Status of the National Electricity Market: Timing and Regulation of the National Electricity Market

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SUMMARY

This paper outlines: the timing of the implementation of the National Electricity Market ("NEM"); the proposed regulatory regime for the NEM;

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and transitional arrangements for the implementation of the NEM.

This paper discusses the actions that have paved the way for the development and implementation of the NEM; as well as those still to be completed before 2001, at which time there will be full implementation of the NEM under the National Electricity Code. The main instruments involved in the NEM are discussed, namely the National Electricity Law, which applies the Code to all industry participants, and the Code. The paper also outlines the way in which participation in the NEM will be regulated, as well as discussing the roles of the various bodies responsible for that regulation.

Finally the paper considers the policy behind the National Electricity Law, and concludes with an outline of the difficulties in establishing the NEM, and the benefits to be gained from overcoming these difficulties.

INTRODUCTION[1]

Over the last decade, the worldwide trend has been towards a significant re-appraisal of policy on the role, structure and function of the electricity industry. A major thrust in this global re-appraisal has been the recognition of the need to remove barriers to entry and to re-structure electricity utilities and industries so as to encourage the competitive discipline needed to improve economic outcomes.

Graeme Dennis' paper has already outlined the background to the microeconomic reform process currently unfolding in Australia and provided an overview of various developments in each of the State markets.[2] That paper then goes on to deal with the operation of the national electricity market as a commodity market and to discuss the nature of certain off market arrangements which are seen as essential to trading in the market.

This paper outlines the timetable currently envisaged for implementation of the national market, including a review of the most recent developments. In particular, it deals with the transitional arrangements that are expected to apply in the period up to the coming into effect of a fully developed national electricity market in 2001.

The paper also considers the proposed regulatory regime that will cover the national market and the transitional arrangements to apply up to operation of the full national market. The move to a national market raises significant transitional issues in all proposed participating jurisdictions. For

1. Some of the material in this paper has been prepared by the author for various purposes associated with the national electricity market process. Accordingly some of that material has, will or may appear in publications of the NGMC or other bodies associated with the national electricity market process. This material is current at 24 July 1996.

2. For a detailed review of these matters and a comparative analysis of similar developments internationally, see Milliner, "Can Federal Forces Drive Change", paper delivered to the International Bar Association's Section on Energy and Natural Resources Law conference "It's An Increasingly Competitive World", San Francisco, 17-18 June 1996.

the most part, those transitional arrangements arise out of arrangements put in place in each of the jurisdictions over the last few years as a result of electricity reforms undertaken by each of those jurisdictions.

The penultimate part of the paper digresses to consider some particular legal issues arising out of the timing for introduction of the market and the proposed new regulatory arrangements.

TIMING OF IMPLEMENTATION OF THE NATIONAL ELECTRICITY MARKET

The original formulation of the national electricity market was laid out by the federal and State Governments in 1991 (with the formation of the National Grid Management Council (NGMC)) and its first scheduled commencement was July 1994. The scheduled commencement date for the national electricity market has been deferred a number of times. As at July 1996 the national market is still not a reality.

It now appears that firm commitments and strategies are in place for the transition to an interim transitional market between Victoria, the Australian Capital Territory and New South Wales from late 1996 and to a full national electricity market by December 1997, including South Australia.[3]

The delays in the commencement of the market to date have occurred due to a wide range of political, financial and regulatory complexities mainly between both the federal and State and Territory governments and the States and Territories themselves.

Arguably, all of those complexities have now been overcome in principle at a political and governmental level. What is left to be done is completion of the detailed implementation work as part of the transition process.

It is instructive to look quickly at the relevant decisions that have been made since 1991. These neatly fall into two stages.

Stage 1 - creation of the vision

- 1991 – formation of NGMC;
- 1992 – release and public consultation on National Grid Protocol by the NGMC;
- 1992 – appointment of the Hilmer Committee to report on national competition policy;
- 1992/1993 – numerous publications by NGMC and Council of Australian Governments (COAG) decision to adopt principle of separation of generation and transmission and commitment to an interstate transmission network based on a multiple network corporation structure;
- 1993 – Hilmer Committee Report on national competition policy; and

3. Queensland's participation is yet to be clarified.

- 1994 – COAG consideration of Hilmer Committee Report on competition policy and agreement on structural reforms in Victoria, New South Wales and Queensland.

Stage 2 – implementation

- 1994 – significant structural reforms in the electricity industry in Victoria and commencement of reforms in New South Wales and Queensland;
- 1995 – further significant structural reforms in the electricity industry in Victoria and significant reforms in New South Wales, Queensland and South Australia;
- 1995 – federal and State governments enter into national competition policy reform package, including agreements relating to compensation payments;
- 1996 – Victoria, New South Wales, Queensland, South Australia and the Australian Capital Territory execute agreements relating to the establishment of the national electricity market, in particular – agreement on the implementation of a co-operative legislative scheme in each State and Territory to support the application of the National Electricity Code and the operation of the national electricity market and agreements relating to the formation and funding of the national market institutions, the National Electricity Code Administrator Ltd (NECA) and the National Electricity Market Management Company Ltd (NEMMCO); and
- 1996 – announcement by New South Wales, Victoria and the Australian Capital Territory of their joint intention to harmonise existing arrangements in each State or Territory to facilitate transitional cross-border trading from 1 October 1996 as a transition to a full national electricity market in 1997.

The purpose of the above chronology is to demonstrate that each of the jurisdictions central to the establishment of the national market, that is, New South Wales, Victoria and South Australia have already made all of the fundamental political and government decisions which are necessary ingredients to the establishment of the national market:

1. significant restructuring has occurred of existing vertically integrated utilities as a pre-cursor to the full operation of a national market;
2. agreements have been signed and legislation passed in South Australia (as lead legislator for the co-operative legislative scheme) to facilitate implementation of the national market; and
3. significant implementation work has been undertaken by reform taskforces in each State and Territory and through the NGMC and its numerous working groups to prepare all the documentation relevant to the transition to a national market.

Steps recently taken by the NGMC towards implementation of the national electricity market include:

1. formation of a joint venture by Victoria and New South Wales to develop the complex information technology systems required to run the national market (December 1995) – that development work is ongoing;
2. detailed discussions with the Australian Competition and Consumer Commission (ACCC) and the Australian Securities Commission (ASC) on regulatory issues (January-July, these are ongoing);
3. release of the first "full" draft of the National Electricity Code for public comment (early March) and subsequent drafts;
4. identification by the NGMC and the ACCC of key issues that arise under the National Electricity Code for the purposes of the *Trade Practices Act* 1974 (Cth) in relation to anti-competitive conduct and access (March) and release by ACCC of a paper "Comments and Issues Arising" (late May);
5. circulation of the draft National Electricity Law to Parliamentary Counsel of participating jurisdictions for comment and approval (April-May);
6. execution of agreements between participating jurisdictions about the basis for the co-operative legislative scheme and the form and management structure of the companies that will administer and manage the national market, NEMMCO and NECA;
7. execution of the Memorandum and Articles of Association of NECA and NEMMCO and endorsement by the members of the appointment of Mr Olaf O'Duill as Chairman of NEMMCO – NEMMCO and NECA have now been incorporated;
8. detailed consultation by the NGMC with industry participants and governments on the draft Code and prudential requirements (March-July); and
9. passage of National Electricity Law by South Australian Parliament as lead legislature.

The proposed transitional arrangements between New South Wales, Victoria and the Australian Capital Territory are not as all embracing as the overall national electricity market proposals. The current commitment, yet to be formalised in detail but announced in principle, is for New South Wales, Victoria and the Australian Capital Territory to "harmonise their electricity trading arrangements commencing from around 1 October 1996".[4] The stated objective of the harmonisation process is to achieve the competitive benefits of interstate electricity trading at the earliest possible date.

The 1996 harmonised arrangements will be based on the operation of the current State Codes in Victoria and New South Wales amended to dispatch generation and establish pool prices on a consistent basis, and to provide for inter-regional hedging arrangements.[5]

At the same time as announcing harmonisation of their electricity trading

4. See Press Release by Office of the Treasurer, Victoria, 10 May 1996.
5. The Victorian Code is commonly known as the VicPool Rules.

arrangements, New South Wales and Victoria agreed to undertake the following actions by 1 July 1997:

1. adopt common transitional steps to the introduction of retail competition; and
2. migrate to the dispatch of generation plant on the basis of an integrated market across New South Wales, Victoria and the Australian Capital Territory.

These matters are currently the subject of detailed technical reviews by New South Wales and Victoria as well as discussions with the ACCC and the ASC. The Australian Capital Territory is still to determine its position on the retail deregulation issue.

The current proposals involve alignment of the current State codes to be completed by 1 October 1997 to allow a paper trial of the various systems dispatch, pricing and settlement systems to be run in the period October to February 1997, with full trading to occur from February 1997. South Australia was not in a position to participate in the transitional arrangements until it had further reviewed its proposed State structural reforms.

Following review of the Industry Commission report into the electricity industry in South Australia, the South Australian government has announced further structural reforms to commence on 1 January 1997, which will allow the State to participate in the national electricity market.[6] These reforms include the establishment of SA Generation Corporation as a separate government-owned entity, and the establishment of a regulatory regime with defined technical and pricing regulators.

Queensland has announced plans to undertake a major review of its electricity industry, including a range of reform issues relating to the implementation of competitive market arrangements and options for connection to the national grid.[7]

The current implementation timetable being pursued by the NGMC is set out in Table 1.

6. Industry Commission Research Report "Electricity Industry in South Australia", 15 March 1996.

7. Note the recommendations of the Queensland Commission of Audit Report, 5 July 1996 in relation to electricity were to develop a detailed electricity reform strategy consistent with the national electricity market agreements and further to restructure for maximum competition and to privatise generation, transmission and distribution assets.

Table 1 – Implementation Timetable

1996	
End August	1. Jurisdictions endorse National Electricity Code and accompanying submission to the ACCC. 2. Jurisdictions enter into a memorandum of understanding with respect to implementation of the national market. 3. National Electricity Code to be submitted to the ACCC by NGMC for authorisation by ACCC and acceptance of access undertakings under the *Trade Practices Act.*
Spring Parliamentary Session (August-November)	ACT, NSW, Victoria and Queensland to pass supporting Application of Law Bills to apply National Electricity Law in each jurisdiction and all jurisdictions to pass consequential amending legislation to existing electricity legislation.
End September	ASC modify existing "futures market exemption declarations" for Victorian and NSW retailers and generators to facilitate cross border trading.
October [provisionally "**NEM1**"]	Commencement of transitional arrangements, including paper trial for interim market between NSW, Victoria and the ACT on basis of existing NSW Code and VicPool Rules to facilitate cross border trading.

1997	
February **NEM1**	Likely commencement of trading under transitional arrangements for interim market between NSW, Victoria and the ACT on basis of amended NSW Code and VicPool Rules to facilitate cross border trading.
Mid 1997 **NEM2**	1. Complete ACCC authorisation of the National Electricity Code and acceptance of access undertakings as specified in the Code. 2. Acceptance of approved National Electricity Code by all participating jurisdictions and bringing into effect (proclamation) of National Electricity Law in each participating jurisdiction. 3. Commencement of national market under the National Electricity Code (except Chs 3 and 4 – rely on market rules and system security requirements of NSW or Victorian Codes).
Late 1997 **NEM3**	Completion of all settlement and dispatch software for full implementation of Ch 3 of the National Electricity Code; full implementation of the National Electricity Code.

Note: All of the above dates are estimates only based on current discussions. There is no formal or binding commitment to any of these dates.

For these purposes, the terms NEM1, NEM2 and NEM3 mean:

"NEM1" means the harmonisation of the New South Wales and Victorian Codes to permit trading between New South Wales and Victoria on the basis of a single dispatch process (with linked pricing).

It is contemplated that under this process there will be no or limited legal and regulatory barriers to full trade in electricity at a wholesale level

between New South Wales, Victoria and the Australian Capital Territory subject to the capacity of the existing interconnectors. Under these arrangements, the New South Wales and Victorian Codes will remain separate codes, but a number of important provisions regarding dispatch, pricing and settlement will be made "co-extensive" (that is, will achieve identical outcomes) and other significant provisions will be aligned. The balance of each code will remain as currently drafted. In addition, at the same time, New South Wales, Australian Capital Territory and Victoria will be moving to harmonise other aspects of the electricity industry, for example, retail deregulation arrangements.

Changes to the "NEM1 Codes", in relation to the co-extensive and aligned provisions, would be determined by a common process for both Codes and all changes to both Codes would be subject to ACCC approval.

"NEM2" means, as soon as practicable after the ACCC has authorised the National Electricity Code and accepted the form of access undertaking contained in the National Electricity Code, the amendment of the New South Wales and Victorian Codes to adopt Chs 1, 2, 5, 6, 7, 8, 9 and 10 (as far as relevant) of the National Electricity Code for the operation of a transitional market. The only chapters that will not apply are Ch 3 and 4, which cannot be applied as the information technology systems necessary for the National Electricity Code dispatch process will not be available until some time between October – December 1997.

It is currently intended that South Australia will be involved in NEM2 with New South Wales, Australian Capital Territory and Victoria. Queensland will not be involved in NEM2. NEMMCO and NECA would be operational at this stage. However, it is not yet clear whether NEMMCO would manage the market under the amended New South Wales and Victorian Codes or whether NECA would administer the Codes subject to processes agreed with the ACCC and New South Wales, Victoria and the Australian Capital Territory. All changes to the "NEM2" Codes would be agreed by a common code change process and subject to approval by the ACCC.

"NEM3" is the final transitional stage involving full application of the National Electricity Code by all participating jurisdictions (New South Wales, Australian Capital Territory, Victoria and South Australia (assuming non-participation by Queensland at this stage)). At this time, the transitional New South Wales and Victorian Codes will cease operation. All arrangements contemplated for the national electricity market will then apply, although transition to the full application of the National Electricity Code will not occur until the major Ch 9 derogations cease in 2000.

Once the ACCC has authorised the National Electricity Code, the Code will be adopted by the jurisdictions then participating in the market (at least, Victoria, New South Wales and the Australian Capital Territory and probably South Australia). At this time, the National Electricity Law will be proclaimed and come into effect and NECA and NEMMCO will become fully operational.

From that time until 2000 the full operation of the National Electricity Code will be modified by, amongst others, the jurisdiction specific derogations in Ch 9 of the Code. Most of these derogations will expire in 2000, following which the "full" national market will be in operation in 2001.

REGULATION OF THE NATIONAL ELECTRICITY MARKET

Outline of the regulatory framework

The proposed "national electricity market" will incorporate the three States and one Territory that are currently interconnected: South Australia; the Snowy Mountains hydro-electric scheme (incorporating parts of Victoria and New South Wales and the Australian Capital Territory); all other regions in New South Wales and Victoria.[8]

Interconnections have been mooted between Victoria and Tasmania (via the submerged Basslink) and New South Wales and Queensland (via Eastlink). At this stage, Tasmania will not be participating in the national market.

The guiding objectives determined by COAG in the building of a fully competitive national market are:

1. freedom of choice for electricity buyers;
2. non-discriminatory access to the interconnected transmission and distribution network;
3. merit order dispatch based on bid price;
4. no discriminatory legislative or regulatory barriers to entry for new participants in electricity generation or retail supply;
5. no barriers to interstate and/or intrastate trade; and
6. uniform and cost reflective grid pricing.

Market design:

The key features of the market design adopted by the NGMC and COAG to achieve these objectives are:

1. the implementation of a common (gross) pool across all participating jurisdictions (ignoring State boundaries);
2. dispatch by a central process through a single market operator – NEMMCO;
3. the ability of customers to purchase on a spot market and/or via bilateral financial contracts;
4. settlement functions for both the spot market and by choice for

8. The participation of Queensland is unclear.

bilateral contract trading; and

5. access to the interconnected network is to be on a competitive and non-discriminatory basis.

Trading in the wholesale electricity market will include bilateral contracts, short term forward market trading, spot trading and inter-regional hedging. Bilateral contracts and inter-regional hedging arrangements will be negotiated outside the National Electricity Code. The rules governing the trading in the short term forward market, the spot market and inter-regional hedging will not be set out in the Code. The National Electricity Code will not extend to the arrangements for retail trading.

Regulatory framework

COAG also agreed that the national electricity market will be governed by a Code of Conduct, developed by the NGMC, and that the Code should be consistent with principles that include:

1. a national competition regulator for market conduct and national pricing oversight;
2. a code of conduct which, following endorsement by governments, would be subject to authorisation by a national competition regulator with oversight for three areas covering: network pricing; market rules, operation and system control; and network connection and access. Oversight will include pricing surveillance, at either State or national level, of non-competitive generation market segments;
3. a national advisory body to provide governments with the information on the monitoring/oversight of a code of conduct for planning of future system developments; and
4. State regulation for franchise customer pricing, the environment and safety.

The arrangements soon to be finalised are consistent with these determinations, although some of the mechanics and processes are slightly different.

Participation in the national electricity market is regulated through:

1. a requirement under the National Electricity Law that generators and network service providers register with NEMMCO or obtain an exemption or derogation under the Code from registration – this is a legal obligation not a discretion; and
2. other market participants applying to NEMMCO for registration as a market participant – as a result of their desire to access the market.

The major regulatory instrument is the National Electricity Code.[9] The Code comprises ten chapters as follows:

1. Ch 1 includes an introduction and describes the bodies responsible for Code supervision and administration;

9. The National Electricity Code is still being finalised, although various drafts have been released. The current draft version of the Code is Version 1.1A (for Ch 3 and 9) and Version 1.1B (for Chs 1-2, 4-8 and 10).

2. Ch 2 describes Code participants and registration procedures;
3. Ch 3 sets out the market rules;
4. Ch 4 deals with system security;
5. Ch 5 deals with network access, including augmentation;
6. Ch 6 deals with pricing for transmission and distribution networks;
7. Ch 7 is the metering chapter;
8. Ch 8 deals with administration of the Code, including disputes and enforcement;
9. Ch 9 sets out the transitional arrangements for each participating jurisdiction; and
10. Ch 10 is the glossary.

The National Electricity Code is, however, more than a regulatory instrument, it is:

- an "unbundled description" of the mechanisms for operating and managing the power system; and
- the delineation of the parameters for a spot commodity market in electricity (which has never previously existed in Australia).

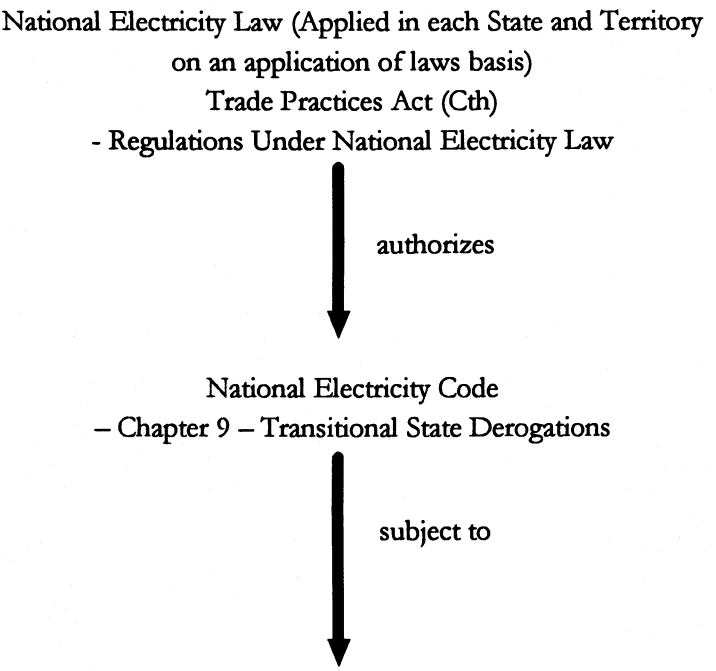
The existing individual State and Territory regulatory frameworks will change in the national market. The market will be regulated by:

- the ACCC;
- the National Electricity Tribunal (the Tribunal), which is the special purpose statutory tribunal established under the *National Electricity (South Australia) Act* 1996 (SA) and charged under the National Electricity Law with overseeing breaches of the Code and the imposition of sanctions;
- NECA; and
- State-based regulators.

The respective roles of the regulatory bodies are set out in Attachment 1 and discussed in more detail below.

The overall hierarchy of the regulatory regime is set out in Diagram 1.

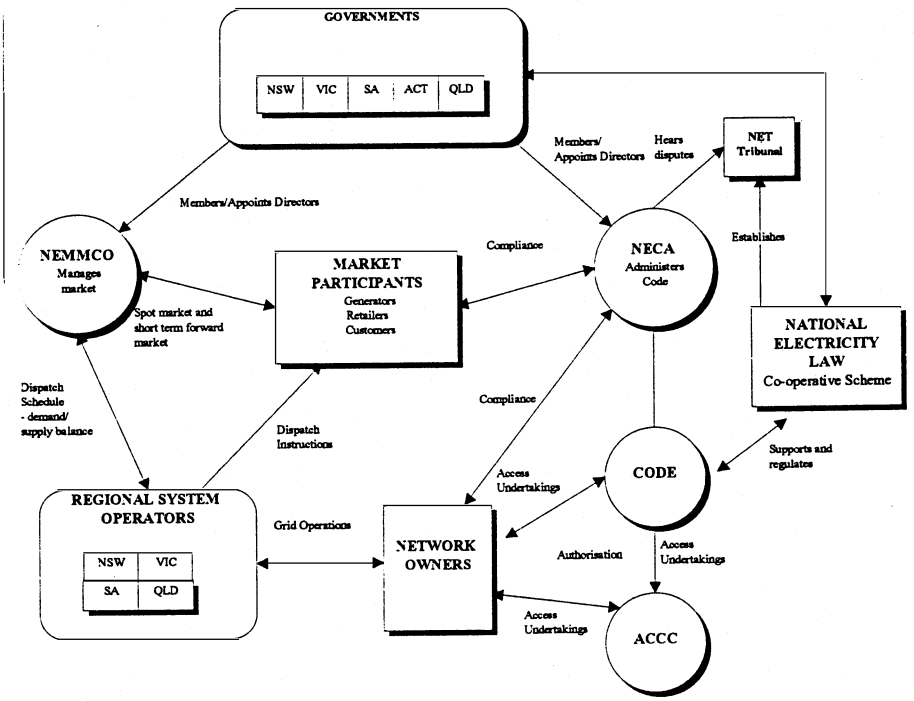
Diagram 1 – Hierarchy of Regulatory Scheme



Relationship of key players

The proposed arrangements for regulation of the national electricity market will incorporate various trading markets, participants and institutions. These arrangements, particularly the critical relationships between regulators, the Code administrator and the market manager and the market participants, are illustrated in Diagram 2.

Diagram 2 – Critical Relationships in the National Electricity Market[10]



As discussed above, the proposed national market is scheduled to commence on a transitional basis (NEM1) between New South Wales, Victoria and the Australian Capital Territory from October 1996. At that time, all of the mechanisms outlined in Diagram 2 will not be fully operational. "Full operation" of the market under those arrangements is expected as part of the NEM3 by December 1997.

[10] Note the recommendations of the Queensland Commission of Audit Report, 5 July 1996, in relation to electricity were to develop a detailed electricity strategy consistent with the national electricity market agreements and further to restructure for maximum competition and to privatise generation, transmission and distribution assets.

These transitional measures are discussed in more detail below.

National Electricity Law

In discussions between the NGMC and the States and Territories in late 1995, it was foreshadowed that legislation would be required to support the effective operation of the National Electricity Code and to enable NEMMCO and NECA to fulfil their roles in the national electricity market.

It was submitted by the NGMC that the most effective way of implementing this legislation would be by way of a co-operative scheme (similar to that for the Corporations Law) to ensure that:

1. there is a binding obligation to participate in the national electricity market on each generators and transmission and distribution network providers that is, the service providers;
2. the Code applies to all industry participants;
3. the Code administrator (NECA) has access to appropriate enforcement powers and sanctions;
4. those provisions of the Code affecting administration of the Code, particularly enforcement and the imposition of sanctions, can only be amended with the consent of the jurisdictions; and
5. the objectives of the national market and the provisions of the Code are not jeopardised by inconsistent State or federal legislation or administrative action.

It was argued by the NGMC that these factors are critical to the effective operation and regulation of a competitive market.

It was also argued by the NGMC that by increasing commercial certainty, the legislation encourages the development of long term contracts and reduces the cost of investment by avoiding:

1. State or Territory amendments to legislation which override the national electricity law;
2. the introduction of unique exceptions to the National Electricity Code;
3. pressure on governments to intervene in the market; and
4. differences arising in legislation from the need to pass amending legislation in each State or Territory.

It is perhaps a measure of the importance the participating jurisdictions place on the development of the national electricity market that this approach was endorsed.

On 9 May 1996, Ministers from New South Wales, Victoria, Queensland, South Australia and the Australian Capital Territory executed the National Electricity Market Legislation Agreement (Legislation Agreement), the purpose of which is to provide support for the National Electricity Code through agreement between the jurisdictions to introduce appropriate legislation. The legislation is to be enacted co-operatively by the jurisdictions under a co-operative (application of laws) scheme to assure its application and effect is identical in all jurisdictions at all times.

In May 1996, in accordance with the Legislation Agreement, the South Australian government submitted to its Parliament the initial legislation, which was approved by each of the Designated Ministers of the participating jurisdictions.

The initial legislation has three conceptual parts:

- The first part provides for the commencement and operation of the *National Electricity (South Australia) Act* 1996 and the application of the National Electricity Law in South Australia.
- The second part is the schedule to the Act, which contains the National Electricity Law containing most of the substantive provisions required to ensure effective application of the Code. A significant component of the National Electricity Law relates to the establishment and functioning of the National Electricity Tribunal.
- The third part is a Schedule, which sets out miscellaneous provisions relating to interpretation of the National Electricity Law.

The *National Electricity (South Australia) Act* 1996 was passed in early June 1996 and received Royal Assent on 20 June 1996.

Under the Legislation Agreement, the other participating jurisdictions have up to two years after assent to the initial legislation in South Australia to secure the passing and proclamation of appropriate legislation in their respective jurisdictions to apply the National Electricity Law in a manner identical with the initial legislation.

Amendments to the National Electricity Law may only be introduced to the South Australian Parliament provided such amendments are approved by the Designated Ministers of all the participating jurisdictions.

The major policy elements of the National Electricity Law are set out below.

Market governance

Market governance arrangements fall into two categories:

1. the external governance or supervisory/regulatory arrangements – which will be conducted by the ACCC, ASC and various State regulators;
2. the internal governance matters involving market administration and operation – which will be conducted by NECA (and the Tribunal) and NEMMCO respectively.

The ACCC will have a significant role to play in the national electricity market. Its primary roles will be with respect to:

1. the authorisation of the National Electricity Code and acceptance of the access undertakings to be provided by network services providers to the ACCC under Pt IIIA of the *Trade Practices Act*, and
2. approval of any changes to the National Electricity Code (in accordance with the Code change mechanism in Ch 8 of the Code), particularly those aspects of the Code which have been authorised on the basis that without authorisation they would breach Pt IV of the

Trade Practices Act and any change to the terms of the access undertakings;

3. an ongoing role in regulating network connection and network access pricing; and
4. ongoing supervision of market conduct and behaviour under Pt IV of the *Trade Practices Act* – particularly in relation to issues of abuse of market power.

The ASC will have a lesser role. Its primary role will be to determine whether the existing "exempt futures market" declarations granted by the ASC to generators and retailers in Victoria and New South Wales respectively under s 1127 of the Corporations Law will be extended for the national market arrangements.[11] (Initially NEM1 then expanding into NEM2 and NEM3.) These declarations are fundamental to the off-market (bilateral) contracts referred to in Graeme Dennis' paper.

The State regulators will have ongoing regulatory responsibility for retail arrangements, environmental and safety issues. Also, depending on the extent of the individual jurisdiction derogations there are ongoing roles in relation to transmission system pricing (until 2001, at which time the ACCC will take over that role under the National Electricity Code) and distribution pricing.

On 9 May 1996, Ministers from New South Wales, Victoria, Queensland, South Australia and the Australian Capital Territory signed various documents associated with the establishment of NEMMCO and NECA as Corporations Law companies limited by guarantee, in particular Members Agreements for each company. Each of the companies has subsequently been registered with the ASC.

Each of the above jurisdictions are the members of both NEMMCO and NECA and may nominate one person to be appointed as a director of each company and that person is appointed on the approval of a majority of members. A chairperson is also appointed by the approval of all the members.

The board may, from time to time, nominate a person to be appointed as a director by the members where the board believes that the appointment will add to the collective skills and experience of the board. The total number of directors nominated in this manner must not at any time exceed two in the case of NEMMCO and one in the case of NECA.

Each of the Members' Agreements provides for other jurisdictions to become members, such as Tasmania. Although some jurisdictions may not be interconnected, it is envisaged that those jurisdictions would, at an appropriate time, have NEMMCO operate the national electricity market arrangements in those jurisdictions.

As both NEMMCO and NECA are companies established under Corporations Law, the director's duties are to the company and not to act as "representatives" of the members (or jurisdictions) who nominated them to

11. Declaration nos 6 of 1995 (dated 3 May 1995 as amended on 27 September 1995) and 2 of 1996 (dated 3 May 1996).

the position of director. NEMMCO, as market manager, will be determining the balancing of demand and supply resources and operating the network and therefore the directors should not be seen to be "representing" particular participants, groups of participants or jurisdictions. For this reason, the directors' duty to act in the best interests of the company overrides the interests of any participant.

NECA and bodies such as the Tribunal will have an administrative role (rather than a supervisory regulatory role) in the national market. NECA is responsible for developing and ensuring effective implementation of the rules and standards in the Code, and for the supervision, enforcement (via the Tribunal), dispute resolution and managing changes to the National Electricity Code.

NEMMCO is responsible for operation of the market, in particular:

1. conducting the spot market, the projected assessment of system adequacy process (stating system security prospects), the short term forward market and the interregional market; and
2. system control and system security, although NEMMCO will be appointing regional system controllers (Victorian Power Exchange (VPX) in Victoria, TransGrid in New South Wales and ETSA in South Australia) to perform the system control function in each region.

The National Electricity Code requires NEMMCO to review its role in the interregional hedging and short-term forward markets within 24 months and 33 months respectively of market commencement and to cease performing these functions in three years.

NECA

The broad functions of NECA are to:

1. monitor and report on compliance of the National Electricity Code by market participants, network service providers and NEMMCO;
2. monitor and report on the performance and adequacy of the National Electricity Code;
3. enforce the National Electricity Code by application of fines as prescribed by regulations enacted by jurisdictions for breaches of the Code, and/or pursuing an action with the Tribunal (for more serious offences);
4. to provide a means for effective dispute resolution between those parties bound to comply with the National Electricity Code; and
5. to manage an efficient method to bring about timely change to the National Electricity Code. Code changes are to be considered by a Code Change Panel constituted under NECA. The Panel provides recommendations to NECA and NECA is to approve such changes provided such changes are consistent with the market objectives as established by the participating jurisdictions. Once approved by

NECA, Code changes are to be submitted by NECA to the ACCC for consideration in respect of authorisation and/or access undertakings.

NECA is to be operated commercially on a break even basis. Income will be derived from administration of the National Electricity Code with the balance from NECA's share of "pool fees" levied on those parties bound to comply with the National Electricity Code and administered by NEMMCO. NECA will use such income to meet its obligations and not pay a dividend to members.

The members are to provide the initial seed capital of $1.334 m for NECA. A further $0.666 m is to be contributed by the Commonwealth (who will not be a member of NECA). Some of this seed contribution is being utilised by the NGMC to support the process of finalising the National Electricity Code and preparing the initial submission to the ACCC. Any establishment capital and operating requirements above the total amount of seed grants may need to be provided by way of loan funds.

The amount to be provided by members as guarantee in the event that NECA is wound up (consistent with a company limited by guarantee) is limited to $5 m shared between the members.

National Electricity Tribunal

The Tribunal will operate independently of NECA in terms of being able to review decisions of both NECA and NEMMCO that are identified as "reviewable decisions" in the Code and will be the body to impose any significant sanction for breach of the Code.

NECA will have power to impose less significant sanctions in the form of civil penalties. Such decisions on the part of NECA can be reviewed by the Tribunal.

The Tribunal will also hear and determine any application by NECA alleging a Code Participant has breached a Code provision.

The Tribunal will consist of a chairperson, a number of deputy chairpersons and other members, all of which are appointed on a part-time basis by the Governor of South Australia on the recommendation of a majority of the Designated Ministers of the participating jurisdictions. The chairperson and deputy chairpersons are to be legal practitioners of at least five years standing with the High Court and/or the Supreme Court of the participating jurisdictions.

The Tribunal is to be constituted for the purposes of hearing and determining a proceeding by the chairperson or a deputy chairperson, or, by two or three members at least one of whom is the chairperson or a deputy chairperson. Sittings of the Tribunal may be held from time to time as required at any place in a participating jurisdiction.

NEMMCO

The objectives of NEMMCO are to:

1. establish and conduct the national electricity market efficiently and in

accordance with the National Electricity Code and its statement of corporate intent on a self funding/break even basis in accordance with its budget;

2. to promote the ongoing development of, and changes to, the national electricity market with the objective of continually improving its efficiency; and
3. to undertake responsibility for coordination of global system planning in relation to the national electricity market as specified in the National Electricity Code.

NEMMCO's key responsibility is to operate and administer the market. In this regard NEMMCO will, under the provisions of the National Electricity Code:

1. operate and administer a spot market for trading in electricity;
2. ensure that adequate facilities are provided to allow market participants to trade in a short term forward market;
3. manage the day to day operation of the network and the power system in order to maintain system security (NEMMCO will undertake this function via agency agreements with the current State control centre);
4. trade in ancillary services and reserves to maintain system security;
5. facilitate a market in inter-regional hedging contracts (NEMMCO will be required to offer to both buy and sell inter-regional hedging contracts); and
6. provide financial settlements services, including billing and clearance for all market trading.

NEMMCO is to be operated commercially on a break even basis. Income will be derived from "pool fees" levied on parties bound to comply with the National Electricity Code and administered by NEMMCO. NEMMCO will use such income to meet its obligations and not pay a dividend to members.

The members are to provide the initial seed capital of $6.67 m for NEMMCO. A further $3.33 m is to be contributed by the Commonwealth (who is not a member of NEMMCO). Some of this seed contribution is being utilised by the NGMC to develop systems and arrangements for NEMMCO. A joint venture between VPX and TransGrid is being utilised to develop the communications and information systems to support the operation of the national electricity market. These assets will be transferred to NEMMCO and the financial contribution to the joint venture by Victoria and New South Wales will be recognised as part of their seed contribution to NEMMCO. Any establishment capital and operating requirements above the total amount of seed grants may need to be provided by way of loan funds.

The amount to be provided by members as guarantee in the event that NEMMCO is wound up (consistent with a company limited by guarantee) is limited to $20 m shared between the members.

Discussion of regulatory responsibility – ongoing role of State regulators

The market design approved by COAG specifically called for regulation through a national competition regulator for market conduct and national pricing oversight. That decision was taken before subsequent COAG agreement on national competition policy reform and the formation of the ACCC. The ACCC has now become the primary regulator for the national electricity market.

However, due to:

1. the retention by States and Territories of regulatory authority over certain matters, for example, retail trading in electricity, environmental and safety matters; and
2. the detailed transitional arrangements to apply until 2001 (and possibly later in the case of distribution pricing),

the interface of the regulatory arrangements is somewhat complicated. The relative roles of the regulators is described in summary form in Attachment 1.

The final clarification of regulatory roles is yet to be achieved. It is to be hoped that some of the potential regulatory overlap and confusion will be reduced during this process.[12]

Transitional arrangements

The transition from the existing State and Territory market arrangements to the national market requires consideration of a number of factors, such as:

1. arrangements adopted by the State or Territory as part of individual reform processes such as the timetable for retail deregulation and regulation of network pricing;
2. changes in the legislation and other instruments regulating the market;
3. specific obligations of the State, for example, in Victoria the Loy Yang B and the Smelter contracts, and interstate arrangements such as the Interconnection Operating Agreement (IOA) with South Australia and New South Wales and the Snowy Mountains Scheme arrangements; and
4. derogations specific to particular existing market participants under existing arrangements.

The transitional arrangements are being effected in a number of ways. First, the proposed transitional implementation of the market arrangements through the NEM1, NEM2 and NEM3 phases. Secondly, Ch 9 of the Code deals with the issues that arise under the Code, for example, in the case of Victoria by recognising the role of the Loy Yang B Trader and the Smelter Trader, and ensuring that the Tariff Order applies until 31 December 2000.

12. See the comments of Baxt, "State Transmission of Gas and Electricity - Some Trade Practices and Competition Issues" [1994] *AMPLA Yearbook* 473, particularly 473 to 476.

Thirdly, other transitional arrangements will be made by amending the relevant legislation and regulatory instruments, rules and codes in the participating jurisdictions.

The following briefly reviews the major transitional issues under consideration by the jurisdictions.

Victoria

The key policy issues for Victoria have been:

1. Licences – At this stage it is anticipated that distribution licences, retail licences and trader licences will still be required under the Electricity Industry Act, and will be the principal instruments under which the Regulator-General regulates, together with guidelines, the Supply and Sale Code, the Distribution Code and the Retail Tariff Metering Code.

   Transmission licences for both VPX and Power Net Victoria will also be required. Their obligations under the National Electricity Code are subject to their respective roles in relation to connection and use of system.

   The existing licences will require amendments (for example, Victorian Power Exchange will no longer operate a wholesale electricity market).

   The Regulator-General's power to appoint an administrator will be retained in relation to licensees.
2. Network access pricing – The Tariff Order applies to all pricing up to 31 December 2000. It will continue to be administered by the Regulator-General using its powers under the Office of the Regulator-General Act.

   After 31 December 2000:

   (a) distribution network pricing will be regulated by the Regulator-General exercising the powers of a "Jurisdictional Regulator" under the National Electricity Code. The Regulator-General must apply the principles set out in the Tariff Order, which are expressed to continue beyond 31 December 2000 (such as the initial asset valuations for distributors); and

   (b) transmission network service pricing will be regulated by the ACCC under the Code. However, the equalisation factor in the Tariff Order will still apply.
3. Network access connection – The National Electricity Code assumes that transmission access and distribution access for market participants will be regulated by the ACCC and that access for non-market participants will be regulated by the Regulator-General. Different arrangements will apply in Victoria to ensure that pricing and access issues can be dealt with by the same regulator.

   It is anticipated that, in Victoria, the Regulator-General will be responsible for regulation of connection to transmission and distribution networks until 31 December 2000. This would continue

after 2000 in relation to those services where the Regulator-General is regulating the price as Jurisdictional Regulator (for the most part, distribution network pricing).

4. Trader arrangements – Arrangements under the National Electricity Code for the Smelter Trader and Loy Yang B Trader will be similar to those that apply in VicPool. The Smelter owners and Loy Yang B Participants will be exempted from the Code and SECV Shell will be the Market Participant for Code purposes in relation to those facilities.

   If the existing IOA, ETSA Contract and Snowy arrangements continue after the commencement date, the Code will include transitional arrangements for those contracts similar to those included for the Smelter Trader and Loy Yang B Trader.
5. Loy Yang B uplift (or energy levy) – At present , the Loy Yang B uplift payment is collected under the Pool Rules. In the national market, the Loy Yang B uplift payment will be collected by NEMMCO and paid to SECV. The uplift payment will be collected in respect of all supply taken in Victoria.
6. IRFM – The VicPool Rules set out arrangements to apply if there is an industrial relations force majeure event in Victoria. Those arrangements continue in the national electricity market.
7. Technical derogations for Victorian participants – Ch 9 provides for technical derogations, such as those that currently apply to generators under the System Code, to be included as part of Ch 9.
8. Planning and augmentation – Ch 5 of the National Electricity Code sets out a number of obligations for network service providers, including obligations with respect to augmentation and planning.

   VPX and Power Net Victoria are both a network service provider for the purposes of the Code. As they have separate functions under the *Electricity Industry Act*, provisions identify whether the obligations in Ch 5 with respect to system planning apply to VPX or Power Net Victoria or both.

New South Wales

A similar approach to the transition to the national market has been taken in New South Wales. The key policy issues for New South Wales have been:

1. regulation of transmission network pricing and of network connection and access by the Independent Pricing and Regulatory Tribunal (IPART) until 30 June 1999;
2. continued regulation of distribution network pricing by IPART;
3. ensuring the State complies with its long term contractual obligations;
4. protections for New South Wales sensitive loads; and
5. State-based regulation of the retail sector.

South Australia

South Australia is still determining which approach it will take to

restructuring its electricity supply industry. As noted above, it has announced plans to restructure its industry from 1 January 1997. The Industry Commission also made a number of recommendations for structural and legislative reform.[13] The transitional arrangements for South Australia are principally concerned with:

1. managing the introduction of competitive energy pricing and cost reflective network charges;
2. eliminating jurisdictional revenue impacts from transmission charges and settlement surpluses during the transition period;
3. enabling ETSA to comply with contractual commitments in relation to the Osborne Co-Generation project;
4. technical derogations for existing plant; and
5. maintaining reliability in South Australia without incurring unnecessary costs.

Australian Capital Territory

Transitional arrangements in the Australian Capital Territory provide for regulation of distribution network pricing and pricing for franchise customers by the ACT Pricing Commissioner.

Queensland

Queensland's transitional arrangements will exempt Queensland from participation in the market until interconnection with New South Wales, or a date nominated by the government. Queensland is also proposing specific derogations to take into account:

1. the transition to a competitive market in Queensland;
2. the State's long term contractual obligations;
3. technical requirements of the Queensland grid and connected equipment;
4. a transition period for pricing of transmission networks;
5. uniform retail tariffs; and
6. an alternative method of economic regulation for distribution network pricing.

LEGAL ISSUES

Constitutional law issues

In James Philips' paper to the 1994 AMPLA conference, he raised a number of issues relating to interstate transmission facilities, namely:

1. "interstateness" – issues arising under the Commonwealth Constitution; and

13. Industry Commission Report, op cit n 6.

2. "natural monopolies" – competition law issues.[14]

It is perhaps worth a little time reflecting on the national market developments in terms of the conclusions reached in that consideration.

The conclusions of Philips on both issues were:

1. "The Constitution neither presents any major impediments to, nor provides a guarantee of, progress to national markets in gas and electricity"; and
2. "In relation to legal rights of access to natural monopoly gas and electricity transmission systems, the current position is untested (but probably favourable to those seeking access)."[15]

There is no doubt that the national electricity market proposals are both consistent with the constitutional concept of free and fair trade between States (subject to perhaps a loose interpretation about the impact of some of the jurisdictions specific transitional derogations to apply until 2000). Furthermore, if the National Electricity Code is to be implemented, the access undertakings to be provided by network service providers must be accepted by the ACCC. In doing so, they must comply with the ACCC's interpretation of Pt IIIA of the *Trade Practices Act*. It is critical to a number of existing State reform processes that undertakings are put in place to protect existing access arrangements from being contested through the declaration process.

To that extent, the possible outcome of the implementation of the national market is consistent with Phillips' conclusion.

Perhaps what is more important is that, given the extensive de-regulation that has occurred in both New South Wales and Victoria, particularly followed by privatisation in Victoria, there must be a real possibility that, unless the national electricity market proposals are implemented in the near future, industry participants will seek to challenge existing barriers to trade across the borders by:

- seeking access to interstate transmission lines through Pt IIIA of the *Trade Practices Act*; and
- invoking s 92 to strike down restrictive State-based legislation prohibiting both wholesale and retail trade in electricity by interstate parties.

Competition law and policy

Role of the ACCC

As previously noted, the National Electricity Code is to be authorised by the ACCC in respect to those elements of the Code that are inconsistent with Pt IV of the *Trade Practices Act* and accept the access undertakings to be provided by network service providers under Pt IIIA of the *Trade Practices Act*.

14. Phillips, "Interstate Transmission of Gas and Electricity" [1994] *AMPLA Yearbook* 453.
15. Phillips, ibid, p 472.

The Pt IV issues to be considered are those relating to:

1. price fixing arrangements;
2. anti-competitive arrangements;
3. exclusionary provisions; and
4. exclusive dealing provisions.

The ACCC has set out in its March 1996 issues paper how it will undertake the authorisation and undertakings process. This is probably the first time the ACCC has undertaken such a process, involving:

1. authorisation of arrangements that have been subject to extensive and detailed political consideration and policy sign off at State and Commonwealth level through the COAG process;
2. extensive pre-submission public consultation;
3. a code to be applied by legislation through agreement of all participating jurisdictions and not being an arrangement entered into at arm's length between private parties; and
4. a major access undertaking review, in which the ACCC has had little prior experience to date, involving multiple jurisdictions and a significant industry sector at the same time as a Pt VII authorisation. Further, the form and content of the access undertaking itself is novel.

The timetable for completion of the process by the ACCC is unclear at this stage.[16]

The NGMC has been undertaking an extensive consultation process with the ACCC prior to submission of the National Electricity Code. As noted above, the ACCC has issued an issues paper on the national electricity market (March 1996), received detailed submissions from numerous parties and issued a further comments and issues arising paper (May 1996). In its second paper, the ACCC raised some 13 substantive issues in relation to the proposed national electricity market arrangements ranging from:

- matters relating to documentation of the National Electricity Code – complexity and length;
- governance arrangements for NEMMCO and NECA and their various functions;
- market design issues particularly relating to the concept of gross pool versus net pool, prudential arrangements for the market, fees, distribution of market information and price caps and price floors; and
- network pricing and network augmentation issues.

Of these issues, the major issues relate to dissemination of market information, particularly bid prices, which the NGMC see as an essential part of the market design, price cap and price floor issues and transmission pricing particularly post 2000.

Negotiations with the ACCC in relation to these major issues are ongoing.

16. In this context, the criticisms of Baxt, op cit n 12, p 476 to 479 are relevant.

National Competition Policy and compensation payments:

Another important, and, perhaps, compelling, force in the drive towards implementation of a national market is the role to be played by the agreements entered into in April 1995 relating to the implementation of the National Competition Policy Reform Package. Under those agreements Commonwealth financial payments will be made to the States and Territories for implementing the reforms specified in those agreements. The payments will be made over three stages commencing in the financial years:

- 1997 – 1998 for two years;
- 1999 – 2000 for two years; and
- 2001 – 2002 (until 2005 – 2006) for five years.

All payments are conditional on the relevant jurisdictions having made specific progress on competition reforms as specified below:

1. first tranche payments – involves a payment of $400m in 1994 – 1995 prices made up of $200m for each year to be divided amongst the jurisdictions on a per capita basis. To receive this payment the States and Territories have to have achieved "effective implementation of all agreements on ... electricity arrangements through the National Grid Management Council".

   The exact wording of this obligation is as follows:
   "(For the relevant jurisdictions) has taken all measures necessary to implement an interim competitive National Electricity Market, as agreed at the July 1991 Special Premiers' Conference, and subsequent COAG agreements, from 1 July 1995 or on such other date as agreed by the parties, including signing any necessary Heads of Agreement and agreeing to subscribe to the National Electricity Market Management Company and National Electricity Code Administrator.";
2. second tranche payments – involve payments over two years of $800m in 1994 – 1995 prices on the basis of $400m per year again applied on a per capita basis. To receive this payment each State and Territory must have completed "effective implementation of all COAG agreements on ... the establishment of a competitive National Electricity Market";
3. third tranche payment – involves a payment equivalent to $3 bn in 1994 – 1995 prices, spread over five years at $600m per year divided amongst the jurisdictions on a per capita basis. To receive the third tranche payments each State and Territory must have "fully implemented, and continues to observe fully, all COAG agreements with regard to electricity".

Policy behind the national electricity law

The national electricity law is in many ways a novel piece of legislation. It is not self contained and must be read in conjunction with other aspects of the regulatory framework, for example, the National Electricity Code. Therefore an understanding of the policy behind the legislation is

instructive.

In developing the national electricity market legislative scheme, the following policy positions were endorsed by the jurisdictions for inclusion in the legislation:[17]

1. the implementation of the Code in each jurisdiction is to be supported by a co-operative (application of laws) legislative scheme between all jurisdictions: any amendment to the lead legislation is to be subject to agreement of all jurisdictions;
2. the legislation is to provide for a regulation making power – regulations are to be made by the lead legislature and adopted by all other jurisdictions: all regulations are to be subject to the agreement of at least a majority of jurisdictions – these regulations will mainly deal with impositions of civil penalties for breach of the Code;
3. the market objectives are to be contained in the Intergovernmental Legislation Agreement (rather than the National Electricity Code) and are not to be amended without the agreement of all jurisdictions;
4. any person who owns, controls or operates:
   (a) a generation system that supplies a transmission or distribution system; or
   (b) a transmission or distribution system that is connected to another transmission or distribution system,

   must either be registered with NEMMCO under the National Electricity Code or be subject to a derogation or be exempt under the National Electricity Code;
5. all persons purchasing electricity directly from the national electricity market must also be registered with NEMMCO;
6. the legislation is to provide for the establishment and funding of an independent statutory tribunal – the Tribunal – to review certain decisions of NECA or NEMMCO, consider Code breaches and to impose sanctions for Code breach (in lieu of NECA imposing all sanctions directly subject to the Disciplinary Panel and Appeals Panel to be established by NECA as previously proposed under earlier drafts of the Code published by the NGMC);
7. NECA is to have the ability to impose "on the spot" penalties (make demand for payment) in limited circumstances and for limited amounts, both as specified in Regulations to be made under the legislation;
8. the level of civil penalties that may be imposed for breaches of the National Electricity Code are:
   (a) by NECA up to $20,000 for certain specified breaches;
   (b) by the National Electricity Tribunal depending on the breach:
      (i) up to $50,000 per breach and $10,000 per day for continuing breach;

17. This list reflects those policy propositions agreed to be included in the National Electricity Law. There were also a number of policy propositions put forward by the NGMC for inclusion in the legislation that were not endorsed by the jurisdictions.

(ii) up to $100,000 per breach and $10,000 per day for continuing breach;

(c) each breach the subject of the above penalties to be specified in Regulations made under the legislation; and

(d) by the Tribunal up to $20,000 for any other breach;

9. if a corporation breaches the National Electricity Code then each officer of the corporation who knowingly authorised or permitted the breach is taken to have contravened the relevant provision and will be liable to a civil penalty;

10. only NECA may bring proceedings for breach of the National Electricity Code although evidence of alleged Code breach can be used in civil proceedings;

11. provision included in the legislation for identification of the National Electricity Code, approved by the jurisdictions, as the "Code" for the purposes of the legislation;

12. the National Electricity Code is to identify "protected provisions" that are not to be changed, notwithstanding the Code change process, without the agreement of all participating jurisdictions;

13. each jurisdiction is to pass application of laws legislation within two years of lead legislature (South Australia) passing, or cease to be a participating jurisdiction;

14. if a jurisdiction passes inconsistent legislation (in the unanimous opinion of all other jurisdictions) that legislation must not remain inconsistent for more than six months from notice from the other jurisdictions (or else cease to be a participating jurisdiction);

15. the legislation will provide that in relation to certain functions of NEMMCO (to be specified in the National Electricity Code) and in relation to all penalties paid to NECA that:

(a) NEMMCO and NECA will establish in their books separate funds for that purpose;

(b) all amounts received by NEMMCO and NECA are to be paid into the relevant fund and are only to be paid out of that fund in relation to liabilities for the fund, or in the case of the NECA penalties fund used for meeting:

(i) costs and expenses of running and staffing the National Electricity Tribunal;

(ii) costs and expenses of NECA in performing its functions;

(c) moneys in the funds are to be invested on a prudent basis and investment income is to accrue to the relevant fund – but NEMMCO and NECA are not trustees in relation to a fund; and

(d) on a winding-up of NEMMCO or NECA the moneys in the funds are only to be applied to liabilities referrable to the fund; and

16. NEMMCO is to have certain rights, if necessary for reasons of public safety or the reliability or security of the electricity system in

NEMMCO's opinion, to enter and to shut down or bring into service plant and equipment and to shed or restore customer load.

CONCLUSION

Notwithstanding the substantial progress made over recent times towards implementation of the national electricity market, history suggests that to be adamant as to the likelihood of the implementation of the market in accordance with the current timetable being pursued by the NGMC is a risky proposition.

However, it is appropriate to observe that, notwithstanding the political, regulatory and financial complexities involved to date, the market arrangements now having reached their current stage of development, have a high probability of being implemented within the next 18 months.

The regulatory framework for the national market is both novel and unique in global terms. It is also relatively complex, requiring compliance with a series of interlinked obligations under:

- Commonwealth law – the *Trade Practices Act*;
- a co-operative legislative scheme – the National Electricity Law;
- the National Electricity Code – the full application of which is subject to a series of individual State and Territory derogations applying over different time periods (as set out in Ch 9 of the Code); and
- existing State and Territory electricity and other relevant legislation and subordinate legislation – modified in light of the application of the National Electricity Law and the National Electricity Code.

It would be unjust criticism to suggest that the regulatory arrangements for the national electricity market have descended to the extremes of regulatory complexity seen in the United States energy market. However, there is no doubt that the regulatory issues facing the electricity industry in the future will be more challenging than in the past, particularly until 2001. There is some justification in the suggestion that this is part and parcel of the creation of a new spot commodity market transcending State and Territory boundaries which requires, for political and regulatory reasons, extensive transitional arrangements.

The shape of the national electricity market and the effect of the regulatory regime on industry participants is still, however, subject to a number of unknown factors, including but not limited to the following:

1. the National Electricity Code is still only in draft form. It is subject to formal jurisdiction sign-off, further changes agreed through the NGMC process and further changes agreed in consultation with the ACCC;
2. the ACCC must authorise the National Electricity Code and accept the access undertaking contained in the Code before it can be applied. Although there is nothing to suggest that authorisation will be refused, the ACCC may require further changes to the National

Electricity Code as a condition of authorisation and acceptance of the undertakings; and

3. full jurisdiction sign-off and final binding commitment to implementation of the market arrangements and the terms of the Code is yet to be achieved. Accordingly there is a risk that individual jurisdictions may make decisions that affect the overall market.

Despite these dangers two final observations are appropriate:

1. the significance of the "virtual" achievement of a national electricity market, trading across boundaries without specific legal and regulatory barriers and with a single regulatory system, involving the effective delegation by States and Territories of individual jurisdiction sovereignty over the wholesale electricity market and the implementation of a co-operative legislative scheme should be recognised; and
2. whether the perceived benefits to the economy of the microeconomic reform process envisaged by the Industry Commission and others, particularly as applied to the electricity sector, eventuate over the next five to ten years will be the final judgment on whether the implementation of the national electricity market has been justifiable.