



Electricity functions 2018-19 AEMO Final Budget and Fees

June 2018

Australian Energy Market Operator Limited

Executive Summary

Introduction

AEMO operates on a cost recovery basis as a company limited by guarantee under the Corporations Act (2001). AEMO recovers all operating costs through fees paid by participants.

AEMO has a broad range of functions and each is underpinned by a fee structure developed in consultation with stakeholders and in line with the national rule requirements. The fee structures detail how AEMO will calculate fees and who will be charged. AEMO's annual budget sets out the amounts that will be charged under these fee structures.

The final fees in this report reflect the electricity fee structure determination that applies from 1 July 2016 to 30 June 2021.

This report provides a view of the final 2018-19 electricity fees, revenue and expenses, and fee estimates for the following four-year period.

The key points of the 2018-19 final budget are:

- AEMO continues to prudently manage our costs. Historically this has resulted in fees reducing in real terms. However the environment is changing rapidly, resulting in the need for additional resources and investment.
- The National Electricity Market (NEM) fee is proposed to increase by 8% in 2018-19.
- AEMO confirms it is committed to continue to closely manage its costs and will continue to identify further opportunities for efficiencies.

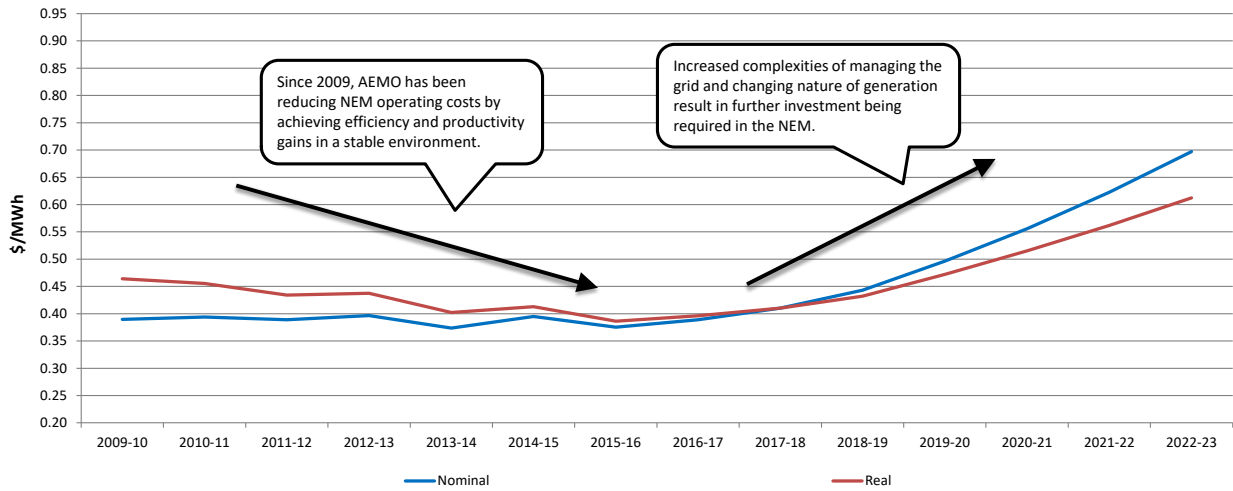
Energy **Security**,
Reliability and
Affordability for all
Australians.

1.1 Summary of Fees (nominal)

Table 1 Summary of Fees

Fee (\$/MW.h)	2014-15	2015-16	2016-17	2017-18	Budget 2018-19	Estimate 2019-20	Estimate 2020-21	Estimate 2021-22	Estimate 2022-23
NEM	0.39	0.38	0.39	0.41	0.44	0.50	0.56	0.62	0.70
% Change	+5%	-5%	+4%	+6%	+8%	+12%	+12%	+12%	+12%
FRC Electricity	0.060	0.040	0.061	0.075	0.077	0.080	0.082	0.085	0.089
% Change	+0%	-33%	+53%	+23%	+3%	+3%	+3%	+4%	+4%
NTP	0.01990	0.02054	0.01606	0.02126	0.02339	0.02502	0.02677	0.02865	0.03065
% Change	-0%	+3%	-22%	+32%	+10%	+7%	+7%	+7%	+7%

Figure 1 NEM projected fees



Real values are the nominal amounts adjusted for inflation. Prices have been calculated relatively to the 2017-18 price.

1.2 Contact for inquiries

AEMO contact for inquiries

For all queries on budget and fees, please contact:

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2. National Electricity Market (NEM)

2.1 NEM Fees

- Purpose of this function
- Power system security and reliability
 - Market operations and systems
 - Wholesale metering, settlements and prudential supervision.
 - Longer term energy forecasting and planning services (for the eastern and southern Australian states)

The changing energy environment and impact

Since the inception of AEMO in 2009, the NEM fee has decreased in real terms, as AEMO has applied strong commercial discipline in managing its costs.

The changing energy environment is resulting in additional resources and investment being needed to manage:

- Increased complexities of managing the grid day to day
- Changing nature of generation resulting in planning and forecasting becoming more complex
- Modernising our future markets and systems to be fit for purpose
- Uplifting our cyber security practices to manage business risk

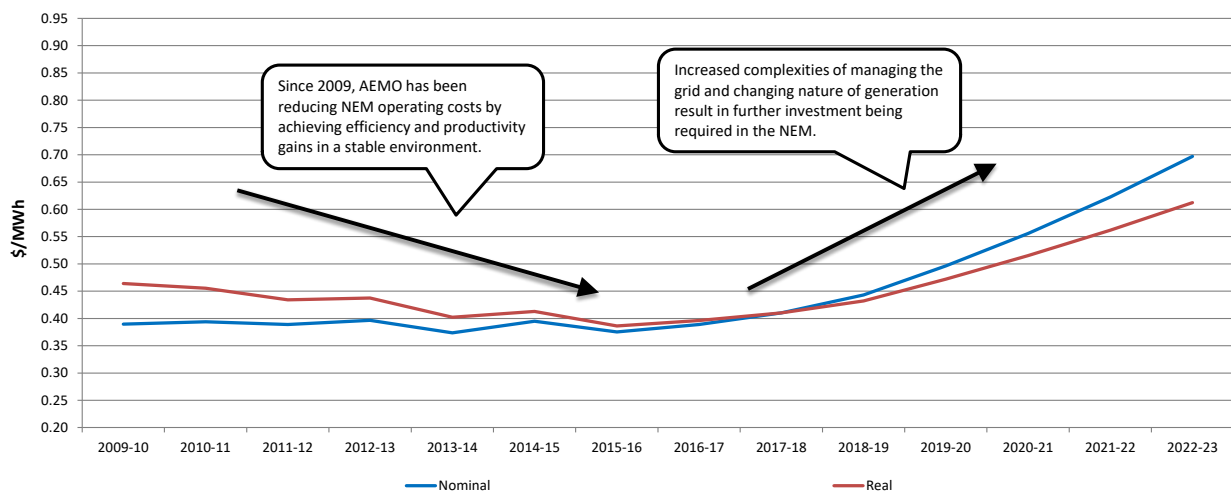
Fees

The current NEM fee is \$0.41/MWh.

The draft NEM fee for 2018-19 is \$0.44/MWh (+8%). The fee is then estimated to increase at 12% for each of the forward 4 years.

The 8%+ increases proposed for the NEM in 2018-19 and forward years reflect AEMO recovering the additional costs from participants over a five year period to reduce fee volatility to participants.

Figure 2 NEM projected fees



Real values are the nominal amounts adjusted for inflation. Prices have been calculated relative to the 2017-18 price.

Other notes In-line with the National Electricity Rules, PCF fees will be charged to the value of \$1m in 2018-19.

Table 2 NEM projected fees (indicative benchmark)

Fee	Actual 2017-18	Budget 2018-19	Estimate 2019-20	Estimate 2020-21	Estimate 2021-22	Estimate 2022-23
NEM fee (\$/MW·h)	0.41	0.44 +8%	0.50 +12%	0.56 +12%	0.62 +12%	0.70 +12%
PCF fee (\$/MW·h)	0.01	0.01	TBC	TBC	TBC	TBC

The indicative benchmark NEM fee provides a high-level comparison of NEM fees. The fees actually charged to market customers and generators are detailed in Appendix B.

2.2 Energy Consumption

The budgeted consumption for 2018-19 is based on available data estimates used in the 2018 National Electricity Forecast Report (NEFR).

The 2018-19 consumption is expected to decrease then flatten in the forward years mainly due to increased solar PV uptake and energy efficiency being offset by population growth.

For market customers, our **NEM fee methodology** levies fees on a **\$ per MWh consumption basis**. An energy forecast is factored into the calculation of the AEMO fees. For generators, our **NEM fee methodology** levies fees on a **\$ per day**

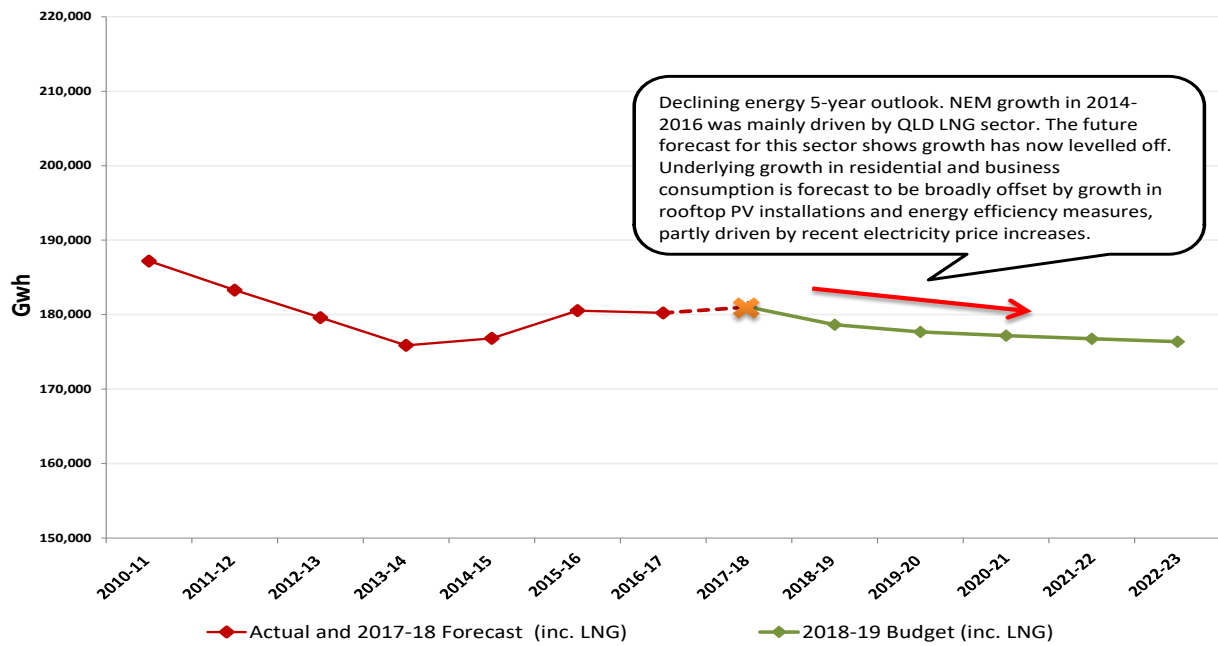
Table 3 NEM consumption

GWh	Budget 2017-18	Forecast ¹ 2017-18	Budget 2018-19	Estimate 2019-20	Estimate 2020-21	Estimate 2021-22	Estimate 2022-23
NEM	181,895	181,009	178,650	177,673	177,187	176,755	176,359
		-0.5%	-1.8%	-0.5%	-0.3%	-0.2%	-0.2%

¹ Forecast annual 2017-18 consumption as at April 2018.

Below demonstrates the forecast energy consumption used to calculate the NEM fee.

Figure 3 Annual electricity consumption (market customer load)



2.3 Revenue and Expenditure

The expenditure is detailed below in Figure 4 by expenditure category

Figure 4 Expenditure by category 2018-19

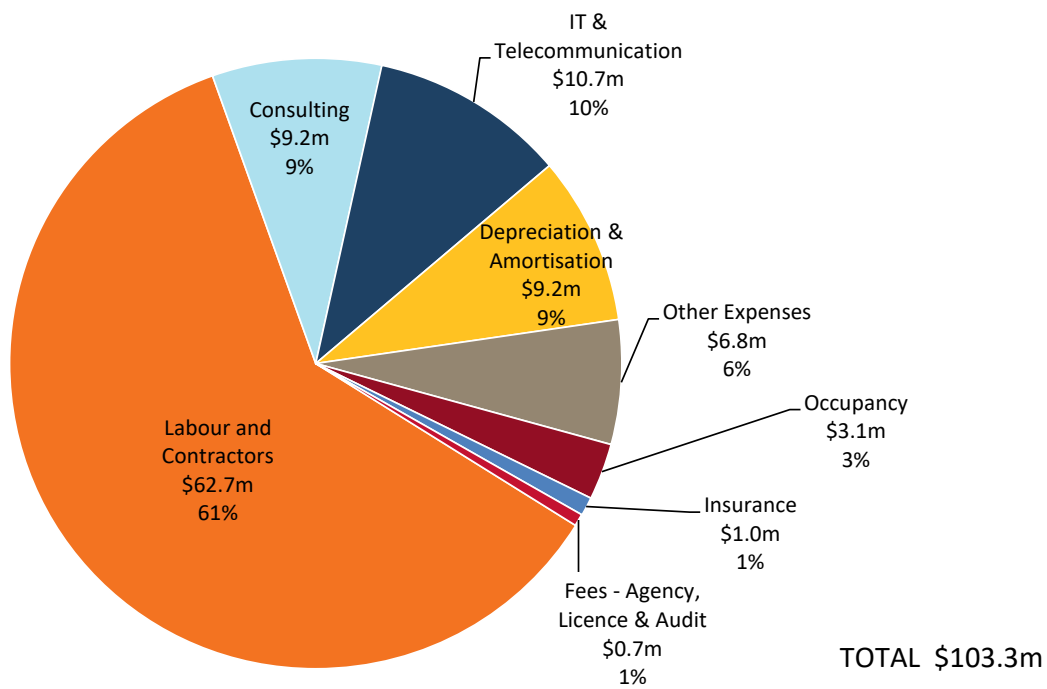


Table 4 Profit and Loss statement 2018-19 and comparison - NEM

	Budget	Budget	Variance	
	2017-18 \$'000	2018-19 \$'000	\$'000	%
Fees and tariffs	75,048	81,054	6,006	+8%
Other Revenue	2,431	2,308	(123)	-5%
Total Revenue	77,479	83,362	5,883	+8%
Labour and Contractors	51,334	62,665	11,331	+22%
Consulting	5,758	9,238	3,481	+60%
Fees - Agency, Licence & Audit	523	663	139	+27%
IT & Telecommunication	8,601	10,670	2,068	+24%
Occupancy	2,829	3,089	260	+9%
Insurance	1,009	1,015	6	+1%
Other Expenses	5,272	6,798	1,526	+29%
Depreciation & Amortisation	5,060	9,205	4,145	+82%
Total Expenditure	80,386	103,342	22,956	+29%
Surplus/ (Deficit)	(2,908)	(19,980)	(17,073)	
Transfer to PCF	(1,237)	(1,248)	(12)	
Brought Forward Surplus/ (Deficit)	457	(10,629)	(11,086)	
Accumulated Surplus/ (Deficit)	(3,687)	(31,857)		

Key points to the profit and loss 2018-19:

Revenue

Increase to 2018-19 budget revenue due to:

- Higher revenue requirement to recover increase in expenditure for the function.
- Increase in number of registrations and new connection applications.

Expenditure

- Labour increase includes increases in resources along with a provision for ongoing resources to manage the increasing complexity of our work.
- Consulting costs are higher in 2018-19. Consulting costs provisioned in 2018-19 include specialist advice and support relating to modernising our markets and managing the complexities of the grid.
- IT and Telecommunication costs are higher in 2018-19. This includes operational costs of the Shared Market Protocol, cloud related costs for enhancements to our forecasting and planning systems and additional licences to cater for additional resources.
- Depreciation and Amortisation costs are higher in 2018-19 mainly due to the full year depreciation of the electricity forecasting insights project along with the increased project program planned for 2018-19.

2.4 PCF fees

The National Electricity Rules require AEMO to maintain a Participant Compensation Fund to pay compensation for scheduling errors to Scheduled Generators, Semi-Scheduled Generators and Scheduled Network Service Providers as determined by the dispute resolution panel.

The funding requirement for the PCF for each financial year is the lesser of:

(1) \$1,000,000; and

(2) \$5,000,000 minus the amount which AEMO reasonably estimates will be the balance of the PCF at the end of the relevant financial year.

It is estimated that the balance of the PCF at 30 June 2018 will be \$1M and therefore the funding requirement for 2018-19 is \$1M.

3. Full Retail Contestability (FRC) Electricity

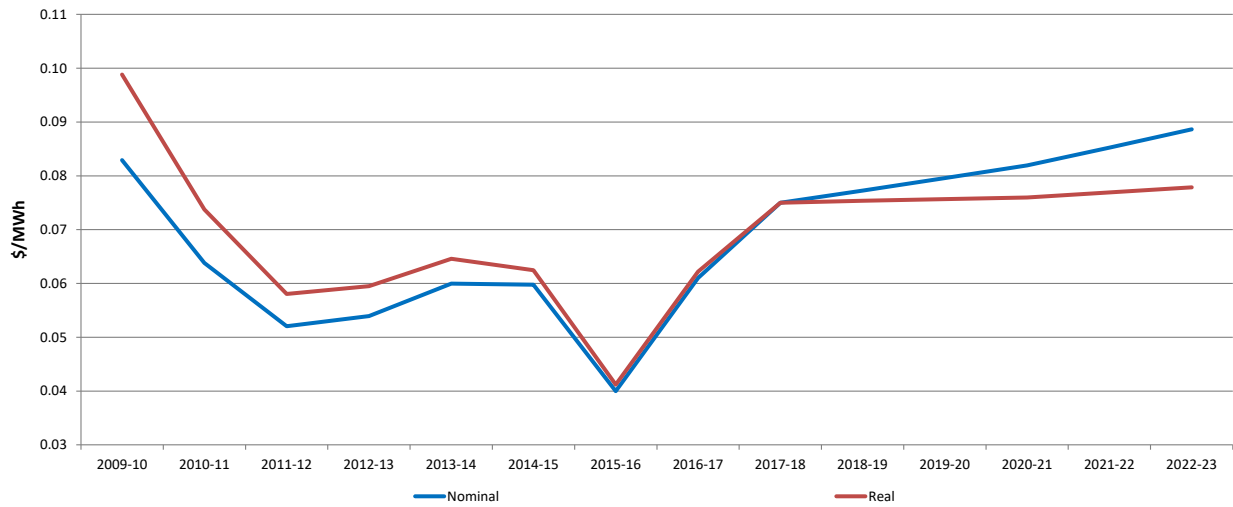
3.1 Fees

Purpose of this function	To facilitate retail market competition in the east coast and southern states of Australia by managing and supporting: <ul style="list-style-type: none"> • Data for settlement purposes • Customer transfers • Business to business processes • Market procedure changes
Fees	The current FRC Electricity fee is \$0.075/MWh. This fee will increase to \$0.077/MWh in 2018-19 (3% higher than 2017-18).
Other notes	The Power of Choice program was successfully completed in December 2017. The project costs will be amortised over a five year period and have been incorporated in the projected fees. In accordance with AEMO's current electricity fee methodology, from 1 July 2016 to 30 June 2019, fees are collected on the current MWh energy consumed basis. From 1 July 2019, fees will be collected on a per connection point basis. For forward budget estimates from 2019-20 to 2022-23 please note the MWh basis has continued to be used for demonstrating the fee trend % for forward years only.

Table 5 FRC Electricity projected fee

Fee	Actual 2017-18	Budget 2018-19	Estimate 2019-20	Estimate 2020-21	Estimate 2021-22	Estimate 2022-23
(\$/MW·h)	0.075	0.077	0.080	0.082	0.085	0.089
	+23%	+3%	+3%	+3%	+4%	+4%

Figure 5 FRC Electricity projected fee



Real values are the nominal amounts adjusted for inflation. Prices have been calculated relative to the 2017-18 price.

3.2 Energy Consumption

The forecast retailer load in the FRC is detailed below

	Budget 2017-18	Budget 2018-19
Retailer Load forecast for FRC jurisdictions	170,981,300 MW·h	167,931,414 MW·h

3.3 Revenue and Expenditure

The expenditure is detailed below in Figure 6 by expenditure category

Figure 6 Expenditure by category 2018-19

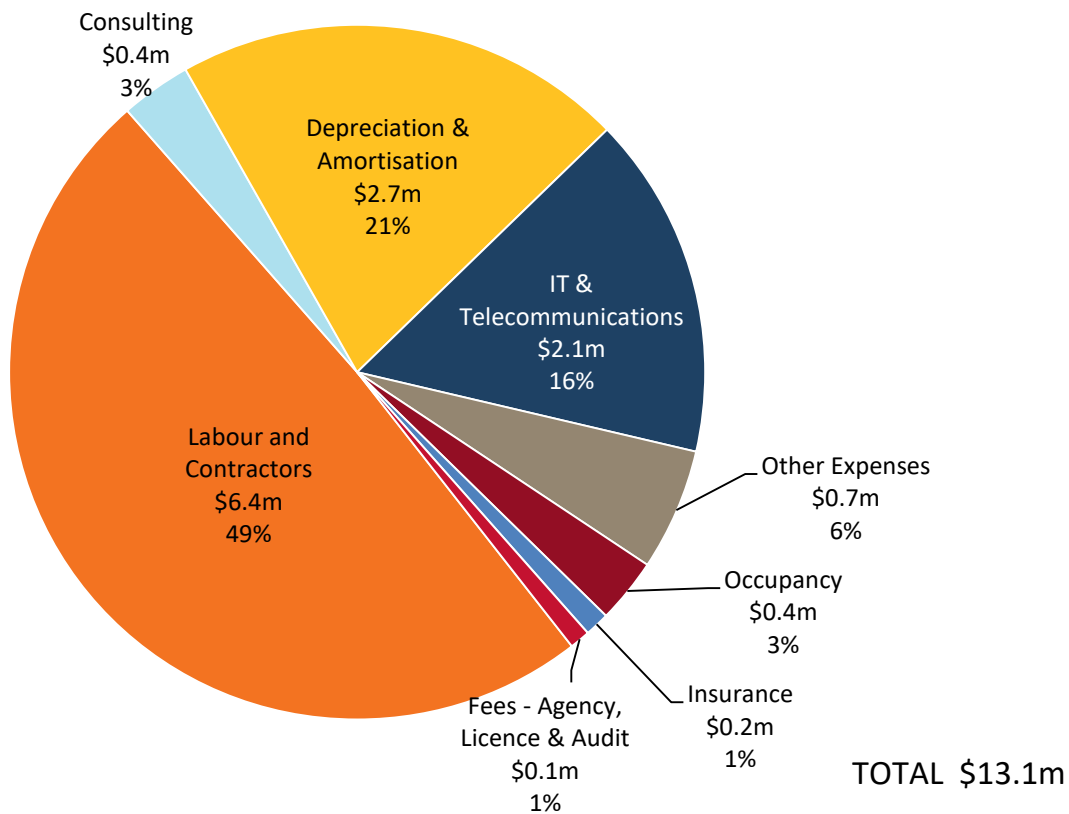


Table 6 Profit and Loss statement 2018-19 and comparison – FRC Electricity

	Budget	Budget	Variance	
	2017-18 \$'000	2018-19 \$'000	\$'000	%
Fees and tariffs	12,883	12,973	90	+1%
Other Revenue	273	2	(271)	-99%
Total Revenue	13,156	12,974	(182)	-1%
Labour and Contractors	8,686	6,440	(2,246)	-26%
Consulting	408	428	20	+5%
Fees - Agency, Licence & Audit	95	124	29	+30%
IT & Telecommunications	2,118	2,092	(25)	-1%
Occupancy	528	394	(133)	-25%
Insurance	210	151	(59)	-28%
Other Expenses	799	743	(56)	-7%
Depreciation & Amortisation	1,002	2,744	1,743	+174%
Total Expenditure	13,845	13,118	(728)	-5%
Surplus/ (Deficit)	(689)	(143)	546	
Brought Forward Surplus/ (Deficit)	92	1,064	972	
Accumulated Surplus/ (Deficit)	(598)	921		

Key points to the profit and loss 2018-19:**Expenditure**

Total expenditure decreased by 5% in 2018-19 compare to 2017-18 mainly due to a reduction in labour and contractor resources, which partially offset by an increase in amortisation as a result of full year depreciation of the Power of Choice program.

4. National Transmission Planner (NTP)

4.1 Fees

Purpose of this function

- Delivering the annual National Transmission Network Development Plan (NTNDP).
- Other activities involve preparing the Independent Planning Reports for New South Wales, Tasmania and Queensland, Connection Point Forecasts and work on the Network Capability Incentive Performance process.

Fees

The current NTP fee is \$0.02126/MWh.

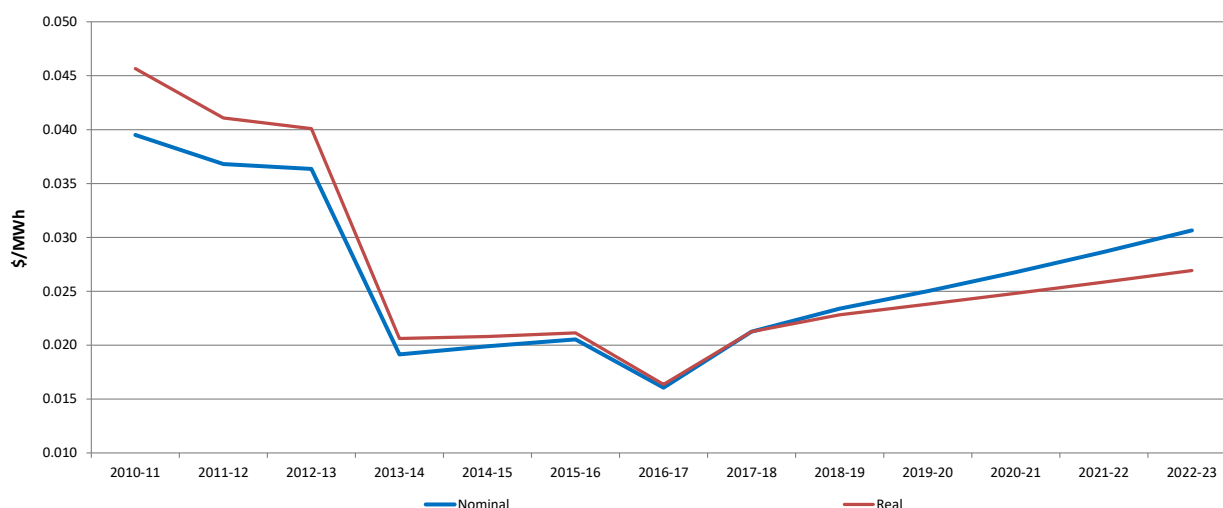
This fee will increase to \$0.02339 in 2018-19 (10% higher than 2017-18).

This increase next year and future years reflects additional resources and investment to uplift forecasting and planning and preparation of the Integrated System Plan (which incorporates the National Transmission Development Plan).

Table 7 NTP projected fee

Fee	Actual 2017-18	Budget 2018-19	Estimate 2019-20	Estimate 2020-21	Estimate 2021-22	Estimate 2022-23
(\$/MWh)	0.02126	0.02339	0.02502	0.02677	0.02865	0.03065
	+32%	+10%	+7%	+7%	+7%	+7%

Figure 7 NTP projected fee



Real values are the nominal amounts adjusted for inflation. Prices have been calculated relative to the 2017-18 price.

Figure 8 Expenditure by category 2018-19

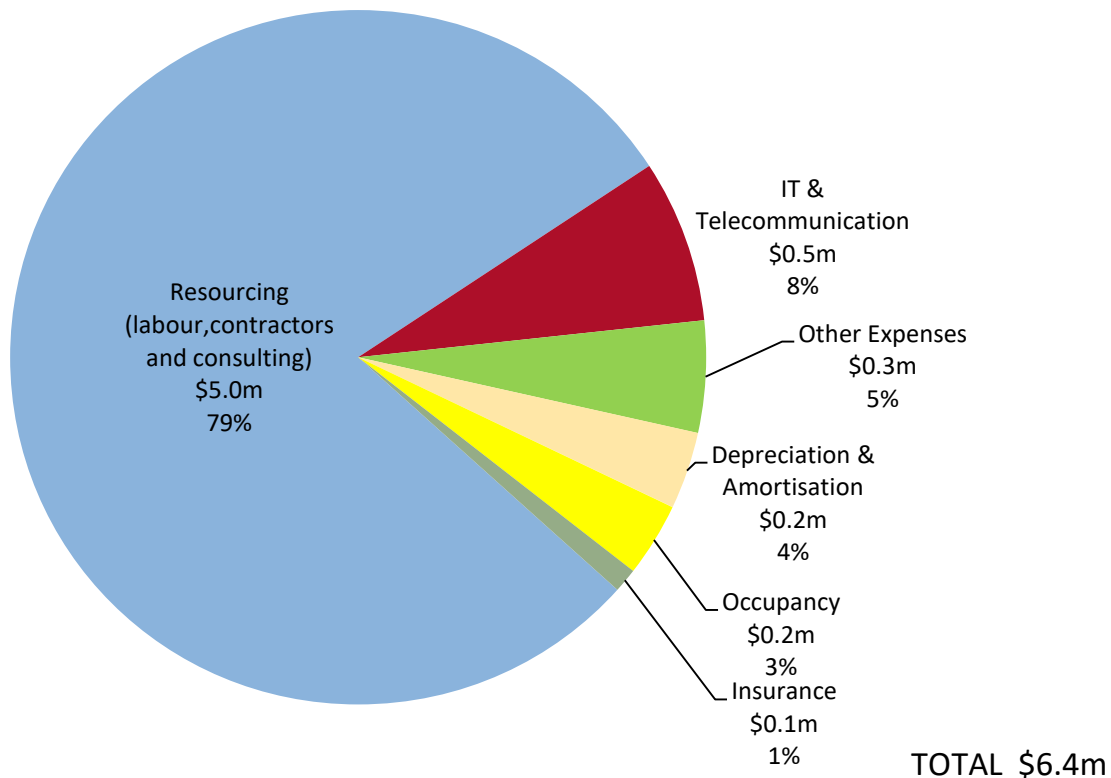


Table 8 Profit and Loss statement 2018-19 and comparison – NTP

	Budget	Budget	Variance	
	2017-18 \$'000	2018-19 \$'000	\$'000	%
Fees and tariffs	3,867	4,178	311	+8%
Other Revenue	4	6	1	+31%
Total Revenue	3,872	4,184	312	+8%
Resourcing (labour, contractors and consulting)	3,172	5,047	1,875	+59%
Fees - Agency, Licence & Audit	20	19	(1)	-6%
IT & Telecommunication	324	484	159	+49%
Occupancy	191	219	28	+15%
Insurance	68	72	4	+6%
Other Expenses	224	332	108	+48%
Depreciation & Amortisation	240	230	(10)	-4%
Total Expenditure	4,240	6,403	2,163	+51%
Surplus/ (Deficit)	(368)	(2,219)	(1,851)	
Brought Forward Surplus/ (Deficit)	526	(171)	(697)	
Accumulated Surplus/ (Deficit)	158	(2,391)		

Key points to the profit and loss 2018-19:

Revenue

Higher revenue in 2018-19 due to increase in revenue requirement as a result of increased expenditure for the function couple with lower energy forecast.

Expenditure

- Labour increase includes a provision for temporary increases in resources along with a provision for ongoing resources to manage the increasing complexity of our work.
- Consulting costs are higher in 2018-19. Consulting costs provisioned to include specialist advice and support relating to modernising our markets and managing the complexities of the grid.

5. Energy Consumers Australia (ECA)

Purpose of this function	To promote long term interests of the energy customers, in particularly for residential customers and small business customers.
Fees	<p>AEMO is required to recover the funding for the ECA from market participants (i.e. pass through recovery). Total expenditure budgeted by the ECA to be recovered in 2018-19 is \$7.3m (+8% increase) (2017-18: \$6.8m).</p> <p>The electricity ECA fee is \$0.00985 per connection point per week in 2018-19 (1% increase). This increase of 1% is mainly due to returning a surplus from 2017-18.</p> <p>The gas ECA fee is \$0.03547 per customer supply point per month in 2018-19 (11% increase). This increase of 11% is higher than the 8% budgeted expenditure mainly due to an under recovery of costs from 2017-18.</p>
Other notes	<p>In November 2017 the Council of Australian Governments approved the ECA 2018-19 annual budget.</p> <p>For any questions on the ECA budget in 2018-19, contact Mohua Mukherjee, Director Governance and Operations at mohua.mukherjee@energyconsumersaustralia.com.au.</p>

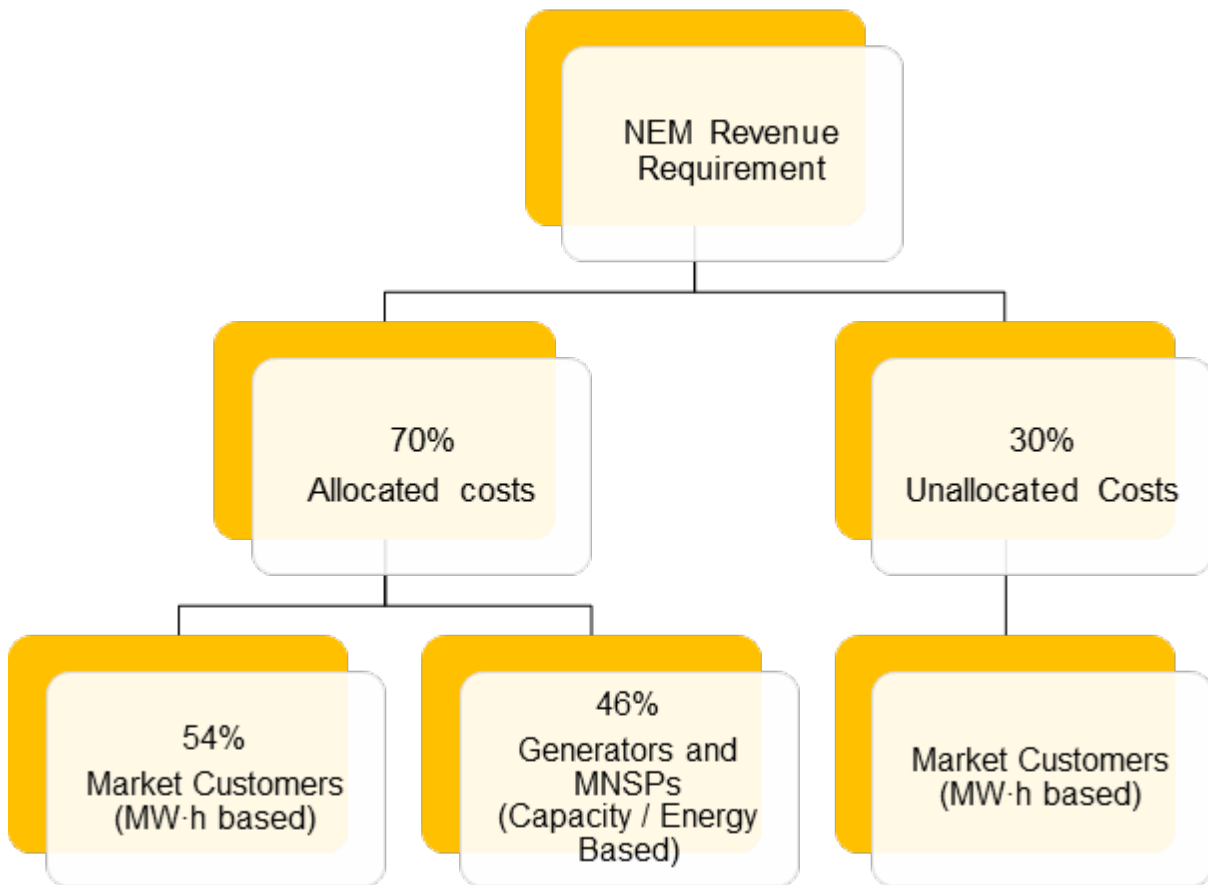
Table 9 ECA projected fee

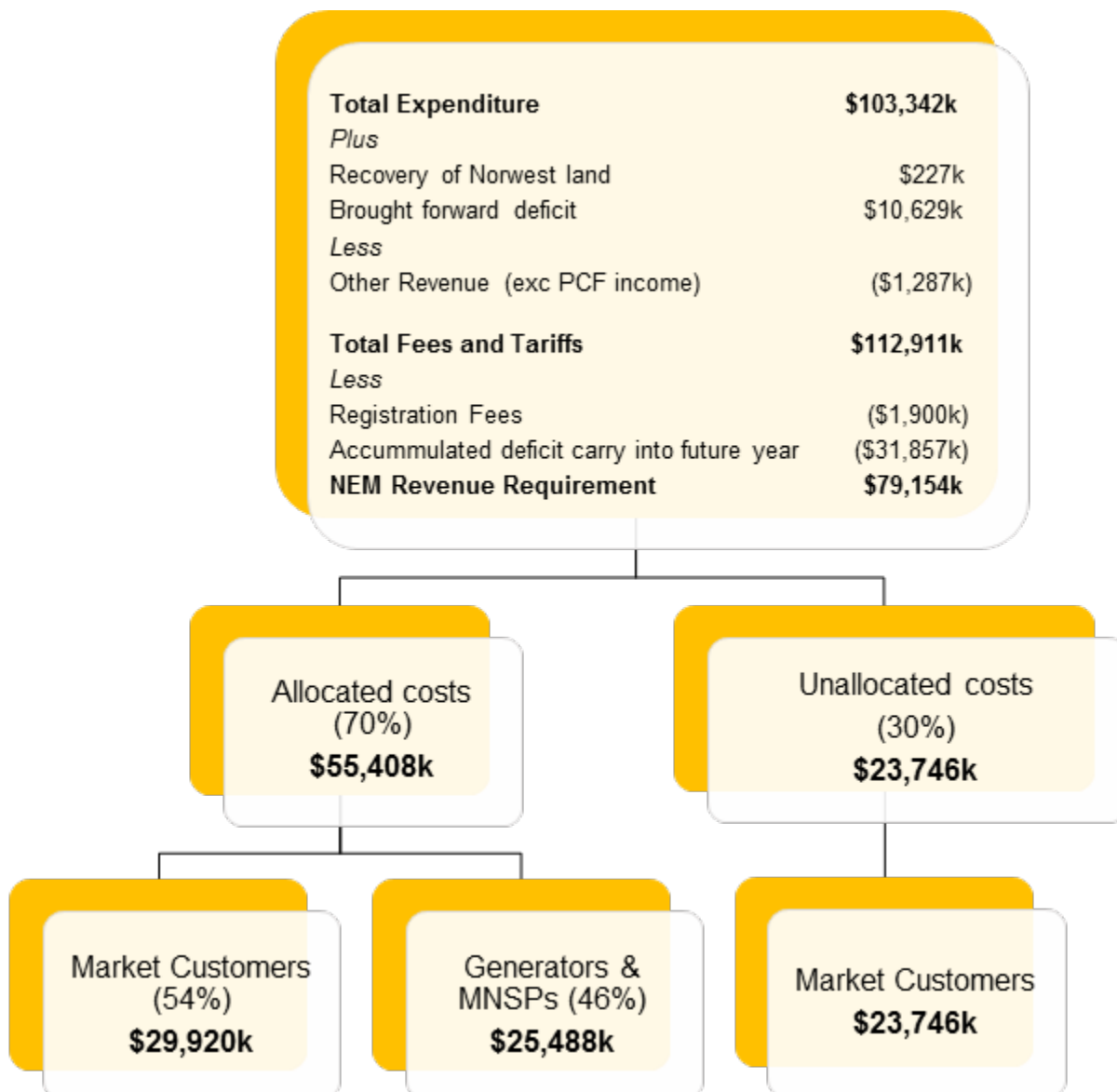
AEMO's ECA Fees	Actual 2017-18	Budget 2018-19
Electricity (\$ / connection point for small customers per week)	0.00979 +3%	0.00985 +1%

Appendix A. NEM Fee Structure

Overview of NEM fee calculation

The NEM fee determination requires the annual revenue to be allocated as follows:





Appendix B. Electricity Revenue and Fee

Revenue requirement and fee schedule for 2018-19

Function	Budget 2018-19 \$'000	Rate	Paying Participants
NEM			
General Fees (unallocated)	23,746	\$0.13292/ MW·h of customer load	Market Customers
Allocated Fees			
Market Customers	29,920	\$0.16748/ MW·h of customer load	Market Customers
Generators ¹ and Market Network Service Providers	25,488	Daily rate calculated on 2017 capacity/ energy	Generators and Market Network Service Providers
NEM Revenue Requirement	79,154		
Participant Compensation Fund	1,000	Daily rate calculated on capacity/ energy basis	Scheduled Generators, Semi-Scheduled Generators and Scheduled Network Service Providers
Registration fees	1,900		Intending Participants
Other	1,308		Dependent on service provided
TOTAL NEM	83,362		
FRC ELECTRICITY			
FRC Operations	12,973	\$0.07700/ MWh of customer load in jurisdictions with FRC	Market Customers with a Retail Licence
Other	2		Dependent on service provided
TOTAL FRC ELECTRICITY	12,974		
National Transmission Planner	4,178	\$0.02339/ MW·h of customer load	Market Customers
Electricity Consumer Advocacy Panel	5,104	\$0.00985/ connection point for small customers/ week	Market Customers
Additional Participant ID		\$5,000 per additional participant ID	Existing Participants
WA WHOLESALE ELECTRICITY MARKET			
WEM Market Operator fee	12,695	\$0.350/ MW·h	Market Customers and Generators
WEM System Management fee	17,563	\$0.484/ MW·h	Market Customers and Generators
WA WEM Revenue Requirement	30,258		

¹ Excluding non market non scheduled generators

Fee schedule for 2018-19 and forward year estimates

Function	Rate					Basis	Paying Participants
	Budget 2018-19	Estimate 2019-20	Estimate 2020-21	Estimate 2021-22	Estimate 2022-23		
NEM							
General Fees (unallocated)	0.13292	0.14887	0.16673	0.18674	0.20915	MW-h of customer load	Market Customers
Allocated Fees							
- Market Customers	0.16748	0.18758	0.21009	0.23530	0.26353	MW-h of customer load	Market Customers
- Generators ¹ and Market Network Service Providers	25,488	28,390	31,710	35,428	39,591	Daily rate calculated on capacity/ energy basis	Generators and Market Network Service Providers
Participant Compensation Fund	0.01	TBC	TBC	TBC	TBC	Daily rate calculated on capacity/ energy basis	Scheduled Generators, Semi-Scheduled Generators and Scheduled Network Service Providers
FRC ELECTRICITY							
FRC Operations	0.07725	0.07957	0.08195	0.08523	0.08864	MW-h of customer load in jurisdictions with FRC	Market Customers with a Retail Licence
Other							
National Transmission Planner	0.02339	0.02502	0.02677	0.02865	0.03065	MW-h of customer load	Market Customers
Electricity Consumer Advocacy Panel	0.00985	TBC	TBC	TBC	TBC	connection point for small customers/ week	Market Customers

[1] Excluding non market non scheduled generators

Fee schedule of electricity registrations

Application Type	2018-19 \$
Registration as Scheduled Market Generator ¹	20,000
Registration as Semi-Scheduled Market Generators	20,000
Registration as Scheduled Non-Market Generator	10,000
Registration as Semi-Scheduled Non-Market Generators	10,000
Registration as Non-Scheduled Market Generator	10,000
Registration as Market Customer	10,000
Registration as Market Small Generation Aggregator	10,000
Transfer of Registration	10,000
Registration as Metering Co-ordinator (MC) ²	10,000
Registration as Market Ancillary Service Provider	10,000
Registration as Non-Scheduled Non-Market Generator	5,000
Registration as Network Service Provider	5,000
Registration as Trader	5,000
Registration as Reallocator	5,000
Classification of generating units for frequency control ancillary services purposes	5,000
Classification of load for frequency control ancillary services purposes - new ancillary service load or aggregated ancillary service load	5,000
Change to constituent devices that form an aggregated ancillary service load	500
Registration as Intending Participants	2,000
Exemption from registration	2,000

¹ Each category of *Generator* in this table includes applications made by persons intending to act as intermediaries.

² The registration fee will not apply to Network Operators that become the Initial Metering Coordinator from 1 December 2017 and Metering Coordinator for Type 7 meters (unmetered load).

Fee schedule of Power of Choice accreditations

Application Type	2018-19 \$
Embedded Network Manager	2,000
Metering Data Providers	5,000
Metering Providers	5,000
Incremental charge rate per hour	150

List of Abbreviations

Term	Definition
AEMO	Australian Energy market Operator
FRC	Full Retail Contestability
ECA	Energy Consumer Australia
ESOO	Electricity Statement of Opportunities
LNG	Liquefied Natural Gas
MC	Metering Co-ordinator
MNSP	Market Network Service Provider
MW-h	Megawatt hour
NA	Not Applicable
NEFR	National Electricity Forecast Report
NEM	National Electricity Market
NTP	National Transmission Planner
PCF	Participant Compensation Fund
TBC	To Be Confirmed