

Determination

Applications for Authorisation

Amendments to the National Electricity Code

Full Retail Competition and Registration of Code Participants

Date: 1 August 2001

Authorisation Nos:

A90739

A90740

A90741

Commissioners

Bhojani

Jones

Cousins

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Glossary

AEEMA	Australian Electrical and Electronic Manufacturers' Association
CEC	Customer Energy Coalition
Code	National Electricity Code
Commission	Australian Competition and Consumer Commission
CSS	Commercial and Strategic Solutions
DNSP	Distribution Network Service Provider
EAG	Energy Action Group
EPD	Energy Policy Division, Victorian Department of Natural Resources and Environment
EWON	Energy and Water Ombudsman New South Wales
FRC	Full Retail Competition
MIG	Market Implementation Group, New South Wales Treasury
MWh	Megawatts per hour
NECA	National Electricity Code Administrator
NEM	National Electricity Market
NEMMCO	National Electricity Market Management Company
NRF	National Retailers Forum
ORG	Office of the Regulator General, Victoria
PIAC	Public Interest Advocacy Centre
TPA	<i>Trade Practices Act 1974</i>
Victorian DBs	Victorian Distribution Businesses

1. Introduction

On 11 August 2000, the Australian Competition and Consumer Commission (Commission) received applications for authorisation (Nos A90739, A90740 and A90741) of amendments to the National Electricity Code (code). The applications were submitted by the National Electricity Code Administrator (NECA) under Part VII of the *Trade Practices Act 1974* (TPA). The proposed amendments facilitate the introduction of full retail competition (FRC) and amend the procedures for the registration of code participants.

The FRC code changes:

- introduce transitional arrangements for metering that recognise the existing domestic metering infrastructure;
- require jurisdictions to appoint a metrology coordinator to be responsible for the development of metrology procedures that facilitate the conversion of metering data into a format suitable for use in the current wholesale market settlements system; and
- clarify the role and responsibilities of the responsible person for metering.

The changes to the registration of code participants allow:

- a new market customer to register without immediately classifying a connection point; and
- distribution network service providers (DNSPs) to register as market customers in order to fulfil their function of retailer of last resort.

NECA lodged a typographical amendment to the FRC code changes on 17 August 2000.

NECA requested that interim authorisation be granted to the FRC code changes. On 20 September 2000, the Commission granted interim authorisation to the proposed arrangements, subject to certain conditions. In response to concerns regarding the conditions of authorisation imposed on 20 September 2000, the Commission revoked and re-granted the interim authorisation with amended conditions on 27 October 2000.

Authorisation under Part VII of the TPA provides immunity from court action for certain types of market arrangements or conduct that would otherwise be in breach of Part IV of the TPA, where the Commission concludes that the public benefits of the arrangements or conduct would outweigh the anti-competitive detriments of such arrangements or conduct.

The Commission has prepared this determination outlining its analysis and views on the applications for authorisation of the code changes relating to FRC and the registration of code participant. Chapter 2 of this determination sets out the statutory test that the Commission must apply when assessing an application for authorisation. Chapter 3 contains an outline of the Commission's public consultation process. The Commission's analysis of the proposed code changes is set out in chapters 4 and 5 and the Commission's determination is in Chapter 6.

2. Statutory test

The applications were made under sub-sections 88(1) and 88(8) of the TPA.

Applications made under sub-section 88(1) of the TPA are for authorisation to make a contract or arrangement, or arrive at an understanding, a provision of which would have the purpose, or would or might have the effect, of substantially lessening competition within the meaning of section 45 of the TPA; and to give effect to a provision of a contract, arrangement or understanding where the provision is, or may be, an exclusionary provision within the meaning of section 45 of the TPA. Further sub-section 88(6) provides that an authorisation made under sub-section 88(1) has effect as if it were also an authorisation in the same terms to every other person named or referred to in the application.

Applications made under sub-section 88(8) of the TPA are for authorisation to engage in conduct that constitutes, or may constitute, the practice of exclusive dealing in accordance with the provisions of section 47 of the TPA. Further, sub-section 88(8AA) provides that where authorisation has been granted under sub-section 88(8) and this particular conduct is expressly required or permitted under a code of practice, the authorisation applies in the same terms to all other persons named or referred to as a party or proposed party to the code. Authorisations may also apply to any corporation who becomes a party in the future.

The TPA provides that the Commission shall only grant authorisation if the applicant satisfies the relevant tests in sub-sections 90(6) and 90(8) of the TPA. While sub-section 90(6) and sub-section 90(8) relate to different types of anti-competitive behaviour, the tests are essentially the same.

Sub-section 90(6) provides that the Commission shall grant authorisation only if it is satisfied in all the circumstances that:

- the provisions of the proposed contract, arrangement or conduct would result, or be likely to result, in a benefit to the public; and
- that benefit would outweigh the detriment to the public constituted by any lessening of competition that would, or would be likely to result from the proposed contract, arrangements or conduct.

Sub-section 90(8) provides that the Commission shall grant authorisation only if it is satisfied in all the circumstances that the proposed provision or conduct would result, or be likely to result, in such a benefit to the public that the proposed contract, arrangement, understanding or conduct should be allowed.

The detriment to be considered is limited to detriment caused by a lessening of competition. However, consideration of public benefits is less restricted and public benefits recognised in the past include:

- fostering business efficiency;
- industry rationalisation;
- promotion of industry cost savings;

- promotion of competition in industry;
- promotion of equitable dealings in the market;
- expansion of employment;
- development of import replacements;
- growth in export markets; and
- arrangements that facilitate the smooth transition to deregulation.

In considering whether or not to grant authorisation the Commission must consider what the position is likely to be in the future if authorisation is granted and what the future is likely to be if authorisation is not granted.

If the Commission determines that the public benefits do not outweigh the detriment to the public constituted by any lessening of competition, the Commission may refuse authorisation or grant authorisation subject to conditions.

The value of authorisation for the applicant is that it provides protection from action by the Commission or any other party for potential breaches of certain restrictive trade provisions of the TPA. It should be noted, however, that authorisation only provides exemption for the particular conduct applied for and does not provide blanket exemption from all provisions of the TPA. Further, authorisation is not available for misuse of market power (section 46).

A more expansive discussion about the Commission's authorisation process and the statutory test that the Commission applies can be found in: *Guide to authorisations and notifications*, Australian Competition and Consumer Commission, November 1995.

3. Public consultation process

The Commission has a statutory obligation under the TPA to follow a public process when assessing an application for authorisation.

The Commission received the initial application for authorisation of the changes to the code on 11 August 2000. Notification of the application and a request for submissions was advertised in *The Australian* of 19 August 2000 and placed on the Commission's web site. Interested parties were asked to make submissions to the Commission regarding their views on the issues of public benefit and anti-competitive detriment arising from implementation of the proposed changes.

Fifteen interested parties provided submissions (see Appendix A). All submissions have been placed on the Commission's public register. The Commission also held consultation with a number of the parties that provided submissions.

The Commission produced a draft determination on 11 April 2001 outlining its analysis and views on the code changes according to the statutory assessment criteria set out in chapter 2. The Commission invited the applicant and other interested persons to notify it within 14 days of 17 April 2001 whether the applicant or other interested persons wish the Commission to hold a conference in relation to this draft determination.¹ The Australian Electrical and Electronic Manufacturers' Association Limited (AEEMA) notified the Commission on 27 April 2001 that it wished the Commission to convene a conference in relation to the draft determination.

The pre-determination conference (PDC) was held in Canberra on 29 May 2001. Approximately thirty interested parties attended the conference. Interested parties were given an opportunity to submit further submissions following the PDC. The Commission received submissions from eight parties, which addressed the issues raised at the conference or in the draft determination (see Appendix A). This determination takes into account the issues raised at the PDC and in submissions.

A person dissatisfied with this determination may apply to the Australian Competition Tribunal for its review.

¹ For the purposes of the conference, an interested person is a person who has notified the Commission in writing that the person, or a specified unincorporated association of which the person is a member, claims to have an interest in the applications and the Commission is of the opinion that the interest is real and substantial.

4. Full retail competition

4.1 The application

Spot prices in the National Electricity Market (NEM) are determined every half-hour. Therefore, under the current code arrangements, customers who change retailers are required to install interval meters capable of reading and communicating half-hourly electricity consumption (type 4 metering installation). This enables a second-tier retailer to net off a customer's consumption of electricity from the local retailer's wholesale market purchases.² The proposed code changes introduce lower cost alternatives to remotely read interval metering, which are designed to enable all customers to change their electricity retailer.

The three new metering installation types designed to both reduce the cost of and promote consumer switching are:

- type 5* – manually read interval meters: meters capable of reading and storing half hourly electricity consumption, which can only be read manually, providing delayed data delivery;
- type 6* – method of estimating electricity consumption from basic accumulation meters (profiling); and
- type 7* – estimation of unmetered supplies (eg streetlights, telephone boxes).

The proposed code changes require the responsible minister in each jurisdiction to appoint a person, other than a code participant, to be a metrology coordinator. A metrology coordinator is responsible for developing a metrology procedure for metering installation types 5-7.

A metrology procedure will contain information on the devices and processes that measure the flow of electricity and will establish the rules, processes, algorithms and procedures necessary to facilitate the conversion of metering data into a format suitable for wholesale market settlement.

Clause 7.3.1(bc) of the proposed code changes contains a set of principles that the metrology coordinator must have regard to when developing a metrology procedure. These are the:

- promotion of an efficient market;
- avoidance of unreasonable discrimination between market participants;
- minimisation of barriers to entry for competing retailers;
- provision of metrology procedures that are technically sound and economically efficient; and

² A host or local retailer operates in the geographical area allocated to a DNSP by the jurisdictional regulator. A second tier retailer is a retailer from outside of the geographical area allocated to a DNSP.

- requirements to follow code consultation procedures where reasonably practicable.

Under the current code arrangements, costs incurred in accessing metering data are to be met by the party obtaining the data. However, in practice, the cost is actually met by the financially responsible market participant. The proposed code changes formalise the current practice.

The other code changes relate to the technical aspects necessary to ensure data integrity.

4.2 Issues for the Commission

The introduction of FRC, through these code amendments, will provide benefits to all customers by enabling them to choose their electricity retailer. However, the potential benefits of the proposed arrangements may be reduced unless a nationally consistent approach is developed to facilitate new and existing retailers competing in other states. Additionally, the requirement to comply with the metrology procedures may potentially lessen competition, particularly from interstate retailers.

4.3 What the applicant says

NECA contends that the proposed code changes provide a framework that will permit the introduction of less sophisticated metering systems to facilitate retail competition and provide smaller customers with similar benefits to those experienced by larger customers. NECA asserts that the code changes support innovation in metering as well as ongoing review and analysis of the retail market that will ensure metering development is not stifled.

NECA claims that the purpose of standardising metering installation types is to facilitate competition for smaller electricity consumers, and that any anti-competitive elements that result are small compared to the public benefit of the earliest practicable introduction of competition for small consumers. It also contends that the specification of metering types is focused on performance to permit the competitive sourcing of metering and metering services, a step that further ameliorates any anti-competitive detriment.

NECA notes that the requirement for parties to comply with a metrology procedure may restrict the flexibility of some parties at the retail level. However, it contends that experience of other markets indicated that without adequate attention to behavioural matters, undesirable outcomes such as ‘customer slamming’, illegal churn, could occur to the detriment of electricity customers.

NECA contends that, although consistency in the metrology procedures is highly desirable to minimise the costs faced by consumers, different regulatory frameworks apply across the NEM and, therefore, a flexible approach is required in the development of the metrology procedures.

4.4 Role of the metrology coordinator and metrology procedures

4.4.1 What the interested parties say

The Victorian Distribution Businesses (Victorian DBs) argue that the metrology coordinator should not be responsible for both designing and approving metrology procedures since there is an internal conflict when one body approves its own proposals. They note that under their original proposals, the Distribution Businesses were to submit the design of the metrology procedure to the metrology coordinator. The metrology coordinator would undertake the approval process following consultation with interested parties. The Victorian DBs submit that if the metrology coordinator can approve its own metrology procedure, then it can direct how the industry operates without the consent or support of the industry.

The Market Implementation Group (MIG) and the Energy Policy Division (EPD) raise a similar issue, stating that once the initial arrangements are in place, there should be a transition to other parties proposing changes to the metrology procedures. They also propose that the jurisdictional regulator should eventually become the metrology coordinator. However, they consider that the initial metrology procedures are a matter of State government policy and should be designed and approved by the government in consultation with the industry, consumers and the jurisdictional regulators.

The National Retailers' Forum (NRF) argues that the obligations imposed on the metrology coordinator are both overly prescriptive and potentially inconsistent with jurisdictional responsibilities. Furthermore, it contends that while the high-level principles contained in clause 7.3.1(bc) can act as guidance for the metrology coordinator, this is of little value when the metrology coordinator is not bound by the code.

EnergyAustralia raises similar concerns, claiming that as the metrology coordinators will not be code participants and, therefore, not bound by the code, the metrology procedures may not be valid and may be challenged in a similar way to determinations by jurisdictional regulators.

Regarding the development of metrology procedures, the Victorian DBs argue that there should only be one metrology procedure per jurisdiction. They also argue that the greater the commonality between jurisdictions the lower will be the cost of entry for new retailers. However, they note that this does not preclude more than one profile from being developed in each jurisdiction.

The NRF contends that NEMMCO should be required to follow the code consultation procedures when making any amendments to metrology procedures for metering installation types 1 to 4.

4.4.2 Issues arising from the draft determination

In its draft determination, the Commission imposed the following conditions of authorisation:

- C1 The proposed code changes must be amended to provide that:**
- (a) the metrology coordinator appointed for a participating jurisdiction will be responsible for the development and approval of the initial metrology procedures for metering installation types 5, 6 and 7 for that participating jurisdiction;**
 - (b) in each participating jurisdiction, the jurisdictional regulator must be appointed as the metrology coordinator by the date that is the earlier of:**
 - (i) the date that all customers in the participating jurisdictions become entitled to purchase electricity from any retailer in that participating jurisdiction; and**
 - (ii) 1 January 2003;**
 - (c) the jurisdictional regulator must, within 6 months of being appointed as the metrology coordinator, complete a review of the initial metrology procedures that are in place when it is appointed as the metrology coordinator. The review must assess the initial metrology procedure against the objectives in 7.3.1(ba)(3A). The review must be conducted in accordance with the code consultation procedures set out in clause 8.9 of the code and a copy of the report must be provided to the Commission and made publicly available;**
 - (d) when the jurisdictional regulator is appointed as the metrology coordinator, it then becomes responsible for reviewing and approving changes to metrology procedures that are proposed by other persons in the participating jurisdiction in accordance with procedures developed by the metrology coordinator (see paragraph (b) of condition C2).**
- C2 The proposed code changes must be amended to provide for the following to apply to metering installations associated with those connection points identified by clause 7.1.1(b)(2) and which are classified as metering installation types 5, 6 and 7 as specified in schedule 7.2 :**
- (a) the initial metrology procedures for each participating jurisdiction are to be prepared and approved by the metrology coordinator appointed in the participating jurisdiction in accordance with the code consultation procedures and other interested persons;**
 - (b) the metrology coordinator in each participating jurisdiction must, by date that is the earlier of:**

- (i) the date that all customers in the participating jurisdictions become entitled to purchase electricity from any retailer in that participating jurisdiction; and
- (ii) 1 January 2003;

develop and document a process for changes to the metrology procedures to be prepared by other persons in the participating jurisdiction and proposed to the metrology coordinator for approval;

- (c) changes to metrology procedures for a participating jurisdiction may be proposed to the metrology coordinator appointed in that participating jurisdiction in accordance with the process referred to in paragraph (b);
- (d) if a metrology procedure for a participating jurisdiction reproduces a clause, or part of a clause of this code, the metrology coordinator appointed in that participating jurisdiction must, if there is a change to any such clauses of this code, update the metrology procedures to maintain consistency between the metrology procedures and the relevant clauses of the code. Such changes to the metrology procedure must be provided to NEMMCO for publication in accordance with clause 7.11(ba)(2)(vii) but not otherwise subject to the proposed clauses 7.3.1(ba);
- (e) changes to metrology procedures for a participating jurisdiction are only effective if approved by the metrology coordinator appointed in that participating jurisdiction;
- (f) the metrology coordinator may only approve changes to metrology procedures:
 - (i) in accordance with the process referred to in paragraph (b);
 - (ii) following consultation with code participants and other interested persons; and
 - (iii) in accordance with clause 7.3.1(ba)(3A); and
- (g) the metrology coordinator must provide the metrology procedures to NEMMCO for publication by NEMMCO.

C3 Clauses 7.3.1(ba)(3)(i) and 7.3.1(bc) must be deleted and the following clause must be inserted into clause 7.3.1(ba) of the proposed code changes:

“(ba) *A metrology procedure* must:

- (3A) be prepared and approved with a view to achieving the following objectives:
 - (i) the promotion of an efficient *market*;

- (ii) the avoidance of unreasonable discrimination between *Market Participants*;
- (iii) minimisation of the barriers to entry for competing retailers; and
- (iv) technical soundness and economic efficiency; and

provided that, to the extent of any conflict between the application of these objectives to a particular metrology procedure, the metrology coordinator may determine the manner in which they can best be reconciled or which of them should prevail.”

C4 The proposed code changes must be amended to provide that changes to the metrology procedures for metering installation types 1 to 4 must only be made:

- (i) following consultation with code participants and other interested persons; and
- (ii) in accordance with clause 7.3.1(ba)(3A).

C5 Clause 7.2.1(A)(d) of the proposed code changes must be deleted.

C6 Clause 7.3.4(e) of the proposed code changes must be deleted and the code must be amended to provide that the jurisdictional regulators must, by 31 December 2003, jointly conduct and complete a review of metering installation types 5 and 6 and the metrology procedures that have been implemented in the participating jurisdictions. The review must:

- (a) in relation to metering installations types 5 and 6:
 - (i) consider whether barriers exist to consumers adopting economically efficient metering solutions or other economically efficient technology and, examine for both first and second tier customers whether meter ownership acts as a barrier to customer switching. If it is determined that such barriers exist, the review must make recommendations in relation to reducing those barriers in order to promote the adoption of economically efficient solutions for example recommendations regarding the accelerated replacement of type 6 meters with type 5 meters;
 - (ii) consider whether there is a need for a sunset of load profiling for certain customer classes, after considering historic and current metering costs;
 - (iii) include in the economic analysis the cost to consumers of any stranded assets;
 - (iv) take into account any jurisdictional requirements in place at

the time of the review in relation to new and replacement meters;

- (v) **consider the effect of implementing a metering solution on consumption decisions made at the wholesale level and how this filters through to retail pricing; and**
 - (vi) **consider options for developing a single nationally consistent metrology procedure;**
- (b) **in relation to the metrology procedures that have been implemented in the participating jurisdictions, seek to achieve national consistency for the purpose of meeting the objectives set out in clause 7.3.1(ba)(3A);**
- (c) **propose to NECA any changes to the code that are necessary to implement the recommendations made by the review; and**
- (d) **specify a date for a further review to be conducted.**

The review must be conducted in accordance with the code consultation procedures set out in clause 8.9 of the code and a copy of the report must be provided to the Commission and made publicly available.

The Victorian Office of the Regulator General (ORG) expresses concerns with the proposed separation of the design and approval of the metrology procedures. It argues that this separation of functions will complicate the change process. The ORG contends that this would leave the development of change proposals to industry participants and customer representatives, neither of which, it believes, is well resourced to perform that role in a thorough and systematic way.

The ORG states that in its experience with amending service and metrology standards, the most balanced and efficient outcomes are achieved when a single body develops changes in consultation with industry and customer representatives. The ORG suggests that the code changes should include an objective to maximise the efficient take-up of interval metering and national consistency, and explicitly require the metrology coordinator to design and approve the metrology procedures in consultation with other metrology coordinators. It argues that this will more effectively address the concerns regarding the separation of the development and approval of charges.

While the EPD generally supports the draft determination, it suggests that the conditions relating to the process for changing metrology procedures prior to the introduction of FRC should be amended. It notes that condition C2(b) of the draft determination requires the metrology coordinator in each participating jurisdiction to develop and document a process that allows other persons to propose changes to the metrology procedure and the metrology coordinator approves the proposed changes. The EPD contends that, as the current metrology coordinator in Victoria, it may be necessary to amend the metrology procedure during the initial period. It argues that in such circumstances, it would be preferable for government to initiate the process for change immediately, rather than deferring the issue for consideration until the jurisdictional regulator becomes the metrology coordinator. The EPD proposes amending condition C2(a) in line with its suggestion.

4.4.3 Commission's considerations

It is important to note at the outset that the Commission is only granting authorisation to the code changes, subject to the conditions set out in this determination. Nothing in this decision should be taken as authorising the making of, or compliance with, any metrology procedures that are made under the code. In the event that any metrology procedure may contravene certain sections of the TPA, a separate application for authorisation could be made.

The proposed code changes require the responsible minister to appoint a metrology coordinator. The Commission considers that the minister should be required to appoint a metrology coordinator that is independent of government and is not a code participant that has a vested interest in the outcome of the metrology procedures. This will ensure that the metrology procedures are designed through a transparent, impartial and accountable process.

However, the Commission acknowledges that in Victoria, New South Wales and the Australian Capital Territory, a government body is currently undertaking the role of the metrology coordinator. As occurred with the introduction of the NEM, the Commission considers that it is appropriate to allow governments the flexibility to implement transitional jurisdictional arrangements before conforming to the requirements of the code. The Commission therefore considers that in order to facilitate a smooth transition towards FRC, each participating jurisdiction should initially be given the flexibility to appoint a government body to undertake the role of the metrology coordinator to develop the metrology procedures. Therefore, Commission has imposed a condition of authorisation that the code must be amended to require that the jurisdictional regulator undertake the role of metrology coordinator by the time that FRC is implemented in the jurisdiction, or no later than 1 January 2003. This issue is addressed in condition C1(a).

The Commission considers that where the metrology coordinator is initially a government body, there should be an independent check of the metrology procedures developed by that body. The Commission has therefore imposed a condition requiring the jurisdictional regulator to complete a review of the metrology procedures within 6 months of commencing its role as metrology coordinator. The review must assess the metrology procedures against the principles in clause 7.3.1(bc) of the code and the report from the review must be made publicly available. This issue is addressed in condition C1(b).

Ergon argues that the requirement for the jurisdictional regulator to review the metrology procedures within six months of becoming the metrology coordinator will lead to greater uncertainty. Ergon considers that the possibility of the metrology procedures changing after their introduction will result in greater regulatory risk and should be removed. It suggests that the metrology procedures should be reviewed and approved by the jurisdictional regulator as part of the implementation process. The Commission believes that in some jurisdictions it may be some time between the implementation of the initial metrology procedure and the jurisdictional regulator taking over as the metrology coordinator. Therefore, the Commission considers that it is appropriate that the jurisdictional regulator undertake a review of the metrology procedures within 6 months of commencing its role as the metrology coordinator.

The draft determination reflected the Victorian Distribution businesses' and the Commission's concerns that the proposed code changes required a metrology coordinator to design and approve the metrology procedure in each participating jurisdiction. However, at the time, the Commission acknowledged the extensive and widescale consultation on the metrology procedures that was undertaken by the MIG and EPD, as metrology coordinators. This included consultation with industry bodies, jurisdictional regulators and consumer representatives. The Commission believes that, in line with a government body initially being able to undertake the role of the metrology coordinator, it should be able to develop and approve the initial metrology procedures.

In the draft determination, the Commission required that at the time the jurisdictional regulator becomes the metrology coordinator, there must be separate processes for the design and approval of metrology procedures. The Commission imposed a condition requiring the metrology coordinator to develop and document a process by which other persons could propose changes to the metrology procedure to the metrology coordinator for approval.

In a submission on the draft determination, the ORG argued that separating the design and approval roles may stifle the development of efficient and effective metrology procedures. The Commission concurs with the concerns raised by the ORG that under the Commission's proposed arrangements, the time needed for industry bodies or consumer representatives to recommend changes will result in a delay to the efficient development of metrology procedures.

The Commission believes that jurisdictional regulators have demonstrated transparent, consultative processes, for example, when developing and approving proposals for service standards. The Commission therefore considers that it is appropriate to allow the metrology coordinator to design and approve changes to the metrology procedures, provided that it undertakes a process in which the development and revision of the metrology procedures is in accordance with the code consultation procedures and includes consultation with other interested parties and other metrology coordinators. The Commission also considers that other interested parties should still be able to propose changes to metrology procedures to the metrology coordinator for approval. These issues are addressed in conditions C2 and C3(c).

The Commission believes that the NRF's concerns regarding NEMMCO's ability to revise the metrology procedures for metering installation types 1 to 4 without undertaking a consultative process are valid. The Commission has imposed a condition that NEMMCO must undertake consultation with code participants and any other interested parties when preparing or revising metrology procedures for metering installation types 1 to 4. This means that the consultative process for metering installations types 1-4 will mirror that for types 5-7 (with the exception of the requirement to consult with other metrology coordinators). This issue is also addressed in condition C2.

The Commission notes the concerns raised by the EPD and the MIG that under the proposed arrangements any revisions to the metrology procedures, irrespective of materiality, must follow a process lasting not less than three months. In circumstances where changes to a metrology procedure are minor, that is they do not have a significant effect on the metrology procedures, are of a procedural nature, or correct a

manifest error, the Commission believes that the metrology coordinator should be able to undertake a shorter process, so as to avoid unnecessary delays to the implementation of these changes. The Commission has therefore imposed condition C3(a) that achieves this effect. The process set out in that condition allows code participants and other interested parties to object to the proposed change within 7 days or longer if deemed appropriate by the metrology coordinator. The metrology coordinator must consider any objections received and give due consideration to any such objections before deciding whether to proceed with the proposed change.

The EPD notes in a letter to the Commission that in preparing the metrology procedure, there has been a large degree of overlap with the provisions of the code. It states that the metrology procedures recognise that the code prevails where any inconsistencies arise. EPD argues that, in such cases, the code should be amended to enable the metrology coordinator to amend and reissue the metrology procedures without undertaking public consultation. The Commission accepts this suggestion and considers that removing the obligation for the metrology coordinator to undertake consultation on the metrology procedures arising from amendments to the code, which have already undergone a consultative process, will remove administrative burdens and duplication of process. The Commission has, therefore, imposed a condition that amends the code to take into account the effect of these types of code changes on the metrology procedures. This is addressed in condition C4(b).

Regarding the accountability of the metrology coordinator, the Commission shares the concerns raised by the NRF and EnergyAustralia that the jurisdictionally appointed metrology coordinators will not be bound by the code. However, apart from NECA and NEMMCO, there is no independent body that does not have a stake in the market yet is accountable under the code. The Commission would be more concerned were the metrology coordinator a code participant who would be affected by the implementation of the metrology procedures. The Commission therefore considers that the requirement that a metrology procedure not be a code participant is acceptable.

In the draft determination, the Commission imposed condition C3, which required the metrology procedures, not the metrology coordinator, to have regard to the principles set out in the code. Upon reflection, the Commission notes that clause 7.3.1(ba)(3) already requires the metrology procedures to be prepared in accordance with the principles set out in 7.3.1(bc). The Commission has therefore removed the condition that was imposed in the draft determination. However, the Commission believes that should there be any conflict between the principles, the metrology coordinator should be able to determine the manner in which they can best be reconciled or which of them should prevail. The Commission has addressed this issue in condition C5.

The Commission agrees with the Victorian DBs' view that there should only be one metrology procedure per jurisdiction. The Commission is concerned that the proposed code changes allow the metrology coordinator to develop multiple metrology procedures. The Commission considers that multiple metrology procedures may act as a barrier to competition for retailers. Additionally, multiple metrology procedures may impose additional costs on retailers, through different requirements. The Commission has, therefore, imposed a condition that amends clause 7.2.1(A)(d) to prevent the metrology coordinator from developing more than one metrology procedure for each metering installation type, within a participating jurisdiction. This issue is addressed in condition C6.

In the longer term, however, the Commission considers that the benefits of FRC will be facilitated by a single metrology procedure. The Commission, therefore, requires that the proposed code changes be amended to require the jurisdictional regulators to consider the costs and benefits of a single nationally consistent metrology procedure in their joint review, which is discussed in more detail in section 4.5 of this determination. This issue is addressed in condition C7(b).

4.5 Metering installations type 5 and 6

4.5.1 What the interested parties say

Mr Hugh Outhred contends that metering installations type 6 (profiling) should be sunsetted because it does not deliver the same level of economic efficiency as metering installations type 5 (manually read interval meters). Mr Outhred claims that profiling provides limited incentives for consumers to manage their demand at times of supply constraint. Mr Outhred also contends that profiling does not provide economically efficient signals to consumers. Mr Outhred suggests that as a condition of authorisation the Commission should require that profiling should be permitted only for a short period, if at all.

The Energy Action Group (EAG) argues that load profiling masks market signals, smears costs across customer classes and mutes consumer responses. It contends that in the medium to long term interval metering will provide market signals to consumers, thereby minimising cost smearing and allocating the risks appropriately.

The Customer Energy Coalition (CEC) submitted a draft executive summary of a report prepared by Pareto Associates. The report argues that the decision to allow load profiling is based on incorrect advice about the feasibility of large scale, low cost interval meter rollouts. The report found that market based incentives have failed to deliver large scale interval meter roll outs anywhere in the world. It notes that the few instances in which a large scale interval meter roll out has or is due to commence are ones in which the investment of meters and communications equipment has been undertaken on a regulated basis, by the monopoly distribution business. The CEC argues that there is no evidence that load profiling delivers benefits to consumers other than its relatively lower initial cost. It claims that profiling will entrench economically inefficient and inequitable cross subsidies in energy prices, thereby inhibiting price signals and demand responsiveness.

Email similarly argues that retailers will be less likely to compete on price unless there is a move towards interval metering. It argues that meter manufacturers are reluctant to develop interval meters suitable for the less than 160 MWh market tranche in Australia because of a lack of certainty.

The Public Interest Advocacy Centre (PIAC) contends that there are significant equity implications of a fully metered approach. It states that interval metering will result in higher costs being smeared across all residential consumers including those who do not benefit from contestability. PIAC argues that since residential customers have consumption patterns that are price inelastic, any price signals will have little or no effect on their consumption. It suggests that even if residential consumers have interval meters, there is currently no technology available that allows consumers to cut their demand during peak times in response to high prices.

PIAC notes that a new and replacement policy appears to overcome the concerns about cost impacts, but in itself fails to take account of the difference in costs between interval meters and accumulation meters or the principle that costs should not be imposed where no benefits accrue.

4.5.2 Issues arising from the draft determination

In its draft determination, the Commission imposed the following condition of authorisation:

- C6 Clause 7.3.4(e) of the proposed code changes must be deleted and the code must be amended to provide that the jurisdictional regulators must, by 31 December 2003, jointly conduct and complete a review of metering installation types 5 and 6 and the metrology procedures that have been implemented in the participating jurisdictions. The review must:**
- (a) in relation to metering installations types 5 and 6:**
 - (i) consider whether barriers exist to consumers adopting economically efficient metering solutions or other economically efficient technology and, examine for both first and second tier customers whether meter ownership acts as a barrier to customer switching. If it is determined that such barriers exist, the review must make recommendations in relation to reducing those barriers in order to promote the adoption of economically efficient solutions for example recommendations regarding the accelerated replacement of type 6 meters with type 5 meters;**
 - (ii) consider whether there is a need for a sunset of load profiling for certain customer classes, after considering historic and current metering costs;**
 - (iii) include in the economic analysis the cost to consumers of any stranded assets;**
 - (iv) take into account any jurisdictional requirements in place at the time of the review in relation to new and replacement meters;**
 - (v) consider the effect of implementing a metering solution on consumption decisions made at the wholesale level and how this filters through to retail pricing; and**
 - (vi) consider options for developing a single nationally consistent metrology procedure;**
 - (b) in relation to the metrology procedures that have been implemented in the participating jurisdictions, seek to achieve national consistency for the purpose of meeting the objectives set out in clause 7.3.1(ba)(3A);**

- (c) **propose to NECA any changes to the code that are necessary to implement the recommendations made by the review; and**
- (d) **specify a date for a further review to be conducted.**

The review must be conducted in accordance with the code consultation procedures set out in clause 8.9 of the code and a copy of the report must be provided to the Commission and made publicly available.

At the PDC and in subsequent submissions, several interested parties expressed their views on interval metering versus profiling. The Energy and Water Ombudsman NSW (EWON), CEC, AEEMA, Nilsen, Email and Vytel all support the introduction of interval metering. These interested parties generally contend that interval meters provide the most equitable and efficient metering solutions for small customers. The CEC, Email, Nilsen and Vytel argue that the Commission should mandate a rollout of interval meters. The EWON argues that interval meters are more appropriate than profiling for the purpose of managing small consumers' consumption.

The CEC argues that consumers currently do not receive appropriate price signals for the electricity that they consume. It argues that load profiling is not sufficient to give consumers access to the full benefits of a competitive electricity market since it limits competition to the consumers' choice of retailer. The CEC contends the current policy for FRC, which recommends the use of a load profiling arrangement for the short term, is based on incorrect advice about the feasibility of large-scale, low cost interval meter roll outs. It argues that a universal roll out of low cost, remotely read interval meters is a realistic method of providing this infrastructure in the NEM, and that this will provide low cost reading and feedback capability that could deliver the full benefits of competition to consumers. The CEC recommends that the Commission not finalise authorisation of the FRC code changes until a cost benefit analysis is undertaken by all participating jurisdictions. This analysis would examine the costs and benefits of both manually read interval meters and low cost remotely read interval meters. The CEC states that the cost-benefit analysis should also examine the impact of delaying the commencement of FRC until:

- all jurisdictions are ready to commence, preferably with common rules and regulations in each jurisdiction that may assist cost minimisation of overheads; and
- there is an effective roll out of sufficient low cost interval meters to ensure a positive net benefit to all consumers.

Commercial Strategic Solutions (CSS) believes that the objectives of FRC will only be achieved if interval metering is available to the market, or at minimum, to second tier retailers, in order to facilitate contestability at the retail level. It argues that profiling is anti-competitive and acts as a barrier for second tier retailers. CSS also argues that the need to have all profiles comply with the National Measurements Act adds a further level of complexity and cost to the introduction of FRC. It contends that profiling hinders the ability of market participants to utilise the contract and derivatives market to obtain effective hedge positions to be translated into competitive and innovative tariffs, therefore causing a barrier to entry to this market.

Siemens Metering (Siemens), Integral, and AGL oppose an interval meter rollout. Siemens contends that interval meters are not economic for customers consuming

below 160MWh per annum, and that the benefits from settling the market a little more accurately will not outweigh the meter installation and data handling costs. Siemens states that given the small size of the Australian market, it is unlikely that the volume of type 5 meters that is necessary to drive prices down will be achieved.

Siemens argues that domestic consumers are more interested in the simplicity of their metering arrangements than in real time price signals. Given that many large consumers buy electricity on the basis of a simple one or two-rate tariff, it is unlikely that there will be multi-tariffs for the below 160MWh market.

Siemens contends that FRC would be much more feasible if the type 5 interval meter was removed from the code because the implementation process and the possibility of contestable ownership will add complexity to the introduction of FRC. If type 5 metering installations are to be removed from the code, Siemens argues that they should not be mandated.

Integral notes that it is physically impossible to roll out interval meters within the retail contestability timetable set by the jurisdictions and agrees with the Commission's approach to allow profiling in the short term.

AGL contends that metering versus profiling is an issue for the wholesale trading market and there are limited benefits from delaying full retail competition to install interval meters, given the costs already incurred.

The MIG believes that condition 6 should be changed to clarify the role of the joint jurisdictional regulators' review of type 5 and 6 metering installations and metrology procedures. Part (a)(i) of condition 6 requires the regulators to consider whether there are barriers to consumers adopting economically efficient meters of other technologies and, if so, to make recommendations to reduce these barriers.

The MIG is concerned that the framework for considering whether there are in fact barriers to the adoption of economically efficient technologies established in C6(a)(i) is not extended to C6(a)(ii), which requires regulators to consider whether there is a need to sunset load profiling in light of historic and current metering costs.

The MIG argues that a sunset for load profiling can only be contemplated as a potential resolution to barriers (if any) to consumers adopting economically efficient technologies. It argues that regulators should not be placed in the position where they must make recommendations about which technologies can or cannot be utilised without reference to proven barriers to the market delivering efficient outcomes. The MIG contends that if regulators intervene in markets without a demonstrated market failure, small customers are likely to be burdened with unnecessary costs that will be a result of the regulatory regime established to support the implementation of FRC.

Therefore the MIG suggests amending condition C6(a)(i) to read as follows:

“consider whether barriers exist to consumers adopting economically efficient metering solutions or other efficient technology and, examine for both first and second tier customers whether meter ownership acts as a barrier to customer switching. If it is determined that such barriers exist, the review must make recommendations in relation to reducing those barriers in order to promote the adoption of economically efficient solutions for example recommendations regarding the accelerated replacement of type 6 meters with type 5 meters and/or the sunseting of load profiling.”

The MIG suggests that condition C6(a)(ii) may then be deleted.

4.5.3 Commission's considerations

After considering the additional evidence presented at the PDC, the Commission maintains its view that it is not appropriate for it to mandate a roll out of interval metering or place a sunset on load profiling. The Commission's role is to authorise the broad framework for the introduction of FRC, with the details being determined by the metrology coordinator in each jurisdiction.

The Commission considers that, as argued by NECA, there are short-term benefits from enabling a low cost alternative to metering to facilitate customer choice. The Commission also agrees that the public benefits of allowing a low cost solution to promote customer choice, despite the lack of accuracy, outweighs any anti-competitive detriments associated with requiring customers who choose to change their retailer to have a metering installation.

Some interested parties have argued that profiling is not a low cost alternative. However, the Commission considers that even if meters can be developed for a lower cost than has been proposed in some reports to the jurisdictions, this does not necessarily mean that interval metering will be a viable solution for all customer classes. There may be some customer classes for which it may not be economic to have an interval meter (unless the jurisdiction has a new and replacement policy that smears the cost of the meters). The Commission also considers that placing a sunset on profiling may deter some businesses from investing in the necessary systems arising from the uncertainty of whether they will continue beyond 2004.

The Commission therefore considers it appropriate that the code changes allow for both type 5 and 6 metering installations. It is then a matter for a metrology coordinator to determine whether it is appropriate that the option of profiling be available to all customer classes or only some customer classes, based on their more in depth analysis and consultation.

However, the Commission is not convinced that the full benefits of competition will be delivered in the longer term without a move towards interval metering. The Commission considers that, as noted by Mr Outhred, the EAG, CEC, and CSS only interval metering, not profiling, will provide the potential for signals to encourage demand side responsiveness and innovative retail tariffs, thereby leading to more genuine retail competition. The Commission considers it vital that any reforms that can stimulate demand side responsiveness are implemented otherwise the market will need to continue to outlay large amounts of capital on generation or network investments that are only used to supply relative short periods of time.

The Commission has, therefore, imposed a condition requiring the jurisdictional regulators to jointly conduct a review of metering installations types 5 and 6 and the metrology procedures that have been implemented in the participating jurisdictions by 31 December 2003. This issue is addressed in condition C7.

Pulse contends that it is essential that any review of metering installation types 5 and 6 takes account of historical and future metering associated costs incurred. It also contends that any review should assess whether the date for replacement of type 6

meters permits an appropriate sunk cost recovery timeframe and the impact of such time frames on customers costs. The NRF suggests that the review may not deliver the required justification for the continuation of load profiling. It argues that as a result, the short time frame allowed for a manually read interval meter roll out would not be achievable, and this will result in financial risks being borne by market participants. It contends that a public benefit test of the metering installations type 6 versus manually read interval meters should be required by 31 December 2001. The Victorian DBs suggest that the review should produce a recommendation to NECA for code changes and should consider any transitional issues, such as jurisdictional differences, arising from the recommendations. AGL considers that the review should consider the effects of implementing a metering solution on consumption decision made at the wholesale level.

After considering these issues, the Commission has decided that the jurisdictional regulators' joint review must:

- consider whether barriers exist to end users adopting economically efficient metering solutions or other economically efficient technology;
- examine whether meter ownership acts as a barrier to end users changing retailers
- identify whether there is a need for a sunset of load profiling for certain customer classes;
- include in the economic analysis the cost to consumers of any stranded assets;
- assess the effects of implementing a metering solution on consumption decisions made at the wholesale level;
- take into account any jurisdictional requirements in place at the time of the review in relation to new and replacement meters; and
- consider options for developing a single nationally consistent metrology procedure for each of metering installation types 5-7.

Even though the CEC cites examples where low cost remotely read interval meters have been rolled out in international markets, the Commission believes that this needs to be addressed in light of Email's comments. Email argues that international metering manufacturers are currently not interested in developing low cost type 5 meters that comply with Australian standards and conditions. Email suggests that a new and replacement strategy is sufficient to drive the necessary volume of production that is needed to reduce the price of interval meters, making it more likely that the market will consider a broader move towards interval meters. The Commission supports the installation of interval meters where existing electromechanical meters are due for replacement and in new commercial and residential properties.

However, the Commission agrees with EPD's view that this issue that should not be addressed in the code. EPD states that the code is concerned with metering for the purposes of settlement of the wholesale market and regulates second tier metering. EPD is of the view that any meter roll out policy must apply equally to first and second tier customers and are best considered by jurisdictional regulators in the context of their pricing reviews. Whilst having concerns about the lack of commitment from some

jurisdictions to a new and replacement strategy, the Commission concurs with the issues raised by EPD and is not imposing a condition that mandates a new and replacement meter strategy.

The Commission notes the ORG's cost-benefit analysis of an interval meter roll-out and the possibility of smearing the costs across all customers. The Commission agrees with the ORG's view that should the jurisdictions decide that interval metering is the most efficient metering solution for small customers in the future, there should be national coordination and a unified approach to interval metering where necessary and possible.

The Commission considers that the MIG's suggestion for changes to condition C6(a)(i) is appropriate, since it clarifies the intention of that condition. Condition C6(a)(i) requires the review to consider: whether meter ownership acts as a barriers to customer switching; whether barriers exists to adopting efficient metering solutions, and if barriers are determined to exist, how these might be removed. The Commission considers that extending C6(a)(i) to include part (a)(ii) reinforces the Commission's intention that the possibility of a sunset on profiling should only be considered where inefficient technologies are found to demonstrably cause a market failure. Therefore, the Commission has amended what is now condition C7 in accordance with the MIG's proposal.

4.6 Meter ownership

4.6.1 What the interested parties say

Email contended that one of the issues that remains unresolved is meter ownership. It argued that meters should belong to the distribution businesses. It also suggested that because of their mounting location, meters are subject to high frequency lightening surges that do not penetrate a residence. Email stated that retail businesses only deal with the consumers inside the residence and hence do not have the same skills at controlling surges as do the network businesses.

The CEC argued that all aspects of meter services including ownership, installation and meter reading should continue to be regulated as a monopoly activity until there is evidence that competition is capable of delivering benefits to consumers. It noted that this may require monopoly metering services to be legally separated from the retail activities of the distribution businesses.

4.6.2 Issues arising from the draft determination

In its draft determination the Commission imposed the following condition of authorisation:

C6 Clause 7.3.4(e) of the proposed code changes must be deleted and the code must be amended to provide that the jurisdictional regulators must, by 31 December 2003, jointly conduct and complete a review of metering installation types 5 and 6 and the metrology procedures that have been implemented in the participating jurisdictions. The review must:

(a) in relation to metering installations types 5 and 6:

- (i) consider whether barriers exist to consumers adopting economically efficient metering solutions or other economically efficient technology and, examine for both first and second tier customers whether meter ownership acts as a barrier to customer switching. If it is determined that such barriers exist, the review must make recommendations in relation to reducing those barriers in order to promote the adoption of economically efficient solutions for example recommendations regarding the accelerated replacement of type 6 meters with type 5 meters;
 - (ii) consider whether there is a need for a sunset of load profiling for certain customer classes, after considering historic and current metering costs;
 - (iii) include in the economic analysis the cost to consumers of any stranded assets;
 - (iv) take into account any jurisdictional requirements in place at the time of the review in relation to new and replacement meters;
 - (v) consider the effect of implementing a metering solution on consumption decisions made at the wholesale level and how this filters through to retail pricing; and
 - (vi) consider options for developing a single nationally consistent metrology procedure;
- (b) in relation to the metrology procedures that have been implemented in the participating jurisdictions, seek to achieve national consistency for the purpose of meeting the objectives set out in clause 7.3.1(ba)(3A);
 - (c) propose to NECA any changes to the code that are necessary to implement the recommendations made by the review; and
 - (d) specify a date for a further review to be conducted.

C7 The code must be amended to provide that the jurisdictional regulators must review the effectiveness of the current ringfencing arrangements between the distribution, retail and the metering businesses. Where the ringfencing guidelines are deemed to be ineffective the jurisdictional regulator must develop new guidelines.

Integral shares the Commission's concerns about meter ownership but believes that the Commission's proposal in the draft determination does not go far enough towards addressing these issues. Integral's concerns relate to C6 of the draft determination, which requires the joint jurisdictional review to consider the issue of meter ownership. Integral states that in the absence of any derogation to the code, the passing of responsibility for meter ownership back to the Financially Responsible Market

Participant (FRMP), may cause barriers to entry, creates a conflict of interest, and increases the cost of metering to the industry and ultimately the consumer.

EWON outlined some basic principles that it believes should be considered in the implementation of full retail competition for small customers. These relate to the cost effectiveness of meters, simplicity of arrangements between customers and retailers/network providers, and customers' accessibility to information about their energy consumption. EWON argues that these issues would be best addressed if network service providers maintained meter ownership.

At the PDC, EnergyAustralia suggested that meter ownership should remain with the distribution businesses until the joint jurisdictional regulators' review is completed by December 2003. It also noted that if some states pursue contestable meter ownership, this may foreclose the review.

4.6.3 Commission's considerations

The Commission shares the concerns raised by Email and the CEC about meter ownership. The Commission is concerned that meter ownership may act as a barrier to competition and is also concerned that this issue has not been adequately addressed either in the code or by the jurisdictions. In the above 160MWh market, the cost savings that are derived from lower electricity prices readily outweigh the cost of the meter. However, in the below 160MWh market, these cost savings may be outweighed by the cost of the meter. The Commission believes that it is unlikely that a retailer will bear the cost of a meter when the risk of a customer switching could leave a large portion of the metering cost stranded. This may mean that retailers charge customers upfront for the meter, and there is the risk that this may deter customers from changing retailers.

However, the Commission considers that under contestability, arrangements could potentially be developed to overcome such barriers. For example, second tier retailers might lease meters from first tier retailers. In this sense, allowing the retailer to own meters may not necessarily be a barrier to competition.

In response to a letter by the Commission, EPD suggested that the issue of meter ownership needs to be addressed by jurisdictions in the light of market developments over the next few years. The Commission agrees with the EPD and has therefore imposed a condition that the joint jurisdictional regulators' review, to be conducted by 31 December 2003, must consider the issue of meter ownership. This is addressed in condition C7.

The Commission notes that at the PDC and in subsequent submissions some interested parties have argued that meter ownership should be a monopoly function of the distribution businesses until this review is conducted. However, the Commission considers that this issue is better considered by each metrology coordinator when developing their metrology procedures. The Commission is aware that as an interim measure some jurisdictions are considering derogations to make the distribution business the monopoly provider of metering services for a transitional period.

The Commission is concerned that, as noted by the CEC, joint distribution/retail businesses may misuse their position to deter other retailers from entering the market.

To address this problem, the Commission has imposed a condition requiring that, by 31 December 2002, the jurisdictional regulators review the effectiveness of the current ringfencing arrangements for prescribed and other services in preventing anti-competitive conduct between the distribution businesses, its retail business and the metering businesses. Where the ringfencing guidelines are deemed to be ineffective the jurisdictional regulator must develop new or revised guidelines. This is addressed in condition C8.

4.7 Centralised data store

4.7.1 What the interested parties say

The NRF was concerned that the code could be interpreted to require NEMMCO to manage data through a centralised data store. It was concerned that without amendment, there is a risk that the code will be narrowly construed to require centralisation of the meter data store and in doing so, restrict industry to a data storage option that may prove both costly and unwarranted. It contended that any imposed centralisation of the data storage function carries with it the dual risks of eliminating pressure for competitive price restraints and reducing flexibility in the provision of services.

4.7.2 Issues arising from the draft determination

The Commission did not receive any response to its decision relating to the centralised data store in the draft determination.

4.7.3 Commission's considerations

It should be noted that the Commission's role in this decision is limited to approving the code changes currently before it. The Commission is of the view that the proposed code changes appropriate allow for either a centralised or decentralised solution to data storage. The Commission believes that NEMMCO's decision to use a centralised process is not prescribed by the code. However, in making a decision about whether to implement a centralised or decentralised data system, NEMMCO would need to be guided by its objectives under the code. One of NEMMCO's objectives is 'to promote the ongoing development of, and changes to, the national electricity market with the objective of continually improving its efficiency'. The Commission believes that it was NEMMCO's opinion that a centralised data store was the most cost-effective method at this point in time. Additionally, NEMMCO's decision to implement a centralised data store was undertaken in consultation with NEMSAT members, jurisdictions, and industry. However, this decision does not preclude NEMMCO from moving to a decentralised system should NEMMCO consider that a decentralised option would become more cost effective in the longer term.

4.8 Editorial amendments

4.8.1 What the interested parties say

Since the FRC code changes were submitted to the Commission, NEMMCO has become aware of the need to clarify a number of areas. NEMMCO suggested several amendments, in a letter addressed to the Commission dated 30 January 2001 (Appendix B), which it considers are essential to ensure that the development of the most efficient solution is allowed for under the code. NEMMCO conducted public consultation on its proposed amendments and there been few concerns raised with the proposals. NEMMCO argued that its suggested amendments improve the interpretation, flexibility and intent of the code changes, particularly with regard to NEMMCO's ability to procure the capacity to develop and deliver the services enabled by the code changes. These amendments relate to:

- Clause 7.9.3 'Periodic Energy Metering'
- Clauses 7.9.4(a) and 7.9.4(b) "Data validation and substitution"
- Clause 7.3.1(a)(5) "Metering installation components"
- Clause 7.11(aa) "Performance of Metering Installation"
- Note 4 of table S7.2.3.1 of schedule 7.2 "Accuracy Requirements for metering Installations"
- Clause 8.6 "Confidentiality"
- Clause 7.3.6 "Payment for Metering"
- Clauses 7.3.1(a)(9) and 7.3.1(a)(10) "Metering Installation components"

4.8.2 Issues arising from the draft determination

Apart from some minor editorial comments from NECA and NEMMCO, the Commission did not receive any response to conditions C8 to C21 that were imposed in the draft determination.

4.8.3 Commission's considerations

The Commission believes that there are public benefits from having a code that is clear in its intent. Therefore, the Commission supports NEMMCO's suggestions that the code changes be amended to improve their interpretation, flexibility and intent and has imposed conditions C9 to C21 to achieve this.

5. Registration of code participants

5.1 The application

Chapter 2 of the code deals with the registration of code participants. To register as a code participant, NEMMCO must be reasonably satisfied that the person meets the specified eligibility requirements in the code.

The code currently requires that a person must classify its electricity purchase at one or more connection points as either a first tier load, second tier load, a market load or an intending load. However, it is possible that at the time a person seeks registration as a customer, particularly as a market customer, the person is not in a position to classify any loads in accordance with the code.

An example of this arises when a new retailer entering the market is not yet in a position to supply customers. As a result, it cannot classify any loads as market loads until it has been registered as a market customer. Additionally, in line with the transition towards FRC, most jurisdictions are establishing retailer of last resort schemes that require the distribution business to act as the default retailer. Therefore, it may be likely that a number of persons, such as distribution businesses who do not act as retailers, will seek registration as a market customer, even though they are not in a position to classify their load.

The proposed code changes allow a new retailer to register as a market customer without requiring it to identify a connection point immediately. However, NEMMCO must be satisfied that the person intends to classify a connection point within a reasonable period of time. The proposed code changes also make provision for persons to register as market customers for the purposes of acting as a retailer of last resort. A person wishing to register as a customer for this purpose would not be expected to classify a connection point until the relevant retailer of last resort scheme is invoked.

5.2 Issues for the Commission

The introduction of FRC will provide customers the opportunity to choose their electricity retailer. However, the potential benefits of FRC may be reduced if retailers are unable to register as code participants, limiting the number of new retailers entering the market.

5.3 What the applicant says

NECA contends that the amendments to the code will improve the ability of retailers to enter the market without additional risk support. This will support the development of retailer of last resort schemes and the entry of new retailers.

5.4 What the interested parties say

The Commission did not receive any submissions from interested parties regarding the registration of code participants.

5.5 Issues arising from the draft determination

The Commission did not receive any response to the decision relating to the registration of code participants in the draft determination.

5.5 Commission's considerations

The Commission considers that the code changes will provide greater opportunities for retailers to enter the market, increasing the potential for greater price and non-price competition to be delivered to customers.

The Commission understands that the registration of market customers to act as retailers of last resort has been an issue in South Australia. ETSA Utilities' distribution license, pursuant to South Australian Electricity Act 1996, requires it to act as a retailer of last resort. However, as ETSA Utilities does not currently undertake any activities that require a retail licence in South Australia, NEMMCO has been reluctant to register it as a market customer. The Commission considers that these code changes will enable ETSA Utilities to undertake this function and will benefit South Australian customers should the retailer of last resorts scheme be activated.

6. Determination

This determination is made on 1 August 2001. The Commission considers that the proposed arrangements and conduct set out in the code changes related to FRC and the registration of code participants:

- 1) are likely to result in a benefit to the public which outweighs the potential detriment from any lessening of competition that would result if the proposed conduct or arrangements were made, or engaged in; and
- 2) are likely to result in such a benefit to the public that the proposed conduct or arrangements should be allowed to take place or be arrived at.

For reasons outlined in chapters 4 and 5 of this determination, the Commission grants conditional authorisation to the amendments to the code contained in application numbers A90739, A90740 and A90741 until 31 December 2010.

The authorisation that the Commission has granted to application numbers A90739, A90740 and A90741 is subject to the following conditions:

C1 The proposed code changes must be amended to provide that:

- (a) **in each participating jurisdiction, the jurisdictional regulator must be appointed as the metrology coordinator by the date that is the earlier of:**
 - (i) **the date that all customers in the participating jurisdiction become able to purchase electricity from any retailer in that participating jurisdiction; and**
 - (ii) **1 January 2003;**
- (b) **the jurisdictional regulator must, within 6 months of being appointed as the metrology coordinator, complete a review of the metrology procedures that are in place when it is appointed as the metrology coordinator. The review must assess the initial metrology procedure against the objectives in clause 7.3.1(bc). The review must be conducted in accordance with the code consultation procedures and following consultation with other interested parties. A copy of the report must be provided to the Commission and made publicly available.**

C2 Clause 7.3.1(ba)(1) and (2) of the proposed code changes must be amended as follows:

‘A metrology procedure must:

- (1) **be prepared, revised and published by NEMMCO, in accordance with Code consultation procedures and following consultation with other interested parties, for metering installations associated with those connection**

points which are classified as metering installation types 1, 2, 3 and 4 as specified in schedule 7.2.

(2) be prepared and revised by a Metrology Coordinator, in accordance with code consultation procedures and following consultation with other interested parties and metrology coordinators, for metering installations associated with those connection points identified by clause 7.1.1(b)(2) and which are classified as metering installation types 5, 6 and 7 as specified in schedule 7.2. The metrology procedure required by this clause 7.3.1(ba)(2):

(i) must be established by a Metrology Coordinator;

(ii) must be provided by the Metrology Coordinator to NEMMCO and published by NEMMCO.

(3) be prepared and revised in accordance with:...

C3 The glossary in the code must be amended to include the following term:

‘interested party:

In chapter 7, a person that a metrology coordinator considers to be an interested party.’

C4 The code must be amended where necessary to ensure that:

(a) where changes to the metrology procedures in relation to any matter (including any changes proposed to the metrology coordinator) are considered by the metrology coordinator to be of a minor or procedural nature or required to correct a manifest error, the metrology coordinator is not required to follow the consultation procedures referred to in clauses 7.3.1(ba) and (bc). In the case of such changes, the metrology coordinator must hold consultations or ask for submissions from only such interested persons as the metrology coordinator considers appropriate. After holding any such consultations or receiving any such submissions the metrology coordinator must notify all Code Participants and other interested parties of the proposed change. The Code Participants and other interested parties may object in writing to the proposed change within 7 days (or such longer period as may be allowed in the notice) after the metrology coordinator’s notice is published. The metrology coordinator must consider any timely objections received by it following the publication of its notice and give due consideration to any such objections before deciding whether to proceed with the proposed change; and

(b) where a metrology procedure for a participating jurisdiction reproduces a clause, or part of a clause of this code, the metrology coordinator appointed in that participating jurisdiction must, if there is a change to any such clauses of this code, update the

metrology procedures to maintain consistency between the metrology procedures and the relevant clauses of the code. Such changes to the metrology procedure must be published in accordance with the process set out in the code but are not otherwise subject to the proposed clauses 7.3.1(ba) and (bc).

- (c) changes to metrology procedures for a participating jurisdiction may be proposed to the metrology coordinator appointed in that participating jurisdiction.**

C5 Clause 7.3.1(bc) of the proposed code changes must be amended to include the following:

‘to the extent of any conflict between the application of these objectives to a particular metrology procedure, the metrology coordinator may determine the manner in which they can best be reconciled or which of them should prevail.’

C6 Clause 7.2.1(A)(d) of the proposed code changes must be deleted and replaced with the following:

‘A Metrology Coordinator may not approve more than one metrology procedure for each type of metering installation within the participating jurisdiction of that Metrology Coordinator.’

C7 Clause 7.13(e)(3) of the proposed code changes must be deleted. A new clause must be inserted into the code which provides that the jurisdictional regulators must, by 31 December 2003, jointly conduct and complete a review of metering installation types 5 and 6 for the metrology procedures that have been implemented in the participating jurisdictions. The review must:

- (a) in relation to metering installations types 5 and 6:**
 - (i) consider whether barriers exist to end users adopting economically efficient metering solutions or other economically efficient technology and, examine whether meter ownership acts as a barrier to end users switching retailers. If it is determined that such barriers exist, the review must make recommendations in relation to reducing those barriers in order to promote the adoption of economically efficient solutions for example recommendations regarding the accelerated replacement of type 6 meters with type 5 meters and/or the sunseting of load profiling;**
 - (ii) include in the economic analysis the cost to consumers of any stranded assets;**
 - (iii) take into account any jurisdictional requirements in place at the time of the review in relation to new and replacement meters; and**

- (iv) consider the effect of implementing a metering solution on consumption decisions made at the wholesale level and how this filters through to retail pricing.
- (b) consider options for developing a single nationally consistent metrology procedure for each of metering installation types 5-7.
- (c) propose to NECA any changes to the code that are necessary to implement the recommendations made by the review; and
- (d) specify a date for a further review to be conducted.

The review must be conducted in accordance with the code consultation procedures, and must include consultation with other interested parties. A copy of the report must be provided to the Commission and made publicly available.

C8 The Code must be amended to provide that the jurisdictional regulators must, by 31 December 2002, review the effectiveness of the ringfencing arrangements for prescribed services and other services in preventing anti-competitive conduct, providing transparency and giving confidence in the integrity of the competitive market arrangements between the distribution, retail and metering businesses. Where the ringfencing guidelines are deemed to be ineffective the jurisdictional regulator must develop new or revised guidelines.

C9 Clause 7.9.3 of the code must be amended to:

- (a) ‘Where a device is used as the *data logger* (*metering installation* types 1 to 5), the *energy data* relating to the amount of *active energy* and where relevant *reactive energy* passing through a *connection point* must be collated in *trading intervals* within a *metering installation* unless it has been agreed between *NEMMCO*, the *Local Network Service Provider* and the *Market Participant*, or *NEMMCO* and a *Metrology Coordinator* that *energy data* may be recorded in sub-multiples of a *trading interval*. An agreement between *NEMMCO* and the *Metrology Coordinator* is to be recorded in a *metrology procedure*.
- (b) Where a *metering installation* database is used as a *data logger* (*metering installation* types 6 and 7), the *energy data* relating to the amount of *active energy* passing through a *connection point* must be collated or determined in *trading intervals* within a *metering installation* unless it is specified in the *metrology procedure* that the data may be converted into *trading interval* data in the *NEMMCO* substitution process referred to in clause 7.9.4(a), in which case the *metrology procedure* must specify:
 - (1) the parameters to be used in preparing the *trading interval* data for each *market load*, including the algorithms;

- (2) the first-tier energy data that is to be used in the conversion process;
- (3) the quality and timeliness of the first-tier energy data;
- (4) the party to be responsible for providing the first-tier energy data; and
- (5) if required the method of cost recovery in accordance with clause 7.3.6(ab).'

C10 Clause 7.9.4(a) must be amended to:

‘NEMMCO is responsible for the validation and substitution of metering data, which must be undertaken in accordance with the procedures developed by NEMMCO under clause 7.9.4(b).’

C11 Clause 7.9.4(b) must be amended to:

‘NEMMCO must develop data validation and substitution procedures that produce *settlements ready data* in accordance with *Code consultation procedures* and the requirements of the relevant *metrology procedure* which have been prepared in accordance with clause 7.9.3. For the purpose of clarification, and if such a requirement is specified in the *metrology procedure*, the validation and substitution procedures are to include the method by which accumulated *metering data* is to be converted into trading interval data and the method of managing the first-tier energy data that is necessary to enable this conversion to take place.’

C12 Clause 7.3.1(a)(5) must be amended to:

‘have electronic data recording facilities such that *active energy* can be collated in accordance with clause 7.9.3. For the purpose of clarity, this clause 7.3.1(a)(5) relates to the *metering installation* and not a *meter*.’

C13 Clause 7.11(aa) of the proposed code changes must be amended to:

‘Where the *metering installation* does not have the capability for the daily delivery of *metering data* arising from a device(s) contained within the site of a metering installation, *metering data* is required:

- (1) at the level of accuracy prescribed in schedule 7.2
- (2) within the timeframe and in the format required for settlements as specified in procedures established by NEMMCO in accordance with clause 7.9.4(b); and
- (3) in accordance with performance standards established by NEMMCO pursuant to *Code consultation procedures*.’

C14 Note 4 of table S7.2.3.1 of the proposed code changes must be amended to:

‘A *metrology procedure* is to be prepared and approved by the *Metrology Coordinator* for the purpose of converting *active energy* into *metering data*. The value of “y” is to be determined by the *Metrology Coordinator*. The maximum acceptable value of “y” is 750 MWh per annum. This *metering installation* type provides for *accumulated energy data* to be transferred to a remote location where access to a *telecommunication network* has been established. The *metrology procedure* is to identify the method by which *accumulated energy data* is to be converted into *trading interval* data in accordance with clause 7.9.3(b), and the method by which *estimated energy data* is to be prepared during the period when the *accumulated energy data* is not available. Devices within the *metering installation* may provide *accumulated energy data* in pre-determined daily time periods where such time periods are contained in the applicable *metrology procedure*.’

C15 Clause 8.6.2 be amended to include the terms (profile) the publication of *the profile*.

C16 The glossary in the code must be amended to include the following term:

‘profile:

The *profile* is an algorithm, or set of algorithms that is used to allocate *energy data* or costs to individual *trading intervals* in the form specified in a *metrology procedure*.’

C17 Clause 7.3.6(a) must be amended to:

‘Subject to clause 7.3.6(aa), the *financially responsible Market Participant* is responsible for payment of all costs associated with the provision, installation, maintenance, routine testing and inspection of the *metering installation*. This includes:

- (1) the cost of providing *metering data* and *settlements ready data* to the *Local Network Service Provider* and to the *Local Retailer* to enable these parties to the extent required to fulfil their obligations under the *Code*;**
- (2) the cost of providing *metering data* to NEMMCO; and**
- (3) the cost of preparing *settlements ready data* where such costs will not be recovered by NEMMCO in accordance with clause 7.3.6(ab).’**

C18 Clause 7.3.6 must be amended to include:

- (ab) When *NEMMCO* is required to undertake functions associated with a *metering installation* in accordance with the requirements of a *metrology procedure*, *NEMMCO*’s cost is to be recovered through *Participant fees* in accordance with a budget prepared under clause 2.11.3(b)(3) unless the**

metrology procedure specifies an alternative method of cost recovery, in which case *NEMMCO* must not recover the costs through *Participant fees*. These functions could include the preparation and application of a *profile*.

C19 7.3.1(a)(9) must be amended to:

‘include facilities on site for storing the *interval energy data* for a period of at least 35 days if the *communications link* has the capability for daily delivery of data from the site of the *metering point* and the *metering installation* includes the *measurement element(s)* and the *data logger* at the same site.’

C20 7.3.1(a)(10) of the proposed code changes must be amended to:

‘include facilities on site for storing the *interval energy data* for a period of at least 200 days or such other period as specified in an applicable *metrology procedure* if the *communications link* does not have a capability for daily delivery of data and the *metering installation* includes the *measurement element(s)* and the *data logger* at the same site’

C21 Clause 7.3.1(a)(8) be amended to:

‘be capable of delivering data from the site of the metering installation to the metering database.’

Appendix A. Submissions

Initial submissions received:

Email

Customer Energy Coalition

Energy Policy Division, Victorian Department of Natural Resources and Environment

Market Implementation Group, New South Wales Treasury

Pulse Energy

Ergon

Energy Action Group

Mr Hugh Outhred

Joint Victorian Distribution businesses

AGL

National Retailers Forum

Public Interest Advocacy Centre

EnergyAustralia

TransGrid

NEMMCO

Submissions received in response to the draft determination

Integral Energy

Energy and Water Ombudsman New South Wales

Siemens Metering

Commercial and Strategic Solutions

Customer Energy Coalition

Office of the Regulator General, Victoria

Energy Policy Division, Victorian Department of Natural Resources and Environment

Market Implementation Group, New South Wales Treasury

Appendix B. Letter from NEMMCO

30 January 2001
Mr Michael Rawstron
General Manager
Regulatory Affairs – Electricity
Australian Competition and Consumer Commission
PO Box 1199
DICKSON ACT 2602

Dear Mr Rawstron

National Electricity Code Changes – Full Retail Competition

I refer to the recent interim determination dated 27 October 2000 on the proposed amendments to the National Electricity Code in regard to full retail competition.

These interim Code changes provide for (in part) the use of a type 6 metering installation. A review of the provisions of the type 6 metering installation in light of consultation on metrology procedures and further clarification of the functionality of the national FRC systems being procured by NEMMCO, has highlighted a number of areas that require clarification to ensure the development of the most efficient solution is allowed for under the Code. These are required in the following areas.

1. Clause 7.9.3 “Periodic Energy Metering”
2. Clauses 7.9.4(a) and 7.9.4(b) “Data Validation and Substitution”
3. Clause 7.3.1(a)(5) “Metering Installation Components”
4. Clause 7.11(aa) “Performance of Metering Installation”
5. Note 4 of Table S7.2.3.1 of schedule 7.2 “Accuracy Requirements for Metering Installation”
6. Clause 8.6 “Confidentiality”
7. Clause 7.3.6 “Payment for Metering”
8. Clause 7.3.1(a)(9) “Metering Installation Components”
9. Clause 7.3.1(a)(10) “Metering Installation Components”

Details of each issue and the recommended changes are presented in Attachments 1 to 10. It should be noted that the changes recommended to the above points 1 and 2 are closely inter-linked – together they provide the necessary additional Code flexibility whilst retaining the existing Code provisions as a default position. The jurisdictional metrology procedures have been nominated as the trigger for enabling use of the additional flexibility.

Stakeholder consultation on the recommended Code changes has been undertaken to the extent possible within the timeframe of the ACCC draft determination process. The draft recommendations have been distributed to NECA, the Jurisdictional Panel, NEMSAT and those industry representatives who attended a relevant workshop during December 2000. Comments from these parties have been considered in finalising the letter.

The alterations are intended to improve the interpretation, flexibility or intent of the package of Code changes that received ACCC interim authorisation in October 2000 to enable full retail competition to commence within jurisdictional timeframes. In particular, it is necessary to formally establish the ability of NEMMCO to procure the capacity to develop, and to deliver, the services enabled by these Code changes to ensure industry support for the FRC process. Accordingly, I bring these alterations to your attention to enable them to be considered as part of the draft determination to be issued by the ACCC.

Please contact me (ph: 03 9648 8728) should further clarification of the above points be required.

Yours sincerely

Mike Robson
Head of Metering and Retail Development

Attached:

- Attachment 1 – Clause 7.9.3 “Periodic Energy Metering”
- Attachment 2 – Clauses 7.9.4(a) and 7.9.4(b) “Data Validation and Substitution”
- Attachment 3 – Clause 7.3.1(a)(5) “Metering Installation Components”
- Attachment 4 – Clause 7.11(aa) “Performance of Metering Installation”
- Attachment 5 – Note 4 of Table S7.2.3.1 of schedule 7.2 “Accuracy Requirements for Metering Installation”
- Attachment 6 – Clause 8.6 “Confidentiality”
- Attachment 7 – Clause 7.3.6 “Payment for Metering”
- Attachment 8 – Clause 7.3.1(a)(9) “Metering Installation Components”
- Attachment 9 – Clause 7.3.1(a)(10) “Metering Installation Components”

(note that in each recommendation, the new text is underlined and deleted text is ~~redlined~~)

(note also that statements provided in square brackets [] are for information only)

Attachment 1 - Clause 7.9.3 “Periodic Energy Metering”

Clause 7.9.3 - At the time of drafting Chapter 7, the intention of this clause was to confirm that a half-hour data stream had priority over a 15-minute data stream (that is, future designs of metering equipment should primarily consider half hour interval data streams rather than some other interval) but that the 15-minute data stream would be accommodated within the market design. The reference to “sub-multiples of a trading interval” was an attempt to generalise this principle to accommodate other possible time intervals. The agreement that is required between NEMMCO, the LNSP and the Market Participant was an attempt to ensure that all parties were aware of the data stream interval when anything other than half-hour was installed.

By way of explanation, 15-minute data streams have been traditionally used for managing demand rather than energy. This practice has been in place for many decades within Australian utilities. Chapter 7 of the Code was designed to accommodate this practice.

The action of transforming active energy data into trading interval data (using a data logger) is considered to be well founded for types 1 to 5 metering installations, where the possibility of the data logger being located in the data collection system (that is, outside a metering installation) would not be contemplated. In regard to the type 7 metering installation, this provision is acceptable, since the technique of specifying the market load and converting the specification into trading intervals can be effectively managed within the metering installation. However, it has been recognised that the action of transforming active energy into trading intervals for the type 6 metering installation can be managed in two ways (that is, within the metering installation and within the data collection system).

In recent discussion on the preparation of a profile shape, it became evident that several alternative parties could perform this function (that is, NEMMCO, the LNSP and a third party). If NEMMCO was the party to perform this function, then the activity would be carried out within the area of NEMMCO’s responsibility, that is within the data collection system. If the LNSP or a third party were to perform this function, then the activity would be carried out within the area of the metrology coordinator’s responsibility, that is within the metering installation. Without pre-empting the solution, it has become apparent that clause 7.9.3, with its current construction, offers an unnecessary barrier to the determination of an efficient solution. The barrier results from the requirement (in clause 7.9.3) that a metering installation must always transform active energy into trading intervals.

For the type 6 metering installation, there is a possibility of converting the accumulated read to a half hourly data stream using a profile shape that is produced in the data collection system. This principle should be accommodated by the Code.

The Code allows NEMMCO to obtain any data (half-hourly “trading interval” data or other data) from the metering installation – the data so obtained is classified as metering data. This feature was introduced to manage the need to accommodate sub-multiple trading interval data. The feature can be combined with clause 7.9.1(d), which requires NEMMCO to store the “original energy readings” in the metering database

(for a type 6 metering installation, the “original energy readings” are the accumulated meter reads).

In regard to the “original energy readings”, it is noted that the interim Code change has included the phrase “where relevant” which was inserted during the NECA consultation phase. This is contrary to the intent of this paragraph, where the original energy readings are required (at least) for audit purpose and accordingly all original energy readings are required. NEMMCO considers that the clause should be restored to its previous meaning and in this regard has submitted this request to the ACCC (in a letter dated 11/9/00) as part of the ACCC consultation process. Whilst the correction was not included in the interim determination, NEMMCO is of the understanding that the restoration will be addressed in the draft determination report. For this analysis, the previous wording of clause 7.9.1(d) has been used.

If accumulated energy data was collected from a metering installation then, and subject to the validation and substitution procedure, NEMMCO would be able to classify the accumulated energy data as metering data for the purpose of settlements and proceed to validate and substitute this data stream. That is, the definition of “metering data” is broad enough to accommodate a wide range of data stream intervals. For instance, it can accommodate the “visible display” data stream (the accumulated meter read) for types 1 to 5 metering installations, as well as the type 6 metering installation accumulated read data stream. It could also accommodate the consumption value, that is, the difference in meter read between two adjacent readings. It is noted that “accumulated energy data” is a Glossary term which can accommodate both a meter read and a consumption value (the difference between two meter reads).

Clause 7.9.4(a) states “NEMMCO is responsible for the validation and substitution of metering data using a method that produces settlements ready data”. Validation and Substitution is a flexible provision and could include the activity of profiling (refer Attachment 2) to produce trading interval data. If the efficient solution was for NEMMCO to prepare a profile shape, then NEMMCO would be able to make use of clause 7.9.4(a) to create the trading interval data necessary for settlements.

To ensure that any action by NEMMCO remains in context with jurisdictional requirements, it is proposed that data validation and substitution take into account any directions provided by the relevant metrology procedure. For instance, if a metrology coordinator requires NEMMCO to prepare a profile shape and to apply the profile for the purpose of settlements, then the metrology procedure should contain this statement. The metrology procedure should also specify the profile shape to be used by that jurisdiction and the type of energy data (eg, meter reading data or consumption data) to be used. If the metrology coordinator specifies a profile shape that requires the use of first-tier data, for instance, then the metrology procedure should specify the quality of that data, the responsibility for providing that data to NEMMCO and the timing of delivery of that data. Alternatively, if a metrology coordinator requires the profile shape to be prepared by a party other than NEMMCO (that is, by a Metering Provider within the metering installation), then the metrology procedure should contain the necessary information to ensure that suitable trading interval data would be prepared within the metering installation. As indicated in Attachment 7, the metrology coordinator could also direct NEMMCO to recover costs in a manner other than through Participant fees.

The Code should be flexible enough to accommodate a direction, either way, by the metrology coordinator.

The current construction of clause 7.9.3 provides a situation where type 6 trading interval conversion would be carried out in two places (within the metering installation and within the data collection system) should NEMMCO be required to perform this function. This dual requirement introduces a barrier to efficient operation. Rather, an option to perform this function in one location or another should be available to the market.

The proposed change to the Code retains the existing arrangement as the default position. In addition, it is constructed around the conditions provided in clauses 7.3.1(b)(5), and 7.3.1(a)(9) to 7.3.1(a)(11), where a data logger can be either a device or a metering installation database.

To remove the barrier, it is **recommended** that clause 7.9.3 be altered to read:

- (a) Where a device is used as the *data logger* (*metering installation types 1 to 5*), the *energy data* relating to the amount of *active energy* and where relevant *reactive energy* passing through a *connection point* must be collated ~~or determined~~ in *trading intervals* within a *metering installation* unless it has been agreed between *NEMMCO*, the *Local Network Service Provider* and the *Market Participant*, or *NEMMCO* and a *Metrology Coordinator* that *energy data* may be recorded in sub-multiples of a *trading interval*. An agreement between *NEMMCO* and the *Metrology Coordinator* is to be recorded in a *metrology procedure*.
- (b) Where a *metering installation* database is used as a *data logger* (*metering installation types 6 and 7*), the *energy data* relating to the amount of *active energy* passing through a *connection point* must be collated or determined in *trading intervals* within a *metering installation* unless it is specified in the *metrology procedure* that the data may be converted into *trading interval* data in the *NEMMCO* substitution process referred to in clause 7.9.4(a), in which case the *metrology procedure* must specify:
- (6) the parameters to be used in preparing the *trading interval* data for each *market load*, including the algorithms;
 - (7) the first-tier energy data that is to be used in the conversion process;
 - (8) the quality and timeliness of the first-tier energy data;
 - (9) the party to be responsible for providing the first-tier energy data; and
 - (10) if required the method of cost recovery in accordance with clause 7.3.6(ab).

Attachment 2 - Clauses 7.9.4(a) and 7.9.4(b) “Data Validation and Substitution”

Clause 7.9.4(a) – This clause states that “NEMMCO is responsible for the validation and substitution of metering data using a method that produces settlements ready data”. The application of this clause to the type 6 metering installation can be explained as follows:

If NEMMCO were to obtain the accumulated meter read from the metering installation as the form of metering data to be used in the settlements process, then NEMMCO could use clause 7.9.4(a) (specifically the substitution process) to convert the accumulated data to trading interval data. To make the conversion, NEMMCO is restricted to the process as agreed to in clause 7.9.4(b) – that is, the procedures prepared by NEMMCO and the industry in accordance with Code consultation procedures.

Clause 7.9.4(b) states “*NEMMCO must develop data validation and substitution procedures in accordance with the Code consultation procedures*”. The validation and substitution procedures would need to allow NEMMCO to create a profile shape and apply the shape to the accumulated data, or a forecast of that data. It would also need to allow NEMMCO to collect first-tier energy data and use this data in the profile shape.

To ensure that the validation and substitution procedures reflect this intent, it is proposed that the following principles be adopted:

- (i) Clause 7.9.4(a) should expressly state that NEMMCO’s responsibility for validation and substitution be in accordance with the procedure. This could be achieved by linking this clause with clause 7.9.4(b).
- (ii) The purpose for preparing the validation and substitution procedure should be moved from clause 7.9.4(a) to 7.9.4(b) such that this purpose qualifies the scope of the procedure and not the extent of NEMMCO’s responsibility. This change will assist in strengthening the link between NEMMCO’s responsibility and the content of the validation and substitution procedure.
- (iii) Clause 7.9.4(b) be referenced to the specification recorded in the metrology procedure, as provided for in clause 7.9.3(b).
- (iv) In addition, and for the purpose of clarity, it is proposed that a new sentence be added to clause 7.9.4(b) to remove any doubt that the scope of the validation and substitution procedure includes first-tier data.

It is noted by virtue of clause 7.3.1(ba)(4) that NEMMCO would need to modify the existing validation and substitution procedure (MT_MA560v002, dated 28 February 2000) within 3 months of the publication of a metrology procedure that involved a type 6 or type 7 metering installation. NEMMCO considers that a formal period of 3 months (in addition to the development period for the metrology procedure) is sufficient time to effect a change to the validation and substitution procedure.

Some comments received from the consultation process, whilst supporting the intent of the proposed change, did not support the use of the validation and substitution

procedures to accommodate a need for NEMMCO to prepare and apply a profile shape. Instead, it was suggested that a new clause be introduced to manage this requirement. To place these comments in context, it is noted that the terms validation and substitution are not defined in the Code – rather, they are common terms that can be varied in scope to accommodate the requirements for processing at any specific time. These common terms have been generally used by the electricity industry to cover conditions where metering data collection has failed or is faulty. The conditions include situations where the metering data has been irretrievably lost, or cannot be obtained within the required time-frame, or where the data obtained is erroneous or incomplete (refer to Section 4 of the Validation and Substitution procedure). If a meter failure occurs, it is the validation and substitution procedure that provides the legal means to resolve how the settlements process may continue to operate. An example of the broader application of the validation and substitution procedure can be found in clause 7.11(aa) which makes use of this procedure for the purpose of specifying the delivery timeframe for metering data.

Whilst there is merit in separately identifying each process that NEMMCO must undertake, there is also merit in consolidating obligations placed on NEMMCO into a single provision which contains like functions, particularly when some of those functions are already being catered for by NEMMCO. Since this submission is based on minor variations to the existing ACCC interim determination on FRC Code changes, it is considered more appropriate to recommend that the profiling obligations placed on NEMMCO by a metrology procedure be included within the validation and substitution procedure at this time.

Accordingly, it is **recommended** that:

- (a) clause 7.9.4(a) be altered to read:

“NEMMCO is responsible for the validation and substitution of metering data using a method that produces settlements ready data, which must be undertaken in accordance with the procedures developed by NEMMCO under clause 7.9.4(b).”

- (b) clause 7.9.4(b) be altered to read:

“NEMMCO must develop data validation and substitution procedures that produce *settlements ready data* in accordance with *Code consultation procedures* and the requirements of the relevant *metrology procedure* which have been prepared in accordance with clause 7.9.3. For the purpose of clarification, and if such a requirement is specified in the *metrology procedure*, the validation and substitution procedures are to include the method by which accumulated *metering data* is to be converted into trading interval data and the method of managing the first-tier energy data that is necessary to enable this conversion to take place.”

Attachment 3 - Clause 7.3.1(a)(5) “Metering Installation Components”

Clause 7.3.1(a)(5) – the first sentence states “have electronic data recording facilities such that *active energy* can be collated into trading intervals in accordance with clause 7.9.3.” This sentence makes reference to the following three separate requirements:

- Electronic data recording facilities;
- Collation of active energy into trading intervals; and
- In accordance with clause 7.9.3.

The first main purpose of this clause is to ensure that active energy would be stored in electronic form within the metering installation. The second main purpose is to dictate the manner in which active energy is to be stored. On review, the phrase “into trading intervals” has been found redundant due to the cross-reference to clause 7.9.3. Further, and when applied to the type 6 metering installation data requirements, the phrase unnecessarily imposes a data form that may not be required by a metrology procedure – the clarification of which is managed within clause 7.9.3.

To correct this situation, it is proposed that “into trading intervals” be deleted. This deletion does not change the operation of the clause and offers the benefit of removing the unnecessary imposition when the amendment to clause 7.9.3 is introduced.

It is noted that all metering installations will have “electronic data recording facilities” and that these facilities would be in the form of a data logger or a metering installation database. It is appropriate for this requirement to remain.

Accordingly, it is **recommended** that clause 7.3.1(a)(5) be altered to read:

“have electronic data recording facilities such that *active energy* can be collated ~~into trading intervals~~ in accordance with clause 7.9.3. For the purpose of clarity, this clause 7.3.1(a)(5) relates to the *metering installation* and not a *meter*.”

Attachment 4 - Clause 7.11(aa) “Performance of Metering Installation”

Clause 7.11(aa) – This is an issue that is similar in nature to the unnecessary imposition of clause 7.3.1(a)(5), as presented in Attachment 3 above. If NEMMCO were to obtain access to accumulated energy data from within the metering installation for the purpose of preparing settlements ready data, then the phrase “for all trading intervals” should be modified. On reflection, this phrase is a useful provision for type 5 and type 7 metering installations but is not useful for a type 6 metering installation.

Since the format of the metering data to be obtained by NEMMCO can be controlled through both the metrology procedure (7.9.3) and the validation and substitution procedures (7.9.4(b)), it is proposed that the phrase be deleted from this current location and the intent of the phrase be introduced in paragraph 7.11(aa)(2). It is noted that the validation and substitution procedure is required to be prepared in accordance with both the Code consultation procedures and the metrology procedures, which together provide an adequate level of control for this matter.

This proposal will offer the necessary flexibility during the design of full retail competition processes whilst retaining the intention of the original provision.

The insertion of “arising” after metering data is recommended to make explicit the point that this clause relates to the data that has left the metering installation (that is, the performance of the metering installation when viewed from the data collection system).

Accordingly, it is **recommended** that clause 7.11(aa) be altered to read:

“Where the *metering installation* does not have the capability for the daily delivery of *metering data* arising from a device(s) contained within the site of a metering installation, *metering data* is required ~~for all trading intervals~~:

- (4) at the level of accuracy prescribed in schedule 7.2
- (5) within the timeframe and in the format required for settlements as specified in procedures established by *NEMMCO* in accordance with clause 7.9.4(b); and
- (6) in accordance with performance standards established by *NEMMCO* pursuant to *Code consultation procedures*”.

Attachment 5 - Note 4 of Table S7.2.3.1 of schedule 7.2 “Accuracy Requirements for Metering Installation”

Note 4 of table S7.2.3.1 of schedule 7.2 – the third sentence states “This metering installation type provides for the conversion of active energy into metering data by methods other than the use of a data logger”. During the NECA consultation process, the term “data logger” was modified by the addition of the phrase “a metering installation database...”. At the time of this modification, the implications of this change on Note 4 were not identified. It is now observed that this sentence in Note 4 no longer represents a correct statement.

In preparing a revised sentence, a comparison was made to the third sentence in Note 3, which states “The metering installation may provide delays in transferring the interval energy data to a remote location where access to a telecommunications network has been established”. Note 4 would benefit from a similar expression, with the reference to ‘interval energy data’ modified to ‘accumulated energy data’ and the reference to ‘delay’ deleted.

It is further observed that Note 4 should be altered to allow for the situation where the metrology coordinator requires NEMMCO to convert accumulated energy data into trading interval data. The requirement would be expressed in the metrology procedure, and NEMMCO would be able to accept this requirement due to the substitution provision of clause 7.9.4. The metrology coordinator would be given power to place this request on NEMMCO by virtue of the modified clause 7.9.3(b). Accordingly, it is proposed that a new sentence be added to Note 4 to clarify this requirement.

Also at this time, an opportunity has been taken to improve the expression of the last sentence. The sentence currently states “Devices within the *metering installation* may provide *accumulated energy data* in pre-determined daily time periods which are approved by the applicable *metrology procedure*”. On reflection, the metrology procedure ‘contains’ the relevant information rather than ‘approves’ this information.

Accordingly, it is **recommended** that Note 4 be altered to read:

“A *metrology procedure* is to be prepared and approved by the *Metrology Coordinator* for the purpose of converting *active energy* into *metering data*. The value of “y” is to be determined by the *Metrology Coordinator*. The maximum acceptable value of “y” is 750 MWh per annum. This *metering installation* type provides for ~~the conversion of active energy into metering data by methods other than the use of a data logger~~ accumulated energy data to be transferred to a remote location where access to a telecommunication network has been established. The metrology procedure is to identify the method by which accumulated energy data is to be converted into trading interval data in accordance with clause 7.9.3(b), and the method by which ~~Estimated estimated energy data may is to be used~~ prepared during the period when the accumulated energy data is not available. Devices within the metering installation may provide accumulated energy data in pre-determined daily time periods which are approved by ~~where such time periods are contained in~~ the applicable metrology procedure.”

Attachment 6 - Clause 8.6 “Confidentiality”

Clauses 8.6 – the clauses 7.10 “confidentiality” and 8.6 “confidentiality” place a restriction on the use of metering data. In particular, the impact of this restriction on the publication of a “profile” and/or its derivatives needs to be considered in detail.

Clause 7.10 states “*metering data* and passwords are confidential data and are to be treated as *confidential information* in accordance with the *Code*”. Clause 8.6.1(a) states “each Code Participant must use all reasonable endeavours to keep confidential any confidential information which comes into the possession or control of that Code Participant or of which the Code Participant becomes aware.” The production of a profile by NEMMCO for the sole use of substitution by NEMMCO in preparing settlements ready data would not appear to breach the provisions of these clauses.

Clause 8.6.1(b)(2), which states “[a Code Participant] must only use or reproduce confidential information for the purpose for which it was disclosed or another purpose contemplated by the Code”, would not appear to offer any restriction on the use of metering data for the purpose of substitution if such a process was agreed in the validation and substitution procedure. However, if NEMMCO was required to undertake the additional action of publishing the profile, then the publication could only be achieved if the profile fulfilled one or more of the conditions listed in clause 8.6.2, or such action was specifically permitted by the Code. In the latter case, clause 8.6.1(b)(1) states “[a Code Participant] must not disclose confidential information to any person except as permitted by the Code.”

To allow NEMMCO to publish the profile, it is proposed that a change be made to clause 8.6.2 to permit such publication. The proposal has been developed on the understanding that a profile is only required for a type 6 metering installation and would only be prepared by NEMMCO if such a requirement was specified in a jurisdictional metrology procedure. In this situation, the metrology procedure should state that the profile is not to be classified as confidential information. Clause 8.6.2 “Exemptions” would be modified to recognise that a profile was not confidential information if so specified in a metrology procedure. The term “profile” would be added to the Glossary. With this proposal, there would be no change made to clause 7.10.

Accordingly, it is **recommended** that:

- (a) clause 7.10 remain un-altered:

7.10 Confidentiality

metering data and passwords are confidential data and are to be treated as *confidential information* in accordance with the *Code*.

- (b) clause 8.6.2(1) be added:

(1) (profile): the publication of *the profile*.

- (c) the following Glossary term be added:

profile:

The *profile* is used to assemble *trading interval metering data* in the forms specified in a *metrology procedure* . The *profile* is an algorithm, or set of algorithms, that is used to allocate *energy data* or costs to individual *trading intervals*.

[For clarification, it is noted that clause 7.7(a) provides rights of access to metering data by specified persons, such as the retailers (FRMP and Local Retailer) whose NEMMCO account statement relates to the connection point. Once the metering data is obtained by the retailer it is classified as “confidential information” by virtue of clause 7.10. Due to this classification, the retailer is required to restrict distribution of (or access to) the metering data in accordance with the conditions imposed by clause 8.6.1.]

Attachment 7 - Clause 7.3.6 “Payment for Metering”

Clause 7.3.6 – this clause provides for the payment of certain metering costs. Clause 7.3.6(a) implies that the financially responsible market participant would be obligated to pay NEMMCO’s costs for the general provision of settlements ready data. The costs would include the preparation of a profile and the application of that profile to produce settlements ready data. It would not include the publication costs of the profile, nor the sharing of these costs with the Local Retailer.

On the other hand, clause 2.11.3(b)(3) provides for NEMMCO to budget for “NEMMCO’s expenditures in the collection, storage and processing of metering data”. This clause provides NEMMCO with sufficient power to recover the full costs of preparing a profile and the application of that profile from Participant fees if it is part of the validation and substitution process required by clause 7.9.4. However, it does not provide NEMMCO with the power to recover costs of publishing the profile – this cost is recovered under another clause in the Code.

The recovery of the publication cost is provided for in clause 3.13.1(a) which states “...and [NEMMCO] may charge a fee reflecting the cost of providing any information under this clause 3.13.1(a).”. It is noted that for NEMMCO to be able to provide the information, a request to NEMMCO would be required. This could be achieved through a metrology procedure.

In regard to the preparation and application by NEMMCO of a profile, clause 7.3.6(a) places an unfair cost burden on the financially responsible Market Participant when compared to the Local Retailer. To improve the equity of NEMMCO’s cost recovery for the preparation and application of a profile, it is proposed that clause 7.3.6(a) be modified to remove the obligation on the financially responsible Market Participant to pay for these costs. To assist in the clarification of the recovery of these costs, it is proposed that a new clause 7.3.6(ab) be introduced. This new clause would remove any doubt that NEMMCO could recover these costs through Participant fees. This approach appears to be equitable since Market Participants from all jurisdictions have the opportunity to benefit from a profile that is prepared for any one jurisdiction. For example, a Local Retailer in jurisdiction 1 could be a second-tier retailer in jurisdiction 2. If jurisdiction 2 made use of a type 6 metering installation to encourage consumer switching, then the Local Retailer of jurisdiction 1 would have the opportunity to benefit from NEMMCO’s preparation and application of the profile.

Accordingly, it is **recommended** that:

- (a) clause 7.3.6(a) be altered to read:

“Subject to clause 7.3.6(aa), the *financially responsible Market Participant* is responsible for payment of all costs associated with the provision, installation, maintenance, routine testing and inspection of the *metering installation*. This includes :

- (1) the cost of providing *metering data* and *settlements ready data* to the *Local Network Service Provider* and to the *Local Retailer* ~~and to NEMMCO~~ to enable these parties to the extent required to fulfill their obligations under the *Code*;

- (2) the cost of providing *metering data* to NEMMCO; and
- (3) the cost of preparing *settlements ready data* where such costs will not be recovered by NEMMCO in accordance with clause 7.3.6(ab).

[this provides for NEMMCO to engage agents who may recover their costs for service independent of other NEMMCO costs such as settlement processing]

Where one or more *Market Participants* have entered into an agreement to use a shared *metering installation*, such costs must be borne by the relevant *Market Participants* in the manner agreed or, failing agreement, shared equally between them.”

- (b) clause 7.3.6(ab) be added:

When *NEMMCO* is required to undertake functions associated with a *metering installation* in accordance with the requirements of a *metrology procedure*, *NEMMCO*'s cost is to be recovered through *Participant fees* in accordance with a budget prepared under clause 2.11.3(b)(3) unless the *metrology procedure* specifies an alternative method of cost recovery, in which case *NEMMCO* must not recover the costs through *Participant fees*. These functions could include the preparation and application of a *profile*.

[this clause allows NEMMCO to be directed by the jurisdiction for cost recovery of of tasks requested of it in a metrology procedure whilst giving NEMMCO and Code Participants the certainty that cost recovery would be carried out in a specific way if not otherwise directed. Checks and balances on these costs include the metrology procedure being limited to processing of data required to settle the market, as well as the extensive checks on metrology procedure required in the ACCC's interim authorisation.]

Attachment 8 - Clause 7.3.1(a)(9) “metering installation components”

Clause 7.3.1(a)(9) – the original wording of this clause made use of the term “metering data”. The clause was modified in the Code change package to state “include facilities on site for storing the metering data...”. On reflection, the addition of the phrase “on site” should have been accompanied by a reference to “interval energy data” rather than metering data. This change is regarded as an editorial change.

Accordingly, it is **recommended** that clause 7.3.1(a)(9) be altered to read:

“include facilities on site for storing the ~~metering~~ interval energy data for a period of at least 35 days ...”.

Attachment 9 - Clause 7.3.1(a)(10) “metering installation components”

Clause 7.3.1(a)(10) – the wording of this clause commenced with the same construction as clause 7.3.1(a)(9). Consequently, this clause made use of the term “metering data”. The same change as recommended for clause 7.3.1(a)(9) should apply to this clause.

Accordingly, it is **recommended** that clause 7.3.1(a)(10) be altered to read:

“include facilities on site for storing the ~~metering~~interval energy data for a period of at least 200 days or such other period as specified in an applicable *metrology procedure...*”