AEMO Board

# Managing opex to budget will be key risk to delivering our FY25 surplus/deficit position

Planned opex and capex expenditure is critical to achieve planned surplus in FY25

Changes to Interest rates, Electricity Volumes, and to a lesser extent Inflation has a significant impact on projected FY25 surplus

Accumulated Surplus/Deficit in FY25, AEMO Group (\$M)



# Key Budget Assumptions include a rise in CPI and interest rates in FY23 with a small jump in energy consumption which then shows a steady/slow decline profile longer term

- **Inflation:** Long term inflation consistent with the mid-point of the RBA inflation target of 2% to 3%
- **Interest Rates:** Variable interest rates based on the BBSW forward curve as at April 2020 plus credit margins based on current lending term.
- **Electricity consumption:** Forecast are based on the progressive change scenario of a gradual market driven take-up of electric vehicles an energy efficiency to achieve economy wide net zero by 2050
- **Gas consumption:** Also based on the progressive change scenario which implies reliance on gas over the next decade, with increasing decarbonisation over the long term

Metric	Actual 2020/21	Forecast 2021/22	Budget 2022/23	Estimate 2023/24	Estimate 2024/25	Estimate 2025/26	Estimate 2026/27
CPI	2.0%	2.0%	2.5%	2.5%	2.5%	2.5%	2.5%
Interest rates	1.0%	1.0%	1.91%	3.5%	3.3%	3.3%	3.3%
Electricity consumption pa (GWh) - NEM	176,428	174,346	176,022	174,449	172,208	171,963	172,581
Electricity consumption pa (GWh) - WEM	35,637	35,637	35,637	35,637	35,637	35,637	35,637
Electricity connection points (EOP) (m)	10.36	10.49	10.59	10.72	10.85	10.98	11.11
Gas consumption pa (TJ)	49,262	42,201	47,484	47,009	46,539	46,074	45,613

\* Progressive change scenario has been used within the Electricity NEM consumption data as this provides (i) A more accurate FY 23 forecast; (ii) A more conservative position of the NEM fee increases over the deficit recovery period; and (iii) It's one of 4 scenarios maintained by the Forecasting team.

# NEM Core

- Financial Summary
- NEM Core fee pathway
- Breakdown of NEM Core Opex increases
- Customer impact assessments

# NEM Draft FY23 Budget – fee increases drive \$31M surplus overall

NEM Segment Annual Financial Surplus/(Deficit) (\$ Million)	Actual 2020/21	Forecast 2021/22	Budget 2022/23	Estimate 2023/24	Estimate 2024/25	Estimate 2025/26	Estimate 2026/27
<b>NEM Core</b>							
Revenue	120.1	129.2	222.2	229.9	237.0	233.9	231.9
Expenditure	(141.2)	(150.5)	(188.9)	(190.8)	(204.9)	(223.4)	(242.2)
Annual Surplus /(Deficit)	(21.1)	(21.3)	33.3	39.1	32.1	10.6	(10.3)
Accumulated Surplus / (Deficit)	(81.1)	(103.6)	(70.6)	(31.7)	0.2	10.5	(0.0)
<b>Electricity FRC</b>							
Revenue	13.8	14.2	13.9	13.7	13.5	13.2	16.2
Expenditure	(13.8)	(14.2)	(15.7)	(13.4)	(13.9)	(14.2)	(18.2)
Annual Surplus /(Deficit)	0.0	0.1	(1.8)	0.3	(0.4)	(0.9)	(2.0)
Accumulated Surplus / (Deficit)	2.9	3.0	1.3	1.6	1.2	0.2	(1.8)
<b>5MS/GS</b>							
Revenue	-	24.7	43.1	43.8	44.4	45.4	44.0
Expenditure	3.4	(29.5)	(42.0)	(42.5)	(43.1)	(43.6)	(43.1)
Annual Surplus /(Deficit)	3.4	(4.8)	1.2	1.3	1.2	1.8	0.9
Accumulated Surplus / (Deficit)	(0.0)	(4.8)	(3.6)	(2.3)	(1.1)	0.7	1.6
<b>NEM 2025</b>							
Revenue	-	-	-	20.0	56.1	79.5	97.7
Expenditure	-	(0.3)	(1.0)	(19.7)	(55.5)	(78.6)	(96.7)
Annual Surplus /(Deficit)	-	(0.3)	(1.0)	0.3	0.6	0.9	1.0
Accumulated Surplus / (Deficit)	-	(0.3)	(1.3)	(1.0)	(0.4)	0.5	1.5
<b>Other NEM Entities</b>							
Revenue	15.0	31.2	32.5	37.1	40.3	43.3	43.5
Expenditure	(16.2)	(19.4)	(33.2)	(39.1)	(40.6)	(42.0)	(42.9)
Annual Surplus /(Deficit)	(1.2)	11.8	(0.7)	(2.0)	(0.3)	1.3	0.7
Accumulated Surplus / (Deficit)	(6.8)	5.0	4.3	2.3	1.9	3.2	3.9
<b>NEM Segment Total</b>							
Revenue	148.9	199.3	311.7	344.5	391.2	415.3	433.4
Expenditure	(167.9)	(213.8)	(280.7)	(305.4)	(358.0)	(401.7)	(443.2)
Annual Surplus /(Deficit)	<b>(19.0)</b>	<b>(14.6)</b>	<b>31.0</b>	<b>39.1</b>	<b>33.2</b>	<b>13.6</b>	<b>(9.8)</b>
Accumulated Surplus / (Deficit)	<b>(84.9)</b>	<b>(100.7)</b>	<b>(70.0)</b>	<b>(31.1)</b>	<b>1.8</b>	<b>15.3</b>	<b>5.2</b>



# NEM Core – Labour, IT and D&A drive most of the \$38M YoY growth in cost

NEM Core (\$Million)	Actual	Forecast	Budget	Estimate	Estimate	Estimate	Estimate
	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27
<b>REVENUE</b>							
Fees and Tariffs	98.8	105.6	198.5	205.6	212.1	208.4	205.8
PCF Fees	1.0	1.0	0.1	-	-	-	-
Connections	15.4	19.4	20.7	21.3	21.8	22.3	22.9
Other Revenue	4.9	3.1	3.0	3.0	3.1	3.2	3.3
<b>NET REVENUE</b>	<b>120.1</b>	<b>129.2</b>	<b>222.2</b>	<b>229.9</b>	<b>237.0</b>	<b>233.9</b>	<b>231.9</b>
<b>OPERATING EXPENDITURE</b>							
Labour	(60.2)	(63.9)	(73.6)	(78.2)	(80.9)	(83.6)	(89.9)
Consulting	(2.4)	(2.2)	(5.9)	(2.6)	(2.7)	(2.7)	(2.8)
IT & Telecommunications	(4.8)	(6.5)	(8.0)	(8.2)	(8.4)	(8.6)	(8.8)
Enterprise Recoveries	(57.8)	(61.1)	(80.7)	(78.2)	(83.5)	(91.7)	(94.6)
Other expenditure	(8.4)	(8.6)	(9.0)	(9.7)	(10.2)	(10.8)	(11.5)
Depreciation and Amortisation	(7.6)	(8.1)	(9.0)	(10.7)	(15.8)	(22.5)	(30.2)
Borrowing costs	(0.0)	(0.0)	(2.7)	(3.2)	(3.4)	(3.4)	(4.4)
<b>TOTAL EXPENDITURE</b>	<b>(141.2)</b>	<b>(150.5)</b>	<b>(188.9)</b>	<b>(190.8)</b>	<b>(204.9)</b>	<b>(223.4)</b>	<b>(242.2)</b>
<b>ANNUAL SURPLUS / (DEFICIT)</b>	<b>(21.1)</b>	<b>(21.3)</b>	<b>33.3</b>	<b>39.1</b>	<b>32.1</b>	<b>10.6</b>	<b>(10.3)</b>
PCF Fees Adjustment	(1.0)	(1.0)	(0.1)	-	-	-	-
Land Reserve Adjustment	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)
<b>ACCUMULATED SURPLUS / (DEFICIT)</b>	<b>(81.1)</b>	<b>(103.6)</b>	<b>(70.6)</b>	<b>(31.7)</b>	<b>0.2</b>	<b>10.5</b>	<b>(0.0)</b>
<b>Enterprise Recoveries</b>							
Labour	(27.4)	(26.4)	(32.3)	(32.8)	(33.6)	(34.9)	(35.9)
Other expenditure	(25.8)	(28.3)	(35.2)	(31.9)	(32.3)	(33.2)	(32.6)
Depreciation and Amortisation	(4.6)	(6.3)	(13.3)	(13.5)	(17.5)	(23.6)	(26.1)
	<b>(57.8)</b>	<b>(61.1)</b>	<b>(80.7)</b>	<b>(78.2)</b>	<b>(83.5)</b>	<b>(91.7)</b>	<b>(94.6)</b>

A three year fee pathway to recover the accumulated deficit and cost of capability uplift of core functions

# We are proposing an 88.5% increase in FY23 NEM Core Fees to cover increased operating costs and recoup the deficit

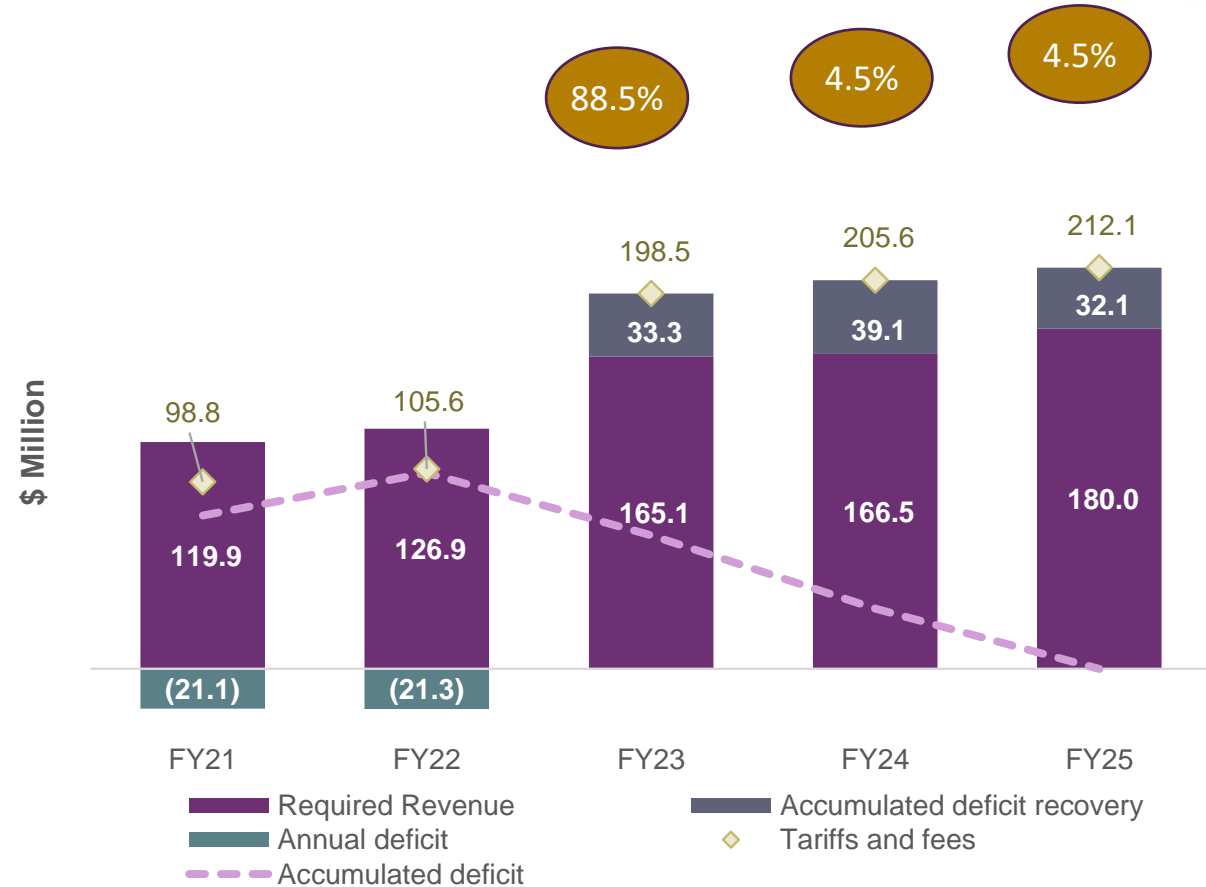
NEM Core Revenues and Costs profile (\$M)

As discussed in the March Board, NEM’s revenue budget needs to be increased to cover operating cost and allow for a three-year recovery of the accumulated NEM deficit.

The fee pathway consists of a price increase of 88.5% in the first year (FY23) and 4.5% thereafter in FY24 and FY25. This revenue pathway progressively recovers the accumulated deficit by the end of FY25.

The step up on operating expenditure reflect annualization of FY22 costs increase, capability uplift in the operations team, support functions and power system forecasting.

These changes are examined in more detail below.



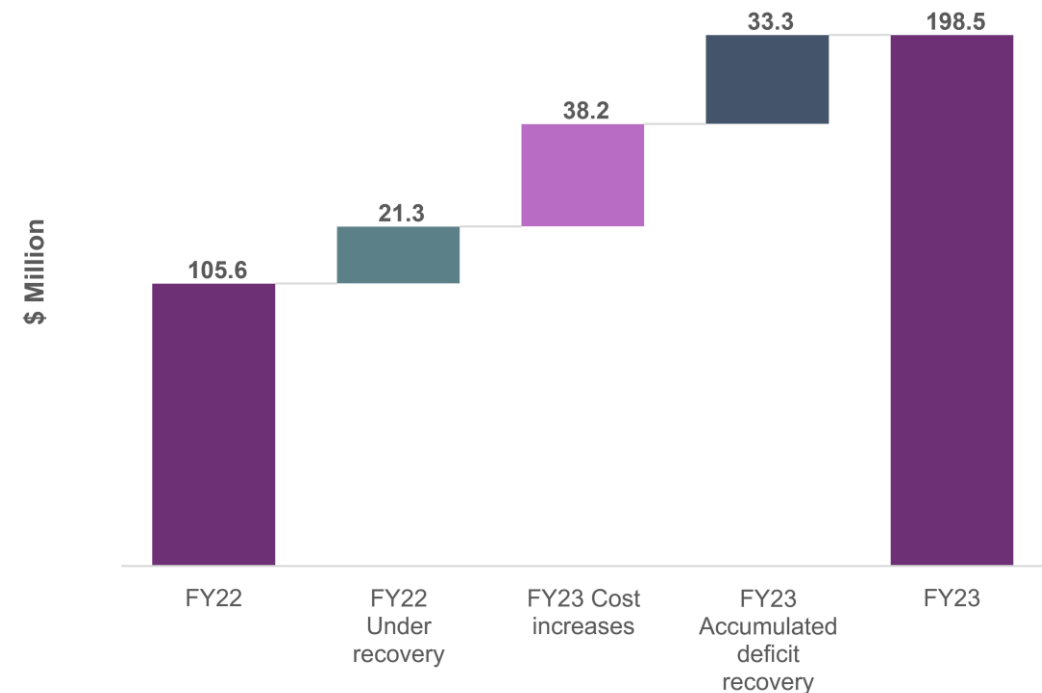
# The Draft FY23 NEM Core Fees and Tariff Revenue increase can be regarded as made of three step changes

NEM Core Fees and Tariff Year 1 Recovery (\$M)

The waterfall chart presents the three step increases in NEM Core Draft FY23 revenue:

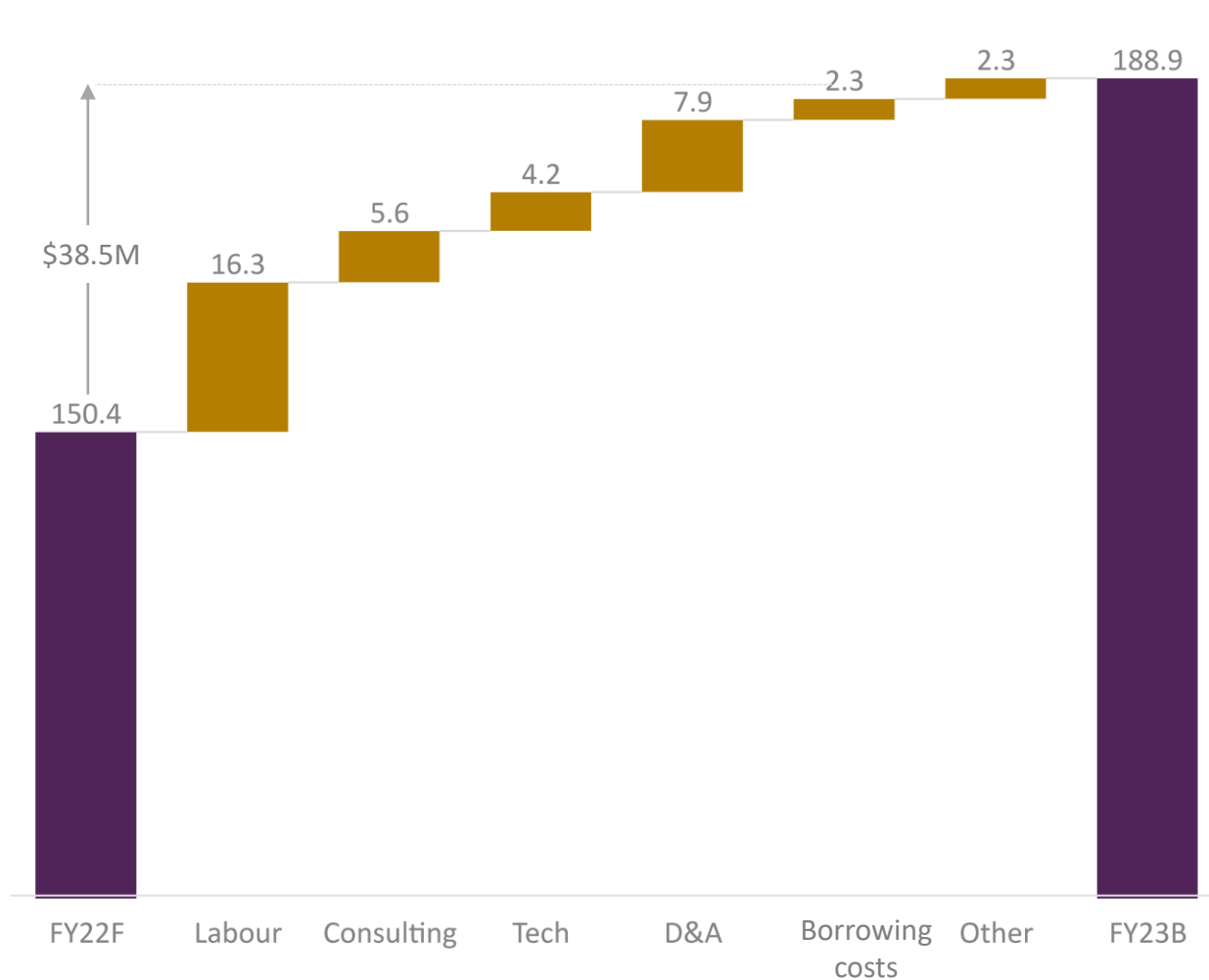
- off-set the forecast FY22 \$21.3m annual deficit,
- fully recover operational expenditure in FY23 being an increase of \$38.2m on the FY22 forecast (Total incremental increase of \$38.5m less \$0.3m pertaining to other revenue), and
- recover \$33.3m of the NEM Core accumulated deficit in FY23, and the remainder of the accumulated deficit over the following two years.

Noting the FY22 under recovery is based on the current full year forecast and is subject to change.



# NEM Core expenditure rises \$38.5M YoY driven primarily by Labour and D&A

Total expenditure and growth by cost category (\$M)



## Drivers of key cost movements

- Labour**
  - \$4M increase in Ops to build modelling and data mgmt. capability in line with Engineering Framework
  - \$3M increase in Digital to support new/upgraded IT systems introduced in FY22
  - \$3M across Reform Delivery & System Design to support increased planning responsibilities
  - Other increases primarily in central organisational functions (e.g. Digital and Finance) to uplift capability.
- Consulting**
  - \$2.5M in System Design including to support Engineering Framework
  - \$2M supporting refresh of corporate function business models
- Tech**
  - \$1.3M increase in SW support contracts across Ops
  - \$2.7M support wider enhancements in SW support and cloud capabilities
- D&A**
  - \$1M to cover amortisation of EMS
  - \$7M allocation of D&A from wider investments in capabilities

# An Indicative average impact of the Draft FY23 NEM Fee increase on Customers



Average impact of Draft FY 23 NEM Fee increases on **residential customers** will be an incremental **\$2.18/year** (FY22 \$4.88 to FY23 \$7.06). This is driven primarily by an increase in NEM core Tariff and Fees of \$1.74 and \$0.44 pertaining to 5MS. This represents 0.48% of a typical annual bill of \$1,495 (incl. GST)



Average impact of Draft FY 23 NEM Fee increases on **Small Business customers** will be an incremental **\$7.80/year** (FY22 \$11.77 to FY23 \$19.60). This is driven primarily by an increase in NEM core Tariff and Fees of \$6.20 and \$1.58 pertaining to 5MS. This represents 0.42% of a typical annual bill of \$4,631 (Incl. GST)



TOP 20

**Industrials:** Increase in NEM fee (~ 87.5%) adds \$1.0m to \$3.0m to annual bill.

**Generators:** Increase in NEM fee (~ 89.1%) adds \$0.7m to \$7.7m to annual bill.

**Retailers:** Increase in NEM fee (~87.5%) adds \$1.0m to \$5.3m to annual bill.

**Gen-tailers:** Increase in NEM fee (~88.3%) adds \$8.1m to \$15.1m to annual bill.

**AEMO costs contribute between 0.5% to 1% of the Total Electricity Bill**

Note: AEMO's cost to our top 20 customers are pass through costs which will eventually be on-charged to the end consumer. Information used in calculating fee impacts on customers is still DRAFT in nature and hence the fee impacts are indicative only.

# Mitigating fee impacts

AEMO is performing mandated functions and delivering agreed reforms for the benefit of energy consumers in an increasingly complex energy market. AEMO is conscious of our costs both on end-consumer as well as the companies who immediately pay our fees.

AEMO will work with members and large industrial users to transition to these higher NEM Core fees.

- ① **Default Market Offer – AER to include central fee estimate in FY2022/23 DMO.**
- ② **Victorian Default Offer and other regulated tariffs**
  - ESC to include central fee estimate in FY2022/23 VDO
  - Other regulators to include in regulated tariffs.
- ③ **Networks: AEMO to support ENA rule change for recovery of TNSP fee component.**
- ④ **Large industrial users to be discussed separately**

# Other Segments

- East Coast Gas
- WA
- Vic TNSP

# East Coast Gas Financial Summary – Draft FY23 revenue increase lower than cost increase to enable return of accumulated surplus

Fees and tariffs revenue increase of \$2m in FY23 to offset revenue under-recovery in the Short-Term Trading Market and Vic Wholesale Gas in FY22.

Revenue is expected to under-recover estimated operating expenditure from FY23 to return of accumulated surpluses.

Increase labour reflects the onboarding of two roles in DWGM and filling of roles currently vacant.

Expenditure from FY24 largely reflects escalation and growth in the business resulting in a lower allocation of recoveries to the gas functions.

East Coast Gas Segment (\$Million)	Actual 2020/21	Forecast 2021/22	Budget 2022/23	Estimate 2023/24	Estimate 2024/25	Estimate 2025/26	Estimate 2026/27
<b>REVENUE</b>							
Fees and Tariffs	40.5	42.2	44.2	44.7	45.1	46.5	50.7
Other Revenue	2.5	2.4	2.7	2.8	2.9	3.0	3.0
<b>NET REVENUE</b>	<b>43.0</b>	<b>44.6</b>	<b>47.0</b>	<b>47.6</b>	<b>48.0</b>	<b>49.5</b>	<b>53.7</b>
<b>OPERATING EXPENDITURE</b>							
Labour	(17.9)	(17.2)	(18.3)	(18.9)	(19.5)	(20.2)	(21.7)
Consulting	(0.1)	(0.4)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)
IT & Telecommunications	(3.2)	(4.0)	(4.9)	(5.0)	(5.1)	(5.3)	(5.4)
Enterprise Recoveries	(16.8)	(16.7)	(22.1)	(17.6)	(18.6)	(19.8)	(22.2)
Other expenditure	(1.1)	(1.7)	(4.1)	(4.2)	(3.3)	(3.4)	(3.4)
Depreciation and Amortisation	(3.6)	(3.0)	(3.2)	(4.7)	(4.7)	(4.1)	(3.4)
Borrowing costs	(0.0)	(0.0)	(0.2)	(0.3)	(0.3)	(0.3)	(0.4)
<b>TOTAL EXPENDITURE</b>	<b>(42.8)</b>	<b>(42.9)</b>	<b>(53.0)</b>	<b>(50.8)</b>	<b>(51.7)</b>	<b>(53.1)</b>	<b>(56.7)</b>
<b>ANNUAL SURPLUS / (DEFICIT)</b>	<b>0.2</b>	<b>1.7</b>	<b>(6.0)</b>	<b>(3.2)</b>	<b>(3.7)</b>	<b>(3.7)</b>	<b>(3.0)</b>
PCF Fees Adjustment	(0.0)	-	-	-	-	-	-
Land Reserve Adjustment	-	-	-	-	-	-	-
<b>ACCUMULATED SURPLUS / (DEFICIT)</b>	<b>25.8</b>	<b>27.5</b>	<b>21.5</b>	<b>18.2</b>	<b>14.5</b>	<b>10.8</b>	<b>7.8</b>

The accumulated surplus / (deficit) includes a \$8.7m contribution



# WA Financial Summary – Draft FY23 is start of growth in revenue and costs to cover deliver of the WEM Reform program

In support of the WA energy market transformation strategy AEMO will implement new market systems and enable greater DER participation.

Recovery of the up-front and ongoing costs of these reforms drives the \$30m increase in revenue from \$34.9m this year to \$63.8m in FY25.

The impact of implementation of reform investments is reflected in higher IT & telco support depreciation and amortisation, and borrowing costs

Labour costs provide for operation reformed markets, new obligations arising from the energy reforms from FY24, and continued support for further energy transformation initiatives.

WA Segment (\$Million)	Actual 2020/21	Forecast 2021/22	Budget 2022/23	Estimate 2023/24	Estimate 2024/25	Estimate 2025/26	Estimate 2026/27
<b>REVENUE</b>							
Fees and Tariffs	34.5	34.9	44.5	57.4	63.7	66.7	77.5
Other Revenue	0.1	0.0	0.0	0.0	0.0	0.0	0.0
<b>NET REVENUE</b>	<b>34.6</b>	<b>35.0</b>	<b>44.5</b>	<b>57.4</b>	<b>63.7</b>	<b>66.8</b>	<b>77.6</b>
<b>OPERATING EXPENDITURE</b>							
Labour	(19.8)	(23.0)	(24.2)	(30.8)	(31.9)	(33.0)	(34.5)
Consulting	(2.4)	(1.4)	(1.6)	(1.5)	(1.5)	(1.6)	(1.6)
IT & Telecommunications	(2.0)	(2.4)	(3.2)	(4.5)	(5.9)	(6.1)	(6.2)
Enterprise Recoveries	(1.2)	(1.7)	(1.6)	(1.5)	(1.7)	(1.7)	(1.7)
Other expenditure	(1.7)	(2.9)	(3.6)	(3.6)	(4.2)	(4.3)	(4.2)
Depreciation and Amortisation	(6.8)	(10.8)	(10.4)	(13.1)	(16.3)	(17.9)	(27.0)
Borrowing costs	(0.0)	(0.0)	(1.2)	(1.7)	(2.0)	(2.2)	(3.2)
<b>TOTAL EXPENDITURE</b>	<b>(33.9)</b>	<b>(42.2)</b>	<b>(45.8)</b>	<b>(56.9)</b>	<b>(63.5)</b>	<b>(66.7)</b>	<b>(78.3)</b>
<b>ANNUAL SURPLUS / (DEFICIT)</b>	<b>0.7</b>	<b>(7.2)</b>	<b>(1.3)</b>	<b>0.6</b>	<b>0.2</b>	<b>0.1</b>	<b>(0.8)</b>
<b>ACCUMULATED SURPLUS / (DEFICIT)</b>	<b>7.6</b>	<b>0.4</b>	<b>(0.9)</b>	<b>(0.4)</b>	<b>(0.2)</b>	<b>(0.1)</b>	<b>(0.9)</b>

Budget subject to finalisation post AR6 final determination.

# VicTNSP Financial Summary – significant cost growth over FY23-25 to drive new/enhanced services matched by revenue growth

Revenue movements reflect

- Network charges reflect lower network payments partly off-set by higher transmission easement taxes
- A step down in Settlement residue from FY22 reflecting changes to Victorian-NSW interconnector flows and lower auction proceeds

Operating expenditure movements between FY22 and FY23 include:

- Onboarding of ~ 15 FTEs to service Vic connections and planning activities
- Consulting expenditure deferred from FY22 to FY23 for VNI West, and expenditure related to the Future Energy Systems engineering framework activity.
- Enterprise recovery of increased corporate costs and a greater allocation to VicTNSP due to growth in the function.

Vic TNSP (\$Million)	Actual 2020/21	Forecast 2021/22	Budget 2022/23	Estimate 2023/24	Estimate 2024/25	Estimate 2025/26	Estimate 2026/27
<b>REVENUE</b>							
TUOS	591.5	603.0	623.9	644.0	669.5	693.0	717.5
Settlement Residue	55.8	23.0	20.0	20.5	21.0	21.6	22.1
Network Charges	(661.5)	(678.5)	(663.3)	(683.9)	(705.8)	(728.8)	(753.3)
Negotiated Services - Income	49.6	50.9	52.0	53.3	54.7	56.0	57.4
Connections Revenue	8.8	11.3	13.5	13.9	14.2	14.6	14.9
Other Revenue	2.5	5.2	0.4	0.4	0.4	0.5	0.5
<b>NET REVENUE</b>	<b>46.8</b>	<b>14.8</b>	<b>46.6</b>	<b>48.2</b>	<b>54.1</b>	<b>56.7</b>	<b>59.2</b>
<b>OPERATING EXPENDITURE</b>							
Labour	(9.4)	(11.4)	(17.8)	(20.1)	(20.7)	(21.4)	(22.1)
Consulting	(3.2)	(2.1)	(10.7)	(7.3)	(7.4)	(7.6)	(7.8)
IT & Telecommunications	0.0	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
Enterprise Recoveries	(8.5)	(10.9)	(18.6)	(20.0)	(21.4)	(22.8)	(24.1)
Recoveries	(3.7)	(5.7)	(3.2)	(3.5)	(3.8)	(4.2)	(4.5)
Other expenditure	(0.2)	(0.1)	(0.3)	(0.5)	(0.6)	(0.6)	(0.5)
<b>TOTAL EXPENDITURE</b>	<b>(25.0)</b>	<b>(30.3)</b>	<b>(50.5)</b>	<b>(51.3)</b>	<b>(54.1)</b>	<b>(56.7)</b>	<b>(59.1)</b>
<b>ANNUAL SURPLUS / (DEFICIT)</b>	<b>21.8</b>	<b>(15.5)</b>	<b>(3.8)</b>	<b>(3.1)</b>	<b>0.0</b>	<b>0.1</b>	<b>0.1</b>
PCF Fees Adjustment	-	-	-	-	-	-	-
<b>ACCUMULATED SURPLUS / (DEFICIT)</b>	<b>22.3</b>	<b>6.8</b>	<b>3.0</b>	<b>(0.1)</b>	<b>(0.1)</b>	<b>(0.0)</b>	<b>0.1</b>

Note AEMO publish the Shared Transmission Network Services Prices for Victoria for FY23 on 19<sup>th</sup> April 2022

# NEM 2025 Reform Program – Declared NEM Project Consultation

# Agenda

- Background
  - NER Requirements for NEM Fees
  - Current Core NEM Fee allocation
- NEM 2025 Reform Program
  - Overview of the NEM 2025 Reform Program
  - NEM 2025 Reform Program Initiatives
- Declared NEM Project
  - NER Requirements
  - Declared NEM Project Criteria and the NEM 2025 Reform Program
  - Proposed Consultation Timeline
- Recommendation/Conclusion

# Background

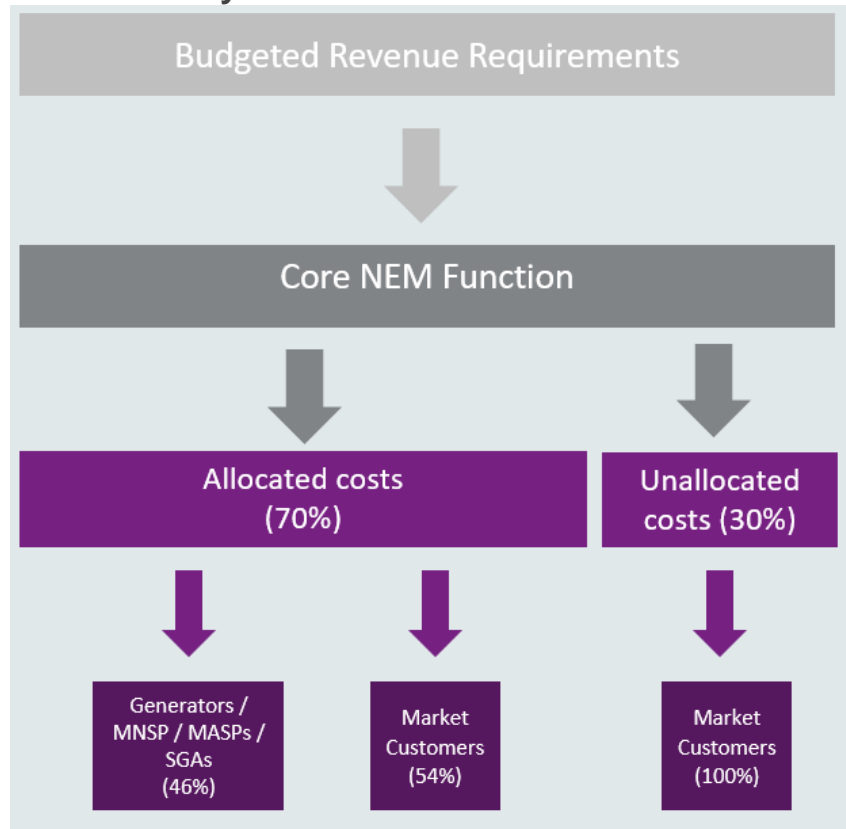


# NER Requirements for NEM Fees

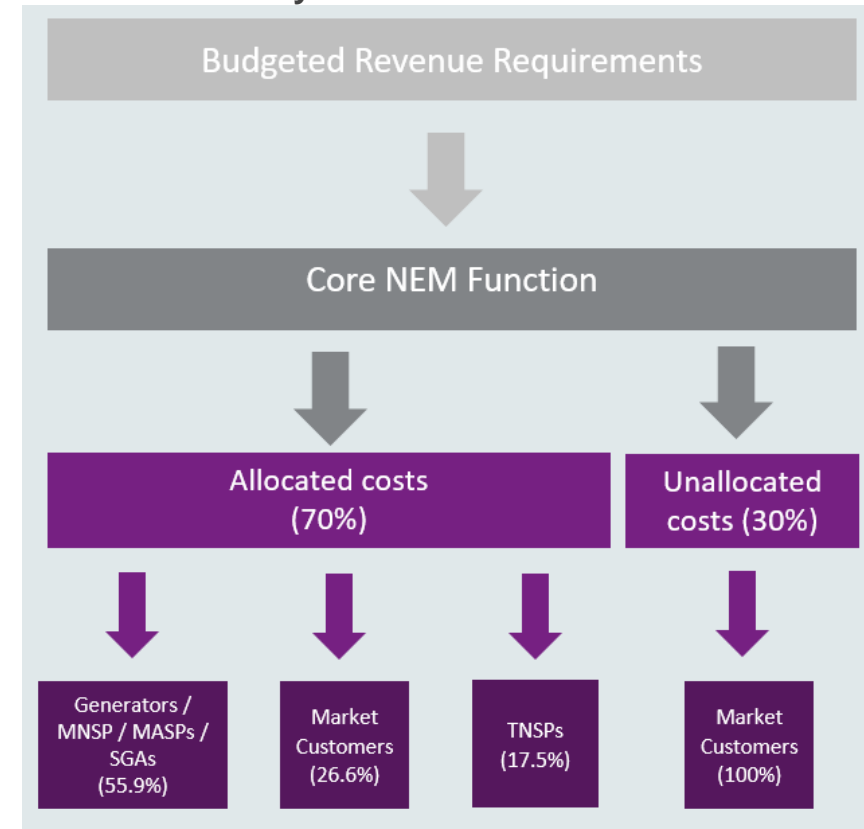
- AEMO recovers the costs of performing its functions from Registered Participants in accordance with clause 2.11.1(a) of the NER
- Participant fee structure determination undergoes consultation with industry in accordance with clause 8.9 of the NER
- Current Participant fee structure determined by AEMO for the NEM applies from 1 July 2021 to 30 June 2026
- Subject to consultation, the NER allows for AEMO to determine a separate fee to recover the costs of specific projects during the term of a Participant fee structure determination (declared NEM project)

# Current core NEM fee allocation

Allocation for the core NEM fee  
(transition period)  
1 July 2021 to 30 June 2023



Allocation for the core NEM fee  
(post-transition period)  
1 July 2023 to 30 June 2026



# NEM 2025 Reform Program- Participant Fee consultations





# Overview of the NEM 2025 Reform Program

- AEMO, the AEMC, the AER and the ESB have been tasked to transition the NEM into a modern energy system fit to meet consumers' evolving wants and needs
- 4 major pathways have been identified by the ESB to ensure immediate problems are addressed and future direction of the NEM's investment and operation is clear:
  1. Resource adequacy mechanisms and ageing thermal retirement
  2. Essential system services and scheduling and ahead mechanisms
  3. Integration of DER and flexible demand
  4. Transmission and access
- A Data Strategy pathway is also required to ensure delivery and implementation of the NEM 2025 Reform Program is seamless
- AEMO's preliminary impact assessment to deliver the program estimates implementation costs to be approx. \$250-330m (**excluding** the capacity mechanism and opex costs), and between \$9m - \$18 m for the data strategy initiatives.
- The estimates are being updated to reflect the Roadmap work being undertaken with the Reform Delivery Committee.
- This program is currently funded by debt through AEMO's facilities. It is not reflected in the fees presented. The debt will need to be recovered through Participant fees. The fee methodology consultations determine which Participants pay and the relevant fee metrics.

# NEM 2025 Reform Program Initiatives

Pathway	Reform Initiatives
Resource Adequacy Mechanism	<ul style="list-style-type: none"> <li>• Investment principles for jurisdictional schemes</li> <li>• MT PSA Enhancements</li> <li>• Jurisdictional Strategic Reserve</li> <li>• Ministerial RRO Trigger</li> <li>• Ongoing Monitoring</li> </ul>
Essential System Services	<ul style="list-style-type: none"> <li>• Fast Frequency Response</li> <li>• Mandatory Primary Frequency Response</li> <li>• Operating Reserve Market</li> <li>• System Strength (Planning)</li> <li>• Structured Procurement &amp; Scheduling Mechanism</li> <li>• Unbundling system services</li> <li>• Integrated ahead market</li> </ul>
Integration of DER & Flexible Demand	<ul style="list-style-type: none"> <li>• Integrating Energy Storage</li> <li>• Flexible Trading Arrangements</li> <li>• Scheduled Lite</li> <li>• Dynamic Operating Envelops</li> <li>• Distribution Local Network Services</li> <li>• Turn-up Services</li> <li>• DER Platform Registry Services</li> <li>• Market &amp; System Operator Integration</li> </ul>

# NEM 2025 Reform Program Initiatives

Pathway	Reform Initiatives
Transmission & Access	<ul style="list-style-type: none"> <li>• Transmission Access Reform</li> </ul>
Data Strategy	<ul style="list-style-type: none"> <li>• Data Services</li> <li>• EV Charging Standing Data Register</li> <li>• Bill Transparency</li> <li>• Network Transparency</li> </ul>

- In addition to the Post-2025 reform initiatives, AEMO has identified a subset of initiatives deemed to be prerequisites to implementing the Post-2025 reform initiatives.

Pathway	Description	Initiatives
<b>AEMO Foundational</b>	Foundational dependency work to deliver an uplift to base capability on which reforms are dependent	<ul style="list-style-type: none"> <li>• Identity Access Management</li> <li>• Industry Data Exchange</li> <li>• Operational Decision Making Tools</li> <li>• Operational Data Store</li> <li>• Business Rules Engine</li> <li>• Forecasting Platform Uplift</li> <li>• [Short Term Projected Assessment of System Adequacy (ST PASA) Replacement ]</li> <li>• SCADA Lite</li> </ul>
<b>AEMO Strategic</b>	Strategic dependency work to effectively futureproof capabilities and scalability of systems thereby avoiding investment in systems that will become end-of-life shortly after the reforms take effect	<ul style="list-style-type: none"> <li>• Portal Consolidation</li> <li>• CoMaStR</li> <li>• Dispatch Target State</li> <li>• Bids / Offers Target State</li> <li>• Constraints Target State</li> <li>• FRC Target State</li> </ul>

# Declared NEM Project



# NER Requirements – Stage 1

- Under clause 2.11.1(ba) of the NER, AEMO may determine any of the following projects to be a **declared NEM project**:
  - a major reform or development (including an anticipated reform or development) of the market; **or**
  - a major change (including an anticipated change) to a function, responsibility, obligation or power of AEMO under the Rules; **or**
  - a major change (including an anticipated change) to any of the computer software or systems that AEMO uses in the performance of any of its functions, responsibilities, obligations or powers under the Rules.

## NER Requirements – Stage 2

- When AEMO determines a project to be a declared NEM project it must then determine:
  - the start date for recovery and the period or periods over which recovery will occur for the declared NEM project, *and*
  - the structure of an additional Participant fee to be used in the recovery of costs associated with a declared NEM project until the next general determination of all Participant fees (made under clause 2.11.1(a) of the NER)

# Declared NEM project criteria and the NEM 2025 Reform Program

1. Major reform or development (including anticipated reform or development) of the market:
  - The energy transition is driving changes to numerous factors of the NEM including:
    - Increase in large-scale capital replacement as old thermal power stations exist the market
    - Introduction of new technologies
    - Expanding consumer choices
  - AEMO's preliminary impact assessment has indicated multiple reform initiatives will require necessary IT and business process changes – estimated at approx. \$250-330 million (excluding the capacity mechanism and opex costs), and between \$9-18 million for the data strategy initiatives
  - AEMO are in the process of updating these estimates via a business case assessment as part of its ongoing work with the Reform Delivery Committee in the development of the NEM 2025 Implementation Roadmap

# Declared NEM project criteria and the NEM 2025 Reform Program

## 2. Major change (including anticipated change) to a function, responsibility, obligation or power of AEMO under the Rules:

- While AEMO's areas of responsibilities will not change, the reform initiatives that make up the NEM 2025 Reform Program will lead to additional functions and obligations upon AEMO across the four reform pathways. For example:
  - **Essential System Services** – AEMO will play a central role in managing new markets / mechanisms including Fast Frequency Response, Operating Reserves and Operational Security Mechanisms. These new markets / mechanisms will directly impact AEMO's business as usual activities in managing the operation of the power system and require changes to or development of new systems and processes
  - **Integrated DER and Flexible Demand** – While AEMO will not be at the centre of these reform initiatives, the outcomes (e.g. additional visibility in relation to operation of DER and their technical capabilities) may necessitate amendments to AEMO systems or processes (i.e. registration, ST PASA processes, demand forecasting systems/processes, control room displays and tools) as well as updates to corresponding procedures and guidelines. These initiatives will require greater collaboration between AEMO and DNSPs in order to maintain ongoing power system security.
  - **Resource Adequacy Mechanism** – Subject to its final detailed design, AEMO may have a significant role in the operation of a capacity mechanism. This could include up front responsibilities such as certification of capacity resources and forecasting capacity requirements to broader responsibilities in administering procurement / trading of capacity. The design, and therefore AEMO's role, in any future capacity mechanism is still in development by the ESB and will be subject to the outcomes of this process



# Declared NEM project criteria and the NEM 2025 Reform Program

3. Major change (including anticipated change) to any of the computer software or systems that AEMO uses in the performance of any of its functions, responsibilities, obligations or powers under the Rules:

- AEMO has completed a heatmap assessment identifying:
  - **Functional relationships across NEM 2025 reform initiatives** – here AEMO has identified those system, process, policy, trial and deadline relationships
  - **Significance of the functional impacts from the NEM 2025 reform initiatives**
  - **Significance of the functional impacts from AEMO’s own strategic and foundational initiatives**
- This analysis highlights the critical touch points for AEMO and participant systems and aids in the consideration of alternative groupings and pathways



# Proposed Consultation Timeline

Deliverable	Indicative date
Consultation Paper published	Monday 16 May 2022
Submissions due on Consultation Paper	Friday 17 June 2022
Draft Report published	Friday 15 July 2022
Submissions due on Draft Report	Friday 29 July 2022
Final Report published	Friday 9 September 2022

# Recommendation / Conclusion



# Recommendation/Conclusion

## Preliminary recommendation/conclusion

- Under the NER, the NEM 2025 Reform Program needs to meet one of the three criteria to be determined a declared NEM project
- AEMO believes the program meets all three criteria and is therefore likely to be determined (in a non-controversial manner) a declared NEM project
- Immediately following the NEM Declared consultation, AEMO will commence the Stage 2 – Fee methodology consultation to determine who pays and the fee metrics.

# General discussion and Questions



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