

Australian Greenhouse Office

SUBMISSION TO THE ACCC ON NATIONAL ELECTRICITY CODE NETWORK PRICING CODE CHANGE

The Australian Greenhouse Office (AGO) welcomes this opportunity to provide input to the ACCC's assessment of the authorisation application and the proposed variation to the access code as submitted by the National Electricity Code Administrator, (NECA). The AGO is the lead Commonwealth agency on greenhouse matters and given the strong relationship between Australia's energy consumption and its greenhouse emissions, the AGO has a strong interest in an electricity supply industry that is both economically and environmentally efficient.

The AGO has numerous concerns with the evolution of the National Electricity Code (NEC) especially with regard to market impediments which may increase the cost of Australia meeting its Kyoto Protocol commitments. The AGO has particular concerns with NECA's conclusions regarding the network charging regime. The AGO believes the proposed code changes do not remove impediments to competition in generation or adequately address regulated network augmentation and expansion issues. In addition, there is a lack of detail backing some of NECA's assertions justifying their proposed approach.

In March 1999, the Department of Industry, Science and Resources released The Allen Consulting Group and McLennan Magasanik Associates report, *Energy Market Reform and Greenhouse Gas Emission Reductions*. The Executive Summary of this report concludes with a **Guiding Reform** section which notes the following.

1. 'Substantial locational signals and greater transparency in network pricing are important for efficient decision making within energy markets.'
2. 'Regulated energy networks should be subject to more contestability and their plans for future network augmentation should be more transparent.'
3. 'Greater competition between network augmentation, embedded generation and demand management options would facilitate lower GHG intensity of energy markets.'

Assuming Kyoto is ratified, not making progress on these issues increases Australia's adjustment costs which is not in the national or public interest. NECA's proposed code changes do not adequately address these three issues. The code changes require further refinement by an independent body to fully optimise the long term, public benefits.

This is due NECA's proposed code changes not adequately addressing the competition lessening effects of:

Inadequate locational signals in TUOS pricing. This gives substantial advantages to remote generation to the competitive disadvantage of embedded generation and efficient energy usage.

Inadequate transparency in TUOS pricing and inadequate competition in regulated network augmentation and expansion.

Inadequate assessment of future greenhouse costs. This gives further disadvantages to embedded generation and efficient energy usage due to the non-pricing of greenhouse externalities reducing the public benefits of energy market reform.

This is likely to have serious economic and environmental implications for Australia and the ACCC needs to take this into account when considering the NECA proposals.

While the 'devil is in the detail', the AGO believes that the above three **Guiding Reform** issues are of fundamental importance to maximising the public benefit of network pricing reform. Further comments follow under the headings contained in the ACCC's Issues Paper.

4.1 Transmission network pricing

4.1.1 Existing arrangements

The AGO is concerned with the potential scope of charges faced by small, embedded generators wishing to contribute to reductions in Australia's Green House Gas (GHG) emissions. Given the likely influx of numerous, small generators with the implementation of the Prime Minister's Mandatory 2% Renewables Target and other greenhouse measures, it is essential that the pricing structure not discriminate against entry of these new technologies.

Section 7.3 **Barriers to Entry** of the NEMMCO document, *Report on the Structure of Participant Fees* states that:

‘the structure includes only a comparatively modest annual fixed fee that will:

- Avoid creating a barrier to genuine market participants.
- Discourage a proliferation of small participants that may lead to a substantial increase in NEMMCO's costs without the corresponding benefits to competition and prices.’

NEC Clause 1.3 (a)5 of **Market Objectives** states:

‘a particular energy source or technology should not be treated more favourably or less favourably than another energy source or technology.’

The structure of registration fees whereby a small non-scheduled, non-market renewable generator pays the same registration fee as a large, fossil fuel generator, coupled with the above statement by NEMMCO, would appear a deliberate strategy designed to discourage / discriminate against a class of market participant.

The AGO believes that the NECA review of network pricing does not adequately address this barrier to small generators. The ACCC needs to carefully consider the exclusionary effects of not adequately addressing this barrier in the proposed code changes.

4.1.2 Who should pay transmission use of system charges

The Commonwealth, (Appendix A) has consistently argued that Transmission Use of System (TUOS) charges should be shared among all that benefit from the use of the transmission network. Generators, as much as customers, benefit from the transmission system and as such should pay a share of TUOS charges commensurate with the service they receive.

NECA has stated that there is no conclusive evidence that recovering sunk costs from generators is less distortionary than the current arrangements. Conversely, no evidence has ever been presented that shows that the current arrangements whereby sunk costs are recovered from customers is less distortionary than imposing some TUOS costs on generators. The Commonwealth has long argued that allocating a proportion of sunk network costs to generators minimises inefficiencies and enhances competition in the NEM.

Recovering sunk transmission costs from generators and customers improves locational signalling in the NEM. The proposed code changes put forward by NECA do not adequately address the competitive advantages remote generators presently have over embedded generators, who typically make very rare to no use of the transmission system.

The method of recovering sunk costs needs to include all beneficiaries of the transmission system, both generators and users. Moreover, the method used for recovering sunk costs must be consistent with that used for recovering the costs of new investment. The AGO believes that the most efficient way of appropriating TUOS charges is for generators to pay for the service from their facility to the regional reference node and customers to pay the balance. Embedded generators who distribute all of their production on the local network and make no use of the transmission system should pay TUOS charges equivalent to their emergency, standby requirements from the system.

The National Greenhouse Strategy (NGS), which is endorsed by all jurisdictions (States and Territories), contains a commitment in measure 4.1A(ii) to:

‘Expand the focus of the energy reform program to deliver consistent and compatible national frameworks for gas and electricity.’

The ACCC needs to be cognisant of the need for consistency between transport pricing arrangements for gas and electricity. The AGO believes the proposed code changes do not adequately increase the compatibility of gas and electricity transport pricing frameworks.

In relation to network planning processes, the AGO believes that a regulatory framework specifying assessment criteria that require network service providers, when planning network augmentation, to undertake cost / benefit analysis that;

- a) incorporates greenhouse externalities; and

- b) includes market competitive, embedded generation and efficient energy usage options.

The AGO has previously made a submission to the ACCC with regards to including greenhouse externalities in the application of the public benefit test. While it is appreciated that the ACCC can only consider existing government regulations with regard to Ecologically Sustainable Development (ESD), the high probability of a future 'carbon cost' requires the ACCC and network augmentation planners to at least consider a future carbon cost in their long term, scenario analysis.

The AGO also has concerns with the process of examining options where the NSP's devise, assess and then recommend options for network expansion and augmentation. To improve competitive outcomes, the AGO recommends that this process include open competition, (or some independent assessment) to augment regulated networks, install embedded generation or increase efficient energy usage to ensure that only the most technically and economically feasible options are considered.

An issue, highlighted by code participants in their approaches to the AGO, has been the number of regulators overseeing different sections within the electricity supply industry. The AGO believes that having one regulator for transmission issues and numerous jurisdictional regulators for distribution issues does not optimise the public benefits of the National Electricity Market (NEM).

The AGO believes that the development of nationally consistent regulations for all aspects of transmission and distribution network pricing and planning is a priority along with appropriate dispute resolution methodologies.

4.1.3 How should transmission use of system charges be levied

The AGO believes that significant long term, public benefit gains can be made by further refining the methodology for allocation of TUOS charges.

Detailed modelling on the impact of reallocating the Cost Reflective Network Pricing (CRNP) and 'Postage Stamp' portions of TUOS charges is yet to be undertaken. The limited timeframe and lack of transparency behind many of NECA's code change proposals has made assessment of benefits and costs difficult. The Commonwealth, in its submission to the NECA Network Pricing Review, (Appendix A), has made it clear that it favours a move towards fully CRNP for the NEM.

4.1.4 Summary of proposed changes to TUOS charges

The proposed code changes would appear to reflect the findings of the NECA review. This however is predicated upon the review being consistent with the issues that arose out of the public consultation process. The AGO has participated in the debate at both the public forum level and in providing submissions. The AGO has also had extensive discussions with numerous stakeholders involved in the process.

The main theme gathered from all of these consultations has been that generators should pay a portion of TUOS charges for the existing network. This has been ignored by NECA and the proposed code changes only marginally change the status quo which largely favours the greenhouse intense incumbents. The AGO appreciates the large cost implications of changing TUOS pricing

methodologies but believes it is important for the ACCC to consider the long term public benefits that arise from appropriate locational signals in its deliberations.

4.2 *Distribution network pricing*

A fundamental problem with distribution network pricing is the disparity in the cost recovery methods used by the different jurisdictional regulators. The AGO supports a move towards a consistent, national methodology for distribution network pricing. NECA does not appear to have attempted to address this issue in their review of network pricing and their proposed code changes.

4.3 *Price negotiation framework and unbundling transmission and distribution network charges*

The AGO concurs with the decision to require Network Service Providers (NSP's) to negotiate in 'good faith' and provide generator access services. However the issue of negotiating in 'good faith' will require transparent, specific guidelines in order to provide potential generators contemplating connection, a high degree of certainty in the decision making process.

There is considerable asymmetry of information between NSP's and potential generators. The AGO believes that without well defined negotiating procedures, generators (notably smaller, embedded self generators or cogenerators) will face significant barriers / costs in gaining access to networks.

Embedded generators and improving efficiency energy usage essentially compete with transmission and distribution networks. Despite this, the transmission pricing regulations and network augmentation requirements of the NEC create a bias favouring networks over embedded generators and efficient energy usage. Many potential embedded generators appear unaware of their rights during the negotiating process and NSP's often are not forthcoming with information essential to making investment decisions.

The AGO supports the full unbundling of network charges to all levels of customers. This will provide customers with the information they need to make informed decisions on economic and environmental impacts arising from any action they undertake. In the short term, this may not be feasible for all customers but should be implemented for larger customers. In the long term, as the metering integrity of the industry improves, this should be progressively phased in to capture all contestable customers.

APPENDIX A

Commonwealth Submission

to the

NECA Review

of

***Transmission and Distribution
Pricing***

COMMONWEALTH SUBMISSION TO NECA REVIEW OF TRANSMISSION AND DISTRIBUTION PRICING

Executive Summary

This submission outlines recent resources policy and environmental policy initiatives by the Commonwealth to integrate electricity and gas supply industries establish a national energy market and harmonise these reforms with Australia's greenhouse response strategy, and the contribution this Review needs to make towards these processes.

The Commonwealth agrees with the ACCC's view that the focus of this Review should be on issues surrounding cost reflectivity and locational signals, cross subsidisation and the incidence of network charges. The submission provides an overview of the Commonwealth position on network cost allocation and pricing which:

- notes the limitations of current Code provisions and outlines important linkages to other energy sector reform implementation measures;
- supports ACCC proposals for improvement of those provisions, including on bypass, pass through and access code functions;
- endorses the ACCC view that network pricing and regulation proposals should be designed to prevent monopoly rent taking;
- commends for NECA consideration the framework outlined in an associated submission by the Australian Bureau of Agricultural and Resource Economics for achieving economic efficiency through network pricing; and
- shares the concerns in the NECA issues paper that the current network charging regime is detrimental to competition in generation, with generators not facing the full costs of their locational decisions.
- NECA's end objective should be a transparent, conceptually defensible methodology that allocates attributable costs between generation and loads in as cost-reflective and competitive a manner as possible and allocates residual costs so as to minimise distortions to network usage and investment.

The submission discusses a number of specific issues arising from consideration of NECA's stated objectives for network pricing including:

- **efficient use, operation and maintenance of the existing network** where the Commonwealth notes the critical roles played by pool price and energy loss signals and revenue regulation, and urges caution on any contractually based approaches that imply physical rights to system use and which could prejudice efficient dispatch;
- **efficient investment in network augmentation** which the Commonwealth regards as one of the greatest challenges facing electricity sector reform. There is a

pressing need to integrate consideration of network pricing with energy market signals and network externalities identified through Code planning mechanisms. Harmonisation with gas reform will also be particularly important because of the dual role of gas fired generation as both a source of competition in electricity production and a driver of investment in gas networks;

- **efficient location of new generation and load** where the Commonwealth supports an end to existing arrangements which provide a substantial subsidy to remote, usually coal fire generation to the competitive disadvantage of generation located closer to loads, including natural gas and renewables. The approach adopted to the application of network costs to both generators and loads in the United Kingdom is suggested for consideration;
- **simplicity and transparency of network prices** where the Commonwealth supports clear separation of transmission and distribution charges in customer bills and improvement of information flows to major users to support negotiations on network charges for connection and system use;
- **price stability** which the Commonwealth agrees is a desirable objective but not to the detriment of an early restructuring of network charges, particularly their incidence between customers and generators;
- **equity considerations** where the Commonwealth stresses the need for:
 - non-discriminatory network access by both incumbent fossil fuel based generation and more greenhouse friendly sources including cogeneration and renewables; and
 - phasing out of cross-subsidies wherever possible or, if unavoidable or mandated by government, providing for transparent funding by direct government subvention or minimally distortive industry levies;
- **efficient regulation** where the Commonwealth is concerned at the continued operation of multiple State regulators and favours more uniform regulation of wires businesses and early transfer of regulatory responsibilities for transmission and distribution to the ACCC.

The submission concludes by calling for a clear action plan for approval and early introduction of NECA proposals for change.

COMMONWEALTH SUBMISSION TO NECA REVIEW OF TRANSMISSION AND DISTRIBUTION PRICING

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Commonwealth Submission to NECA Review of Transmission and Distribution Pricing

1. Introduction

In this submission the Commonwealth maps out the strategic and policy context within which this Review of transmission and distribution pricing is taking place and provides comment on a number of key network pricing issues from that perspective.

In an associated, more technical, submission the Australian Bureau of Agricultural and Resource Economics (ABARE) outlines a framework for achieving economic efficiency through network pricing arrangements and applies that framework to address a number of specific questions raised in the NECA Issues Paper of December 1997.

In specific terms this submission:

- outlines recent Commonwealth initiatives to progress energy sector reform and associated greenhouse response measures;
- provides an overview of the Commonwealth's position on network cost allocation and pricing;
- addresses specific issues arising from consideration of NECA's stated objectives for network pricing; and
- concludes with discussion of a number of implementation issues.

2. Recent Commonwealth Initiatives to Progress Energy Sector Reform and Associated Greenhouse Response Measures

The Commonwealth's approach in this area is set out in the Prime Minister's statement of 20 November 1997 'Safeguarding the Future: Australia's Response to Climate Change' and the Resources Policy Statement issued by the Minister for Resources and Energy on 2 February 1998.

In these statements the Commonwealth has sought to entrench and build on the substantial economic benefits arising from the program of energy sector reforms agreed progressively by the Council of Australian Governments during this decade and to harmonise these reforms with Australia's greenhouse response strategy.

The Resources Policy Statement makes clear the Commonwealth's commitment to promoting competitive reform of electricity supply industries and ensuring an effective transition to a fully competitive national electricity market by 2001 including to encourage investment which extends and deepens the market (see Attachment A). The Commonwealth is seeking to maintain and where possible accelerate the momentum for this reform and to identify and remove impediments to the efficient operation of electricity markets.

NECA should be mindful that electricity reform is only part of the overall competition policy agenda. The Commonwealth is seeking to build upon complementary reforms in electricity and gas industries to deliver more integrated and compatible national frameworks for electricity and gas by 2002. Several aspects of this submission point to the desirability of taking common approaches to issues associated with transmission and distribution pricing. The Commonwealth would want the outcome of this Review to promote the goal of greater convergence between electricity and gas sectors.

In short, the foundations need to be laid for a fully integrated national energy market. The Commonwealth is anxious this be a market driven by energy consumers, where the means of supplying energy and the types of fuel involved are less important than the costs of energy and the quality of associated energy products and services. Increased competition and more transparent and efficient national markets must remain the central drivers of this reform process.

Under the Kyoto Protocol, agreed at the Third Conference of Parties to the Framework Convention on Climate Change in December 1997, Australia is committed to ensuring greenhouse gas emissions over the budget period of 2008-2012 will be no more than eight percent above 1990 levels. As electricity contributes around one quarter of total national greenhouse contributions, addressing emissions from this sector will be key to Australia's ability to meet its commitments.

To these ends and in collaboration with other COAG jurisdictions, the Commonwealth is seeking to lower the rate of growth of greenhouse gas emissions by improving the economic efficiency of energy supply through (see Attachment B):

- acceleration and extension of the existing program of electricity supply reform;
- development of means to identify greenhouse intensity of energy sources in energy market trading pools by 2001;
- implementation of efficiency standards for fossil fuel electricity generation; and
- mandatory targets for the uptake of renewable energy in power supplies.

In particular, the Prime Minister's statement makes clear the Commonwealth's intention to accelerate the uptake of renewable energy in grid-based power applications and to establish a firm market base for renewable energy supplies. This initiative goes well beyond the contribution to greenhouse reduction targets and recognises the central role renewable

energy can play in a commercially competitive national energy market. A litmus test for this Review will be its success in removing impediments to the potential for several hundred, general small, renewable energy projects to be connected to the national grid over the coming decade, as reflected in the relative efficiency, equity and commercial certainty provided by network pricing outcomes.

To enhance project management in these areas and to ensure more coherent and strategic policy direction, COAG jurisdictions have agreed to the establishment of additional coordinating mechanisms at senior official level. A Greenhouse Energy Group chaired by the Commonwealth has been established and tasked with addressing those elements of national energy market reform which have implications for Australia's greenhouse performance. It is recognised for example, that there are potential greenhouse implications to various aspects of network pricing such as cost reflectivity, efficient location of new generation and load, treatment of embedded projects, unbundling of transmission charges, non-discriminatory access arrangements and treatment of cross subsidies. It is expected the Greenhouse Energy Group will take an active interest in the NECA Review process and outcomes.

As NECA is only too well aware, management of energy sector reform continues to be an extremely complex project involving the collaborative efforts of governments, energy sector enterprises, market institutions, regulators, customers and others. A more concerted approach to market integration and energy sector greenhouse issues will necessarily add further layers to that complexity. Nonetheless, in moving to create a dynamic market environment, the Commonwealth is looking to NECA to take account of these resources policy and environmental policy considerations in framing its recommendations on transmission and distribution pricing. The Commonwealth believes this is an area where economic efficiency and environmental objectives closely coincide.

Without adequate attention to these issues, it is unlikely that the environmental benefits which can flow from electricity market reform - including greater penetration of gas, the cessation of new excess generating capacity creation, growth in cogeneration and renewables and greater attention to demand management - will be realised. Indeed, an incomplete market reform process can easily lead to worsened environmental outcomes. The Commonwealth would regard such outcomes as unacceptable.

3. Overview of Commonwealth Position on Network Cost Allocation and Pricing

a) Limitations of Current National Electricity Code Provisions

No one should underestimate the intellectual effort and expertise applied by industry participants under the auspices of the National Grid Management Council in developing the network access and other elements of the National Electricity Code.

Nevertheless, it was well recognised at the time that the network pricing provisions of the Code were less developed than other provisions and had a number of rough edges which needed subsequent attention. It was for this reason that the Code provided for deferral of the application of many of these provisions until the ACCC took over responsibility for oversight of transmission pricing. In the meantime, further work was envisaged to refine and develop these provisions in line with emerging best practice in Australia and overseas.

This work was to be drawn together through:

- this NECA review of network pricing;
- development by the ACCC of a statement of regulatory intent outlining national guidelines and principles for determination of transmission revenue requirements; and
- work by jurisdictional regulators on national principles and guidelines for the determination of distribution revenue requirements.

It must be a fundamental tenet of this Review that existing limitations inherent in the National Electricity Code and interim derogations not provide a reference point for future network transmission or distribution pricing. The principle objective to create an efficient and competitive national electricity and energy market must be kept firmly in view. The Code is a means not an end in itself in this process.

b) ACCC Assessment

The ACCC Final Determination of December 1997 on access elements of the National Electricity Code has proposed a number of changes which the Commonwealth supports for improvement of the Code. These include importantly that the Code:

- must explicitly recognise the right of third parties to bypass the network, include guiding principles and, in a process involving the ACCC, require governments and regulators to develop guidelines to address the complex issue of achieving efficient bypass;
- must include mechanisms (such as those adopted by IPART in NSW) which allow distributors to negotiate with embedded generators on the pass through of reductions in the components of transmission charges;
- ensure that regulators (who must be statutorily independent of governments) have sufficient powers to perform their access code functions including in relation to the development of guidelines for the accounting and functional ringfencing of regulated network services from non-regulated services, information provision by network service providers (NSPs), the development of NSP service charters and the imposition of specified timelines for response by NSPs to information and other requests by regulators.

Similarly, the Commonwealth endorses the ACCC's view that network pricing and regulation proposals should be designed to prevent monopoly rent taking by transmission

network owners and provide effective market price signals for the use of existing network facilities and for future investment in the network.

The ACCC also expressed a number of concerns about the apparent arbitrariness and inadequate cost reflectivity and location signals inherent in Code network pricing provisions and has asked NECA in this Review to inter alia:

- i) re-examine and justify the appropriate balance between cost reflective network pricing and postage stamp allocation of costs for transmission use of system charges;
- ii) examine the extent of any cross subsidies in the postage stamp component of the transmission use of system charges; and
- iii) re-examine the incidence (particularly between generators and customers) of transmission use of system charges with a view to promoting cost reflective and efficient usage, investment and location signals.

c) *Major Commonwealth Concerns*

The Commonwealth agrees that the issues identified by the ACCC as outlined above should provide the focus for this Review, especially in relation to the apparent arbitrariness and inadequate cost-reflectivity and locational signals inherent in Code pricing provisions.

In general, the following comments apply equally to both transmission and distribution network pricing.

Cost Reflectivity

The Commonwealth is under no misapprehension about the conceptual and practical issues involved in remedying the problems in current Code provisions and devising a generally acceptable overall alternative approach.

The associated ABARE submission outlines the economic theory of optimal short run marginal cost pricing and the practical problems of capital cost under-recovery which will arise from its application in networks characterised by substantial economies of scale and natural monopoly. The submission also points to the positive and negative externalities inherent in shared networks which are not readily handled through cost reflective pricing but may lead to systematic under investment if not taken into account. An example is the enhanced system security which can be provided to other network users by system augmentation designed to serve particular generators or loads. A practical demonstration of the pervasiveness of such externalities and the difficulties of capturing these in network pricing can be found in work by London Economics and others on proposals for a new interconnection between the transmission systems of NSW and SA.

The ABARE submission provides a framework for approaching these problems which the Commonwealth considers is worthy of NECA attention in this Review. Other specific practical models for change are canvassed in the next section of this submission.

An example of the lack of cost reflectivity and its effect on market efficiency is averaging of prices. The Commonwealth is concerned that a high level of averaging and postage stamp pricing of transmission and distribution charges will seriously undermine the achievement of competitive outcomes from the market.

NECA's end objective should be the development of a conceptually defensible overall methodology which allocates attributable costs between generation and loads in as cost-reflective a manner as practicable and allocates residual costs in a manner which minimises distortions to network usage and investment. This outcome, for example, is likely to be critical to opportunities for investment in new energy technologies and the development of renewable generation.

Cross Subsidisation

There is a fundamental and incompatible tension between the use of cross subsidisation for a range of revenue or social policy objectives and the development of a competitive, efficient national electricity market.

The Commonwealth considers the cross subsidies inherent in existing pricing and revenue arrangements should be eliminated as much as possible, consistent with the goal for a fully transparent, cost-reflective regime. Where this is either unavoidable or mandated by government for social or other equity policy reasons, this should not serve as a trade-off or justification for perpetuating inefficient pricing arrangements. Such residual cross subsidies should be transparently funded either as community service obligations on budget or through minimally distortive industry levies.

All of this will require substantially better costing systems and information provision by NSPs than currently prevails. NECA will need to complete urgent work and investment on this front with NSPs to improve market transparency.

Incidence of Charges

The Commonwealth is particularly concerned that issues relating to the incidence of transmission use of system (TUoS) charges between customers and generators be given priority attention by NECA.

Current arrangements, which restrict transmission charging to generators to shallow entry costs, while leaving the bulk of costs to be recovered from customers, provide a substantial subsidy to remote, usually coal-fired generation to the competitive disadvantage of more greenhouse friendly natural gas and renewable generation typically located closer to loads. Pursuit of demand management options is also acutely disadvantaged.

The Commonwealth shares the concerns identified in the NECA Issues Paper that the current network charging regime is detrimental to competition in generation and that generators do not face the full costs of their locational decisions. While recognising the

financial pressures from the low energy prices currently being faced by generators, the Commonwealth is concerned to ensure that this anti-competitive bias is removed as quickly as practicable. Removal of this bias will at the one stroke both help to increase the depth of competition in electricity and energy markets and reduce the greenhouse intensity of generation. Attention to the lack of cost-reflectivity in charging to remote loads should also help remove obstacles to distributed gas, renewable generation and demand management measures.

d) *Linkages to Other Reform Implementation Processes*

This Review is not taking place in isolation and NECA will need to ensure that it frames its recommendations in a way which does not prejudice efficient functioning of energy markets and is closely integrated with the approaches taken by the ACCC and jurisdictional regulators in their work on NSP revenue regulation.

NECA should also have regard to approaches taken on network access and pricing issues in the gas reform process. The ACCC has already drawn on approaches in the gas access code in framing its Determination on electricity access and could with advantage also draw on the Gas Code in its development of electricity revenue guidelines. While the Gas Code provides little specific guidance on network cost allocation and pricing, implementation experience in NSW and Victoria may provide pointers to dealing with some issues despite the greater inherent complexity of electricity networks. The discussion below of a number of specific electricity network pricing issues identifies a number of areas where such cross fertilisation may be worthwhile.

4. Specific Issues Arising from NECA Objectives for Network Pricing

The Commonwealth supports the network pricing objectives outlined in sections 3.1 and 3.2 of the NECA Discussion Paper and applies them below in a discussion of a number of specific issues which need to be addressed in this Review.

a) *Efficient Use, Operation and Maintenance of the Existing Network*

NECA has suggested that the network pricing and regulatory environment should:

- signal to network users the losses incurred in delivering electricity to or from their location on the network, which parts of the network are congested and which are not, and when congestions occurs; and
- provide incentives to the NSP to operate the network efficiently and to minimise the costs of providing the service levels requested by users.

Much of the weight of responsibility for pursuing these objectives rests on the energy market and dispatch arrangements administered by NEMMCO and the revenue regulation functions exercised by the ACCC and jurisdictional regulators. Under the market arrangements

energy pool price bids and loss factors will provide the major signals to guide efficient operation and use of the network.

Rigorous regulatory scrutiny of NSP costs and service performance against best performance benchmarks and service standard charters will guide decisions on efficiency incentive factors to be incorporated in revenue caps. The impact of these latter processes would be enhanced by greater involvement of generators in this scrutiny through generator charging particularly given that, unlike distributors which are afforded regulatory pass through of transmission charges to their customers, generators have to recover their costs in a competitive market.

NECA should take care to ensure that its network pricing arrangements do nothing to prejudice the operation of these parallel processes.

While supporting investigation of financial operations for hedging the risk of network constraints, the Commonwealth urges that particular caution be applied in considering arrangements for firm access and other contractually based approaches that imply physical rights to network use. The appropriateness of a capacity rights model has yet to be established. Any move to firm capacity rights would need to ensure that the holder cannot manipulate market prices by withholding transmission capacity.

A major issue in the ACCC consideration of market management provisions in the Code was the choice between the gross pool arrangements for system dispatch ultimately authorised by the ACCC, and the net pool arrangements favoured by major users under which their requirements would be satisfied through contract based dispatch and wheeling arrangements with the requirements of other users dealt with through the pool. Similar issues are being debated in the current regulatory scrutiny of proposals by Victoria for a market carriage approach to dispatch of its gas transmission system rather than the traditional contract carriage approach favoured by major users.

For its part, the Commonwealth would not favour introduction of any contractual arrangements for transmission use which threatened the gross pool model approach to system dispatch administered by NEMMCO.

b) Efficient Investment in Network Augmentation

NECA suggests that the network pricing and regulatory environment should also ensure that:

- the network is expanded only when there are net benefits and where these benefits exceed those arising from alternatives such as additional generation or demand side management; and
- NSPs are provided with sufficient certainty that they will be able to make a reasonable rate of return on efficient investment.

The Commonwealth agrees with NECA that this is perhaps the area which presents the greatest strategic challenge in electricity market reform. Avoidance of the excessive levels of

network investment characteristic of the 1980s without succumbing to the risks of economic damage and hardship caused by under investment, could well be the test by which the success or failure of national electricity reform is largely judged.

Here again efficient network pricing is but one of the instruments to be deployed in ensuring appropriate decisions:

- pool and contract prices, energy loss factors, system constraints, access to relevant market data and industry benchmarks, and the accumulation of settlements residues produced by market operations all provide signals relevant to investment;
- the mechanisms proposed in Chapter 5 of the NEC for the conducting of broad ranging cost benefit analyses of network investments will help to ensure that relevant externalities are properly taken into account;
- regulators in setting revenue caps will need to ensure that while NSPs are not allowed to pass on the costs of past poor investment decisions to their customers but are given appropriate security that the costs of new investment, approved in accordance with the Code processes as prudent and efficient, are able to be included in the rate base. This is not to suggest that recovery of stranded assets should be allowed should subsequent optimisation of network assets render parts of the network under used or unnecessary.

The Commonwealth sees the major task for all agencies is to ensure that an appropriate balance is struck between decentralised investment decision making based on appropriate market and network pricing signals, and central planning mechanisms designed to ensure that investment externalities are properly taken into account. These planning mechanisms should also be reviewed to ensure that they give proper weight to gas fired and renewable generation and demand side options.

It is in this area that the need for harmonisation of electricity and gas reform processes is most pressing. Gas fired electricity generation may well be both the greatest new source of competition in electricity production and the major driver of investment in gas network infrastructure. Regulators will need to ensure that the decisions they take on future investment aspects of electricity and gas NSP revenue streams are mutually compatible.

c) *Efficient Location of New Generation and Load*

As outlined in Section 3 above, the Commonwealth agrees with NECA that network pricing should reflect the costs which new load and generation imposes on transmission and distribution, costs which vary with the location of the user. To avoid obstacles to market entry, existing users should also be charged on the same basis as new users.

In seeking a practical approach to achieving an appropriate sharing of costs between generation and loads, NECA should review the earlier work done in this area by the NGMC and the recently dropped Queensland proposals for generator charges. The Commonwealth also believes that positive consideration should be given to the system of

transmission pricing used in the United Kingdom. While it may be necessary to modify elements of the UK system, key features of the Australian market should provide for:

- transmission costs to be part of the competitive cost base for generators, with cost sharing between generators and users determined by the market value provided to both by the transmission system;
- clear signals to match generation and load, recognising the different pricing signals experienced by generators and load. The incentive effect of negative pricing provides particularly strong signalling; and
- more efficient signals for new infrastructure investment versus alternatives such as cogeneration.

d) *Simplicity and Transparency of Network Prices*

The Commonwealth agrees with NECA that pricing arrangements should be such as to enable network users to understand the factors that influence what they are charged. Transparency, ringfencing and unbundling of network service charges are essential features of a competitive national market. The transactions costs involved in providing such support services to network users are themselves a competitive factor in service delivery.

On this basis, the Commonwealth supports the clear separation of transmission and distribution charges in customer bills. The Commonwealth also supports the improvement of information flows to major users to support negotiations on charges for connection and system use. Here the disciplines imposed on NSPs by information provision requirements in the Gas Code may provide some guidance to NECA.

e) *Price Stability*

The Commonwealth accepts the undesirability of excessively volatile network charges. However, this should not mean that a start on desirable restructuring of charges is delayed particularly in the reallocation of costs between loads and generators. The Commonwealth is aware that the Australian Cogeneration Association has suggested one approach to the phasing in of such a reallocation which NECA may wish to consider. NECA could also contemplate application of settlements residues to facilitate the adjustment process for generators.

f) *Equity Considerations*

Non discriminatory access to the network and equitable treatment of energy sources and technology must be a central feature of a future integrated national energy market. NECA should take particular care to ensure there is no inherent bias in favour of incumbent generation over new entrants, fossil fuel based generation over more greenhouse benign sources, including cogeneration and renewables, large over smaller scale projects or remote over more centrally located or embedded generation. In relation to technology, demand management options need to be assessed equally with new generation investments.

As indicated in Section 3, above the Commonwealth considers that existing network cross subsidies should be identified and costed as a matter of priority and either phased out or funded by budget subventions or minimally distorting industry levies if mandated by Government for continuation. The justification for maintaining such subsidies, including more effective ways of delivering community service obligations, can then be subject to public scrutiny.

g) *Efficient Regulation*

As noted above, regulators need to balance the risks between over and under network investment. The Commonwealth agrees with many who have made submissions to this Review that the deprival value approach to the determination of recoverable capital values should be supplemented as provided for in the Gas Code by other indicators including indicators of cash flow and profitability. However, once these values are settled and new investments approved by regulators as prudent and efficient, regulators should ensure that they do not threaten cost recovery through subsequent decisions.

The Commonwealth is also concerned that the continued operation of multiple State regulators will complicate market operations and lead to rail gauge and cost problems for market participants. This concern particularly applies to the wires businesses where any distinction between transmission and distribution businesses is likely to be artificial and introduce unnecessary uncertainty. Accordingly, the Commonwealth:

- supports the objective of uniform regulation of all wires businesses;
- believes the ACCC should be responsible for regulating transmission wires as soon as possible following authorisation of the national Code and its application to participating jurisdictions in the national electricity market;
- believes the transfer of regulation of distribution wires to the ACCC would add to commercial certainty;
- believes that, consistent with other industries operating on a commercial competitive basis and the market objectives (see clause 1.3(b) of the Code), network pricing arrangements should be competitive and should not treat one sector or person more or less favourably than another.

Uniform regulation is consistent with national energy market objectives to deliver integrated and compatible national frameworks for gas and electricity and the desire to maximise potential greenhouse gains from energy market reform. The forthcoming ACCC Statement of Regulatory Intent will need to provide clear principles and guidelines on the approach it will employ in network regulation.

5. Follow Up to the Review

The Commonwealth expects the Review report to outline a clear process and action plan for early implementation of its recommendations.

Following the review, the Commonwealth considers that participating jurisdictions in the national market should undertake to quickly adopt agreed recommendations and arrangements and take the necessary early action to amend or remove relevant existing chapter 9 Code derogations.

Accordingly, the Commonwealth welcomes and supports the position taken by the ACCC in its determination on the National Electricity Code that derogations regarding transmission pricing end by 31 December 2002 if not earlier.

Minerals and Petroleum: A Framework for Sustainable Growth

The Resources Policy Statement by the Resources and Energy Branch Minister, Senator Warwick Parer, on 2 February 1998 included the following extract on electricity and gas industry reform.

COAG agreed in July 1991 to develop a competitive electricity market in southern and eastern Australia. In February 1994, as part of the National Competition Policy reform program, COAG agreed to implement free and fair trade in natural gas. The competitive reforms are being introduced with a view to giving consumers efficient low cost energy, high quality service and greater choice, allowing more efficient use of our energy resources, and improve the competitiveness of Australia's economy.

In gas reform, the Government's actions to date have been aimed at the removal of legislative and regulatory barriers to trade, and the establishment of a uniform national framework for third party access to natural gas pipelines. Reforms include the separation of contestable and noncontestable components of vertically integrated companies, and the regulation of the monopoly element.

A package of reform measures, including a national third party access code for natural gas pipeline systems, has been agreed by Governments.

To complete its gas reform agenda and allow industry and users to obtain the expected benefits, the Government will:

- remove remaining impediments to competition in the gas market and implement speedily the national third party access regime;
- enact legislation to apply to areas of Commonwealth responsibility and to give Commonwealth competition institutions authority under the national access regime;
- encourage all Australian governments to uphold agreed reform commitments and enact reform commitments and enact application legislation for the national access regime by July 1998; and
- facilitate the development of an integrated national pipeline network.

In the electricity supply industry, previously State-owned, vertically integrated, highly regulated utilities are being desegregated, a competitive market for the generation and sale of electricity is being introduced, and opportunities are being created for increased private sector participation in the industry.

The first stage of the integrated competitive National Electricity Market began on 4 May 1997 with harmonisation of the existing interconnected NSW, ACT and Victorian wholesale electricity markets, allowing electricity to flow in between State markets based on competitive bid offers of supply.

The National Electricity Code is to be implemented following authorisation of the Code by the Australian Competition and Consumer Commission and Consumer Commission and the passage of the National Electricity Law in participating jurisdictions. The National Electricity Market Management Company will assume responsibility for electricity supply and market systems operations, and the National Electricity Code Administrator will become responsible for the administration of the Code.

South Australian generators will become full market participants when the national systems begin operating. Queensland is undertaking internal market-based reforms ahead of interconnection with the New South Wales and Victorian electricity grid in 2001. Tasmania is also pursuing reforms which will position it for possible future participation in the national market.

Competition is being increased with the progressive lowering of the electricity threshold which determines the eligibility of customers to participate in the market. Fully competitive market arrangements are expected to be in place by 2001. The impacts of competition are already being seen in lower prices to electricity consumers.

The Government will:

- continue to promote competitive reform of the electricity supply industry and the effective transition to the fully competitive electricity market by 2001;
- corporatise, with the NSW and Victorian Governments, the Snowy Mountains Hydroelectric Authority following resolution of the issue of environmental flows; and
- encourage new investments which extend and deepen the market .

It is timely to build on the complementary reforms of the electricity and natural gas industries to facilitate the development of a national energy market.

The Government will:

- maintain, and where possible accelerate, the momentum for ongoing competitive reform, and review the operation of the evolving markets with the States and industry, to identify and remove any emerging impediments to efficient market operations;
- implement the measure announced as part of the Commonwealth's Greenhouse Response of 20 November 1997 to extend electricity reform, deliver integrated and compatible national frameworks for gas and electricity by 2002 and, with the States, develop means to identify greenhouse intensity of energy sources in energy market trading pools by 2001;
- boost renewable energy use (which currently contributes close to 10% to national energy needs), through measures including a mandatory target with electricity retailers to source an additional 2% of their electricity from renewable sources by the year 2010, and by providing \$60 million for the commercialisation of renewable energy technologies;
- accelerate energy market reform leading to further economic, environmental and greenhouse benefits, and implement efficiency standards for fossil fuel electricity generation by the year 2000; and
- seek further energy market reform to deliver integrated and compatible national frameworks for gas and electricity by 2002, and develop common approaches to emerging issues related to deregulation, industry convergence and privatisation.

Safeguarding the Future: Australia's Response to Climate Change

The Statement by the Prime Minister of Australia the Hon John Howard MP on 20 November 1997 included the following specific energy related measures.

Accelerating Energy Market Reform

The objective is to lower the rate of growth of emissions by improving the economic efficiency of energy supply. The measure will expand energy market reforms to extend electricity reform, deliver integrated and compatible national frameworks for gas and electricity by 2002, and with the States develop the means to identify greenhouse intensity of energy sources in energy market trading pools by 2001.

Efficiency Standards for Power Generation

The Commonwealth will work with the States to achieve movement towards best practice in the efficiency of electricity generation conversion by implementing efficiency standards for different fossil fuel classes, so as to deliver reductions in the greenhouse gas intensity of energy supply. Standards will apply to new electricity generation projects, significant refurbishments and existing generation.

Mandatory Targets for the Uptake of Renewable Energy in Power Supplies

Targets will be set for the inclusion of renewable energy in electricity generation by the year 2010. Electricity retailers and other large electricity buyers will be legally required to source an additional two percent of their electricity from renewable or specified waste product energy sources by 2010 (including through direct investment in alternative renewable energy sources such as solar water heaters). This will accelerate the uptake of renewable energy in grid-based power applications, and provide an ongoing base for commercially competitive renewable energy. The program will also contribute to the development of internationally competitive industries which could participate effectively in the burgeoning Asian energy market.