

FINAL REPORT -STRUCTURE OF PARTICIPANT FEES IN AEMO'S ELECTRICITY MARKETS 2016

FINAL REPORT

Published: 17 March 2016



AEMO



1. EXECUTIVE SUMMARY

1.1 Background

AEMO has completed the review of the structure of Participant fees in AEMO's electricity markets to apply from 1 July 2016.

The review applied only to the structure of Participant fees. The actual amount charged for each fee will be determined on an annual basis through the AEMO budgeting process.

AEMO conducted two stages of consultation with stakeholders and has published all submissions on its website. AEMO has taken the submissions into consideration when preparing this final report.

1.2 Information

Table 1 Information on Final Report

Report Purpose	To present the final Participant fee structure determination in the electricity functions covered in the consultation.
Date applicable	1 July 2016
Duration of fee determination	5 years (i.e. 1 July 2016 to 30 June 2021) with the option for AEMO to re-open (i.e. re-determine) the structure of the fee for the Electricity Full Retail Competition function during the determination period.
Electricity functions covered in consultation	 The National Electricity Market (NEM) The Electricity Full Retail Competition (FRC) The National Transmission Planner (NTP) function The Energy Consumers Australia (ECA) fees collected by AEMO from NEM participants NEM Participation Compensation Fund (PCF)



Consultation process overview	The consultation process undertaken by AEMO for the review of Participant fees in its electricity markets followed the Rules consultation procedure in clause 8.9 of the National Electricity Rules (NER).			
	Milestone	Publication date	Submissions close	Comments
	Issues paper	14 September 2015	20 October 2015	5 submissions received ¹ .
	Draft report	18 December 2015	29 January 2016	8 submissions received ² .
	Final report	17 March 2016	N/A	N/A
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1.3 Guiding principles for electricity fee structure

In determining the structure of Participant fees, AEMO must comply with the National Electricity Law (NEL) and National Electricity Rules (NER).

Under NER 2.11.1, in determining Participant fees AEMO must have regard to the National Electricity Objective (NEO) and the structure must, to the extent practicable, be consistent with the following principles:

- The structure of Participant fees should be simple.
- The components of Participant fees charged to each Registered Participant should be reflective of the extent to which AEMO's budgeted revenue requirements involve that Registered Participant.
- Participant fees should **not unreasonably discriminate** against a category or categories of Registered Participants.

¹ Submissions received in the first stage of consultation is published on the consultation page <u>http://www.aemo.com.au/Consultations/National-Electricity-Market/Electricity-Markets-Structure-of-Participant-Fees</u>

² Submissions received in the second stage of consultation is published on the consultation page. http://www.aemo.com.au/Consultations/National-Electricity-Market/Electricity-Markets-Structure-of-Participant-Fees



- Fees and charges are to be determined on a **non-profit basis** that provides for full cost recovery.
- The structure of Participant fees **should provide for the recovery of AEMO's budgeted revenue requirements** on a specified basis.

The principles may often be competing, for example a strong cost-reflective (user pays) structure is unlikely to be simple. Neither the NEL, nor the NER, expressly indicate that any one or more of these principles should have greater weight than the others and where there are competing principles, AEMO is permitted by the language of NER 2.11.1, to adopt a structure that is not equally consistent with each of these principles.



1.4 Summary of key changes in the final fee structure from the existing structure

Table 2 Comparison of existing structure to the final structure by function

	Existing structure	Final fee structure
	(1 July 2011 to 30 June 2016)	(1 July 2016 to 30 June 2021)
National Electricity Market	-	



	Existing structure	Final fee structure
	(1 July 2011 to 30 June 2016)	(1 July 2016 to 30 June 2021)
Electricity FRC	Charged to Market Customers with a retail licence and levied for a financial year at a rate per MWh based on AEMO's estimate of total MWh to be settled in spot market transactions by Market Customers with a retail licence during that financial year against regional reference nodes. Rate applied to actual spot market transactions in the billing period.	Electricity FRC fees to continue to be collected on a MWh energy consumed basis from 1 July 2019 until 30 June 2019. From 1 July 2019, fees will be collected on a per connection point basis. A trigger clause to be incorporated to allow for a separate consultation to be conducted at AEMO's discretion for Electricity FRC to consider the impact associated with Power of Choice projects
National Transmission Planner	Charged to Market Customers and levied at a rate per MWh based on AEMO's estimate of total MWh to be settled in spot market transactions by Market Customers during that financial year. Rate applied to actual spot market transactions in the billing period.	No change to the existing structure.
Energy Consumers Australia fee	Charged to Market Customers and levied at a rate per small customer (as defined in the National Energy Retail Law) connection point.	No change to the existing structure.
NEM Participant Compensation Fund	Charged to Scheduled Generators, Semi Scheduled Generators and Scheduled Network Service Providers in accordance to the NER, levied on 50% maximum capacity and 50% energy generated in the previous calendar year.	No change to existing structure.
Registration fees	The fee structure for registration fees along with the amounts to be charged for each different application type was set in the determination.	The fee structure for registration fees for each application type to continue to be charged. A proposed new type of applicant, 'Metering Coordinator', to be charged a new registration fee. The actual registration fee amounts are to be set as part of the annual budget.
Incremental charges	Where it is practical for AEMO to identify that doing something specific for a participant or another party, and that action causes identifiable and material costs for AEMO, AEMO can seek to levy fees to recover the incremental costs incurred.	No change to the existing structure.
Staged implementation	No staged implementation in the current determination.	All fees to commence 1 July 2016. Except for the Electricity FRC fee change to commence 1 July 2019 (unless Electricity FRC fee structure is amended earlier as a result of AEMO conducting a consultation on the structure of the FRC fees within the period of the final determination to consider the impact of any changes to any electricity market, rules or procedures associated with recommendations made in the AEMC Power of Choice Review final report which are to become effective within the period of the final determination). No other staged implementation proposed.



	Existing structure (1 July 2011 to 30 June 2016)	Final fee structure (1 July 2016 to 30 June 2021)
Period of fee structure	5 year term.	5 year term. However a trigger clause to be incorporated into the final determination to conduct a consultation on the structure of the FRC fees during the period of the final determination if AEMO considers it appropriate to consider the impact of any changes to any electricity market, rules or procedures associated with recommendations made in the AEMC Power of Choice Review final report which are to become effective within the period of the final determination.



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2. FINAL ELECTRICITY MARKETS FEE STRUCTURE

2.1 Period of fee methodology

2.1.1 Final position

The final fee structure has a duration of five years, from 1 July 2016 to 30 June 2021.

However a trigger clause is incorporated to allow for the period of the structure of the Electricity FRC fees to be less than five years if AEMO considers it appropriate to conduct a consultation on the structure of the FRC fees to consider the impact of any changes to any electricity market, rules or procedures associated with recommendations made in the AEMC Power of Choice Review final report which are to become effective within the period of the final determination.

Table 3 Final	nosition – ne	riod of fee r	nethodology c	compared to	existing structure
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	Existing structure (1 July 2011 to 30 June 2016)	Final fee structure (1 July 2016 to 30 June 2021)
Period of fee structure	Five year term.	5 year term. However a trigger clause to be incorporated into the final determination to conduct a consultation on the structure of the FRC fees during the period of the final determination if AEMO considers it appropriate to consider the impact of any changes to any electricity market, rules or procedures associated with recommendations made in the AEMC Power of Choice Review final report which are to become effective within the period of the final determination.

2.1.2 Reasons

Having a structure that applies over a longer period i.e. five years, provides certainty and predictability of the fee structure, but is also balanced against having the ability to keep a Participant fee structure consistent with the principles as circumstances change.

2.2 National Electricity Market

This refers to AEMO's core NEM functions in the following broad services:

- Power system security, market operations and systems.
- Power system reliability and planning.
- Wholesale metering and settlements.
- Prudential supervision.

Costs relating to FRC, NTP, ECA, PCF, Registration, Incremental Services and Settlement Residue Auctions are recorded and reported separately.

2.2.1 Final position

There are no changes to the existing structure for the National Electricity Market (NEM) fees.



	Existing structure	Final fee structure	
	(1 July 2011 to 30 June 2016)	(1 July 2016 to 30 June 2021)	
National Electricity Market	 Allocated direct costs: 70% of AEMO's general budgeted revenue requirements are "allocated costs" and are apportioned on the following basis: (a) 54% Market Customers; and (b) 46% Generators and Market Network Service Providers of which: (iv) two-thirds is apportioned to Market Generators in respect of their market generating units, Non-Market Scheduled Generators in respect of their non-market scheduled generating units, Semi-Scheduled Generators in respect of their semi-scheduled generating units, Semi-Scheduled Generators in respect of their semi-scheduled generating units and Market Network Service Providers in respect of their market network services; (v) one-third is apportioned only to Market Generators in respect of their market network services; and (vi) none is apportioned to Non-Market Network Service Providers in respect of their market network services; and (vi) none is apportioned to Non-Market Non-Scheduled Generators in respect of their non-market non-scheduled generating units. Generator and Market Network Service Provider charges: 50% charged as a daily rate based on aggregate of the higher of the greatest registered capacity and greatest notified maximum capacity in the previous calendar year of generating units and market network services and 50% charged as a daily rate based on MWh energy scheduled or metered (in previous calendar year). Market Customers charges – Rate per MWh for a financial year based on AEMO's general budgeted revenue requirements are "unallocated costs" and are allocated 100% to Market Customers. Market Customers charges – Rate per MWh for a financial year based on AEMO's general budgeted revenue requirements are "unallocated costs" and are allocated 100% to Market Customers. 	No change to the existing structure.	



2.2.2 Reasons

The reasons for no change to the NEM fee structure is explained in sections 2.2.3 to 2.2.7.

2.2.3 Economic advice

In 2005 NEMMCO, as AEMO's predecessor, sought economic advice from the Allen Consulting Group (ACG) on allocation of core NEM fees (ACG 2005). In 2010 AEMO sought further advice from ACG on the allocation of indirect, unallocated costs (ACG 2010). For this determination, AEMO sought additional clarification on those previous advices from ACIL-Allen Consulting as ACG's successor (AAC 2016). These three advices can be found on AEMO's website.

The AAC reviewed the earlier advices, noting that ACG 2005 was prepared prior to the explicit inclusion of the NEO as a requirement for developing the Participant fee structure (NER 2.11.1[ab]). AAC 2016 confirms that ACG 2005 and ACG 2010 were developed with regard to the NEO and remain consistent with contemporary economic approaches.

AEMO had regard to this advice when making its decision on NEM general fees. After considering this alongside its own analysis and stakeholder feedback, AEMO has ultimately determined a NEM fee structure that remains consistent with the ACG/AAC advices.

2.2.4 Allocating costs between Participant categories

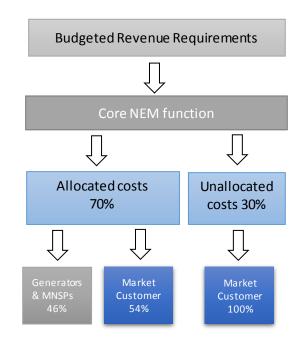
AEMO has undertaken a detailed analysis of its costs, activities and outputs to develop a reasonable estimate of how these costs involve registered participant categories. AEMO first identified the costs that are deemed to be direct, attributable costs to key NEM outputs, and those deemed to be indirect costs that are allocated to the NEM function. This resulted in 70% of costs being deemed to be direct and 30% being indirect.

AEMO then identified the key broad activities (e.g. power system security, metering and settlements) and allocated NEM direct costs to each of the outputs.

Following this, AEMO allocated the activities to categories of Registered Participants based on the 'reflective of involvement' and 'no unreasonable discrimination' criterion and the simplicity principle.

This analysis resulted in 46% of direct allocated costs being apportioned to Generators and Market Network Service Providers (MNSPs) and 54% to Market Customers. A table showing the broad activities and to which classes these were determined as involving is included in Appendix A.





2.2.5 Unallocated costs

This category relates to common "overheads" in operating AEMO that cannot be allocated to particular categories. In this case the reflective of involvement principle does not provide guidance and therefore AEMO focuses on simplicity and economic efficiency. ACG 2010 considered the most economically efficient allocation is to recover unallocated costs from end users via the Registered Participants closest to them. AEMO considers the approach of levying unallocated costs on Market Customers via energy charges continues, on balance, to best meet the Rules principles.

2.2.6 Market Customers

In determining how to recover the allocated costs within Market Customers, AEMO contemplated how they and their end-users are engage with AEMO. AEMO considers:

- The costs are effectively fixed, i.e. they do not, at the margin, vary with the number of customers or volume of energy transacted.
- The engagement is primarily with bulk energy and total market settlement rather than individual customers, as metering information is externally aggregated by the FRC function.

ACG 2005 considered these matters and preferred a multi-part, i.e. part variable and part fixed levy on Market Customers. However, as there was no obvious way to recover fixed costs from Market Customers, ACG 2005 recommended a fully variable, energy charge.

AEMO considers this is simple and of a form that is easily passed-on to end-users whose proportional energy consumption reflects the extent to which Market Customers are "involved" in this function. AEMO's consideration of other approaches is detailed in Table 5 and section 3.



Fixed cost approach	Consideration	
Flat fixed fee per retailer	The small administrative costs of additional Market Customer registrations is recovered through AEMO's fee structure for new registration fees. A fee per retailer does not seem to be reflective of involvement and appears to unreasonably discriminate against small retailers.	
Levying a fixed tariff or charge based on number of connection points	Under this approach, costs currently allocated to large customers would be transferred to small customers. Individual connection points are involved in the FRC function, where the energies are aggregated, but for NEM core functions the engagement is with their aggregate energy and settlement. Therefore this approach does not appear to be reflective of involvement.	
Levying a fixed tariff or charge based on peak demand of a Market Customer	Much of NEM direct allocated costs could be said to relate to AEMO's capacity to manage peak demand rather than energy. Energy charging therefore potentially results in end-users with flat load profiles contributing above their level of involvement. Levying a charge based on peak deman of a Market Customer could meet this principle better. A relevant consideration was the growth of rooftop photovoltaic generation which results in some end-user's energy demands being very small relative to their peak demand.	
	However there are challenges with this approach as	
	 AEMO does not have all the data to perform these calculations without estimations. 	
	It would require AEMO system changes.	
	 Is likely to cause retailer customer billing challenges in determining an appropriate and transparent on-charge of AEMO market fees to end-users and significant system changes. 	
	This approach does not appear simple, which, on balance, exceeds its attractiveness in more closely meeting the involvement principle. It was considered that the current penetration and forecast growth rates of rooftop photovoltaic generation would not alter this conclusion for the period of this determination.	

Table 5 Alternate methods to determine Market Customer charges

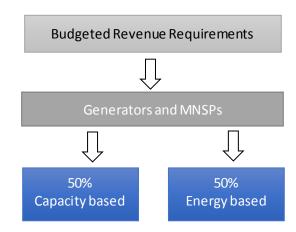
After considering this advice and stakeholder feedback discussed in section 3.1.4, AEMO has determined to not change the existing structure.

2.2.7 Generators and MNSPs

For the Generator category, ACG 2005 preferred a part-fixed, part-variable tariff, however it could not identify a practical way to charge variable fees which would not be passed through to other Participant classes. Therefore it recommended a fully fixed fee, based half on historic registered capacity and half on historical energy. This view was re-confirmed in ACG 2016.

After considering this advice and stakeholder feedback discussed in section 3.1.4, AEMO determines to not change the existing structure.





2.2.8 Transmission Network Service Providers (TNSP) and Distribution Network Service Providers (DNSP)

The relationship between TNSPs and AEMO has two aspects. TNSPs may be considered to be involved in AEMO's NEM functions – for example the security and integrity of equipment of TNSPs is preserved by AEMO's power system security activities and TNSPs make use of the reports AEMO publishes as part of its NTP function. AEMO has substantial interaction and involvement with the TNSPs on a consistent basis and considers whilst the TNSPs are critical to the operation of the NEM, their involvement is supportive to the market. TNSPs also provide services to AEMO that contribute to AEMO's ability to manage power system security and perform its NTP role and other NEM functions.

Some of these services are provided to AEMO under agreements entered into between AEMO and the relevant TNSP. For the most part, however, they are provided as a result of obligations imposed on TNSPs under the Rules. If AEMO were to charge TNSPs Participant fees, they are likely to seek to charge AEMO for the services they provide AEMO that support the NEM.

AEMO has less extensive interaction with DNSPs in relation to power system security and reliability outputs and that interaction, like that with TNSPs, involves mutual services. Accordingly, AEMO considers it should not charge DNSPs fees.

AEMO has determined to not charge TNSPs or DNSPs participant fees.

2.3 Electricity Full Retail Competition (FRC)

AEMO has several functions relating to facilitation of retail market competition (customer choice). These broad services include:

Electricity FRC services	Inclusions	AEMO costs
(1) Managing data for settlement purposes	Supporting metering functions; managing large volumes of metering data to ensure energy usage is properly measured, reconciled and allocated to the appropriate parties; and managing transfers of financial responsibilities between retailers, predominately to support market settlement.	

Table 6 AEMOs services for the Electricity FRC function



Electricity FRC services	Inclusions	AEMO costs
(2) Support from retail market functions and customer transfers	Providing the ability for customers to choose or change their retailer, facilitate large volumes of customer transfers between retailers and the provision of service point identifiers to support a range of functions including discovery facility.	People,
(3) Business to business processes	AEMO provides the platform to facilitate business to	
(4) Market Procedures changes and project implementation	AEMO is responsible for development and consultation of procedures changes, and implementation of market changes arising from reviews and rules. AEMO runs a number of forums to support these functions.	

2.3.1 Final position

From 1 July 2016 to 30 June 2019, fees will continue to be collected on the current MWh energy consumed basis. From 1 July 2019, fees will be collected on a per connection point basis.

Connection point basis of recovery method

Before the start of each financial year, AEMO will calculate an FRC fee rate as the charge per retail connection point, per week. This will be derived from the budgeted revenue requirement and AEMO's estimate of the total number of active retail connection points over the upcoming financial year.

The amount charged to a retailers in a billing week will be calculated by multiplying the FRC fee rate (expressed as a daily rate) by the number of days in the billing period, and by the applicable number of active NMI's for which the retailer is the Financially Responsible Market Participant (FRMP) on each day in the billing period. AEMO will assess the number of active NMI's for each FRMP on a periodic basis, and at least once per month, and will be aligned to the assessment for ECA fees.

TRIGGER CLAUSE EXCEPTION

The exception to the above change is to allow for a 'trigger clause' be incorporated to allow for a separate consultation **to be conducted at AEMO's discretion** to consider significant Power of Choice projects being implemented.

If triggered, the scope of this separate consultation will only cover the Electricity FRC fee structure (i.e. not all the electricity functions).

Note: If this trigger clause is exercised and a separate consultation is conducted prior to 1 July 2019 and a new determination is made, the new determination will take precedence over this current determination of the connection point basis method of recovery for FRC fees.



	Existing structure (1 July 2011 to 30 June 2016)	Final fee structure (1 July 2016 to 30 June 2021)
Electricity FRC	Charged to Market Customers with a retail licence and levied for a financial year at a rate per MWh based on AEMO's estimate of total MWh to be settled in spot market transactions by Market Customers with a retail licence during that financial year against regional reference nodes. Rate applied to actual spot market transactions in the billing period.	Electricity FRC fees will continue to be collected on a MWh energy consumed basis from 1 July 2016 until 30 June 2019. From 1 July 2019, fees will be collected on a per connection point basis. A trigger clause will be incorporated to allow for a separate consultation to be conducted at AEMO's discretion for Electricity FRC to consider the impact of Power of Choice projects.

Table 7 Electricity FRC final fee structure compared to existing

2.3.2 Reasons

Connection point basis of recovery

For AEMO to deliver the four broad Electricity FRC services as described above, people, processes and the IT System underpin the allocation of costs incurred in order to provide these services. By adopting the 'reflective of involvement' principle and the NEO, one of the key purpose for establishing the Electricity FRC market was to build capability in the IT market systems to facilitate customer transfer and accurately aggregate meter information for businesses. AEMO's investment in people and processes to provide this capability are related to the number of connection points that the business is responsible for, or in a sense, the retailer's 'market share' of this capability at any point in time.

AEMO considers this basis of recovery better reflects of the drivers of this function's purpose to the industry and consumers, as opposed to the current MWh consumption basis of recovery. This is because AEMO's FRC capability is built to handle a total number of individual meters and the actual energies flowing through them is incidental. In accordance with Clause 2.11.1(d) of the NER, AEMO also considered the fee structure in the gas markets operated by AEMO and notes that this basis of recovery is aligned with the basis of recovery in the gas FRC markets. This basis of recovery is aligned with the basis of the recovery of Energy Consumers Australia's electricity functions costs that benefit small electricity customers.

Delayed implementation to 1 July 2019 with a potential re-opener of fees trigger clause

AEMO considers that that the connection point basis of recovery is more reflective of registered participant's involvement with the costs of the services provided in the Electricity FRC function, than the current MWh consumption basis.

However prudence needs to be applied in determining an implementation date for this change.

In accordance to the 'simplicity' principle and the NEO, AEMO considers that, in absence of the Power of Choice program developments, the change to connection point basis recovery could be implemented as soon as practical for affected participants, thus the draft report recommended changing to recovery on the basis of connection point from 1 July 2017. However, AEMO has also considered the impacts to participants if 2 changes to the FRC fee structure were to be made in a short period of time – changing to recovery on the basis of connection points from 1 July 2017 and another change to consider the impact of Power of Choice impacts which could potentially occur in December 2017 when recent changes for metering competition become effective. The additional costs and complexity of implementing system and process changes twice may outweigh the benefits of changing to basis of recovery which is more reflective of involvement from 1 July 2017.

Therefore, AEMO has decided to delay the connection point basis of charging to 1 July 2019. This will allow for further developments in the Power of Choice program to come to fruition. Allowing more time



to track developments and its impact to participant fee structure could mean that, at AEMO's discretion, a separate consultation can be conducted on the FRC fee structure prior to 1 July 2019. Therefore, retailers and AEMO will be required to only implement changes once and this provides a simpler way to change the structure of the FRC fee component whilst also allowing time to consider the impact of Power of Choice changes.

For the avoidance of doubt, this trigger clause does not limit or affect any discretion or right under the NER relating to the determination of a fee structure, such AEMO's discretion to determine a declared NEM project and the structure of additional fees for such a project.

2.4 National Transmission Planner (NTP)

AEMO's main activity since 2010 as NTP is preparation and maintenance of the annual National Transmission Network Development Plan (NTNDP). Current NTP activities also 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.

2.4.1 Final position

The NTP function is to be recovered from Market Customers based on \$/MWh energy basis.

This is not changed from the existing structure.

Table 8 NTP final fee structure compared to existing

	Existing structure (1 July 2011 to 30 June 2016)	Final fee structure (1 July 2016 to 30 June 2021)				
National Transmission Planner	Charged to Market Customers and levied at a rate per MWh based on AEMO's estimate of total MWh to be settled in spot market transactions by Market Customers during that financial year. Rate applied to actual spot market transactions in the billing period.	No change to the existing structure.				

2.4.2 Reasons

There are strong synergies between the NTP and NEM functions for Market Customers. Aligning NTP fees structure with the NEM function for Market Customers appears to meet the principles well, especially simplicity.

2.5 Energy Consumers Australia (ECA)

The Council of Australian Governments (COAG) Energy Council approved establishment of Energy Consumers Australia (ECA) by 1 January 2015, providing a focus on national energy market matters of strategic importance for energy consumers, in particular residential and small business consumers.

The ECA replaced the existing Consumer Advocacy Panel (CAP) for which AEMO currently collects funds through participant fees in the National Electricity Market (NEM) and gas markets. AEMO is also required to collect funding for the ECA, and changes need to be made to AEMO's fee schedules to allow the new mechanism to be operational when the ECA commences.

In October 2014, before ECA fees were introduced, AEMO conducted an accelerated consultation process about the fee structure to be charged to participants (i.e. applicable date 30 January 2015). The determination was that AEMO would revisit the ECA fee structure in this review.



2.5.1 Final position

ECA fees for electricity to be levied on Market Customers based on fee per connection point for small customers.

There is no change to the existing structure.

Table 9 ECA electricity fee final fee structure compared to existing

	Existing structure (1 July 2011 to 30 June 2016)	Final fee structure (1 July 2016 to 30 June 2021)
Energy Consumers Australia fee	Charged to Market customers and levied at a rate per small customer (as defined in the National Energy Retail Law) connection point.	No change to the existing structure.

2.5.2 Reasons

AEMO notes that establishment of the ECA, its constitution, and mandate of activities is to provide a focus on national energy market matters of strategic importance in particular to benefit residential and small business consumers. Therefore AEMO considers it appropriate for the costs associated with ECA to be apportioned on the basis of small customer connection points only and therefore there is no change to the current basis of charging.

2.6 NEM Participant Compensation Fund (PCF)

2.6.1 Final position

In accordance to the NER, AEMO is required to maintain a Participant Compensation Fund (PCF) for the NEM to pay compensation to Scheduled Generators, Semi Scheduled Generators and Scheduled Network Service Providers for scheduling errors as determined by the Dispute Resolution Panel.

The NER requires that funding requirements of the NEM PCF are to be recovered only from Scheduled Generators, Semi Scheduled Generators and Scheduled Network Services Providers. AEMO has decided not to make a change to the existing structure.

	Existing structure (1 July 2011 to 30 June 2016)	Final fee structure (1 July 2016 to 30 June 2021)
NEM Participant Compensation Fund	Charged to Scheduled Generators, Semi Scheduled Generators and Scheduled Network Service Providers in accordance to the NER, levied on 50% maximum capacity and 50% energy generated in the previous calendar year.	No change to existing structure.

Table 10 NEM PCF final fee structure compared to existing

2.6.2 Reasons

The NER prescribes that funding requirements of the PCF can only be recovered from Scheduled Generators, Semi Scheduled Generators and Scheduled Network Service Providers under NER clause 2.11.3(b)(8).

In accordance with the simplicity principle, a consistent method of recovery from generators with the NEM fee structure (i.e. based on 50% maximum capacity as registered in the previous calendar year and 50% energy generated in the previous calendar year) will satisfy this principle.



2.7 New Registration fees

In the last determination in 2011, AEMO set the fee structure for registration fees including the amounts to be charged for each different application type.

2.7.1 Final position

The amount of new registration fees charged (in Australian dollars) will be set as part of the annual budget.

This is a change from the current structure where the amount of new registration fees are set as part of the determination.

All new electricity Registered Participants will continue to be required to pay a registration fee. The final structure will also propose a new registration application type, the 'Metering Coordinator'.

Table 11 Registrations final fee structure compared to existing

2.7.2 Reasons

AEMO is currently reviewing the end-to-end registration process for each application and considers it may be appropriate to retain the current fees for each application type until the review is complete to accurately measure and satisfy the 'reflective of involvement' principle. It is then proposed that the fees for each application type be reviewed to ensure they are cost reflective and that changes to the fees can be set as part of AEMO's annual budgeting and fee setting process. This is consistent with the NER and the other electricity functions, where de-coupling of the budgetary amount and underlying fee structure is achieved.



2.8 Incremental charges

Where specific actions for a Registered Participant or another party cause identifiable and material costs for AEMO, AEMO proposes to continue to seek to levy fees to recover incremental costs incurred. An example of this is Marketnet charges for additional bandwidth use.

2.8.1 Final position

Incremental charges where costs can be separated and uniquely identifiable will be charged directly to the participant. This is no change to the existing structure.

Table 12 Incremental charges final fee structure compared to existing

	Existing structure (1 July 2011 to 30 June 2016)	Final fee structure (1 July 2016 to 30 June 2021)
Incremental charges	Where it is practical for AEMO to identify that doing something specific for a participant or another party, and that action causes identifiable and material costs for AEMO, AEMO can seek to levy fees to recover the incremental costs incurred.	No change to the existing structure.

2.8.2 Reasons

AEMO's ability to directly recover unique incremental charges from participants will satisfy the 'reflective of involvement' principle and will not unreasonably discriminate between Registered Participants as all participants will incur the costs where costs can be separated and uniquely identified.

2.9 Staged implementation

AEMO can set a fee structure that varies through the period. A staged implementation may be considered where:

- The preferred structure involves implementation challenge, for example changes to IT systems
- Participants may need to consider the customer impact and adjust to a material change to the current fee structure.

2.9.1 Final position

AEMO's final position is to implement a staged implementation for the Electricity FRC fee to be levied on a connection point basis effective from 1 July 2019.

There is no stage implementation for the new Registered Participant – Metering Coordinator registration fees.



Table 13 Staged implementation final fee structure compared to existing

	Existing structure (1 July 2011 to 30 June 2016)	Final fee structure (1 July 2016 to 30 June 2021)			
Staged implementation	No staged implementation in the current determination.	All fees to commence 1 July 2016. Except for the Electricity FRC fee change to commence 1 July 2019 (unless Electricity FRC fee structure is amended earlier as a result of AEMO conducting a consultation within the period of the final determination to consider the impact of any changes to any electricity market, rules or procedures associated with recommendations made in the AEMC Power of Choice Review final report which are to become effective within the period of the final determination). No other staged implementation proposed.			

2.9.2 Reasons

(?)

Refer to section 2.3 Electricity FRC for the reason for staged implementation in this function.



3. SUBMISSIONS RECEIVED FROM CONSULTATION

AEMO received five submissions in the first stage of consultation. Respondents were:

- Origin Energy
- AGL
- Red Energy/Lumo Energy
- ERM Power
- CS Energy

In the second stage of consultation i.e. Draft Report, AEMO received responses from:

- Origin Energy
- AGL
- Energy Australia
- Red Energy/Lumo Energy (RELE)
- Simply Energy
- ERM Power
- CS Energy (including supporting report by Frontier Economics)
- EUAA

These submissions are published on AEMO's website.

http://www.aemo.com.au/Consultations/National-Electricity-Market/Electricity-Markets-Structureof-Participant-Fees

All submissions were considered in detail when preparing the final report and respondents were contacted individually.

AEMO responded to matters raised in the first stage submission in the draft report.

The following responses are to second stage submissions.

3.1 NEM

In the draft report, AEMO proposed continuing the methodology as discussed in ACG 2005 and ACG 2010. Simply Energy supported this approach, whilst EUAA and CS Energy recommended changes. The matters raised were varied and complex and are responded to below.

3.1.1 Unallocated costs

EUAA questioned the basis of allocating 100% of unallocated costs to Market Customers, proposing they be shared equally across all Registered Participants.

AEMO Response: ACG 2010 engages specifically with this question, and concludes that, as cost reflectivity cannot be determined, the allocation should achieve the most economically efficient option, which is to "minimise the number of steps in a supply-chain along which a levied fee is passed" and levy the fee for these costs on entities in the electricity supply chain nearest to end-users, being Market Customers.



AEMO reconsidered this issue for this determination and still considers that cost reflectivity cannot be determined for unallocated costs and therefore, having regard to the NEO, unallocated costs should continue be levied on Market Customers.

3.1.2 Structure of general NEM fees

EUAA were concerned the draft report did not present the activity analysis which determined the split between Generators and Market Customers and noted the percentage had not changed in this determination. EUAA recommended a third-party audit of this analysis.

AEMO Response: AEMO confirms that a fresh, bottom-up activity analysis was performed for the draft report. Whilst underlying quantities had changed from previous analyses, the totals coincidentally rounded to the same shares (or percentage allocation) as the 2011 determination.

A high level break up is shown in Appendix A. AEMO did not consider it necessary to publish the activity analysis in greater detail, however the process used can be described in more detail to interested parties on request. AEMO does not consider the matter warrants the cost of an external audit.

3.1.3 Structure of Market Customer fees

The draft report proposed continuing the recovery of NEM general fees upon Market Customers on an energy (i.e. per MWh) basis. It described three alternatives that had been assessed:

- Charging a fixed fee per Market Customer (i.e. Retailer) registration. This approach did not seem to be reflective of involvement and appears to unreasonably discriminate against small retailers.
- A fixed charge per connection point. Outside of FRC (which is discussed in section 2.2.6), AEMO's systems dealt with aggregated customer data and therefore this approach did not appear to be reflective of involvement.
- A charge based on the peak demand of a Market Customer. This approach did not appear to be simple.

EUAA stated that the first alternative, a fixed fee per Registered Participant, may not necessarily impact on competition and this may warrant further consideration.

AEMO Response: AEMO considers that charging a large and small retailer equally would be unreflective of their business' relative involvement with AEMO and would unreasonably discriminate against small retailers.

EUAA and CS Energy also recommended reconsideration of the second alternative for some all of these fees.

EUAA argued fixed charges per connection point should not harm competition, recognises economies of scale and are easily passed through to end-users.

CS Energy/Frontier argued that fixed charges per connection point were more economically efficient than energy charging and were equally simple.

AEMO Response: Individual customers' energies are aggregated into wholesale quantities by the FRC activity. General market fees only relate to AEMO's activities after this aggregation has been performed, hence there is no involvement link between general fees and the number of connection points. As noted by ACG 2005:

"Furthermore, where connection-based charges may fail the clause 2.11.1(b) criteria is in the reflective of extent of involvement test. A market customer with a small number of large end users would pay lower fees than a market customer with a large number of small end users.



Yet, if they both purchase about the same amount of electricity in the NEM, then arguably they have the same involvement with NEMMCO and should pay about the same fees." ³

Involvement-based metrics that can be used for general NEM fees are ones that take into account the total size of a Market Customer's business engagement with AEMO. Such metrics could include energy, peak demand or financial settlement.

On balance, after consideration of both involvement and simplicity, AEMO considers energy remains the best option.

CS Energy/Frontier argued that energy-based charging is less efficient than connection based charging because it can distort (i.e. inefficiently discourage) consumption.

AEMO Response: AEMO agrees that variable fees, if significant, can potentially distort customer decisions more than connection based charging. On this matter ACG 2005 noted:

"Because the guantum of fees to be levied on Market Customers would be likely to be small relative to their total costs the effect on energy prices and thus energy demand would be expected to be small, so the efficiency cost of this variable fee would also be expected to be small."4

For residential customers, AEMO energy fees represent around 0.1% of their energy charges, and for larger customers about 0.2%⁵. AEMO considers this should have only minor efficiency consequence, and on balance, is outweighed by the involvement principle advantages of energy based charging.

3.1.4 Structure of Generator/MNSP charges

Simply Energy supported the existing structure whilst CS Energy re-iterated its first stage concerns that it is economically inefficient and included supporting economic analysis from Frontier Economics.

The existing structure is consistent with the 2005 ACG advice, which recommended, where possible, a fixed and variable fee for each participant class. However, as variable fees would be passed on through Generators' bids, the 2005 ACG advice stated that:

"There does not appear to be any practical basis for levying variable fees on Generators."6

ACG therefore recommended 100% fixed fees on Generators, and, so as to not discriminate against either base load or peaking Generators, an allocation based on half capacity and half energy scheduled. As the fee is intended to be fixed, ACG recommended that historical capacity and produced energy should be used to determine the fee.

CS Energy and Frontier recommended instead that the bulk of these generator fees be shifted to Market Customers and charged on a connection point basis and. Generators only be charged fees for AEMO's avoidable cost of providing services to Generators, which are likely to be extremely low.

CS Energy/Frontier's arguments included:

- The involvement principle does not require AEMO to allocate its costs between participant class as the price per Registered Participant can vary to satisfy the principles of simplicity, no unreasonable discrimination and reflective of involvement. This then frees AEMO to allocate costs to satisfy the NEO and economic efficiency.
- Fees reflective of involvement does not oblige an activity-based allocation, but could lie within bounds set by the avoidable cost and standalone cost of servicing a participant. As this range is very large, it provides freedom for AEMO to maximise the other principles, particularly the NEO.

³ ACG 2005 Page 22

⁴ ACG 2005, Page 21

 ⁵ Assuming a residential retail price of around \$300 per MWh and industrial of \$150 per MWh.
 ⁶ ACG 2005 page 21.



- Ramsay pricing is more efficient than ACG's recommendation of multi-part pricing, and in this
 case following Ramsay pricing principles would likely lead to a recommendation of customerrecovered fixed charging.
- Generator fees are economically inefficient: variable fees are passed on to consumers and distort consumption decisions, whilst fixed fees distort generators' investment decisions.
- ACG incorrectly described the historical energy charge as "fixed" because generators would adjust their bids in anticipation of the following year's fee. This is therefore effectively a variable fee.

AEMO's response:

In determining Participant fees AEMO must have regard to the National Electricity Objective and the structure of Participant fees must, to the extent practicable, be consistent with the principles in NER 2.11.1. AEMO considers CS Energy/Frontier's proposed structure:

- Would recover the budgeted revenue requirements for AEMO.
- Appears to meet the simplicity principle.
- Is economically efficient and therefore meets the NEO.
- Does not appear to unreasonably discriminate against any categories of participants.

However, AEMO considers that the existing Participant fee structure is the more preferable structure compared to CS Energy/Frontier's proposed structure when considered against the reflective of involvement principle for the following reasons:

- The allocation of 46% of NEM allocable costs to Generators and MNSPs derives from an internal survey of AEMO activities. Each group in AEMO were assessed to identify time and other costs spent in activities involving various participant classes.
- The approach of basing half of Generator and MNSP fees on capacity and half on energy is a simple approach to reflect the approximate level of involvement with respect to both peaking and base load Generators.
- The allocation of Generator fees on a fixed historical basis, as recommended by ACG⁷, intentionally makes the fees difficult for Generators to pass-through, in order for the fees to be ultimately incurred at the involved activity.

AEMO does not agree that the recommended structure is economically inefficient and fails to meet the NEO⁸. AAC 2016 confirms that the ACG 2005 advice considered economic efficiency and had regard to the NEO. Specifically, AEMO:

- Does not consider the fixed fee on Generators large enough to "distort plant investment and retirement decisions against peakers in the long-run."⁹
- Accepts that Generators may adjust offers in anticipation of a future energy charge, however as this falls equally on all generators it should not result in inefficient dispatch.¹⁰

In 2001 the National Generators' Forum (NGF) disputed NEMMCO's 2000 determination¹¹ which allocated fees to Generators. In 2002 the "Second Group" of the dispute panel rejected all four of the NGF's error contentions.

The NGF's first error contention was that AEMO should allocate by participant and not by class, which was also argued in CS Energy's submission. The Second Group found that this error had not been established and that the Code provides ample indication that a distinction may be made between Generators as a class of Participant and other Code Participants, and in turn that the further sub-

⁷ ACG 2005 advice to NEMMCO, page 21.

⁸ CS Energy submission page 1.

⁹ Frontier, page 10

 ¹⁰ Frontier, page 10
 ¹¹ NEMMCO is the predecessor to AEMO as NEM Market/System Operator



division of generators into four sub-categories may well be an appropriate grouping by which to apply the principle in cl 2.11.1(b)(3).

The NGF's other contended errors are not identical to those argued by CS Energy/Frontier in its submission, however the Second Group's discussion explaining its decisions retains contemporary relevance:

"The principles of the Code [now NER] are far from being clear-cut, but are abstractions as to which legal, economic and business minds may reasonably differ."

"The Second Group concludes that in terms of achieving economically efficient outcomes in the NEM, NEMMCO's adoption of a fixed fee structure for the recovery of part of its fixed and common costs is understandable and as a matter of economics defensible." ¹²

3.2 Period of fee structure

The draft report proposed a five year structure consistent with previous determinations, with a midperiod re-opener of FRC fees triggered by Power of Choice rule changes. The re-opener is discussed in section 3.3.1.

Only RELE commented on the overall period, suggesting a three-year period would avert the need for a re-opener. Alternatively, if a five-year period is chosen, RELE proposed an alternative to an FRC re-opener, which is discussed in section 3.3.1.

AEMO Response: AEMO agrees RELE's suggestion of a three year structure without re-opener has some advantages, but on balance chose to retain its draft position. The main reasons are:

- Outside of FRC fees, AEMO does not consider AEMO's activities likely to change significantly enough to justify the added expense and uncertainty of a shortened general fee structure.
- The FRC fees currently comprise approximately 12% of the total fees being determined. The five year period plus re-opener allows the majority of fees to remain predictable for longer period.
- AEMO could not identify, at this time, any specific date for which Power of Choice developments will have progressed sufficiently to justify a review of FRC fees, and therefore locking in a three-year period is not necessarily better.

3.3 FRC fee structure

3.3.1 Power of Choice re-opener

The first stage of consultation received a number of submissions that new participant categories that would emerge following the introduction of Power of Choice (PoC) rule changes be subject to FRC fees. The draft report proposed that, since the PoC fee implications were unclear but likely to emerge in the course of the current determination, that an FRC fee re-opener clause be included in the final determination.

Origin and AGL supported the re-opener whilst RELE preferred either a three year duration for the entire structure (see discussion in section 3.2) or a five year duration with the determination worded "so that fees can be recovered from all relevant participant classes, as determined and amended in the National Electricity Rules"¹³.

AEMO Response: RELE's suggestion is welcome however AEMO is unsure it would be practical or appropriate for AEMO to re-determine FRC fees after the PoC changes without consultation. The PoC changes may be complex and have effects on existing participant classes' fees. The re-opener allows broader FRC issues to be re-considered and enables all affected participants to engage. The re-opener

¹² http://www.aer.gov.au/about-us/dispute-resolution/wholesale-energy-market-dispute-resolution/wholesale-energy-market-dispute-resolutionelectricity/dispute-resolution-panel-determinations-electricity. Sighted 19 Feb 2016

¹³ RELE submission page 3



also potentially allows AEMO to align the timing of the PoC changes with other FRC changes, discussed in section 3.3.3.

3.3.2 Customer fee basis

The draft report proposed that FRC fees would move to a connection point recovery basis from 1 July 2017. The change was justified because, as the FRC activity is commensurate with the number of FRC eligible connection points, this is most reflective of involvement. One year's notice was considered sufficient for build time.

The approach was supported by ERM Power. CS Energy and EUAA did not discuss FRC fees specifically, but recommended general customer fees move more toward a connection point basis.

Origin¹⁴, Energy Australia, RELE and Simply Energy opposed the change.

RELE criticised the lack of detail in the draft report about the incidence of FRC costs.

AEMO Response: AEMO's practice is not to provide a full activity analysis with its Participant fees determinations. Due to the simplicity principle, the fee allocations are ultimately resolved to broad metrics such as an energy basis or connection point basis, and therefore does not require a granular presentation of the individual costs.

RELE argued that the involvement principle is not the appropriate criteria for FRC fees. RELE and Simply Energy argued AEMO should instead focus on the NEO and simplicity principles which in their view would lead to continuation of FRC fees based on energy. RELE and Simply Energy argued a costbenefit analysis should be performed before undertaking this change. RELE stated that it would prefer to allocate its internal IT resources to implementing competition in metering or embedded networks changes.

AEMO Response: AEMO must consider all the NER fees principles, including the extent of involvement principle which AEMO considers is better met by recovering FRC costs on connection point basis. Connection point recovery is a simple and efficient approach and already used in recovery of Energy Consumer Australia (ECA) costs and in FRC fees in AEMO's gas markets. Following the automation of the ECA recovery process, AEMO's own costs of implementing connection point charging in FRC fees will be negligible. AEMO has also considered the impact to industry and the connection point basis of charging FRC fees should be relatively low as it is an extension of the ECA process and concerns about implementation by Participants have been taken into account in the adjusted implementation date to 1 July 2019, in section 3.3.3.

RELE and Simply Energy argued the change would be inequitable for small customers and regressive.

AEMO Response: The principles prohibit unreasonable discrimination: a severe form of inequity. The recommended approach results in approximately \$1 per year per customer and does not seem unreasonable. This is calculated on the 2015-16 budgeted Electricity FRC revenue required divided by the number of connection points.

Simply Energy argued that large users proportionally benefit more from retail choice.

AEMO Response: The reflective of involvement principle does not necessarily mean reflective of benefit. In this case, each meter is equally involved in AEMO's FRC function, notwithstanding the actual quantities being metered and that larger customers presumably benefit proportionally more from FRC.

¹⁴ Origin was incorrectly described as supporting the change in the Draft Report.



ERM suggested that for the implementation of the connection point basis, AEMO could update the number of connection points for each Market Participant every three months as a balance between accuracy and administrative burden.

AEMO Response: The existing ECA recovery mechanism updates connection points monthly, and the most straightforward implementation of the new FRC recovery mechanism is to replicate the ECA's approach. Further automation of the ECA mechanism is planned prior to 1 July 2019, which provides an opportunity to increase the ECA frequency to weekly or daily. Should this occur, it seems appropriate to also align the new FRC recovery with this frequency. This is also a matter potentially affected by the re-opener, should it occur prior to 1 July 2019.

3.3.3 Interactions of fee basis change with Power of Choice reforms

Origin reflected on the possible interactions between the change of FRC fee basis and issues that may arise with the PoC reforms. Connection point charging may inadvertently result in incumbent retailers funding some of the FRC costs that should be ascribed to the new participant classes.

Origin and Energy Australia suggested it would be better to align changes in FRC recovery with changes that result from the PoC reforms, in order reduce the number of system projects.

AEMO Response: AEMO intends that FRC projects associated with PoC reforms would be capitalised and thereby recovered from the actual groups to which the costs are ultimately allocated. AEMO accepts however that aligning changes to the FRC basis with PoC changes has simplicity attractions. For that reason AEMO has changed its final determination for the connection point recovery to apply from 1 July 2019, which is after the time a PoC re-opener is most likely to occur. If a PoC re-opener does occur prior to 1 July 2019, then the interaction of the changed basis and PoC reforms will be considered. If the re-opener occurs early in the period, it may consider whether it is appropriate to bring the basis change forward.

3.3.4 Other FRC matters

AGL was "broadly satisfied" with AEMO's approach that the proposed fee structure reflects the extent that AEMO's revenue requirements will be proportionally met from existing and new participant classes. AGL felt costs recovery associated with the new B2B e-hub participant created under the AEMC's shared market protocol (SMP) rule change should be confirmed in the final report

AEMO Response: The B2B e-hub system changes are not final and are not yet sufficiently specified for AEMO to form a view on appropriate allocation for this report. This would be considered within a FRC fee review should it be re-opened.

AGL felt that only transactional costs should apply to users who transact via AEMO's market systems and makes no other use of the AEMO functions and that AEMO could provide further disclosure on market systems transactional costs for such users.

AEMO Response: All retailers have equal access to AEMO's FRC systems, although some may use them more than others. AEMO considers that whilst breaking up the existing FRC costs into individual components for tailored fees may be more reflective of involvement of each individual retailer, it is not as simple as the current structure.

3.4 Other Comments

Energy Australia felt AEMO could improve the clarity of its budget documents and provide forecasts of what is charged to each participant category to help participants reconcile fees.

AEMO Response: Whilst the budget documents are not part of this determination, AEMO undertook further discussions with Energy Australia on this matter and have actioned the requested improvements to those documents in the upcoming publication of AEMO's budget and fees.



APPENDIX A.

A.1 Core NEM function

Table 14 Core NEM function

	Secu Ope	ver System urity, Market rations and Systems		ower System eliability and Planning	Prudential Supervision	m	Wholesale netering and settlements	TOTAL	% Allocation on basis of involvement
Costs attributed to outputs (in \$'000)	\$	28,784	\$	6,327	\$ 4,919	\$	6,225	\$ 46,255	
% allocation of outputs to registered participar Market Customers Generators and MNSPs	ıt:	50% 50%		75% 25%	50% 50%		51% 49%		
Costs on basis of involvement (in \$'000): Market Customers Generators and MNSPs	\$ \$	14,392 14,392	\$ \$	4,745 1,582	2,459 2,459	\$ \$	3,175 3.050	24,771 21,483	54% 46%