Determination and Report

Structure of Participant Fees under clause 2.11 of the National Electricity Rules

24 March 2006
## TABLE OF CONTENTS

1 **Determination - Structure of Participant fees** .......................................................... 5
   - NEMMCO general fees: allocated cost component (Part A) ......................................... 5
   - NEMMCO general fees: administration and other cost component (Part B) ............... 6
   - NEMMCO FRC fees (Parts C and D) ............................................................................. 6
   - Incremental Services components (Part E) ....................................................................... 7
   - Participant Compensation Fund component ..................................................................... 8
   - Recovery principles for certain expenditure ..................................................................... 8
   - General ............................................................................................................................... 8

2 **Executive Summary** ..................................................................................................... 10
   - 2.1 Structure of Participant fees: criteria ........................................................................ 10
   - 2.2 Consultation process .................................................................................................. 11
   - 2.3 Analysis of NEMMCO’s activities, outputs & costs ..................................................... 11
   - 2.4 NEMMCO general costs ............................................................................................ 12
      - “Allocatable” amount .................................................................................................... 12
      - TNSPs, DNSPs and Non-Market Non-Scheduled Generators ...................................... 14
      - “Unallocatable” amount ............................................................................................... 15
   - 2.5 Incremental Service fees and registration fees ........................................................... 16
   - 2.6 Allocation of FRC costs ............................................................................................ 17
   - 2.7 Proposed structure of Participant fees ........................................................................ 17
   - 2.8 Participant fee components ....................................................................................... 19
   - 2.9 Recovery principles for certain expenditure ............................................................... 20
      - Establishment costs ....................................................................................................... 20
      - FRC .............................................................................................................................. 20
      - New control centre ....................................................................................................... 21
   - 2.10 Duration of structure of fees .................................................................................... 21
   - 2.11 Fee structure comparisons ....................................................................................... 22

3 **Background** .................................................................................................................... 23
   - 3.1 NEMMCO’s role under clause 2.11.1 of the Rules .................................................... 23
   - 3.2 NEMMCO’s Consultative and Decision Making Process ........................................... 23
   - 3.3 Advisers ..................................................................................................................... 24
   - 3.4 NEMMCO Participant Fee Working Group ................................................................. 25

4 **Criteria for structuring fees** ........................................................................................... 26
   - 4.1 Introduction ................................................................................................................ 26
   - 4.2 Recent changes to the framework within which NEMMCO operates ....................... 29
   - 4.3 What NEMMCO must determine under clause 2.11.1 of the Rules .......................... 30
4.4 Criteria for structure .................................................................31
  4.4.1 Introduction ........................................................................31
  4.4.2 Efficiency and full cost recovery ........................................32
  4.4.3 Simplicity ...........................................................................33
  4.4.4 Basis for recovering budgeted revenue requirements ..........33
  4.4.5 Reflective of involvement ....................................................34
  4.4.6 Unreasonably discriminate ..................................................35
  4.4.7 NEM objective ....................................................................35

4.5 Fee structure comparisons ......................................................37

5 Consideration of Submissions ....................................................38
  5.1 List of submissions received ....................................................38
  5.2 Material issues raised byConsulted Persons ..............................38
  5.3 Whether NEMMCO should alter the current Participant fee structure ....39
  5.4 Imposition of Participant fees on NSPs ......................................40
  5.5 Recovery of fees for activities that do not directly support NEMMCO’s statutory functions .............................41
  5.6 Transparency, accountability and cost allocation ........................41

6 Basis of Recovery of Budgeted Revenue Requirements ...............43
  6.1 Introduction ............................................................................43
  6.2 NEMMCO Establishment Costs ............................................43
  6.3 FRC Costs ..............................................................................43
  6.4 New Control Centre ...............................................................44

7 NEMMCO’s budgeted revenue requirements ................................47
  7.1 Introduction ............................................................................47
  7.2 Categorisation of outputs and activities ....................................47
  7.3 NEMMCO’s budgeted revenue requirements ............................48
  7.4 Attribution of general costs to outputs ......................................49
    7.4.1 Attribution of general labour costs ......................................50
    7.4.2 Attribution of general non-labour costs .................................51
    7.4.3 Summary of attribution of general costs to outputs ...............52

8 Allocating budgeted revenue requirements ................................54
  8.1 Allocation of outputs to categories of Registered Participants: Principles ...54
  8.2 Extent of involvement of Registered Participants in outputs ..........55
    8.2.1 Introduction ........................................................................55
    8.2.2 TNSPs and DNSPs ...............................................................56
    8.2.3 NEMMCO’s analysis ...............................................................57
    8.2.4 Non-Market Generators ..........................................................62
8.3 Costed allocation on basis of involvement ............................................. 64
8.4 "Unallocatable" amount ........................................................................... 65
8.5 Incremental services and costs: general ...................................................... 66
8.6 Incremental services and costs: Registration fees .................................... 66

9 FRC budgeted revenue requirements ......................................................... 68

10 Structure of Participant Fees & Fee Components ..................................... 71
  10.1 Introduction ............................................................................................ 71
  10.2 Alternative pricing approaches ............................................................... 71
  10.3 Structure of fees levied on Generators and MNSPs .................................. 72
  10.4 Structure of fees levied on Market Customers ......................................... 73

11 Duration of New Structure of Participant Fees ......................................... 75

12 Other Issues ............................................................................................. 77
  12.1 Participant Compensation Fund .............................................................. 77
  12.2 Economic advice .................................................................................... 77
  12.3 Participant fee components ................................................................... 77
  12.4 Fee structure comparisons ................................................................... 79

13 Glossary .................................................................................................... 80

Attachment A – Notice of First Stage of Rules Consultation ......................... 83
Attachment B – Copy of Issues Paper ............................................................ 88
Attachment C – Notice of Second Stage of Rules Consultation ....................... 95
Attachment D – NEMMCO Activity Survey and Cost Analysis ....................... 99
Attachment E – Submissions received (Stages 1 and 2) .................................. 121
Attachment F – Allen Consulting Report ....................................................... 133
Attachment G – Submissions received ........................................................... 171
1 Determination - Structure of Participant fees

In accordance with clause 2.11.1 of the National Electricity Rules (Rules) and on the basis of the reasoning and in light of the considerations set out in this Determination and Report, NEMMCO determines that the structure of Participant fees for the period 1 July 2006 to 30 June 2011 will be as follows:

NEMMCO general fees: allocated cost component (Part A)\(^1\)

1. For each financial year covered by the structure, 70% of NEMMCO’s budgeted revenue requirements determined under the Rules (excluding budgeted revenue requirements for FRC, new declared NEM projects and the Participant compensation fund and less forecast revenue from registration fees and fees for Incremental Services) are called “allocated costs” and are apportioned on the following basis:

   (a) 55% to Market Customers; and

   (b) 45% to Generators and Market Network Service Providers, of which:

      (i) 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 and Market Network Service Providers in respect of their market network services;

      (ii) one-third is apportioned only to Market Generators in respect of their market generating units and Market Network Service Providers in respect of their market network services; and

      (iii) none is apportioned to Non-Market Non-Scheduled Generators in respect of their non market non scheduled generating units.

2. The allocated costs apportioned to Market Customers under paragraph 1(a) for a financial year will be converted to a rate per MWh set on the basis of NEMMCO’s estimate of total MWh to be settled in spot market transactions by Market Customers during that financial year. The amount payable by each Market Customer for a billing period is that rate multiplied by the actual MWh settled in spot market transactions for that Market Customer in respect of that billing period.

3. Of the allocated costs apportioned to a group of Generators and Market Network Service Providers under paragraph 1(b)(i) or 1(b)(ii) for a financial year:

   (a) 50% will be shared between each member of that group, on the basis of the aggregate of the MWh of energy scheduled\(^2\) or

---

\(^1\) The references to Parts in this determination are to be read with Figure 1: Overview of fee structure determination.

\(^2\) For a scheduled generating unit or a market network service.
energy metered\(^3\) in the previous calendar year in respect of their generating units of the relevant category and market network services as a proportion of the total of the equivalent figures for all those members, and converted to a daily rate for each member; and

(b) 50% will be shared between each member of that group, on the basis of the aggregate of the higher of the greatest registered capacity and greatest notified maximum capacity in the previous calendar year in respect of each of their generating units of the relevant category and market network services as a proportion of the total of the equivalent figures for all those members, and converted to a daily rate for each member.

4. The amount payable by each Generator\(^4\) and Market Network Service Provider for a billing period is the sum of the rates calculated for it under paragraph 3 multiplied by the number of days in the billing period.

**NEMMCO general fees: administration and other cost component (Part B)**

5. For each financial year covered by the structure, 30% of NEMMCO’s budgeted revenue requirements determined under the Rules (excluding budgeted revenue requirements for FRC, new declared NEM projects and the Participant compensation fund and less forecast revenue from registration fees and fees for Incremental Services) and the Establishment Receivable are called “administration and other costs” and are allocated to Market Customers.

6. The administration and other costs for a financial year will be converted to a rate per MWh set on the basis of NEMMCO’s estimate of total MWh to be settled in spot market transactions by Market Customers during that financial year. The amount payable by each Market Customer for a billing period is that rate multiplied by the actual MWh settled in spot market transactions for that Market Customer in that billing period.

**NEMMCO FRC fees (Parts C and D)**

7. For each financial year covered by the structure, NEMMCO’s budgeted revenue requirements determined under the Rules for FRC will be allocated to Market Customers that are licensed under the laws of a participating jurisdiction as a retailer (Retailers) and levied in two components as follows:

(a) FRC establishment component: the budgeted revenue requirements related to NEMMCO’s FRC establishment costs for a financial year (including depreciation on establishment assets, pre-operating receivables and interest) will be converted to a rate per MWh set on the basis of NEMMCO’s estimate of total MWh to be settled in spot market transactions by Retailers during that financial year;

---

\(^3\) For a non-scheduled generating unit.

\(^4\) Except Non-Market Non-Scheduled Generators.
(b) **FRC operations component:** the budgeted revenue requirements related to NEMMCO’s FRC operating costs for a financial year will be converted to a rate per MWh set on the basis of NEMMCO’s estimate of total MWh to be settled in spot market transactions by Retailers during that financial year against regional reference nodes within participating jurisdictions that have implemented FRC.

8. The amount payable by each Retailer for a billing period for each component is the relevant rate multiplied by:

   (a) in the case of the FRC establishment component, the actual MWh settled in spot market transactions for that Retailer in that billing period; and

   (b) in the case of the FRC operations component, the actual MWh settled in spot market transactions (against regional reference nodes within participating jurisdictions that have implemented FRC) for that Retailer in that billing period.

**Incremental Services components (Part E)**

9. There will be a registration fee of $3,500 per registration application for all new registrations. This will be a one off charge at the time of registration. The registration fee will be escalated for each financial year after 30 June 2007 in line with movements in:

   (a) the average CPI figure in respect of the 4 quarters ending on 31 March immediately preceding the financial year in which the escalated fee is to apply

   compared to:

   (b) the average CPI figure in respect of the 4 quarters immediately preceding the 4 quarters referred to in paragraph (a).

10. There will be Incremental Services fees that will be charged for the acquisition of Incremental Services.

11. An Incremental Service is a service that, in NEMMCO’s opinion, is provided to a Participant or other person where the recipient is receiving some benefit over and above Participants of the relevant class and is:

   - (identifiable) the cost of the service is able to be separately accounted for; and

   - (material) the identified costs in providing the service are material; and

   - (voluntary) the service is provided at the request of the recipient.

If the Rules contemplate NEMMCO levying a separate fee or charge for a service, that service is likely to be an Incremental Service.
12. Incremental Service fees will be levied on the basis of NEMMCO’s assessment of the labour, overheads and other material costs involved in providing the service.

**Participant Compensation Fund component**

13. For each financial year covered by the structure, NEMMCO’s budgeted revenue requirements in respect of the Participant compensation fund under clause 3.16.1(c) of the Rules (if any) will be allocated to Scheduled Generators in respect of their scheduled generating units and Scheduled Network Service Providers in respect of their scheduled network services and levied on the same basis as the allocated costs apportioned to a group of Generators and Market Network Service Providers under paragraphs 3 and 4, with any necessary changes.

**Recovery principles for certain expenditure**

14. NEMMCO’s expenditure associated with the following items will be recovered on the basis set out below:

   (a) non-capital expenditure associated with FRC establishment prior to February 2002 is being recovered over a 10 year period from 1 July 2003;

   (b) capitalised costs associated with the construction of a new control centre will be recovered over a period of 30 years, and capitalised costs associated with the fitout of a new control centre will be recovered over a period of 15 years, by way of depreciation of the relevant assets. A straight-line depreciation method will be used. The costs associated with the acquisition of the land on which a new control centre is located will also be recovered over a period of 30 years on a similar basis. In the case of the new control centre in New South Wales, the recovery periods will commence on 1 July 2006.

**General**

15. In this structure:

   (a) a term that appears in this style, has the meaning given in the Rules;

   (b) “FRC” means full retail competition;

   (c) “CPI” means the Consumer Price Index as published by the Australian Bureau of Statistics (Cat no. 6401.0) for All Groups, Weighted Average of Eight Capital Cities, or if that index ceases to be published, an equivalent index selected by NEMMCO;

---

5 The Participant compensation fund component will only be applied when there is a funding requirement under clause 3.16.1(c) of the Rules, i.e. when the fund has been drawn on as a result of a scheduling error and needs to be replenished.

6 Capital expenditure associated with FRC establishment is being recovered through the depreciation of the assets acquired by the capital expenditure over the effective life of the relevant assets in a manner that is consistent with generally accepted accounting principles.

7 These costs will be included in NEMMCO’s budgeted revenue requirements for general fees for future financial years.
(d) a “Non-Market Scheduled Generator” is a Non-Market Generator that is also a Scheduled Generator and a “non market scheduled generating unit” is a generating unit that is classified as a non-market generating unit and also a scheduled generating unit;

(e) a “Non-Market Non-Scheduled Generator” is a Non-Market Generator that is also a Non-Scheduled Generator and a “non market non scheduled generating unit” is a generating unit that is classified as a non-market generating unit and also a non-scheduled generating unit;

(f) a participating jurisdiction has “implemented FRC” when, in NEMMCO’s opinion, it becomes possible for any Retailer licensed under the laws of the participating jurisdiction to sell electricity to any customer (whatever the size of its load) in respect of a connection point located in that jurisdiction; and

(g) all fees exclude GST (as defined in clause 3.15.11A of the Rules).

16. This determination is only in respect of the structure of Participant fees provided for under clause 2.11.1 of the Rules. It does not alter or affect fees payable under other provisions of the Rules. NEMMCO’s budgeted revenue requirements determined under the Rules for a new declared NEM project will be recovered by an additional Participant fee determined under clause 2.11.1(bb) of the Rules.
2 Executive Summary

2.1 Structure of Participant fees: criteria

Clause 2.11.1 of the Rules requires NEMMCO to determine the structure of Participant fees that will apply from 1 July 2006. Participant fees are levied on Registered Participants under the Rules to recover NEMMCO’s budgeted revenue requirements determined under the Rules, which relate to operating the National Electricity Market (NEM).

Under section 50 of the National Electricity Law (NEL), NEMMCO is required to exercise its functions efficiently and on a full cost recovery but not for profit basis.

Clause 2.11.1(b) of the Rules contains four key principles that apply in addition to section 50:

(a) the structure of Participant fees should be simple;

(b) the structure of Participant fees should provide for the recovery of NEMMCO’s budgeted revenue requirements on a specified basis;

(c) the components of Participant fees charged should be “reflective of the extent to which the budgeted revenue requirements ... involve that Registered Participant” – referred to below as the “reflective of involvement criterion”; and

(d) the Participant fees should not unreasonably discriminate against a category or categories of Registered Participants.

The NEL does not contain an explicit obligation on NEMMCO to apply the NEM objective in performing its functions. That said, the NEM objective is a relevant consideration where NEMMCO has to exercise judgment or discretion in reaching its determination, for example, if there are a number of Participant fee structures that each satisfy the criteria referred to above or the relevant provisions of the Rules are ambiguous.

There is a degree of tension between these principles and they reflect criteria that, far from being clear-cut, are abstractions in respect of which legal, economic and business minds may reasonably differ.

NEMMCO must make the 2006 Fee Determination “afresh”. That is, it must freshly consider the application of the relevant criteria above to the facts and analysis available to it at this time. In doing so, however, NEMMCO has had regard to the reasoning and decision of the Second Group\(^8\) and NEMMCO’s previous fee determinations, where appropriate.

Since the 2003 Fee Determination was made, the NEL has been amended and the Rules have replaced the National Electricity Code. These changes are taken into account in the discussion of the criteria to be applied by NEMMCO in determining a new structure of Participant fees contained in

---

\(^8\) A group of 3 legal and economic experts appointed under Chapter 8 of the Code to resolve the dispute under the Code concerning the 2000 Fee Determination.
section 4.4 of this Determination and Report. Although the changes to the regulatory framework have had some impact on the criteria to be applied, the criteria remain very similar to those which NEMMCO applied in previous fee determinations.

NEMMCO is not required by clause 2.11.1 of the Rules to publish the actual level of fees, expressed in dollar terms, at this time. The actual level of Participant fees will not be set until NEMMCO has prepared and published its budget of revenue requirements for the relevant financial year. These budgets are required to be published prior to the commencement of the relevant financial year.

These issues are discussed in section 4 of this Determination and Report.

2.2 Consultation process

NEMMCO undertook a consultation process in determining the new structure of Participant fees.

As part of the process, NEMMCO sought submissions on the new structure of Participant fees and on a draft of this Determination and Report. NEMMCO received five submissions during Stage 1 and three submissions in Stage 2.

NEMMCO has considered all submissions received and has also completed, with the assistance of external advisers, an analysis of the structure of Participant fees.

The submissions are set out in Attachment G, and are discussed in section 5 and Attachment E, of this Determination and Report.

2.3 Analysis of NEMMCO’s activities, outputs & costs

In order to have a practical and reasonable basis on which to allocate NEMMCO’s budgeted revenue requirements, it is necessary to understand NEMMCO’s activities and outputs, and the cost drivers associated with them.

NEMMCO therefore has undertaken a thorough and robust analysis of its costs, activities and outputs. This analysis included surveying NEMMCO staff in order to allocate labour time to NEMMCO’s activities and outputs.

NEMMCO has used the 2005/2006 budgets from the May 2005 Statement of Corporate Intent and Budget as the starting point for the cost attribution analysis. There are two relevant budgets in the SCI, one dealing with FRC and the other dealing with general expenses. Some modifications were made to remove the effect of costs that are recovered by other means (such as expenses relating to settlement residue auctions).

As part of this analysis, NEMMCO sought to identify more clearly what might be considered to be the final “outputs” of NEMMCO’s activities in an operational sense.

NEMMCO identified a total of 162 reasonably discrete activities undertaken internally by NEMMCO staff on a regular basis. These activities were then categorised into 10 broad, non-FRC, outputs as follows:
(a) power system security;
(b) power system reliability;
(c) market operation;
(d) market settlement (cash transactions and clearing, metering and billing);
(e) prudential supervision;
(f) settlement residue auctions\(^9\);
(g) wholesale market improvement;
(h) information dissemination;
(i) retail market improvement; and
(j) data and system management.

NEMMCO administration has been identified separately.

NEMMCO considers that these 10 broad outputs represent a sufficient level of detail by which to practically inform the development of a fee structure that will satisfy the reflective of involvement criterion. FRC is not included in the analysis, because this “output” is already budgeted for separately by NEMMCO.

The analysis shows that, of NEMMCO’s general budgeted revenue requirements, approximately $41 million is attributable to the 10 identified outputs and it is not possible to attribute the balance of approximately $17 million to any of those outputs.

On this basis, NEMMCO considers that 70% of the general portion of its budgeted revenue requirements (excluding FRC and the Establishment Receivable) can be allocated against the outputs identified above, while 30% cannot be readily allocated. (The percentages have been rounded for simplicity.)

This analysis is presented in section 7 of this Determination and Report and the NEMMCO Activity Survey and Cost Analysis contained in Attachment D.

2.4 **NEMMCO general costs**

“Allocatable” amount

Using the experience and expertise of its staff and general managers, NEMMCO has considered each of the outputs referred to above, and has formed a view as to the extent of involvement of each category of Registered Participant in the budgeted revenue requirements associated with that output.

\(^9\) Although settlement residue auction services has been included as an output, it will be extracted for the purposes of determining fees, because these costs are recovered separately by way of auction expense fees.
Figure 1 below shows the process NEMMCO has undertaken to allocate outputs to Registered Participants.

**Figure 1: Overview of fee structure determination**

The following table summarises NEMMCO’s views as to the extent of involvement of the various categories of Registered Participant in relation to the outputs identified above.

### Allocation of outputs to Participants

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Market Customers</td>
<td>50%</td>
<td>75%</td>
<td>51%</td>
<td>50%</td>
<td>50%</td>
<td>0%</td>
<td>50%</td>
<td>50%</td>
<td>100%</td>
<td>50%</td>
</tr>
<tr>
<td>Generators and MNSPs (except for Non-Market Non-Scheduled Generators)</td>
<td>50%</td>
<td>25%</td>
<td>49%</td>
<td>50%</td>
<td>75%</td>
<td>Not allocated separately</td>
<td>50%</td>
<td>50%</td>
<td>0%</td>
<td>50%</td>
</tr>
</tbody>
</table>

The analysis underpinning this table is set out in detail in section 8 of this Determination and Report.

NEMMCO is satisfied, on the basis of the experience and expertise of its general managers and staff, that each Participant in these categories is likely to be involved with NEMMCO’s costs in relevantly similar ways (but see the discussion below concerning Non-Market Scheduled Generators).
The percentage allocation determined for each Participant category in the case of each output was then applied to the costs attributed to each of those outputs. This is shown in Table 5 of the NEMMCO Activity Survey and Cost Analysis.

As a result of a submission received on the Draft Determination and Report, NEMMCO has further considered the extent of involvement of Non-Market Scheduled Generators in the outputs identified above. NEMMCO has concluded that Non-Market Scheduled Generators are substantially involved in only the power system security, power system reliability and data and system management outputs.

Accordingly, NEMMCO believes it is appropriate to break the “allocatable costs” apportioned to Generators and MNSPs into two pools, one representing the Generators/MNSPs’ share of costs related to the power system security, power system reliability and data and system management outputs, and the other representing the Generators/MNSPs’ share of costs related to the other outputs. All Generators (except Non-Market Non-Scheduled Generators) and MNSPs would share the costs in the first pool, but only Market Generators and MNSPs would share the costs in the second pool.

As close to two thirds of “allocatable costs” relate to power system security, power system reliability and data and system management (see Table 5 of the NEMMCO Activity Survey and Cost Analysis), NEMMCO believes it is appropriate to set the first cost pool at two-thirds of the “allocatable costs” apportioned to Generators and MNSPs and the second cost pool at one-third of that amount.

NEMMCO, therefore, proposes apportioning 55% of its “allocatable” general budgeted revenue requirements to Market Customers, 30% to Market Generators, Non-Market Scheduled Generators and MNSPs and 15% to Market Generators and MNSPs. (The percentages have been rounded for simplicity.) The Establishment Receivable is attributed to the “unallocatable” amount directly.

### Costed allocation on basis of involvement

<table>
<thead>
<tr>
<th>Participant</th>
<th>$'000's</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market Customers</td>
<td>22,642</td>
<td>55.39%</td>
</tr>
<tr>
<td>Market Generators, Non-Market Scheduled Generators and MNSPs</td>
<td>12,157</td>
<td>29.74%</td>
</tr>
<tr>
<td>Market Generators and MNSPs</td>
<td>6,079</td>
<td>14.87%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>40,878</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

**TNSPs, DNSPs and Non-Market Non-Scheduled Generators**

NEMMCO has not apportioned any of its budgeted revenue requirements to three categories of Participant: TNSPs, DNSPs and Non-Market Non-Scheduled Generators, for the following reasons:

(a) **TNSPs:** The relationship between TNSPs and NEMMCO has two aspects. In some respects, TNSPs may be considered to be involved in NEMMCO activities – for example, the security and integrity of the...
equipment of TNSPs is preserved by NEMMCO’s power system security activities. TNSPs, however, also provide “services” to NEMMCO that contribute to NEMMCO’s ability to manage power system security and perform its other functions. Some of these services are provided to NEMMCO under agreements entered into between NEMMCO and the relevant TNSP. Others are provided as a result of obligations imposed on TNSPs under the Rules. NEMMCO does not believe it is appropriate to allocate any of its budgeted revenue requirements to TNSPs because these two aspects are so intertwined, and the services TNSPs provide significantly contribute to NEMMCO’s ability to perform its functions.

(b) DNSPs: NEMMCO has only limited interaction with DNSPs in relation to power system security and reliability outputs. It advises a DNSP if the DNSP’s network will be affected by load shedding or a system security risk so that the DNSP can manage the consequences. This communication is undertaken by the TNSPs on NEMMCO’s behalf. Accordingly, NEMMCO considers that the extent of involvement of DNSPs in those outputs is minor and incidental. Although NEMMCO interacts with DNSPs on retail market improvement activities, that output in the main supports retail competition and the DNSPs’ involvement is also only incidental.

(c) Non-Market Non-Scheduled Generators: NEMMCO has only marginal interaction with Generators in relation to non market non scheduled generating units.

“Unallocatable” amount

Even after this allocation exercise, there remains a significant proportion of NEMMCO’s budgeted revenue requirements (approximately 30% of its general budgeted operating costs, plus the Establishment Receivable) that cannot be readily allocated to particular categories of Registered Participant. Therefore, it is not possible to determine the extent of involvement of different Participants in relation to this “unallocatable” amount.

Section 50 of the NEL requires NEMMCO to operate on a “full cost recovery but not for profit basis”. Clause 2.11.1(b)(2) also contemplates that Participant fees should recover the budgeted revenue requirements for NEMMCO. In other words, NEMMCO is required to recover all its costs, and not just those that can be allocated to particular Participants, or categories of Participants, on the basis of the reflective of involvement criterion.

The Allen Consulting Group, in its report, states that:

_In the circumstances, a reasonable and efficient method for recovering unallocated costs is from end users via the Participants that are closest in the electricity supply chain to those end users._

_This can be achieved by a fee that is levied on Market Customers based on load in the current year. It is reasonable to expect that Market Customers would relatively quickly pass_
the fee onto end users, so that it would be end users, not Market Customers, who would bear the burden of the fee.\textsuperscript{10}

This is, of course, the same way in which the “unallocatable” amount is dealt with under the current structure of Participant fees. In their joint submission, NGF and ERAA state that:

\textit{The issues and parameters \ldots have not materially changed and thus the ERAA and the NGF believe that there is no requirement to change the current participant fee structure.}\textsuperscript{11}

Given The Allen Consulting Group’s recommendations, and the views expressed by Participants, NEMMCO proposes that this category of costs should be allocated to Market Customers.

This analysis is discussed in detail in section 8 of this Determination and Report and in the NEMMCO Activity Survey and Cost Analysis.

### 2.5 Incremental Service fees and registration fees

NEMMCO recognises that some of the services it provides are incremental, in that the recipient is receiving some benefit by NEMMCO providing the service over and above other Participants of the relevant class. An example is where NEMMCO has been requested to provide additional bandwidth for access to NEMMCO’s market systems.

Where it is practical for NEMMCO to identify that it is doing something specific for a Participant or other parties, and that action causes identifiable and material costs for NEMMCO, NEMMCO will levy fees to recover the incremental costs incurred.

NEMMCO recognises that identifying whether a particular service falls within this category or forms part of the services NEMMCO provides the market generally is not always easy. Given the evolving nature of the market and Registered Participants’ needs, it is also not possible to specifically identify every service that falls in this category now.

The fee will be levied on the basis of NEMMCO’s assessment of the labour, overheads and other material costs involved in providing the service.

In previous determinations, NEMMCO set a registration fee of $1,700 per registration application for all new registrations. In preparing the NEMMCO Activity Survey and Cost Analysis, NEMMCO considered the costs involved in assessing registration applications, and concluded that the actual labour cost per registration application is approximately $3,655.

The current registration fee of $1,700 (which has been in place since 2000), therefore, does not adequately reflect the time taken to process Participant registration applications.

Accordingly, NEMMCO has decided to set the registration fee at $3,500 per registration application for all new registrations (escalated in line with

\textsuperscript{10} Chapter 4.4 of the Allen Consulting report.

\textsuperscript{11} NGF and ERAA, Submission to the NEMMCO Structure of Participant Fee Consultation, 28 October 2005, p.1.
movements in the CPI). NEMMCO does not believe that a fee of this magnitude constitutes a material barrier to entry to the NEM.

2.6 Allocation of FRC costs

As discussed above, NEMMCO budgets for FRC separately.

In its Issues Paper, NEMMCO sought comment on the appropriateness of its current cost recovery systems for FRC and B2B costs. NEMMCO currently charges FRC fees separately to other Participant fees, and is recovering the cost of the implementation of B2B communications through those FRC fees. The consensus among the submissions received was that it was appropriate that B2B related costs should be recovered on the same basis as FRC costs.

NEMMCO’s FRC and B2B activities and systems serve a reasonably discrete purpose: the provision of services that support the transfer of retail customers between Retailers. That is, in general terms, it is Retailers who are involved in these services.

Participating jurisdictions have adopted different timeframes for the introduction of FRC. New South Wales and Victoria introduced FRC in January 2002. FRC was introduced in South Australia in January 2003 and in the ACT in July 2003. Queensland has recently announced that FRC will be introduced in that State from 1 July 2007. Tasmania has announced that it anticipates implementing FRC in that State from 1 July 2010\(^{12}\).

Despite the staggered introduction of FRC, NEMMCO’s FRC systems have had to be designed and scaled to accommodate FRC in all jurisdictions. That is, the decision by some jurisdictions to implement FRC later than others has not resulted in NEMMCO avoiding any of the capital costs associated with establishing its FRC systems. Rather, all Retailers, irrespective of location, have the option of obtaining customer transfer services that include the functionality and scale required to support FRC.

NEMMCO, therefore, believes that its budgeted revenue requirements for FRC (including B2B) should be allocated to Retailers. As FRC has not yet been implemented in all participating jurisdictions, the FRC operating costs will be allocated to Retailers on the basis of the energy they purchase through the NEM in those participating jurisdictions that have implemented FRC. FRC establishment related costs, however, will be allocated to all Retailers on the basis of the energy they purchase through the NEM in any participating jurisdiction.

This analysis is presented in section 9 of this Determination and Report.

2.7 Proposed structure of Participant fees

The proposed structure of Participant fees for the period after 1 July 2006 is set out in section 1 of this Determination and Report, and is summarised in Figure 2 below.

\(^{12}\) NEMMCO understands that Tasmania has, however, reserved a final decision on whether retail competition should be extended to the final tranche of customers until an assessment is made of the costs and benefits of doing so.
Figure 2: Summary of New Participant Fee Determination

(The numbers in brackets have been included for comparison purposes)

NEMMCO’s Budgeted Revenue Requirements\(^5\)

**GENERAL BUDGET**

- 70% (66\(^\%\))
- Attributed to 10 NEMMCO outputs
- 30% (34\(^\%\))
- Unallocated

**FRC Budget**

- 100% (100\(^\%\))
- FRC Establishment
- FRC Operations

**Incremental Services**

- Fees to individual Participants/ Third Parties
- Labour, overheads and material (Part E)

---

1. Equivalent figure for the 2003 Fee Determination.
2. These figures have been derived using NEMMCO’s 2005/2006 budgets from the latest Statement of Corporate Intent. The numbers in brackets show the 2005/2006 budgets applied to the 2003 Fee Determination structure, to enable a comparison of the financial impact of the changes in the proposed fee structure.
4. Notional amount only.
5. If the Participant Compensation Fund is depleted due to a scheduling error, an additional fee will be levied on Scheduled Generators and Scheduled Network Service Providers to replenish the fund.
2.8 Participant fee components

Consistent with the recommendations of The Allen Consulting Group, NEMMCO proposes that there will be the following components of Participant fees:

(a) **NEMMCO general fees: allocated cost component (Part A)**: As discussed above, the portion of NEMMCO's budgeted revenue requirements which is classified as “allocated” will be collected from Market Customers and different categories of Generators/MNSPs in specified proportions. The proportion of allocated costs apportioned to Market Customers will be collected on the basis of MWh settled in spot market transactions in each billing period using a rate set on the basis of forecast total MWh for the current year. Of the proportion of allocated costs apportioned to a category of Generators/MNSPs, 50% will be collected on the basis of MWh of energy scheduled or metered in the previous calendar year, and 50% will be collected on the basis of the higher of the greatest registered capacity and highest notified maximum capacity in the previous calendar year. A generating unit that is classified as both a non market and also a non scheduled generating unit is not taken into account for the purpose of these calculations;

(b) **NEMMCO general fees: administration and other cost component (Part B)**: As discussed above, the portion of NEMMCO's budgeted revenue requirements which is classified as “unallocatable” will be collected from Market Customers on the basis of MWh settled in spot market transactions in each billing period using a rate set on the basis of forecast total MWh for the current year;

(c) **NEMMCO FRC fees: FRC establishment cost component (Part C)**: The budgeted revenue requirements relating to NEMMCO’s FRC establishment related costs will be collected from Retailers on the basis of MWh settled in spot market transactions in each billing period using a rate set on the basis of forecast total MWh for the current year;

(d) **NEMMCO FRC fees: FRC operations component (Part D)**: The budgeted revenue requirements relating to NEMMCO’s FRC operations will be collected from Retailers on the basis of MWh settled in spot market transactions in each billing period against regional reference nodes in participating jurisdictions that have implemented FRC using a rate set on the basis of forecast total MWh against those nodes for the current year;

(e) **Incremental Services component (Part E)**: These fees will be collected on the basis of NEMMCO’s assessment of the labour, overheads and other material costs involved in providing the relevant Incremental Service; and

---

13 The references to Parts in this Determination and Report are to be read with Figure 1: Overview of fee structure determination.

14 Except Non-Market Non-Scheduled Generators.
(f) **Participant Compensation Fund component:** The budgeted revenue requirements (if any) in respect of the Participant Compensation Fund will be allocated to Scheduled Generators and Scheduled Network Service Providers and collected on the same basis as NEMMCO general fees: allocated cost component for Generators and MNSPs, with any necessary changes.

These issues are discussed in section 10 of this Determination and Report.

### 2.9 Recovery principles for certain expenditure

Clause 2.11.1(b) of the Rules contains principles that should be applied for the recovery of particular items of expenditure. In effect, these set out the recovery periods NEMMCO is required to apply in preparing its annual budget of revenue requirements. Special rules apply to establishment costs and declared NEM projects. There are also general rules that apply to other recurrent and capital expenditures.

#### Establishment costs

Establishment costs are the expenditures incurred by NEMMCO prior to the commencement of the NEM in preparation for its commencement. Establishment costs comprise three main components: depreciation expense, interest on borrowings and the “Establishment Receivable”. The Establishment Receivable represents the non-capital expenditure that NEMMCO incurred while setting up the NEM. These costs were separately recorded and capitalised at the commencement of the NEM and are being collected over a 10 year period. As at 30 June 2006, the Establishment Receivable outstanding will be $11.4 million. This will be covered over the first three financial years covered by the new structure at a rate of $4.45 million per year for each of the first two financial years and the remainder in the third financial year. As discussed above, the Establishment Receivable forms part of the “unallocatable amount” (see sections 2.4 and 2.8(b) of this Determination and Report).

#### FRC

In the 2003 Fee Determination, NEMMCO determined that FRC establishment costs would be recovered over a 10 year period for any capitalised operating costs and up to 5 years (depending on the nature of the capital investment) for any capital investment costs. In practice, the second part of this decision meant that FRC expenditure relating to capital equipment is recovered through the depreciation of the assets acquired by the expenditure over the effective lives of those assets in a manner that is consistent with generally accepted accounting principles.

Since January 2004, NEMMCO has been actively involved in facilitating the development and implementation of systems and procedures to allow the automation of data exchange and reconciliation between Participants. This is known as “B2B”. B2B communications are closely related to FRC, and NEMMCO considers that its costs associated with B2B should be recouped through FRC fees as operating expenses – there will be no establishment component for B2B.
New control centre

NEMMCO is building a new control centre for the NEM to replace the existing facility located in New South Wales, which is currently leased. A suitable site has been purchased and the new facility has been specifically designed to meet the NEM’s future requirements.

The capital expenditure associated with the project has two components, the costs associated with acquiring the land, and the costs associated with the construction and fitout of the building. NEMMCO expects the new control centre to be in use for approximately 30 years, and the initial fitout is expected to last approximately 15 years.

NEMMCO intends to recover the capitalised costs associated with construction over a period of 30 years from 1 July 2006 and the capitalised costs associated with fitout over a period of 15 years from 1 July 2006, by way of depreciation of the relevant assets. NEMMCO has decided to recover the cost of the land over a period of 30 years from 1 July 2006, consistent with the recovery period for the capitalised costs associated with construction.

The recovery principles for the new control centre were also considered by the Participant Advisory Committee on 14 April 2005. The Committee, which is comprised of senior representatives of the various industry sectors, agreed that the costs of the land and buildings should be recovered over a longer period, namely 30 years. This approach was also reflected in NEMMCO’s May 2005 Statement of Corporate Intent and Budget.

These issues are analysed in section 6 of this Determination and Report.

2.10 Duration of structure of fees

A number of competing considerations impact on the optimal period for the new structure of Participant fees. On the one hand, there is an advantage in the predictability and certainty of Participant fees and their structure and, therefore, having the structure apply over a longer period. On the other hand, the reflective of involvement criterion suggests that, as circumstances change, the structure of Participant fees is likely to need adjustment.

The NEM commenced 7 years ago. Operationally, the NEM is now a mature market and there is more experience to draw on in order to allocate costs on the basis of NEMMCO’s existing functions.

Given the basis on which NEMMCO has arrived at the proposed new structure of Participant fees, it is likely that a requirement to change that structure will only arise where there is some change in the functions that NEMMCO performs. The Rules now contain a framework for dealing with significant market developments between fee determinations that did not exist before the introduction of the concept of declared NEM projects.

Another consideration is that, in the electricity industry, most pricing determinations made by the national and State regulators in respect of the regulated activities of TNSPs and DNSPs are for five years.

The requirements of the Rules mean that the process of determining a structure of Participant fees is time consuming and expensive for the NEM.
In the submissions received, TransGrid has suggested that the next fee determination should have a duration of 5 years, and the NGF and ERAA believe that the duration should be “at least” 5 years.

Having regard to these competing considerations, NEMMCO believes that a duration of five years for the new structure for Participant fees (ie commencing 1 July 2006 until 30 June 2011) strikes the right balance.

This analysis is presented in section 11 of this Determination and Report.

2.11 Fee structure comparisons

Clause 2.11.1(d) of the Rules requires NEMMCO to consider other fee structures that it thinks are appropriate. Chapter 5 of The Allen Consulting Group report contains an analysis of the fee structures used by other electricity market operators in Australia and around the world, to the extent that it has been possible to obtain the information.

That analysis shows that each market has adopted a structure appropriate to its own regulatory environment and circumstances. While the analysis is interesting, it is not possible to draw any specific guidance for this current determination.

These issues are discussed further in section 12.4 of this Determination and Report.
3 Background

3.1 NEMMCO’s role under clause 2.11.1 of the Rules

Participant fees are levied on Registered Participants under the Rules to recover the budgeted revenue requirements of NEMMCO.

Clause 2.11.1 of the Rules requires NEMMCO to determine the structure of Participant fees for such period as NEMMCO considers appropriate.

The current structure of Participant fees was determined in March 2003. At that time, NEMMCO published a report detailing the rationale for the current structure of Participant fees. In making its March 2003 Determination, NEMMCO considered various issues and, in accordance with clause 2.11.1 of the then National Electricity Code (Code), developed a structure of Participant fees that would apply until 30 June 2006.

3.2 NEMMCO’s Consultative and Decision Making Process

NEMMCO is required to comply with clause 8.9 of the Rules in determining a new structure of Participant fees. Following is an outline of the consultation process.

<table>
<thead>
<tr>
<th>Process</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Notice of First Stage of Rules Consultation issued</td>
<td>13 September 2005</td>
</tr>
<tr>
<td>Closing date for submissions received in response to the Notice of</td>
<td>28 October 2005</td>
</tr>
<tr>
<td>First Stage of Rules Consultation</td>
<td></td>
</tr>
<tr>
<td>Publication of the Draft Determination and Report and issue of</td>
<td>22 December 2005</td>
</tr>
<tr>
<td>Notice of Second Stage of Rules Consultation inviting submissions in</td>
<td></td>
</tr>
<tr>
<td>response to the Draft Determination and Report</td>
<td></td>
</tr>
<tr>
<td>Closing date for submissions received in response to the Draft</td>
<td>17 February 2006</td>
</tr>
<tr>
<td>Determination and Report</td>
<td></td>
</tr>
<tr>
<td>Publication of this Determination and Report</td>
<td>24 March 2006</td>
</tr>
</tbody>
</table>

On 13 September 2005, NEMMCO issued a Notice of First Stage of Rules Consultation to Registered Participants (including Intending Participants) and other interested parties\(^{15}\) (Consulted Persons) regarding the proposed new structure of Participant fees under clause 8.9 of the Rules (First Stage Notice), together with an Issues Paper. The purpose of the Issues Paper was to assist Consulted Persons in providing their views to NEMMCO.

Copies of the First Stage Notice and Issues Paper are set out in Attachments A and B. The First Stage Notice and Issues Paper were also circulated widely.

\(^{15}\) That is, persons (including an end user or its representative) who, in NEMMCO’s opinion, has or identifies themselves to NEMMCO as having an interest in relation to the structure of Participant fees and such other persons as NEMMCO considers appropriate.
by way of a NEM Communication and published on NEMMCO’s website. A notice was also published in the Australian Financial Review.

The First Stage Notice invited written submissions by 28 October 2005. NEMMCO received 5 submissions in its first round of consultations (Stage 1). All submissions were published on the NEMMCO website. The submissions are also reproduced in Attachment G.

NEMMCO also scheduled a forum on 11 November 2005 to which all Consulted Persons were invited. None of the Stage 1 submissions requested a meeting (as they were entitled to do under clause 8.9(e) of the Rules). NEMMCO considered the submissions received, and concluded that it was not desirable or necessary to hold meetings with Consulted Persons at that stage. NEMMCO, therefore, sent an email to each Consulted Person asking whether they wished to proceed with the initial forum. As no Consulted Person requested that the initial forum proceed in response to the email, the forum was not held.

On 22 December 2005, NEMMCO issued a Draft Determination and Report on the Structure of Participant Fees under clause 2.11 of the National Electricity Rules (Draft Determination and Report), together with a Notice of Second Stage of Rules Consultation (Second Stage Notice) to Consulted Persons. A copy of the Second Stage Notice is set out in Attachment C. The Second Stage Notice was also circulated widely by way of a NEM Communication and published on NEMMCO’s website.

The Second Stage Notice invited written submissions on the Draft Determination and Report on the Structure of Participant Fees by 17 February 2006. NEMMCO received three submissions in this second round of consultations (Stage 2). These submissions were published on the NEMMCO website. The submissions are also reproduced in Attachment G.

NEMMCO also scheduled a public forum on 24 February 2006 to which Consulted Persons were invited. None of the Stage 2 submissions requested a meeting. NEMMCO considered the submissions received, and concluded that it was not necessary to hold the public forum. NEMMCO, therefore, sent a NEM Communication on 20 February 2006 asking whether a Registered Participant, interested party or other person wished to proceed with the public forum. As no-one requested that the public forum proceed in response to the NEM Communication, the forum was not held.

NEMMCO considered all of the issues that were raised in the submissions. The key points raised in the submissions are summarised in section 5 of this Determination and Report. NEMMCO’s response to those key points is set out in section 5, or, where appropriate, another section of this Determination and Report.

3.3 Advisers

In addition to consulting with Consulted Persons, NEMMCO has also been advised by external experts. NEMMCO engaged the services of economic adviser The Allen Consulting Group (Allen Consulting), Tony Snell as legal advisor, and Dench McClean Carlson as probity auditors. Allen Consulting
produced a report (Allen Consulting report), which is set out in Attachment F.

3.4 **NEMMCO Participant Fee Working Group**

NEMMCO established a NEMMCO Participant Fee Working Group (Working Group), the members of which included NEMMCO officers and NEMMCO advisers. The Working Group met periodically to co-ordinate the process of reviewing and developing the draft fee structure in accordance with the consultation process.

NEMMCO required the members of the Working Group to declare to NEMMCO, on a continuing basis, matters that could give rise to a perception of a conflict of interest in order that NEMMCO could determine whether or not such a conflict arose. No relevant conflicts have been identified.
4 Criteria for structuring fees

4.1 Introduction

The NEM is governed by the NEL and the Rules that are made under the NEL, and also have the force of law.\(^\text{16}\)

Section 50 of the NEL requires NEMMCO to perform the functions detailed in section 49 “efficiently and on a full cost recovery but not for profit basis”.

The determination as to the structure of Participant fees appears in the context of clauses 2.11.1 to 2.11.3 of the Rules. These clauses operate to:

(a) require NEMMCO to develop, review and publish the structure of Participant fees according to certain rules – clause 2.11.1 of the Rules;

(b) require NEMMCO to determine its budgeted annual revenue requirements according to certain rules – clause 2.11.3 of the Rules; and

(c) empower NEMMCO to recover the budgeted revenue requirements by charging Registered Participants in accordance with the structure of Participant fees – clause 2.11.2 of the Rules.

Clause 2.11.1 of the Rules provides:

(a) NEMMCO must develop, review and publish, in consultation with Registered Participants and interested parties and such other persons as NEMMCO thinks appropriate, in accordance with the Rules consultation procedures, the structure (including the introduction and determination) of Participant fees for such periods as NEMMCO considers appropriate.

(b) The structure of Participant fees must, to the extent practicable, be consistent with the following principles:

(1) the structure of Participant fees should be simple;

(2) Participant fees should recover the budgeted revenue requirements for NEMMCO determined under clause 2.11.3 on a basis where:

(i) recurring expenditure requirements and payments are recovered in the year of expenditure or payment (or the following year, should there be a revenue shortfall);

(ii) capital expenditures (incurred after market commencement) are recovered through the depreciation or amortisation of the assets acquired by the capital expenditure in a manner that is consistent with generally accepted accounting principles;

(iii) establishment costs in the nature of:

(A) all expenditure (that is not in the nature of capital expenditure) incurred by, and depreciation and amortisation charged to, NEMMCO prior to market commencement, to the extent that the expenditures have not been funded by the participating jurisdictions, are recovered over a period of 10 years from market commencement; and

\(^{16}\) Section 9 of the NEL.
(B) [Deleted]

(C) capital expenditure incurred by NEMMCO before market commencement, to the extent that the expenditure has not been funded by participating jurisdictions or recovered under clause 2.11.1(b)(2)(iii)(A) as depreciation or amortisation, is recovered through the depreciation or amortisation of the assets acquired by the capital expenditure in a manner that is consistent with generally accepted accounting principles; and

(iv) notwithstanding clauses 2.11.1(b)(2)(i), (ii) and (iii), expenditure incurred by, and depreciation and amortisation charged to, NEMMCO associated with a declared NEM project are recovered from the start date and over the period determined for that declared NEM project under clauses 2.11.1(bb) or 2.11.1(bd). Amounts associated with a declared NEM project determined in accordance with this clause are to be recovered through an additional Participant fee determined in accordance with clauses 2.11.1(bb) or 2.11.1(bd) until the next general determination of all Participant fees is made under clause 2.11.1(a);

(3) the components of Participant fees charged to each Registered Participant should be reflective of the extent to which the budgeted revenue requirements for NEMMCO involve that Registered Participant;

(4) Participant fees should not unreasonably discriminate against a category or categories of Registered Participants; and

(5) the fixed component of Participant fees for a Market Customer who:

(i) is registered with NEMMCO solely for the purpose of providing market ancillary services; and

(ii) does not classify any of its market loads as a scheduled load, may be zero.

(ba) NEMMCO may determine any of the following projects to be a declared NEM project:

(1) a major development to the market;

(2) a major change to a function, responsibility, obligation or power of NEMMCO under the Rules; or

(3) a major change to any of the computer software or systems which NEMMCO uses in the performance of any of its functions, responsibilities, obligations or powers under the Rules.

(bb) When NEMMCO determines a project to be a declared NEM project under clause 2.11.1(ba), it must also determine the start date for recovery and the period or periods over which recovery will occur for the declared NEM project. NEMMCO must also determine 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 is made under clause 2.11.1(a).

(bc) In making determinations under clauses 2.11.1(ba) and (bb), NEMMCO must comply with the Rules consultation procedures.

(bd) The introduction and facilitation of full retail competition is taken to have been determined to be a declared NEM project under clause 2.11.1(ba) and NEMMCO will be entitled to recover through Participant fees expenditure incurred by, and depreciation and amortisation charged to, NEMMCO in respect of full retail
competition. The period or periods over which recovery will occur for this declared
NEM project will be determined by NEMMCO using the Rules consultation
procedures. If any amounts associated with the introduction and facilitation of full
retail competition are to be recovered prior to the next general determination of all
Participant fees under clause 2.11.1(a), such recovery must be through an
additional Participant fee determined using the Rules consultation procedures.

(c) The components of the Participant fees may include, but are not limited to:

(1) registration fees, comprising an annual fee payable by each person for
each Registered Participant category in which they are registered;

(2) ancillary service fees, to recover NEMMCO’s budgeted revenue
requirements in relation to its procurement of non-market ancillary
services;

(3) power system operations fees, to recover NEMMCO’s budgeted revenue
requirements in relation to its power system operation activities described
in clause 2.11.3(b)(2);

(4) metering fees to recover NEMMCO’s budgeted revenue requirements for
the collection, storage and processing of metering data;

(5) billing and settlements fees, to recover NEMMCO’s budgeted revenue
requirements as described in clause 2.11.3(b)(4); and

(6) administration fees, to recover the remainder of NEMMCO’s budgeted
revenue requirements;

and each component of the Participant fees may take into account adjustments
which may be appropriate in light of the matters described in clauses 2.11.3(b)(7)
or (8).

(d) In undertaking the process described in clause 2.11.1(a) NEMMCO must consider
other fee structures in existence which it thinks appropriate for comparison
purposes.

(e) NEMMCO must publish to Registered Participants and to such other persons as
NEMMCO thinks appropriate, the structure of Participant fees determined, the
methods used in determining the structure and an assessment of the extent to
which the structure complies with the principles set out in clause 2.11.1(b) at least
3 months prior to the implementation of the structure.

Clause 2.11.1 of the Rules is substantially the same as the equivalent clause
in the Code.

There was a dispute under the Code concerning the structure of Participant
fees determined by NEMMCO for the period 1 July 2000 to 30 June 2003
(2000 Fee Determination). The dispute was resolved by a group of three
legal and economic experts (known as the Second Group) appointed under
Chapter 8 of the Code. The 2000 Fee Determination and the substantive
issues in the dispute are summarised in the Determination of the Structure of
Participant Fees under Clause 2.11 of the National Electricity Code dated
26 March 2003 (2003 Fee Determination). In their decision, the Second
Group made a number of comments on the relevant provisions of the Code.

The 2003 Fee Determination sets out NEMMCO’s interpretation of clause
2.11.1 of the Code as at the time that determination was made.

NEMMCO must determine the structure of Participant fees “afresh”. That is, it
must freshly consider the application of the criteria in clause 2.11.1 of the
Rules and the NEL to the facts and analysis available to it at this time. In
doing so, however, NEMMCO has had regard to the reasoning and decision of the Second Group and its previous determinations under clause 2.11.1 of the Code, where appropriate.

4.2 Recent changes to the framework within which NEMMCO operates

Since the 2003 Fee Determination was made, the NEL has been amended\(^\text{17}\) and the Rules replaced the Code. The key changes that might impact on this determination are as follows:

(a) the provisions of the Code that set out the lists of diverse Code and Market Objectives and NEMMCO Objectives do not appear in the Rules.

(b) the NEL now includes an “omnibus” National Electricity Market objective, replacing the previous lists of Code and Market Objectives. The NEM objective provides:

The national electricity market objective is to promote efficient investment in, and efficient use of, electricity services for the long term interests of consumers of electricity with respect to price, quality, reliability and security of supply of electricity and the reliability, safety and security of the national electricity system.\(^\text{18}\)

(c) NEMMCO’s functions in respect of the NEM now appear in the NEL. These include:

(a) to operate and administer, in accordance with this Law and the Rules, the wholesale exchange; and

(b) to promote the development and improve the effectiveness of the operation and administration of the wholesale exchange; and

(c) to register persons as Registered participants in accordance with this Law and the Rules or otherwise in accordance with the Rules; and

(d) to exempt certain persons from being registered as Registered participants; and

(e) to maintain and improve power system security; and

(f) to undertake the coordination of the planning of augmentations to the national electricity system; and

(g) any other functions conferred on it under this Law or the Rules.\(^\text{19}\)

NEMMCO must exercise those functions in accordance with the NEL and the Rules\(^\text{20}\).

\(^{17}\) The National Electricity (South Australia) (New National Electricity Law) Amendment Act 2005 made the 2005 changes to the NEL.

\(^{18}\) Section 7 of the NEL.

\(^{19}\) Section 49(1) of the NEL.

\(^{20}\) Section 49(2) of the NEL.
(d) NEMMCO now has a duty under the NEL to:

\[
\text{perform a function referred to in section 49 efficiently and on a full cost recovery but not for profit basis.}^{21}
\]

Previously, NEMMCO’s objectives under the Code had been:

(a) to establish and conduct the national electricity market efficiently in accordance with the Code on a self funding/break even basis;

(b) to promote the ongoing development of, and changes to, the national electricity market with the objective of continually improving its efficiency; and

(c) to undertake responsibility for co-ordination of power system planning in relation to the national electricity market as specified in Chapter 5 of the Code.\(^{22}\)

(e) The Rules now clearly constitute law\(^{23}\), and the principles of statutory interpretation apply.

These changes are taken into account in the discussion of the criteria to be applied by NEMMCO in determining a new structure of Participant fees contained in section 4.4 of this Determination and Report. Although the changes to the regulatory framework have had some impact on the criteria to be applied, the criteria remain very similar to those which NEMMCO applied in previous fee determinations.

4.3 What NEMMCO must determine under clause 2.11.1 of the Rules

Clause 2.11.1 of the Rules requires NEMMCO to determine the structure of Participant fees.

Determining a Participant fee structure involves a determination of “who” will pay Participant fees and “how”, or in what manner, those fees will be calculated. A structure of Participant fees must be published at least three months prior to its implementation.

NEMMCO is not required by clause 2.11.1 of the Rules to publish the actual level of fees, expressed in dollar terms, at this time. The actual level of Participant fees will not be set until NEMMCO has prepared and published its budget of revenue requirements for the relevant financial year. These budgets are required to be published prior to the commencement of the relevant financial year. Following the publication of these budgets NEMMCO will publish an annual fee schedule that sets out the level of fees, consistent with the structure determined by NEMMCO.

\(^{21}\) Section 50 of the NEL.
\(^{22}\) Clause 1.6.2 of the Code.
\(^{23}\) Section 9 of the NEL.
4.4 Criteria for structure

4.4.1 Introduction

The development, review and publishing of a structure of Participant fees is a function\(^\text{24}\) conferred on NEMMCO under the Rules, and referred to in section 49 of the NEL. Section 49(2) of the NEL provides that “NEMMCO must exercise the functions referred to in this section in accordance with this Law and the Rules”.

Under section 50 of the NEL, NEMMCO is required to exercise “a function referred to in section 49 efficiently and on a full cost recovery but not for profit basis”.

Clause 2.11.1(b) of the Rules contains four key principles that apply in addition to section 50:

(a) the structure of Participant fees should be simple;

(b) the structure of Participant fees should provide for the recovery of NEMMCO’s budgeted revenue requirements on a specified basis;

(c) the components of Participant fees charged should be “reflective of the extent to which the budgeted revenue requirements ... involve that Registered Participant”; and

(d) the Participant fees should not unreasonably discriminate against a category or categories of Registered Participants.

Neither the NEL, nor the Rules, expressly indicate that any one or more of these principles should have greater weight than the others. Where it is not “practicable” for NEMMCO to satisfy all of the principles in clause 2.11.1 of the Rules, or satisfy them all to an equal degree, NEMMCO is permitted, by the language of the clause, to adopt a structure that is not equally “consistent” with each of these principles.

In the 2000 Fee Determination dispute, the Second Group observed:

..there is a degree of tension between the principles in clause 2.11.1(b). For example, the principle that the structure of participant fees should be simple does not sit entirely easily with the third principle that the fee components should be reflective of Code Participants’ involvement: there may be a trade off between simplicity and precise allocation of fees.\(^\text{25}\)

It is important to stress that not only is the language of the principles in Clause 2.11.1(b) expressed in exhortatory language, but the principles themselves reflect criteria (“simple”, “reflective of involvement” and “not unreasonably discriminate”) which, far from being clear-

---

\(\text{24}\) “Function” includes “duty” (see clause 10 of Schedule 2 of the NEL), that is the behaviour due by moral or legal obligation (the New Shorter Oxford English Dictionary). Under clause 2.11.1(a) of the Rules, NEMMCO “must” develop etc the structure of Participant fees.

\(\text{25}\) Decision of Second Group on Amended Dispute Reference Notice by National Generators Forum Concerning NEMMCO Participant Fees Determination, paragraph 5.13.
These criteria are discussed in the remainder of this section.

### 4.4.2 Efficiency and full cost recovery

Under section 50 of the NEL, NEMMCO is required to exercise a function “efficiently and on a full cost recovery but not for profit basis”.

NEMMCO’s duty under section 50 of the NEL will clearly be relevant when NEMMCO prepares its budgets of revenue requirements under clause 2.11.3 of the Rules. It is also relevant, however, in the process of developing, reviewing and publishing fee structures under clause 2.11.1 of the Rules.

In this context, the statutory duty could be interpreted as simply requiring NEMMCO to go about its process of developing, reviewing and publishing fee structures in an “efficient” way and recover its costs of doing so (ie run a tight and cost-effective process in accordance with the Rules). Given that a fee determination cuts across all of NEMMCO’s functions, however, NEMMCO considers that the NEL requires NEMMCO to consider the impact of the determination in light of its statutory duty in addition to running an efficient process. How NEMMCO recovers the costs of performing a function is relevant to assessing how “efficiently” NEMMCO has performed that function.

In other words, a fee structure must itself be consistent with NEMMCO acting efficiently and on a full cost recovery but not for profit basis. The New Shorter Oxford English Dictionary (relevantly) defines “efficient” as follows:

*Effective, producing the desired result with the minimum wasted effort; (of a person) capable, competent,*

and “efficiently” as:

*in an efficient manner, effectively.*

As described in chapter 3 of the Allen Consulting report (a copy of which is contained in Attachment F), there are three types of economic efficiency: allocative efficiency, productive (or technical) efficiency and dynamic efficiency. The link between section 50 of the NEL and the NEM objective is productive efficiency\(^{27}\). Productive efficiency is attained when firms produce goods and services for the minimum cost, which implies that the lowest-cost combination of society’s resources is used and the best technology is employed. The “efficiently” component of NEMMCO’s statutory duty can be interpreted as prescribing, in economists’ language, an objective of productive efficiency for NEMMCO in respect of its own operations.

The relevance of productive efficiency to NEMMCO’s determination is that some structures of Participant fees are more likely than others to lead to NEMMCO conducting its own operations in a productively efficient manner, or

---

\(^{26}\) Decision of Second Group on Amended Dispute Reference Notice by National Generators Forum Concerning NEMMCO Participant Fees Determination, paragraph 5.14.

\(^{27}\) See chapter 3.2 of the Allen Consulting report. All types of economic efficiency (productive, allocative and dynamic) described in the Allen Consulting report may need to be considered as a result of NEM objective (see section 4.4.7).
more likely to discipline the demands made on NEMMCO by Registered Participants. For example, as described in the Allen Consulting report, if Participant fees are set on the basis of NEMMCO's average costs, this will place no bound on the amount of services provided by NEMMCO, or the cost of producing them – the costs will simply be passed on as higher Participant fees (to the extent that this is possible).28

4.4.3 Simplicity

Clause 2.11.1(b)(1) of the Rules provides that the structure of Participant fees should be simple. As "simple" is not defined in the Rules, it must be given its ordinary meaning as understood in the context of clause 2.11 of the Rules. The New Shorter Oxford English Dictionary’s definition of “simple” (in this context) is: “not complicated or elaborate” and “plain, unadorned”. Whether a fee structure fits these definitions is largely a matter of judgement.

As discussed in the Allen Consulting report, there is a wide range of possible fee structures. There is no single identifiable point where “simple” becomes “complicated”.

It is clear from this provision that a certain degree of complexity was envisaged in that the structure of Participant fees may involve several components and budgeted revenue consists of several elements. The structure of Participant fees need not demonstrate absolute simplicity.

As noted in the Allen Consulting report:

… the simplest fee structures are unlikely to be consistent with the other criteria. However, it is possible to find fee structures that, while consistent with the other criteria, are relatively simple, in comparison to alternative structures.29

Further, NEMMCO considers that the use of the word "simple" in this context also involves a degree of transparency.

4.4.4 Basis for recovering budgeted revenue requirements

Clauses 2.11.1(b)(2)(i) to (iv) of the Rules provide that Participant fees should recover budgeted revenue requirements on a specific basis in respect of recurring and capital expenditure, establishment costs and declared NEM projects.

The budgeted revenue requirement for which fees are to be recovered must be calculated under clause 2.11.3 of the Rules. The main requirements are that the budget must take into account and separately identify nine projected revenue requirements. These separate revenue requirements do not need to be reflected in different components of any fee structure, but in total must be recovered.

28 The link between productive efficiency as it relates to NEMMCO and wider market efficiency (which may need to be considered as a result of the NEM objective – see section 4.4.7) is that these higher NEMMCO fees may retard investment, or if they are passed on to consumers as higher charges, may reduce the consumption of electricity, both outcomes being inconsistent with economic efficiency.

29 Chapter 3.2 of the Allen Consulting report.
4.4.5 Reflective of involvement

Clause 2.11.1(b)(3) of the Rules provides that the components of Participant fees charged to each Registered Participant “should be reflective of the extent to which the budgeted revenue requirements for NEMMCO involve that Participant”.

In the 2000 Fee Determination dispute, the Second Group observed that:

_The pivotal principle of “reflective of extent of involvement” does not have a specialised meaning in the discourse of economics. It is consistent with the economic notion of ‘user pays’ but as a matter of ordinary language, it may properly be construed as indicating a degree of correspondence (between NEMMCO and its costs and participants) without connoting identity. Taking into account the language of the whole clause we reject the contention that it must involve a precise degree of correspondence ..._

_although the Code principle speaks of each Code Participant in the singular, it was entirely appropriate for NEMMCO to conclude that where fixed and common costs were involved it was likely to be the case that multiple Code participants were involved with NEMMCO costs in relevantly similar ways._

In its report, Allen Consulting states that:

_... a reasonable economic interpretation might be that budgeted revenue requirements are reflective of the extent of the involvement of a Participant to the extent that those revenue requirements are given rise to, or caused by, that Participant’s presence in the market._

NEMMCO’s analysis and experience shows that there are categories or classes of Registered Participants that share certain characteristics that mean that the way in which they interact with NEMMCO is likely to have the same or similar cost implications for NEMMCO. Where it is practical for NEMMCO to identify costs that are fixed or common in nature that can reasonably be allocated to a class or classes of Participants that share characteristics such that their involvement with NEMMCO’s outputs is likely to have the same or similar cost implications, it will seek to do so.

In determining whether the extent to which the budgeted revenue requirement relating to a particular output involves a class of Registered Participant, NEMMCO relies on the experience and expertise of its general managers and staff, and considers factors such as the degree to which the class of Registered Participant:

(a) interacts with NEMMCO in relation to the output;

(b) uses the output;

(c) receives the output; and

(d) benefits from the output.

---

30 Decision of Second Group on Amended Dispute Reference Notice by National Generators Forum Concerning NEMMCO Participant Fees Determination, paragraphs 5.17 and 5.19.

31 Chapter 3.2 of the Allen Consulting report.
4.4.6 Unreasonably discriminate

Clause 2.11.1(b)(4) of the Rules states that Participant fees should not unreasonably discriminate against a category or categories of Registered Participants.

In its 2000 Fee Determination, NEMMCO adopted the following definition of discriminate:

*Discriminate means to treat people or categories of people differently or unequally. Discriminate also means to treat people, who are different in a material manner, in the same or identical fashion. Further, “discriminate against” has a legal meaning which is to accord “different treatment … to persons or things by reference to considerations which are irrelevant to the object to be attained”.*

Where a degree of discrimination between categories of Registered Participants is necessary or appropriate to achieve consistency with the other principles in clause 2.11.1(b) of the Rules, or the NEL, the discrimination will not be “unreasonable”.

The Second Group did not find fault with this approach and it made the following observations:

> At the onset two observations should be made about Clause 2.11.1(b)(4) of the Code...They are:

1. the principle is to be applied to the extent practicable; and
2. it is only unreasonable discrimination that offends.

4.4.7 NEM objective

The NEL does not contain an explicit obligation on NEMMCO to apply the NEM objective in performing its functions. That said, the NEM objective is clearly a relevant consideration where NEMMCO has to exercise judgment or discretion in reaching its determination, for example, if there is a number of Participant fee structures each of which can satisfy the criteria referred to in sections 4.4.2 to 4.4.6, or where the relevant provisions of the Rules are ambiguous.

In other words, where there are alternative Participant fees structures that each satisfy the criteria referred to above, NEMMCO will adopt the structure that best satisfies the NEM objective, that is to:

> promote efficient investment in, and efficient use of, electricity services for the long term interests of consumers of electricity with respect to price, quality, reliability and security of supply of electricity and the reliability, safety and security of the national electricity system.
The Second Reading Speech to the National Electricity (South Australia) (New National Electricity Law) Amendment Bill 2005\textsuperscript{35} makes it clear that the NEM objective is an economic concept and should be interpreted as such. The Speech gives an example that investment in and use of electricity services will be efficient when services are supplied in the long run at least cost, resources, including infrastructure, are used to deliver the greatest possible benefit and there is innovation and investment in response to changes in consumer needs and productive opportunities. The Speech goes on to state that the long term interests of consumers of electricity requires the economic welfare of consumers, over the long term, to be maximised. If the NEM is efficient in an economic sense, the long term economic interests of consumers in respect of price, quality, reliability, safety and security of electricity services will be maximised. Applying an objective of economic efficiency recognises that, in a general sense, the NEM should be competitive, that any person wishing to enter the market should not be treated more, or less, favourably than persons already participating, and that particular energy sources or technologies should not be treated more, or less, favourably than others.

Chapter 3 of the Allen Consulting report analyses various structures of Participant fees in light of the NEM objective of promoting efficient investment in, and use of, electricity services.

Allen Consulting notes that it should be borne in mind that the level of NEMMCO’s fees is very small relative to industry turnover and so the material effect of NEMMCO’s fees on industry efficiency is unlikely to be significant\textsuperscript{36}.

Allen Consulting states there are three types of economic efficiency: allocative efficiency, productive (or technical) efficiency and dynamic efficiency.

In the context of NEMMCO’s Participant fees, Allen Consulting finds that:

\textit{a fee structure that promotes allocative efficiency will be one that least distorts prices in the end-user markets for electricity. For this reason, amongst others, past fee structures have included a component levied on Generators based on their MW capacity, as this is a fixed charge that is not directly related to the amount of electricity produced (or consumed).}

\textit{A fee structure that promotes productive efficiency is one that places some discipline on NEMMCO’s costs. A fee structure that Participants are not simply able to pass on to their customers would create such a discipline, since Participants would be motivated to ensure that NEMMCO operates at minimum cost (for a given level of service).}\textsuperscript{37}

\textit{...}

\textit{A fee structure consistent with dynamic efficiency is one that promotes, or at least does not significantly impede, innovation and investment in the industry. This objective will be satisfied by a fee structure that is consistent with the criteria set out in clause 2.11.1(b) of the Rules – a fee structure that is simple, reflects the involvement of Participants and does not unreasonably discriminate between them should not have any negative effects on}

\textsuperscript{35} By virtue of clause 8 of Schedule 2 to the NEL, the Second Reading Speech can be used in some cases to assist in the interpretation of the Law.

\textsuperscript{36} See chapter 3.2 of the Allen Consulting report.

\textsuperscript{37} See also the discussion in section 4.4.2 of this Determination and Report.
investment and innovation in the industry as a whole, nor distort investment and innovation incentives within the industry; for example, investment in different types of generation\textsuperscript{38}.

4.5 Fee structure comparisons

Clause 2.11.1(d) of the Rules requires NEMMCO to consider other fee structures that it thinks are appropriate. NEMMCO believes fee structures used in other power exchanges and by other independent system operators around the world should be considered. These are discussed in section 12.4 of this Determination and Report.

\textsuperscript{38} Chapter 3.2 of the Allen Consulting report.
5 Consideration of Submissions

5.1 List of submissions received

NEMMCO received 5 submissions in response to the First Stage Notice. Following is a list of respondents:

<table>
<thead>
<tr>
<th>Respondent</th>
<th>Participant Type or other Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Generators’ Forum (NGF) &amp; Energy Retailers Association of Australia Inc. (ERAA)</td>
<td>Generators’ and Retailers’ Associations, representing 30 organisations in total</td>
</tr>
<tr>
<td>United Energy Distribution Pty Ltd (UED)</td>
<td>Distribution Network Service Provider</td>
</tr>
<tr>
<td>Citipower Pty (Citipower) &amp; Powercor Australia Ltd (Powercor)</td>
<td>Distribution Network Service Providers</td>
</tr>
<tr>
<td>SPI Electricity Pty Ltd (trading as SP AusNet) (SP AusNet)</td>
<td>Distribution and Transmission Network Service Providers</td>
</tr>
<tr>
<td>TransGrid</td>
<td>Transmission Network Service Provider</td>
</tr>
</tbody>
</table>

All of these submissions were published on NEMMCO’s website before the Draft Determination and Report was released and are reproduced in Attachment G.

NEMMCO received three submissions in response to the Second Stage Notice. Following is a list of respondents:

<table>
<thead>
<tr>
<th>Respondent</th>
<th>Participant Type or other Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marubeni Australia Power Services Pty Limited (Marubeni)</td>
<td>Non-Market Scheduled Generator</td>
</tr>
<tr>
<td>Ergon Energy Pty Ltd (Ergon Energy)</td>
<td>Market Customer (and other categories)</td>
</tr>
<tr>
<td>AGL Electricity Limited (AGL)</td>
<td>Market Customer (and other categories)</td>
</tr>
</tbody>
</table>

All of these submissions were published on NEMMCO’s website before this Determination and Report was released and are reproduced in Attachment G.

Attachment E details, for each Consulted Person, each issue raised and refers to NEMMCO’s response.

5.2 Material issues raised by Consulted Persons

Consulted Persons raised the issues detailed in the following table. The table also indicates where in this Determination and Report each issue is addressed.
### 5.3 Whether NEMMCO should alter the current Participant fee structure

In their joint submission, NGF and ERAA state that:

*The issues and parameters … have not materially changed and thus the ERAA and the NGF believe that there is no requirement to change the current participant fee structure.*

---

39 NGF and ERAA Submission, p.1.
In a similar vein, the UED submission states that:

_Given the push to national reform and possible convergence of gas and electricity, UED does not believe that the structure of the participant fees should be further complicated by the addition of any new categories._\(^{40}\)

NEMMCO is required by clause 2.11.1 of the Rules to review the structure of Participant fees in light of the upcoming expiry of the current structure. In doing so, NEMMCO is required to consider the matter afresh in light of the current circumstances.

As noted in section 4.2 of this Determination and Report, there have been developments in the NEM since March 2003. In addition, the experience of the last three years has shown that there are some changes in the extent of NEMMCO’s involvement with Registered Participants in some areas.

5.4 **Imposition of Participant fees on NSPs**

The submissions from UED, Citipower and Powercor, SP AusNet and TransGrid all supported the current structure to the extent that it did not impose Participant fees on network service providers.

For example, TransGrid commented that:

_TransGrid and other TNSPs are, and remain, minimal users of NEMMCO’s systems, such as the Energy Market Settlements and Energy Market Dispatch systems. TransGrid and other TNSPs also provide various services to NEMMCO, (including information to help maintain a safe and secure power system, that ultimately benefits all Registered Participants and the long term interests of consumers) as well as responding to System Security directions, providing voltage and network control functions, and the provision of the facilities to convey signals from market systems to generator controls._\(^{41}\)

This issue is generally considered in section 8.2.2 of this Determination and Report.

Each of UED, Citipower and Powercor and SP AusNet made the point that if a fee was imposed on them they would not be able to pass it on. As the combined Citipower and Powercor submission stated:

_The revenues of these businesses are regulated … The Essential Services Commission of Victoria … has not included provision for NEMMCO fees and the businesses will have no opportunity to recover the costs of such fees during the next regulatory period._\(^{42}\)

While this may be correct during the period covered by a particular pricing determination, the inability to pass on costs during the current regulatory period is not one of the criteria NEMMCO is required to apply in determining the structure of Participant fees. NEMMCO also understands that there may also be Retailers who face a similar issue in relation to some categories of customers in particular jurisdictions.

---

\(^{40}\) UED, Submission to the NEMMCO Structure of Participant Fee Consultation, 28 October 2005, p.1.

\(^{41}\) TransGrid, Submission to the NEMMCO Structure of Participant Fee Consultation, 28 October 2005, p.1.

\(^{42}\) Citipower and Powercor, Submission to the NEMMCO Structure of Participant Fee Consultation, 28 October 2005, p.1.
That said, NEMMCO concluded, after applying the reflective of involvement criterion, that the main categories of Participant fees should not be levied on NSPs – see section 8.2.2 of this Determination and Report.

In its submission, TransGrid stated:

"TNSPs can be categorised as a discrete class of Registered Participant for the purpose of levying Participant fees...TNSPs provide information and services to NEMMCO and receive no benefit from NEMMCO's activities or outputs. Levying Participant fees on categories of Registered Participants other than TNSPs does not constitute discrimination. NEMMCO is not discriminating when it treats different entities differently."

NEMMCO agrees with these comments.

5.5 Recovery of fees for activities that do not directly support NEMMCO’s statutory functions

In their joint submission, NGF and ERAA stated that:

"...ERA and the NGF consider that costs associated with new activities of NEMMCO, that is activities that do not directly support NEMMCO’s functions under the National Electricity Law and National Electricity Rules, should not be recovered from participants through market fees."

Participant fees are clearly designed to recover the budgeted revenue requirements of NEMMCO for carrying out its functions and responsibilities under the NEL and the Rules. Under the Rules, NEMMCO cannot seek to include in its budgeted revenue requirements (and therefore in its fees) expenditure that is not related to its functions and responsibilities under the NEL and the Rules.

Any new activities that are unrelated to those functions and responsibilities will be funded by other means. An example of this is the recovery of NEMMCO’s costs for providing gas market B2B services. As outlined in NEMMCO’s 2005 Statement of Corporate Intent and Budget dated May 2005, NEMMCO will recover those costs on a fee-for-service basis.

The financial information used for the purposes of NEMMCO’s Activity Survey and Cost Analysis and sections 7, 8 and 9 of this Determination and Report exclude expenditure that is not related to NEMMCO’s functions and responsibilities under the NEL and the Rules.

5.6 Transparency, accountability and cost allocation

In its submission, Ergon Energy noted that the reform process of the NEM has been protracted, as has the development of a structure of Participant fees over that time, and commented:

---

43 TransGrid Submission, p. 3.
44 NGF and ERAA Submission, p.1.
45 NEMMCO’s 2005 Statement of Corporate Intent and Budget dated May 2005, p.44.
46 See also the discussion in section 7.3 of this Determination and Report.
Over this period, there has been general acknowledgement within the market and stakeholders on the need for increased transparency and accountability of all participants in the NEM. Despite this widely accepted need, the Draft Determination fails to demonstrate a significant incremental improvement, especially in regard to cost allocation\(^{47}\).

Of particular concern to Ergon Energy was the various cost categories in NEMMCO’s budgeted revenue requirements that, in the Draft Determination and Report, NEMMCO believed could not be directly attributed. These included travel, printing & stationery, directors’ fees and other fees. This specific issue is addressed in section 7.4.2 of this Determination and Report.

On the wider issue of transparency and accountability, NEMMCO considers that this Determination and Report constitutes a substantial development on the previous three determinations. In preparing this Determination and Report, NEMMCO has gone to considerable lengths to set out the cost and budget information on which the determination is based, and, where judgement has been exercised, to set out the reasons why NEMMCO has made the decision it did.

NEMMCO notes that the consultation process surrounding the determination of a structure of Participant fees is only one element of the accountability framework which applies in the NEM. This framework includes the preparation of annual Statements of Corporate Intent and Budgets, with the opportunity for Participant input, the publication of Annual Reports (including statutory accounts) and regular market audits. Special governance arrangements have also been put in place in relation to the development of B2B procedures (eg the IEC).

In its submission, Ergon Energy asked that NEMMCO consider establishing procedures to enable information to be captured, presumably to enable a higher degree of attribution in the next fee determination. NEMMCO has considered introducing an activity based costing system, and believes that the cost involved (including the time it would take for staff to administer) would be significant compared to the benefits that might accrue. It needs to be recognised that, in determining a structure of Participant fees, NEMMCO makes a number of judgements, and refining the information further will not necessarily assist in making the ultimate outcome more precise.

---

6 Basis of Recovery of Budgeted Revenue Requirements

6.1 Introduction

Clause 2.11.1(b) of the Rules contains principles that should be applied for the recovery of particular items of expenditure. In effect, these set out the recovery periods NEMMCO is required to apply in preparing its annual budget of revenue requirements. Special rules apply to the establishment costs and declared NEM projects. There are also general rules that apply to other recurrent and capital expenditures.

6.2 NEMMCO Establishment Costs

Establishment costs are the expenditures incurred by NEMMCO prior to the commencement of the NEM in preparation for its commencement.

Clause 2.11.1(b)(2)(iii) of the Rules requires establishment costs to be recovered over either 10 years, or in accordance with generally accepted accounting principles, depending on their nature.

Establishment costs comprise three main components: depreciation expenses, interest on borrowings and the “Establishment Receivable”. The Establishment Receivable represents the non-capital expenditure (ie operating establishment costs) that NEMMCO incurred while setting up the NEM. These costs were separately recorded and capitalised at the commencement of the NEM and are being collected over a ten year period.

As at 30 June 2006, the Establishment Receivable outstanding will be $11.4 million. This will be recovered over the first three financial years covered by the new structure at a rate of $4.45 million per year for each of the first two financial years, and the remainder in the third financial year.

6.3 FRC Costs

NEMMCO has incurred costs in the vicinity of $46 million, in establishing (approximately $38 million) and operating (approximately $8 million) the systems necessary to support the transfer of retail customers between Retailers as a result of the introduction of FRC in their jurisdictions.

The introduction and facilitation of FRC is taken to have been determined to be a declared NEM project for the purposes of the Rules.

In the 2003 Fee Determination, NEMMCO determined that FRC establishment costs (incurred up until 31 January 2002) will be recovered over a 10 year period for any capitalised operating costs and up to 5 years (depending on the nature of the capital investments) for any capital investment costs. In practice, the second part of this decision meant that FRC expenditure related to capital equipment is recovered through the depreciation of the assets.
acquired by the expenditure over the effective lives of those assets in a manner that is consistent with generally accepted accounting principles.

The elements comprising the FRC operating costs and FRC establishment costs are shown in the 2005/2006 FRC Budget in section 7.3 of this Determination and Report.

Data relating to customer transfers has in the past largely been processed manually by Market Customers and DNSPs. Since January 2004, NEMMCO has been actively involved in facilitating the development and implementation of systems and procedures to allow the automation of data exchange and reconciliation between Participants. This solution is known as “B2B”.

B2B communications are closely related to FRC – the automation of data exchanges between businesses is necessary to permit large numbers of retail transfers to occur in an efficient manner.

B2B communications will primarily occur between Retailers and DNSPs relating to the transfer of end use customers. In addition to providing the B2B Hub, NEMMCO supports the Information Exchange Committee (IEC) in the formulation of B2B standards and coordinating the testing of Retailer and DNSP systems as part of a standard implementation process. NEMMCO is also providing assistance in coordinating implementation and testing activities.

NEMMCO estimates that it will incur costs in the vicinity of $2.075 million in carrying out its B2B activities. The FRC budget in the SCI also includes $561,000 to support the work of the IEC.

Currently, costs associated with B2B are recouped through FRC fees as operating expenses, and there is no establishment component.

6.4 New Control Centre

NEMMCO is building a new control centre for the NEM to replace the existing facility located in New South Wales, which is currently leased. A suitable site has been purchased and the new facility has been specifically designed to meet the NEM’s future requirements.

Clause 2.11.1(b)(2) of the Rules provides that, to the extent practicable, recurring expenditure requirements and payments are recovered in the year of expenditure, or payment, and capital expenditures of this kind are recovered through the depreciation, or amortisation, of the assets acquired by the capital expenditure in a manner that is consistent with “generally accepted accounting principles”.

In their joint submission, the NGF and ERAA state that:

The costs of the new control centre should be recovered according to common accounting practice and allocated to participants in the same manner as other major capital costs;50

NEMMCO has put in place a financing facility with a bank to fund its costs associated with the new control centre. The facility will be for a term of 7 years and will be refinanced during the effective life of the new control centre. From

50 NGF and ERAA Submission, p.1.
1 July 2006, NEMMCO’s interest expense for the loan will be recovered from Registered Participants as recurring expenditure in accordance with clause 2.11.1(b)(2)(i) of the Rules.

The capital expenditure associated with the project has two components: the cost associated with acquiring the land, and the costs associated with the construction and fitout of the building. NEMMCO expects the new control centre to be in use for approximately 30 years, and the initial fitout is expected to last about 15 years.

NEMMCO has been advised by Ernst & Young that generally accepted accounting principles require that the building and fitout be depreciated over the expected useful life of the relevant assets. NEMMCO, therefore, intends to recover the capitalised costs associated with construction over a period of 30 years from 1 July 2006 and the capitalised costs associated with fitout over a period of 15 years from 1 July 2006 by way of depreciation of the relevant assets under clause 2.11.1(b)(2)(ii) of the Rules. A straight-line depreciation method will be used.

NEMMCO has been advised by Ernst & Young that land is not a depreciable asset under generally accepted accounting principles. NEMMCO does not believe that the cost of the land can be amortised, either.

Under section 50 of the NEL, NEMMCO is required to operate “on a full cost recovery but not for profit basis”. Clause 2.11.1(b)(2)(ii) of the Rules (that only applies “to the extent practicable”) does not provide NEMMCO with any guidance on the appropriate basis for recovering the costs associated with the acquisition of the land. NEMMCO has decided to recover those costs over a period of 30 years from 1 July 2006, consistent with the recovery period for the capitalised costs associated with construction.

The recovery principles for the new control centre were considered by the Participant Advisory Committee on 14 April 2005. The Committee, which is comprised of senior representatives of the various industry sectors, agreed that the costs of the land and building should be recovered over a longer period, namely 30 years.

The approach was also reflected in NEMMCO’s Statement of Corporate Intent and Budget for 2005/2006.

Because of its unique role, this is the first time that NEMMCO has acquired a significant asset that is likely to appreciate in value. NEMMCO acknowledges that the acquisition of the land could be seen as effectively increasing the jurisdictions’ “equity” in NEMMCO, however, it needs to be borne in mind that:

- the new control centre is a specialist facility and the land is located within a secure complex. It will not be used for any other purpose in the foreseeable future;
- the jurisdictions will only access the additional “equity” in NEMMCO if the company is wound up, or sold, which is unlikely;
- there will always be a need for a control room and a complex of this type to manage the national electricity system and the market – if the NEM is
restructured in the future, it is reasonable to assume that the new control centre will be transferred to NEMMCO’s successor; and

- after its initial period of operation, the new control centre is likely to be refurbished and continue to be used for a further period for the same purpose, or alternatively, it could be sold and the proceeds applied to minimise the future costs of a more modern and appropriate replacement facility.

NEMMCO considers that these recovery principles should also apply if NEMMCO were to acquire other land during the life of the new structure of Participant fees.
7 NEMMC0’s budgeted revenue requirements

7.1 Introduction

Clause 2.11.1(b)(3) of the Rules requires that, to the extent practicable:

the components of Participant fees charged to each Registered Participant should be reflective of the extent to which the budgeted revenue requirements for NEMMC0 involve that Registered Participant.

In light of this principle, NEMMC0 has undertaken a thorough and robust analysis of its costs, activities and outputs with a view to developing a reasonable basis for determining the extent to which its budgeted revenue requirements involve individual Registered Participants or categories of Registered Participants. In order to have a basis on which to allocate NEMMC0’s budgeted revenue requirements (ie costs), it is necessary to understand NEMMC0’s activities and outputs and the costs attributed to them.

In the NEMMC0 Activity Survey and Cost Analysis contained in Attachment D, NEMMC0 has analysed its costs and attributed them (where possible) to its main outputs. This section of the Determination and Report summarises the results of the cost attribution analysis contained in the NEMMC0 Activity Survey and Cost Analysis.

7.2 Categorisation of outputs and activities

NEMMC0’s functions encompass a wide range of activities, with individual Registered Participants and categories of Registered Participants having varying levels of interaction in each activity. NEMMC0 has two core functions: that of an independent system operator, and that of an independent power exchange. In performing the first function, NEMMC0 is responsible for ensuring the power system operates in a safe, secure and reliable manner. In performing the second function, NEMMC0 is responsible for ensuring that the market operates in an efficient manner subject to the constraints contained in the Rules.

In carrying out these two broad functions, however, NEMMC0 engages in a large number of activities and produces a range of “outputs”.

NEMMC0 has identified 162 separate activities that it undertakes to support its functions. These activities can be categorised into 10 broad, non-FRC, outputs as follows:

(a) power system security;
(b) power system reliability;
(c) market operation;
(d) market settlement (cash transactions and clearing, metering and billing);
(e) prudential supervision;
(f) settlement residue auctions;
(g) wholesale market improvement;
(h) information dissemination;
(i) retail market improvement; and
(j) data and system management.

NEMMCO administration has been identified separately.

NEMMCO considers that these 10 broad outputs represent a sufficient level of detail by which to practically inform the development of a fee structure that will satisfy the reflective of involvement criterion.

The allocation of specific activities to the above outputs is set out in Appendix 1 to NEMMCO’s Activity Survey and Cost Analysis.

The outputs identified above relate to NEMMCO’s non-FRC activities. NEMMCO’s FRC activities are discussed in section 9 of this Determination and Report.

7.3 NEMMCO’s budgeted revenue requirements

NEMMCO has used the 2005/2006 budgets from its latest Statement of Corporate Intent and Budget dated May 2005 (SCI) as the starting point for this cost attribution analysis. There are two relevant budgets in the SCI, one dealing with general costs and the other dealing with FRC.

These budgets are set out below (with some modifications as indicated in the notes).

2005/2006 NEMMCO General Budget

<table>
<thead>
<tr>
<th>GENERAL COSTS</th>
<th>$'000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Expenses</td>
<td></td>
</tr>
<tr>
<td>Labour &amp; Contractors</td>
<td>30,720</td>
</tr>
<tr>
<td>Consultants</td>
<td>4,320</td>
</tr>
<tr>
<td>Agency Fees</td>
<td>1,940</td>
</tr>
<tr>
<td>Information Technology</td>
<td>4,050</td>
</tr>
<tr>
<td>Travel</td>
<td>1,090</td>
</tr>
<tr>
<td>Accommodation</td>
<td>1,320</td>
</tr>
<tr>
<td>Insurance</td>
<td>4,680</td>
</tr>
<tr>
<td>Depreciation</td>
<td>4,530</td>
</tr>
<tr>
<td>Finance Charges</td>
<td>1,520</td>
</tr>
<tr>
<td>Training &amp; Development</td>
<td>920</td>
</tr>
<tr>
<td>Audit</td>
<td>490</td>
</tr>
<tr>
<td>Telephone</td>
<td>280</td>
</tr>
<tr>
<td>Printing &amp; Stationery</td>
<td>440</td>
</tr>
<tr>
<td>Amenities</td>
<td>100</td>
</tr>
<tr>
<td>Subscriptions</td>
<td>430</td>
</tr>
<tr>
<td>Utilities</td>
<td>220</td>
</tr>
<tr>
<td>Directors Fees</td>
<td>675</td>
</tr>
<tr>
<td>Other</td>
<td>1,335</td>
</tr>
<tr>
<td>Other Revenue to be offset</td>
<td>(570)</td>
</tr>
<tr>
<td><strong>Sub-total Operating Expenses</strong></td>
<td>58,490</td>
</tr>
<tr>
<td>Establishment Receivable</td>
<td>4,450</td>
</tr>
<tr>
<td><strong>Total NEMMCO Fees</strong></td>
<td>62,940</td>
</tr>
</tbody>
</table>

Notes – see next page
Notes:
1. NEMMCO’s budgeted General Fees per the SCI includes an item “contingency”, which is designed as a provision for potential budget under recovery to lessen the impact on the subsequent year. For the purpose of the costing activity the item has been removed.
2. Expenses related to Settlement Residue Auctions are not included, as fees are collected separately for these under clause 3.18 of the Rules.
3. “Other Revenue to be offset” includes the fees collected relating to NEMMCO’s training courses and interest earned by NEMMCO.
4. All amounts are exclusive of GST.

### 2005/2006 FRC Budget

<table>
<thead>
<tr>
<th>FRC Costs</th>
<th>$’000</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Operating Expenses</strong></td>
<td></td>
</tr>
<tr>
<td>Labour</td>
<td>3,780</td>
</tr>
<tr>
<td>Contractors</td>
<td>30</td>
</tr>
<tr>
<td>Consultants</td>
<td>480</td>
</tr>
<tr>
<td>Office Administration</td>
<td>80</td>
</tr>
<tr>
<td>Information Technology</td>
<td>1,340</td>
</tr>
<tr>
<td>Travel</td>
<td>100</td>
</tr>
<tr>
<td>Accommodation</td>
<td>120</td>
</tr>
<tr>
<td>Training</td>
<td>80</td>
</tr>
<tr>
<td>Depreciation</td>
<td>370</td>
</tr>
<tr>
<td>Legal Costs</td>
<td>100</td>
</tr>
<tr>
<td>Market Audit</td>
<td>40</td>
</tr>
<tr>
<td>Costs incurred between Feb 02 - Jun 03</td>
<td>560</td>
</tr>
<tr>
<td><strong>Sub-total Operating Expenses</strong></td>
<td>7,080</td>
</tr>
<tr>
<td><strong>Establishment Expenses</strong></td>
<td></td>
</tr>
<tr>
<td>Establishment Receivable</td>
<td>2,060</td>
</tr>
<tr>
<td>Depreciation</td>
<td>537</td>
</tr>
<tr>
<td>Interest Charges</td>
<td>220</td>
</tr>
<tr>
<td><strong>Sub-total Establishment Expenses</strong></td>
<td>9,630</td>
</tr>
<tr>
<td><strong>Total FRC Fees</strong></td>
<td>16,710</td>
</tr>
</tbody>
</table>

Note: All amounts are exclusive of GST

The SCI budgets (as modified in the manner described in the notes above) provide the most up to date information NEMMCO has available for the purposes of this Determination and Report. Although NEMMCO’s annual costs will vary over the duration of the new structure, the SCI budgets give a robust basis for notionally dividing NEMMCO’s annual budgeted revenue requirements between NEMMCO’s outputs during the period covered by the new structure.

### 7.4 Attribution of general costs to outputs

Figure 3 shows the process by which NEMMCO attributed its general budgeted revenue requirement to each of the outputs identified above.
The level to which NEMMCO is able to attribute its costs to the broad categories of output is outlined below.

The Establishment Receivable in NEMMCO’s general budget is not attributed to any of specific outputs, but forms part of the unallocatable amount.

7.4.1 Attribution of general labour costs

NEMMCO does not conduct on-going time-sheet reporting by staff against either broadly defined outputs or specific activities, however, NEMMCO has undertaken an analysis (using a comprehensive but non-exhaustive survey) of labour costs incurred in conducting each of the activities listed in Appendix 1 to NEMMCO’s Activity Survey and Cost Analysis. Aggregating labour costs for each of these activities allows NEMMCO to attribute all labour costs to each of the 10 broad categories of output and NEMMCO administration – the detailed analysis of allocation of labour costs (by output/activity) is provided in the NEMMCO Activity Survey and Cost Analysis.

As part of the labour cost attribution exercise and to facilitate comparison of this survey with surveys undertaken to inform previous fee determinations, NEMMCO also undertook an analysis of time spent in direct interaction with each category of Participant against each activity. A summary of NEMMCO staff time able to be allocated as being spent in direct interaction with the various categories of Registered Participant is provided in the NEMMCO Activity Survey and Cost Analysis. 51 Although the most recent direct interaction analysis was useful in understanding the extent to which

---

51 See section 3 of the NEMMCO Activity Survey and Cost Analysis. Only 33.9% of total time spent on all activities was able to be allocated in this way.
Participants are involved with NEMMCO at the “input” level, direct interaction with particular Participants against each activity is only one issue to consider when it comes to assessing the extent to which Participants are involved in specific outputs.

### 7.4.2 Attribution of general non-labour costs

For every financial year, NEMMCO budgets and accounts for actual expenditure against each of the categories listed below.

Non-labour costs of NEMMCO fall into the following categories:

- consultants;
- information technology;
- accommodation;
- depreciation;
- training & development;
- telephone;
- amenities;
- utilities;
- other.

Not all of these non-labour costs could be attributed to the individual activities listed in Appendix 1 to NEMMCO’s Activity Survey and Cost Analysis.

In its submission, Ergon Energy expressed concern that NEMMCO had formed the view in the Draft Determination and Report that various general non-labour cost categories could not be directly attributed to specific outputs, particularly travel, printing & stationery, directors’ fees and other fees.

In light of Ergon Energy’s concerns, NEMMCO has reconsidered the methodologies for attributing these particular cost categories.

NEMMCO further analysed the travel category and other cost category and has attributed a further proportion of those cost categories to specific outputs, although it remains impossible to attribute all of those costs.

NEMMCO still believes that it is not possible to attribute printing & stationery and directors’ fees to specific outputs. In relation to directors’ fees, NEMMCO notes that the Board of NEMMCO is responsible for the overall management of the company, and it is not feasible to attribute the time they spend in Board meetings and other activities to particular outputs. In relation to printing & stationery, it should be noted that NEMMCO recoups the publication costs of the Statement of Opportunities and the Annual National Transmission Statement separately, and the costs of producing these publications are not included in the printing & stationery cost category.

Non-labour costs have been attributed to specific outputs, using the methodologies described below.
Methodologies for attributing general non-labour costs to outputs

<table>
<thead>
<tr>
<th>Cost Category</th>
<th>Attribution Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consultants</td>
<td>Attributed on basis of relationship to outputs as determined by review of costs within project codes and consultation with departments.</td>
</tr>
<tr>
<td>Agency Fees</td>
<td>Attributed to Power System Security</td>
</tr>
<tr>
<td>Information Technology</td>
<td>Attributed on basis of analysis of relationship of underlying assets to activities and outputs in consultation with Information Technology</td>
</tr>
<tr>
<td>Travel</td>
<td>Attributed to outputs by alignment of NEMMCO cost centres to the outputs</td>
</tr>
<tr>
<td>Accommodation</td>
<td>Attributed to outputs on the basis of the functions of each of the premises. In 2005/06 this includes rent and outgoings. In future periods, it is intended to include recovery for the cost of the new New South Wales control centre land and other capitalised expenses. See the discussion in section 6.2 of NEMMCO’s Activity Survey and Cost Analysis.</td>
</tr>
<tr>
<td>Insurance</td>
<td>With the exception of TNSP insurance which is attributed to Power System Security, and that specifically for Settlement Residue Auctions, this could not be specifically attributed - allocated to general overheads</td>
</tr>
<tr>
<td>Depreciation</td>
<td>Attributed on basis of analysis of relationship of underlying assets to activities and outputs in consultation with Information Technology</td>
</tr>
<tr>
<td>Finance Charges</td>
<td>Relates to establishment costs – allocated to general overheads</td>
</tr>
<tr>
<td>Training &amp; Development</td>
<td>Training specific to the Power System Operations group has been allocated between Power System Security, Power System Reliability and Market Operation, otherwise could not be specifically attributed - allocated to general overheads</td>
</tr>
<tr>
<td>Audit</td>
<td>Market Audit costs attributed to Power System Security, Power System Reliability, Market Settlement, Market Operation and Prudential Supervision equally. Settlement Residue Auction audit costs attributed specifically with internal and statutory audit costs attributed to general overheads</td>
</tr>
<tr>
<td>Telephone</td>
<td>Attributed in proportion to labour time</td>
</tr>
<tr>
<td>Printing &amp; Stationery</td>
<td>Allocated to general overheads</td>
</tr>
<tr>
<td>Amenities</td>
<td>Attributed in proportion to labour time</td>
</tr>
<tr>
<td>Subscriptions</td>
<td>Attributed on basis of relationship to outputs as determined by consultation with departments</td>
</tr>
<tr>
<td>Utilities</td>
<td>Attributed in proportion to accommodation costs</td>
</tr>
<tr>
<td>Directors’ Fees</td>
<td>Could not be specifically attributed - allocated to general overheads</td>
</tr>
<tr>
<td>Other</td>
<td>More than half of these costs relate to maintenance of control centres and general office equipment and have been allocated on the same basis as accommodation. Meals and entertainment were allocated in proportion to labour costs. The remaining costs are general administrative costs that were allocated to NEMMCO Administration.</td>
</tr>
</tbody>
</table>

7.4.3 Summary of attribution of general costs to outputs

The table below shows costs by major expense category for each of the outputs identified above and NEMMCO administration, determined using the attribution principles above.
### Attribution of NEMMCO Costs to Outputs

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Labour &amp; Contractors</td>
<td>10,717</td>
<td>1,822</td>
<td>1,565</td>
<td>1,368</td>
<td>358</td>
<td>270</td>
<td>1,647</td>
<td>2,045</td>
<td>928</td>
<td>3,434</td>
<td>6,376</td>
<td>30,530</td>
</tr>
<tr>
<td>Consultants</td>
<td>424</td>
<td>277</td>
<td>302</td>
<td>202</td>
<td>8</td>
<td>78</td>
<td>604</td>
<td>139</td>
<td>696</td>
<td>52</td>
<td>1,538</td>
<td>4,320</td>
</tr>
<tr>
<td>Agency Fees</td>
<td>1,940</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1,940</td>
</tr>
<tr>
<td>Information</td>
<td>1,256</td>
<td>1,053</td>
<td></td>
<td>1,377</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2,329</td>
</tr>
<tr>
<td>Technology</td>
<td>142</td>
<td>139</td>
<td>5</td>
<td>129</td>
<td>15</td>
<td>15</td>
<td>56</td>
<td>54</td>
<td>34</td>
<td>144</td>
<td>362</td>
<td>1,090</td>
</tr>
<tr>
<td>Travel</td>
<td>233</td>
<td>187</td>
<td>33</td>
<td>134</td>
<td></td>
<td></td>
<td>8</td>
<td>67</td>
<td>47</td>
<td>46</td>
<td>78</td>
<td>496</td>
</tr>
<tr>
<td>Accommodation</td>
<td>400</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4,220</td>
</tr>
<tr>
<td>Insurance</td>
<td>1,383</td>
<td>1,174</td>
<td>8</td>
<td>1,548</td>
<td>15</td>
<td>15</td>
<td>83</td>
<td>83</td>
<td>83</td>
<td>83</td>
<td>319</td>
<td>4,530</td>
</tr>
<tr>
<td>Depreciation</td>
<td>88</td>
<td>88</td>
<td>42</td>
<td>88</td>
<td>10</td>
<td>7</td>
<td>44</td>
<td>55</td>
<td>25</td>
<td>92</td>
<td>172</td>
<td>710</td>
</tr>
<tr>
<td>Travel &amp; Development</td>
<td>70</td>
<td>70</td>
<td>70</td>
<td>70</td>
<td>30</td>
<td>30</td>
<td>15</td>
<td>15</td>
<td>9</td>
<td>31</td>
<td>110</td>
<td>490</td>
</tr>
<tr>
<td>Audit</td>
<td>98</td>
<td>17</td>
<td>14</td>
<td>13</td>
<td>3</td>
<td>2</td>
<td>15</td>
<td>19</td>
<td>9</td>
<td>31</td>
<td>58</td>
<td>280</td>
</tr>
<tr>
<td>Telephone</td>
<td>35</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>5</td>
<td>7</td>
<td>3</td>
<td>11</td>
<td>21</td>
<td>100</td>
</tr>
<tr>
<td>Printing &amp; Stationery</td>
<td>177</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>253</td>
</tr>
<tr>
<td>Subscriptions</td>
<td>77</td>
<td>13</td>
<td>11</td>
<td>10</td>
<td>3</td>
<td>2</td>
<td>12</td>
<td>15</td>
<td>7</td>
<td>25</td>
<td>46</td>
<td>220</td>
</tr>
<tr>
<td>Utilities</td>
<td>177</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>253</td>
</tr>
<tr>
<td>Other Directors Fees</td>
<td>301</td>
<td>207</td>
<td>50</td>
<td>87</td>
<td>6</td>
<td>6</td>
<td>46</td>
<td>46</td>
<td>74</td>
<td>75</td>
<td>443</td>
<td>1,335</td>
</tr>
<tr>
<td>Amenities</td>
<td>35</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>5</td>
<td>7</td>
<td>3</td>
<td>11</td>
<td>21</td>
<td>100</td>
</tr>
<tr>
<td>Contingency</td>
<td>451</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>451</td>
</tr>
</tbody>
</table>

| Total                    | 17,163                | 5,229                    | 2,115             | 5,029            | 474                     | 451                       | 2,512               | 2,427                     | 1,986                     | 3,943                    | 17,161                 | 58,490      |

| Attributable             | 17,163                | 5,229                    | 2,115             | 5,029            | 474                     | 451                       | 2,512               | 2,427                     | 1,986                     | 3,943                    | 17,161                 | 40,878      |

| Non Attributable         |                        |                          |                   |                  |                         |                           |                     |                           |                           |                         |                       | 17,161      |

| Total Costed Outputs     | 17,163                | 5,229                    | 2,115             | 5,029            | 474                     | -                         | 2,512               | 2,427                     | 1,986                     | 3,943                    | 17,161                 | 58,039      |

| Recovered Separately     |                        |                          |                   |                  |                         |                           |                     |                           |                           |                         |                       | 451         |

The table above shows that, of NEMMCO’s general budgeted revenue requirements, approximately $41 million (70.43%) is attributable to the outputs listed in section 7.2 of this Determination and Report and it is not possible to attribute the balance of approximately $17 million (29.57%) to any of those outputs. As discussed above, the Establishment Receivable is attributed to the unallocatable amount directly and NEMMCO’s budgeted revenue requirements relating to FRC are separately identified in an FRC budget.

On that basis, NEMMCO considers that 70% of the general portion of its budgeted revenue requirements can be allocated against the outputs identified in section 7.2, while 30% cannot be allocated. (The percentages have been rounded for simplicity.)
8 Allocating budgeted revenue requirements

8.1 Allocation of outputs to categories of Registered Participants: Principles

After attributing NEMMCO’s budgeted revenue requirements to outputs, the next step is to allocate those budgeted revenue requirements amongst Registered Participants.

The issue of allocating budgeted revenue requirements on the basis of membership of a category of Registered Participants was considered by the Second Group in the 2000 Fee Determination dispute. The Second Group stated:

*NEMMCO was entitled … to be “influenced by its own experience in that in operating the NEM certain services and activities (and hence NEMMCO costs and resources) are used or involve, in a large sense, classes or categories of Code Participants.”*

In allocating budgeted revenue requirements, NEMMCO has considered the reflective of involvement criterion, and also the simplicity and no unreasonable discrimination criteria.

In considering the extent to which the budgeted revenue requirements for NEMMCO involve Registered Participants, NEMMCO has used the categories of Registered Participants provided for in the Rules. NEMMCO is satisfied, on the basis of the experience and expertise of its general managers and staff, that each Participant in these categories is likely to be involved with NEMMCO’s costs in relevantly similar ways.

The main categories of Registered Participants for this purpose are:

(a) Generators: A Generator is registered in respect of a generating system or unit(s) that is connected to a transmission or distribution network. A generating unit can be classified as market or non market and scheduled or non scheduled.

The entire output of a market generating unit is sold through the NEM. The output of a non market generating unit is sold to the local Retailer or a customer connected at the relevant connection point.

A scheduled generating unit is subject to NEMMCO’s centrally co-ordinated dispatch process. Generating units that have a nameplate rating of 30 MW or greater (or are part of a group of units connected at a common connection point with a combined nameplate rating of 30 MW or greater) are generally classified as scheduled generating units. Even non scheduled generating units are required to have some interaction with NEMMCO to enable NEMMCO to fulfill its power system security responsibilities.

NEMMCO considered breaking down the Generator category on some other basis. As Allen Consulting comment in its report:

---

52 Decision of Second Group on Amended Dispute Reference Notice by National Generators Forum Concerning NEMMCO Participant Fees Determination, paragraph 5.19.
It may be possible, in theory, to charge capacity-based fees to peaking generators and energy-based fees to base load generators but in practice the distinction between base load and peaking generators is difficult to make, especially when the category of intermediate generators is added. The merit order of Generators in the NEM, while reasonably stable (with low cost coal fired generators generally the first to be dispatched) is not however immutably fixed and the categories “base load”, “intermediate”, and “peaking” are not useful for the purposes of designing a fee structure to recover NEMMCO’s costs.\(^{53}\)

NEMMCO agrees with this comment.

(b) **Market Customers:** Market Customers purchase electricity through the NEM. They are generally Retailers, who on-supply that electricity to end customers;

(c) **Transmission Network Service Providers:** TNSPs operate the high voltage networks in the NEM that transmit electricity from generating units to distribution grids and some customers. TNSPs charge network fees that are subject to regulation by the AER.

(d) **Distribution Network Service Providers:** DNSPs operate the distribution networks in the NEM jurisdictions that distribute electricity from transmission networks (and some embedded generation) to end use customers. DNSPs charge network fees that are subject to regulation by the relevant local State or Territory regulator.

(e) **Market Network Service Providers:** MNSPs are network service providers who operate a network element which is classified as a “market network service”. The electricity flow on a market network service is scheduled by NEMMCO using the MNSP’s bids and NEMMCO’s centrally co-ordinated dispatch process and MNSPs are remunerated through the wholesale exchange. In terms of interaction with NEMMCO, they have many similarities to Market Scheduled Generators.

(f) **Traders:** Traders register to participate in settlement residue auctions.

### 8.2 Extent of involvement of Registered Participants in outputs

#### 8.2.1 Introduction

NEMMCO has considered each of the outputs identified in section 7.2 of this Determination and Report and, on the basis of the experience and expertise of its general managers and staff, has formed a view as to the extent of involvement of each category of Registered Participant in that output.

Figure 4 shows the process NEMMCO has undertaken to allocate outputs to Registered Participants.

\(^{53}\) Chapter 4.3 of the Allen Consulting report.
NEMMCO’s analysis in relation to each output is summarised in the following table, and discussed in detail in sections 8.2.2 (TNSPs and DNSPs) and 8.2.3 (NEMMCO’s analysis) of this Determination and Report.

### Allocation on basis of involvement

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Market Customers</td>
<td>50%</td>
<td>75%</td>
<td>51%</td>
<td>50%</td>
<td>25%</td>
<td>N/A</td>
<td>50%</td>
<td>100%</td>
<td>100%</td>
<td>50%</td>
</tr>
<tr>
<td>Generators and MNSPs</td>
<td>50%</td>
<td>25%</td>
<td>49%</td>
<td>50%</td>
<td>75%</td>
<td>N/A</td>
<td>50%</td>
<td>0%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>N/A</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Section 8.2.4 of this Determination and Report considers the position of Non-Market Generators and concludes that Non-Market Scheduled Generators are, overall, less involved in NEMMCO’s outputs than Market Generators, and that Non-Market Non-Scheduled Generators are only marginally involved in NEMMCO’s outputs. Accordingly, the level of Participant fees charged to Non-Market Scheduled Generators will be less than that charged to Market Generators, and Non-Market Non-Scheduled Generators will not be charged Participant fees.

### 8.2.2 TNSPs and DNSPs

The extent of involvement of TNSPs and DNSPs is an issue that comes up in the case of a number of NEMMCO’s outputs.
TNSPs

The relationship between TNSPs and NEMMCO has two aspects. In some respects, TNSPs may be considered to be involved in NEMMCO activities – for example, the security and integrity of the equipment of TNSPs is preserved by NEMMCO’s power system security activities. TNSPs, however, also provide “services” to NEMMCO that contribute to NEMMCO’s ability to manage power system security and perform its other functions. Some of these services are provided to NEMMCO under agreements entered into between NEMMCO and the relevant TNSP. Others are provided as a result of obligations imposed on TNSPs under the Rules.

As TransGrid commented in its submission:

TransGrid and other TNSPs also provide various services to NEMMCO ... including information to help maintain a safe and secure power system, that ultimately benefits all Registered Participants and the long term interests of consumers54

NEMMCO does not believe it is appropriate to allocate any of its budgeted revenue requirements to TNSPs because these two aspects are so intertwined, and the services TNSPs provide significantly contribute to NEMMCO’s ability to perform its functions.

DNSPs

NEMMCO has only limited interaction with DNSPs in relation to power system security and reliability outputs. NEMMCO advises a DNSP if the DNSP’s network will be affected by load shedding or a system security risk so that the DNSP can manage the consequences. This communication is undertaken by the TNSPs on NEMMCO’s behalf. Accordingly, NEMMCO considers that the extent of involvement of DNSPs in those outputs is minor and incidental.

Although NEMMCO interacts with DNSPs on retail market improvement activities, that output in the main supports retail competition and the DNSPs’ involvement is also only incidental.

8.2.3 NEMMCO’s analysis

Against that background, NEMMCO’s analysis as to the extent of involvement of each category of Registered Participant in each output is as follows.

(a) Power system security

This output delivers a secure power system that ensures that a “credible event” does not cause the power system to enter a state where equipment is overloaded, or power flows, voltages, and frequency are outside limits, or are not under control. The activities involved include real time monitoring, both by automatic means and through control centre operations, such as running system simulations, outage co-ordination with TNSPs, the acquisition and dispatch of ancillary services, power system analysis and performance monitoring.

54 TransGrid Submission, p.1.
All those who are connected to the power system are involved in this output. All Generators, MNSPs and Market Customers require a secure power system to carry out their businesses. A secure power system also ensures that equipment belonging to TNSPs, DNSPs and end use customers is not damaged.

The issue of TNSPs' and DNSPs' involvement in this output is discussed in section 8.2.2 of this Determination and Report.

The main categories of Registered Participant that are involved in this output are Generators, MNSPs and Market Customers. Generators and MNSPs as a group and Market Customers as a group are similarly involved in that one group supplies energy to, and the other receives energy from, the secure power system.

Given that the extent of involvement in this output of Generators and Market Customers is equivalent, NEMMCO considers that the budgeted revenue requirements associated with this output should be split half to Generators and MNSPs and half to Market Customers.

The relative extent of involvement of the different categories of Generators in this output is discussed further in section 8.2.4.

(b) **Power system reliability**

This output ensures that supply is delivered to Market Customers with a specified level of probability. The activities involved include reserve monitoring in a range of timeframes, the provision of information to the market by the projected assessment of system adequacy (PASA), interconnection reviews and a substantial portion of the Statement of Opportunities.

Power system reliability outputs can be broken down into the major components of:

- ensuring an acceptable probability of supply to customers;
- facilitating stable prices while supply is being met, rather than the price routinely hitting VoLL during load shedding;
- provision of information to the market by PASA to assist in the self co-ordination of generation outages so that outages are taken at the best time for Generators; and
- provision of information to the market to facilitate appropriate levels of investment.

The issue of TNSPs' and DNSPs' involvement in this output is discussed in section 8.2.2 of this Determination and Report.

As indicated above, Market Customers are clearly involved in this output as they benefit from the higher likelihood of being supplied with electricity. Generators and MNSPs are also involved, but not to the same overall extent as Market Customers.
NEMMCO considers that a reasonable split is 75% to Market Customers and 25% to Generators and MNSPs.

The relative extent of involvement of the different categories of Generators in this output is discussed further in section 8.2.4.

(c) Market operation

Market operation involves determining the economic dispatch or schedules for generating plant and the prices for the NEM. The activities include the dispatch of energy and ancillary services, pre-dispatch processes, and market management technology systems.

The categories of Registered Participant involved in this output are Market Generators, MNSPs, and Market Customers. NEMMCO considers that Market Generators and MNSPs as a group and Market Customers as another group are equally involved in this output.

NEMMCO considers that the budgeted revenue requirements associated with this output should be split half to Market Generators and MNSPs and half to Market Customers.

(d) Market settlements

Market settlements involve determining amounts owing and owed in the NEM, and the facilitation of cash transactions. The activities include acquisition of metering data, preparation of settlement statements, billing and Austraclear processing.

Market Generators, MNSPs and Market Customers are involved in this output. NEMMCO considers that the budgeted revenue requirements associated with this output should be allocated in proportion to dollars transacted via NEMMCO’s settlements system for spot market transactions.

The dollars transacted in the spot market for each of these categories for the 2004/2005 financial year is as follows:

**Market Settlements for energy traded - for 2004/2005 financial year**

<table>
<thead>
<tr>
<th>Customer / Participant Type</th>
<th>Energy Traded $</th>
<th>Energy Traded %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market Customers</td>
<td>$6,394,922,029</td>
<td>51.34%</td>
</tr>
<tr>
<td>MNSPs</td>
<td>6,183,844</td>
<td>0.05%</td>
</tr>
<tr>
<td>Market Scheduled Generators</td>
<td>$6,032,339,031</td>
<td>48.43%</td>
</tr>
<tr>
<td>Market Non-Scheduled Generators</td>
<td>$23,300,000</td>
<td>0.19%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>12,456,744,904</strong></td>
<td><strong>100.00%</strong></td>
</tr>
</tbody>
</table>

NEMMCO considers that the budgeted revenue requirements associated with this output should be split 51% to Market Customers and 49% to Market Generators. (The percentages have been rounded for simplicity.) The difference reflects losses.
(e) **Prudential supervision**

Prudential supervision delivers a high degree of confidence that payments will be made to settlement creditors. The activities involved include calculating maximum credit limits, monitoring Market Participant outstandings, maintaining required credit support, reallocations and prudential crisis management. They also include the work that is being done by NEMMCO to reduce the costs of prudential supervision for Market Customers, including maximum credit limits and reallocations.

Market Generators and MNSPs are the primary beneficiaries of this output. The extent of involvement in this output of Market Customers was previously assessed as not material. Accordingly, in the 2003 Fee Determination, all of the budgeted revenue requirements associated with this output were allocated to Market Generators and MNSPs in proportion to dollars transacted via NEMMCO settlements.

Given the work being done to reduce the costs of prudential supervision for Market Customers, NEMMCO believes that, going forward, a proportion of the budgeted revenue requirements associated with this output should be allocated to Market Customers. Bearing in mind the need for simplicity, NEMMCO considers that a reasonable split is 75% to Market Generators and MNSPs and 25% to Market Customers. Market Generators and MNSPs remain more involved in this output than Market Customers.

(f) **Settlement residue auctions**

NEMMCO operates an auction process to sell rights to a share of certain future settlement residue streams. The budgeted revenue requirements associated with this output are recovered by auction fees that are approved by the Settlement Residue Committee.

This output has therefore not been included in the allocated component of Participant fees.

(g) **Wholesale market improvement**

This output relates to the continued development of the efficiency of the NEM. The activities involved include market design analysis, market performance monitoring, market issues management, working group participation, testing and implementing system changes. Participants involved in this output are those trading or operating in the NEM.

The issue of TNSPs’ and DNSPs’ involvement in this output is discussed in section 8.2.2 of this Determination and Report.

Market Generators, MNSPs and Market Customers are involved in this output. NEMMCO considers that the budgeted revenue requirements associated with this output should be split half to Market Generators and MNSPs and half to Market Customers.
(h) Information dissemination

This output involves the provision of information to parties operating in the wholesale exchange. The activities include the output of data from NEMMCO’s processes, general information provision, Participant support, the Participant Advisory Committee and NEMOC. For the reasons set out in section 8.2.2 of this Determination and Report, NEMMCO does not believe it is appropriate to allocate any of the budgeted revenue requirements associated with this output to TNSPs.

All Market Participants are involved in this output in that they benefit from a transparent market and forums within which Participant concerns can be raised. NEMMCO considers that the budgeted revenue requirements associated with this output should be split half to Market Generators and MNSPs and half to Market Customers.

(i) Retail market improvement

Retail market improvement activities include:

- the specification of metrology standards and retail transfer processes for the NEM;
- investigating mechanisms to improve the transfer of data at the retail/network interface to support NEM settlements and other billing transactions;
- identifying and improving the processes by which B2B process information is exchanged;
- the exploration of emerging technologies, innovation and business processes which have the potential to impact on the retail market; and
- the investigation and analysis of emerging and new energy policy issues which have the potential to impact on the retail market.

The issue of DNSPs’ involvement in this output is discussed in section 8.2.2 of this Determination and Report.

Given that this output is closely related to retail competition, which primarily involves Market Customers, NEMMCO considers that the budgeted revenue requirements associated with this output should be allocated to Market Customers.

(j) Data and system management55

This output relates to the secure provision of data and the management of systems. This includes data network management, database management, data standards, information security, IT project management and change management. This output also relates to the overall support and management of the Market Management System and its provision of data.

55 This output was called “automated inter-business transactions” in the 2003 Fee Determination.
The extent of involvement in this output might be expected to be correlated with the number of user accounts in NEMMCO systems\textsuperscript{56}. When NEMMCO considered the number of user accounts as a mechanism for allocation this time, it became apparent that a number of Registered Participants had multiple user accounts, and it was not always clear in what capacity they held them (as some Participants are registered in a number of Participant categories).

This output is similar in many ways to Information Dissemination. Accordingly, NEMMCO considers that the budgeted revenue requirements in respect of this output should be split 50% to Market Customers and 50% to Generators and MNSPs.

The relative extent of involvement of the different categories of Generators in this output is discussed further in section 8.2.4.

8.2.4 Non-Market Generators

In the Draft Determination and Report, NEMMCO treated all Generators (except Non-Market Non-Scheduled Generators) as a single category of Registered Participant for the purpose of determining their extent of involvement in particular outputs. While it recognised that different categories of Generator were involved in NEMMCO’s outputs in different ways, NEMMCO took the view that, taken globally, all Generators (except Non-Market Non-Scheduled Generators) were involved in its outputs to substantially the same extent. Non market non scheduled generating units were excluded from the relevant analysis because NEMMCO took the view that it only had very limited interaction with Non-Market Non-Scheduled Generators.

Marubeni submitted that, in its view, Non-Market Scheduled Generators do not utilise NEMMCO’s services to the same extent as Market Scheduled Generators and requested NEMMCO “separate Non Market Schedule[d] Generators and allocate their costs of services provided by NEMMCO on a fair and equitable basis that is consistent with other participants”\textsuperscript{57}.

Marubeni also made a number of specific comments on the assessments NEMMCO made in section 8.2.3 of the Draft Determination and Report covering the extent of involvement of Non-Market Scheduled Generators in various outputs. As a result of Marubeni’s comments, NEMMCO has reconsidered its analysis of this issue and made several changes to section 8.2.3 as it appears in this Determination and Report.

The four separate categories of Generators (Market Scheduled; Market Non-Scheduled; Non-Market Scheduled; and Non-Market Non-Scheduled) are each involved to a different extent in each of the output categories that are relevant to Generators (see section 8.2.3). In order to assess the overall involvement of each category of Generator it is relevant to consider some specific characteristics of the outputs (excluding Settlement Residue Auctions) and identify which characteristics involves which category of Generator.

\textsuperscript{56} This was the basis on which NEMMCO allocated this output in the 2003 Fee Determination.

\textsuperscript{57} Marubeni, Submission to the NEMMCO Structure of Participant Fee Consultation, 30 December 2005, p.1.
The specific characteristics of each output that are relevant to such an assessment are as follows:

(a) Power system security:
   - all Generators connected to the power system derive a benefit from the maintenance of a secure power system;
   - the involvement of Scheduled Generators is more significant given the requirement to use the dispatch process to manage power system security; and
   - Generators require a secure power system to get their product to customers;

(b) Power system reliability:
   - all Generators connected to the power system derive a benefit from the maintenance of a reliable power system;
   - the relative stability of prices that ensue from a reliable power system benefit all Market Generators;
   - the PASA process used to flag reserve issues assists in the development and management activities of Scheduled Generators;
   - the longer term investment signals provided by maintenance of a reliable power system assist in the development and management activities of Market Generators;

(c) Market operation involves only Market Generators;

(d) Market settlement involves only Market Generators;

(e) Prudential supervision involves only Market Generators;

(f) Wholesale market improvement involves only Market Generators;

(g) Information dissemination involves only Market Generators; and

(h) Data and system management involves Market Generators and Scheduled Generators.

In summary:

(a) Market Scheduled Generators are substantially involved in all relevant outputs;

(b) Market Non-Scheduled Generators are substantially involved in all relevant outputs;

(c) Non-Market Scheduled Generators are substantially involved in only the power system security, power system reliability and data and system management outputs; and

(d) Non-Market Non-Scheduled Generators are marginally involved in only the power system security and system reliability outputs.
Accordingly, NEMMCO believes it is appropriate to break the “allocatable costs” apportioned to Generators and MNSPs into two pools, one representing the Generators/MNSPs’ share of costs related to the power system security, power system reliability and data and system management outputs, and the other representing the Generators/MNSPs’ share of costs related to the other outputs. All Generators (except Non-Market Non-Scheduled Generators) and MNSPs would share the costs in the first pool, but only Market Generators and MNSPs would share the costs in the second pool.

As close to two thirds of “allocatable costs” relate to power system security, power system reliability and data and system management (see Table 5 of the NEMMCO Activity Survey and Cost Analysis), NEMMCO believes it is appropriate to set the first cost pool at two-thirds of the “allocatable costs” apportioned to Generators and MNSPs and the second cost pool at one-third of that amount.

On the basis of the above analysis, a case could also be made for requiring Non-Market Non-Scheduled Generators to pay Participant fees given their involvement in the outputs of power system security and power system reliability. NEMMCO, however, remains of the view it expressed in the Draft Determination and Report that Participant fees should not be levied on Non-Market Non-Scheduled Generators. At most, their involvement in the relevant outputs is only marginal. As well, given the size of the generating units in this category, and the absence of NEM metering on those units, the fees that could be collected from Non-Market Non-Scheduled Generators are not likely to be significantly greater than the transaction costs involved in developing a process to allocate and collect them.

### 8.3 Costed allocation on basis of involvement

The table in section 8.2.1 of this Determination and Report summarises NEMMCO’s views as to the extent of involvement of the various categories of Registered Participant in relation to the broad outputs identified in section 7.2.

The percentage allocation determined for each Participant category in the case of each output was then applied to the costs attributed to each of those outputs as shown in the table in section 7.4.3 of this Determination and Report. This outcome is shown in Table 5 of the NEMMCO Activity Survey and Cost Analysis.

As a result of further consideration following a submission received on the Draft Determination and Report, the “allocatable costs” apportioned to Generators and MNSPs has been broken into two pools. The first cost pool has been set at two-thirds of the “allocatable costs” apportioned to Generators and MNSPs and the second cost pool set at one-third of that amount.

<table>
<thead>
<tr>
<th>Participant</th>
<th>$'000's</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market Customers</td>
<td>22,642</td>
<td>55.39%</td>
</tr>
<tr>
<td>Market Generators, Non-Market Scheduled Generators and MNSPs</td>
<td>12,157</td>
<td>29.74%</td>
</tr>
<tr>
<td>Market Generators and MNSPs</td>
<td>6,079</td>
<td>14.87%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>40,878</strong></td>
<td><strong>100.00%</strong></td>
</tr>
</tbody>
</table>
On this basis, NEMMCO, therefore, proposes applying 55% of its “allocatable” general budgeted revenue requirements to Market Customers, 30% to Market Generators, Non-Market Scheduled Generators and MNSPs and 15% to Market Generators and MNSPs. (The percentages have been rounded for simplicity.)

8.4 “Unallocatable” amount

Even after the allocation exercise above, there remains a significant proportion of NEMMCO’s budgeted revenue requirements (approximately 30% of its general budgeted operating costs plus the Establishment Receivable) that cannot be allocated to particular categories of Registered Participant. Therefore, it is not possible to determine the extent of involvement of different Participants in relation to this “unallocatable” amount.

Section 50 of the NEL requires NEMMCO to operate on a “full cost recovery but not for profit basis”. Clause 2.11.1(b)(2) also contemplates that Participant fees should recover the budgeted revenue requirements for NEMMCO. In other words, NEMMCO is required to recover all its costs, and not just those that can be allocated to particular Participants, or categories of Participants, on the basis of the reflective of involvement criterion.

Allen Consulting, in its report, states that:

In the circumstances, a reasonable and efficient method for recovering unallocated costs is from end users via the Participants that are closest in the electricity supply chain to those end users.

This can be achieved by a fee that is levied on Market Customers based on load in the current year. It is reasonable to expect that Market Customers would relatively quickly pass the fee onto end users, so that it would be end users, not Market Customers, who would bear the burden of the fee.

It is also likely that a variable fee that was levied on Generators, for the purposes of recovering unallocated costs, would also be passed down the supply chain, first into higher wholesale prices, then eventually into higher retail prices. However, since the purpose of the fee would be to recover unallocated costs from end users, it would more efficient to levy the fee on Participants who are closest to end users i.e. Market Customers.58

Under the current structure of Participant fees, this component of costs is also allocated to Market Customers.

In their joint submission, the NGF and ERAWA state that:

The issues and parameters … have not materially changed and thus the ERAW and the NGF believe that there is no requirement to change the current participant fee structure59

Given Allen Consulting’s recommendations, and the views expressed by Consulted Persons, NEMMCO proposes that this category of costs should be allocated to Market Customers.

---

58 Chapter 4.4 of the Allen Consulting report.
59 NGF and ERAWA Submission, p.1.
NEMMCO also considers that this outcome would be consistent with the criterion of simplicity and is not unreasonably discriminatory.

8.5 Incremental services and costs: general

NEMMCO recognises that some of the services it provides are incremental, in that the recipient is receiving some benefit by NEMMCO providing the service over and above other Participants of the relevant class. An example is where NEMMCO has been requested to provide additional bandwidth for access to NEMMCO’s market systems.

Where it is practical for NEMMCO to identify that it is doing something specific for a Participant or other parties, and that action causes additional costs for NEMMCO, NEMMCO will seek to levy fees for those actions to recover the incremental costs incurred.

NEMMCO recognises that identifying whether a particular service falls within this category or forms part of the services NEMMCO provides the market generally is not always easy. Given the evolving nature of the market and Registered Participants’ needs, it is also not possible to specifically identify every service that falls in this category now.

An Incremental Service is a service that, in NEMMCO’s opinion, is provided to a Participant or other person where the recipient is receiving some benefit over and above Participants of the relevant class and is:

- (identifiable) the cost of the service is able to be separately accounted for; and
- (material) the identified costs in providing the service are material; and
- (voluntary) the service is provided at the request of the recipient.

If the Rules contemplate NEMMCO levying a separate fee or charge for a service, that service is likely to be an Incremental Service.

NEMMCO will charge a Registered Participant who receives an Incremental Service a fee. The fee will be levied on the basis of NEMMCO’s assessment of the labour, overheads and other material costs involved in providing the service.

The costs NEMMCO incurs in providing Incremental Services will be deducted from NEMMCO’s budgeted revenue requirements before the other components of Participant fees are calculated.

8.6 Incremental services and costs: Registration fees

In previous determinations, NEMMCO set a registration fee of $1,700 per registration application for all new registrations. This is a one off charge at the time of registration.

In preparing the NEMMCO Activity Survey and Cost Analysis, NEMMCO considered the costs involved in assessing registration applications, and found
that the actual labour cost per registration application is approximately $3,655\textsuperscript{60}.

The current registration fee of $1,700 (which has been in place since 2000) therefore does not adequately reflect the time taken to process Participant registration applications.

Accordingly, NEMMCO has decided to set the registration fee at $3,500 per registration application for all new registrations. NEMMCO does not believe that a fee of this magnitude constitutes a material barrier to entry to the NEM.

Because it is proposed that the new structure of Participant fees will have a duration of five years, NEMMCO considers it is appropriate to escalate the new registration fee in line with movements in the Consumer Price Index.

\textsuperscript{60} See section 7.3 of the NEMMCO Activity Survey and Cost Analysis.
9 FRC budgeted revenue requirements

In its Issues Paper, NEMMCO asked for comment on the appropriateness of its current cost recovery systems for FRC and B2B costs. NEMMCO currently charges FRC costs separately to other Participant fees, and is recovering the cost of the implementation of B2B communications through those FRC fees.

NEMMCO’s interaction with Registered Participants in relation to B2B communications mainly involves Market Customers and DNSPs. This is also reflected in the membership of the IEC and industry working groups.

The consensus among the submissions received was that it was appropriate that B2B related costs should be recovered on the same basis as FRC costs.

SP AusNet and UED commented on which Market Customers these fees might best be levied. SP AusNet concluded that:

... under these separate arrangements the costs are met by retailers, and in our view this allocation remains appropriate ... the emergence of industry B2B communications systems are intrinsically associated with Full Retail Competition in the retail market, and would not otherwise be required beyond arrangements between the network business and host retailer. Whilst network businesses now have a significant operational reliance upon NEMMCOs provision of FRC and B2B facilities and services, these market developments have been implemented to create opportunities for more innovative and efficient retailing arrangements.61

Similarly, UED commented that:

To date any B2B fees incurred by NEMMCO have been incorporated into FRC fees consistent with the wider interpretation of national market facilitation. This is also consistent with the Victorian gas approach where B2B is considered part of market facilitation and Vencorp’s costs are part of the market operators fees to retailers. This mechanism also provides the most efficient mechanism for the ultimate flow of these costs to the customers.62

NEMMCO agrees with these views. NEMMCO’s FRC and B2B activities and systems serve a reasonably discrete purpose: the provision of services that support the transfer of retail customers between Retailers. That is, in general terms, Retailers are involved in these services.

In relation to B2B communications, NEMMCO also notes that:

• the purpose of B2B communications is to improve and streamline the process for transferring customers. As such, B2B activities are an outcome of FRC - in the absence of FRC, these activities would have been less likely to occur; and

• once the standards for B2B communications have been determined, in the longer term the level of NEMMCO’s interaction with DNSPs is unlikely to continue.

---

61 SP AusNet, Submission to the NEMMCO Structure of Participant Fee Consultation, 28 October 2005, p.2.
The participating jurisdictions have adopted different timeframes for the introduction of FRC. New South Wales and Victoria introduced FRC in January 2002. FRC was introduced in South Australia in January 2003 and in the ACT in July 2003. Queensland has recently announced that FRC will be introduced in that State from 1 July 2007. Tasmania has announced that it anticipates implementing FRC in that State from 1 July 2010. Despite the staggered introduction of FRC, NEMMCO’s FRC systems have had to be designed and scaled to accommodate FRC in all jurisdictions. That is, the decision by some jurisdictions to implement FRC later than others has not resulted in NEMMCO avoiding any of the capital costs associated with establishing its FRC systems. Rather, all Retailers, irrespective of location, have the option of obtaining customer transfer services that include the functionality and scale required to support FRC. Accordingly, all Retailers are involved in the costs incurred in establishing FRC systems.

NEMMCO, therefore, believes that its budgeted revenue requirements for FRC (including B2B) should be allocated to Retailers. In the Draft Determination and Report, NEMMCO proposed that:

(a) FRC establishment related costs would be allocated to all Retailers on the basis of the energy they purchase through the NEM in any participating jurisdiction, but

(b) FRC operating costs would be allocated to Retailers on the basis of the energy they purchase through the NEM in those participating jurisdictions that have implemented FRC.

AGL submitted that it believed that the distinction being drawn by NEMMCO in the Draft Determination and Report between participating jurisdictions that have implemented FRC and those that have not is “artificial”. AGL stated:

In AGL’s view, all retailers use the systems developed for FRC to a greater or lesser degree and should be sharing in both the establishment and operational costs of those systems. This is particularly important since the B2B costs are only to be recovered in the operational FRC costs.

… In our view, however, the separation of the establishment and operational costs leaves a potential for dispute over the term “implemented” in relation to FRC. While we accept that FRC may not be considered to be “implemented” in Tasmania, we would argue that FRC has now been “implemented” in Queensland.

In our view it would be much simpler to allocate FRC costs on an energy basis to all retailers in all regions.

If FRC costs were allocated on the basis proposed by AGL, some customers would be exposed to the cost of operating FRC systems that do not apply in their participating jurisdictions, as the relevant jurisdiction has not yet implemented FRC. This was recognised in the 2003 Fee Determination. While NEMMCO appreciates the point being made by AGL, NEMMCO believes that the current arrangements on FRC cost recovery put in place by

---

63 NEMMCO understands that Tasmania has, however, reserved a final decision on whether retail competition should be extended to the final tranche of customers until an assessment is made of the costs and benefits of doing so.

64 AGL, Submission to the NEMMCO Structure of Participant Fee Consultation, 16 February 2006.
the 2003 Fee Determination ought to continue. In doing so, NEMMCO notes that Queensland is expected to implement FRC from the start of the second year of the new structure of Participant fees (ie 1 July 2007) and Tasmania has not yet finally determined the start date for FRC in that State.

On the question of the meaning of “implemented” in the Draft Determination and Report, NEMMCO has made a minor change to the determination to clarify this.
10 Structure of Participant Fees & Fee Components

10.1 Introduction

In sections 7, 8 and 9 of this Determination and Report, NEMMCO has set out its conclusions on the allocation of NEMMCO's costs to individual Registered Participants and between categories of Registered Participants. Having determined the allocation of costs, NEMMCO must now determine the structure of the fees that are to be levied on Registered Participants.

In determining the structure of fees, NEMMCO has considered the criteria of: simplicity, recovery of budgeted revenue requirements, reflective of involvement, no unreasonable discrimination, NEMMCO's efficiency and, where appropriate, the NEM objective – see section 4 of this Determination and Report.

10.2 Alternative pricing approaches

In chapter 3 of its report, Allen Consulting considers a number of alternative pricing approaches against the applicable criteria, including:

(a) marginal cost-based pricing;
(b) average cost pricing;
(c) fully distributed cost pricing;
(d) Ramsey pricing; and
(e) multi-part pricing.

The following table, extracted from the Allen Consulting report provides a qualitative assessment of the alternative pricing approaches against the criteria.65

<table>
<thead>
<tr>
<th>Basis of participant fee</th>
<th>Simple</th>
<th>Reflective of extent of involvement</th>
<th>Not unreasonably discriminatory</th>
<th>Recovers revenue</th>
<th>Efficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marginal cost</td>
<td>Yes in principle, though marginal costs may be difficult to estimate in practice. However, incremental costs could be estimated for specific services.</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Average cost</td>
<td>Yes</td>
<td>Possibly</td>
<td>Possibly</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Fully distributed cost</td>
<td>Yes (depending on the detail)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Possibly</td>
</tr>
</tbody>
</table>

65 Table 3.1 in the Allen Consulting report.
### Allen Consulting’s conclusion is:

*Based on economic principles, multi-part fees are the most likely to pass the criteria set out in clause 2.11.1(b) of the Rules and section 50 of the [NEL], as well as satisfying the NEM objectives in relation to economic efficiency. Care must be taken in the specific design of the multi-part fees; particularly, in order to satisfy the reflective of extent of involvement test, multi-part fees should be designed so that those Participants who have a greater involvement with NEMMCO’s activities should pay more in fees than those Participants with a lower level of involvement. In this respect, the design of multi-part fees may take on some of the features of Fully Distributed Cost pricing.*

*It should also be emphasised that it is not necessary for all Participants to be charged multi-part fees in order to satisfy clause 2.11.1 of the Rules and efficiency tests. For example, in practice, while it may be a simple matter to charge a fixed component of fees to one class of Participants, it may not be possible, at least not in a simple way, to charge a fixed fee to another class. In such a case, the latter class may simply be charged a variable fee.*

### 10.3 Structure of fees levied on Generators and MNSPs

Turning now to consider the structure of fees to be levied on particular categories of Participants, Allen Consulting considers the most appropriate structure of fees for Generators and MNSPs and states that:

*Two kinds of fixed fees on Generators which would satisfy the criteria set out in clause 2.11.1(b) of the Rules and section 50 of the NEL, as well as satisfying the NEM objective of efficiency, are fees based on historical capacity, and fees based on historical amounts of electricity scheduled.*

*Arguments can be made for both types of fees and, in fact, both types were levied on Generators following the 2003 Fee Determination. The case for levying both types of fixed fees is that there are different types of Generators with different characteristics and it is reasonable to set a fee structure that does not unduly favour or disfavour any particular type.*

*In the circumstances, a combination of historical capacity and historical energy scheduled forms a reasonable basis for the setting of fixed fees on Generators.*

---

66 Chapter 3.6 of the Allen Consulting report.

67 Chapter 4.3 of the Allen Consulting report.
NEMMCO notes that fees for Generators and MNSPs under the current fee structure were also levied on this basis. The 2003 Fee Determination sets out in detail the reasoning underlying the current basis for levying these fees.

Allen Consulting also considered possible mechanisms for levying a variable fee on Generators and MNSPs and concluded that there did not seem to be any practical basis for doing so68.

NEMMCO agrees with Allen Consulting’s recommendations that fees for Generators69 and MNSPs be structured using a combination of historical capacity and historical energy scheduled. Of the proportion of allocated costs apportioned to a category of Generators/MNSPs, 50% will be collected on the basis of MWh of energy scheduled or metered in the previous calendar year, and 50% will be collected on the basis of the higher of the greatest registered capacity and highest notified maximum capacity in the previous calendar year. A generating unit that is classified as both a non market and also a non scheduled generating unit is not taken into account for the purpose of these calculations.

10.4 Structure of fees levied on Market Customers

The budgeted revenue requirements allocated to Market Customers include a portion related to NEMMCO’s general budgeted revenue requirements, and also all of NEMMCO’s FRC budgeted revenue requirements.

Allen Consulting also looked at the most appropriate structure for levying fees on Market Customers. It concluded that there did not appear to be any satisfactory options for levying fixed fees on Market Customers70. In relation to variable fees, Allen Consulting stated:

*The most obvious candidate here is a fee based on load in the current year. This type of fee has been levied in the past. It would pass all the clause 2.11.1 criteria and also be reasonably efficient, even though it might be expected to be passed on to end users. Because the quantum 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.*71

Accordingly, NEMMCO has decided that budgeted revenue requirements allocated to Market Customers will be recovered by way of fees structured on the basis of load in the current year. They will be collected on the basis of MWh settled in spot market transactions in each billing period using a rate set on the basis of forecast total MWh for the current year.

10.5 Structure of Incremental Service fees (including registration fees)

See the discussion in sections 8.5 and 8.6 of this Determination and Report.

---

68 See chapter 4.3 of the Allen Consulting report.
69 Except Non-Market Non-Scheduled Generators.
70 See chapter 4.3 of the Allen Consulting report.
71 Chapter 4.3 of the Allen Consulting report.
10.6 Participant Compensation Fund

Under clause 2.11.3(b)(8) of the Rules, the funding requirements (if any) for the Participant Compensation Fund must only be recovered from Scheduled Generators and Scheduled Network Service Providers.

The last time there was a funding requirement for the Participant Compensation Fund, it was recovered by a fee structured on the basis of a rate per dollar for sent out energy. Allen Consulting has, however, recommended that general fees for Generators and MNSPs be structured using a combination of historical capacity and historical energy scheduled (see section 10.3 of this Determination and Report).

On the basis of these recommendations, and for consistency with the general fees levied on Generators and MNSPs, NEMMCO considers that if the Participant Compensation Fund is at any stage depleted and additional funding is required under clause 2.11.3(b)(8) from Scheduled Generators and Scheduled Network Service Providers, those fees would be collected on the same basis as the NEMMCO general fees allocated to Generators and MNSPs (as discussed in section 10.3), with any necessary changes.
11 Duration of New Structure of Participant Fees

In the submissions received, TransGrid suggested that the next fee determination should have a duration of 5 years, and the NGF and ERAA believed that the duration should be "at least" 5 years72.

A number of competing considerations impact on the optimal period for the new structure of Participant fees. On the one hand, there is an advantage in the predictability and certainty of Participant fees and their structure and, therefore, having the structure apply over a longer period. On the other hand, the reflective of involvement criterion suggests that, as circumstances change, the structure of Participant fees is likely to need adjustment.

The NEM commenced 7 years ago. Operationally, the NEM is now a mature market and there is more experience to draw on in order to allocate costs on the basis of NEMMCO's existing functions.

Given the basis on which NEMMCO has arrived at the proposed new structure of Participant fees, it is likely that a requirement to change that structure will only arise where there is some change in the functions that NEMMCO performs.

As a result of the recent changes to the regulatory arrangements underpinning the NEM, there is a clear and predictable institutional framework within which the market will develop over the foreseeable future.

The Rules also now contain a framework for dealing with significant market developments between fee determinations that did not exist in the early days of the NEM. NEMMCO may declare any of the following to be a declared NEM project:

(a) a major development to the market;
(b) a major change to a function, responsibility, obligation or power of NEMMCO under the Rules; or
(c) a major change to any of the computer software or systems NEMMCO uses in the performance of any of its functions, responsibilities, obligations or powers under the Rules.

When NEMMCO determines a project to be a declared NEM project, it must also:

(a) determine the start date for recovery of the associated costs for the project and the period or periods over which recovery will occur; and
(b) the structure of an additional Participant fee to be used in the recovery of those costs until the next general fee determination.

In making these determinations, NEMMCO must comply with the Rules consultation procedures.

72 TransGrid Submission, p.2, and NGF and ERAA Submission, p.2.
In its submission, TransGrid commented that:

This five (5) year period also accommodates sufficient flexibility and responsiveness required to ensure a Participant Fee structure remains relevant and reflective of the market.\(^73\)

Another consideration is that, in the electricity industry, most pricing determinations made by the national regulator (previously the ACCC, now AER) and State regulators, such as the Essential Services Commission of Victoria, the Independent Pricing and Regulatory Tribunal of NSW and the Queensland Competition Authority, in respect of the regulated activities of TNSPs and DNSPs are for five years.

The requirements of the Rules mean that the process of determining a structure of Participant fees is time consuming and expensive for the NEM.

Having regard to these competing considerations, NEMMCO believes that a duration of five years for the new structure for Participant fees (ie commencing 1 July 2006 until 30 June 2011) strikes the right balance.

\(^73\) TransGrid Submission, p.2.
12 Other Issues

12.1 Participant Compensation Fund


Clause 3.16.1(c) of the Rules provides for a funding requirement for the Participant Compensation Fund.

As it currently contains the required funding level, NEMMCO has, for some years, not included in its budgeted revenue requirements a component for the Participant Compensation Fund. If the amount in the fund drops below the required level so that there is a funding requirement under clause 3.16.1 of the Rules, NEMMCO will include the funding requirement in its budgeted revenue requirements and that amount will be collected through the Participant Compensation Fund component.

Under clause 2.11.3(b)(8) of the Rules, the funding requirements of the Participant Compensation Fund must only be recovered from Scheduled Generators and Scheduled Network Service Providers.

12.2 Economic advice

NEMMCO considers that it is likely that there is a range of options for the allocation of NEMMCO's costs and structure of fees that are likely to satisfy, to varying degrees, the applicable criteria. In addition, there is likely to be a number of competing, but still validly held, opinions of economists in respect of which allocation and structure options are most likely to promote economic efficiency.

NEMMCO is conscious that the economic advice it has received in respect of the previous Fee Determinations, in some respects, differs. NEMMCO agrees with the observations of the Second Group in the 2000 Fee Determination dispute:

The possible economic conclusions involve a broad spectrum ranging from the obvious to the debatable and to the barely conceivable. There is no one correct answer and there is room for legitimate differences of opinion. The process of decision making becomes of necessity a process of striking a balance among various competing interests in the terms of the applicable Code policy guidelines.

12.3 Participant fee components

Clause 2.11.1(c) of the Rules anticipates, but does not require, that Participant fees may comprise a number of components including:

(a) registration fees, comprising an annual fee payable by each person for each Registered Participant category in which they are registered;

74 Decision of Second Group on Amended Dispute Reference Notice by National Generators Forum Concerning NEMMCO Participant Fees Determination, paragraph 4.4.
(b) ancillary service fees, to recover NEMMCO’s budgeted revenue requirements in relation to its procurement of non-market ancillary services;

(c) power system operations fees, to recover NEMMCO’s budgeted revenue requirements in relation to its power system operation activities described in clause 2.11.3(b)(2) of the Rules;

(d) metering fees to recover NEMMCO’s budgeted revenue requirements for the collection, storage and processing of metered data;

(e) billing and settlements fees, to recover NEMMCO’s budgeted revenue requirements as described in clause 2.11.3(b)(4) of the Rules; and

(f) administration fees, to recover the remainder of NEMMCO’s budgeted revenue requirements.

For the purposes of formulating its determination, NEMMCO has considered various possible fee components. In particular, NEMMCO carefully considered the extent of involvement by categories of Registered Participants in certain NEMMCO operations, for example, Power System Security and Market Operation.

It is not necessary, however, to adopt a separate fee component in respect of each of its outputs in order to allocate the relevant costs in accordance with the reflective of involvement and other criteria. This has been achieved through the aggregation of cost components and their allocation in aggregate to the relevant categories.

Consequently, the separate fee components NEMMCO considers appropriate are as follows:

(a) NEMMCO general fees: allocated cost component (Part A75);
(b) NEMMCO general fees: administration and other cost component (Part B);
(c) NEMMCO FRC fees: FRC establishment cost component (Part C);
(d) NEMMCO FRC fees: FRC operations component (Part D);
(e) registration fees and Incremental Services fees component (Part E); and
(f) Participant Compensation Fund component.

For the purposes of clause 3.15.8(g) of the Rules, “the largest single fixed component of Participant fees” is the NEMMCO general fees: allocated cost component.

---

75 The references to Parts in this section are to be read with Figure 1: Overview of fee structure determination.
12.4 Fee structure comparisons

Chapter 5 of the Allen Consulting report contains an analysis of the fee structures used by other electricity market operators in Australia and around the world, to the extent that it has been possible to obtain that information.

That analysis shows that each market has adopted a structure appropriate to its own regulatory environment and circumstances. While the analysis is interesting, it is not possible to draw any specific guidance for this current determination.

NEMMCO notes that none of the other markets Allen Consulting has looked at require the market operator to determine its own fee structure. The requirement under clause 2.11.1 appears to be unique in requiring NEMMCO to undertake this task in accordance with broad criteria. Instead, the rules governing each of the other markets either sets out the structure (some providing more detail than others), or provides for some other mechanism.

This effectively takes this very difficult, and sometimes controversial, decision out of the hands of the market operator. Instead, the market operator is charged generally with performing its functions efficiently, and its annual budget is converted to fees by a more or less formulistic approach provided for by the market rules. For example, in New Zealand, the Electricity (Levy of Industry Participants) Regulations 2005 (NZ) provide for levies to be payable by three classes of industry participants:

(a) Generators – participants who sell electricity in the wholesale market;

(b) Purchasers – participants who buy electricity in the wholesale market;

and

(c) Distributors – participants who convey electricity.

The Regulations prescribe a detailed three step process for calculating fees, whereby the costs associated with certain operations are allocated in specific proportions actually prescribed in the Regulations to these classes of industry participants.

NEMMCO believes that there is merit in considering a similar approach in the NEM, now that the market is more settled. NEMMCO, Registered Participants and end users would all benefit from long-term certainty in this area. A more prescriptive approach will also remove the costs associated with undertaking the current determination process for the NEM.
## 13 Glossary

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>AEMC</td>
<td>Australian Energy Markets Commission</td>
</tr>
<tr>
<td>AER</td>
<td>Australian Energy Regulator</td>
</tr>
<tr>
<td>AGL</td>
<td>AGL Electricity Limited</td>
</tr>
<tr>
<td>Allen Consulting</td>
<td>The Allen Consulting Group</td>
</tr>
<tr>
<td>Allen Consulting report</td>
<td>Report produced by Allen Consulting, which is set out in Attachment F</td>
</tr>
<tr>
<td>B2B</td>
<td>Business to business communication. In the context of the NEM, B2B are communications that primarily occur between Market Customers and DNSPs relating to the transfer of end use customers.</td>
</tr>
<tr>
<td>Citipower</td>
<td>Citipower Pty</td>
</tr>
<tr>
<td>Code</td>
<td>The former National Electricity Code, now replaced by the Rules</td>
</tr>
<tr>
<td>Consulted Person</td>
<td>Has the meaning given in clause 8.9(b) of the Rules</td>
</tr>
<tr>
<td>CPI</td>
<td>Consumer Price Index as published by the Australian Bureau of Statistics (Cat no. 6401.0) for All Groups, Weighted Average of Eight Capital Cities, or if that index ceases to be published, an equivalent index selected by NEMMCO</td>
</tr>
<tr>
<td>DNSPs</td>
<td>Distribution Network Service Providers</td>
</tr>
<tr>
<td>Draft Determination and Report</td>
<td>The Draft Determination and Report on the Structure of Participant Fees under clause 2.11 of the National Electricity Rules issued by NEMMCO on 22 December 2005</td>
</tr>
<tr>
<td>ERAA</td>
<td>Energy Retailers Association of Australia Inc</td>
</tr>
<tr>
<td>First Stage Notice</td>
<td>The Notice of First Stage of Rules Consultation issued on 13 September 2005, set out in Attachment A.</td>
</tr>
<tr>
<td>FRC</td>
<td>Full retail competition</td>
</tr>
<tr>
<td>Ergon Energy</td>
<td>Ergon Energy Pty Ltd</td>
</tr>
<tr>
<td>Incremental Service</td>
<td>A service that, in NEMMCO’s opinion, is provided to a Participant or other person where the recipient is receiving some benefit over and above Participants of the relevant class – see section 8.5 of this Determination and Report</td>
</tr>
<tr>
<td>IEC</td>
<td>Information Exchange Committee established under clause 7.2A.2 of the Rules</td>
</tr>
<tr>
<td>Marubeni</td>
<td>Marubeni Australia Power Services Pty Limited</td>
</tr>
</tbody>
</table>
MNSPs  Market Network Service Providers
NEL  National Electricity Law
NEM  National Electricity Market
NEM objective  The National Electricity Market objective contained in section 7 of the National Electricity Law
NEMMCO  National Electricity Market Management Company Limited
NEMMCO Activity Survey and Cost Analysis  The NEMMCO Activity Survey and Cost Analysis, which is set out in Attachment D
NGF  National Generators Forum
NMI  National Meter Identifier
non market non scheduled generating unit  A generating unit that is classified as a non-market generating unit and also a non-scheduled generating unit.
Non-Market Non-Scheduled Generator  A Non-Market Generator that is also a Non-Scheduled Generator.
non market scheduled generating unit  A generating unit that is classified as a non-market generating unit and also a scheduled generating unit.
Non-Market Scheduled Generator  A Non-Market Generator that is also a Scheduled Generator.
NRF  National Retailers Forum
NSP  Network Service Provider
Powercor  Powercor Australia Ltd
Retailer  Market Customers that are licensed under the laws of a participating jurisdiction as a retailer
Rules  National Electricity Rules
SCI  NEMMCO’s Statement of Corporate Intent and Budget for 2005/2006
Second Group  The group of three legal and economic experts appointed under Chapter 8 of the Code to resolve the dispute under the Code concerning the 2000 Fee Determination
Second Stage Notice  The Notice of Second Stage of Rules Consultation issued on 22 December 2005, set out in Attachment C.
SPI Electricity Pty Ltd (trading as SP AusNet)

Stage 1
The first stage in the consultation process leading up to the issuing of this Determination and Report, which was started by the First Stage Notice.

Stage 2
The second stage in the consultation process leading up to the issuing of this Determination and Report, which was started by the Second Stage Notice.

Transmission Network Service Providers

United Energy Distribution Pty Ltd

The Determination of the Structure of Participant Fees Under Clause 2.11 of the National Electricity Code dated 31 March 2000

The Determination of the Structure of Participant Fees Under Clause 2.11 of the National Electricity Code dated 26 March 2003
Notice of First Stage of Rules Consultation

National Electricity Rules - clause 2.11.1

Structure of Participant Fees

This notice informs all Registered Participants, Intending Participants, interested parties and any other persons NEMMCO thinks appropriate ("Consulted Persons") that NEMMCO is conducting a consultation on the structure of Participant fees.

This consultation is being conducted under clause 2.11.1 of the National Electricity Rules ("the Rules") in accordance with the Rules consultation procedures detailed in clause 8.9 of the Rules.

1. Date of notice

This Notice of First Stage of Rules Consultation is issued on 13 September 2005.

2. Objectives of the consultation

The objectives of the consultation are to:

- To provide Consulted Persons with the opportunity to have input into, the development of the structure of Participant fees that will apply from 1 July 2006; and

- To ensure that Consulted Persons are properly informed about the proposed and the final outcome.

3. Background

NEMMCO is required to develop, review and publish the structure of Participant fees that will apply from 1 July 2006.

4. Particulars of Matters under Consultation

Clause 2.11.1 of the Rules provides:

(a) NEMMCO must develop, review and publish, in consultation with Registered Participants and interested parties and such other persons as NEMMCO thinks appropriate, in accordance with the Rules consultation procedures, the structure (including the introduction and determination) of Participant fees for such periods as NEMMCO considers appropriate.

(b) The structure of Participant fees must, to the extent practicable, be consistent with the following principles:

   (1) the structure of Participant fees should be simple;

   (2) Participant fees should recover the budgeted revenue requirements for NEMMCO determined under clause 2.11.3 on a basis where:

       (i) recurring expenditure requirements and payments are recovered in the year of expenditure or payment (or the following year, should there be a revenue shortfall);

---

76 Italics terms are defined in the National Electricity Rules.
(ii) capital expenditures (incurred after market commencement) are recovered through the depreciation or amortisation of the assets acquired by the capital expenditure in a manner that is consistent with generally accepted accounting principles;

(iii) establishment costs in the nature of:

A. all expenditure (that is not in the nature of capital expenditure) incurred by, and depreciation and amortisation charged to, NEMMCO prior to market commencement, to the extent that the expenditures have not been funded by the participating jurisdictions, are recovered over a period of 10 years from market commencement; and

B. [deleted]

C capital expenditure incurred by NEMMCO before market commencement, to the extent that the expenditure has not been funded by participating jurisdictions or recovered under clause 2.11.1(b)(ii)(A) as depreciation or amortisation, is recovered through the depreciation or amortisation of the assets acquired by the capital expenditure in a manner that is consistent with generally accepted accounting principles; and

(iv) notwithstanding clauses 2.11.1(b)(ii), (iii), expenditure incurred by, and depreciation and amortisation charged to, NEMMCO associated with a declared NEM project are recovered from the start date and over the period determined for that declared NEM project under clauses 2.11.1(bb) or 2.11.1(bd). Amounts associated with a declared NEM project determined in accordance with this clause are to be recovered through an additional Participant fee determined in accordance with clauses 2.11.1(bb) or 2.11.1(bd) until the next general determination of all Participant fees is made under clause 2.11.1(a);

(3) the components of Participant fees charged to each Registered Participant should be reflective of the extent to which the budgeted revenue requirements for NEMMCO involve that Registered Participant;

(4) Participant fees should not unreasonably discriminate against a category or categories of Registered Participants; and

(5) the fixed component of Participant fees for a Market Customer who:

(i) is registered with NEMMCO solely for the purpose of providing market ancillary services; and

(ii) does not classify any of its market loads as a scheduled load, may be zero.

(ba) NEMMCO may determine any of the following projects to be a declared NEM project:

(1) a major development to the market;

(2) a major change to a function, responsibility, obligation or power of NEMMCO under the Rules; or

(3) a major change to any of the computer software or systems which NEMMCO uses in the performance of any of its functions, responsibilities, obligations or powers under the Rules.

(bb) When NEMMCO determines a project to be a declared NEM project under clause 2.11.1 (ba), it must also determine the start date for recovery and the period or periods over which recovery will occur for the declared NEM project. NEMMCO must also determine the structure of the 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 is made under clause 2.11.1(a).

(bc) In making determinations under clauses 2.11.1(ba) and (bb), NEMMCO must comply with the Rules consultation procedures.

(bd) The introduction and facilitation of full retail competition is taken to have been determined to be declared NEM project under clause 2.11.1(ba) and NEMMCO will be entitled to recover through Participant fees expenditure incurred by, and depreciation and amortisation charged to, NEMMCO in respect of full retail competition. The period or periods over which recovery will occur for this declared NEM project will be determined by NEMMCO using the Rules consultation procedures. If any amounts associated with the introduction and facilitation of full retail competition are to be recovered prior to the
next general determination of all Participant fees under clause 2.11.1(a), such recovery must be through an additional Participant fee determined using the Rules consultation procedures.

(c) The components of the Participant fees may include, but are not limited to:

(1) registration fees, comprising an annual fee payable by each person for each Registered Participant category in which they are registered;

(2) ancillary service fees, to recover NEMMCO’s budgeted revenue requirements in relation to its procurement of non-market ancillary services;

(3) power system operations fees, to recover NEMMCO’s budgeted revenue requirements in relation to its power system operation activities described in clause 2.11.3(b)(2);

(4) metering fees to recover NEMMCO’s budgeted revenue requirements for the collection, storage and processing of metered data;

(5) billing and settlements fees, to recover NEMMCO’s budgeted revenue requirements as described in clause 2.11.3(b)(4); and

(6) administration fees, to recover the remainder of NEMMCO’s budgeted revenue requirements;

and each component of the Participant fees may take into account adjustments which may be appropriate in light of the matters described in clauses 2.11.3(b)(7) or (8).

(d) In undertaking the process described in clause 2.11.1(a), NEMMCO must consider other fee structures in existence which it thinks appropriate for comparison purposes.

(e) NEMMCO must publish to Registered Participants and to such other persons as NEMMCO thinks appropriate, the structure of Participant fees determined, the methods used in determining the structure and an assessment of the extent to which the structure complies with the principles set out in clause 2.11.1(b) at least 3 months prior to the implementation of the structure.

5. The consultation process

Following is an outline of the consultation process, including key dates. Please note that these dates are proposed dates and may be subject to change by NEMMCO.

<table>
<thead>
<tr>
<th>Process</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Closing date for submissions received in response to this Notice of First Stage of Rules Consultation</td>
<td>Friday, 28 October 2005</td>
</tr>
<tr>
<td>Public Forum on Initial Notice of Consultation and Issues Paper</td>
<td>Currently, proposed date is Friday, 11 November 2005</td>
</tr>
<tr>
<td>Publication of the Draft Determination and invitation to make submissions in response to the Draft Determination</td>
<td>Currently, proposed date is Friday, 22 December 2005</td>
</tr>
<tr>
<td>Closing date for submissions received in response to the Draft Determination</td>
<td>Currently, proposed date is Friday, 17 February 2006</td>
</tr>
<tr>
<td>Public Forum on Draft Determination</td>
<td>Currently, proposed date is Friday, 24 February 2006</td>
</tr>
<tr>
<td>Publication of the Final Determination</td>
<td>Currently, proposed date is Friday, 31 March 2006</td>
</tr>
</tbody>
</table>

6. Invitation to Make Submissions

NEMMCO invites written submissions on the structure of Participant fees that will apply from 1 July 2006.
As part of previous consultations on the Participant fee structure, NEMMCO published reports from its advisors together with a final determination. These reports can be accessed by contacting NEMMCO; see Part 10 of this Notice for contact details.

As part of this review, NEMMCO would welcome views on any or all of these previous reports, particularly as they apply to this consultation process in the context of the current NEM or any other relevant material.

NEMMCO would also welcome views on any of the matters raised in the attached Issues Paper.

Please identify any information in your submission that you consider to be confidential and provide the reasons why you wish that information to be treated as confidential. NEMMCO is required, subject to the confidentiality provisions of the Rules, to make available copies of any material submitted to it as part of the consultation. Accordingly, NEMMCO reserves the right to publish material that it does not consider to be confidential under the Rules, despite your submission as to its confidentiality.

You should also note that material identified as confidential may be accorded less weight in the decision-making process than material that is published.

7. Closing date for submissions

Submissions in response to this Notice of First Stage of Rules Consultation should reach NEMMCO by 5:00pm on Friday, 28 October 2005.

NEMMCO has a discretion to consider late submissions. Any late submission should explain:

i. the reason for the lateness; and

ii. the detriment to you if NEMMCO fails to consider your submission.

8. Meetings/Public Forums

In accordance with clause 8.9(e) of the Rules, you may request a meeting, if you consider a meeting necessary or desirable in connection with the matter under consultation. This request should be included in the written submission, along with the reasons for the request.

You should bear in mind that NEMMCO proposes to hold two public forums as part of this consultation.

9. Further information

An Issues Paper is attached to this Notice of First Stage of Rules Consultation.

10. Contact Details

NEMMCO prefers that submissions be forwarded in electronic format as they will be published on the NEMMCO website.

Please send all e-mail submissions to: Fee_determination@nemmco.com.au

Alternatively, post or fax submissions to:
Mr Brett Hausler  
General Manager, Corporate Services  
NEMMCO  
Level 12  
15 William Street  
MELBOURNE VIC 3000  

Fax: (03) 9648 8653
Attachment B – Copy of Issues Paper

An Issues Paper was published in conjunction with the first stage of this consultation. For convenience, a copy of that paper is included here as Attachment B in the Draft Determination and Report.

STRUCTURE OF PARTICIPANT FEES

Issues Paper

1 INTRODUCTION

Section 50 of the National Electricity Law (‘the NEL’) requires NEMMCO to perform the functions detailed in section 49 “efficiently and on a full cost recovery but not for profit basis”.

Clause 2.11.1 of the National Electricity Rules (‘the Rules’) requires NEMMCO to develop, review and publish the structure of Participant fees. The structure of Participant fees details the manner in which NEMMCO’s budgeted revenue requirements, determined in accordance with clause 2.11.3 of the Rules, are recovered.

The current structure of Participant fees was determined in March 2003. At that time, NEMMCO published a report detailing the rationale for the current structure of Participant fees. In making its March 2003 determination, NEMMCO considered various issues and, in accordance with clause 2.11.1 of the then National Electricity Code (‘the Code’), developed a structure of Participant fees that would apply until 30 June 2006.

The issues canvassed by NEMMCO in making the March 2003 determination are also likely to be relevant considerations for the determination of the structure of Participant fees which is to apply from 1 July 2006. In addition, National Electricity Market (‘NEM’) developments since June 2003, including the introduction of the new NEL and Rules, new institutions and the commencement of Full Retail Competition in some Jurisdictions, may have given rise to new considerations relevant to the structure of Participant fees.

2 ISSUES FOR COMMENT

In developing and reviewing the structure of Participant fees for the post-1 July 2006 period, NEMMCO is bound by the applicable provisions of the NEL and clause 2.11.1 of the Rules.

NEMMCO invites comments on how Participant Fees to apply from 1 July 2006 should be structured, including any issues canvassed in NEMMCO’s March 2000 and March 2003 reports and the following:

2.1 NEM developments

As referred to in the Introduction, there have been a number of developments in the NEM since June 2003.

In particular, previous Participant fee determinations were made in the context of market objectives, Code objectives and NEMMCO objectives in Chapter 1 of the Code. One of the amendments brought about by the introduction of the Rules and the amendments to the
NEL was to replace these with a single objective prescribed by section 7 of the NEL and the obligation on NEMMCO under section 50 of the NEL, as outlined above.

NEMMCO welcomes comments on the implications of these changes (particularly the new NEM objective) in the context of determining the structure of Participant fees.

2.2 General Issues arising out of Clause 2.11.1 of the Rules

Clause 2.11.1 of the Rules imposes a number of requirements on NEMMCO. In this section, the relevant parts of the clause are cited, followed by suggestions for comments.

(a) Period of Structure of Participant Fees

Clause 2.11.1(a) states:

\[
\text{NEMMCO must develop, review and publish, in consultation with Registered Participants and interested parties and such other persons as NEMMCO thinks appropriate, in accordance with the Rules consultation procedures, the structure (including the introduction and determination) of Participant fees for such periods as NEMMCO considers appropriate.}
\]

Previous determinations on the structure of Participant fees have set the structure for a period of three years. In the current consultation, NEMMCO will have to determine the period of time over which the new structure of Participant fees will apply.

Comments are welcome on the length of time over which the structure of Participant fees from 1 July 2006 should apply.

(b) Simplicity

Clause 2.11.1(b) of the Rules states that, to the extent practicable, the structure of Participant fees should be consistent with a number of principles.

One of those is paragraph (1), which states that ‘the structure of Participant fees should be simple’.

Other considerations, for example, applying the causality principle, fostering economic efficiency or applying generally accepted accounting principles may give rise to a more complex structure for Participant fees than would otherwise be the case.

Comments on the interpretation of the term “simple” as it applies to the structure of Participant fees are welcome, as well as to what extent simplicity can be achieved in the context of the other relevant principles NEMMCO must adhere to.

(c) Basis of Recovery of Budgeted Revenue Requirements

Clause 2.11.1(b) of the Rules states that, to the extent practicable, the structure of Participant fees should be consistent with a number of principles, including paragraph (2), which states:

\[
\text{Participant fees should recover the budgeted revenue requirements for NEMMCO determined under clause 2.11.3 on a basis where:}
\]

\[
(i) \text{ recurring expenditure requirements and payments are recovered in the year of expenditure or payment (or the following year, should there be a revenue shortfall);}
\]
(ii) capital expenditures (incurred after market commencement) are recovered through the depreciation or amortisation of the assets acquired by the capital expenditure in a manner that is consistent with generally accepted accounting principles;

(iii) establishment costs in the nature of:

A. all expenditure (that is not in the nature of capital expenditure) incurred by, and depreciation and amortisation charged to, NEMMCO prior to market commencement, to the extent that the expenditures have not been funded by the participating jurisdictions, are recovered over a period of 10 years from market commencement; and

B. [deleted]

C. capital expenditure incurred by NEMMCO before market commencement, to the extent that the expenditure has not been funded by participating jurisdictions or recovered under clause 2.11.1(b)(2)(iii)(A) as depreciation or amortisation, is recovered through the depreciation or amortisation of the assets acquired by the capital expenditure in a manner that is consistent with generally accepted accounting principles; and

(iv) notwithstanding clauses 2.11.1(b)(2)(i), (ii) and (iii), expenditure incurred by, and depreciation and amortisation charged to, NEMMCO associated with a declared NEM project are recovered from the start date and over the period determined for that declared NEM project under clauses 2.11.1(bb) or 2.11.1(bd). Amounts associated with a declared NEM project determined in accordance with this clause are to be recovered through an additional Participant fee determined in accordance with clauses 2.11.1(bb) or 2.11.1(bd) until the next general determination of all Participant fees is made under clause 2.11.1(a);

It should be noted that, apart from the introduction and facilitation of Full Retail Competition, there are no declared NEM projects at the date of this Issues Paper.

Comments are welcome on the implications of these provisions on the structure of Participant fees.

(d) Causality and Allocation of Costs

Clause 2.11.1(b) of the Rules states that, to the extent practicable, the structure of Participant fees should be consistent with a number of principles, including paragraph (3), which states:

the components of Participant fees charged to each Registered Participant should be reflective of the extent to which the budgeted revenue requirements for NEMMCO involve that Registered Participant

Efficiency and equity considerations generally lead to the principle that those whose actions give rise to a cost (and who generally benefit from the service or function) should pay, and that fee levels should be set to reflect the costs involved. Transaction costs, or technical limitations, however, may prevent the identification of the party or parties who directly caused the need for the service or function, or there may be significant costs that are shared across a number of different services or functions (common costs). If cost drivers cannot be tracked back to individual Participants or classes of Participants, it will be necessary to allocate costs using different principles.
Comments are invited on how NEMMCO should treat this requirement.

(e) **Participant Categories and Unreasonable Discrimination**

Clause 2.11.1(b) of the Rules states that, to the extent practicable, the structure of Participant fees should be consistent with a number of principles, including paragraph (4), which states:

*Participant fees should not unreasonably discriminate against a category or categories of Registered Participants*

Comments are welcome on:

- the most appropriate Participant categories for the purposes of the new structure of Participant fees; and

- the meaning of the expression to ‘not unreasonably discriminate against a category or categories of Registered Participants’ in this context.

(f) **Market Ancillary Services**

Clause 2.11.1(b) of the Rules states that, to the extent practicable, the structure of Participant fees should be consistent with a number of principles, including paragraph (5), which states:

*the fixed component of Participant fees for a Market Customer who:

(i) is registered with NEMMCO solely for the purpose of providing market ancillary services; and

(ii) does not classify any of its market loads as a scheduled load,

may be zero.*

Comments are invited on whether this is an appropriate outcome.

(g) **Weight to Specified Categories**

Comments are welcome on the relative weight NEMMCO should give to each of the principles enunciated in clause 2.11.1(b).

(h) **Components of Participant Fees**

Clause 2.11.1(c) of the Rules provides an inclusive list of components that the Participant fees might comprise. These are:

(1) registration fees, comprising an annual fee payable by each person for each Registered Participant category in which they are registered;

(2) *ancillary service fees*, to recover NEMMCO’s budgeted revenue requirements in relation to its procurement of non-market ancillary services;

(3) *power system* operations fees, to recover NEMMCO’s budgeted revenue requirements in relation to its power system operation activities described in clause 2.11.3(b)(2);

(4) *metering* fees to recover NEMMCO’s budgeted revenue requirements for the collection, storage and processing of metered data;
(5) billing and settlements fees, to recover NEMMCO’s budgeted revenue requirements as described in clause 2.11.3(b)(4); and

(6) administration fees, to recover the remainder of NEMMCO’s budgeted revenue requirements;

and each component of the Participant fees may take into account adjustments which may be appropriate in light of the matters described in clauses 2.11.3(b)(7) or (8).

NEMMCO welcomes comments on the appropriate components of Participant fees to be included in the new structure.

The structure of Participant fees determined by NEMMCO in 2000 and 2003 included fixed and variable (volumetric) components.

Allocative efficiency is enhanced where all Registered Participants take into account the (marginal or incremental) costs their decisions impose on NEMMCO. This suggests that, abstracting from all other considerations, Participant fees should reflect the marginal or incremental costs imposed on NEMMCO by participant decisions and actions, however, where the costs associated with NEMMCO functions are mainly fixed or common, fees that are solely based on marginal costs or incremental costs alone may not recover the total costs of NEMMCO.

In this scenario, allocative efficiency requires the remainder of these costs be recovered from other fees in the manner which least distorts participants’ economic decision making. Arguably this may be achieved by relying more heavily on capacity-related (or other types of fixed, ie not volume-related) fees, however, a structure of Participant fees which has mainly capacity-related (or other types of fixed) components may result in actual fees for some types of Registered Participants that are large when compared against those paid by other types of Registered Participants.

Comments are welcome on the adoption of capacity-based fees (or other types of fixed fees) and volume-related (or variable) components and the extent to which the principles specified in clauses 2.11.1(b)(3), (4) and (5) and 2.11.1(c)) should be addressed through the adoption of a structure of Participant fees that has either, or both, of these components.

(i) **Comparison with other Fee Structures**

Clause 2.11.1(d) of the Rules states that ‘NEMMCO must consider other fee structures in existence which it thinks appropriate for comparison purposes’.

NEMMCO will again be reviewing the structure of fees in some other markets, both domestically and internationally.

Comments are welcome on fee structures found in other relevant markets.

### 2.3 Weight

Comments are welcome on the relative weight NEMMCO should give to each of the considerations NEMMCO is required to take into account under the NEL and the Rules in determining a new structure of Participant fees.
2.4 Other Issues

(a) Current Structure of Participant Fees

NEMMCO welcomes comments on how the current structure is working, or could be improved.

(b) Full Retail Competition

Full Retail Competition Establishment and Operating Fees are presently charged separately from other Participant fees.

Clause 2.11.1(bd) states that, so far as is practicable:

The introduction and facilitation of full retail competition is taken to have been determined to be declared NEM project under clause 2.11.1(ba) and NEMMCO will be entitled to recover through Participant fees expenditure incurred by, and depreciation and amortisation charged to, NEMMCO in respect of full retail competition.

NEMMCO welcomes comments on the current method of setting and charging Full Retail Competition Establishment and Operating Fees.

(c) B2B

NEMMCO is currently recovering the costs associated with its facilitation of B2B communications through Full Retail Competition fees.

Comments are welcome on the method by which NEMMCO's B2B costs should be recovered.

(d) New Control Centre

NEMMCO is building a new control centre in New South Wales to replace its Carlingford facility, which is currently leased.

A suitable site has been purchased and the new high security facility has been specifically designed to meet the NEM's future requirements.

Clause 2.11.1(b)(2)(ii) of the Rules suggests that, to the extent practicable, capital expenditures of this kind are recovered in a manner that is consistent with ‘generally accepted accounting principles’.

NEMMCO welcomes comments on the most appropriate way of recovering the expenditures associated with this new control centre (including the costs of acquiring the site), and the period over which those expenditures should be recovered.

(e) Market Services

NEMMCO is required by the Rules to provide certain market service activities, such as the provision of bandwidth services, at the request of Registered Participants.

Comments are welcome on whether the costs associated with these types of activities should be recovered through the more general components of Participant fees or whether specific components of Participant fees should be adopted for
these types of activities to facilitate the recovery of costs from Registered Participants who have requested that those activities be undertaken.

3 CONSULTATION

The consultation timing and contact arrangements are set out in the Notice of First Stage of Rules Consultation, dated 13 September 2005.
Attachment C – Notice of Second Stage of Rules Consultation

Notice of Second Stage of Rules Consultation
National Electricity Rules - clause 2.11.1
Structure of Participant Fees

This Notice of Second Stage of Rules Consultation informs all Consulted Persons\textsuperscript{77} of the second stage of consultation on the structure of Participant fees.

The consultation is being conducted under clause 2.11.1 of the National Electricity Rules (the Rules) in accordance with the Rules consultation procedures in clause 8.9 of the Rules.

1. Date of notice

This Notice of Second Stage of Rules Consultation was issued on 22 December 2005.

2. First Stage of Consultation

\textit{NEMMCO} issued the Notice of First Stage of Rules Consultation on 13 September 2005, together with an Issues Paper.

Five submissions were received on this matter. All submissions have been published on the \textit{NEMMCO} website.

There were no requests for meetings, or a forum.

\textit{NEMMCO} has considered the issues raised in the submissions and has now produced a Draft Determination and Report.

The Draft Determination and Report is now available to all Consulted Persons for their consideration.

3. Objectives of the consultation

The objectives of the consultation are:

- To provide Consulted Persons with the opportunity to have input into the development of the structure of Participant fees that will apply from 1 July 2006; and

- To ensure that Consulted Persons are properly informed about the proposed and the final outcome.

4. Background

\textit{NEMMCO} is required to develop, review and publish the structure of Participant fees that will apply from 1 July 2006.

\textsuperscript{77} Italicised terms are defined in the National Electricity Rules.
5. **Matter under consultation**

Clause 2.11.1 of the Rules provides:

(b) **NEMMCO must develop, review and publish, in consultation with Registered Participants and interested parties and such other persons as NEMMCO thinks appropriate, in accordance with the Rules consultation procedures, the structure (including the introduction and determination) of Participant fees for such periods as NEMMCO considers appropriate.**

(c) The structure of Participant fees must, to the extent practicable, be consistent with the following principles:

1. The structure of Participant fees should be simple;
2. **Participant fees should recover the budgeted revenue requirements for NEMMCO determined under clause 2.11.3 on a basis where:**
   (i) recurring expenditure requirements and payments are recovered in the year of expenditure or payment (or the following year, should there be a revenue shortfall);
   (ii) capital expenditures (incurred after market commencement) are recovered through the depreciation or amortisation of the assets acquired by the capital expenditure in a manner that is consistent with generally accepted accounting principles;
   (iii) establishment costs in the nature of:
      A. all expenditure (that is not in the nature of capital expenditure) incurred by, and depreciation and amortisation charged to, NEMMCO prior to market commencement, to the extent that the expenditures have not been funded by the participating jurisdictions, are recovered over a period of 10 years from market commencement; and
      B. [deleted]
   (iv) notwithstanding clauses 2.11.1(b)(2)(i), (ii) and (iii), expenditure incurred by, and depreciation and amortisation charged to, NEMMCO associated with a declared NEM project are recovered from the start date and over the period determined for that declared NEM project under clauses 2.11.1(b) or 2.11.1(bd). Amounts associated with a declared NEM project determined in accordance with this clause are to be recovered through an additional Participant fee determined in accordance with clauses 2.11.1(bb) or 2.11.1(bd) until the next general determination of all Participant fees is made under clause 2.11.1(a);
3. the components of Participant fees charged to each Registered Participant should be reflective of the extent to which the budgeted revenue requirements for NEMMCO involve that Registered Participant;
4. **Participant fees should not unreasonably discriminate against a category or categories of Registered Participants; and**
5. the fixed component of Participant fees for a Market Customer who:
   (i) is registered with NEMMCO solely for the purpose of providing market ancillary services; and
   (ii) does not classify any of its market loads as a scheduled load, may be zero.

(ba) **NEMMCO may determine any of the following projects to be a declared NEM project:**

1. a major development to the market;
2. a major change to a function, responsibility, obligation or power of NEMMCO under the Rules; or
3. a major change to any of the computer software or systems which NEMMCO uses in the performance of any of its functions, responsibilities, obligations or powers under the Rules.

(bb) When NEMMCO determines a project to be a declared NEM project under clause 2.11.1 (ba), it must also determine the start date for recovery and the period or periods over which recovery will occur for the declared NEM project. NEMMCO must also determine 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 is made under clause 2.11.1(a).

(bc) In making determinations under clauses 2.11.1(ba) and (bb), NEMMCO must comply with the Rules consultation procedures.

(bd) **The introduction and facilitation of full retail competition is taken to have been determined to be declared NEM project under clause 2.11.1(ba) and NEMMCO will be entitled to recover through Participant fees expenditure incurred by, and depreciation and amortisation charged to, NEMMCO in respect of full retail competition. The period or periods over which recovery will occur for this declared NEM project will be determined by NEMMCO using the Rules consultation procedures. If any amounts associated with the introduction and facilitation of full retail competition are to be recovered prior to the next general determination of all Participant fees under clause 2.11.1(a), such recovery must be through an additional Participant fee determined using the Rules consultation procedures.**

(d) The components of the Participant fees may include, but are not limited to:

1. registration fees, comprising an annual fee payable by each person for each Registered Participant category in which they are registered;
ancillary service fees, to recover NEMMCO’s budgeted revenue requirements in relation to its procurement of non-market ancillary services;

power system operations fees, to recover NEMMCO’s budgeted revenue requirements in relation to its power system operation activities described in clause 2.11.3(b)(2);

metering fees to recover NEMMCO’s budgeted revenue requirements for the collection, storage and processing of metered data;

billing and settlements fees, to recover NEMMCO’s budgeted revenue requirements as described in clause 2.11.3(b)(4); and

administration fees, to recover the remainder of NEMMCO’s budgeted revenue requirements;

and each component of the Participant fees may take into account adjustments which may be appropriate in light of the matters described in clauses 2.11.3(b)(7) or (8).

In undertaking the process described in clause 2.11.1(a), NEMMCO must consider other fee structures in existence which it thinks appropriate for comparison purposes.

NEMMCO must publish to Registered Participants and to such other persons as NEMMCO thinks appropriate, the structure of Participant fees determined, the methods used in determining the structure and an assessment of the extent to which the structure complies with the principles set out in clause 2.11.1(b) at least 3 months prior to the implementation of the structure.

6. The consultation process

Following is an outline of the consultation process, including key dates. Please note that these dates are proposed dates and may be subject to change by NEMMCO.

<table>
<thead>
<tr>
<th>Process</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Closing date for submissions received in response to this Notice of Second Stage of Rules Consultation</td>
<td>Friday, 17 February 2006</td>
</tr>
<tr>
<td>Public Forum</td>
<td>Friday, 24 February 2006</td>
</tr>
<tr>
<td>Publication of the Final Determination</td>
<td>Friday, 31 March 2006</td>
</tr>
</tbody>
</table>

7. Invitation to make submissions


Please identify any information in your submission that you consider to be confidential and provide the reasons why you wish that information to be treated as confidential. NEMMCO is required, subject to the confidentiality provisions of the Rules, to make available copies of any material submitted to it as part of the consultation. Accordingly, NEMMCO reserves the right to publish material that it does not consider to be confidential under the Rules, despite your submission as to its confidentiality.

You should also note that material identified as confidential may be accorded less weight in the decision-making process than material that is published.

8. Closing date for submissions

Submissions in response to this Notice of Second Stage of Rules Consultation should reach NEMMCO by 5:00pm on Friday 17 February 2006.
NEMMCO has a discretion to consider late submissions. Any late submission should explain:

- the reason for the lateness; and
- the detriment to you if NEMMCO fails to consider your submission.

9. Public Forum

NEMMCO proposes to hold a public forum on Friday 24 February 2006 as part of this consultation, unless Consulted Persons request otherwise in their submissions.

10. Contact details

NEMMCO prefers that submissions be forwarded in electronic format as they will be published on the NEMMCO website.

Please send all e-mail submissions to: Fee_determination@nemmco.com.au

Alternatively, post or fax submissions to:

Mr Brett Hausler
General Manager, Corporate Services
NEMMCO
Level 12
15 William Street
MELBOURNE VIC 3000

Fax: (03) 9648 8653
Attachment D – NEMMCO Activity Survey and Cost Analysis
# TABLE OF CONTENTS

1. Introduction ......................................................................................................... 3  
2. Budgeted Revenue Requirements ...................................................................... 4  
3. The Survey Approach ......................................................................................... 6  
4. Cost Attribution.................................................................................................... 8  
5. Cost Allocation to Participants........................................................................... 11  
6. Other Specific Costs ............................................................................................ 15  
   6.1 NEM Establishment Receivable ................................................................ 15  
   6.2 Control Centre Costs.................................................................................... 15  
      (a) New Control Centre................................................................................ 15  
      (b) Existing Control Centres........................................................................... 16  
7. Incremental Services Cost Review...................................................................... 17  
   7.1 Notional Allowance.................................................................................... 17  
   7.2 Incremental Services Fees.......................................................................... 17  
   7.3 Registration Fees ...................................................................................... 17  
Appendix 1 ................................................................................................................ 18  
Appendix 2 ................................................................................................................ 21
1. Introduction

The NEMMCO Participant Fee Working Group (Working Group) determined to approach the 2006 Fee Determination from the perspective of Participant involvement with NEMMCO outputs. From a review of the types of activities NEMMCO carries out, or is involved with, 11 key outputs were identified. They are:

- Power System Security
- Power System Reliability
- Market Settlement
- Market Operation
- Prudential Supervision
- Settlement Residue Auctions
- Market Improvement
- Information Dissemination
- Retail Market Improvement
- Data & System Management
- NEMMCO Administration

and are broadly consistent with the outputs used 2003 Cost Activity and Cost Driver Review. The outputs are explained in detail in section 7.2 of the Draft Determination and Report on the Structure of Participant Fees under Clause 2.11 of the National Electricity Rules dated 22 December 2005 (the Draft Determination and Report). The outputs comprise 162 activities, which are detailed in Appendix 1.

The approach adopted is as follows:

- Budgeted Revenue Requirements
- The Survey Approach
- Cost Attribution
- Output Cost Review
- Other Specific Costs
- Summary of Outcomes
- Incremental Services Review
2. **Budgeted Revenue Requirements**

NEMMCO's 2005/2006 budget, as contained in the Statement of Corporate Intent (SCI), provides the financial basis for determining the structure of Participant Fees.

The NEMMCO General costs are the basis for the costing activity, which are:

<table>
<thead>
<tr>
<th>General Costs</th>
<th>$'000</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Operating Expenses</strong></td>
<td></td>
</tr>
<tr>
<td>Labour &amp; Contractors</td>
<td>30,720</td>
</tr>
<tr>
<td>Consultants</td>
<td>4,320</td>
</tr>
<tr>
<td>Agency Fees</td>
<td>1,940</td>
</tr>
<tr>
<td>Information Technology</td>
<td>4,050</td>
</tr>
<tr>
<td>Travel</td>
<td>1,090</td>
</tr>
<tr>
<td>Accommodation</td>
<td>1,320</td>
</tr>
<tr>
<td>Insurance</td>
<td>4,680</td>
</tr>
<tr>
<td>Depreciation</td>
<td>4,530</td>
</tr>
<tr>
<td>Finance Charges</td>
<td>1,520</td>
</tr>
<tr>
<td>Training &amp; Development</td>
<td>920</td>
</tr>
<tr>
<td>Audit</td>
<td>490</td>
</tr>
<tr>
<td>Telephone</td>
<td>280</td>
</tr>
<tr>
<td>Printing &amp; Stationery</td>
<td>440</td>
</tr>
<tr>
<td>Amenities</td>
<td>100</td>
</tr>
<tr>
<td>Subscriptions</td>
<td>430</td>
</tr>
<tr>
<td>Utilities</td>
<td>220</td>
</tr>
<tr>
<td>Directors Fees</td>
<td>675</td>
</tr>
<tr>
<td>Other</td>
<td>1,335</td>
</tr>
<tr>
<td><strong>Other Revenue to be offset</strong></td>
<td>(570)</td>
</tr>
<tr>
<td><strong>Sub-total Operating Expenses</strong></td>
<td>58,490</td>
</tr>
<tr>
<td>Establishment Receivable</td>
<td>4,450</td>
</tr>
<tr>
<td><strong>Total NEMMCO Fees</strong></td>
<td>62,940</td>
</tr>
</tbody>
</table>

**Notes:**

1. NEMMCO's budgeted General Fees per the SCI includes an item “contingency”, which is designed as a provision for potential budget under recovery to lessen the impact on the subsequent year. For the purpose of the costing activity the item has been removed.
2. Expenses related to Settlement Residue Auctions are not included, as fees are collected separately for these under clause 3.18 of the Rules.
3. “Other Revenue to be offset” includes the fees collected relating to NEMMCO's training courses and interest earned by NEMMCO.
4. All amounts are exclusive of GST.
The FRC costs are reviewed and considered separately; they are:

<table>
<thead>
<tr>
<th>FRC Costs</th>
<th>$'000</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Operating Expenses</strong></td>
<td></td>
</tr>
<tr>
<td>Labour</td>
<td>3,780</td>
</tr>
<tr>
<td>Contractors</td>
<td>30</td>
</tr>
<tr>
<td>Consultants</td>
<td>480</td>
</tr>
<tr>
<td>Office Administration</td>
<td>80</td>
</tr>
<tr>
<td>Information Technology</td>
<td>1,340</td>
</tr>
<tr>
<td>Travel</td>
<td>100</td>
</tr>
<tr>
<td>Accommodation</td>
<td>120</td>
</tr>
<tr>
<td>Training</td>
<td>80</td>
</tr>
<tr>
<td>Depreciation</td>
<td>370</td>
</tr>
<tr>
<td>Legal Costs</td>
<td>100</td>
</tr>
<tr>
<td>Market Audit</td>
<td>40</td>
</tr>
<tr>
<td>Costs Incurred between Feb 02 – Jun 03</td>
<td>560</td>
</tr>
<tr>
<td><strong>Sub-Total Operating Expenses</strong></td>
<td>7,080</td>
</tr>
<tr>
<td><strong>Establishment Expenses</strong></td>
<td></td>
</tr>
<tr>
<td>Establishment Receivable</td>
<td>2,060</td>
</tr>
<tr>
<td>Depreciation</td>
<td>537</td>
</tr>
<tr>
<td>Interest Charges</td>
<td>220</td>
</tr>
<tr>
<td><strong>Sub-Total Establishment Expenses</strong></td>
<td>9,630</td>
</tr>
<tr>
<td><strong>Total FRC Fees</strong></td>
<td>16,710</td>
</tr>
</tbody>
</table>

Note: All amounts are exclusive of GST
3. The Survey Approach

NEMMCO does not operate a job costing (or activity based costing) system as part of its normal activities. A costing activity, therefore, was undertaken to “build up” the cost of each output.

Having identified the NEMMCO activities and outputs, the next step was to collect the data against those activities. Data was collected by conducting a survey of NEMMCO staff.

The most recent NEMMCO organisation chart was reviewed and positions representative of the range of NEMMCO activities were identified as positions to be surveyed.

A total of 78 positions were surveyed and 65 responses were received. Employees who responded to the survey questionnaire included General Managers (2), Department Heads (10), Team Leaders (20) and Team Members (33). In total, this represents 29% of NEMMCO employees.

As some NEMMCO positions are part time, the survey responses were converted to Full Time Equivalents (FTE). The following comments about the survey refer to FTEs and not the actual number of positions. From the 64.1 FTE survey responses, a further 144.9 positions were modelled and 12.7 positions determined as overheads. Positions were modelled having regard to like positions and within Departments.

In the survey, staff were asked the following question:

For the following list of activities, based on your experience to date, what percentage of time, averaged over a year, would you spend on each activity?

In answering the questions, staff were required to allocate 100% of their time across 162 NEMMCO activities using an Excel template. Responses were collated within Department groups and then used to model remaining positions within each group. Department results were then collated to produce the aggregated NEMMCO result by activity and, hence, the result by output in Table 1:
Table 1 – Staff Surveyed and Modelled

<table>
<thead>
<tr>
<th>Service / Output</th>
<th>FTE Surveyed Labour</th>
<th>FTE Modelled Labour</th>
<th>Surveyed and Modelled Labour</th>
<th>FTE Determined as O'heads</th>
<th>Total</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power System Security</td>
<td>22.6</td>
<td>55.2</td>
<td>77.8</td>
<td>77.8</td>
<td>35%</td>
<td></td>
</tr>
<tr>
<td>Power System Reliability</td>
<td>3.6</td>
<td>9.7</td>
<td>13.2</td>
<td>13.2</td>
<td>6%</td>
<td></td>
</tr>
<tr>
<td>Market Settlement</td>
<td>3.0</td>
<td>8.4</td>
<td>11.4</td>
<td>13.4</td>
<td>6%</td>
<td></td>
</tr>
<tr>
<td>Market Operations</td>
<td>3.4</td>
<td>6.5</td>
<td>9.9</td>
<td>9.9</td>
<td>4%</td>
<td></td>
</tr>
<tr>
<td>Prudential Supervision</td>
<td>1.1</td>
<td>1.5</td>
<td>2.6</td>
<td>2.6</td>
<td>1%</td>
<td></td>
</tr>
<tr>
<td>Settlement Residue Auctions</td>
<td>1.0</td>
<td>1.0</td>
<td>2.0</td>
<td>2.0</td>
<td>1%</td>
<td></td>
</tr>
<tr>
<td>Wholesale Market Improvement</td>
<td>5.4</td>
<td>6.6</td>
<td>12.0</td>
<td>12.0</td>
<td>5%</td>
<td></td>
</tr>
<tr>
<td>Information Dissemination</td>
<td>4.5</td>
<td>10.3</td>
<td>14.9</td>
<td>14.9</td>
<td>7%</td>
<td></td>
</tr>
<tr>
<td>Retail Market Improvement</td>
<td>2.7</td>
<td>4.1</td>
<td>6.7</td>
<td>1.9</td>
<td>1%</td>
<td></td>
</tr>
<tr>
<td>Data and System Management</td>
<td>6.7</td>
<td>18.2</td>
<td>24.9</td>
<td>27.7</td>
<td>13%</td>
<td></td>
</tr>
<tr>
<td>NEMMCO Administration</td>
<td>7.1</td>
<td>17.3</td>
<td>24.4</td>
<td>24.4</td>
<td>11%</td>
<td></td>
</tr>
<tr>
<td>Unattributed</td>
<td>3.1</td>
<td>6.2</td>
<td>9.2</td>
<td>12.7</td>
<td>10%</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>64.1</td>
<td>144.9</td>
<td>209.0</td>
<td>221.7</td>
<td>100%</td>
<td></td>
</tr>
</tbody>
</table>

Staff were then asked a second question:

For each of the activities listed, based on your experience to date, please provide an estimate of the amount (time) of ‘immediate interaction’ that you had with a specific class of Registered Participant – that is: Market Customers; TNSPs; DNSPs; MNSPs; Generators (Market Scheduled, Market Non Scheduled, Non Market Scheduled, Non Market Non Scheduled).

The definition of ‘immediate interaction’ includes, but is not limited to, the following:

- speaking on the telephone;
- meetings or other liaisons;
- reading and interpreting correspondence or representations from Registered Participants;
- preparing correspondence or representations to Registered Participants; and
- other specific activities required to finalise your interaction with that party.

In answering this question, staff were again required to allocate their time across the 162 NEMMCO activities using a second Excel template. Responses were collated and modelled as for the first survey question.

Based on the surveyed and modelled positions, the survey revealed that 33.9% of time is spent in immediate interaction with Registered Participants. In other words, of the 100% of time allocated to specific activities associated with the outputs, 33.9% is spent in immediate interaction with Participants.

This second question was included for comparison purposes. It was based on the input activity approach used in the 2003 Cost Activity and Cost Driver Review. Results are contained in Appendix 2.
4. Cost Attribution

The next step in the process was to determine how to cost each activity and output. The SCI budgets were used as the basis for a review of the costs by category and consideration of how they might be attributed or assigned to each of the activities and outputs. Labour costs representing 52% of the total cost base were attributed to activities on the basis of the survey of how staff spend their time. And as activities are related to outputs, this essentially built the labour cost of the outputs. In terms of the other costs it was not practical to allocate them across the 162 activities so the focus was on assigning them to the 11 outputs. Table 2 identifies the attribution method used for each cost category.

Table 2 – Cost Attribution Methods

<table>
<thead>
<tr>
<th>Cost Category</th>
<th>Attribution Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labour</td>
<td>Activity costing aggregated to Outputs. NEMMCO budgeted average salary multiplied by FTE.</td>
</tr>
<tr>
<td>Consultants</td>
<td>Attributed on basis of relationship to outputs as determined by review of costs within project codes and consultation with departments.</td>
</tr>
<tr>
<td>Agency Fees</td>
<td>Attributed to Power System Security</td>
</tr>
<tr>
<td>Information Technology</td>
<td>Attributed on basis of analysis of relationship of underlying assets to activities and outputs in consultation with Information Technology</td>
</tr>
<tr>
<td>Travel</td>
<td>Attributed to outputs by alignment of NEMMCO cost centres to the outputs.</td>
</tr>
<tr>
<td>Accommodation</td>
<td>Attributed to outputs on the basis of the functions of each of the premises. In 2005/06 this includes rent and outgoings. In future periods it is intended to include recovery for the cost of the new NSW control centre land and other capitalised expenses.</td>
</tr>
<tr>
<td>Insurance</td>
<td>With the exception of TNSP insurance which is attributed to Power System Security, and that specifically for Settlement Residue Auctions, this could not be specifically attributed - allocated to general overheads</td>
</tr>
<tr>
<td>Depreciation</td>
<td>Attributed on basis of analysis of relationship of underlying assets to activities and outputs in consultation with Information Technology</td>
</tr>
<tr>
<td>Finance Charges</td>
<td>Relates to establishment costs – allocated to general overheads</td>
</tr>
<tr>
<td>Training &amp; Development</td>
<td>Training specific to the Power System Operations group has been allocated between Power System Security, Power System Reliability and Market Operation, otherwise could not be specifically attributed - allocated to general overheads</td>
</tr>
<tr>
<td>Audit</td>
<td>Market Audit costs attributed to Power System Security, Power System Reliability, Market Settlement, Market Operation and Prudential Supervision equally. Settlement Residue Auction audit costs attributed specifically with internal and statutory audit costs contributed to general overheads</td>
</tr>
<tr>
<td>Telephone</td>
<td>Attributed in proportion to labour time</td>
</tr>
<tr>
<td>Printing &amp; Stationery</td>
<td>Allocated to general overheads</td>
</tr>
<tr>
<td>Amenities</td>
<td>Attributed in proportion to labour time</td>
</tr>
<tr>
<td>Cost Category</td>
<td>Attribution Method</td>
</tr>
<tr>
<td>---------------</td>
<td>--------------------</td>
</tr>
<tr>
<td>Subscriptions</td>
<td>Attributed on basis of relationship to outputs as determined by consultation with departments</td>
</tr>
<tr>
<td>Utilities</td>
<td>Attributed in proportion to accommodation costs</td>
</tr>
<tr>
<td>Directors’ Fees</td>
<td>Could not be specifically attributed - allocated to general overheads</td>
</tr>
<tr>
<td>Other</td>
<td>More than half of these costs relate to maintenance of control centres and general office equipment and have been allocated on the same basis as accommodation. Meals and entertainment were allocated in proportion to labour costs. The remaining costs are general administrative costs that were allocated to NEMMCO Administration.</td>
</tr>
</tbody>
</table>

The surveyed labour time by output was multiplied by the NEMMCO average labour cost to attribute the value of labour to each output. Each line item in the SCI budget was then attributed to the relevant outputs using the attribution methods explained in Table 2. There are essentially 10 key outputs that involve NEMMCO with Registered Participants. A final 11th notional output called “NEMMCO Administration” was used to capture those costs not able to be attributed to one of the Participant involvement outputs. The result is contained in the Table 3.

Of NEMMCO’s General Fees of $58.49m, only $41.33m can be specifically attributed to the involvement outputs. As fees for the Settlement Residue Auctions output are recovered separately, the costs attributed to this output are not involved further in the cost activity exercise. This leaves $40.88m as the total of Participant-involved outputs with the remaining $17.16m captured under NEMMCO Administration as Non-Attributable.
Table 3 – Attribution of NEMMCO Costs to Outputs

<table>
<thead>
<tr>
<th></th>
<th>Power System Security</th>
<th>Power System Reliability</th>
<th>Market Settlement</th>
<th>Market Operation</th>
<th>Prudential Supervision</th>
<th>Settlement Residue</th>
<th>Wholesale Market Improvement</th>
<th>Information Dissemination</th>
<th>Retail Market Improvement</th>
<th>Data &amp; System Management</th>
<th>NEWMCO Administration</th>
<th>Total $'000's</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labour &amp; Contractors</td>
<td>10,717</td>
<td>1,822</td>
<td>1,565</td>
<td>1,368</td>
<td>358</td>
<td>270</td>
<td>1,647</td>
<td>2,045</td>
<td>928</td>
<td>3,434</td>
<td>6,376</td>
<td>30,530</td>
</tr>
<tr>
<td>Consultants</td>
<td>424</td>
<td>277</td>
<td>302</td>
<td>202</td>
<td>8</td>
<td>78</td>
<td>604</td>
<td>139</td>
<td>696</td>
<td>52</td>
<td>1,538</td>
<td>4,320</td>
</tr>
<tr>
<td>Agency Fees</td>
<td>1,940</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1,940</td>
</tr>
<tr>
<td>Information Technology</td>
<td>1,256</td>
<td>1,053</td>
<td>1,377</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4,050</td>
</tr>
<tr>
<td>Travel</td>
<td>142</td>
<td>139</td>
<td>5</td>
<td>129</td>
<td>15</td>
<td>-</td>
<td>56</td>
<td>54</td>
<td>34</td>
<td>144</td>
<td>362</td>
<td>1,090</td>
</tr>
<tr>
<td>Accommodation</td>
<td>233</td>
<td>187</td>
<td>33</td>
<td>134</td>
<td>-</td>
<td>-</td>
<td>67</td>
<td>47</td>
<td>46</td>
<td>78</td>
<td>495</td>
<td>1,320</td>
</tr>
<tr>
<td>Insurance</td>
<td>400</td>
<td></td>
<td></td>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4,220</td>
</tr>
<tr>
<td>Depreciation</td>
<td>1,383</td>
<td>1,174</td>
<td>8</td>
<td>1,548</td>
<td>-</td>
<td>-</td>
<td>15</td>
<td>-</td>
<td>83</td>
<td>-</td>
<td>319</td>
<td>4,530</td>
</tr>
<tr>
<td>Finance Charges</td>
<td>88</td>
<td>88</td>
<td>42</td>
<td>88</td>
<td>10</td>
<td>7</td>
<td>44</td>
<td>55</td>
<td>25</td>
<td>92</td>
<td>172</td>
<td>710</td>
</tr>
<tr>
<td>Training &amp; Development</td>
<td>70</td>
<td>70</td>
<td>70</td>
<td>70</td>
<td>30</td>
<td>-</td>
<td>15</td>
<td>19</td>
<td>9</td>
<td>31</td>
<td>58</td>
<td>280</td>
</tr>
<tr>
<td>Audit</td>
<td>98</td>
<td>17</td>
<td>14</td>
<td>13</td>
<td>3</td>
<td>2</td>
<td>15</td>
<td>19</td>
<td>9</td>
<td>31</td>
<td>58</td>
<td>280</td>
</tr>
<tr>
<td>Telephone</td>
<td>35</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>5</td>
<td>7</td>
<td>3</td>
<td>11</td>
<td>21</td>
<td>100</td>
</tr>
<tr>
<td>Printing &amp; Stationery</td>
<td>35</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>5</td>
<td>7</td>
<td>3</td>
<td>11</td>
<td>21</td>
<td>100</td>
</tr>
<tr>
<td>Amenities</td>
<td>77</td>
<td>13</td>
<td>11</td>
<td>10</td>
<td>3</td>
<td>2</td>
<td>12</td>
<td>15</td>
<td>7</td>
<td>25</td>
<td>48</td>
<td>220</td>
</tr>
<tr>
<td>Subscriptions</td>
<td>177</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>253</td>
</tr>
<tr>
<td>Utilities</td>
<td>77</td>
<td>13</td>
<td>11</td>
<td>10</td>
<td>3</td>
<td>2</td>
<td>12</td>
<td>15</td>
<td>7</td>
<td>25</td>
<td>48</td>
<td>220</td>
</tr>
<tr>
<td>Directors’ Fees</td>
<td>301</td>
<td>207</td>
<td>50</td>
<td>87</td>
<td>6</td>
<td>-</td>
<td>46</td>
<td>46</td>
<td>74</td>
<td>75</td>
<td>443</td>
<td>1,335</td>
</tr>
<tr>
<td>Other</td>
<td>301</td>
<td>207</td>
<td>50</td>
<td>87</td>
<td>6</td>
<td>-</td>
<td>46</td>
<td>46</td>
<td>74</td>
<td>75</td>
<td>443</td>
<td>1,335</td>
</tr>
<tr>
<td>Contingency</td>
<td>301</td>
<td>207</td>
<td>50</td>
<td>87</td>
<td>6</td>
<td>-</td>
<td>46</td>
<td>46</td>
<td>74</td>
<td>75</td>
<td>443</td>
<td>1,335</td>
</tr>
<tr>
<td>Total</td>
<td>17,163</td>
<td>5,229</td>
<td>2,115</td>
<td>5,029</td>
<td>474</td>
<td>451</td>
<td>2,512</td>
<td>2,427</td>
<td>1,986</td>
<td>3,943</td>
<td>17,161</td>
<td>58,490</td>
</tr>
</tbody>
</table>

Attributable

Non Attributable

Total Costed Outputs

Recovered Separately 451

Total 451
5. **Cost Allocation to Participants**

The Working Group considered how the NEMMCO outputs could be allocated to Registered Participants on the basis of involvement. Details of the allocation are considered in Sections 8.2.2 and 8.2.3 of the Draft Determination and Report. Table 4 shows the proportion of each output involved with each Participant group in percentage terms.

The percentage allocation determined for each Participant group within each output category was then applied to the costed output detailed in Table 3 to obtain the costed outputs by Participant group. This is shown in Table 5, and summarised below:

<table>
<thead>
<tr>
<th>Participant</th>
<th>$'000's</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market Customers</td>
<td>22,642</td>
<td>55.39%</td>
</tr>
<tr>
<td>Generators and MNSPs</td>
<td>18,236</td>
<td>44.61%</td>
</tr>
<tr>
<td>Total</td>
<td>40,878</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

The result is that 55% of the costed output is involved with Market Customers and 45% is involved with Generators (except for Non-Market Non-Scheduled Generators) and MNSPs.
Table 4 – Allocation on Basis of Involvement

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Market Customers</td>
<td>50%</td>
<td>75%</td>
<td>51%</td>
<td>50%</td>
<td>25%</td>
<td>50%</td>
<td>50%</td>
<td>50%</td>
<td>100%</td>
<td>50%</td>
</tr>
<tr>
<td>Generators and MNSPs (excludes Non Market Non Scheduled)</td>
<td>50%</td>
<td>25%</td>
<td>49%</td>
<td>50%</td>
<td>75%</td>
<td>Not Allocated - recovered separately</td>
<td>50%</td>
<td>50%</td>
<td>0%</td>
<td>50%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
<td><strong>100%</strong></td>
<td><strong>100%</strong></td>
<td><strong>100%</strong></td>
<td><strong>100%</strong></td>
<td><strong>0%</strong></td>
<td><strong>100%</strong></td>
<td><strong>100%</strong></td>
<td><strong>100%</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>
Table 5 – Costed Allocation on Basis of Involvement

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Retailers (Market Customers)</td>
<td>$8,582</td>
<td>$3,922</td>
<td>$1,079</td>
<td>$2,515</td>
<td>$118</td>
<td>$1,256</td>
<td>$1,214</td>
<td>$1,986</td>
<td>$1,971</td>
<td>$22,642</td>
<td></td>
</tr>
<tr>
<td>Generators and MNSPs (except for Non Market Non Scheduled)</td>
<td>$8,582</td>
<td>$1,307</td>
<td>$1,036</td>
<td>$2,515</td>
<td>$355</td>
<td>$1,256</td>
<td>$1,214</td>
<td>-</td>
<td>$1,971</td>
<td>$18,236</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>$17,163</td>
<td>$5,229</td>
<td>$2,115</td>
<td>$5,029</td>
<td>$474</td>
<td>$2,512</td>
<td>$2,427</td>
<td>$1,986</td>
<td>$3,943</td>
<td>$40,878</td>
<td></td>
</tr>
</tbody>
</table>
To further demonstrate the outcome of the costing activity and align the financial information with the format of the Draft Determination and Report, Table 6 groups expenses as either Attributable or Non-Attributable in the same format as the SCI information in Section 2 of this Analysis.

Table 6 – P&L by expense category split between Attributable and Non-Attributable

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Attributable</th>
<th>$'000's Non-Attributable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labour &amp; Contractors</td>
<td>30,260</td>
<td>23,884</td>
<td>6,376</td>
</tr>
<tr>
<td>Consultants</td>
<td>4,242</td>
<td>2,705</td>
<td>1,538</td>
</tr>
<tr>
<td>Agency Fees</td>
<td>1,940</td>
<td>1,940</td>
<td>-</td>
</tr>
<tr>
<td>Information Technology</td>
<td>4,050</td>
<td>3,767</td>
<td>284</td>
</tr>
<tr>
<td>Travel</td>
<td>1,090</td>
<td>782</td>
<td>362</td>
</tr>
<tr>
<td>Accommodation</td>
<td>1,320</td>
<td>825</td>
<td>495</td>
</tr>
<tr>
<td>Insurance</td>
<td>4,620</td>
<td>400</td>
<td>4,220</td>
</tr>
<tr>
<td>Depreciation</td>
<td>4,530</td>
<td>4,211</td>
<td>319</td>
</tr>
<tr>
<td>Finance Charges</td>
<td>1,350</td>
<td>-</td>
<td>1,350</td>
</tr>
<tr>
<td>Training &amp; Development</td>
<td>702</td>
<td>531</td>
<td>172</td>
</tr>
<tr>
<td>Audit</td>
<td>460</td>
<td>350</td>
<td>110</td>
</tr>
<tr>
<td>Telephone</td>
<td>278</td>
<td>219</td>
<td>58</td>
</tr>
<tr>
<td>Printing &amp; Stationery</td>
<td>440</td>
<td>-</td>
<td>440</td>
</tr>
<tr>
<td>Amenities</td>
<td>99</td>
<td>78</td>
<td>21</td>
</tr>
<tr>
<td>Subscriptions</td>
<td>430</td>
<td>177</td>
<td>253</td>
</tr>
<tr>
<td>Utilities</td>
<td>218</td>
<td>172</td>
<td>46</td>
</tr>
<tr>
<td>Directors Fees</td>
<td>675</td>
<td>-</td>
<td>675</td>
</tr>
<tr>
<td>Other</td>
<td>1,335</td>
<td>892</td>
<td>443</td>
</tr>
<tr>
<td>Contingency</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total NEMMCO Operating</strong></td>
<td>58,039</td>
<td>40,878</td>
<td>17,161</td>
</tr>
<tr>
<td>% of Total NEMMCO Operating</td>
<td>70%</td>
<td>30%</td>
<td></td>
</tr>
<tr>
<td><strong>Establishment Receivable</strong></td>
<td>4,450</td>
<td>4,450</td>
<td></td>
</tr>
<tr>
<td><strong>Sub-Total $ (before FRC)</strong></td>
<td>62,489</td>
<td>40,878</td>
<td>21,611</td>
</tr>
<tr>
<td>% of Sub-Total</td>
<td>65%</td>
<td>35%</td>
<td></td>
</tr>
<tr>
<td><strong>FRC</strong></td>
<td>16,710</td>
<td>16,710</td>
<td></td>
</tr>
<tr>
<td><strong>Total $ (after FRC)</strong></td>
<td>79,199</td>
<td>40,878</td>
<td>38,321</td>
</tr>
<tr>
<td>% of Total</td>
<td>52%</td>
<td>48%</td>
<td></td>
</tr>
</tbody>
</table>
6. Other Specific Costs

6.1 NEM Establishment Receivable

The Establishment Receivable\(^1\) represents the recovery of the operating costs accumulated while setting up the National Electricity Market. At the commencement of the NEM these costs were capitalised and are being recovered in instalments over a 10-year period. It will be recovered at the rate of $4,447m per annum until 2007/2008, when the remaining balance will be fully recovered; this is depicted in Table 7:

Table 7 – Recovery of NEM Establishment Receivable

<table>
<thead>
<tr>
<th>Remaining at '30 June 2006</th>
<th>To Be Recovered</th>
</tr>
</thead>
<tbody>
<tr>
<td>$'000</td>
<td></td>
</tr>
<tr>
<td>$11,396</td>
<td>$4,447</td>
</tr>
</tbody>
</table>

6.2 Control Centre Costs

(a) New Control Centre

The new NSW Control Centre is expected to be operational by October 2006. It has been proposed to recover the costs associated with it by way of a depreciation charge on a straight-line basis for the building and furniture and fittings, and an amortisation charge for the legal and interest costs accumulated during its construction. The cost of the land will also be recovered by way of a periodic charge. It is proposed to depreciate the building over 30 years, under the accounting concept of its estimated useful life, and this timeframe would also be applied to the periodic recovery charge for land. The other assets and accumulated costs would be brought to account over 15 years, which has been assessed as reasonable within the definition of useful life. At project completion, the value of the asset and accumulated costs is expected to total $29.3m.

Fees to recover the costs, as well as the ongoing interest on the debt funding will commence from July 2006 and so it is relevant to this Analysis. It is proposed to allocate these costs across the NEMMCO outputs on the same basis as other control centre accommodation costs.

Table 8 shows the projected cost per annum over the next five years as included in the 2005/06 SCI and how it will be attributed to the NEMMCO outputs.

\(^1\) See Table 4.
Table 8 – Allocation of New Control Centre Costs

<table>
<thead>
<tr>
<th>Financial Year</th>
<th>Total $ ’000</th>
<th>Power System Security</th>
<th>Power System Reliability</th>
<th>Market Operation</th>
<th>Data &amp; System Management</th>
<th>General Admin</th>
</tr>
</thead>
<tbody>
<tr>
<td>06/07 to 10/11</td>
<td>$2,890</td>
<td>$1,272</td>
<td>$1,012</td>
<td>$217</td>
<td>$101</td>
<td>$289</td>
</tr>
<tr>
<td>%</td>
<td>100%</td>
<td>44%</td>
<td>35%</td>
<td>7.5%</td>
<td>3.5%</td>
<td>10%</td>
</tr>
</tbody>
</table>

(b) Existing Control Centres

NEMMCO currently leases control centre premises in NSW and QLD. The NSW lease will cease when operations relocate to the new control centre, resulting in a saving in lease and other associated accommodation costs. The terms under which the QLD control centre is occupied will expire in 2008 and a number of accommodation options will need to be considered.
7. Incremental Services Cost Review

7.1 Notional Allowance

For the purposes of this Analysis, a notional amount of $1m has been assigned as the estimated cost of providing incremental services. This is consistent with the 2003 Cost Activity and Cost Driver Review.

7.2 Incremental Services Fees

An Incremental Service is a service that, in NEMMCO’s opinion, is provided to a Participant or other person where the recipient is receiving some benefit over and above Participants of the relevant class and is:

- (identifiable) the cost of the service is able to be separately accounted for; and
- (material) the identified costs in providing the service are material; and
- (voluntary and specific) the service is provided at the request of, and for the benefit of, the recipient.

If the Rules contemplate NEMMCO levying a separate fee or charge for a service, that service is likely to be an Incremental Service.

Where NEMMCO can specify a particular fee for a particular incremental service, it shall do so. These fees will be levied on the basis of NEMMCO’s assessment of the labour, overheads and other material costs involved in providing the service. Registration Fees is an area where NEMMCO has been able to fix a fee for the service.

7.3 Registration Fees

NEMMCO currently processes around 30 registration applications per annum.

Based on specific enquiry of the staff involved in the process to register new participants, and costing of their specific salaries without the application of an oncost to recover overheads, it was calculated that the actual labour cost per registration is approximately $3,655.

The current registration fee of $1,700 has been in place since 2000 and does not adequately reflect the time taken to process registration applications. Based on the review of the associated labour costs, the Working Group has recommended setting the fee at $3,500 per registration.
## Appendix 1

### Survey Activities and Outputs

<table>
<thead>
<tr>
<th>ID</th>
<th>Service/Output</th>
<th>Activities/Inputs</th>
</tr>
</thead>
</table>
| 1.0 | **Power System Security** | • Real time monitoring and control - SCADA / EMS facilities  
• Real time monitoring and control - Analysis tools  
• Real time monitoring and control - Control room processes  
• Constraint formulation - analysis tools  
• Outage Co-ordination - network outage schedule (NOS)  
• Outage Co-ordination - analysis tools  
• Ancillary services - FCAS Market  
• Ancillary services - AS Contracts  
• ST PASA - Load Forecast (1-7 Day)  
• ST PASA – NOS  
• ST PASA - General availability  
• Due diligence assessment of network limits - system normal  
• Due diligence assessment of network limits - Prior outage  
• Protection reviews (interconnectors)  
• Control system assessment - Power system stabilisers (check)  
• Control system assessment - SVC PODs (approve)  
• Inter-regional testing - recording & analysis tools  
• Power System Performance Monitoring  
• Problem solving TNSP problems  
• Incident investigation and reporting  
• Under frequency load shed analysis, review and settings  
• Stakeholder Issues management  
• Tasmanian NEM Entry  
• Intermittent generation  
• Standards development  
• Managing entry of new transition projects  
• Procedure development  
• DSA Issues  
• Analysis tools and database management  
• System studies and problem resolution  
• PASA solver  
• Real-time Network Security performance / assessment monitoring  
• Real-time Energy / FCAS market implementation, System Security impact monitoring  
• Database support  
• System support  
• Dispatch  
• Load forecasting  
• Dispatcher Training and DTS  
• Security related procedures  
• Other Specify |
| 2.0 | **Power System Reliability** | • Reserve monitoring  
• Reserve trader contracts  
• Reserve margin assessments for Reliability Panel  
• ST PASA - Load Forecast (1-7 Day)  
• ST PASA – NOS  
• ST PASA - General availability  
• MT PASA - Load Forecast (1-10 year)  
• MT PASA – NOS  
• MT PASA - Generator availability  
• Statement of opportunities - load forecast (1-10 year)  
• Statement of opportunities - Status of proposed developments  
• IRPC and Reliability Panel Activities  
• Statement of Opportunities – strategic content review  
• ANTS development and analysis  
• PASA solver  
• System Support |
<table>
<thead>
<tr>
<th>ID</th>
<th>Service/Output</th>
<th>Activities/Inputs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>• Operational reserve determination and studies</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Reliability related procedures</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Power system emergency scenarios and management</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Other Specify</td>
</tr>
<tr>
<td>3.0</td>
<td>Market Settlements</td>
<td>• Settlements Statements (credits, debits &amp; netting-off) - Metering Data - measurement</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Settlements Statements (credits, debits &amp; netting-off) - Metering Data – retrieval</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Settlements Statements (credits, debits &amp; netting-off) - Metering Data – checking</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Settlements Statements (credits, debits &amp; netting-off) - Metering Data - Dispatch results - Prices, targets etc</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Settlements Statements (credits, debits &amp; netting-off) - Loss Factors (Static) - Analysis tools</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Settlements Statements (credits, debits &amp; netting-off) - Loss Factors (Static) - Analysis tools</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Settlements Statements (credits, debits &amp; netting-off) - Compensation determination</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Metering processes and procedures</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Metering Data Provider management</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Metering registration and investigation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• EFT Processing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Settlements and AustraClear</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Billing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Reallocations</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Preparing functional descriptions for software development</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Software testing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Change management – implementation plans</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Investigating product problems</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Miscellaneous – Statement production – answering participant queries</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• MSATS Configurations</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• MSATS testing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• System support</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Other Specify</td>
</tr>
<tr>
<td>4.0</td>
<td>Market Operation</td>
<td>• General Dispatch together with FCAS - Load Forecast (5 Min)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• General Dispatch together with FCAS - Bids &amp; offers via NEMNET (base level)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• General Dispatch together with FCAS - Loss factors (static &amp; IR) - Analysis tools</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• General Dispatch together with FCAS - Constraints - Constraint Library</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• General Dispatch together with FCAS - Constraints - Ad hoc constraints</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• General Dispatch together with FCAS - Standing data</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• General Dispatch together with FCAS - Standing data – Registration</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Real time monitoring and control (Compliance with targets, specific conditions pricing) - SCADA / AGC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 5 Min Pre-Dispatch - Load Forecast (1 day)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Pre-dispatch - Load Forecast (2 days)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Pre-Dispatch Sensitivities - Load Deltas</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Market Price investigations and analysis</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Dispatch and Pricing reference group activities</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Market Performance Monitoring</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Other Specify</td>
</tr>
<tr>
<td>5.0</td>
<td>Prudential Supervision</td>
<td>• Prudential Supervision</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Prudential Supervision – MCL determination</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Prudential Supervision - Monitoring of spot trading debts</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Prudential Supervision - credit support</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Prudential Crisis Management</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Prudential procedures and scenarios</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Other Specify</td>
</tr>
<tr>
<td>ID</td>
<td>Service/Output</td>
<td>Activities/Inputs</td>
</tr>
<tr>
<td>-----</td>
<td>-------------------------------------</td>
<td>-----------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>6.0</td>
<td><strong>Settlement Residue Auctions</strong></td>
<td>• Standing &amp; General Data (includes Information Memorandum)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Bids via NEMNET</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Auction Solver and processes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Settlement Residue Committee activities and reporting</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Other Specify</td>
</tr>
<tr>
<td>7.0</td>
<td><strong>Wholesale Market Improvement</strong></td>
<td>• Market Performance Monitoring</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Market Design Analysis and development</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Stakeholder Issues Management</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Dispatch models</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Intermittent generation issues</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Rules reviews</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Efficiency and incentives development</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Marginal cost issues and investigation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Financial and spot market developments</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Prudential development</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Other Specify</td>
</tr>
<tr>
<td>8.0</td>
<td><strong>Information Dissemination</strong></td>
<td>• Output of NEM Processes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• General information</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• TNSP Advice</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• MSATS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Helpdesk responses</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Participant support</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• NEMOC and PAC activities</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Other Specify</td>
</tr>
<tr>
<td>9.0</td>
<td><strong>Retail Market Improvement</strong></td>
<td>• MSATS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Transfer procedures</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Retail market Development</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Metrology harmonisation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• RMEC activities</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• IEC and working group facilitation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Other Specify</td>
</tr>
<tr>
<td>10.0</td>
<td><strong>NEMMCO Administration</strong></td>
<td>• MD Office, Board and strategy</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Legal</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Commercial Services</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• HR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Corporate Relations</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Accommodation and Office Systems</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• IT Support</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Research</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Regulatory affairs and interaction with AEMC and AER</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Budget Management and fee determination</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Team Management</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Compliance</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Other Administration Specify</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Other Non Attributable Activities</td>
</tr>
<tr>
<td>11.0</td>
<td><strong>Data &amp; Systems Management</strong></td>
<td>• Change Management</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Data Security</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Standards</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Data Network Management</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Project Management</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• IT Testing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• IT Requirement Specification</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• MMS File Reporting</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• MMS Support</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Database maintenance</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Other Specify</td>
</tr>
</tbody>
</table>
## Appendix 2

### Time spent in immediate interaction with Registered Participants

<table>
<thead>
<tr>
<th>Output</th>
<th>Market Customers</th>
<th>TNSPs</th>
<th>DNSPs</th>
<th>MNSPs (if unable to split)</th>
<th>NSPs</th>
<th>Market Scheduled Generators</th>
<th>Market Non Scheduled Generators</th>
<th>Non Market Scheduled Generators</th>
<th>Non Market Non Scheduled Generators</th>
<th>Generators (if unable to split)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power System Security</td>
<td>15.23%</td>
<td>0.03%</td>
<td>5.22%</td>
<td>1.12%</td>
<td>0.25%</td>
<td>3.42%</td>
<td>2.05%</td>
<td>0.46%</td>
<td>0.01%</td>
<td>0.04%</td>
</tr>
<tr>
<td>Power System Reliability</td>
<td>1.00%</td>
<td>0.03%</td>
<td>0.32%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.21%</td>
<td>0.08%</td>
<td>0.01%</td>
<td>0.01%</td>
<td>0.02%</td>
</tr>
<tr>
<td>Market Settlement (Cash transactions and clearing, metering and billing services)</td>
<td>1.91%</td>
<td>0.90%</td>
<td>0.19%</td>
<td>0.35%</td>
<td>0.03%</td>
<td>0.02%</td>
<td>0.07%</td>
<td>0.05%</td>
<td>0.00%</td>
<td>0.02%</td>
</tr>
<tr>
<td>Market Operation (Efficient pricing services)</td>
<td>1.85%</td>
<td>0.14%</td>
<td>0.10%</td>
<td>0.02%</td>
<td>0.04%</td>
<td>0.04%</td>
<td>0.68%</td>
<td>0.07%</td>
<td>0.05%</td>
<td>0.00%</td>
</tr>
<tr>
<td>Prudential Supervision</td>
<td>0.80%</td>
<td>0.65%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.06%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
</tr>
<tr>
<td>Settlement Residue Auctions</td>
<td>0.12%</td>
<td>0.05%</td>
<td>0.03%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.03%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
</tr>
<tr>
<td>Wholesale Market Improvement and Development services</td>
<td>1.13%</td>
<td>0.11%</td>
<td>0.14%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.02%</td>
<td>0.17%</td>
<td>0.41%</td>
<td>0.00%</td>
<td>0.03%</td>
</tr>
<tr>
<td>Information Dissemination</td>
<td>3.19%</td>
<td>1.32%</td>
<td>0.24%</td>
<td>0.20%</td>
<td>0.00%</td>
<td>0.56%</td>
<td>0.11%</td>
<td>0.04%</td>
<td>0.00%</td>
<td>0.00%</td>
</tr>
<tr>
<td>Retail Market Improvement</td>
<td>2.78%</td>
<td>1.35%</td>
<td>0.05%</td>
<td>1.32%</td>
<td>0.03%</td>
<td>0.01%</td>
<td>0.00%</td>
<td>0.01%</td>
<td>0.00%</td>
<td>0.00%</td>
</tr>
<tr>
<td>NEMMCO Administration</td>
<td>0.28%</td>
<td>0.07%</td>
<td>0.03%</td>
<td>0.02%</td>
<td>0.00%</td>
<td>0.10%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
</tr>
<tr>
<td>Business to Business, and Business to NEMMCO Services</td>
<td>5.59%</td>
<td>1.10%</td>
<td>0.00%</td>
<td>1.13%</td>
<td>0.00%</td>
<td>1.72%</td>
<td>1.35%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.13%</td>
</tr>
<tr>
<td>Summary</td>
<td>33.89%</td>
<td>5.76%</td>
<td>6.30%</td>
<td>4.15%</td>
<td>0.35%</td>
<td>6.11%</td>
<td>4.60%</td>
<td>1.05%</td>
<td>0.06%</td>
<td>0.26%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Summary</th>
<th>Total</th>
<th>Market Customers</th>
<th>TNSPs &amp; DNSPs &amp; NSPs</th>
<th>Generator &amp; MNSPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summary</td>
<td>33.89%</td>
<td>5.76%</td>
<td>16.56%</td>
<td>11.57%</td>
</tr>
</tbody>
</table>
### Attachment E – Submissions received (Stages 1 and 2)

National Generators' Forum & Energy Retailers' Association of Australia

<table>
<thead>
<tr>
<th>Issue</th>
<th>Response</th>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whether NEMMCO should alter the current Participant fee structure:</td>
<td>&quot;The issues and parameters … have not materially changed and thus the ERAA and the NGF believe that there is no requirement to change the current participant fee structure.&quot;</td>
<td>5.3</td>
</tr>
<tr>
<td>B2B Fees:</td>
<td>&quot;B2B fees should be recovered on the same basis as full retail contestability costs&quot;</td>
<td>6.3 and 9</td>
</tr>
<tr>
<td>New Control Centre:</td>
<td>&quot;The costs of the new control centre should be recovered according to common accounting practice and allocated to participants in the same manner as other major capital costs;&quot;</td>
<td>6.4</td>
</tr>
<tr>
<td>Fees for Services specifically for the Benefit of a Specified Registered Participant:</td>
<td>&quot;Market services, eg services specifically applied to the benefit of a specific Registered Participant, should be recovered from those participants as NEMMCO does now.&quot;</td>
<td>8.5</td>
</tr>
<tr>
<td>Fees for Costs of Activities that do not Directly Support NEMMCO's Statutory Functions:</td>
<td></td>
<td>5.5</td>
</tr>
</tbody>
</table>
“... ERAA and the NGF consider that costs associated with new activities of NEMMCO, that is activities that do not directly support NEMMCO’s functions under the National Electricity Law and National Electricity Rules, should not be recovered from participants through market fees.”

Length of Determination:

“The ERAA and the NGF support NEMMCO’s decision to review the participant fee structure from time to time. We consider that an appropriate interval should be at least 5 years unless a participant group considers that there has been a material change to the nature of fees being charged to participants.”

See the discussion in section 11 of the Determination and Report.

United Energy Distribution Pty Ltd

<table>
<thead>
<tr>
<th>Issue</th>
<th>Response</th>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whether NEMMCO should alter the current Participant fee structure:</td>
<td>See the discussion in section 5.3 of the Determination and Report.</td>
<td>5.3</td>
</tr>
<tr>
<td>“Given the push to national reform and possible convergence of gas and electricity, UED does not believe that the structure of the participant fees should be further complicated by the addition of any new categories.”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FRC Fees:</td>
<td>See the discussion in Section 9 of the Determination and Report.</td>
<td>9</td>
</tr>
<tr>
<td>“Given the last review of participant fees ... took into account Full Retail Contestability (FRC) charges, UED consider there is little or no requirement to alter the current charging structure, allocations or categories.”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B2B Fees:</td>
<td>See the discussion in Section 9 of the Determination and Report.</td>
<td>9</td>
</tr>
<tr>
<td>Issue</td>
<td>Response</td>
<td>Section</td>
</tr>
<tr>
<td>-------</td>
<td>----------</td>
<td>---------</td>
</tr>
<tr>
<td>“To date any B2B fees incurred by NEMMCO have been incorporated into the FRC fees consistent with the wider interpretation of national market facilitation. This is also consistent with the Victorian gas approach where B2B is considered part of market facilitation and Vencorp’s costs are part of the market operators fees to retailers. This methodology also provides the most efficient mechanism for the ultimate flow of these costs to the customers.”</td>
<td>See the discussion in sections 5.4 and 8.2.2 of the Determination and Report.</td>
<td>5.4 and 8.2.2</td>
</tr>
</tbody>
</table>

Imposition of Fees on NSPs:

“As a Victorian distribution business, UED is in the final stages of its price review for the pricing period 2006-2010 with a Final Determination already handed down … UED is a regulated business and has no opportunity to recover these types of participant fees over the next pricing period.”

CitiPower Pty and Powercor Australia Ltd

<table>
<thead>
<tr>
<th>Issue</th>
<th>Response</th>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>Imposition of Fees on NSPs:</td>
<td>See the discussion in sections 5.4 and 8.2.2 of the Determination and Report.</td>
<td>5.4 and 8.2.2</td>
</tr>
<tr>
<td>“… would be very concerned if there is any move to change the structure of participant fees so as to impose new fees on distribution businesses …”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>“The revenues of these businesses are regulated … The Commission has not included provision for NEMMCO fees and the businesses will have no opportunity to recover the costs of such fees during the next regulatory period.”</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Structure of Participant Fees - Determination and Report

<table>
<thead>
<tr>
<th>Issue</th>
<th>Response</th>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;In addition … there seems to be no material benefit in imposing fees on distributors … more efficient for the NEMMCO costs to flow more directly through to Market Customers and on to electricity consumers.&quot;</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>SPI Electricity Pty Ltd (trading as SP AusNet)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>B2B &amp; FRC Fees:</strong></td>
<td>See the discussion in section 9 of the Determination and Report.</td>
<td>9</td>
</tr>
<tr>
<td>&quot;… method of recovery of costs associated with the provision of Full Retail Competition and B2B communications … NEMMCO’s costs in relation to these activities are presently charged separately from other participant fees … under these separate arrangements the costs are met by retailers, and in our view this allocation remains appropriate.&quot;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot;… the emergence of industry B2B communications systems are intrinsically associated with Full Retail Competition in the retail market, and would not otherwise be required beyond arrangements between the network business and host retailer. Whilst network businesses now have a significant operational reliance upon NEMMCOs provision of FRC and B2B facilities and services, these market developments have been implemented to create opportunities for more innovative and efficient retailing arrangements. In SP AusNet’s view retailers (and end consumers) are clearly the beneficiaries of these services.&quot;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Imposition of Fees on NSPs:</td>
<td>See the discussion in sections 5.4 and 8.2.2 of the Determination and Report.</td>
<td>5.4 and 8.2.2</td>
</tr>
<tr>
<td>&quot;Giving consideration to the previous significant analysis and outcomes [in previous fee determinations], SP AusNet considers that there would be no</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
basis for charging participant fees to network businesses."

"... the dispute process tested NEMMCO’s decision not to allocate fees to TNSPs. The dispute was ultimately resolved in favour of NEMMCO’s determination. Importantly, the dispute panel’s ruling confirmed the view of the TNSPs that there were no grounds for charging participant fees of TNSPs. The decision summary makes the following statements: 'In particular, the exclusion of the TNSPs from liability to pay is understandable, given that they do not in any significant or certain operational or conceptual sense contribute to the fixed and common costs incurred by NEMMCO and NECA. Rather, the TNSPs themselves provide NEMMCO with information and other inputs necessary for NEMMCO to perform its Code functions. They do not trade in the NEM and in that sense do not use or are not a direct beneficiary of NEMMCO’s services'."

"In considering the structure of fees we request that NEMMCO take into account the regulated status of network businesses and the constraints upon the ability of these businesses … to recover any fees imposed."

"Present … determinations in respect of SP AusNet’s networks do not provide for an allocation of participant fees … Therefore SP AusNet does not consider that there is any realistic means through which it could recover fees imposed by NEMMCO."

"SP AusNet concludes that the previous decisions made by NEMMCO to not levy participant fees on network businesses have been fully justified, and that retention of this outcome remains appropriate …"

"Specifically, SP AusNet believes that there are no grounds for charging network businesses, having regard to:

<table>
<thead>
<tr>
<th>Issue</th>
<th>Response</th>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>The nature and beneficiaries of the services provided by NEMMCO and</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Issue

<table>
<thead>
<tr>
<th>Section</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>recovered under participant fees; and The regulatory regime that applies to network businesses for the recovery of costs associated with the provision of regulated network services.</td>
<td></td>
</tr>
</tbody>
</table>

### TransGrid

<table>
<thead>
<tr>
<th>Issue</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application of the NEL &amp; Rules:</td>
<td>NEMMCO agrees generally with these comments. See the discussion in section 4 of the Determination and Report, and particularly sections 4.4.2 and 4.4.7 as to NEMMCO’s views as to the link between NEMMCO’s obligations under section 50 of the NEL and the NEM objective.</td>
</tr>
</tbody>
</table>

- "In exercising its functions in respect of the national electricity market (NEM) NEMMCO must do so in accordance with the National Electricity Law and the Rules."

- "Section 50 of the NEL requires NEMMCO to perform its functions in respect to the NEM efficiently and on a full cost recover basis but not for profit."

- "The NEL [section 7] states the NEM objective is ‘to promote efficient investment in, and efficient use of services for the long term interests of consumers of electricity with respect to price, quality, reliability and security of supply of electricity and the reliability, safety and security of the national electricity system’."

- "The principles stated in clause 2.11 of the Rules stated are consistent generally with NEMMCO’s obligations under s50 of the NEL and the national electricity market objective."

| Interpretation of Clause 2.11.1(b): | See the discussion in section 4 of the Determination and Report, and particularly sections 4.4.1 to 4.4.7. In relation to the specific issue of levying fees on network service providers, see the discussion in sections 5.4 and 8.2.2 of the Determination and Report. |

- "Clause 2.11.1(b) of the Rules provides that the structure for Participant Fees to be developed by NEMMCO must, to the extent practicable, be
### Issue Consistent with the Following Principles:

- The structure should be simple;
- Participant fees should recover the budgeted revenue requirements for NEMMCO on a specified basis;
- The components of Participant fees charges should be 'reflective of the extent to which the budgeted revenue requirements for NEMMCO involve that Registered Participant';
- Participant fees should not unreasonably discriminate against a category or categories of Registered Participants; and
- The fixed component of Participant fees for a Market Customer may be zero.

In addition, NEMMCO is not required to develop a structure for Participant Fees with all five [of] the principles if that is not practicable. TransGrid's comments regarding the application of each of these principles is set out for each in principle in turn."

### Simplicity

“TransGrid supports NEMMCO's interpretation and application of the 'simple' structure of Participant Fees in its 'Determination of the Structure of Participant Fees under clause 2.11 of the National Electricity Code' dated 26 March 2003 [pp 23 and 24] ...”

### Causality and Allocation of Costs

TransGrid supports the efficient allocation of resources and the user pays principle. The levying of fees on the basis of Registered Participant involvement is consistent with promoting allocative efficiency within the market. Charging Registered Participants for services they do not cause or

<table>
<thead>
<tr>
<th>Issue</th>
<th>Response</th>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consistent with the following principles:</td>
<td></td>
<td>8.2.2 of the Determination and Report.</td>
</tr>
<tr>
<td>the structure should be simple;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participant fees should recover the budgeted revenue requirements for NEMMCO on a specified basis;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>the components of Participant fees charges should be 'reflective of the extent to which the budgeted revenue requirements for NEMMCO involve that Registered Participant';</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participant fees should not unreasonably discriminate against a category or categories of Registered Participants; and</td>
<td></td>
<td></td>
</tr>
<tr>
<td>the fixed component of Participant fees for a Market Customer may be zero.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>In addition, NEMMCO is not required to develop a structure for Participant Fees with all five [of] the principles if that is not practicable. TransGrid’s comments regarding the application of each of these principles is set out for each in principle in turn. &quot;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Causality and Allocation of Costs</td>
<td>TransGrid supports the efficient allocation of resources and the user pays principle. The levying of fees on the basis of Registered Participant involvement is consistent with promoting allocative efficiency within the market. Charging Registered Participants for services they do not cause or</td>
<td>8.2.2 of the Determination and Report.</td>
</tr>
<tr>
<td>Issue</td>
<td>Response</td>
<td>Section</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>benefit from is likely to result in significant behavioural distortions.</td>
<td>Clause 2.11.1(b) requires that the components of Participant fees charged to each Registered Participant should be ‘reflective of the extent to which the budgeted revenue requirements for NEMMCO involve that Registered Participant.’ [clause 2.11.1(b)(3)]</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Whilst the words ‘reflective’ and ‘involve’ are not defined in the Rules, TransGrid notes the context and drafting of clause 2.11.1(b) indicate that the nature and significance of involvement is centrally relevant.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mere or incidental involvement in NEMMCO’s activities and costs or mere interaction with NEMMCO should not make a Registered Participant liable to pay Participant fees. Where Registered Participants are not ‘involved’ in NEMMCO’s activities and costs to any significant extent, those Registered Participants should not pay Participant fees, as payment of Participant fees in those circumstances would not be reflective of the extent of involvement. This interpretation is supported by the Second Group, which stated:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>‘The pivotal principle of ‘reflective or extent of involvement’ does not have a specialised meaning in the discourse of economics. It is consistent with the notion of ‘user pays’ but as a matter of ordinary language, it may properly be construed as indicating a degree of correspondence (between NEMMCO and its costs and participants) without connoting identity. Taking into account the language of the whole clause we reject the contention that it must involve a precise degree of correspondence” [decisions of Second Group on Amended Dispute reference Notice by National Generators Forum Concerning NEMMCO Participant Fees Determination, paragraph 5.17]</td>
<td></td>
</tr>
<tr>
<td>Participant Categories and Unreasonable Discrimination</td>
<td>“Discrimination involves treating equals differently or treating non-equals the same. Clause 2.11.1(b)(4) does not prohibit discrimination; it merely</td>
<td></td>
</tr>
</tbody>
</table>

Determination and Report issue date: 24 March 2006
<table>
<thead>
<tr>
<th>Issue</th>
<th>Response</th>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>provides that, to the extent practicable, NEMMCO should not discriminate ‘unreasonably’.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TNSPs can be categorised as a discrete class of Registered Participant for the purpose of levying Participant fees. As stated above, TNSPs provide information and services to NEMMCO and receive no direct benefit from NEMMCO’s activities or outputs. Levying Participant fees on categories of Registered Participants other than TNSPs does not constitute discrimination. NEMMCO is not discriminating if it treats different entities differently.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Even if there is discrimination, the differences between TNSPs on the one hand and other Registered Participants on the other means that the discrimination is not unreasonable.”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight of Specific Categories</td>
<td></td>
<td></td>
</tr>
<tr>
<td>“Clause 2.11.1(b) does not specify the preference to be given to the five principles. TransGrid submits that equal weighting should be given to each of the five principles where this is practicable.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taken together, these principles imply, as they did at the last Review of Participant Fees, that Participants Fees should not be levied on TNSPs …”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Imposition of Fees on NSPs:</td>
<td></td>
<td>5.4 and 8.2.2</td>
</tr>
<tr>
<td>“…TNSPs are, and remain, minimal users of NEMMCO’s systems…”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>“.TNSPs provide information and services to NEMMCO and receive no direct benefit from NEMMCO’s activities or outputs”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>“…it would be appropriate that Participant fees are levied on Generators and Market Participants only”</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

See the discussion in sections 5.4 and 8.2.2 of the Determination and Report.
### Structure of Participant Fees - Determination and Report

<table>
<thead>
<tr>
<th>Issue</th>
<th>Response</th>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length of Determination:</td>
<td>See the discussion in section 11 of the Determination and Report.</td>
<td>11</td>
</tr>
</tbody>
</table>

---

**Marubeni Australia Power Services Pty Limited**

<table>
<thead>
<tr>
<th>Issue</th>
<th>Response</th>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>In the Draft Determination and Report, NEMMCO categorises Non-Market Scheduled Generators with Market Scheduled Generators, on the basis that each utilise the same services from NEMMCO.</td>
<td>NEMMCO agrees with many of the points being made by Marubeni. See the discussion in section 8.2 of the Determination and Report (and particularly section 8.2.4).</td>
<td>8.2.4</td>
</tr>
</tbody>
</table>

--

In Marubeni’s view this is clearly not the case and Marubeni requests that NEMMCO separate Non Market Schedule[d] Generators and allocate their costs of services provided by NEMMCO on a fair and equitable basis that is consistent with other participants.”

In its Stage 2 submission, Marubeni then works through each of the outputs identified by NEMMCO and comments on the extent to which Non-Market Scheduled Generators are involved in the relevant outputs. Marubeni accepts that NEMMCO provides a number of services to Non-Market Scheduled Generators but believes that Non-Market Scheduled Generators are less involved with NEMMCO than other Generators and the level of their fees ought to be adjusted accordingly.
Ergon Energy Pty Ltd

<table>
<thead>
<tr>
<th>Issue</th>
<th>Response</th>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ergon Energy notes that the reform process of the NEM has been a</td>
<td>See the discussion in section 5.6 of the Determination and Report.</td>
<td>5.6</td>
</tr>
<tr>
<td>protracted process and the development of the structure of participant fees over that time has been no different.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>“Over this period, there has been general acknowledgement within the</td>
<td></td>
<td></td>
</tr>
<tr>
<td>market and stakeholders on the need for increased transparency and</td>
<td></td>
<td></td>
</tr>
<tr>
<td>accountability of all participants in the NEM. Despite this widely accepted need, the Draft Determination fails to demonstrate a significant incremental improvement, especially in regard to cost allocation.”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Of particular concern to Ergon Energy are the various cost categories that could not be directly attributed to outputs. These costs included:</td>
<td>See the discussion in section 7.4.2 of the Determination and Report.</td>
<td>7.4.2</td>
</tr>
<tr>
<td>• Travel ($1,090,000);</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Printing and stationery ($440,000);</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Directors’ fees ($675,000); and</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Other fees ($1,335,000).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ergon Energy believes it is reasonable for market participants to expect NEMMCO to allocate this expenditure. Ergon Energy requests NEMMCO to reconsider this part of the Draft Determination and Report.</td>
<td>See the discussion in section 7.4.2 of the Determination and Report.</td>
<td>7.4.2</td>
</tr>
<tr>
<td>In circumstances where NEMMCO cannot apply historical information to make further attributions, Ergon Energy submits that NEMMCO establish procedures immediately to enable the resultant information to be captured.</td>
<td>See the discussion in section 7.4.2 of the Determination and Report.</td>
<td>7.4.2</td>
</tr>
</tbody>
</table>
AGL is concerned that an artificial distinction is being drawn between jurisdictions that have implemented FRC and those that have not.

“In AGL’s view, all retailers use the systems developed for FRC to a greater or lesser degree and should be sharing in both the establishment and operational costs of those systems. This is particularly important since the B2B costs are only to be recovered in the operational FRC costs.”

AGL are concerned about the term “implemented” in relation to FRC in the Draft Determination and Report.

“While we accept that FRC may not be considered to be “implemented” in Tasmania, we would argue that FRC has now been “implemented” in Queensland.”

In AGL’s view, it would be much simpler to allocate FRC costs on energy basis to all retailers in all regions.

<table>
<thead>
<tr>
<th>Issue</th>
<th>Response</th>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGL is concerned that an artificial distinction is being drawn between jurisdictions that have implemented FRC and those that have not.</td>
<td>See the discussion in section 9 of the Determination and Report.</td>
<td>9</td>
</tr>
<tr>
<td>AGL are concerned about the term “implemented” in relation to FRC in the Draft Determination and Report.</td>
<td>See the discussion in section 9 of the Determination and Report.</td>
<td>9</td>
</tr>
</tbody>
</table>
Attachment F – Allen Consulting Report
Report to NEMMCO on economic issues relating to Participant Fee structure

22 December 2005
Report to National Electricity Market Management Company
The Allen Consulting Group
The Allen Consulting Group Pty Ltd
ACN 007 061 930

Melbourne
4th Floor, 128 Exhibition St
Melbourne VIC 3000
Telephone: (61-3) 9654 3800
Facsimile: (61-3) 9654 6363

Sydney
Level 12, 210 George St
Sydney NSW 2000
Telephone: (61-2) 9247 2466
Facsimile: (61-2) 9247 2455

Canberra
Level 12, 15 London Circuit
Canberra ACT 2600
GPO Box 418, Canberra ACT 2601
Telephone: (61-2) 6230 0185
Facsimile: (61-2) 6230 0149

Perth
Level 21, 44 St George’s Tce
Perth WA 6000
Telephone: (61-8) 9221 9911
Facsimile: (61-8) 9221 9922

Brisbane
Level 11, 77 Eagle St
Brisbane QLD 4000
PO Box 7034, Riverside Centre, Brisbane QLD 4001
Telephone: (61-7) 3221 7266
Facsimile: (61-7) 3221 7255

Online
Email: info@allenconsult.com.au
Website: www.allenconsult.com.au

Disclaimer:
While The Allen Consulting Group endeavours to provide reliable analysis and believes the material it presents is accurate, it will not be liable for any claim by any party acting on such information.

© The Allen Consulting Group 2005
Contents

Executive summary

Introduction
Conclusions
Recommendations

Chapter 1
Introduction

1.1 The brief
1.2 Consideration of economic principles
1.3 Previous economic analysis

Chapter 2
Legal Context

2.1 Introduction
2.2 National Electricity Rules
2.3 National Electricity Law
2.4 Market objective

Chapter 3
Economic principles and their application

3.1 Introduction
3.2 The National Electricity Rules
3.3 The market for NEMMCO’s services
3.4 Options for pricing approaches
3.5 Assessment of alternative pricing approaches against clause 2.11.1(b) criteria and efficiency
3.6 Conclusion

Chapter 4
Design of a Participant Fee Structure

4.1 Introduction
4.2 Who should pay Participant Fees?
4.3 What fees should be levied?
4.4 How should the fees be divided?
<table>
<thead>
<tr>
<th>Chapter 5</th>
<th>24</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>International comparisons</strong></td>
<td>24</td>
</tr>
<tr>
<td>5.1 Introduction</td>
<td>24</td>
</tr>
<tr>
<td>5.2 New Zealand</td>
<td>24</td>
</tr>
<tr>
<td>5.3 Alberta, Canada</td>
<td>25</td>
</tr>
<tr>
<td>5.4 Ontario, Canada</td>
<td>26</td>
</tr>
<tr>
<td>5.5 Europe</td>
<td>26</td>
</tr>
<tr>
<td>5.6 United States of America</td>
<td>28</td>
</tr>
<tr>
<td>5.7 Western Australia</td>
<td>29</td>
</tr>
<tr>
<td>Chapter 6</td>
<td>31</td>
</tr>
<tr>
<td><strong>Conclusions and recommendations</strong></td>
<td>31</td>
</tr>
<tr>
<td>6.1 Conclusions</td>
<td>31</td>
</tr>
<tr>
<td>6.2 Recommendations</td>
<td>31</td>
</tr>
</tbody>
</table>
Executive summary

Introduction

The Allen Consulting Group has been retained by the National Electricity Market Management Company (NEMMCO) to provide a summary of the economic issues associated with the determination of Participant fees for Registered Participants.

In its analysis, the Group has had regard to a number of issues including the relevant criteria identified in the National Electricity Law and the National Electricity Rules, the application of economic objectives, as well as submissions from interested parties made in response to NEMMCO’s Issues Paper on the Structure of Participant Fees.

This report:

• provides an economic framework for the structure of Participant fees by NEMMCO;

• considers the structure of such fees in light of those requirements set out section 50 of the National Electricity Law and in clause 2.11.1(b) of the National Electricity Rules; and

• also considers the structure of Participant fees in light of more general economic principles.

Finally, conclusions and recommendations are made on the most appropriate structure for Participant fees for Participants when considered in light of the relevant criteria.

Conclusions

A number of alternative pricing approaches exist which may be used to underlie the structure of Participant fees. These include marginal cost pricing, average cost pricing, fully distributed cost pricing, Ramsey pricing and multi-part pricing. All types of pricing approaches satisfy at least some of the criteria that NEMMCO must follow in setting Participant fees, however, no pricing approach definitively satisfies all the criteria. The particular design of Participant fees i.e. the application of a chosen pricing approach, must strike a balance in terms of satisfying the criteria.

Recommendations

On balance, a multi-part fee strikes a reasonable balance in satisfying the necessary criteria for Participant fees.

The recommended Participant fee structure is as follows.

1. For the vast bulk NEMMCO’s total costs (general costs):

   • costs which can be allocated to Generators plus MNSPs should be recouped on the basis of historical capacity and historical energy produced, in equal amounts;
• costs which can be allocated to Market Customers should be recouped on the basis of contemporaneous load (i.e. MWh of energy purchased); and

• costs which cannot be allocated to any class of Participants should be recovered from end users. The most efficient way to do this is to levy fees on the Market Participants closest in the supply chain to end users i.e. Market Customers, in the expectation that these fees will be passed on relatively quickly to end users. The particular fee for this purpose should be recouped on the basis of contemporaneous load.

2. Services deemed to be ‘incremental’ i.e. those services whose recipients can be readily identified, should be charged at the incremental cost to NEMMCO of providing those services i.e. the cost that NEMMCO would avoid if the service were not provided.
Chapter 1
Introduction

1.1 The brief

The Allen Consulting Group has been retained by the National Electricity Market Management Company (NEMMCO) to provide an analysis of the economic issues associated with the determination of Participant fees for Participants.

In analysing such issues, we have had regard to the following:

- the relevant criteria in the NEL and the Rules;
- economic principles and their application in the determination of an appropriate fee structure; and
- submissions from interested parties made in response to NEMMCO’s Issues Paper and Draft Determination of the Structure of Participant Fees document.

Based on The Allen Consulting Group’s own analysis, as well as submissions made by interested parties, this report:

- provides an economic framework for the structure of Participant fees by NEMMCO (Chapter 3); and
- considers the structure of such fees in light of those criteria set out in clause 2.11.1(b) of the National Electricity Rules and the National Electricity Law (Chapter 4).

Chapter 5 summarises how Participant fees are structured in other countries. Chapter 6 provides conclusions.

1.2 Consideration of economic principles

As set out in the previous section, the purpose of this report is to examine those economic principles NEMMCO must have regard to when determining the structure of Participant fees for Participants.

In determining the structure of fees, NEMMCO must have regard to those criteria set out in 2.11.1(b) of the National Electricity Rules. NEMMCO must also have regard to section 50 of the National Electricity Law. These constructs are explained in more detail in Chapter 2.

1.3 Previous economic analysis

This is NEMMCO’s fourth review of Participant fees, with previous reviews being completed in 1998, 2000 and 2003.

NEMMCO considers each new determination ‘afresh’. That is, NEMMCO must freshly consider the application of the criteria in clause 2.11.1(b) of the Rules to the facts and analysis available to it at the time.

A summary of the core principles adopted in each decision is provided below.
2003 Decision

In its 2003 decision, NEMMCO determined to allocate fees according to three principles. That is:

• costs determined in accordance with discretionary services;
• costs determined in accordance with a ‘reflective of involvement’ principle;
• unallocated costs representing the remaining total costs, after having been applied according to the two former principles.

NEMMCO also levied a fixed Registration Fee for new registrations.

Costs determined in accordance with discretionary services were levied on an hourly basis.

On the basis of the ‘reflective of involvement’ principle with respect to NEMMCO’s outputs, 66 per cent of fees charged by NEMMCO were on an allocated basis. In this case, allocated costs were divided between both Generators and Market Customers (48 per cent and 52 per cent respectively). Generators were levied two types of fixed fees. Half of the fees levied on Generators were based on capacity in the previous calendar year, with the other half based on MWh of energy scheduled (for Scheduled Generators) or metered (for Non-Scheduled Generators) in the previous calendar year, whilst Market Customers’ fees were levied on a variable basis (MWh transacted through the spot market).

Unallocated costs were levied solely on Market Customers and set as variable fees based on a $/MWh value. During the consultation process, some Participants raised the issue that this could be construed as being unreasonably discriminatory against Market Customers. However, NEMMCO determined that the allocation of such costs to Market Customers alone was a reasonable exercise of the form and intent of clause 2.11.1 of the then Code.

2000 Decision

In reaching a determination in 2000, NEMMCO allocated its costs according to one of three allocation principles:

• discretionary services;
• establishment costs; and
• general costs.

NEMMCO determined to charge any directly attributable costs on an incremental basis to the particular Participants giving rise to such costs. Where costs could not be attributed to certain participants, Generators and Market Customers were to be deemed ‘involved’ in the market and pay the remainder of costs.
Specifically, for incremental services, NEMMCO determined to levy a fixed Registration Fee per registration as well as a variable Participant Compensation Fund Fee for Scheduled Generators. A Discretionary Service Fee was levied on Participants and was calculated on the basis of recovering the directly attributable cost associated with the service.

Establishment costs were phased in over the period of the determination. Specifically:

- In the financial years 2000 and 2001, fees were recovered in the following manner:
  - 50 per cent in the form of fixed fees charged to Generators and MNSPs and Market Customers (with 50 per cent of these costs allocated to each Participant group);
  - 50 per cent as a variable fee charged to Market Customers on the basis of $/MWh.
- In the subsequent financial years, establishment fees were recovered 100 per cent in the form of fixed fees charged to Market Participants (with 50 per cent allocated to Generators and 50 per cent to Market Customers).

As with establishment fees, general fees were also phased in over the three year period of the determination. Specifically:

- In the financial years 2000 and 2001:
  - 25 per cent of fixed fees were charged to Generators (and MNSPs) and Market Customers (with 50 per cent of fixed fees allocated to each Participant group);
  - 75 per cent of fees were charged as variable fees to Market Customers on the basis of $/MWh.
- In subsequent financial years, 50 per cent of fees were charged to Market Participants (50 per cent allocated to Generators and 50 per cent to Market Customers). The remaining 50 per cent of costs were charged as a variable fee to Market Customers on the basis of $/MWh or Market Load.

For both Establishment and General fees, Generator (and MNSP) fixed fees were proportioned on the basis of registered unit MW capacity as at 31 March 2000 (new entrants without a registered MW capacity at this date being excluded). Market Customers’ fixed fees were calculated on the basis of the value of energy acquired through the NEM in the twelve-month period ending 31 March immediately prior to the financial year in which the charge was being levied.

This fee structure was the subject of a dispute, with the National Generators Forum (NGF) formally disputing this structure. Previously, NGF members had not faced General Fixed fees. The Second Group found in favour of NEMMCO’s price structure.

---

1 The purpose of this fund was to protect Scheduled Generators against losses arising from NEMMCO scheduling errors.
**1998 Decision**

For its 1998 decision, NEMMCO assessed an appropriate fee structure by first determining the components of the fees’ structure. These components included: registration; power system operations; metering; settlements; administration; and NECA — and then determined which of these components were cost drivers. Costs were classified as being either fixed, common or sunk.

In its final decision, NEMMCO set fees as follows:

- **Registration** — As a readily identifiable direct variable cost, fees were set as a fixed per registration rate and levied on Code Participants.
- **Power System Operations** — These fees were set on a variable basis and charged to Market Customers on a $/MWh basis.
- **Metering** — Metering fees were set on a variable basis, and charged as an amount to Market Customers on a $/MWh basis.
- **Settlements** — These costs were considered to be variable and were charged on a $/MWh basis to Market Customers.
- **Administration** — Most administration costs were considered to be variable and were charged to Market Customers on a $/MWh basis. A fixed fee of $25 per day was also charged to Market Participants.
- **NECA** — The recovery of NECA costs was via a variable fee charged as an amount to Market Customers on a $/MWh basis.
- **Participant Compensation Fund (PCF)** — This fee was charged to Scheduled Generators in proportion to their share of the total market output value.
- **Other costs – service user generated** — These costs were allocated directly to the service user.
- **Establishment costs** — These costs were charged on a $/MWh basis to Market Customers.

In determining such a fee structure, NEMMCO considered that it satisfied the requirements of simplicity, economic efficiency, comparability, and an aim to reduce barriers to entry.
Chapter 2

Legal Context

2.1  Introduction

This chapter sets out the context in which NEMMCO must determine Participant fees. In particular, this chapter looks at NEMMCO’s responsibilities in determining fees as set out by the National Electricity Rules (the Rules) and the National Electricity Law (NEL).

2.2  National Electricity Rules

The Rules set out the principles with which NEMMCO must have regard to when determining a fee structure for Participant fees. Specifically, these are set out by clause 2.11.1(b) of the Rules.

Clause 2.11.1(a) of the Rules requires NEMMCO to develop the structure of Participant fees.

Clause 2.11.1(b) states that to the extent possible, the structure of Participant fees must be consistent with the following principles:

1. The structure of Participant fees should be simple;
2. Participant fees should recover the budgeted revenue requirements for NEMMCO, determined under clause 2.11.3, on a basis as set out in clause 2.11.2 (i) – (iv);
3. The components of Participant fees charged to each Registered Participant should be reflective of the extent to which the budgeted revenue requirements for NEMMCO involve that Registered Participant;
4. Participant fees should not unreasonably discriminate against a category or categories of Registered Participants; and
5. The fixed component of Participant fees for a Market Customer who satisfies various criteria as set out in the clause may be zero.

Clause 2.11.1 (c) states that the components of Participant fees may include, but not be limited to:

- Registration fees
- Ancillary service fees
- Power system operation fees
- Metering fees
- Billing and settlements fees
- Administration fees

In determining a structure for Participant fees, NEMMCO must have regard to other fee structures in existence as considered appropriate.
NEMMCO must publish the structure of Participant fees determined, the methods used in determining the structure and an assessment of the extent to which the structure complies with the principles set out in clause 2.11.1(b) to Registered Participants and any other appropriate persons, at least three months prior to the introduction of the new structure.

The Rules do not expressly indicate the weighting that each of the principles listed in clause 2.11.1(b) ought to be awarded. As such, the Rules are silent on whether any and each of these principles should be weighted equally, or more or less than others.

In previous decisions, NEMMCO has placed equal importance on each principle. However, NEMMCO has stated that where it is not practicable to satisfy all principles, or it is not possible to satisfy them to an equal degree, it may be necessary to develop Participant fees in a manner that places additional emphasis on some principles.

For example, imposing fees that strive to allocate costs that are reflective of each Participant’s level of involvement may lead to a degree of price discrimination. In this case, those Participants which are responsible for a larger amount of NEMMCO’s costs may reasonably being expected to pay a higher level of fees. This issue is addressed in more detail in Chapter 3.

In determining an appropriate allocation of fees for Participants, NEMMCO must, in addition to clause 2.11.1(b) of the Rules, have regard to Section 50 of the NEL.

2.3 National Electricity Law

The existing scheme for electricity market regulation came into force in 1998, with the proclamation of the National Electricity (South Australia) Act 1996. South Australia is currently the lead legislator for the National Electricity Law and the current National Electricity Law is scheduled to this Act. This Law also applies in New South Wales, Victoria, Queensland, the Australian Capital Territory and Tasmania – through Application Acts in each of those jurisdictions and the Commonwealth.

Section 50 of the NEL requires NEMMCO to perform the functions detailed in Section 49 “efficiently and on a full cost recovery but not for profit basis”.

2.4 Market objective

The now defunct National Electricity Code set out a number of market objectives as well as objectives specific to NEMMCO.

These objectives have since been subsumed by a new overarching NEM objective in section 7 of the NEL, as follows:

The national electricity market objective is to promote efficient investment in, and efficient use of, electricity services for the long term interests of consumers of electricity with respect to price, quality, reliability and security of supply of electricity, and the safety, reliability and security of the national electricity system.

According to the second reading speech of the National Electricity (South Australian) (New National Electricity Law) Amendment Bill, the NEM objective is an economic concept and should be interpreted as such.
Chapter 3
Economic principles and their application

3.1 Introduction

This chapter discusses the economic principles applied to recommend a structure of Participant fees. The structure of the chapter is as follows. First, is a discussion of the principles, from an economic viewpoint, which are to guide the structure of Participant fees, as set out in clause 2.11.1(b) of the National Electricity Rules (NER). There is also some discussion of section 50 of the NEL.

Secondly, there is a discussion of the market for the services provided by NEMMCO, in particular, the implication for Participant fees that NEMMCO is a natural monopoly. Thirdly, given the previous discussion, the chapter discusses pricing options that may be used to underlie the structure of Participant fees. These options are then assessed against the applicable criteria set out in clause 2.11.1(b) of the Rules.

3.2 The National Electricity Rules

As described in Chapter 2, the relevant parts of clause 2.11.1(b) of the Rules are to be found in clause 2.11.1(b), which sets out that:

The structure of Participant fees must, to the extent practicable, be consistent with the following principles:
(1) the structure of Participant fees must be simple; …
(3) the components of Participant fees charged to each Registered Participant should be reflective of the extent to which the budgeted revenue requirements for NEMMCO involve that Registered Participant;
(4) Participant fees should not unreasonably discriminate against a category or categories of Registered Participants.

Clause 2.11.1(b)(2) sets out that Participant fees should recover NEMMCO’s budgeted revenue requirements, and discusses timing and other issues.

Simple

‘Simple’ does not have a straightforward economic meaning. The Oxford Dictionary’s definitions of simple (in this context) are “understood and done easily without difficulty”; “not complicated or elaborate, plain”; and “not compound or complex”. Whether a structure of fees fits these definitions is largely a matter of judgement. As discussed below there is a wide range of possible Participant fee structures. However, there is no point where ‘simple’ becomes ‘complicated’ and, further, NEMMCO has also previously determined that the use of the word ‘simple’ may also reflect a degree of transparency. What is apparent is that simplicity has to be weighed against other clause 2.11.1(b) criteria (reflective of the extent of involvement and not unreasonably discriminate); the simplest fee structures are unlikely to be consistent with the other criteria. However, it is possible to find fee structures that, while consistent with the other criteria, are relatively simple, in comparison to alternative structures.
**Reflective of the extent of involvement**

This phrase is not of standard use in economics and therefore does not have a precise economic definition. In the context of NEMMCO’s objectives under clause 2.11.1(b), however, a reasonable economic interpretation might be that budgeted revenue requirements are reflective of the extent of the involvement of a Participant to the extent that those revenue requirements are given rise to, or caused, by that Participant’s presence in the market.

Using this interpretation, a Participant’s presence in the market leads to the consumption of scarce resources by NEMMCO; that is, it creates opportunity costs, with resources expended by NEMMCO in providing services in response to Participants that could have been used elsewhere. This concept is closely related to the concept of ‘user pays’.

For example, while it is not possible to precisely determine the relative extent of involvement for both Generators and Market Customers, it is clear that each cause opportunity costs, for without either class, the NEM would cease to exist. That is, by being ‘involved’ in the NEM, and having services provided to them by NEMMCO, Participants cause resources to be used up; and this is an opportunity cost to society, because those resources have other potential uses. The amount of opportunity cost created by each Participant thus reflects each Participant’s involvement, and as a user, that Participant should pay. While it is not possible to judge precisely the relative amount of opportunity cost caused by each Participant, all classes of Participants cause opportunity costs, for without them, the NEM would not exist.

The above discussion is about each Participant’s involvement with NEMMCO’s inputs. Alternatively, it is instructive to examine the involvement of each Participant with NEMMCO’s outputs. These two alternatives may lead to very different conclusions.

In its 2003 decision, NEMMCO’s approach to this criterion was in general terms as follows:

- Where it was practical for NEMMCO to identify action on the part of both Code Participants and other parties, where
  - discretion was exercised by either Code Participants or other parties; and
  - that discretionary action caused additional costs to be incurred by NEMMCO,

  NEMMCO sought to levy fees in relation to those actions to recover the incremental costs;

- Where it was practical for NEMMCO to identify costs that:
  - were fixed and/or common in nature;

---

could reasonably be allocated to a class or classes of Participants; or

- shared characteristics such that their involvement with NEMMCO’s outputs
  was likely to have the same or similar cost implications,

it sought to do so; and

- Where there was no practical and reasonable basis on which certain costs could
  be allocated to either one or more classes of participants, NEMMCO sought to
  allocate those costs in accordance with other criteria and economic principles.

**Discrimination**

Price discrimination occurs when a seller charges different prices to different
buyers, for the same level of service. Depending on the circumstances, price
discrimination can either add to, or subtract from, economic efficiency.

Clause 2.11.1(b) of the Rules states that, to the extent possible, the structure of
Participant fees should, amongst other conditions, “… not unreasonably
discriminate against a category or categories of Registered Participants.”

In the 2000 Fee determination, NEMMCO adopted the following definition of
discriminate:

Discriminate means to treat people or categories of people differently or unequally.
Discriminate also means to treat people, who are different in a material manner, in the same or
identical fashion. Further “discriminate” has a legal meaning which is to accord different
treatment to persons or things by reference to considerations which are irrelevant to the object
to be attained.

Following a dispute lodged by the National Generators Forum concerning
NEMMCO’s Participant Fees Determination, the Second Group did not find fault
with this approach but made the following observations.

At the onset two observations should be made about clause 2.11.1(b)(4) of the Code… They
are:

(1) the principle is to be applied to the extent practicable; and

(2) it is only unreasonable discrimination that offends.

---

3 The economics literature refers to thee types of price discrimination. First degree price discrimination occurs
when sellers can charge buyers exactly their willingness to pay for a certain amount of service. Under second
degree price discrimination e.g., quantity discounts, a firm offers different deals to everybody and buyers
choose the deal they prefer. Third degree price discrimination occurs when a seller charges different prices to
different types of buyers.

4 NEMMCO (National Electricity Market Management Company Ltd) 2000, Final Report and Determination of
the Structure of Participant Fees – Section 2.11 of the National Electricity Code, 31 March, p.14.
It should be noted that price discrimination i.e. charging different prices for the same service to different customers, or different classes of customers, can in many circumstances, enhance economic efficiency and so would be consistent with the NEM objective. Thus, while a Participant fee structure in which different classes of Participants are charged on a different basis (e.g. in the 2003 Determination, Generators were charged on the basis of capacity and energy produced, while Market Customers were charged simply on the basis of their energy loads), while discriminatory in some sense, is not unreasonably discriminatory, if it is consistent with other criteria and economic efficiency.

**Economic efficiency**

In general, there are three types of economic efficiency — allocative efficiency, productive (or technical) efficiency and dynamic efficiency.

*Allocative efficiency* is attained when the mix of goods and services that an economy produces reflects the relative value that society places on those goods and services given the extent of society’s resources required to produce the respective goods and services i.e. when the prices of goods or services are equal to their opportunity costs.

*Productive (technical) efficiency* is attained when firms produce the goods and services for the minimum cost, which implies that the lowest-cost combination of society’s resources (typically defined generically as land, labour and capital) is used, and the best technology is employed.

*Dynamic efficiency* is attained when the mix of goods and services produced, and the production processes employed by firms, change over time in response to changes in tastes, technology and other factors – that is, so that allocative and productive efficiency are maintained at each point in time.

In the context of Participant fees, a fee structure that promotes allocative efficiency will be one that least distorts prices in the end-user markets for electricity. For this reason, amongst others, past fee structures have included a component levied on Generators based on their MW capacity, as this is a fixed charge that is not directly related to the amount of electricity produced (or consumed).

A fee structure that promotes productive efficiency is one that places some discipline on NEMMCO’s costs. A fee structure that Participants are not simply able to pass on to their customers would create such a discipline, since Participants would be motivated to ensure that NEMMCO operates at minimum cost (for a given level of service).

---

5 In principle, allocative efficiency will also be promoted by a structure of fees that doesn’t distort the market for the services provided by NEMMCO itself. However, this is not a material consideration, since it is reasonable to assume that the demand for NEMMCO’s services by Participants is determined by the level of their involvement in the national electricity market i.e. how much electricity they sell or transport, and is largely unaffected by fees charged by NEMMCO.
The link between section 50 of NEL and the NEM objective is productive efficiency, which is attained when firms produce goods and services for the minimum cost, which implies that the lowest-cost combination of society's resources is used, and the best technology is employed. Section 50 can be interpreted as a prescribing, in economists' language, an objective of productive efficiency for NEMMCO, in respect of its own operations.

The relevance to the structure of Participant fees is that some types of fees are more likely than others to lead to NEMMCO conducting its own operations in a productively efficient manner, or more likely to discipline the demands made on NEMMCO by Participants. For example if Participant fees are set on the basis of NEMMCO's average costs\(^6\) then this will place no bound on the amount of services provided by NEMMCO, or the cost of producing them — the costs will simply be passed on as higher Participant fees (to the extent that this is possible). The link with market efficiency is that these higher fees, may retard investment, or if they are passed on to consumers as higher charges, may reduce the consumption of electricity, both outcomes being inconsistent with economic efficiency.

A fee structure consistent with dynamic efficiency is one that promotes, or at least does not significantly impede, innovation and investment in the industry. This objective will be satisfied by a fee structure that is consistent with the criteria set out in clause 2.11.1(b) of the Rules — a fee structure that is simple, reflects the involvement of Participants and does not unreasonably discriminate between them should not have any negative effects on investment and innovation in the industry as a whole, nor distort investment and innovation incentives within the industry; for example, investment in different types of generation.

It should be borne in mind, moreover, that the level of NEMMCO’s fees of about $60 million is very small relative to the turnover of the industry and so the material effect of NEMMCO’s fees on industry efficiency, in all its dimensions, is unlikely to be significant.

3.3 The market for NEMMCO’s services

NEMMCO is both market operator and system operator for the NEM. NEMMCO operates a spot market on a regional basis for wholesale supply of electricity in the six regions of the NEM, through a centrally coordinated dispatch process that continuously balances supply with demand in order to satisfy the electricity requirements of all end-use customers. Supply of electricity involves both the generation of electricity and its transport through the interconnected power system.

---

\(^6\) That is, equal to NEMMCO's total (relevant) costs divided by a measure of the quantity of NEMMCO's services that it provides to Participants, or some other measure of activity.
Three aspects of the market for NEMMCO’s services are particularly relevant to the structure of Participant Fees. The first is that NEMMCO is a natural monopoly. A natural monopoly exists in an industry when that industry’s production costs are minimised by having just one producer. In the case of the national electricity market, it is self-evident that it would not be efficient for another organisation (or organisations) to duplicate NEMMCO’s dual roles of market operator and system operator (and such duplication would not be consistent with system security either). This is largely (but not solely) because of the large economies of scale involved in the gathering and dissemination of information required for the operation of the wholesale national electricity market.

The second aspect is that, consistent with being a natural monopoly, NEMMCO’s costs are largely fixed and, therefore, do not vary with the quantity of services provided by NEMMCO (except in the relatively minor case of incremental services, discussed below). If an industry is characterised by very large fixed costs and relatively small marginal costs, it will not be possible to attain maximum allocative efficiency. This is because allocative efficiency implies that the price of services produced in a market is equal to the marginal cost of production since, in that case, the community faces a price just equal to the opportunity cost of using (or not) one extra unit of the good or service concerned. However, a firm in these circumstances (with substantial fixed costs) that sets price equal to marginal cost will not be economically viable, and so price must be set above marginal cost. As noted above, a fee structure that maximises allocative efficiency is one that will least distort consumption in the retail (end-use) electricity market. Economic analysis does not prescribe the form of that fee, and the fact that most of NEMMCO’s costs are fixed, for example, does not in itself mean that the fee structure must be based on fixed fees.

The third aspect is that services provided by NEMMCO, and hence the (mostly fixed) costs of those services, are largely shared between different Participants, and so a large part of them cannot be directly attributed to particular Participants or particular classes of Participants. Economic analysis does not prescribe any simple solution to how costs that are common to serving all Participants should be apportioned to those Participants. However, the characteristics of those Participants are relevant. Practical pricing structures are often based on ideal or benchmark pricing structures, but with their implementation constrained by information availability and practicality.

3.4 Options for pricing approaches

Possible pricing approaches to underlie alternative fee structures for pricing NEMMCO services include the following:

---

7 NEMMCO is also a legal monopoly, according to section 11 of the NEL.
8 Section 50 of the NEL makes it clear that NEMMCO must recover its costs fully.
Marginal Cost Pricing: Under this pricing approach, NEMMCO’s fees (per unit of service) would be set equal to the marginal cost of providing that service. As discussed in the following section, while marginal pricing is allocatively efficient, its implementation requires marginal costs to be measurable and large enough to satisfy NEMMCO’s revenue requirements, in the light of section 50 of the NEL and clause 2.11(b)(2) of the Rules.

Average Cost Pricing: Under this arrangement, the fees charged to Participants are equal to NEMMCO’s total (relevant) costs divided by a measure of the quantity of NEMMCO’s services that it provides to Participants, or some other measure of activity. This was essentially the pricing structure under the First Fee Determination in 1998, with the fees determined as a per MWh charge (variable fee) on Market Customers, sufficient to recover NEMMCO’s revenue requirements. 10 As discussed below, while having the virtue of simplicity, this fee structure rates poorly on the test of allocative efficiency, since in the presence of largely fixed costs, average cost is far removed from marginal cost. In terms of end-use of electricity, such a scheme in fact involves maximum deviation from marginal cost pricing of electricity. It also rates poorly on the test of productive efficiency, since average cost pricing does not discipline the demands made on NEMMCO by any Participants, who can all readily pass on variable costs to their customers.

Fully Distributed Cost Pricing: Under this pricing approach, fees for each Participant would be proportional to each Participant’s contribution to costs, where contribution would be assessed according to an accounting procedure, such as one of the commonly used activity-based costing methodologies.

Ramsey pricing: A Ramsey pricing approach is one that is used when marginal cost pricing is not feasible, mainly when there are large fixed costs to recover. In this context the aim would be to minimise allocative inefficiency by setting fees for each Participant (or class of Participant) such that distortions to demand in the final (retail) market are minimised. This is done by setting prices to different groups in inverse relation to the price sensitivity of these groups. Every group pays at least marginal costs, but ‘base-load’ users (the least price sensitive) pay relatively more of the fixed costs. Ramsey prices are attractive theoretically but the information requirements for their implementation – the price elasticities of demand of different Participants, – are formidable. Ramsey prices are likely to perform poorly on the simplicity test.

9 I.e. excluding incremental services whose cost is recovered in other ways e.g. fees for additional bandwidth for communications.

10 Since NEMMCO does not produce electricity, but instead produces services to Participants in the electricity industry, a fee structure based on MWh purchased by Market Customers is an example of average cost pricing only to the extent that the quantity of services provided by NEMMCO to those Market Customers is proportional to the MWh purchased by them.
Multi-Part pricing: Multi-part pricing is another way of recovering costs when marginal cost pricing is not feasible or not desired. Its basic components are one (or more) fixed fee(s) and one (or more) variable fee(s). A multi-part fee would balance the dynamic efficiency losses that might be caused by the fixed component of the fee, which cannot be passed on down the supply chain (such losses might include delaying investment or new entry) against the allocative efficiency losses from the variable component. While there exists an extensive theoretical literature on optimal multi-part pricing\textsuperscript{11}, implementation in practice is largely a matter of judgment, since the information required to implement an optimal multi-part price is very difficult to acquire.

In fact while it may not be possible to implement optimal multi part fees, it is possible to implement multi-part fees that are not only reasonably efficient, but satisfy other criteria as well (such as simplicity). Multi-part fees are commonplace in utilities (electricity, gas, water, telecommunications) where there often exists a connection charge (or equivalent) and a per unit of use charge (or in some cases multiple per unit of use charges). In some areas, the pricing is quite complex – e.g. in mobile telephony, users are charged a fixed amount for the handset and a separate fixed amount of rental per month, while calls have both a fixed and per minute cost. In other instances, for example, taxi fares, the structure is relatively simple, with a fixed charge (the flag fall) and a variable charge per kilometre travelled (along with other minor charges). In all cases, these fee structures represent a practical method of recovering the costs (in particular, fixed costs as well as variable) of the entity providing the service.

3.5 Assessment of alternative pricing approaches against clause 2.11.1(b) criteria and efficiency

Table 3.1 provides a qualitative assessment of the alternative pricing approaches against the criteria set out in Clause 2.11.1(b) of the Rules, and economic efficiency.

### Table 3.1
**QUALITATIVE ASSESSMENT OF ALTERNATIVE PRICING APPROACHES**

<table>
<thead>
<tr>
<th>Basis of participant fee</th>
<th>Simple</th>
<th>Reflective of extent of involvement</th>
<th>Not unreasonably discriminatory</th>
<th>Recovers revenue</th>
<th>Efficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marginal cost</td>
<td>Yes in principle, though marginal costs may be difficult to estimate in practice. However, incremental costs could be estimated for specific services.</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Average cost</td>
<td>Yes</td>
<td>Possibly</td>
<td>Possibly</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Fully distributed cost</td>
<td>Yes (depending on the detail)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Possibly</td>
</tr>
<tr>
<td>Ramsey</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes (relative to average cost)</td>
</tr>
<tr>
<td>Multi-part</td>
<td>Yes, (depending on how many parts)</td>
<td>Yes (depending on the basis of fixed and variable components)</td>
<td>Yes (depending on the basis of fixed and variable components)</td>
<td>Yes</td>
<td>Yes (relative to Ramsey)</td>
</tr>
</tbody>
</table>

From the table, it is evident that all types of pricing approaches satisfy at least some of the criteria, but that none of them definitively satisfies all the criteria.

*Marginal cost-based pricing* has the theoretical advantage of being allocatively efficient, because the price of services just equals the opportunity cost to society of resources foregone in their production. However, it cannot be used (at least not on its own) to raise revenues for a natural monopoly like NEMMCO, because the revenues raised will be less (probably far less) than total costs. A version of marginal cost pricing, viz incremental cost pricing, can be used for specific services. Incremental costs are the extra costs associated with the provision of an extra service. They can (and typically do) include both a fixed component (i.e. invariant to how much of the extra service is provided) and a variable component that is related to how much of the extra service is provided. In practical pricing problems, an efficient solution is often to set the price of a service at its incremental cost of provision, or if the service is jointly provided with other services (i.e. there are common costs between services), to set the price somewhat higher than incremental cost, so that pricing for that service recovers some common costs.
Apart from what might be called its ‘regular’ services, NEMMCO provides services incremental services to Participants who request them, e.g., additional bandwidth for use in communications. While it is not feasible for NEMMCO to set its Participant fees to be simply equal the marginal costs of the services it provides to Participants, it is feasible for NEMMCO to charge fees for these incremental services, at the incremental cost of those services.

*Average cost* pricing is simple and can meet revenue requirements but it is not efficient (in any sense) and it may or may not satisfy the other criteria, depending on how it is implemented. If average cost pricing is implemented just on the basis of the MWh purchased by Market Customers (as was the case in the First Fee Determination), with no charge falling on other Participants then it arguably fails the reflective of the extent of involvement test, because other Participants are also involved with NEMMCO. It also arguably discriminates against Market Customers (as a group), because they would bear the entire burden of the fees. On the other hand, it may be possible to implement an average cost pricing structure based on other data that reflects the involvement of all major classes of Participants and which passes the no unreasonable discrimination test. For example, if the services provided by NEMMCO to Generators is proportional to (or at least positively correlated with) installed capacity by Generators, a fee structure for Generators that is based on historical capacity will be an average cost-based structure that is reflective of their involvement. Alternatively, Generators may be levied fees based on their historical energy produced, as discussed in the next chapter. Each of these alternatives reflects the involvement of Generators with NEMMCO, albeit in different ways.

*Fully distributed cost pricing* rates quite well according to the criteria. It is relatively simple, is reflective of involvement 12, is non-discriminatory and can be constructed to recover all necessary revenues. As a cost concept, it is more closely related to average costs than marginal costs, so is not generally considered to be efficient. Whether or not (or to what extent) such a fee structure can be said to be consistent with allocative efficiency (at least in comparison with Ramsey pricing, if not marginal cost pricing) depends on the form in which the pricing is structured. 13 This structure might be consistent with productive efficiency if it contributed to a discipline on NEMMCO’s costs and services. It would certainly be more consistent than average cost pricing with the Rules criterion of ‘reflective of involvement’, provided there is sufficient information about the contributions made to cost (in the appropriate economic sense) by each class of Participant.

---

12 Fully distributed cost pricing can be implemented in a number of ways; see Brown and Sibley (1986) pp 45-51. In general fully distributed costs for a particular service are equal to the attributable cost of that service plus a fraction of the common costs of all services. This fraction may be calculated as the proportion of total output provided by that service, the proportion of total revenues, or the proportion of total attributed cost. All of these methods relate to “involvement”, albeit perhaps in significantly different ways.

Ramsey pricing recovers sufficient revenue (by construction, Ramsey prices are set at a level to recover required revenue) does not unreasonably discriminate and is reasonably efficient, certainly in comparison to average cost pricing. However Ramsey pricing fails on the grounds of simplicity, because its implementation would require knowledge of Participants’ price elasticity of demand for services provided by NEMMCO. Ramsey pricing may also fail on the grounds of reflective of the extent of involvement test. For example, under Ramsey pricing, the highest fees would be charged to Participants who have the lowest price elasticity of demand, but these Participants may have very little involvement (compared to other Participants) with either NEMMCO’s inputs or outputs.

Multi-part pricing can take many forms, but usually is comprised of a fixed component (one that Participants could not avoid by changing the degree of their participation in the market; for example, in the case of Generators, by producing less electricity) and a variable component (that depends on the degree of participation in the market; for example, energy produced or purchased in the market). Depending on how they are designed, multi-part fees can pass the tests of simplicity, reflective of the extent of involvement, and no unreasonable discrimination; and they can be designed to raise sufficient revenue. For example, it is possible to design the fixed component of a multi-part fee that reflects the involvement of Participants (e.g. based on the power-generating capacity of generators). Equally, it is possible to design the fixed component which bears no relation to involvement e.g. all Participants pay the same dollar amount of fixed fee. The former is likely to pass the reflective of extent of involvement test; the latter is not.

Multi-part fees also do well on the efficiency test. It has been shown that it is always possible to design multi part fees that are more efficient than fees based on Ramsey pricing.14

3.6 Conclusion

Based on economic principles, multi-part fees are the most likely to pass the criteria set out in clause 2.11.1(b) of the Rules and section 50 of the NEM, as well as satisfying the NEM objectives in relation to economic efficiency. Care must be taken in the specific design of the multi-part fees; particularly, in order to satisfy the reflective of extent of involvement test, multi-part fees should be designed so that those Participants who have a greater involvement with NEMMCO’s activities should pay more in fees than those Participants with a lower level of involvement. In this respect, the design of multi-part fees may take on some of the features of Fully Distributed Cost pricing.

It should also be emphasised that it is not necessary for all Participants to be charged multi-part fees in order to satisfy clause 2.11.1 of the Rules and efficiency tests. For example, in practice, while it may be a simple matter to charge a fixed component of fees to one class of Participants, it may not be possible, at least not in a simple way, to charge a fixed fee to another class. In such a case, the latter class may simply be charged a variable fee. These issues are discussed in the following chapter.
Chapter 4
Design of a Participant Fee Structure

4.1 Introduction

This chapter focuses on the design of a Participant fee structure, in the light of the discussion in the previous chapter. It discusses the following issues: who (which classes of Participants) should pay fees; what fees should be levied on those Participants and how the fees should be divided amongst those classes of Participants.

4.2 Who should pay Participant Fees?

General NEMMCO fees

NEMMCO believes that only a small proportion of NEMMCO’s costs can be ascribed to incremental services (other than those associated with Full Retail Competition). The bulk of NEMMCO’s costs must therefore be recovered through more general mechanisms.

NEMMCO interacts with five key classes of NEM Participants: Generators, Market Customers (mostly retailers), MNSPs, TNSPs and DNSPs. Generators in turn fall into four categories: Market Scheduled, Market Non Scheduled, Non-Market Scheduled, and Non-Market Non-Scheduled.

NEMMCO’s analysis found that Generators (apart from Non-Market, Non-Scheduled generators) and Market Customers are involved with NEMMCO’s outputs. Therefore, these classes of Participants should pay fees to NEMMCO.

On the other hand, DNSPs and Non-Market Non-Scheduled Generators are not primarily involved with NEMMCO’s outputs, while TNSPs have an interdependent relationship with NEMMCO. Therefore, on the reflective of extent of involvement criterion, these Participants should not pay any general NEMMCO fees (other than fees for incremental services, where relevant).

Fees for incremental services

As discussed in Chapter 3, where the incremental costs of providing specific services can be identified then simple fees that are specific to those services should be charged directly to the Participants who acquire those services.

Such fees would pass the reflective of extent of involvement and no unreasonable discrimination tests and be efficient.

4.3 What fees should be levied?

As discussed in Chapter 3, multi-part fees, comprising a fixed component (which, by definition, cannot be varied by changes in the Participant’s activity in the NEM, or involvement with NEMMCO, in the year in which the fees are levied); and a variable component are the most likely to pass the criteria set out in clause 2.11.1(b) of the Rules and section 50 of the NEL, as well as satisfying the NEM objective of efficiency.
Fixed fees on Participants are efficient because they do not affect the production decisions of those Participants (or, if they are levied on final users, do not affect their consumption decisions).\textsuperscript{15} Fixed fees also cannot be passed down the supply chain to final users (except in the long run where capacity is variable, as are all costs). This is true regardless of the competitive structure of the NEM. At all times, price setting in the NEM will be a function of Participants’ marginal costs. For those parts of the NEM that are very competitive, prices will be set at or close to marginal costs. For those parts of the NEM that may be less competitive, prices will be set as a mark-up over marginal costs. But Participants’ prices will never be set as a function of their fixed costs, including fixed fees levied by NEMMCO.

**Fixed fees on Generators**

Two kinds of fixed fees on Generators which would satisfy the criteria set out in clause 2.11.1(b) of the Rules and section 50 of the NEL, as well as satisfying the NEM objective of efficiency, are fees based on historical capacity, and fees based on historical amounts of electricity scheduled.

Arguments can be made for both types of fees and, in fact, both types were levied on Generators following the 2003 Fee Determination. The case for levying both types of fixed fees is that there are different types of Generators with different characteristics and it is reasonable to set a fee structure that does not unduly favour or disfavour any particular type.

For example, it can be argued that fixed fees based solely on historical capacity may unduly favour Generators with high utilisation, such as base load generators. On the other hand, fixed fees based solely on historical amounts of energy scheduled may unduly favour Generators with low utilisation, such as peaking generators.

It may be possible, in theory, to charge capacity-based fees to peaking generators and energy-based fees to base load generators but in practice the distinction between base load and peaking generators is difficult to make, especially when the category of intermediate generators is added. The merit order of Generators in the NEM, while reasonably stable (with low cost coal fired generators generally the first to be dispatched) is not immutably fixed and the categories “base load”, “intermediate”, and “peaking” are not useful for the purposes of designing a fee structure to recover NEMMCO’s costs.

In the circumstances, a combination of historical capacity and historical energy scheduled forms a reasonable basis for the setting of fixed fees on Generators.

\textsuperscript{15} The one exception to this statement is when fixed fees are so large that they affect the decision about whether to participate in the NEM at all. This is unlikely to be a practical consideration with Participant fees.
Variable fees on Generators

An obvious candidate for variable fees for Generators is one based on energy scheduled in the contemporaneous year that the fee is to be paid. However, since Generators operate upstream from Market Customers, such fees would be very likely to be passed on in higher bid prices in the NEM. To the extent that the wholesale market is competitive (with generators’ bids equal to their marginal costs), variable fees on Generators would be passed on dollar for dollar, thus defeating the purpose of levying fees on Generators in the first place.

Another candidate for variable fees on Generators would be their spot market revenues. However, these too would be passed on in higher bid prices.

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

Fixed fees on Market Customers

There appear to be few options for levying fixed fees on Market Customers, where there is no measure that is analogous to historical capacity. One possibility would simply be to levy a constant dollar amount on each Market Customer, large or small. While this would not be able to be passed on in higher prices for end users, it would create economies of scale in electricity retailing. This would retard competition and be damaging for efficiency in the retail electricity market. Moreover, a fee of this type, while certainly simple, would probably not reflect the extent of Market Customers’ involvement with NEMMCO.

Another possibility would be to use historical load. This would not create economies of scale, and be more reflective of involvement, and so would be a better fixed fee than a constant dollar amount, however, if load in one year is highly correlated with load the following year, fixed fees of this type may affect a Market Customer’s pricing decisions if they are forward looking, and so many of the efficiency benefits of a fee of this type may be lost.

As discussed above, there is a good case to be made for using historical amounts of energy scheduled as a basis for a fixed fee for generators. It may appear inconsistent to not similarly use historical load as a basis for a fixed fee on Market Customers. However, it should be recalled that the principal reason for using historical energy as well as historical capacity for generators is that the use of either one but not the other may unduly favour certain types of generators. Analogous arguments do not exist for Market Customers and so, on balance, the case for using historical load as a basis for levying fixed fees on Market Customers is not made.

In sum, there do not appear to be any satisfactory options for levying fixed fees on Market Customers.

Variable fees on market customers

The most obvious candidate here is a fee based on load in the current year. This type of fee has been levied in the past. It would pass all the clause 2.11.1 criteria and also be reasonably efficient, even though it might be expected to be passed on to end users. Because the quantum 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.
Another possibility for a variable fee, discussed during the 2003 Fee Determination is based on the number of customer connections. This fee would be passed on to consumers in terms of higher service to property charges, and it is not obvious that this would be any better, from any efficiency viewpoint, than a fee based on load which was passed on as higher energy charges.

Furthermore, connection-based charges may be problematic for equity reasons if prices for big and small customers alike are increased by the size of the charge.

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.

4.4 How should the fees be divided?

Thus far, the discussion in this chapter has been about the type of fees that could be levied on Generators and Market Customers. This section discusses how the fees should be allocated between these two classes of Participants.

The starting point for this discussion is NEMMCO’s Activity Survey and Cost Analysis, which found that most of NEMMCO’s general costs could be allocated to either Market Customers or Generators, with the relative split being 55 per cent to Market Customers and 45 per cent to Generators. Economic analysis does not provide a unique mapping of possible fee structures to cost allocation, but a reasonable solution for raising revenue to cover costs that can be allocated consistent with the clause 2.11.1(b) and section 50 criteria and the NEM objective of economic efficiency is as follows.

1. The 45 per cent of allocated costs that can be ascribed to Generators should be raised as fixed fees, divided equally between fees based on historical capacity and fees based on historical energy generated (i.e. capacity and energy generated in the year prior to the year for which fees are being raised).

2. The 55 per cent of allocated costs that can be ascribed to Market Customers should be raised as variable fees, based on load in the current year.

---

16 Here, the term “Generators” excludes Non-Market, Non-Scheduled Generators (who are not involved with NEMMCO’s outputs in a significant sense) and includes MNSPs, who, while they do not generate electricity, bid into the market, and are dispatched by NEMMCO, and so have an involvement with NEMMCO’s outputs in a manner very similar to generators.

17 Since NEMMCO’s Participant Fees for a given year are set at the beginning of that year, the precise fee in terms of $/MWh for that year needs to be based on an estimate of load for that year. A reasonable estimate for load in a current year is load for the previous year (or a 12 month period ending just prior to the current year). Some adjustment to fees may be necessary during the current year if actual load differs from estimated load.
For the costs that cannot be allocated, it is, by definition, not possible to determine the extent of involvement of different Participants. In the circumstances, it is difficult to justify levying fees on any class of Participant to recover costs which cannot be allocated to them, and so do not reflect the extent of their involvement.

Nonetheless, under clause 2.11.1(b)(2), Participant Fees should recover NEMMCO’s budgeted revenue requirements. This includes not just costs that can be allocated to particular Participants, or classes of Participants, but those costs that cannot be allocated as well. In the circumstances, a reasonable and efficient method for recovering unallocated costs is from end users via the Participants that are closest in the electricity supply chain to those end users.

This can be achieved by a fee that is levied on Market Customers based on load in the current year. It is reasonable to expect that Market Customers would relatively quickly pass the fee onto end users, so that it would be end users, not Market Customers, who would bear the burden of the fee.

It is also likely that a variable fee that was levied on Generators, for the purposes of recovering unallocated costs, would also be passed down the supply chain, first into higher wholesale prices, then eventually into higher retail prices. However, since the purpose of the fee would be to recover unallocated costs from end users, it would more efficient to levy the fee on Participants who are closest to end users i.e. Market Customers.
Chapter 5

International comparisons

5.1 Introduction

Clause 2.11.1(d) of the Rules states that:

In undertaking the process described in clause 2.11.1(a) NEMMCO must consider other fee structures in existence which it thinks appropriate for comparison purposes.

In previous decisions, NEMMCO has investigated international comparisons in satisfying this requirement. This chapter provides an updated summary of electricity pools in international markets, as well as the current development of an electricity pool in Western Australia.

5.2 New Zealand

The Electricity Commission is a public authority of NZ, constituted under the Electricity Act 1992 (NZ) to operate the NZ electricity market. The Commission’s functions are detailed in section 172O of the Act.

The Commission’s funding is paid for by the Government, who seeks an appropriation each year from Parliament to make payments to the Commission to enable it to perform its functions, powers and duties. These costs are to be recovered by way of levy from every industry participant (or class of industry participants) prescribed by regulations under section 172ZC of the Act.

The Electricity (Levy of Industry Participants) Regulations 2005 (NZ) provide for levies to be payable by three classes of industry participants:

• generators - participants who sell electricity in the wholesale market;
• purchasers - participants who buy electricity in the wholesale market; and
• distributors - participants who convey electricity.

The Regulations require the Commission to adopt a 3-step process in levying fees:

Step 1 involves a determination of the costs of certain activities, prescribed by Table 1 of Regulation 7;

Step 2 requires the costs of each activity to be allocated to the classes of participants according to fixed proportions listed Table 1 of Regulation 7 as follows; and

Step 3 requires the costs payable by each participant class to be divided by a number calculated in accordance with the Regulations.
Table 5.1  

<table>
<thead>
<tr>
<th>PARTICIPANT FEES IN NEW ZEALAND</th>
<th>Classes of participants to whom costs of activity are allocated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activity</td>
<td>Generators</td>
</tr>
<tr>
<td>Common quality operations</td>
<td>1/3</td>
</tr>
<tr>
<td>Market operations</td>
<td>1/2</td>
</tr>
<tr>
<td>Registry and consumers operations</td>
<td></td>
</tr>
<tr>
<td>Supply security operations</td>
<td>All to purchasers</td>
</tr>
<tr>
<td>Transmission operations</td>
<td>All to Transpower</td>
</tr>
<tr>
<td>Electricity efficiency operations</td>
<td></td>
</tr>
<tr>
<td>Other activities</td>
<td>1/3</td>
</tr>
<tr>
<td>MACQS reform operations(18)</td>
<td>1/3</td>
</tr>
</tbody>
</table>

Source: New Zealand regulations

5.3 Alberta, Canada

The Alberta Electric System Operator (AESO) is constituted by the Electric Utilities Act 2003 (Alb). It must exercise its powers and carry out its duties, responsibilities and functions in a timely manner that is fair and responsible to provide for the safe, reliable and economic operation of the interconnected electric system and to promote a fair, efficient and openly competitive market for electricity.

The transmission tariff is set by the AESO by application to the Energy and Utilities Board of Alberta (EUB).

The prices and rates are set in a two-step process detailed in the ISO Rules:

1. Phase I application determines the revenue requirement for the AESO. The EUB decision on this application determines the prudently incurred costs by the AESO necessary to manage the transmission system in Alberta.

2. Phase II application determines the allocation of costs between the different classes of customers for the provision of system access service by the AESO. The EUB decision on the Phase II application determines the rates charged to customers to recover the revenue requirement determined in Phase I.

The AESO is a not for profit organisation. It is required to submit an annual budget detailing its estimated expenditures, costs and expenses in order to carry out its powers, duties, responsibilities and functions and those of the Market Surveillance Administrator and:

\(18\) MACQS means Multilateral Agreement on common Quality Standards
• its estimated revenue from ISO fees, and
• its estimated revenue from the ISO tariff.

It is also required to submit to the EUB a single tariff setting out:

(a) the rates to be charged for each class of system access service; and

(b) the terms and conditions that apply to each class of system access service provided to persons connected to the transmission system.

The rates to be charged for each class of service must reflect the prudent costs that are reasonably attributable to each class of system access service provided.

The rates set out in the tariff must not be:

(a) different for distributors, customers who are industrial systems or a person who has made an arrangement for direct access to the wholesale pool with AESO as a result of the location of those systems or persons on the transmission system; and

(b) unjust or unreasonable simply because they comply with clause (a).

5.4 Ontario, Canada

The Independent Electricity System Operator (IESO) is constituted by the Electricity Act 1998 (Ont).

It is required to submit its proposed expenditure and revenue requirements for each fiscal year and the fees it proposes to charge during the fiscal year to the Ontario Energy Board for review and approval, but shall not do so until after the Minister approves or is deemed to approve the IESO’s proposed business plan for the fiscal year.

The IESO must publish the fees for market participants under the Market Rules, which must be those approved by the Ontario Energy Board; these permit the IESO to recover in any way it sees appropriate.

5.5 Europe

A number of electricity pools exist in Europe, including the Nordic Pool, ELEXON in the United Kingdom, and the Baltic Pool.

The Nord Pool Group operates a spot market for physical contracts (Elspot) under the Nord Pool Spot Company. Elspot is based on bids for purchase and sale of hourly contracts using three different bidding types – hourly bids, block bids and flexible hourly bids that cover all 24 hours of the next day. Prices are determined through auction trade for each delivery hour.

---

19 For more information, see http://www.nordpool.com.
Participants in the Elspot market must pay an entrance fee and an annual fee as well as volume dependent fees. These fees may be changed with one month’s notice. Currently the entrance fee is set at NOK 25 000. Elspot participants may pay a fixed annual fee of NOK 100 000 as well as a variable trading fee of NOK 0.25/MWh or a fixed fee of NOK 0 and a variable trading fee of NOK 1.00/MWh. Fixed and variable fees also exist for Elspot clearing customers and gross bidding activities.

The Elbas market acts as a supplement to the Elspot market. The Elbas market provides continuous trading 24 hours a day covering individual hours, up to one hour prior to delivery. The traded products are one-hour long contracts, traded in Euro.

The cost structure of the Elbas market is the same for all participants. All Elbas participants must pay an entrance fee of NOK 25 000, with an annual fee of EUR 12 000 for direct participants and for trading and clearing representatives. For clearing customers, the annual fee is EUR 6000. There is also a monthly service fee of EUR 350 for all market participants, and an annual fee of EUR 6000 for an additional trading account. The combined transaction and clearing cost is EUR 0.08/MWh.

In the United Kingdom, ELEXON procures, manages and operates services and systems which enable the balancing and imbalance settlement of the wholesale electricity market and retail competition in electricity supply.

Market participation charges are paid monthly. Participants are subject to the following fees:

- **Main Funding Share** — a monthly fee that reflects a trading party’s proportionate share of aggregate credited energy volumes.
- **SVA (Consumption) Funding Share** — a monthly fee that reflects a trading party’s proportionate share of aggregate non-half hourly consumption for that month.
- **SVA (Production) Funding Share** — a monthly fee that reflects a trading party’s proportionate share of aggregate credited energy volumes for Production Balancing Measure Units for that month.
- **General Funding Share** — a monthly fee that reflects a trading party’s proportionate share of the aggregate of certain ELEXON charges for that month.
- **Annual Funding Share** — the sum of a trading party’s General Funding Shares for the 12 consecutive months ending with and including that month, divided by the sum for all trading parties of their General Funding Shares for such 12 months.

---

20 See http://www.elexon.co.uk for more information.
All charges are calculated in accordance with complicated formulae detailed in Section D of the Balancing and Settlement Code.

After regaining independence in 1992, the Baltic IPS (Interconnection of the Power Systems) was set up as a power pool in order to co-ordinate operations of electric power supply in the Baltics. The operations dispatch management of the Baltic IPS is carried out by the Baltic Power Systems Regional Control Center, DC. This is within the framework of a multilateral agreement on the parallel operation of Baltic country power systems.\(^{22}\)

### 5.6 United States of America\(^ {23}\)

In the early 1990s, the American Congress and the Federal Energy Regulatory Commission (FERC) commenced the restructuring of the wholesale electricity power market in the United States of America.

Overseeing the electricity industry nationally, the FERC created independent system operators (ISOs) so as to oversee restructuring on a regional basis. These ISOs were given responsibility for establishing and overseeing competitive wholesale electricity markets. Large and significant ISOs include the California, Pennsylvania-New Jersey-Maryland (PJM), New England, New York and Midwest ISOs.

The California ISO assumed computerised control of California’s wholesale power grid in 1998, and directs the flow of electricity along long distance, high voltage power lines that connect California with neighbouring states as well as Mexico and British Columbia. The ISO is also the operator of the state’s wholesale power grid, serving 30 million Californians.\(^ {24}\) Its tariffs are collected in accordance with detailed instructions contained in the ISO Tariff, both as to its components and how collection is to be levied against participants.

The New York ISO (NYISO) was formed in 1998 as part of the restructuring of that state’s electric power industry. An outgrowth of the New York Power Pool, its mission is to facilitate fair and open competition in the wholesale power market and create an electricity commodity market in which power is purchased and sold on the basis of competitive bidding. On commencement, the NYISO opened with all standard markets, including the day-ahead and real-time energy, reserve, and regulation markets, as well as Transmission Congestion Contracts and Installed Capacity Market auctions.\(^ {25}\) Fees are levied on participants on a /MWh basis.\(^ {26}\)

---


23 This section describes institutional arrangements in the United States, and reports information on the level of fees. However no instructive information on the structure of fees appears to be available.


The PJM ISO is a regional transmission organisation that coordinates the movement of electricity through all or parts of Delaware, Illinois, Indiana, Kentucky, Maryland, Michigan, New Jersey, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia and the District of Columbia. PJM operates the world’s largest competitive wholesale electricity market, with 51 million people covered by PJM’s operations.\(^{27}\)

Currently PJM recovers administrative costs under a formula rate system. Recently PJM announced its intention to establish fixed rates for services. Instead of automatic recovery of costs, PJM’s administrative costs will be received and approved much like utility rates. Administration rates are charged to PJM members to pay for the cost of operating the electric transmission system and the wholesale electricity markets. The composite average rate for all service categories under the stated rates would be US$0.39/MWh as compared to US$0.40/MWh under the current formula rates.\(^{28}\)

ISO New England is a regional transmission organisation serving Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island and Vermont and provides three core functions. It provides for the minute-to-minute reliable operation of New England’s bulk electric power system; development, oversight and administration of the state’s wholesale electricity marketplace, through which bulk electric power has been bought, sold and traded since 1999; and the management of comprehensive bulk electric power system and wholesale markets’ planning processes.\(^{29}\) ISO New England works closely with the New England Power Pool, a group of generators, utilities, marketers, public power companies and end users.\(^{30}\)

The Midwest ISO (MISO) launched its energy markets on 1 April 2005. MISO provides a market-based congestion management program and spot market and includes a day-ahead energy market and a real-time energy market, locational marginal pricing and a market for Financial Transmission Rights. MISO’s Energy Market Tariff includes both fixed and usage based fees.

### 5.7 Western Australia

The Wholesale Electricity Market Rules govern the market for the South West Interconnected System (SWIS) which is being established as part of the state government’s reform of the electricity sector in Western Australia. The energy market is planned to commence on 1 July 2006. The IMO is the Market Operator and the Market Administrator.\(^{31}\)

---

\(^{27}\) See [www.pjm.com/about/glance.html](http://www.pjm.com/about/glance.html) for more information.


\(^{29}\) See [http://www.iso-ne.com/aboutisp/co_profile/overview/index.html](http://www.iso-ne.com/aboutisp/co_profile/overview/index.html) for more information.

\(^{30}\) See [http://www.iso-ne.com/aboutiso/co_profile/history/index.html](http://www.iso-ne.com/aboutiso/co_profile/history/index.html) for more information.

The establishment of the new wholesale market is in its final stages of implementation and aims to facilitate competition and encourage private investment in the generation and retail sectors of the electricity industry.

The Market Rules include a mechanism (the Reserve Capacity Mechanism) for ensuring that adequate generation and demand side management capacity is available to maintain reliability and security of the electricity supply.

The IMO will recover its budget, system management costs and that portion of the Western Australian Economic Regulation Authority’s budget relating to its wholesale electricity market activities, through a per MWh fee on metered generation and consumption in the SWIS.  

Chapter 6
Conclusions and recommendations

6.1 Conclusions

A number of alternative pricing approaches exist which may be used to underlie the structure of Participant fees. These include marginal cost pricing, average cost pricing, fully distributed cost pricing, Ramsey pricing and multi-part pricing. All types of pricing approaches satisfy at least some of the criteria that NEMMCO must follow in setting Participant fees, however, no pricing approach definitively satisfies all the criteria. The particular design of Participant fees i.e. the application of a chosen pricing approach, must strike a balance in terms of satisfying the criteria.

6.2 Recommendations

On balance, a multi-part fee strikes a reasonable balance in satisfying the necessary criteria for Participant fees.

The recommended Participant fee structure is as follows.

1. For the vast bulk of NEMMCO’s total costs (general costs):
   - costs which can be allocated to Generators plus MNSPs should be recouped on the basis of historical capacity and historical energy produced, in equal amounts;
   - costs which can be allocated to Market Customers should be recouped on the basis of contemporaneous load (i.e. MWh of energy purchased); and
   - costs which cannot be allocated to any class of Participants should be recovered from end users. The most efficient way to do this is to levy fees on the Market Participants closest in the supply chain to end users i.e. Market Customers, in the expectation that these fees will be passed on relatively quickly to end users. The particular fee for this purpose should be recouped on the basis of contemporaneous load.

2. Services deemed to be ‘incremental’ i.e. those services whose recipients can be readily identified, should be charged at the incremental cost to NEMMCO of providing those services i.e. the cost that NEMMCO would avoid if the service were not provided.