# 1 About the inquiry

## 1.1 What are the perceived problems?

This inquiry relates to electricity network services in the National Electricity Market (NEM), which covers all jurisdictions excepting Western Australia and the Northern Territory. The network comprises the wires, poles, easements, substations and other infrastructure used to transport power from generators to customers — with around 800 000 kilometres of lines extending from Tasmania to Queensland. Network charges account for around 40‑50 per cent of an average household’s electricity bill.

Network services are ‘natural’ monopolies — often still state-owned — with little scope in any given location for a competitor to duplicate the network efficiently. Without regulation, the resulting market power would lead to high prices and probably insufficient investment. Accordingly, government must regulate the prices and other aspects of these services to ensure reliable and affordable electricity. In contrast, Australian governments have opened the generation and retailing segments of the electricity sector to greater competition. While not yet fully realised, the need for regulation in these segments has diminished.

However, regulation of natural monopolies is not straightforward. Recent large increases in electricity prices — much of them attributable to growing network costs — have sounded alarms about the effectiveness of current regulatory arrangements. Nationwide, retail electricity prices rose by around 70 per cent in real terms from June 2007 to December 2012 (chapter 2). Moreover, a Productivity Commission staff working paper separate to this inquiry (Topp and Kulys 2012) found significant reductions in measured productivity in the Australian electricity sector over the past decade, which may have contributed to these price pressures (discussed in chapter 2).

***Against that background, the overarching questions underlying this inquiry are ‘why have network costs been rising, will they continue to do so, are increases justified, and if not, how can the underlying problems be fixed?’***

### Price pressures are posed by regulatory flaws and business inefficiency, but also legitimate investment costs

Regulatory arrangements for electricity transmission and distribution changed significantly in 2006 and 2008 respectively. As the intent of these changes was ‘to improve the environment for investment’ (AEMC 2006a, p. iv; AER 2011a, pp. 3‑4), some price increases would be expected. A reduction in productivity would also be anticipated because businesses must invest ahead of the full utilisation of capital.

Nevertheless, some key stakeholders claimed that the regulations had substantial flaws and had inefficiently raised prices. These stakeholders included the Australian Energy Regulator (the AER — which has responsibility for regulating the NEM), various electricity user groups, and the Garnaut review of climate change policy. They attributed much of the price increase (and to some extent, the reductions in productivity) to two interrelated flaws in the post‑2008 regulatory arrangements for electricity networks. They argued that:

* the design of regulatory incentives encouraged excessive investment (‘gold plating’) in networks. Gold-plated investments increase the capital stock without a commensurate increase in output (although they may do so at a future date). Excessive investment leads to price increases and wastage of resources best used elsewhere in the Australian economy
* the regulated return to capital was excessive, directly leading to higher prices (as well as encouraging too much investment).

In that context, the AER said that some price rises it had allowed were ‘difficult to justify’, and arose from deficiencies in chapter 6 of the National Electricity Rules (the ‘Rules’) that it was obliged to enforce (AER 2011b, p. 4). The New South Wales Independent Pricing and Regulatory Tribunal (IPART 2012a, p. 4) has echoed this sentiment. Indeed, a body representing large commercial users of power, Major Energy Users, suggested that the relevant regulations had ‘more than reversed the benefit gained from energy reforms initiated since the mid-1990s’ (MEU 2011a, p. 3). In May 2012, the Queensland Government created an Independent Review Panel to oversee reform of power delivery in that state, with the rationale for the review being the ‘blow out … in network costs, relative to service provision’ (McArdle 2012, p. 1), though it did not attribute the alleged blow out to any particular source.

In this context, in 2011, the AER and others sought new regulatory approaches that they considered would better align investment and pricing with that which an efficient market would deliver. In response to those requests, in late 2012, the Australian Energy Market Commission (AEMC —the policymaker) introduced Rule changes that gave the regulator more discretion in its regulatory decisions (AEMC 2012r). The AER will develop guidelines about how it will exercise this greater level of discretion (AER 2012q, p. 13). One of the goals of this inquiry is to inform those guidelines, and to indicate how benchmarking could assist the AER in its decisions under the new regulatory regime.

Not surprisingly, network businesses have disputed that prices and costs have been too high. They have argued that the price increases only reflect the efficient response to the investments needed to meet:

* the long-term growth in connections
* the rising trends in ratio of peak to average demand ratios
* governments’ requirements for higher reliability
* the need to replace a stock of capital that is reaching the end of its economic life
* the greater obligations to place lines underground
* demand from the increasing levels of distributed wind and solar power generators.

Of course, legitimate cost pressures and inefficiencies could both be at work — an important issue for this inquiry. For example, an investment might be built to address peak demand, but be built in advance of its real need due to regulatory flaws. Similarly, regulated reliability standards may exceed their efficient levels, raising costs without commensurate benefits. These two issues are critical to this inquiry.

### Interconnectors or how the ‘N’ got into the ‘NEM’

In addition to the above cost pressures, some claim there are shortcomings in the regulatory arrangements for the transmission lines (‘interconnectors’) that allow trade in power between eastern Australian states. Trading in power between regions has implications for electricity pricing; the required network infrastructure; system security and reliability; the need for generator capacity to meet end users’ needs; and access by the broader network to new renewable power sources.

In his update on climate change, Professor Garnaut claimed that there was inadequate investment in interconnectors — a result he ascribed to fragmented and parochial transmission planning, market design flaws and other regulatory failures (Garnaut 2011a, pp. 153‑55). While not widely regarded as a major contributor to recent price increases, there is concern that any such inter-regional barriers to trade have (and will increasingly) lead to inefficiency in the electricity industry. Underinvestment in interconnectors could put more pressure on prices and undermine the efficient use of renewable energy generators, which are suited more to some regions than others.

### Considering the issues through two lenses

The Australian Government has requested that the Commission consider the above issues through two lenses:

* the use of benchmarking as a means of achieving the efficient delivery of network services and electricity infrastructure
* the effectiveness of regulatory arrangements for interconnectors.

An important starting point is defining the nature of the market and its principal institutions.

## 1.2 Overview of the regulatory framework and its institutions

The NEM enables the trading of electricity throughout Australia, excepting Western Australia and the Northern Territory.[[1]](#footnote-1) It has several common institutions (figure 1.1). The overarching legal framework is the National Electricity Law (NEL), which is ‘template’ law enacted by South Australian law and adopted in all participating jurisdictions. Among other things, the NEL specifies the National Electricity Objective:

The objective of this Law is to promote efficient investment in, and efficient operation and use of, electricity services for the long term interests of consumers of electricity with respect to (a) price, quality, safety, reliability and security of supply of electricity and (b) the reliability, safety and security of the national electricity system. (*National Electricity (South Australia) Act 1996* (SA), s. 7)

The institutions responsible for electricity policy and regulation also perform these roles for natural gas.

The responsibility for energy policy rests with the Standing Council on Energy and Resources (SCER), a recently formed Council of Australian Governments (COAG) standing council, which has assumed the functions of the Ministerial Council on Energy (MCE).[[2]](#footnote-2)

Figure 1.1 Institutional arrangements in the National Electricity Market

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| Figure 1.1 Institutional arrangements in the National Electricity Market. This figure shows the multiple agencies in the national electricity market, such as the regulator, the market operator and the Rule makers. It also shows the various legislative instruments and market participants. |

The responsibility for making Rule changes rests with the AEMC, an independent national body funded by all state and territory governments (and employing around 60 people).[[3]](#footnote-3) The AEMC makes rules that meet the objectives and other aspects of the NEL for the NEM (and gas for Australia as a whole), and undertakes market reviews and provides advice to SCER. The AEMC has a strictly limited independent capacity to initiate Rule changes, and responds to requests by other parties, such as the ministerial council, the regulator, market participants, and end-users.

The regulator, the AER, is an independent Australian Government statutory authority with its own expertise-based board, although it is located within the Australian Competition and Consumer Commission (ACCC).[[4]](#footnote-4) It employs around 130 people of whom around 60 concentrate on electricity network issues. The AER regulates network providers, subject to the NEL and the detailed requirements of the Rules. Its main role is the determination of network revenue allowances (which are realised through price limits or revenue caps), although it also ensures business compliance with regulations, and collects information on the energy market. It would be the main body responsible for benchmarking of network efficiency.

The Australian Competition Tribunal is responsible for adjudicating on merits appeals of the AER’s determinations.

The Australian Energy Market Operator (AEMO) is also an important part of the institutional arrangements for electricity (and natural gas).[[5]](#footnote-5) It employs around 500 people. It is structured as a corporation with an expertise-based board comprising government and private members. Its electricity responsibilities include managing the electricity market and playing a coordinating role in ensuring system security when demand exceeds supply. It takes bids and determines spot prices for generators, and ensures demand and supply are matched. AEMO also provides long-term planning reports and regional demand forecasts, and directly manages the planning of the Victorian electricity transmission system to ensure existing and expected demands are met. In other jurisdictions, the state government or the transmission service provider undertakes these functions.

State and territory governments and their regulators play a major role in regulating reliability standards and retailing in the NEM. State and territory governments also have various renewable energy policies that affect network businesses’ options for addressing emerging bottlenecks in their systems. They are the owners of network services in Queensland, New South Wales, Tasmania and, in part, the ACT. Some also own generators.

The existing regulatory arrangements for the NEM are detailed, prescriptive and frequently amended (with the Rules being around 1500 pages in length). The Rules consolidated and amended regulatory arrangements that previously operated at the state and territory level. Nevertheless, the ‘N’ in the NEM is a work in progress.

There is no uniform regulation of network services in the NEM, with major variations in the treatment of:

* the intra-regional transmission network, which comprises the high voltage components of the network that carry power over long distances within states
* the inter-regional high-voltage transmission network (‘interconnectors’) used to transport power between states
* the distribution network, the lower voltage capillaries that deliver power at the local level (The distribution network accounts for the bulk of the infrastructure and costs. The distinction between lines and assets characterised as belonging to the distribution and transmission network varies between jurisdictions)
* the electricity retail markets in each jurisdiction, which has implications for the extent to which consumers face the real costs of supplying power.

## 1.3 The Commission’s approach to its terms of reference

The Commission’s approach to this inquiry takes into account the specific issues raised in the terms of reference, and ultimately is underpinned by the general policy guidelines in the *Productivity Commission Act 1998*. Among other things, section 8 of the Commission’s Act directs it to:

1. improve the overall economic performance of the economy through higher productivity in the public and private sectors in order to achieve higher living standards for all members of the Australian community
2. reduce regulation of industry where this is consistent with the social and economic goals of the Commonwealth Government
3. encourage the development and growth of Australian industries that are efficient in their use of resources, enterprising, innovative and internationally competitive.

In pursuing these objectives, the Commission is required to recognise the interests of the community generally, as well as those (such as consumers or industries) likely to be affected by its proposals. The Commission may make recommendations on any matters relevant to the inquiry.

The Commission is aware that the regulatory environment is evolving, and that the complex inter-relationships between changes in one aspect of the regulatory environment can have significant impacts elsewhere. There are numerous ongoing or recently completed reviews by the AEMC, the AER and others focusing on specific regulatory aspects of the NEM (tables 1.1 and 1.2). Given this, the Australian Government asked the Commission to take account of work being undertaken by SCER, the AEMC and the AER. In particular, the Government emphasised the relevance of the:

* AEMC’s review of transmission frameworks (AEMC 2011f, 2012j, 2012n)
* major Rule change proposals, of which the most important — the AER’s 2011 proposal for regulatory reform — was completed by the AEMC in late 2012 (AEMC 2012r)
* the review of demand side participation — the *Power of Choice* (AEMC 2012u).

Reflecting these regulatory developments, the Commission had ongoing discussions with the AEMC, the AER and AEMO throughout the inquiry. The Commission has also taken into account the policy announcements made by COAG, SCER and the Business Advisory Forum Taskforce in late 2012 about key aspects of the regulatory environment (SCER 2012a,b; COAG 2012; BAFT 2012).

Given this, and the Commission’s statutory obligation to consider the long-run benefits to the community as a whole, the Commission has taken a broad approach to its terms of reference. The Commission released an issues paper in February outlining this wide-ranging approach. Some participants’ submissions addressed the broad set of matters raised in the paper,[[6]](#footnote-6) while others considered that a narrower approach on benchmarking methods was preferable, and provided useful inputs mainly confined to this area.

Table 1.1 AEMC reviews and Rule changes

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| Review/Rule change report | Scope | Key dates |
| Economic Regulation of Network Service Providers | Assessment of rule changes relating to the AER’s approval of future expenditure and the regulated rate of return on capital | Consultation papers 20 October 2011 and November 2011, directions paper March 2012, draft determination August 2012, final report December 2012 |
| Power of Choice | Demand side participation (or management), including the role of new technologies, such as smart grids, energy efficiency initiatives, and the efficiency of price signals in the NEM | Directions paper March 2012, draft report September 2012, final report 30 November 2012 |
| Review of Distribution Reliability Outcomes and Standards (NSW) | Examines the extent to which investment in distribution networks reflect consumers’ willingness to pay for reliability | Issues paper November 2011, best practices paper January 2012, draft report June 2012, final report August 2012 |
| Review of Distribution Reliability Outcomes and Standards (National) | Analyse the different approaches to setting distribution reliability outcomes across the NEM and consider scope for national regime | Issues paper June 2012, draft report November 2012. Final report now subsumed into broader review also covering transmission |
| Transmission Frameworks Review | Proposals to reform the role and provision of transmission networks, including charging for the use of the transmission system, generator access rights, and planning | First interim report November 2011, second interim report August 2012, final report March 2013 |
| Review of National Frameworks for Transmission and Distribution Reliability | New approaches for the regulation of electricity distribution and transmission reliability across the National Electricity Market | Final reports are due September 2013 for distribution and November 2013 for transmission |
| Distribution Planning and Expansion Framework | Consultation on a rule change about annual planning and reporting of investments, demand-side engagement strategy, and a Regulatory Investment Test for Distribution | Consultation paper September 2011, draft determination in June 2012, final report October 2012 |
| Differences between actual and forecast demand in network regulatory determinations | Advice to SCER on the implications of such differences for incentive regulation, particularly focusing on how the AER should factor such gaps into successive determinations, and whether changes should occur to the NER | 31 March 2013 |
| Inter-regional Transmission Charging | Consideration of inter-regional transmission charging | Discussion paper August 2011, final rule determination early 2013 |

Table 1.2 Other reviews and major papers

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| Review | Scope | Key dates |
| Limited merits review arrangements | Review of statutory merits appeal processes (requested by SCER) | Stage 1 report June 2012, Stage 2 report October 2012. Any legislative change by end 2013 |
| Energy White Paper (Australian Government) | Policy framework to address challenges in the energy sector | December 2012 (final) |
| AER review of information collection processes | Aims to provide appropriate inputs into analytical tools | Implementation by June 2013 |
| Senate Select Committee on Electricity Prices | Examines reasons for rising prices and appropriate policy responses | November 2012 |
| Queensland Independent Review Panel on Network Costs | Government-commissioned review of the source of network cost rises and possible policy responses | Interim report November 2012  Final early 2013. |
| Proposal for a National Energy Consumer Advocacy Body | Developing a proposal for consideration by SCER on the design of a consumer advocacy body | Final report 30 April 2013 |
| Independent review of the Australian Energy Regulator | Australian Government commissioned review of the AER and its operational requirements | Review commences July 2014 |
| Better Regulation reform program | AER will develop guidelines — with consultation — that will implement the new Rules relating to network regulation | November 2013 |

The Commission continues to believe that it can only discharge its responsibilities appropriately in this inquiry by taking a broad and holistic approach, while drawing on the other reviews taking place. The panel appraising the limited merits review regime similarly recognised the need to comment on the regulatory regime as a whole when considering any part of it:

… the Panel is minded not to refrain from commenting on how different pieces of the policy jigsaw, of which development of the LMR [limited merits review] regime is just one, might fit together. (Yarrow et al. 2012a, p. 12)

Given this policy jigsaw, this inquiry:

* *considers the overall efficiency of electricity networks and the resulting impacts on costs for consumers — in keeping with the National Electricity Objective of meeting the long-term interests of consumers*. Benchmarking is a generic tool to measure inefficiency and to promote efficient conduct generally. So while one use of it is to set ‘efficient’ business prices in a regulatory determination, another common application is to assess efficient regulatory options — ‘regulatory benchmarking’. Accordingly, the Commission has identified regulations outside the control of businesses that undermine efficiency and increase costs (and that may act as a greater drag on efficiency than managerial inefficiency). Where possible, the Commission has identified and quantified the things that matter to efficiency — the hallmark of benchmarking
* *takes account of the interdependencies between the regulatory, institutional, business governance and planning features of the NEM* (figure 1.2). These are pivotal to good overall outcomes for the community. There are significant dangers in bolting-on ‘solutions’ based on benchmarking and changes in interconnector policies if the surrounding regulatory edifice is rotten. For example, prescriptive reliability standards set at the state level may reduce businesses’ capacity for efficient cost minimisation, while the current appeals process may undermine the usefulness of certain types of benchmarking analysis. Regulations that presume that network businesses will be motivated by profits, may not work effectively where government ownership removes or weakens such motivations. An interconnector is a transmission line (or group of lines), privileged with a special name because it connects into a more meshed network either side of a state border. An interconnector has a similar effect to the entry of new generators to the connected regions. Optimal interconnector policies depend on the planning framework for transmission generally, its pricing and the degree to which policies can limit game playing by some generators. Accordingly, any assessment of regulatory arrangements for interconnectors necessarily overlaps with the regulatory issues for intra-regional transmission and, to some extent, the conduct of generators
* *analyses the best institutional framework for achieving efficient outcomes*. Regulatory reform involves much more than writing new laws and regulations, but requires facilitating institutions and processes. For instance, to meet its objectives effectively, a regulator must have independence (financial, cultural, legislated and perceived), expertise and adequate resources, and use the right processes. The more power and discretion given to any agency in using benchmarking to set prices, the more important it is that the institutional and governance arrangements are sound. Similarly, a sound appeals process is required, on the one hand, to prevent gaming by businesses and, on the other, to minimise regulatory errors
* *considers the future* — including potential imminent Rule changes, changing technologies and carbon pricing — when making judgments about regulatory arrangements. However, the Commission is also aware that the current arrangements are relatively new. Any radical reforms should be considered carefully given the uncertainties and risks that these entail.

Figure 1.2 Everything in electricity policy is interconnected

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| Figure 1.2 Everything in electricity policy is interconnected. This figure shows how the main institutional actors, regulatory framework, policies and outcomes can result in positive outcomes for the Australian community. |

### Consultations

Beyond the Commission’s consultations with the AER, the AEMC and AEMO, the Commission also consulted with state and territory governments and their competition regulators, various Australian Government agencies, transmission and distribution businesses, generators, consumer stakeholders, and other interested parties in undertaking the review. The Commission also considered international regulatory experiences in achieving efficient investment and pricing in networks and interconnectors, and held discussions with overseas experts and regulators in the United Kingdom and the United States.

To encourage and guide submissions, the Commission released an issues paper on 23 February 2012 outlining the key matters on which it was seeking comments and information from participants. A draft report was released in October 2012. The Commission held public hearings into the draft report in November and December 2012 in Canberra, Melbourne and Sydney. Transcripts of these hearings are available on the Commission’s web page. The Commission held two roundtables (network transmission planning and reliability; and demand management) in November 2012. The Commission received 44 submissions prior to publication of the draft report and a further 65 submissions prior to completion of the final report. The Commission thanks all those who have contributed to this inquiry.

## 1.4 A guide to the report

### Introductory material

Electricity networks are one of Australia’s most important, costly and extensive forms of infrastructure. The desirability, feasibility and design of any new policies for benchmarking and interconnectors is dependent on the nature of electricity networks and their associated regulatory arrangements. Chapter 2 sets out the characteristics of electricity networks, the broad nature of the existing regulatory arrangements across the NEM, and describes the industry’s aggregate performance under current regulatory arrangements.

While most argue that there are strong grounds for regulation of an essential service with natural monopoly characteristics, it is important to understand how and why likely problems will be manifested, since that affects the design of the regulatory remedies. This also helps identify the appropriate objectives of, and limits to, regulation — including the role of benchmarking in regulatory determinations. Recently, this has been an area of some controversy. Chapter 3 addresses these issues.

### Using benchmarking to set regulated prices and revenues

Benchmarking comprises a set of tools for measuring business efficiency and performance against some best practice benchmark, and for creating incentives (financial or political) for managerial efficiency and for best practice regulations. Chapter 4 describes benchmarking and its methodologies, strengths and limitations.

Some envisage that benchmarking could play a larger role in the regulatory regime. However, the benefits of an expanded role depend on whether the design of the regulatory regime frustrates its effective use. A benchmark, no matter how accurate, is of little value if the regulator is unable to use it or if it does not influence the behaviour of the regulated firm. Chapter 5 examines these issues, taking into account recent Rule changes giving the AER greater regulatory discretion. Among other matters, the chapter considers the investment biases in the weighted average cost of capital and how these might be remedied, the impacts of competitive neutrality on state-owned corporations, and how the regulator should consider regulatory errors in making its decisions.

It is useful to consider whether there is a prima facie case that significant inefficiency exists among network businesses. That would strengthen the case for further benchmarking — and for it to play a greater role in future regulation. Chapter 6 considers existing studies of network efficiency and undertakes some preliminary analysis of the performance of network businesses (an exercise that also sheds light on the practicality of undertaking benchmarking). Due to limitations in the data and the problems of undertaking precise benchmarking, the results are necessarily not authoritative. The Commission has used several data sources and information to make its judgments in this area.

State-owned corporations remain the most common suppliers of network services. These businesses face particular challenges. It is important to assess the degree to which ownership makes a difference to productivity performance and the extent to which such businesses respond to incentive regulations. Chapter 7 considers this question, drawing on chapters 5 and 6, as well as other evidence. It also discusses the appropriate pathway to privatisation of state-owned electricity network businesses.

In light of the findings of chapter 4 to 7, chapter 8 examines how the regulator might use benchmarking in regulatory determinations.

### External factors constraining business efficiency — regulatory benchmarking

As emphasised earlier, many sources of inefficiency in networks may be outside the control of the businesses themselves. For example, network businesses do not set reliability standards, feed-in tariff rates, demand management incentive schemes, or retail price regulations. Weighing up existing regulatory and policy measures against best practice — regulatory benchmarking — can reveal the degree, if not the precise magnitude, of the costs associated with policy-induced inefficiencies, and also the direction for reform. Any benchmarking of managerial inefficiency aimed at assisting the regulator to determine prices and revenues must also attempt to control for the impacts of factors that a business must take as given. Accordingly, the Commission has considered the degree to which:

* demand management can improve the efficient investment in, and operating costs of, networks. Chapter 9 examines the problems posed by prices that do not fully reflect the costs of infrastructure (especially during critical peak demand periods), and benchmarks the potential cost savings from improved policy. However, the size and timing of these potential savings depend on a suite of coordinated reforms and sensible processes. The critical requirements are:
* technological change (such as smart metering) that underpin the capacity for network businesses to set time-based charges for their services, and that allow retailers to develop new services and create pricing packages that reflect the charges passed onto them from the network businesses (chapter 10)
* the long-run adoption of cost-reflective pricing of network services, but accompanied by processes that ensure proper consultation with all stakeholders, that drive a coherent transition to that long run, and that address concerns about the effects of change on vulnerable consumers (chapter 11)
* changing how the regulator constrains prices or revenues over the regulatory period (the so-called ‘control mechanism’), ensuring that incentives for distribution businesses to undertake demand management take into account the flow-on benefits throughout the supply chain that they cannot capture, and implementing policies that motivate retailers to develop products and tariffs that allow improved demand management (chapter 12)
* distributed (small-scale) generation can avoid or defer network investment by helping to relieve network congestion, meet peak demand or improve system reliability (similar to the goals of demand management). However, the appropriate role of distributed generation depends on whether there are any regulatory obstacles to its use, the extent to which it has adverse effects on the network (which has largely been designed for one-way flows of power), and whether there are subsidies or other measures that distort people’s choices in this area (chapter 13)
* reliability standards affect the costs and efficiency of electricity network businesses. Chapter 14 provides a framework for assessing reliability issues and diagnoses the problems of the current arrangements. While there are some overlapping factors, reliability issues vary considerably between distribution networks (chapter 15) and transmission (chapter 16), and so too do the optimal policy approaches. The Regulatory Investment Test for Transmission (RIT-T) potentially could play an important role in ensuring that efficient transmission investments are made, but the existing arrangements lack any teeth (effectively the RIT-T is neither ‘regulatory’ in nature, nor a ‘test’). Chapter 17 addresses this issue.

### Interconnectors

Chapter 18 considers the role of interconnectors in the NEM, the framework for assessing any problems, and the magnitude and implications of any current inefficiency. Chapter 19 examines the efficient utilisation of interconnectors, including the potential long-run adoption of more fundamental pricing reforms.

Most interconnectors are ‘regulated’, which means that the AER sets the maximum revenue they receive over a given regulatory period. However, at the commencement of the NEM, it was envisaged that unregulated private interconnectors (often called ‘merchant’ interconnectors) would play a more significant role. An important question is whether the virtual absence of merchant interconnectors reflects aspects of the regulatory arrangements, and whether they could or should play a role in linking the regions (chapter 20).

### Governance and institutions

Policy and practice sits within an institutional framework. Chapter 21 assesses the best institutional structures for progressing reform, including the potential to empower consumers; the need to ensure the regulator is funded adequately and has sufficient access to expertise; and the role of SCER. (Other institutional arrangements — such as those relating to the role of AEMO in planning and demand forecasting — are largely covered in previous chapters.) Implementation issues are discussed in the relevant chapters and summarised in the overview to this report.

Appendix A describes the conduct of the inquiry and participation by various stakeholders. The report is accompanied by several other appendices that address particular issues raised in lesser detail in chapters, and by a technical supplement on the costs and benefits of demand management (with an associated spreadsheet). These are on the Commission’s inquiry web page.

1. The origin of the national grid was a 1991 decision by a Special Premier’s Conference in July 1991, and a subsequent decision by COAG in 1993 to endorse the creation of an interstate electricity transmission network (Smith 1997, pp. 6‑7). [↑](#footnote-ref-1)
2. However, the National Electricity Law still specifies the MCE as the responsible COAG policymaker. [↑](#footnote-ref-2)
3. The AEMC was established under a South Australian Act, the *Australian Energy Market Commission Establishment Act 2004*. The Consumer Advocacy Panel was also established under this Act. [↑](#footnote-ref-3)
4. The AER was established under Part IIIAA of the *Competition and Consumer Act 2010* (Cwlth). [↑](#footnote-ref-4)
5. The National Electricity Law prescribes AEMO’s functions, while the Rules prescribes the procedures and processes for market operations, power system security, network connection and access, pricing for network services in the NEM and national transmission planning. AEMO is fully funded by market participants. Ownership of AEMO is divided between government members (60 per cent of the votes) and industry members (40 per cent of the votes). [↑](#footnote-ref-5)
6. For example, the Major Energy Users (sub. 11); the Consumer Action Law Centre (sub. 5); AEMO (sub. 32); and the Energy Supply Association of Australia (sub. 23). [↑](#footnote-ref-6)