
Appendix A

Federalism and national infrastructure development

The federal structure of government can be a barrier to the development of integrated infrastructure networks. Intergovernmental agreements have helped to integrate State and Territory systems and create broader networks in the electricity, gas, rail freight, and water industries. This appendix outlines some of the main issues and problems which arise in making the transition from separate State infrastructure systems to national or interstate networks. It examines the problems of co-ordination between jurisdictions that arise in attempts to improve Australia's productivity by establishing national infrastructure networks. It illustrates these issues and problems with particular reference to the electricity supply industry.

Australia's economic infrastructure involves both national and regional networks. Postal, telecommunications, and air services operate on national networks, whereas at least historically, electricity, gas, and rail have run on separate regional — usually State-based — networks.

National networks in areas such as postal services were established early in Australia's development because of the obvious interstate network requirements. Other networks developed on separate State lines for geographical and technical reasons (eg loss of energy in transmitting electricity over long distances) and parochial reasons (eg maintaining State control over interstate rail movements).

With the growth of national and international markets, national networks have become increasingly important to facilitate the efficient production and distribution of goods and services between States and regions and to reduce the costs of Australian firms.

Whatever the historical reasons for the development of separate networks, the process of integrating them into interstate and national networks is fraught with difficulty, requiring a high degree of co-ordination and co-operation between different governments.

This appendix reviews the main issues in formation of interstate infrastructure networks. It does so with particular reference to the formation of a national electricity grid. The focus, however, is on the issues to be resolved through co-operation between jurisdictions. It does not attempt a comprehensive review of progress in establishing the national electricity grid.

Problems in developing national infrastructure

Where it is considered appropriate to form an interstate or national network, a number of intergovernmental issues must be addressed:

- narrow regional perspectives;
- ensuring that governments introduce compatible reforms in their jurisdictions;
- gaining agreement between governments over the property rights to an interstate or national network;
- establishing the operating environment to allow the benefits of integration to flow; and
- transition arrangements (where necessary) to allow appropriate experience to develop and arrangements to be put into place.

Overcoming narrow regional perspectives

Overcoming the tendency of governments to focus on their own interests at the expense of broader concerns is central to the reform process. There is a tendency for individual governments to focus on the direct cost associated with reform, such as loss of revenue or lower employment in their instrumentalities, without taking into account the nationwide benefits that flow from reform and even indirect benefits that may accrue in their jurisdictions.

Competition between States within national infrastructure networks creates the opportunity for supply to be sourced from lowest cost producers, resulting in an increase in production and employment in some States and a decrease in others. Finding some way of dealing with separate State interests is fundamental to establishing truly national networks.

In the case of the formation of the interstate electricity grid, some States have been concerned that in a competitive electricity market, they would lose market share and hence revenue. For example, it has been claimed that the South Australian electricity supply industry could not compete with NSW and Victoria in a deregulated environment. The South Australian Government is currently

reviewing its electricity supply industry with a view to structural reform consistent with the national model.

Compatible reforms

The development of national networks necessitates compatible reforms across jurisdictions on a number of matters, varying from administrative reform (including corporatisation) to major structural reform and privatisation. Compatible structural reform is a major challenge. The potential benefits of national networks may be reduced if governments cannot agree on the extent of vertical separation. Structural reform — vertically separating infrastructure systems into competitive and natural monopoly elements — can facilitate greater competition and improvements in efficiency.

In most infrastructure industries, the owner of the network is also the provider of the service. For example, most railways own the track as well as operate the trains and, historically, electricity generators have owned the transmission and distribution networks. The case for separate management of network and services rests primarily on the proposition that the provision of services is less of a natural monopoly than the provision of the basic network, so that separation holds the promise of introducing or expanding competition.

The more important competition is to the efficiency of a national network, the more vital it is that the network is separated from service provision. In the electricity industry, where a high level of competition in generation and (less so) distribution is beneficial, there is great emphasis on vertically separating transmission from generation and distribution. However, in the rail industry, where introducing competition is initially less important than streamlining the network, vertical separation has not been a priority.

Electricity

The separation of generation, transmission, and distribution functions in electricity has been a contentious issue. In NSW, after initial resistance from Pacific Power, the government established a transmission company in July 1994 as a subsidiary to Pacific Power and a wholly independent transmission organisation is expected to be established in early 1995. There will be a review of the structure of NSW generation prior to July 1995.

The Victorian Government has moved faster in reform, with generation, transmission, and distribution vertically separated in October 1993. A competitive market will apply in Victoria from October 1994, with five distribution organisations, a grid company, a wholesale market company, and a generation holding company under which individual generators will act

independently. Under a pooling arrangement, distribution retailers and large customers will be given the opportunity to purchase electricity direct from a competitive generation market.

In Queensland, the generation sector is to be separated from transmission and distribution in early 1995. The transmission and distribution functions are to rest with legally separate subsidiaries. It is intended that there will be scope for competition in generation, including from new entrants, subject only to technical licensing requirements.

Reviews of the State electricity industries in both Tasmania and South Australia are now under way with a view to structural reform consistent with the national model (COAG 1994b, pp.4-8)

Defining network property rights

A major issue in developing interstate networks is whether essential network assets should be owned and/or controlled by a separate national or interstate body. Under the State-based electricity and rail networks, each State owned and controlled a significant amount of infrastructure. They can be reluctant to hand over ownership or responsibility to a national body. For example, the formation of a national rail network incurred problems relating to the transfer of assets and responsibility from the State authorities to the National Rail Corporation (NR). In particular, there has been some reluctance to provide clear control of the track to the NR. Also, there is a possibility of the NR having to lease track rather than being granted title and having to pay stamp duty and other government charges on assets transferred or subject to long-term lease.

In the case of the planned national electricity grid, questions have been raised as to whether national ownership is necessary for the attainment of a competitive market. The States argue that they should retain ownership of the grid, and cooperatively manage it. However, the Commonwealth has argued that this arrangement would constrain competition, as conflicts of interest would arise (NGMC, 1993e, p.24). COAG decided at its June 1993 meeting that the Multiple Network Corporation structural option would be taken. This is where the grid is owned by State or regionally-based government corporations (COAG 1993, p.2)

Establishing the operating environment

Even if all the pre-conditions for establishing a national network have been fulfilled, there is still a need to ensure that the operating environment is compatible between jurisdictions.

The development of effective competition is central to the operation of a national network. For effective competition to prevail, agreement on access arrangements, pricing, and appropriate regulations must be reached.

- Access and pricing arrangements

For it to be effective, there must be non-discriminatory access to the network at appropriate prices. If the access price is too high, it acts as a barrier to entry, reducing the scope for effective competition. If the access price is too low, an artificially high level of new entrants will be subsidised by the incumbent firms.

Under the draft NGMC protocol, all generators of 30MW and greater will be able to negotiate access to the network to contract directly with customers and/or use other trading mechanisms. Customers of at least 10MW demand (ie distributors and large industrial users) will be able to trade directly with generators, and enter into arrangements where the cost of transmission can be separately identified from the cost of electricity. Thus, both generators and customers may gain access to the major utility networks directly or through their local distribution networks, depending on the most economic arrangement (NGMC 1992, p.1).

Under the proposed NGMC pricing arrangements, an attempt is made to ensure that network prices are determined according to a common method throughout the national electricity market. However, in view of the complexity of calculating the value of network services used by individual householders and small customers, COAG has noted that distribution system pricing could be calculated using a greater degree of averaging than that required for larger consumers (COAG 1994b, p.7).

- Regulatory arrangements

An important function of regulation is to ensure that all market participants compete on a fair basis. For effective competition to prevail, new private entrants must be able to compete on a fair basis with the existing State authorities. Regulation is needed to ensure that effective competition is not constrained by monopoly elements, to facilitate non-discriminatory access, and to make sure that all parties can access the grid on equal terms.

There has been extensive debate about the appropriate regulation of the natural monopoly elements as an industry moves to national networks. State-based regulatory authorities have been operating under different arrangements and procedures. A national network requires a national or co-ordinated regulatory regime.

Electricity

A national system of regulation is required to ensure effective competition, while not disrupting the operation of the national grid. At its February 1994 meeting, COAG approved a regulatory package which is consistent with the Hilmer Report recommendations. It has three components:

- a national regulator for market conduct;
- a code of conduct with national regulatory oversight for network connection and access, network pricing, and market rules and operation; and
- State regulation for three areas — franchise customer pricing, environment, and safety.

COAG agreed that the code of conduct should be authorised by the Trade Practices Commission, unless the general regulation proves to be unsuccessful, in which case an industry-specific regulator would be used (COAG 1994a, pp.8–10).

The essence of this approach is for the specific regulations to be handled through industry codes of conduct, subject to the oversight of a national general regulator with an economy-wide perspective. Economic regulation, covering anti-competitive behaviour, would be handled directly by the national regulator (NGMC 1993d, p.35).

The NGMC (1993d, p.3) saw several advantages in this approach:

- it is light handed;
- it achieves consistency in the application of regulation both within the industry and with other industries in the economy;
- it is cheaper than industry-specific regulation;
- it retains a central role for the electricity industry to determine technical requirements and industry standards;
- it provides for an independent oversight of the industry with respect to monopoly pricing and market behaviour; and
- it retains State control of local policy issues.

The NGMC (1993d, pp.43–44) acknowledged that this approach may have some disadvantages:

- general regulation is susceptible to resources being diverted to other tasks, resulting in less knowledgeable operation; and
- general regulation may not respond quickly to changing needs, as it is not as close to the industry as industry-specific regulation would be.

Transition arrangements

The role of transition arrangements is to provide some certainty and opportunities for learning as the national network evolves. They aim to give network participants the experience necessary to compete effectively in a national network.

In the case of the electricity supply industry, the NGMC (1993a, p.16) stated:

The purpose of the transition process is to allow participants a reasonable opportunity to implement new structures and systems, obtain productivity improvements and acquire the necessary skills for viability in a competitive market.

The transition arrangements to apply until the start of a fully competitive electricity market by no later than 1 July 1999 are being developed by senior officials. They are to report to COAG by the end of 1994 on the timing and maturity profile of vesting contracts between generators and distributors over the transition period, taking into account State financial/budgetary impacts and the reduction in the customer market thresholds (COAG 1994b, p.8).

