

Administration of the Smart Grid, Smart City Program

Department of the Environment

Department of Industry

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Canberra ACT
29 January 2014

Dear Mr President
Dear Madam Speaker

The Australian National Audit Office has undertaken an independent performance audit in the Department of the Environment and the Department of Industry in accordance with the authority contained in the *Auditor-General Act 1997*. Pursuant to Senate Standing Order 166 relating to the presentation of documents when the Senate is not sitting, I present the report of this audit to the Parliament. The report is titled *Administration of the Smart Grid, Smart City Program*.

Following its presentation and receipt, the report will be placed on the Australian National Audit Office's website—<http://www.anao.gov.au>.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Ian McPhee', is positioned above the printed name.

Ian McPhee
Auditor-General

The Honourable the President of the Senate
The Honourable the Speaker of the House of Representatives
Parliament House
Canberra ACT

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Abbreviations

AGS	Australian Government Solicitor
ANAO	Australian National Audit Office
ATOs	Activity Target Outcomes
CGGs	Commonwealth Grant Guidelines
COAG	Council of Australian Governments
DCCEE	Department of Climate Change and Energy Efficiency
DEWHA	Department of the Environment, Water, Heritage and the Arts
DNSP	Distribution network service provider
ERC	Expenditure Review Committee of Cabinet
FMA Act	<i>Financial Management and Accountability Act 1997</i>
IAP	Independent Assessment Panel
KPIs	Key Performance Indicators
MMRs	Monitoring and Measurement Reports
PBS	Portfolio Budget Statements
PMDC	Program Management and Delivery Committee
RET	Department of Resources, Energy and Tourism
SCER	COAG Standing Council on Energy and Resources

Glossary

Distributed generation	Distributed generation or on-site generation refers to the generation of energy from many small sources (for example, rooftop solar panels, small-scale wind turbines, or fuel cells), as opposed to traditional grid-supplied electricity that is sourced from one centralised point, generally a large coal-fired power station.
Distribution network service provider	Australia's electricity supply industry involves four sectors—generation, transmission, distribution and retail. A distribution network service provider (DNSP) provides the infrastructure (the 'poles and wires') to deliver low-voltage electricity to consumers. The Smart Grid, Smart City Program was delivered by a DNSP.
Distributed storage	Distributed storage refers to devices used to store energy (they are usually batteries of various technologies). Distributed storage can assist in the integration of intermittent energy sources (such as solar panels or wind turbines) into the grid, and/or provide energy during consumption peaks, thereby reducing the use of grid-supplied electricity.
Electric Vehicles	Electric vehicles (EVs) are vehicles propelled by electric motors powered by stored electricity, either from an external power source or an on-board electrical generator or fuel cell. EVs differ from 'normal' fossil fuel-powered vehicles in that, instead of a fuel tank, they have a battery and instead of a combustion engine, they have an electric motor.
Fault detection	Fault detection allows the operator of an electricity network to discover the occurrence of a fault, determine its location, isolate the equipment responsible for the fault and deploy other available network resources to restore power to as much of the affected area as possible.

Smart grid	A smart grid combines advanced communication, sensing and metering infrastructure (including smart meters) with the existing electricity network. A smart grid can improve the reliability of electricity services for DNSPs and consumers by identifying and resolving faults on the electricity grid, better managing voltage and identifying infrastructure that requires maintenance. Smart grids also have the potential to assist consumers in managing their individual electricity consumption by providing real-time information on electricity use, and enabling the use of 'smart appliances' that can be programmed to operate on off-peak power.
Smart meter	A smart meter is an electronic electricity meter that measures electricity use continuously and records consumption on a half hourly basis. Smart meters also have communication capabilities and can provide close to real-time information on electricity consumption, both to the consumer (through feedback technologies such as an internet portal or smartphone application), and to the electricity provider. A traditional electricity meter measures total electricity use, with regular manual readings by the distribution company to calculate consumption (usually over a three-month period).
Time of use	Time of use (TOU) pricing is a method of pricing electricity depending on the time of day it used. This reflects the different costs of generating and distributing electricity throughout the day. To access TOU pricing, consumers must have a smart meter or an interval meter (which records use in half-hour intervals, but does not have the communications capacity of smart meters) installed at home.

Summary and Recommendations

Summary

Introduction

1. Against a background of increasing domestic electricity prices and a greater focus on encouraging Australians to embrace energy efficiency measures, the Smart Grid, Smart City Program was announced by the Australian Government in the 2009–10 Federal Budget. The then Government committed up to \$100 million for the program to:

create, in one Australian city, town or region, an energy network that integrates a smart grid with smart meters in homes, thereby enabling greater energy efficiency, reduced emissions and use of alternative energy sources such as solar power.¹

2. A smart grid combines advanced communication, sensing and metering infrastructure (including smart meters) with the existing electricity network. A smart grid can also improve the reliability of electricity services by remotely identifying and resolving faults on the electricity grid, better managing voltage and identifying infrastructure that requires maintenance. In addition, smart grids have the potential to assist consumers in managing their individual electricity consumption by providing real-time information on electricity use, and enabling the use of ‘smart appliances’ that can be programmed to operate on off-peak power.

3. The Smart Grid, Smart City Program had the following four high-level objectives: deploying a demonstration and/or commercial-scale smart grid rollout; building public and corporate awareness of the economic and environmental benefits of smart grids; gathering robust information and data on smart grid applications; and investigating synergies with other infrastructure.

4. The program was established as a competitive, merit-based grant program, with the aim of selecting one consortium led by an Australian electricity distribution network service provider (DNSP) to deliver the program. The grant application period opened in late October 2009, with four consortia submitting applications. The preferred applicant, EnergyAustralia

1 Australian Government, Budget Paper No.2: 2009–10, *Expenses Measures for the Department of the Environment, Water, Heritage and the Arts*, Commonwealth of Australia, Canberra, 2009, p. 199.

(later renamed Ausgrid), was announced in June 2010. A funding agreement between the Australian Government and Ausgrid, with a total value of \$93 million, was signed in October 2010. The program was to be delivered in Newcastle, New South Wales, surrounding districts in the Hunter Valley, and some areas of Sydney.

5. The key deliverables under the funding agreement with Ausgrid included:

- the deployment of smart meters into consumers' homes;
- the trialling of new electricity tariff regimes and feedback technologies (such as an internet portal showing real-time electricity consumption and costs);
- testing new technologies in the electricity network to enhance reliability and assist in the integration of renewable energy sources (referred to as grid-side applications);
- a trial of 20 electric vehicles (EVs) to gather information about their potential broader rollout in Australia; and
- testing potential smart grid compatibility with the National Broadband Network (NBN), and other technologies, such as 'smart' gas and water metering.

6. The rollout of individual projects under the funding agreement commenced in late 2010, with the program originally scheduled to be completed by September 2013. However, in early 2013 the Government announced that one component—trialling new electricity retail tariffs together with smart meters and feedback technologies—would be extended to the end of February 2014.

7. At the conclusion of the program, the funding agreement required Ausgrid to agree with the Australian Government on a decommissioning strategy for each of the projects implemented under the program. Where this strategy included the sale of assets, proceeds of the sale were to be returned to the Australian Government.²

2 In December 2013, the Department of Industry advised that decommissioning costs for each of the projects were likely to exceed any profit made from the sale of Smart Grid, Smart City assets.

Administrative arrangements

8. The responsibility for the administration of the Smart Grid, Smart City Program has been transferred across four administering departments since it was established in May 2009. The former Department of the Environment, Water, Heritage and the Arts (DEWHA—now the Department of the Environment) administered the program from May 2009 to March 2010, including designing the program and conducting the grant assessment and selection process. The former Department of Climate Change and Energy Efficiency (DCCEE) administered the program from March to September 2010, including finalising the grant assessment and selection process and negotiating the funding agreement.³ The former Department of Resources, Energy and Tourism (RET) was responsible for the majority of the program's implementation, from September 2010 to September 2013, when the Department of Industry assumed responsibility for the program.⁴

Audit objective, criteria and scope

9. The objective of the audit was to assess the effectiveness of the administration of the Smart Grid, Smart City Program, including the establishment, implementation and ongoing management of the program.

Criteria

10. The criteria used by the ANAO to address the objective examined the:
- program's design and establishment, including governance and oversight arrangements;
 - grant assessment process to select the provider for the program;
 - negotiation and management of the funding agreement; and
 - monitoring, reporting and evaluation arrangements put in place to determine the extent to which the program has achieved its objectives.

3 As part of revised administrative arrangements, DCCEE was abolished by the previous Government in March 2013.

4 As part of revised administrative arrangements, RET was abolished by the current Government in September 2013.

Scope

11. The audit focused on the implementation of the Smart Grid, Smart City Program by the responsible departments. It did not include a technical assessment of the various projects implemented under the funding agreement. Broader issues associated with smart grids and smart meters, such as potential advantages or disadvantages of time-of-use pricing regimes, or any health and safety concerns that may be associated with smart meters were also not examined.

Overall conclusion

12. The \$100 million Smart Grid, Smart City demonstration program was established to implement or trial a range of new technologies in a challenging environment. These challenges included technological issues, consumer resistance to smart metering technologies, regulatory reform in the electricity sector, and responsibility for the program being transferred across four departments between 2009 and 2013. While a number of staff transferred with the program, changes in administrative responsibility occurred at key stages of the program's implementation (such as the approval of the successful grant applicant) and resulted in changed oversight arrangements and administrative policies and procedures. The changes also made it more difficult to manage program knowledge, including the creation and retention of program records.

13. As a demonstration program, a key outcome from the Smart Grid, Smart City Program is data and information that contributes to greater knowledge and understanding regarding the rollout of smart grids. To date, reports from the grant recipient, Ausgrid, and the department indicate that many of the program's trials have been successfully implemented, with a range of data collected.⁵ Projects that were completed largely in accordance with the funding agreement included:

- grid-side applications that tested new technologies to assist distribution network service providers (DNSPs) to better manage electricity supply;
- energy resource management projects to test the potential impact of wide-scale renewable energy generation (such as rooftop solar panels or wind turbines) on the existing electricity grid, and trial storage

5 In a number of cases, information reported by Ausgrid has been verified by technical advisers engaged by the former Department of Resources, Energy and Tourism.

batteries and other technologies that can assist to manage peak electricity demand and integrate with energy generated from renewable sources;

- an electric vehicle (EV) trial that involved the operation of 20 vehicles over short and longer-range journeys for an 18-month period; and
- a 'network' trial that rolled out smart meters to customers' homes and tested their interaction with feedback technologies providing information on real-time electricity use.

14. Key components of the program have, however, presented additional challenges, such as the retail trial. This trial, which cost \$20 million and represented the largest component of the program, sought to test consumers' interaction with a range of electricity retail tariffs and feedback technologies.⁶ Technological difficulties, combined with customer resistance and problems in securing an electricity retail provider, contributed to significant delays in rolling out the retail trial and, ultimately, the achievement of lower-than-expected numbers of customers participating.⁷

15. Overall, the administering departments established appropriate arrangements to support the implementation of the Smart Grid, Smart City Program. The commissioning and completion of a pre-deployment study, coupled with the engagement of a broad range of stakeholders, informed the design of the program, while oversight arrangements, including an interdepartmental Steering Committee guided the program's implementation. In addition, the arrangements established to manage the Smart Grid, Smart City funding agreement, including a structured reporting framework to underpin grant payments, enabled the department to monitor whether project milestones were being met and projects were delivered to the required standard.

16. There was, however, scope for improvement in several areas of the departments' administration of the program, including: aspects of the grant

6 This trial, which is separate from the network trial outlined earlier, involved new electricity tariffs in addition to feedback technologies facilitated by smart meters. For example, one retail trial tariff involved participants paying for their electricity use on a 'time of use' basis, with participants able to monitor their electricity use and costs in real-time over the internet.

7 The program guidelines and funding agreement had stipulated that an electricity retail provider must be included in the consortium to deliver the program. This was because electricity retailers 'owned' the customer relationships, which would be important to the success of the retail trial.

assessment and selection process, including probity arrangements; and the measurement and reporting of program performance.

17. While the grant assessment and selection process involved three levels of review undertaken by the then Department of the Environment, Water, Heritage and the Arts (DEWHA), an Expert Panel and an Independent Assessment Panel, there was scope for aspects of the process to be strengthened to enhance transparency and accountability. In particular, it was not evident from departmental records that the Independent Assessment Panel had assessed each applicant against the five published merit criteria. The Chair of the Independent Assessment Panel and the Department of the Environment informed the ANAO that each panel member did conduct an assessment of each application against the published merit criteria, with the assessments subsequently used to rank applicants. However, these assessments have not been retained⁸ and the assessment report of the panel did not clearly set out this process.

18. Probity processes help to ensure that grant assessment and selection processes are transparent and accountable. While DEWHA sought probity advice on aspects of the grant assessment and selection process, overall, the probity arrangements established for the process were not in keeping with those expected for a grant of this scale and complexity. Given the scale of the program and the involvement of independent assessors, there would have been merit in the department: preparing a probity plan; requiring the probity adviser to attend assessment panel meetings; and reviewing the panel's selection report to confirm that the assessment process undertaken aligned with the published program guidelines and that any identified conflicts of interest had been appropriately managed.

19. Over the course of the program's implementation, the departments have provided information on the progress of various program activities through a range of communication channels, such as stakeholder meetings, program seminars, presentations to conferences and the publication of Ausgrid reports. This information has not, however, specifically addressed the extent to

8 The stated roles and responsibilities of the Independent Assessment Panel (IAP) did not clearly outline whether these records should have been destroyed or returned to DEWHA. The Terms of Reference for the IAP stated 'all copies and notes prepared in the course of the assessment should be destroyed'. However, the contract for each Panel member stated that IAP members must deliver all Contract Material to the department when the contract ended. Contract material was defined as 'any material created for the purposes of this contract, provided or required to be provided to the Department as part of the Services, or derived at any time from the material'.

which the program's objectives are being achieved. Developing and reporting against an appropriate set of outcome-focused key performance indicators would have better informed the department's senior managers, Parliament and other stakeholders about the progress being made towards achieving the program's objectives; and supported the planned program evaluation.

20. This audit has highlighted the challenges in maintaining administrative continuity for complex programs that are transferred across agencies. In these circumstances, sound record-keeping and regular program reviews help to ensure the continuing appropriateness of governance and program administration arrangements. It is particularly important for departments assigned responsibility for continuing programs to undertake a 'health check' at the point of transfer, to ensure the key governance elements in place are appropriate and operating effectively.

21. The ANAO has made two recommendations to enhance the administration of grant programs in those agencies that have had responsibility for implementing aspects of the Smart Grid, Smart City Program. The first recommendation (directed to the Department of Industry) relates to measuring and reporting program achievement against established objectives. The second recommendation (directed to the Department of the Environment) relates to implementing appropriate probity arrangements, and appropriately documenting grant assessment and selection processes.

Key findings by chapter

Program planning and design (Chapter 2)

22. The Smart Grid, Smart City Program was announced by the then Government in the 2009–10 Federal Budget, with limited input from the agency tasked with its design and implementation (DEWHA). DEWHA's immediate priority once it was assigned responsibility for the program was to establish administrative arrangements, including the commissioning of a pre-deployment study. DEWHA managed this process effectively, drawing on relevant expertise and taking into account a range of stakeholder views. The pre-deployment study informed the subsequent detailed design of the Smart Grid, Smart City Program, including the preparation of program guidelines (the grant guidelines).

23. DEWHA generally met the requirements of the Commonwealth Grant Guidelines (CGGs) for approving the program's guidelines (although the

department advised that a signed approval was not retained). Stakeholder feedback was also considered prior to the finalisation of the guidelines.⁹ The guidelines provided relevant information for potential applicants, such as the program's objectives, weighted selection criteria and an indicative timeline for the assessment and selection process. However, there was scope to further clarify several eligibility criteria (for example, the criteria used to determine a 'commercial-scale' project or a 'credible' operational plan). It would also have been helpful to potential applicants if more information had been provided about the: planned grant assessment and selection process; decision-making arrangements; and complaint/review mechanisms.

Program governance arrangements (Chapter 3)

24. In general, the established governance mechanisms for the program incorporated appropriate oversight arrangements. The Department of the Prime Minister and Cabinet (PM&C) established a Steering Committee for the program, involving senior officials from a range of relevant departments. Several departmental officials interviewed by the ANAO who participated on the committee considered that it was effective in providing high-level guidance for the development of a new program that involved complex technologies. The absence of records of Steering Committee meetings, however, limited the departments' ability to demonstrate the extent to which the committee discharged its terms of reference, in particular providing oversight of the design and implementation of the program.

25. Oversight arrangements established by the administering departments, including senior management engagement and approval at key stages of the program, helped the program to progress as intended. Once the funding agreement with the preferred applicant, Ausgrid, was signed and the program had commenced, progress was also subject to review by a senior executive committee in RET with oversight of all departmental projects. Departments also established sound risk plans for the program, with evidence of the risks being reviewed and amended in line with developments throughout the life of the program.

9 The grant application process was accessible to a small pool of eligible applicants (the 16 electricity distribution network service providers in Australia). These providers were aware of the announcement of the program in the 2009–10 Federal Budget and had participated in the stakeholder consultations undertaken to inform the pre-deployment study.

26. There was a range of information provided to stakeholders and the general public about activities conducted under the program, including through the establishment of an industry stakeholder committee, presentations at conferences and seminars, and the regular release of Ausgrid reports. However, the absence of a set of outcome-focused key performance indicators (KPIs) has made it difficult for stakeholders to assess the extent to which the Government's objectives are being achieved. The reporting against the activity-level KPIs that were included in the administering departments' Portfolio Budget Statements (PBS) has provided limited progress information for stakeholders. The adoption of more appropriate outcome-focused KPIs (including, where appropriate, intermediate outcome measures), would have better assisted administering departments to communicate the achievements of the program.

Grant assessment and selection (Chapter 4)

27. DEWHA outlined the proposed timeline and grant assessment and selection process in a range of documents, including the pre-deployment study, detailed submissions to government and briefings to the Steering Committee. However, the establishment of a grant assessment plan, which outlined in a single document the manner in which the assessment and selection process was to be implemented, clarified roles and responsibilities and documented probity arrangements, would have better placed the department to demonstrate that it had undertaken a transparent assessment and selection process.

28. Probity processes help to ensure that grant assessment and selection processes are transparent and accountable. While DEWHA appointed a probity adviser for the grant assessment and selection process, the adviser had limited oversight of the process. The probity adviser did not prepare a probity plan or attend assessment panel meetings. Strengthening arrangements for the management of conflicts of interest, and confirmation from the adviser that the assessment and selection process conformed to the published guidelines would also have provided DEWHA with a greater level of assurance regarding the probity of the process.

29. DEWHA sought to implement an assessment and selection process that drew on a range of expertise, as had been recommended in the pre-deployment study. This involved: an eligibility assessment of the four grant applications by departmental staff; a concurrent assessment by a

17-member Expert Panel drawn from across government and five private sector companies; and a separate assessment by an Independent Assessment Panel (IAP) comprising six members with a range of relevant expertise.

30. The Expert Panel review process was complex, involving the assessment of each application against the five high-level selection criteria (including 32 sub-criteria, which were allocated to Expert Panel members based on their relevant expertise). A number of the 17 assessors on the Expert Panel did not, however, provide an assessment against all the criteria assigned to them.¹⁰ Further, the 32 sub-criteria used to assess applications had not been clearly identified in the program guidelines and associated guidance documents.

31. The merit assessment process included each IAP member undertaking an assessment of each grant application, against the five published selection criteria. These individual assessments were not, however, retained by DEHWA. The Chair of the IAP advised the ANAO that the panel subsequently made a joint assessment of each application against the five selection criteria, taking into account the findings of the Expert Panel. However, documentation, including the minutes of the IAP meetings and its final selection report, did not clearly evidence this assessment. The IAP also undertook a secondary assessment of the two highest ranked applicants, intended to provide additional assurance regarding their suitability to deliver against the objectives established for the program. There would have been merit in outlining the potential for an additional assessment in the program guidelines and internal guidance materials.

32. Appropriate advice was provided to the relevant Minister and the Government on the grant assessment process and the recommendation of a preferred applicant. On the basis of this advice, the Minister and the Government supported the panel's recommendation, and the relevant departmental official subsequently approved the spending proposal of \$93 million (as required under Regulation 9 of the *Financial Management and Accountability Act 1997*). The decision-maker (approver) for the grant was not, however, clearly identified in internal planning documents or published guidance materials. Further, the roles of the Minister and Government in the

10 The Department of the Environment advised that it tested the final averaged scores and concluded that it was highly unlikely that the missing assessments would have changed the order in which the applications were ranked by the Expert Panel.

approval process were not clearly defined, with various briefs and submissions to Ministers and Government seeking ‘approval’ or ‘agreement to’ the selection of the preferred applicant, approval to announce the preferred applicant, and approval of a spending proposal (which would be the form of words generally expected for a Regulation 9 approval). There is merit in clearly identifying decision-making arrangements for grants programs, to avoid misunderstandings and to ensure transparency and accountability in the process.

Managing the funding agreement (Chapter 5)

33. The funding agreement negotiated by the Australian Government and Ausgrid established detailed project deliverables to be achieved by Ausgrid. It also established a clear framework for reporting, releasing payments and managing the relationship between the two parties. The administering department (the then Department of Resources, Energy and Tourism—RET) and Ausgrid developed a productive and professional working relationship, with RET’s detailed review of Ausgrid’s reporting resulting in improved information and data being provided over the life of the funding agreement.

34. In general, the majority of the grant milestone payments were made in accordance with the funding agreement requirements and were appropriately documented. There were, however, some cases where records did not clearly indicate the final acceptance and approval of deliverables, such as reports from Ausgrid.

35. In June 2012, RET made an early payment to Ausgrid for several milestones that were yet to be achieved. The department informed the ANAO that the payment was made with the intention of ensuring that the Australian Government could meet its obligations under the funding agreement.¹¹ However, while carefully considered by RET, this approach was not in keeping with generally accepted principles of sound program management and presented a number of risks to RET’s effective management of the agreement—

11 In general, agencies that have not spent program funding in a financial year can seek approval from government to reallocate the funding to the next financial year. However, in 2012–13, the then Government determined that such reallocation would only occur in exceptional circumstances, with all other savings to be returned to government. On this basis, RET considered that there was a risk that funding would not be available in 2013–14 to meet the Government’s commitments under the funding agreement. To address this risk, RET approved the release of the early payment.

in particular its ability to manage potential under-performance by Ausgrid, by withholding future grant payments.

36. RET's monitoring of Ausgrid's compliance with its obligations under the funding agreement relied primarily on regular reports from Ausgrid (as had been set out in the funding agreement). The department's review of these reports was informed by technical advisers engaged to provide assurance over a range of activities and projects being reported by Ausgrid. The compliance arrangements established for the program through the funding agreement were not, however, supported by a documented compliance strategy. The early development of a compliance strategy by DEWHA during the design phase, which identified key compliance risks and outlined a framework to address these risks, would have informed potential applicants of their compliance obligations and better placed RET to establish and monitor compliance under the funding agreement.

Program achievements (Chapter 6)

37. The objectives of the Smart Grid, Smart City Program reflected the intention of the Government for the program to provide useful and valid data to inform a potential broader rollout of smart grid technologies in Australia. The program was also intended to identify the issues that would need to be addressed by both government and industry to help achieve this objective.

38. A final report from Ausgrid to the Government outlining the detailed findings of the program is due to be published in early 2014. Internal and external reporting for the Smart Grid, Smart City Program, available as at October 2013, indicated that the majority of projects had been completed in line with the funding agreement requirements. These projects had gathered significant data and information to support further development of smart grids in Australia.

39. Some elements of the program did not, however, progress as originally envisaged. Ausgrid's grant application and the funding agreement had foreshadowed a retail trial involving 'up to' 20 000 participants. A trial design study commissioned early in the program by Ausgrid, and verified by RET consultants, reduced the target to a minimum of 4453 (with a 'stretch target' of 8333). However, challenges in the retail trial implementation included

customer resistance to the technologies¹², delayed availability of appropriate smart meters, technological issues and difficulties in securing an electricity retail partner for the trial. As a result, the final number of participants in the retail trial fell just short of the minimum target (at 4000 participants), and the trial was not fully in place for the optimal two summers (to gather the most comprehensive range of data).

40. Notwithstanding the reduced number of participants, the planned cost of the trial remained unchanged, primarily due to increased implementation costs. The estimated cost of the retail trial (around \$20 million—or \$5000 per participating customer) accounted for just over one-fifth of the total expected expenditure for the program. The retail trial did, however, help to identify some of the issues that government and industry will need to consider if implementing a broader rollout of smart meters and their associated technologies.

Summary of agency responses

41. The Department of the Environment's and the Department of Industry's summary responses to the proposed report are provided below, with their full responses at Appendix 1:

Department of the Environment

The Department of the Environment notes the ANAO's findings that overall, the administering departments established appropriate arrangements to support the implementation of the Smart Grid, Smart City program and is grateful for the opportunity to respond to the audit report. The Department also notes that the audit has made recommendations for improvement of some aspects of the grants administration process and these recommendations will be incorporated into current and future grants programs.

Department of Industry

The Department welcomes the conclusion of the Australian National Audit Office that overall the four administering departments of this program established appropriate arrangements to support the implementation of the Smart Grid, Smart City Program.

¹² Ausgrid experienced a high customer drop-out rate after initial sign-up to the trial (up to 20 per cent). As at November 2013, Ausgrid was yet to conduct detailed surveys to determine causes for the drop-outs.

The Department of Industry agrees with Recommendation 1. As noted by the ANAO in the report, the Department provided extensive information on the progress and outcomes of the program to stakeholders through a range of communication channels. The Department acknowledges that it is best practice to ensure indicators report on the extent to which the programmes objectives and outcomes are being achieved.

Recommendations

Recommendation No.1

Paragraph 3.37

To enhance program performance reporting, both internally and to external stakeholders, the ANAO recommends that the Department of Industry:

- develop relevant, reliable and complete key performance indicators; and
- report against established indicators on the extent to which the program's objectives and outcomes are being achieved.

Industry's response: *Agreed*

Recommendation No.2

Paragraph 4.59

To improve accountability and transparency in grants administration, the ANAO recommends that the Department of the Environment reinforces the importance of:

- implementing probity arrangements that are proportionate to the complexity and risks of grant programs; and
- retaining documentation to appropriately evidence grant assessment and selection processes.

Environment's response: *Agreed*

Audit Findings

1. Background and Context

This chapter provides the context for, and an overview of, the Smart Grid, Smart City Program. The audit objectives, criteria and methodology are also outlined.

Electricity prices in Australia

1.1 In recent years, rising household electricity costs have become a significant ‘cost-of-living’ issue across Australia. Over the three years from 2009–2012, retail electricity costs increased by an average of around 40 per cent, with increases well over 50 per cent in some Australian states.¹³ The rising costs have been driven by a number of factors, including network infrastructure requirements (the ‘poles and wires’ needed to meet peak electricity demand), retail and energy scheme costs (such as Commonwealth and state government programs for energy efficiency and renewables), wholesale electricity generation, and the carbon price.¹⁴ These increases, when combined with other cost-of-living factors, have resulted in pressure on the Australian, state and territory governments to address the issue of rising electricity prices.

1.2 In November 2012, the then Australian Government published its Energy White Paper, which set out a framework to build more efficient and competitive energy markets, to support more informed consumer choices and to encourage investment in energy resource development.¹⁵ Consistent with the White Paper and associated Council of Australian Governments (COAG) agreements, governments agreed to progress a range of measures to respond to the impact of increasing electricity prices, including:

- strengthening regulation, including an increase in resourcing for the Australian Energy Regulator (AER);

13 Department of Resources, Energy and Tourism, *Energy White Paper 2012*, RET, Canberra, November 2012, p. xii.

14 Department of Industry, Factsheet: *The facts on electricity prices*, available from <<http://www.ret.gov.au/Department/Documents/clean-energy-future/ELECTRICITY-PRICES-FACTSHEET.pdf>> [accessed 16 December 2013]. The factsheet states that for every \$100 of the average 2012–13 annual electricity bill, network costs accounted for \$51, retail and energy scheme costs \$20, wholesale electricity generation \$20, and the carbon price \$9.

15 *Energy White Paper 2012*, op.cit., p. iii.

- enhancing consumer input to decisions that influence energy prices, such as the AER's regulatory oversight of network infrastructure spending proposals¹⁶;
- balancing the need to upgrade infrastructure against cost-effectiveness (to prevent the 'gold-plating' of network infrastructure)¹⁷; and
- seeking agreement from the states and territories about timeframes and methods for the deregulation of energy markets.

1.3 In addition to these measures, more efficient energy consumption by consumers will form an important part of any long-term solution to managing electricity pricing. The White Paper noted that:

The market should supply price signals to promote more efficient energy consumption (particularly during peak periods), so we need an effective demand-side framework that promotes efficient signals and participation across the supply chain.¹⁸

1.4 Modernising electricity infrastructure, such as the adoption of smart grids, is seen as an important element underpinning more efficient energy consumption by consumers. A smart grid facilitates improvements to the management of electricity supply and demand. It involves new technologies for both the transmission and distribution network electricity systems (grid-side applications), and for consumers.¹⁹

1.5 For consumers, smart grids involve the use of 'smart meters' to replace traditional accumulation electricity meters (see Figure 1.1 on the following page). Smart meters measure energy use and provide information on consumption in detailed time periods. For example, residential users of smart meters may access real-time and detailed information on their energy consumption and its cost through a log-in internet site or a smartphone application. Smart meters also facilitate 'time-of-use' electricity pricing, which

16 Australian Energy Regulator, *AER Consumer Challenge Panel*, Media Release, AER, Canberra, 12 February 2013.

17 Council of Australian Governments—Standing Council on Energy and Resources, *Report to COAG*, COAG Reform Council, Sydney, 28 November 2012. pp. 117–130.

18 *Energy White Paper 2012*, op.cit., p. 154.

19 Department of the Environment, Water, Heritage and the Arts (DEWHA), *Smart Grid, Smart City: A new direction for a new energy era*, Commonwealth of Australia, 2009, p. 17.

allows consumers to pay a lower tariff for using electricity outside of peak demand times.²⁰

Figure 1.1: Traditional accumulation meter and a smart meter

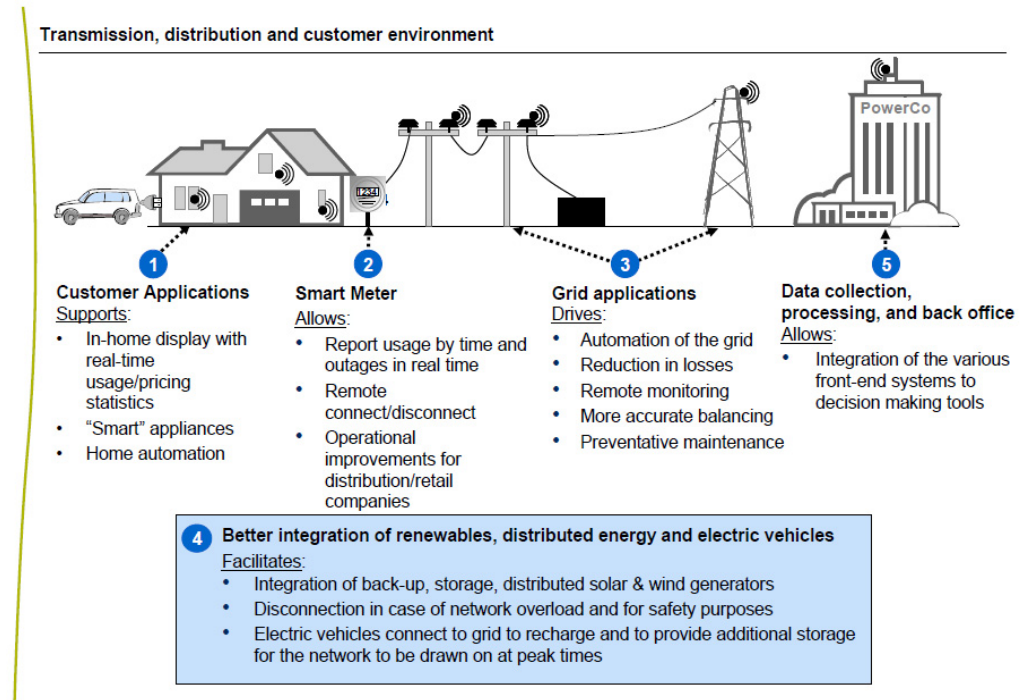


Source: [Picture left] NSW Smart Meter Taskforce: *Discussion Paper*, [picture right] Ausgrid website, 12 September 2013.

1.6 Grid-side applications allow the electricity network provider to better manage electricity supply. These applications may include sensors and monitors to detect faults and re-route supply, where possible, and improved integration of intermittent solar and wind-generated energy into the electricity grid. Figure 1.2 provides an overview of smart grid technologies.

20 Traditional 'accumulation' electricity meters record total electricity consumption over a period of time (usually a three-month period), meaning consumers pay a flat rate for all electricity use. The Australian Energy Market Commission reported in November 2012 that 88 per cent of Australian households had accumulation meters. The remaining 12 per cent were predominantly interval meters, which record electricity use in smaller time periods, but do not have the two-way communication capacity of smart meters.

Figure 1.2: Overview of smart grid technologies



Source: DEWHA, Smart Grid, Smart City: A new direction for a new energy era, op.cit., p. 18.

1.7 To assist in demonstrating the role that smart grids, including smart meters, may play in assisting consumers to reduce electricity costs, the Australian Government established the Smart Grid, Smart City Program in May 2009.

Smart Grid, Smart City Program

1.8 The Smart Grid, Smart City Program²¹ was announced in the 2009–10 Federal Budget. The Australian Government committed up to \$100 million for the program, with the objective of:

creating, in one Australian city, town or region, an energy network that integrates a smart grid with smart meters in homes, thereby enabling greater

21 The program was initially named the National Energy Efficiency Initiative, but later in 2009 became the Smart Grid, Smart City Program.

energy efficiency, reduced emissions and use of alternative energy sources such as solar power.²²

1.9 The Smart Grid, Smart City Program was established as a competitive, merit-based grant program, with the aim of selecting one consortium, led by an Australian electricity distribution network service provider, to deliver the program. A timeline of the implementation of the program is provided in Table 1.1.

1.10 The grant application period opened in late October 2009, with four consortia submitting applications. The preferred applicant, EnergyAustralia (later renamed Ausgrid)²³, was announced in June 2010. A funding agreement between the Australian Government and Ausgrid, with a total value of \$93 million, was subsequently signed in October 2010.

Table 1.1: Smart Grid, Smart City Program timeline

Milestone	Date
Announcement of the program	12 May 2009 (Budget night)
Development of a pre-deployment study to inform the program design, including industry consultation	July–September 2009
Pre-deployment study and draft Grant Guidelines released	30 September 2009
Grant application period opens	29 October 2009
Grant application period closes	28 January 2010
Grant assessment period ¹	February to mid-March 2010
Announcement of Ausgrid as the preferred applicant for the Smart Grid, Smart City Program grant	7 June 2010
Funding agreement signed between the Australian Government and Ausgrid	8 October 2010
Smart Grid, Smart City Program due for completion ²	30 September 2013

Source: ANAO analysis of Smart Grid, Smart City Program documents.

Note 1: A more detailed timeline of the assessment process is provided in Chapter 4.

Note 2: In 2013, the Government announced that the program's retail trial would be extended to the end of February 2014 (discussed in Chapter 6).

22 Australian Government, Budget Paper No.2: 2009–10, *Expenses Measures for the Department of the Environment, Water, Heritage and the Arts*, Commonwealth of Australia, Canberra, 2009, p. 199.

23 To assist the reader, the provider for the Smart Grid, Smart City Program will be referred to as Ausgrid throughout the report, even though the name change (EnergyAustralia to Ausgrid) occurred in 2011.

1.11 Key responsibilities for Ausgrid, as outlined in the funding agreement, were to:

- deploy smart meters in up to 30 000 consumers' homes (mandatory) and up to 20 000 opt-in homes;
- using the smart meters, trial new electricity tariff regimes, feedback technologies (such as internet portals) and education approaches in up to 37 500 households (with 12 500 to remain as a control group);
- test the accuracy of remote readings of smart meters in comparison to manual meter readings;
- test and report on grid-side applications, such as fault detection and distributed storage²⁴;
- deploy a fleet of 20 electric vehicles with 50 charging points; and
- test and report on 'interoperability' solutions, such as potential compatibility with the National Broadband Network (NBN) and the addition of smart gas and water metering.

1.12 At the conclusion of the program, the funding agreement required Ausgrid to agree with the Australian Government on a decommissioning strategy for each of the projects implemented under the program. Where this strategy included the sale of assets, proceeds of the sale were to be returned to the Australian Government.²⁵

Administrative arrangements

1.13 The Smart Grid, Smart City Program has been administered by four departments since May 2009. Table 1.2 outlines the administering departments for the program and their key responsibilities during implementation.

24 The glossary provides further detail on these technologies.

25 In December 2013, the Department of Industry advised that decommissioning costs for each of the projects were likely to exceed any profit made from the sale of Smart Grid, Smart City assets.

Table 1.2: Administrative responsibility for the Smart Grid, Smart City Program

Date	Administering Department	Key Responsibilities
May 2009 to March 2010	Department of the Environment, Water, Heritage and the Arts (DEWHA) ⁽¹⁾	Program establishment Management of a pre-deployment study Grant assessment and selection process
March 2010 to September 2010	Department of Climate Change and Energy Efficiency (DCCEE) ⁽²⁾	Finalising the grant assessment and selection process Negotiation of the funding agreement between Australian Government and Ausgrid
September 2010 to September 2013	Department of Resources, Energy and Tourism (RET) ⁽³⁾	Execution of the funding agreement Managing the implementation of the funding agreement
18 September 2013 to present	Department of Industry	Managing the funding agreement through to completion

Source: ANAO analysis of departmental records.

Note 1: As part of revised administrative arrangements, DEWHA's name was changed to the Department of Sustainability, Environment, Water, Population and Communities (DSEWPaC) in September 2010. It was again changed in September 2013 to the Department of the Environment.

Note 2: As part of revised administrative arrangements, DCCEE was abolished by the previous Government in March 2013.

Note 3: As part of revised administrative arrangements, RET was abolished by the current Government in September 2013.

Recent developments in electricity pricing and regulation

1.14 Electricity regulation and its impact on electricity pricing is a dynamic policy area. In recent years, there have been a number of reviews and reforms announced at the Australian and state/territory government levels.²⁶ In addition, a range of stakeholders in Australia's energy market have released discussion papers and/or actively lobbied for government support of smart grids and associated technologies.²⁷

Council of Australian Governments reforms

1.15 On 7 December 2012, COAG agreed to a number of energy market reforms covering four key areas:

²⁶ The reviews have included: the Energy White Paper (November 2012); AEMC *Power of Choice Review* (November 2012); Productivity Commission *Inquiry into Electricity Network Regulatory Frameworks* (June 2013); and a Senate Select Committee on Electricity Prices (November 2012, Government response June 2013).

²⁷ Stakeholders that have publicly expressed support for smart grid technologies include Smart Grid Australia, the Energy Retailers Association of Australia, and Energy Networks Australia.

- strengthening regulation;
- empowering consumers;
- enhancing competition and innovation; and
- ensuring balanced network investment.²⁸

1.16 Actions agreed by COAG included the competitive, business-led rollout of smart meters, to provide consumers with options to access more information about their electricity use, and voluntary time-of-use tariffs.²⁹ In July 2013, COAG's Standing Council on Energy and Resources (SCER) reported that progress had been made on a number of the agreed energy market reforms, including SCER agreement to submit a number of rule changes to the Australian Energy Market Commission (AEMC) to facilitate the broad-scale (optional) rollout of smart meters in states where such a rollout is not already underway.³⁰ At its December 2013 meeting, the SCER noted a number of measures being implemented to progress the agreed energy market reforms, but did not make any announcements specifically regarding smart meters or other demand side participation measures for residential electricity consumers.³¹

State government reforms

New South Wales

1.17 The Smart Grid, Smart City Program was implemented in New South Wales—in Newcastle, the Hunter Valley and parts of Sydney. In the period from late 2010 to the end of 2012, there was significant regulatory reform within the NSW electricity market. Key impacts of these reforms were that:

28 The Queensland Minister reserved his position on a number of matters, including smart meters and time-of-use pricing, pending the finalisation of Queensland Government reviews on these issues.

29 Standing Council on Energy Reform, *Report to COAG*, 7 December 2012, available from <<http://www.coag.gov.au/node/481>> [accessed 16 December 2013].

30 The Australian Energy Market Commission (AEMC) is the rule-maker for Australia's National Energy Market. Further information about the AEMC is available from <<http://www.aemc.gov.au/>> [accessed 16 December 2013]. Further information on the SCER's implementation of energy market reforms is available from <<http://www.scer.gov.au/workstreams/energy-market-reform/>> [accessed 16 December 2013].

31 Demand-side participation is a term used to describe the ability of electricity consumers to make decisions about the quantity and timing of their electricity consumption. Further information is available from the AEMC Information Sheet on the *Power of Choice Review*, available from <<http://www.aemc.gov.au/Media/docs/Information-sheet-a3c2a77a-7eca-4112-b02e-5978ce388119-0.pdf>> [accessed 20 December 2013].

- the three state-owned electricity distribution network service providers (DNSPs)—then EnergyAustralia, Integral Energy and Country Energy—sold their retail arms to private-sector companies. EnergyAustralia’s remaining distribution business changed its name to Ausgrid, while the purchaser of its retail business (TRUenergy), was rebranded as EnergyAustralia during 2012³²; and
- on 1 July 2012, the State’s three DNSPs (Ausgrid, Endeavour Energy and Essential Energy) were merged into a single entity (Networks NSW). The new governance arrangements and merged corporate functions were predicted to result in \$2 billion in efficiency savings over four years.³³

1.18 In addition to the reforms outlined above, the NSW Government has indicated that it is considering a broad rollout of smart meters. In mid-2012, it established a task force to recommend options for smart meter deployment in NSW. The taskforce released a Discussion Paper in November 2012 that, while recognising the potential benefits of smart meter technology, discouraged any mandatory rollout or time-of-use charges.³⁴ At the conclusion of public consultations, the taskforce was to provide a final report to the NSW Government in early 2013. As at December 2013, the report and the Government’s response had not been publicly released.

Victoria

1.19 Victoria is the only Australian state or territory to implement a mandatory replacement of all existing electricity meters with smart meters. In 2006, the Victorian Government announced its Advanced Metering Infrastructure (AMI) Project. Under this project, all Victorian residential and small business consumers (more than 2.4 million homes and small businesses) were to receive smart meters over the period from 2009 to 2013.

32 The two other distribution entities also changed their business names: Integral Energy became Endeavour Energy; and Country Energy became Essential Energy. Origin Energy, the purchaser of the Integral Energy and Country Energy retail businesses, chose to retain existing branding during a transition period.

33 NSW Trade and Investment, *NSW Electricity Network Reforms*, NSW Government, Australia, 2013, available from <<http://www.energy.nsw.gov.au/electricity/networks/reforms>> [accessed 16 December 2013].

34 NSW Government, *NSW Smart Meter Task Force: Discussion Paper*, NSW Government, Australia, 2012, available from <<http://engage.haveyoursay.nsw.gov.au/document/show/585>> [accessed 16 December 2013].

1.20 As at December 2013, over 90 per cent of the smart meter rollout was complete, voluntary time-of-use pricing (named ‘flexible pricing’) had been introduced, and electricity companies had developed products such as internet portals for consumers to monitor their electricity use.³⁵ There was, however, community concern over the rollout, with some consumers protesting about mandatory installation of the meters, including by forming ‘stop the meters’ groups. These concerns included the potential economic disadvantage to some groups as a result of time-of-use pricing, privacy implications, and potential health impacts of the smart meters.³⁶

1.21 In November 2009, the Victorian Auditor-General released a report on the AMI Project. The audit report found a ‘gap in the project’s accountability framework’ and that the responsible department’s oversight of the project’s implementation had been too limited. The report also stated that electricity bills in Victoria had increased by around \$100 per household per annum, to fund the smart meters and associated implementation costs.

Audit coverage

1.22 While the Smart Grid, Smart City Program has not been the subject of a previous performance audit by the ANAO, a number of performance audits have been conducted over recent years by international audit offices that have reviewed the establishment, rollout and testing of smart grids. Common findings from these audits have noted that smart grids:

- have the potential to create an environment that fosters competitive electricity pricing;
- require strong customer engagement, especially during early project phases;
- could have been improved by stronger risk management practices; and

35 Department of Primary Industries, *Smart Meters*, Victorian Government, Australia, 2013, available from <<http://www.dpi.vic.gov.au/smart-meters/about-smart-meters/latest-news>> [accessed 16 December 2013].

36 For example, households with large families may have less capacity to change their use of household appliances to take advantage of off-peak time periods, and low income households have been shown to have inelastic power use (that is, they are generally already trying to minimise their electricity use as far as possible to save on bills, and they have less capacity to purchase new, energy-efficient whitegoods). Brotherhood of St Laurence 2012, Submission to the Senate Select Committee on Electricity Prices [Internet], available from <http://www.bsl.org.au/pdfs/BSL_subm_Senate_inquiry_on_electricity_prices_2012_w_attachment.pdf#page=1> [accessed 16 December 2013].

- have potential security implications for customers and industry.³⁷

Grants administration framework

1.23 As outlined earlier, the Australian Government provided \$93 million (excluding GST) in grant funding to Ausgrid to implement the Smart Grid, Smart City Program. Ausgrid was selected through a competitive grant selection process conducted in late 2009 and early 2010.

1.24 Australian Government grant programs involve the expenditure of public money and are subject to applicable financial management legislation. At the time of the Smart Grid, Smart City Program, the *Financial Management and Accountability Act 1997* (FMA Act) provided a framework for the proper management of public money and public property, including requirements governing the process by which decisions were made about whether public money should be spent on individual grants.³⁸

1.25 In support of FMA requirements, in July 2009, the then Government introduced a policy framework for grants administration.³⁹ The new framework had a particular focus on the establishment of transparent and accountable decision-making processes for the awarding of grants, and included new specific requirements set out in the Commonwealth Grant Guidelines (CGGs) 2009 (updated in June 2013). Officials performing grants administration duties must act in accordance with the CGGs.

1.26 The following seven key principles for grant administration were established in the CGGs: robust planning and design; an outcomes orientation; proportionality; collaboration and partnership; governance and accountability; probity and transparency; and achieving value with public money.⁴⁰ Further, the CGGs state that unless specifically agreed otherwise, competitive,

37 These include reports from: the National Audit Office (United Kingdom), *Preparations For the Rollout of Smart Meters*, 30 June 2011, available from <<http://www.nao.org.uk/report/preparations-for-the-roll-out-of-smart-meters/>>; and Government Accountability Office (United States of America), *Challenges in Securing the Modernized Electricity Grid*, 28 February 2012, available from <<http://www.gao.gov/products/GAO-12-507T>> [both reports accessed 16 December 2013].

38 In June 2013, the Parliament passed new legislation, titled the *Public Governance, Performance and Accountability Act 2013*, to replace the FMA Act and the *Commonwealth Authorities and Companies Act 1997* (the CAC Act), enhancing the Commonwealth financial framework. The *Public Governance, Performance and Accountability Act 2013* takes effect on a day to be fixed by proclamation, or 1 July 2014 (whichever occurs first).

39 The new framework followed a number of earlier reforms, including interim measures announced in December 2007, and revised Finance Minister's Instructions in January 2009.

40 Department of Finance and Deregulation, *Commonwealth Grant Guidelines*, Finance, Canberra, June 2013, p. 30.

merit-based selection processes should be used, based upon clearly-defined selection criteria.⁴¹

1.27 In addition to the CCGs, ANAO better practice guides on grants administration have been available since 1997. The ANAO's current Implementing Better Practice Grants Administration guide was published in December 2013.⁴²

Audit objective, criteria, scope and methodology

Objective

1.28 The objective of the audit was to assess the effectiveness of the administration of the Smart Grid, Smart City Program, including the establishment, implementation and ongoing management of the program.

Criteria and scope

1.29 The criteria used by the ANAO to address the objective examined the:

- program's design and establishment, including governance and oversight arrangements;
- grant assessment process to select the provider for the program;
- negotiation and management of the funding agreement; and
- monitoring, reporting and evaluation arrangements put in place to determine the extent to which the program has achieved its objectives.

1.30 The audit scope focused on the implementation of the Smart Grid, Smart City Program by the responsible departments. As noted earlier (and outlined in Table 1.2), the responsibility for the administration of the Smart Grid, Smart City Program has been transferred across four administering departments since it was established in May 2009. Consequently, the audit's findings are directed to: the Department of the Environment (formerly DEWHA/DSEWPaC), which had responsibility for the establishment of the Smart Grid, Smart City Program and the grant assessment and selection process; and the Department of Industry, to which RET's Energy Division

41 *ibid.*, p. 26.

42 The Better Practice Guide is available from <<http://www.anao.gov.au/Publications/Better-Practice-Guides/2013-2014/Implementing-Better-Practice-Grants-Administration>> [accessed 16 December 2013].

(responsible for the program's implementation from September 2010 to September 2013) was transferred in September 2013.

1.31 The audit did not include a technical assessment of the various projects implemented under the funding agreement. The broader issues associated with smart grids and smart meters, such as potential advantages or disadvantages of time-of-use pricing regimes, or health and safety concerns that may be associated with smart meters, were also not examined.

Methodology

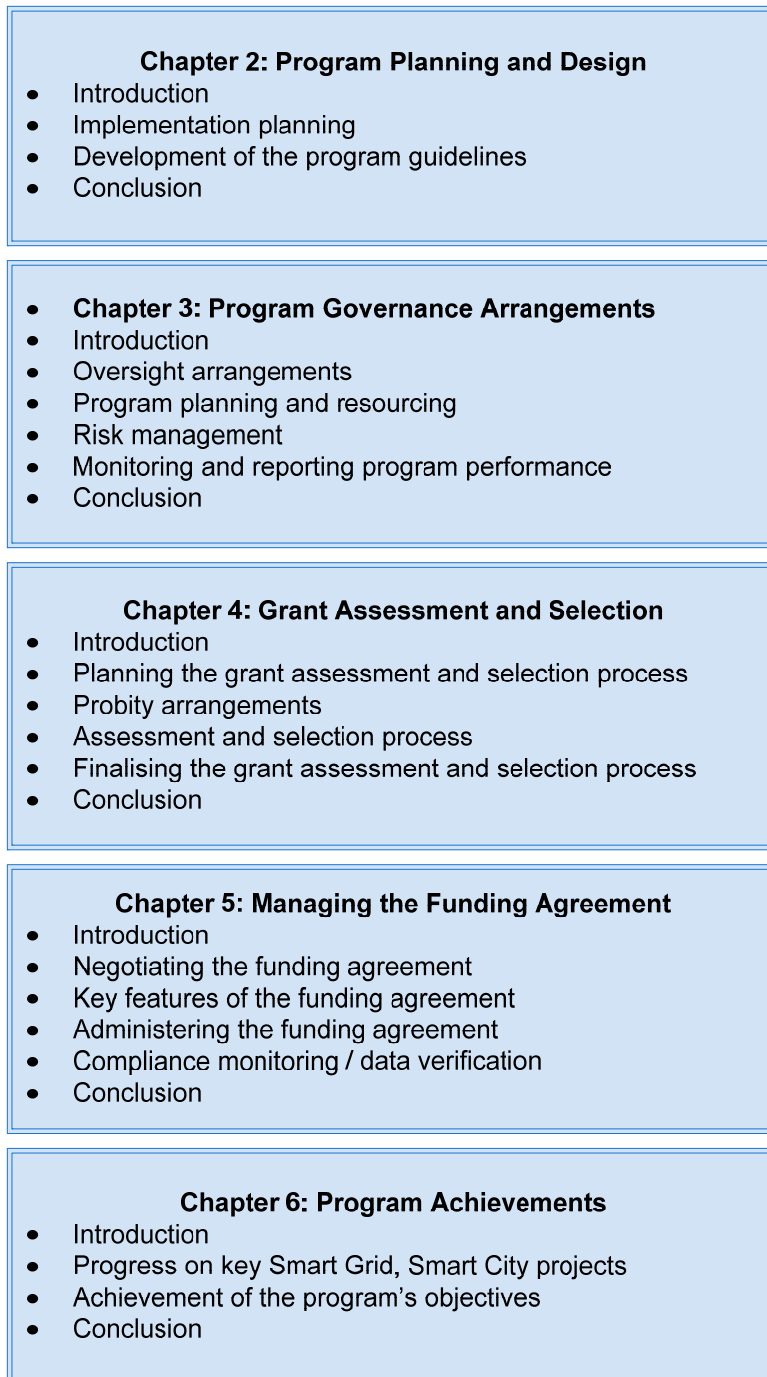
1.32 In undertaking the audit, the ANAO:

- reviewed departmental files and program documentation;
- interviewed departmental staff, Ausgrid and other relevant stakeholders, including consumers participating in the Smart Grid, Smart City Program;
- reviewed key program projects, including the retail trial, to determine the extent to which the program objectives had been achieved; and
- conducted site visits to implementation areas for the Smart Grid, Smart City Program in Sydney, Newcastle and the Upper Hunter Valley.

1.33 The audit was conducted in accordance with ANAO Auditing Standards at a cost to the ANAO of \$368 600.

Report structure

Figure 1.3: Report structure



2. Program Planning and Design

This chapter examines the design and implementation of the Smart Grid, Smart City Program.

Introduction

2.1 As previously noted, the Smart Grid, Smart City Program was announced as part of the 2009–10 Federal Budget. The policy initiative had been developed by the Department of the Prime Minister and Cabinet (PM&C) in the weeks leading up to the Budget, although it was envisaged that the administering department would be DEWHA. As the relevant policy departments (including DEWHA and RET) had provided limited input to the development of the new measure, detailed program planning occurred after the Budget announcement.

2.2 The Budget Papers set out the Government's design parameters for the program and stated that:

The Government will provide \$100.0 million in 2009–10 for investment in an integrated system of renewable energy, smart grid and smart meter technology and infrastructure in a regional city of at least 25,000 people.

Subject to an implementation study, a competitive grant is expected to be provided to a consortium of state and local government, public and private energy companies and other private sector providers. The initiative is aimed at creating, in one Australian city, town or region, an energy network that integrates a smart grid with smart meters in homes, thereby enabling greater energy efficiency, reduced emissions and use of alternative energy sources such as solar power.⁴³

2.3 The ANAO examined the establishment of the program by DEWHA. Particular emphasis was given to implementation planning in the early stages of the program, including stakeholder engagement, the management of the pre-deployment study for the program and the development of the program's guidelines.

43 Australian Government, *Budget Paper No. 2: 2009–10, Budget Expense Measures*, Commonwealth of Australia, Canberra, 2008, p. 199. While the Budget Papers allocated \$100 million for the program in 2009–10, as the program developed this expenditure was re-phased across forward years, concluding in 2013–14.

Implementation planning

2.4 Immediately following the Budget announcement, DEWHA began: establishing internal staffing and reporting arrangements; meeting with stakeholders, including Ministers' offices, key departments and industry representatives; and assisting its Minister to plan a follow-up media event. Departmental documents and the ANAO's interviews with departmental staff indicate that, while timeframes had not been set, the Government had sought to expedite the implementation of the program. Early activities undertaken by DEWHA included project and risk planning, and the conduct of a pre-deployment study to inform the program's design.

Project and risk planning

2.5 DEWHA developed a Delivery Concept for the Smart Grid, Smart City Program, which guided the subsequent program design and implementation. The five key phases for the delivery of the program set out in the Delivery Concept were: pre-deployment; proposals; assessment; post-assessment; and implementation.

2.6 DEWHA also prepared a project plan for the program, which covered key aspects of the program's implementation, including: its objectives and intended outcomes; descriptions of key project tasks, responsibilities, deadlines and status; available funding for the program and a budget for administrative costs; governance arrangements; and a stakeholder management plan. The project plan was regularly reviewed by DEWHA and it was updated by DCCEE when it assumed responsibility for the program's administration in March 2010. In line with its internal guidelines at the time, DEWHA also developed a risk management plan for the program as an attachment to the project plan. An external legal services firm was engaged to assist with the department's assessment of project risks.

Pre-deployment study

2.7 The Budget announcement established a requirement that a full rollout of the Smart Grid, Smart City Program was subject to an implementation study. Planning for the selection (via an open tender process) of an expert provider to develop a pre-deployment study commenced shortly after the program's announcement. DEWHA appropriately managed the tender process, particularly given the truncated timelines expected by government. A

contract, to the value of \$1.5 million (GST inclusive), was signed with the successful consultant in July 2009.

2.8 The pre-deployment study was developed, finalised and published within a three-month timeframe (July to September 2009), with two final reports produced—one internal to government, and a public version (released with the draft grant guidelines in late September 2009).⁴⁴ While the two documents were very similar, the public version excluded detailed analysis on aspects such as: potential societal benefits for Australia of smart grids; intellectual property issues; funding considerations; risks for the grant selection phase of the program; and grant assessment questions.

Stakeholder engagement

2.9 The announcement of the program generated significant interest among key stakeholders in the electricity sector, including peak bodies, electricity providers, individual technology companies, researchers and consumer groups.

2.10 The development of effective working relationships with stakeholders can often help to: identify, overcome or avoid fragmentation and unnecessary overlaps in granting activity; encourage prospective recipients to understand their rights and have an opportunity to influence the design of a granting activity; and reduce compliance costs for prospective recipients.⁴⁵

2.11 Stakeholder workshops, involving peak bodies, electricity and ICT industry representatives, academics and government agencies and regulators, provided a key input to the pre-deployment study. DEWHA and its consultant also met separately with some stakeholders, most notably a number of distribution network service providers (DNSPs—the targeted grant applicants).

2.12 Most stakeholders interviewed by the ANAO commented positively on the engagement process that was employed to inform the development of the pre-deployment study, although one stakeholder commented that it

44 Minister for the Environment, Heritage and the Arts, Minister for Broadband, Communications and the Digital Economy and Minister for Resources, Energy and Tourism, 'Australia One Step Closer To A New Energy Era: *Smart Grid, Smart City*', joint media release, Parliament House, Canberra, 30 September 2009.

45 Department of Finance and Deregulation, *Commonwealth Grant Guidelines 2009—Policies and Principles for Grants Administration*, Finance, Canberra, July 2009, p. 34.

considered that the Government had already determined many of the areas covered by the workshops.

2.13 A range of public and stakeholder engagement activities were also delivered by Ausgrid as part of its responsibilities under the funding agreement (these are examined further in Chapters 5 and 6).

Access to the program

2.14 An early and important consideration in the design of a grant program is establishing the process by which potential funding recipients will be able to access the program.⁴⁶ The pre-deployment study recommended that the service provider should be selected through a competitive assessment process, which was limited to consortia led by an Australian DNSP. The study identified the following three reasons why a DNSP should be the lead member of any consortia applying for funding:

- a central point of control—the distributor’s position in the electricity network made it a natural point of control for smart grid infrastructure rollout and data collection;
- managing investment and execution risk—distributors would likely be responsible for the majority of the required infrastructure investments, including grid components and smart meters, and as such were best placed to manage the risk and underwrite the consortium’s co-funding commitment; and
- competition—electricity distributors are regulated monopolies not in competition, and thus were more likely to share the data generated by the program.⁴⁷

2.15 The pre-deployment study’s recommendation was accepted by DEWHA, the Steering Committee and the Government, resulting in a small pool of potential applicants (DEWHA identified 16 DNSPs that would potentially apply for funding).

46 ANAO Better Practice Guide—Implementing Better Practice Grants Administration, op.cit., p. 44.

47 Department of Environment, Water, Heritage and the Arts, *Smart Grid, Smart City: A new direction for a new energy era*, Commonwealth of Australia, 2009, p. 79. The study also recommended that each consortium should include a retail partner and a range of other partners, such as smart grid technology providers and appliance manufacturers, universities, state/local governments, electricity transmitters and other network distributors, consumer interest groups, and NBN Co.

Development of the program guidelines

2.16 Agencies are required to develop guidelines for new grant programs and make them publicly available (including on agency websites) to those persons and/or entities eligible to apply for a grant under the program.⁴⁸ The ANAO reviewed the process by which DEWHA developed the Smart Grid, Smart City Program guidelines⁴⁹, and assessed whether the guidelines and associated documents met the requirements of the CGGs and provided relevant information to potential applicants.

Development of the guidelines

2.17 Stakeholder consultations had canvassed potential grant selection criteria, in particular relating to the selection of an appropriate location, an acceptable scale for 'commercial-scale' demonstration projects, and consumer engagement.

2.18 The draft Grant Guidelines were released for comment in late September 2009, with feedback received from 22 respondents. DEWHA also held a workshop with DNSPs to obtain their views on the draft guidelines. DEWHA made some (generally minor) amendments to the guidelines, including an extension to the closing date for submissions to the end of January 2010 (originally scheduled for early January 2010).

2.19 Under the CGG requirements that applied at the time, guidelines for new grant programs were required to be approved by the Expenditure Review Committee of Cabinet (ERC).⁵⁰ As outlined above, the draft Grant Guidelines were approved for release by the Government in September 2009. The final Grant Guidelines were due to be considered by the ERC at a meeting scheduled for 28 October 2009. However, on 26 October 2009 the then Minister

48 *Commonwealth Grant Guidelines 2009*, op.cit., p. 11.

49 While the CGGs and other guidance materials refer to 'program guidelines', the Smart Grid, Smart City Program guidelines were titled 'Grant Guidelines'. To avoid confusion, this report will also use this terminology.

50 *Commonwealth Grant Guidelines 2009*, op. cit., section 3.22. Program guidelines were, in certain circumstances, considered by another committee of Cabinet, for example the Strategic Planning and Budget Committee (SPBC)—see ANAO Audit Report No.26 2011–12 *Development and Approval of Grant Program Guidelines*, p. 61. The approval requirements for program guidelines were revised in September 2010, with program guidelines for high-risk programs to be approved by the ERC; medium-risk programs by the then Minister for Finance and Deregulation; and low-risk programs by the relevant Minister. The risks are to be assessed using Finance's Risk Potential Assessment Tool, available from <<http://www.finance.gov.au/gateway/risk-potential-assessment-tool.html>> [accessed 16 December 2013].

for the Environment, Water, Heritage and the Arts wrote to the then Minister for Finance and Deregulation indicating that the scheduled ERC meeting had been cancelled, and he was therefore seeking an out-of-session approval of the Grant Guidelines. This approval would enable the public release of the guidelines in accordance with the previously announced timelines. In August 2013, RET advised the ANAO that the records transferred to the department from DEWHA and DCCEE did not include the Finance Minister's approval of the Grant Guidelines.⁵¹

Content of the guidelines and associated materials

2.20 Clear, consistent and well-documented grant guidelines are an important component of effective and accessible grants administration.⁵² The Smart Grid, Smart City Grant Guidelines were generally in accordance with the mandatory requirements set out in the CGGs, and included elements of better practice. For example, the guidelines provided background on the need for a smart grid demonstration program, set out the Government's objectives and expected outputs of the program, and included weighted selection criteria with additional guidance on key issues, such as the location for the program. Nonetheless, there was scope for the guidelines to provide more clarity in relation to the eligibility and selection criteria, the assessment process, and the complaints and appeals process.

Eligibility criteria

2.21 Criteria outlining eligibility should be straightforward, easily understood and effectively communicated to potential applicants.⁵³ The Grant Guidelines set out 10 eligibility criteria, all of which had to be met for an application to be considered against the selection criteria.⁵⁴ The first criterion clearly stated that the lead proponent of the applicant consortium must be a DNSP. The remaining nine criteria generally established requirements for material to be enclosed with the application, such as plans (including a retailer engagement plan, stakeholder engagement plan, and data management plan),

51 A submission to government prepared by DCCEE in April 2010 (relating to the selection of the preferred applicant) did, however, include a statement that the then Finance Minister had previously approved the Grant Guidelines.

52 *Commonwealth Grant Guidelines 2009*, op.cit., p. 22.

53 *ibid.*

54 Department of Environment, Water, Heritage and the Arts, *Smart Grid, Smart City Grant Guidelines* [Internet], Canberra, 2009, p. 13, available from <<http://www.ret.gov.au/energy/Documents/smart-grid/smartgrid-grant-guidelines.pdf>> [accessed 16 December 2013].

evidence of partnerships with key consortium members, and/or specific commitments such as information dissemination and regular meetings with DEWHA. There was, however, a lack of clarity in relation to several of the criteria, in particular:

- Criterion 5 established a requirement for an integrated proposal that included a commercial-scale demonstration for customer applications, grid applications and distributed storage, but did not define 'commercial-scale'; and
- Criterion 6 established the requirement for the application to include a credible operational plan and cost breakdown, and risk management plan, however, 'credible' was not further defined.⁵⁵

Selection criteria

2.22 The Grant Guidelines set out the following five high-level, weighted selection criteria:

- applications, approach and benefits (40 per cent);
- operational plan and risk management (25 per cent);
- dissemination of findings (10 per cent);
- interaction with Regulatory and Standards Working Groups (10 per cent); and
- financial viability and consortium structure and governance model (15 per cent).

2.23 The guidelines also provided additional explanatory information under each selection criterion, which further outlined the Government's expectations. A supplementary document titled Application Supporting Material was released two weeks after the Grant Guidelines (on 17 November 2009), and also provided further information on the selection criteria.

2.24 Neither the Grant Guidelines, nor the Application Supporting Materials, clearly outlined that 32 sub-criteria would be used to assess applications. While recognising that agencies should not be overly prescriptive

⁵⁵ DEWHA's probity adviser for the grant assessment had raised this issue and recommended that the subjective term 'credible' be removed from the eligibility criteria. However, the term remained in the final Grant Guidelines.

with selection criteria, better practice is to clearly articulate all criteria against which applications will be assessed.⁵⁶

Assessment and approval process

2.25 Grant guidelines should outline the assessment and selection process, including who is responsible for making the final recommendations and approving funding.⁵⁷ The pre-deployment study had set out a proposed assessment process, which was released in the public version of the report. However, the Grant Guidelines provided a more limited overview of the planned assessment and selection process, only stating that ‘an independent panel of experts will assess applications for technical and business merit and provide recommendations to government’.

2.26 There was, however, a three-stage process, as recommended in the pre-deployment study: an eligibility assessment by DEWHA officers; an Expert Panel assessment; and an assessment by the Independent Assessment Panel (IAP), which was to make a recommendation on a preferred applicant, through the Steering Committee, to the Government.

2.27 The Grant Guidelines set out an indicative timeline for the assessment and selection process (with the successful consortium to be announced in April 2010), and identified that ‘the Australian Government [would] decide the successful applicant to implement Smart Grid, Smart City’.⁵⁸ While the preferred applicant was to be agreed by government, the decision-maker (referred to as the ‘approver’ in the relevant legislation) in terms of making the funding decision under the *Financial Management and Accountability Act 1997* (the FMA Act), was not defined.⁵⁹ While the approval was ultimately provided by a RET senior executive, this role was not foreshadowed in the Grant Guidelines. As outlined in previous ANAO audits⁶⁰, a lack of clarity around decision-making in procurement or grants selection can result in difficulties in concluding

56 ANAO Better Practice Guide—Implementing Better Practice Grants Administration, June 2010, Canberra, p. 62.

57 *Commonwealth Grant Guidelines 2009*, op.cit., p. 22.

58 *Smart Grid, Smart City Grant Guidelines*, op. cit., p. 25.

59 Under the FMA Act, the approver can be a Minister, a group of Ministers (such as Cabinet), an agency Chief Executive, agency officials acting on the authority of a Minister or their Chief Executive, or other persons authorised by legislation. Financial Management and Accountability Regulations 1997, Regulation 9. See also Department of Finance and Deregulation, Finance Circular No. 2011/01: *Commitments to Spend Public Money (FMA Regulations 7 to 12)*, 2011.

60 For example, ANAO Audit Report No. 29, 2011–12, *Administration of the Australia Network Tender Process*, 2012.

these processes (this matter is discussed further in Chapter 4, at paragraph 4.6). The development of a detailed grant assessment plan (also discussed in Chapter 4), would have assisted DEWHA to clarify key roles and responsibilities, including that of the approver.

Complaints and appeal process

2.28 The Grant Guidelines did not include information on complaints handling processes or mechanisms for review/appeal of decisions and/or the outcome. This is in contrast to CGG requirements, which state that the inclusion in program guidelines of a documented process for the consistent and timely handling of complaints and queries helps to maintain public confidence in the integrity of the program.⁶¹

Feedback from applicants

2.29 Notwithstanding the issues outlined above, two grant applicants interviewed by the ANAO (the successful applicant and one unsuccessful applicant) stated that they considered the Grant Guidelines and associated materials (in particular the pre-deployment study) clearly communicated the key requirements for the grant assessment and selection process, including the eligibility and selection criteria.⁶²

Informing potential applicants

2.30 Stakeholders interviewed by the ANAO indicated that the Budget announcement generated significant interest from the energy sector. One grant applicant noted that DEWHA was not in a position to provide further detail on the program immediately following the announcement in the Budget, and there was a significant delay until information was made available to potential applicants. As outlined at paragraph 2.1, DEWHA had not been involved in the policy development phase for the program prior to its announcement in the 2009–10 Federal Budget, limiting the department’s ability to provide program information immediately following the announcement.

2.31 A website established one month after the Budget announcement contained an overview of the Smart Grid, Smart City Program and details of the forthcoming industry workshops to inform the development of the

61 Commonwealth Grant Guidelines 2009, p. 36; and ANAO Better Practice Guide—Implementing Better Practice Grants Administration, op.cit., p. 40.

62 The remaining two applicants declined the ANAO’s invitation to be interviewed.

pre-deployment study. DEWHA used the website to inform potential applicants of the upcoming opportunity to apply for grant funding. The primary means of communicating the grant to potential applications, the Grant Guidelines, were officially launched by the Minister for the Environment, Water, Heritage and the Arts, the Minister for Resources and Energy, and the Minister for Broadband, Communications and the Digital Economy at a public event in Queanbeyan, New South Wales on 29 October 2009 and subsequently placed on the website.

2.32 The final versions of the Application Supporting Material, Draft Funding Agreement, the Program Terms and Conditions and a Frequently Asked Questions document were published on the Smart Grid, Smart City Program website in mid-November 2009. The applications period closed on 28 January 2010.

Conclusion

2.33 DEWHA worked effectively within condensed timeframes to establish the Smart Grid, Smart City Program. To inform program implementation, DEWHA prepared sound project and risk management plans, and reviewed these materials at regular intervals. The pre-deployment study provided a detailed proposal for the program's design, drawing on expertise contracted by DEWHA, and taking into account a range of stakeholder views. In general, stakeholders considered that the pre-deployment study contributed to a well-informed program design.

2.34 The Smart Grid, Smart City Grant Guidelines drew heavily on the work undertaken in the pre-deployment study. They provided potential applicants with relevant information, such as the Government's objectives for the program, expectations of applicants, and the weighted selection criteria to be used to assess applications. DEWHA generally met the CGGs' mandatory requirements for approval of the guidelines (although the final Ministerial approval had not been retained) and stakeholder feedback was considered before the guidelines were finalised. However, to further assist potential applicants and other stakeholders, there was scope to: clarify several eligibility criteria; provide more information on the planned grant selection process (including the roles of the Expert Panel and the Independent IAP and the possibility of supplementary assessments); outline decision-making arrangements; and explain complaint/review mechanisms.

3. Program Governance Arrangements

This chapter examines the governance arrangements for the Smart Grid, Smart City Program.

Introduction

3.1 The appropriate and accountable administration of programs requires sound governance arrangements to guide and support program implementation. The ANAO assessed the governance arrangements supporting the Smart Grid, Smart City Program including: oversight arrangements; planning and resourcing; risk management; and monitoring and reporting of program performance.

Oversight arrangements

Program Steering Committee

3.2 In May 2009, the Department of the Prime Minister and Cabinet (PM&C) established a Steering Committee to oversee implementation of the Smart Grid, Smart City Program and another energy program.⁶³ The Steering Committee was to be involved in selecting a consultant for the pre-deployment study, and have an ongoing role to ensure that the business model implemented for the Smart Grid, Smart City Program met the needs of government, and that progress was being made against agreed milestones.

3.3 The Steering Committee comprised senior departmental officials from PM&C, DEWHA, RET, and Finance. The terms of reference were agreed at the first meeting of the committee. The meeting records retained by PM&C did not, however, include finalised agendas or meeting minutes, with PM&C informing the ANAO that it was not able to locate these records. The absence of relevant information on the conduct of meetings makes it difficult to determine the extent to which the Committee discharged its terms of reference.

3.4 In early March 2010, responsibility for the Steering Committee transferred from PM&C to DCCEE. The DCCEE-chaired Steering Committee met once, on 15 March 2010, to review the report of the Independent

63 The Solar Flagships Program, which had also been announced in the May 2009 Budget, was being administered by RET.

Assessment Panel. While records indicated that DCCEE envisaged an ongoing role for the Committee, there were no further meetings convened.

3.5 Several departmental officials who participated on the committee and were interviewed by the ANAO reported positively on the role of the Steering Committee in establishing the program. In particular, the committee was considered effective in providing high-level and broad expertise and advice to the implementing department (DEWHA), including ensuring that the 'big picture' was adequately reflected in the program's design.

Departmental oversight arrangements

3.6 As outlined previously, since 2009 the Smart Grid, Smart City Program has been administered by DEWHA, DCCEE, RET and the Department of Industry. The ANAO reviewed (to the extent possible given limitations in retained records) the administrative and oversight arrangements established initially by DEWHA and DCCEE, and subsequently by RET.⁶⁴

Oversight arrangements in DEWHA and DCCEE

3.7 In May 2009, immediately following the Budget announcement, DEWHA established a project team to administer the Smart Grid, Smart City Program. Staff were sourced from existing areas within DEWHA, with oversight by an Assistant Secretary. Briefs to senior managers were prepared at key stages in DEWHA's administration of the program (for example, submission of the program design to government). In addition, the responsible DEWHA First Assistant Secretary was a member of the Steering Committee.

3.8 On 8 March 2010, the program was transferred with other DEWHA Energy Efficiency functions to DCCEE. The department was responsible for finalising the grant selection process, including the preparation of a submission to government outlining the recommended applicant, and negotiating and executing a funding agreement with the approved applicant (the timeline for the grant selection process is set out in Chapter 4).

3.9 Key program staff transferred from DEWHA to DCCEE, including the responsible Assistant Secretary. Program planning documents were updated when the program was transferred to DCCEE, with these documents referring to DCCEE senior management's oversight of the program. Over this period,

64 The transfer of the program to the Department of Industry, in September 2013, occurred after the majority of audit fieldwork was completed.

briefs were prepared for DCCEE senior management and the Minister, as part of the funding agreement negotiation process.

Oversight arrangements in RET

3.10 RET assumed responsibility for the program through the Administrative Arrangements Order made on 14 September 2010. A number of key program staff transferred from DCCEE to RET.

3.11 RET's Program Management and Delivery Committee (PMDC) was the primary governance mechanism for programs delivered within the department. It comprised a number of senior RET executives and reported directly to the RET Executive Board. Under the PMDC framework, all programs were required to submit a report that included a 'traffic light' status update, along with more detailed information about the program's progress, including expenditure to date and key issues and risks.

3.12 The ANAO reviewed all project status reports prepared for PMDC by the Smart Grid, Smart City team from November 2010 to June 2013 and the corresponding minutes from PMDC meetings. In general, status reports were prepared for the PMDC meetings during this period.⁶⁵ These reports highlighted the project's progress and emerging issues, such as delays in smart meter rollout due to technical difficulties, issues in securing a retail partner, and team resourcing. Traffic light reporting for much of the project was 'Orange', which reflected the range of challenges facing the rollout of the program. The PMDC minutes, while brief, indicated ongoing senior management oversight of the program.

3.13 In addition to reporting to the PMDC, progress on the program was reported through briefs to relevant RET senior managers. Briefs were also prepared in support of milestone payments and change orders under the funding agreement (discussed further in Chapter 5).

3.14 In November 2012, RET undertook a mid-term evaluation of the program.⁶⁶ Overall, the evaluation presented a positive view of the program's progress to January 2013, reporting that the majority of the program's infrastructure and systems had been deployed. The evaluation was not able to

65 While monthly status reports for three PMDC meetings were not available, it appeared that they may have been inadvertently copied over with the following month's reports.

66 The evaluation was undertaken by a RET staff member external to the program team. Its terms of reference included a review of the program's appropriateness, effectiveness, efficiency, integration, performance assessment, and strategic policy alignment.

report on the success (or otherwise) of the program's various project activities, due to insufficient data, analysis and information being available at the time of the evaluation.

Program planning and resourcing

3.15 To guide its administration of the program, RET established a range of procedural documents, including detailed timelines to track funding agreement milestones and payment schedules, and checklists to assist in the review of reports and other documents submitted by Ausgrid. The department also prepared a draft program plan, but the plan was not finalised or endorsed.⁶⁷ Further, the department did not establish a consolidated set of standard operating procedures for the program, which RET's Grants Administration Manual recommended to help ensure that robust practices are in place to support the particular needs of individual programs.

3.16 The development of a program plan or standard operating procedures at the point at which the program was transferred to the department would have better positioned RET to monitor the progress and success of the program, with coverage including:

- the program's objectives, milestones, resources, planned compliance activities and measures of success; and
- consideration of performance information required to monitor the achievement of the program's objectives.

3.17 RET's reported administrative costs for the program ranged from \$527 913 in 2010–11, to \$384 585 in 2012–13. These costs largely related to salary, training, and travel expenses. A key reason for the changes in administrative costs was the fluctuation of staffing levels over the course of the program's implementation, particularly during 2012 when the program was managed by two staff members for a number of months. The long-term involvement of several key RET staff (including the project manager) and a single project leader within Ausgrid, assisted the ongoing management of the program.

67 As required by the funding agreement, Ausgrid produced a detailed Project Management Plan, which was reviewed and endorsed by RET and updated every six months. However, this plan did not address RET's implementation of the program.

3.18 The reduced resources during 2012 affected the Smart Grid, Smart City team's capacity to undertake some administrative activities, such as the review of material submitted by Ausgrid, to the extent previously undertaken. The reduced staffing levels also resulted in RET engaging external consultants to assist the department to obtain appropriate assurance over project activities. RET acknowledged that the delay in deploying additional departmental resources to the program resulted in the scaling back of administration and compliance activities over an extended period. However, the department also considered that the team had appropriately focused its reduced resources on ensuring that key administration and compliance components of the program were met and managed at appropriate levels.

3.19 Ausgrid also informed the ANAO that it had concerns over the loss of RET team members and project knowledge. Ausgrid considered that RET's reduced ability to locate departmental staff members within the Ausgrid team in Sydney meant that the department was more reliant on standard reports, rather than first-hand feedback from embedded team members. According to Ausgrid, first-hand involvement and understanding would have been valuable in a program of this complexity and duration.

Risk management

3.20 An important aspect of program implementation is the identification and assessment of risks that may adversely affect program delivery, and the development of mitigation strategies to address identified risks. In the case of the Smart Grid, Smart City Program, which as a demonstration program, was complex, technically challenging and involved the expenditure of around \$100 million by one provider, sound risk management was a key area for departmental focus (as had been highlighted in the pre-deployment study).⁶⁸

3.21 The ANAO examined the risk management framework applied to the Smart Grid, Smart City Program from its inception and design within DEHWA and DCCEE to the ongoing management of the program by RET.

DEHWA and DCCEE risk management

3.22 As previously noted in paragraph 2.6, DEHWA developed a risk management plan for the Smart Grid, Smart City Program as part of its

68 DEHWA, *Smart Grid, Smart City: A new direction for a new energy era*, op.cit., p. 99.

program planning activities. The risk management plan identified key stakeholders in the management of the program, their risk management responsibilities and risk escalation/delegation protocols. Accompanying the management plan was a risk register that identified potential risks that may arise during program implementation. The risk register addressed each risk's source, consequence, current (untreated) level, and provided an outline of planned mitigation strategies, responsibilities and timeframes.

3.23 The risk register was regularly reviewed and updated by DEWHA from August 2009 to March 2010. Following the program's transfer to DCCEE in March 2010, the risk register was reviewed in April 2010 to take into account the new administrative framework and risks that had been identified by the grant assessment panel, which by that stage had concluded its assessment and provided a report to the department.

RET's risk management framework

3.24 RET had in place a tiered risk management framework comprising: a Strategic Risk Plan for the department⁶⁹; division or major function risk plans; and program, policy, or project area risk plans.⁷⁰ RET's 2011–12 Annual Report stated that the department had a risk appetite level of 'medium', and all risks rated above this level were reported to the Executive Board for further consideration.⁷¹

3.25 The Smart Grid, Smart City Program team had updated its project area Risk Register and Treatment Plan each quarter for the years 2010–11 to 2012–13. The plans had highlighted new and emerging risks, such as delays in project delivery due to the challenges of the retail trial and staffing shortages. Further, the Smart Grid, Smart City risk plan aligned with RET's strategic and divisional plans, as required by the department's risk management framework.

69 RET informed the ANAO that the 2011–12 risk plan (endorsed in May 2012) was the most recently endorsed plan for the department.

70 Department of Resources, Energy and Tourism, *Annual Report 2011–12*, RET, Canberra, 2012, p. 106.

71 *ibid.*

Monitoring and reporting program performance

3.26 Adequate performance information, particularly in relation to program effectiveness, allows entities to assess the impact of policy measures, adjust management approaches as required, and provide advice to government on the success, shortcomings and/or options for refining the design of programs to achieve better outcomes. This information also allows managers to make informed decisions on the allocation and use of program resources. In addition, performance information and reporting enables the Parliament and the public to consider a program's performance, in relation to both the impact of the program in achieving the policy objectives of the government and its cost effectiveness.⁷²

3.27 The Government's Outcomes and Programs Framework requires entities to firstly identify, and secondly report against, the programs that contribute to government outcomes over the Budget and forward years. A central aspect of this approach is the development of clearly specified outcomes, program objectives and appropriate key performance indicators (KPIs).⁷³

3.28 The ANAO examined the arrangements put in place by DEWHA, DCCEE and RET to measure and report on the program's performance.⁷⁴ A broader examination of the Smart Grid, Smart City Program's achievements against the Government's objectives for the program, is provided in Chapter 6.

Program objectives

3.29 A key element of sound program administration is defining a clear objective for the activity. Figure 3.1 outlines the objectives for the Smart Grid, Smart City Program.

72 ANAO Audit Report No.28 2012–13: *The Australian Government Performance Measurement and Reporting Framework—Pilot Project to Audit Key Performance Indicators*, April 2013, Canberra, p. 14.

73 *ibid.*, p. 15.

74 The ANAO did not examine the Department of Industry's performance measurement and reporting arrangements as the program's transfer occurred after the majority of audit fieldwork had concluded.

Figure 3.1: Program objectives

The objectives of the Smart Grid, Smart City demonstration project are to:

- deploy a commercial-scale rollout that tests the business case for key applications and technologies of the smart grid;
- build public and corporate awareness of the economic and environmental benefits of smart grids and obtain buy-in from industry and customers;
- gather robust information and data to inform broader industry adoption of smart grid applications across Australia; and
- investigate synergies with other infrastructure (such as gas and water) and the National Broadband Network.

Source: DEWHA Smart Grid, Smart City Grant Guidelines, October 2009, p. 9.

3.30 The objectives were clearly identified in the Grant Guidelines released in October 2009, the funding agreement⁷⁵ and in performance reports produced during program implementation, such as Ausgrid's Monitoring and Measurement Reports.

Performance measurement in Portfolio Budget Statements

3.31 The ANAO examined the KPIs for the Smart Grid, Smart City Program, as outlined in the relevant Portfolio Budget Statements (PBS) for DCCEE and RET.⁷⁶ KPIs should be relevant, reliable and complete—that is, providing a balanced examination of the overall program performance, both quantitatively and qualitatively, and collectively addressing the program objective.⁷⁷

3.32 Overall, the KPIs published and reported against by the administering departments over the years 2010–11 to 2013–14, provided limited information to stakeholders to inform an assessment of the extent to which the program's objectives were being achieved. For example, a KPI used from 2011–12 to 2013–14 was that payments would be made to agreed milestones and within government guidelines. While achievement of this KPI would indicate that the project was largely tracking on schedule, it would not be clear to stakeholders how the program's progress against milestones was contributing to the achievement of objectives.

75 The first objective was slightly modified in the funding agreement. This issue is discussed further in Chapter 6.

76 The 2009–10 PBS for DEWHA did not include deliverables or KPIs for the program (the program was established in the May 2009 Budget, and as previously outlined, DEWHA had limited input to the program's development prior to its announcement).

77 ANAO Audit Report No. 28 2012–13 *The Australian Government Performance Measurement and Reporting Framework: Pilot Project to Audit Key Performance Indicators*, Canberra, April 2013, pp. 12 and 63.

3.33 In July 2012, RET developed more detailed KPIs, for internal reporting purposes. These KPIs included indicators and targets, such as:

- number of trials completed under the program (target = 68);
- information dissemination—number of trials with results and data released to public (target = 68);
- participant recruitment—network trial participants recruited (target = 20 000) and retail trial participants recruited (target = 10 000);
- public awareness in target area increased (target = 40 per cent); and
- Standards Roadmap completed (time target not specified).

3.34 While these KPIs are largely activity-based, when combined they help to communicate the program's progress against its four objectives, for example the deployment of a commercial-scale smart grid rollout. While acknowledging that measurable program data has predominantly become available from mid-2011 onwards, reporting against these KPIs would have provided more useful information to stakeholders about the achievements of the program.

Program reporting

Reporting program progress

3.35 As is outlined further in Chapter 5, RET used a range of channels to outline program activities and report progress on these activities. These channels included public reports (Monitoring and Measurement Reports), hosting of industry workshops and seminars, presentations to professional and community seminars, and a dedicated website. The sharing of information on program developments over the course of implementation contributed to a broader understanding of the issues impacting on the rollout of smart grids.

Reporting program performance

3.36 Relevant departmental annual reports from 2009–10 to 2012–13⁷⁸ provided coverage of the Smart Grid, Smart City Program. Over the period of implementation, this included reporting against the KPIs established in the PBS, and general information regarding the program's progress. The reports'

78 The ANAO reviewed: DCCEE's 2009–10 Annual Report (when programs transfer between departments, the convention is for the inheriting department to report on the full year's activities); and RET's 2010–11, 2011–12 and 2012–13 annual reports.

only discussion of challenges to the program's implementation was in relation to delays in sourcing appropriate smart meters for the trial. However, this coverage did not include information regarding the potential impact of the delays. Enhancements to the KPIs established for the program and more balanced coverage of program progress would have provided stakeholders with a better understanding of program achievements.

Recommendation No.1

3.37 To enhance program performance reporting, both internally and to external stakeholders, the ANAO recommends that the Department of Industry:

- develop relevant, reliable and complete key performance indicators; and
- report against established indicators on the extent to which the program's objectives and outcomes are being achieved.

Department of Industry's response:

3.38 *Agreed. The Department of Industry agrees with Recommendation 1. As noted by the ANAO in the report, the Department provided extensive information on the progress and outcomes of the program to stakeholders through a range of communication channels. The Department acknowledges that it is best practice to ensure indicators report on the extent to which the programmes objectives and outcomes are being achieved.*

Conclusion

3.39 Overall, the departments assigned responsibility for implementing the Smart Grid, Smart City Program established appropriate oversight arrangements. Within DEWHA and DCCEE, these involved senior management engagement and approval at key stages in the planning and grant selection processes for the program, and preparation of briefs to the departmental executive and government. Oversight was also enhanced by a multi-agency Steering Committee, established to provide a strategic and operational level overview of the program, which continued until the conclusion of the grant selection process. Within RET, governance oversight was provided by the Program Management and Delivery Committee (PMDC), which facilitated high-level oversight of program delivery by senior managers.

3.40 Departments also established sound risk plans for the program, which identified key risks and also the risk owner/s and risk escalation/delegation protocols. Identified risks were subsequently reviewed on a regular basis and amended to reflect changes in the delivery environment over the course of program implementation.

3.41 DEWHA established an objective for the program in November 2009, which has informed performance measurement and reporting activities for the program. The KPIs set out in the PBS were reported against in annual reports by the responsible departments. However, they provided limited information for stakeholders about the progress of the program in meeting its objectives. While activity-level data has been provided through a range of other public reporting and information activities by RET and Ausgrid, enhancements to the KPIs established for the program and more balanced coverage of program progress would have provided stakeholders with a better understanding of the extent to which the program has achieved the objectives set by Government.

4. Grant Assessment and Selection

This chapter examines the grant assessment and selection processes, including probity arrangements, established and administered by the responsible agencies for the Smart Grid, Smart City Program.

Introduction

4.1 A key consideration for grant programs is whether decision-makers have equitably and transparently selected for funding those applications that represent best value for public money, in the context of the objectives and outcomes of the granting activity.⁷⁹ A competitive merit assessment process that is based on clearly-defined selection criteria and is free from claims of political or other bias provides a sound basis on which to select grant recipients.

4.2 The ANAO examined key aspects of the assessment and selection process (outlined in Table 4.1 on the following page) implemented by DEWHA for the Smart Grid, Smart City Program, including the:

- planning for the grant assessment and selection process;
- probity arrangements;
- assessment process undertaken by departmental staff, an expert panel and the Independent Assessment Panel; and
- arrangements to finalise the grant assessment and selection process (including the decision-making process, announcement and reporting of the grant outcome, and process for applicant feedback, complaints handling and appeals).

79 ANAO Better Practice Guide—Implementing Better Practice Grants Administration, op.cit., p. 70.

Table 4.1: Timeline and key milestones for the grant assessment and selection process

Milestone	Date
Application period for the Smart Grid, Smart City Program	29 October 2009–28 January 2010
Eligibility Assessment by DEWHA	29 January–19 February 2010 (concurrent assessments)
Expert Panel review	
Independent Assessment Panel assessment	10 February–11 March 2010 (The IAP commenced its assessment prior to the conclusion of the eligibility assessment and Expert Panel review)
Steering Committee approval of IAP report	15 March 2010
Brief to Minister advising of outcome DEWHA prepared a submission to government seeking approval of the preferred applicant	17 March 2010
Government supported selection of Ausgrid	24 April 2010
Public announcement of the preferred applicant	7 June 2010
Debriefs for unsuccessful applicants	July/August 2010

Source: ANAO analysis of Smart Grid, Smart City Program information.

Planning the grant assessment and selection process

4.3 DEWHA prepared a range of documents that outlined various aspects of the grant assessment and selection process, including:

- the pre-deployment study outlined an assessment process that included an Expert Panel review followed by an assessment by an Independent Assessment Panel (IAP). The internal version of the study also included suggested questions to be asked by the assessment panel⁸⁰;
- a submission prepared by DEWHA and accepted by the Government in September 2009, which included a high-level overview of the proposed assessment process;
- terms of reference for the IAP, which were developed by the Steering Committee in December 2009 and endorsed by the then Minister for Environment, Water, Heritage and the Arts in late 2009, provided a

80 As outlined earlier, there were two versions of the pre-deployment study produced—one internal to government, and a public version.

timeline for the assessment process and an overview of the planned assessment to be carried out by the IAP; and

- an Examination Guide produced to assist the Expert Panel in its review of applications contained detailed information on the 32 sub-criteria against which the Expert Panel was to assess applications (further discussed at 4.31 below).

4.4 These documents established a clear timeline for the grant assessment process and, to varying degrees, outlined the roles of participants in the process (such as the Steering Committee and the IAP), and the assessment process to be undertaken. There was not, however, an assessment plan prepared that brought together all aspects of the proposed process.

4.5 There would have been benefit in DEWHA developing an over-arching grant assessment plan⁸¹, which assessed risks to the assessment and selection process, outlined the planned process, and clarified issues, such as:

- procedures for receipt and handling of applications;
- probity arrangements (supported by a separate probity plan, where appropriate);
- assessment of grant eligibility requirements, including procedures to handle applications that did not meet all eligibility requirements;
- an outline of the proposed grant assessment process—aligned with that set out in the Grant Guidelines and other public documents, and reviewed by a probity adviser, where appropriate;
- the roles and responsibilities of key participants, including clearly identifying the grant approver and defining the role of Ministers/government in decision-making;
- relevant information to be included in the grant assessment report; and
- procedures for debriefing unsuccessful applicants and handling complaints/reviews.

4.6 As discussed at paragraph 2.27, the decision-maker (or approver) for the grant expenditure was not clearly identified in the Grant Guidelines.

81 Evidence retained by RET indicates that DEWHA commenced the development of an assessment plan, but a final and endorsed copy was not retained.

Further, internal documents reviewed by the ANAO, including submissions to government, did not identify the grant approver, with a range of references to the Government ‘approving’ or ‘agreeing’ to the selection of the program provider, approving the publication of the program provider, and one reference to the Government approving a spending proposal (which would be the form of words generally expected for a FMA Regulation 9 approval). As indicated earlier, the Cabinet or a Minister could have fulfilled the FMA Regulation 9 approver role.

Probity arrangements

4.7 In the context of grants administration, probity refers to those involved in the grant process applying and complying with public sector values and duties, such as honesty, integrity, impartiality and accountability.⁸² The CCGs set out a number of recommended approaches to ensuring probity in grants administration, including by establishing:

- appropriate internal control mechanisms for granting activities—for example the separation of duties;
- mechanisms for identifying and managing perceived or actual conflicts of interest; and
- decision-making processes that are transparent, well documented and consistent with the legislative and policy requirements of the CCGs.⁸³

4.8 The CCGs do not require that agencies appoint a separate probity adviser or prepare a probity plan, although it is considered to be better practice to undertake these activities on a case-by-case basis.

Probity adviser

4.9 According to the Grant Guidelines for the Smart Grid, Smart City Program:

A probity advisor has been appointed for Smart Grid, Smart City to provide probity advice before and during the selection process and to ensure that all applications are assessed fairly and in accordance with the arrangements set out in these guidelines and their accompanying documentation.⁸⁴

82 *Commonwealth Grant Guidelines 2009*, op cit., p. 27.

83 *ibid.*, pp. 28–29.

84 *Smart Grid, Smart City Grant Guidelines*, op. cit., p. 24.

4.10 DEWHA appointed a legal services firm in September 2009 to provide probity services for the grant assessment process. The contract stated that the legal firm was to provide services that the department (DEWHA) may require, including: reviewing grant assessment and selection processes; preparing a probity plan; attending assessment meetings, responding to questions from the assessment panel or DEWHA; reviewing proposed communications with applicants; and assisting with debriefs for unsuccessful applicants. In the event, the probity services provided by the legal services firm were limited. For example, the probity adviser did not attend briefings or meetings of the Expert Panel or the IAP, and did not review the final IAP report to confirm that the assessment had been undertaken in accordance with the published Grant Guidelines and adhered to generally accepted probity practices.

4.11 The legal services firm was paid \$12 083 for services provided between 25 September and 20 November 2009.⁸⁵ In May 2010, DCCEE terminated the contract with the probity adviser, and sought probity advice from the Australian Government Solicitor (AGS), which had been appointed previously to provide legal advice for the drafting and negotiation of the funding agreement. The AGS provided limited probity advice to DEWHA and DCCEE during 2009–10 (on matters including management of identified conflicts of interest and IAP questions to applicants during the assessment process). There was, however, no evidence to indicate that DEWHA requested the AGS to provide a full range of probity services, such as those sought from the previous probity adviser.

Contact with applicants

4.12 In the interests of probity, all eligible applicants to a grant program should have equal opportunities to access funding. This includes in relation to the extent, if any, to which applicants will be given the opportunity to engage with, or make additional representations to, agency officials, assessment or advisory panels, and Ministers or other decision-makers.⁸⁶ While DEWHA had met with or communicated directly with a number of DNSPs shortly after the release of the Grant Guidelines, this contact ceased in mid-November 2009

⁸⁵ The invoice for this amount indicates that the legal services firm provided advice on the development of the Grant Guidelines and the conflict of interest declaration documents, and prepared a draft probity plan, probity protocol and probity register. However, documents retained by the departments did not include a probity plan, protocol or register.

⁸⁶ ANAO Better Practice Guide—Implementing Better Practice Grants Administration, op.cit., pp. 78–79.

when the draft funding agreement and other application materials were released. During the application period DEWHA published and updated a 'Frequently Asked Questions' document that provided general answers to written questions received from a range of stakeholders, including potential grant applicants.⁸⁷

4.13 DEWHA also sought advice from the AGS regarding questions the IAP wished to ask of several applicants (see paragraph 4.38), and in regard to a proposed meeting between a Minister and one applicant. The applicant had sought a meeting with the Minister in early 2010, through their local Member of Parliament. Based on the AGS advice, DEWHA advised the Minister not to proceed with the meeting, given the open status of the grant assessment and selection process.⁸⁸

4.14 Notwithstanding this advice, the Minister's Chief of Staff met with an applicant on 22 April 2010 (by this stage, key elements of the grant assessment and selection process had concluded—for example, the IAP had finalised its report and submitted it to the Steering Committee, but the final decision to approve funding for the preferred applicant had not yet been made). A DCCEE official attended the meeting and prepared minutes. While the administering departments took reasonable steps to advise the Minister (and her staff) regarding the risks in meeting with a grant applicant, the grant assessment process was still 'live' and industry speculation regarding the outcome was building. In general, unless program guidelines specifically provide applicants with the capacity to make representations in support of their applications, it is advisable that contact with applicants be limited to that necessary to keep them appropriately informed regarding the grant assessment and selection process.⁸⁹

Conflict of interest and confidentiality

4.15 An important element to be considered when establishing an advisory or selection panel is the potential for perceived or actual conflicts of interest.⁹⁰

87 'Frequently Asked Questions' were available online from <<http://www.ret.gov.au/energy/Documents/smart-grid/smartgrid-fags.pdf>> [accessed 16 December 2013].

88 Ministerial meetings with other stakeholders, such as a smart meter company, had previously been declined on probity grounds.

89 ANAO Better Practice Guide—Implementing Better Practice Grants Administration, op.cit., pp. 78–79.

90 DEWHA's conflict of interest declarations referred to 'perceived or actual' conflicts of interest. The term 'potential' conflict of interest is also used to define a declared conflict that is yet to be assessed.

A conflict of interest may arise where a person involved in the selection process has, or could be perceived as having, a direct or indirect interest that might prejudice, or be seen to prejudice, their impartiality in the selection of projects or activities for funding.⁹¹ It is also important that all parties involved in the grant assessment and selection process understand the need to maintain the confidentiality of information provided by applicants.

4.16 Mechanisms for identifying and managing perceived or actual conflicts of interests include:

- grant guidelines and internal documents outlining matters that may constitute conflicts of interest;
- procedures for declaring perceived or actual conflicts of interest; and
- managing these conflicts, including identifying who will be responsible for ensuring they are appropriately managed.⁹²

4.17 While DEWHA had not prepared a grant assessment or probity plan, which would usually address conflict of interest issues, the department sought advice from its probity adviser regarding the development of a conflicts of interest declaration.

4.18 Completed conflict of interest and non-disclosure declarations were available for all departmental assessors and the 17 members of the Expert Panel (with the exception of the five external contractors to the Expert Panel, for whom there were non-disclosure statements retained, but no conflict of interest documentation). Of the six IAP members, four conflict of interest declarations were retained (non-disclosure was covered in the contract signed by each panel member). However, other documentation reviewed by the ANAO (such as legal advice from the AGS) indicated that all six members had completed a conflict of interest declaration.

4.19 A number of the DEWHA staff members and the Expert Panel members raised potential conflicts of interest, such as: professional relationships with consortia members; previous employment with consortia members; or family employment with consortia members. The consideration and assessment of these potential conflicts (for example, by the probity adviser

91 ANAO Better Practice Guide—Implementing Better Practice Grants Administration, op.cit., p. 31.

92 *ibid.*

or DEWHA officers not directly involved in the grant assessment and selection process) was not evident from departmental records.

4.20 Of the six IAP members, three declared a conflict of interest. DEWHA sought advice from the AGS regarding these declared conflicts. The declarations related primarily to previous employment and/or consultancy work that IAP members had undertaken with consortia members. The AGS considered that two of the declared conflicts did not pose an issue, but, in relation to the third, it advised DEWHA to seek further information from the IAP member. After considering the AGS advice, DEWHA determined that the declared conflicts did not present a significant probity risk to the assessment process. However, the records do not evidence DEWHA's actions in response to the advice from the AGS to separately brief the IAP member regarding confidentiality requirements, and/or require that he sign a confidentiality undertaking.

4.21 Overall, there was scope for DEWHA to have strengthened arrangements for the management of conflicts of interest, including the requirement for any declared (perceived or actual) conflicts to be specifically addressed before grant selection activities commenced, and for compliance with the conflict of interest procedures to have been monitored throughout the grant selection exercise.⁹³

Assessment and selection process

4.22 The assessment and selection process to identify the preferred applicant for the Smart Grid, Smart City Program was to occur in three stages:

1. receipt of applications and an assessment of each applicant's eligibility was to be conducted by departmental officers;
2. an Expert Panel comprising 17 representatives from government agencies, regulators and expert consultants was to review applications against the five published weighted selection criteria (divided into 32 sub-criteria—not published)—this occurred concurrently with the DEWHA eligibility checking process); and

93 ANAO Better Practice Guide—Implementing Better Practice Grants Administration, op.cit., pp. 31–32.

3. an Independent Assessment Panel was to review the Expert Panel's findings, conduct an assessment of each proposal, rank applications in an order of merit, and make a recommendation to the Steering Committee and the Government.

Applications received

4.23 Four applications were received by the close of the application period, with consortium leaders and locations of the proposed trials identified in Table 4.2. DEWHA provided a written confirmation to the four applicants that their application had been received around two weeks after receipt.

Table 4.2: Applications for the Smart Grid, Smart City Program (alphabetical order)

Consortium Leader	Proposed Trial Location
Country Energy	Australian Capital Region, Australian Capital Territory
EnergyAustralia (renamed Ausgrid in 2011)	Newcastle, New South Wales
Ergon Energy Corporation Limited	Townsville, Toowoomba, and Brisbane, Queensland
United Energy Limited	Frankston, Victoria

Source: DEWHA information.

Handling of applicant documents

4.24 As applications contained commercial-in-confidence material, appropriate arrangements were required to protect this material. The Department of the Environment informed the ANAO that management of applicant information was tightly controlled by the department. This included procedures such as: registering each application as it was received; storing applications in secure areas; numbering copies to be dispatched to Expert Panel and IAP members; and the use of registered delivery arrangements. Notwithstanding this advice, the lack of appropriate documentation to evidence these actions reduced the transparency and accountability of the process.⁹⁴

⁹⁴ Departmental records did not evidence the date and time each application was received, and a register tracking the dispatch of confidential applicant material to assessors (and its subsequent return and/or destruction) was not completed.

Eligibility assessment by DEWHA officers

4.25 The eligibility criteria for the application process were set out in the Grant Guidelines, although as noted in Chapter 2, there was scope for these criteria to have been more clearly defined.⁹⁵ The Grant Guidelines had stated ‘all of the following eligibility criteria **must** be met’ [emphasis added] for an application to be deemed eligible. Eligibility criteria are ‘threshold criteria’, and applications that fail to meet these criteria should be identified as ineligible for funding.⁹⁶

4.26 The eligibility assessment was undertaken by three members of the DEWHA Smart Grid, Smart City team. This assessment determined that each application fulfilled all the eligibility requirements and would progress to the next stage of assessment. However, the department’s early consideration of eligibility initially raised concerns regarding two applications.⁹⁷ For the first application these concerns were in relation to whether a trial proposed in the application could be considered to be ‘commercial-scale’. In the case of the second application, concerns related to whether the operational plan could be considered ‘credible’ to meet the eligibility requirements and whether the applicant had sufficiently demonstrated that arrangements had been established with consortium partners.

4.27 The records retained by the departments do not indicate how DEWHA resolved these eligibility issues, and as noted above, all four applications were considered eligible. The ANAO reviewed the four applications against the eligibility criteria established in the Grant Guidelines and found that each had included information against each of the required eligibility criteria.⁹⁸

4.28 As outlined in Table 4.1, DEWHA’s eligibility assessment process was conducted concurrently with the Expert Panel’s review of all applications. There would have been merit in conducting the eligibility assessment prior to the commencement of the Panel’s review, to help ensure that resources were only directed to the assessment of eligible applicants.

95 *Smart Grid, Smart City Program Grant Guidelines 2009*, op. cit., Section 8.1, p. 13.

96 ANAO Better Practice Guide—Implementing Better Practice Grants Administration, op.cit., p. 63.

97 These documents included notes made by DEWHA staff undertaking the eligibility assessment, and comments from several departmental representatives on the 17-member Expert Panel.

98 It was beyond the scope of the audit to assess the technical feasibility of each application, for example whether the proposed trials could be considered commercial-scale.

Expert Panel review

4.29 As proposed in the pre-deployment study (but not outlined in the Grant Guidelines) a review of each application was undertaken by an Expert Panel, to assist the IAP in its merit assessment of applications. The 17-member Expert Panel included representatives from DEWHA, nine government entities, three industry regulators and five external service providers.⁹⁹

4.30 DEWHA separately briefed the Expert Panel representatives in January 2010. The relevant meeting agendas indicated that the briefings included information on the program's background, the assessment process, timeline, and confidentiality requirements (minutes from the briefings were not retained).

Review process

4.31 An Examination Guide was provided to Expert Panel members, which was designed to help ensure consistency across the reviews. Each application was reviewed against 32 sub-criteria, 26 of which were grouped into five weighted categories, which were aligned to the high-level selection criteria set out in the Grant Guidelines. There were an additional five 'ungrouped' sub-criteria that were allocated across two or more of the high-level selection criteria.¹⁰⁰ As has been outlined in Chapter 2, the guidance for applicants in relation to potential sub-criteria for each of the five high-level selection criteria (although they were not labelled as such) was set out in various sections of the Grant Guidelines and in the Application Supporting Material document. This approach did not provide potential applicants with a clear outline of the criteria that were to be applied in determining the preferred applicant.

4.32 Each Expert Panel reviewer was assigned criteria that were relevant to their expertise and requested to complete an Assessment Workbook. A scaling system was established to help ensure that only the scores of experienced reviewers were considered for their assigned criteria, with feedback provided by reviewers beyond the scope of their assigned criteria removed in this

99 Government entities on the Expert Panel included: DEWHA; RET; PM&C; the Attorney-General's Department; the then Department of Broadband, Communications and the Digital Economy (DBCDE); the then Department of Innovation, Industry, Science and Technology (DIISR); the then Department of Infrastructure, Transport, Regional Development and Local Government; the Australian Government Solicitor; and NBN Co. (which is a wholly-owned Commonwealth company). Regulators on the Expert Panel included: the Australian Energy Market Operator; the Australian Energy Market Commission; and the Australian Energy Regulator.

100 The eligibility of applicants was deemed as a sub-criterion, bringing the total number of sub-criteria to 32.

process (this was despite the review tool stating that feedback on criteria outside their assigned scope 'is most welcome'). Once all completed workbooks were received by DEWHA in mid-February 2010, they were incorporated into a single workbook, from which final scores and rankings were calculated, and written feedback collated.

ANAO examination of Expert Panel reviews

4.33 For each of their assigned criteria, the Expert Panel reviewers were requested to provide a score (from 0—poor, to 3—very good), and a written justification of the score, including any issues or areas for improvement.

4.34 The ANAO's review of all Assessment Workbooks from the Expert Panel members found that, while the external contracted reviewers responded on average to 98 per cent of the requested criteria, reviewers from government entities and regulators addressed on average 72 per cent of the requested criteria. Information provided by DEWHA to the IAP indicated that, across the 17 Expert Panel reports, 278 of the 2176 requested criteria (or 12.7 per cent) were not reviewed. DEWHA advised that it had undertaken testing of the final averaged scores and concluded that it was highly unlikely that the scores from those criteria not reviewed would change the order in which the applications were ranked by the Expert Panel review. The ANAO's testing also found that, in general, the data from individual workbooks was accurately recorded in the consolidated workbook.

Independent Assessment Panel

4.35 The merit assessment of the grant applications was undertaken by an Independent Assessment Panel (IAP), consisting of six members selected on the basis of their experience in areas relevant to the program. The IAP's task was to 'consider all grant applications received, and the material prepared during the [Expert Panel] review, and make an overall assessment of the relative merit of each application.'

4.36 The then Minister for the Environment, Water, Heritage and the Arts appointed the IAP (with membership recommended by the Steering Committee) in December 2009. IAP members attended a briefing on 10 February 2010, where, according to the agenda, they discussed the panel's role and responsibilities and the Terms of Reference, the assessment process and timeline. The Department of the Environment also informed the ANAO that the meeting included a detailed probity briefing by the Australian

Government Solicitor (AGS), however, minutes for the briefing were not retained.

Assessment of applications

4.37 IAP members received copies of the four grant applications in the period from 10 to 15 February 2010 and the ANAO was advised that individual assessments of the applications were conducted prior to the IAP's first meeting on 23 February 2010. These individual assessments were not retained by DEWHA¹⁰¹, and neither the IAP meeting minutes nor the final report indicate whether the assessments were against the five published selection criteria. The Chair of the IAP informed the ANAO that the individual IAP members assessed each application against the published selection criteria. This view was supported by the Department of the Environment.

4.38 The IAP minutes and the final report indicate that, at its first meeting, panel members discussed the applications and noted that all members had reached the conclusion that two of the four applications were superior. The IAP also considered the Expert Panel's review and noted that its proposed order of merit for the applications aligned with each member's individual assessment.¹⁰²

4.39 The IAP decided at the initial meeting to short-list the two highest-ranked applications, and develop a matrix of 'program objectives and key project attributes, that identified the strengths and weaknesses in each application.' At the second IAP meeting, held on 2 March 2010, the panel members completed the assessment matrix for the two highest-ranked applications.

4.40 The potential for a supplementary assessment was not foreshadowed in the program guidelines (or in internal documents). The IAP's rationale for assessing the applications against seven program objectives and key project

101 The documentation outlining the roles and responsibilities of the IAP did not clearly outline whether these records should have been destroyed or returned to DEWHA. The Terms of Reference for the IAP stated: 'all copies and notes prepared in the course of the assessment should be destroyed'. However, the contract for each Panel member stated that IAP members must deliver all Contract Material to the department when the contract ended. Contract material was defined as 'any material created for the purposes of this contract; provided or required to be provided to the Department as part of the Services; or derived at any time from the material'.

102 The IAP also sought additional information from the two highest-ranked applicants, to clarify aspects of their applications. The approach to the applicants was informed by advice from the AGS, each applicant was provided with a set timeframe for responses, and the responses were limited to the information requested by the IAP (rather than providing an opportunity to improve their application overall).

attributes is not recorded in the meeting minutes or in the IAP report. The Department of the Environment advised the ANAO that the conduct of this 'secondary' assessment was intended to test and assess the two highest-ranked applicants against the program objectives, and to check for any unintended consequences or risks from the primary assessment process. The department considered this step to be an additional checking mechanism, which did not replace the formal assessment process undertaken by the IAP.

4.41 The use of supplementary assessments can assist panels to validate their assessments against the merit criteria. However, agencies should be mindful of the desirability for all key assessment procedures to be outlined in program guidelines and other public and internal guidance materials, so that the processes to be employed for determining grants are transparent. This is particularly important where these supplementary processes have the potential to influence applicant rankings.

Final report

4.42 Following the second IAP meeting, the *Smart Grid, Smart City: Report of the Independent Assessment Panel* was completed by members of the IAP on 11 March 2010.¹⁰³ The IAP presented its assessment report to the Steering Committee on 15 March 2010. While minutes of the meeting were not retained, the Department of the Environment and the IAP Chair informed the ANAO that the Steering Committee did not request changes to the report.¹⁰⁴ Following the Steering Committee meeting, the IAP Chair signed the report on 16 March 2010.

4.43 The report outlined the assessment process, including:

- the role and membership of the IAP;
- the IAP's review, testing and acceptance of the Expert Panel assessment;
- the IAP's decision to short-list the two highest-ranked applicants and undertake a detailed review, using a matrix developed by the IAP;
- a recommended order of merit;

103 Evidence indicates that the drafting of various sections was undertaken by individual members of the IAP, with drafts circulated via email in the period 2–11 March 2010.

104 This was confirmed by the ANAO's review of the version of the report considered by the Committee and the version that was provided to the Minister.

- a risk analysis;
- the IAP questions to applicants and their responses; and
- recommendations to the Government, including a recommended course of action if a funding agreement could not be negotiated with the two highest-ranked applicants.

Finalising the grant assessment and selection process

4.44 As outlined earlier, on 8 March 2010, responsibility for the Smart Grid, Smart City Program was transferred from DEWHA to DCCEE. On 17 March 2010, a brief was provided to the then Minister for Climate Change and Energy Efficiency, informing her of the assessment outcome. The brief contained an overview of the Smart Grid, Smart City Program establishment and history, details of the Expert Panel and IAP, and a copy of the IAP report. The brief did not include information regarding the identity of the grant approver (as has been discussed previously). It referred to a submission being developed by DCCEE (to be sponsored by the Minister) to ‘inform [government] of the assessment findings and the Independent Assessment Panel’s order of merit’ and later in the same brief ‘to select the successful project’. The brief was noted and signed by the Minister on 31 March 2010.

4.45 Following the Minister’s approval, DCCEE prepared a submission to government seeking approval of the preferred applicant. The submission contained the Minister’s recommendations for the preferred applicant and a copy of the IAP report was provided to the Government on 19 April 2010 and considered on 21 April 2010. The Government supported the recommendation to select Ausgrid as the preferred grant applicant, and noted that negotiations for a funding agreement would commence immediately.

Notification of the assessment outcome

4.46 The Grant Guidelines had foreshadowed that the announcement of the successful consortium ‘was expected’ in April 2010. In the period leading up to the June 2010 announcement, speculation about the grant outcome was building among stakeholders. There was a seven week delay (from 21 April 2010 to 7 June 2010) between the preferred applicant being agreed by the Government, and the public announcement of the grant outcome. The Department of the Environment advised the ANAO that this delay was primarily due to Ministerial availability to attend a public announcement of the successful applicant.

4.47 A public announcement of Ausgrid as the preferred applicant¹⁰⁵ was made by Australian Government Ministers and the Managing Director of Ausgrid in Newcastle on 7 June 2010 (Ausgrid had been informed via telephone that it was the preferred applicant several days before the public announcement and had signed a confidentiality agreement).¹⁰⁶ DCCEE's website was also updated on 7 June 2010 to reflect the announcement of the preferred applicant.

4.48 Each unsuccessful applicant was informed of the assessment outcome immediately prior to the public announcement, and later provided with a debrief from DCCEE, including a face-to-face meeting and written feedback. The ANAO interviewed two of the four applicants for the program (Ausgrid—the successful applicant, and one other applicant). The unsuccessful applicant informed the ANAO that it was satisfied with the debriefing process provided by DCCEE.

Approving the grant funding

4.49 The FMA Regulations require that a proposal to spend public money (including the awarding of a grant) must be considered and approved by an appropriately authorised party before a funding agreement (or other arrangement to spend public money) can be entered into. In this respect, the approver must not approve a spending proposal unless they are satisfied, after making reasonable inquiries, that the proposal is an efficient, effective, economical and ethical use of Commonwealth resources, and is not inconsistent with the policies of the Commonwealth. Following the transfer of the Smart Grid, Smart City Program to RET in September 2010, the department prepared a Regulation 9 approval brief for its nominated grant approver (the Head of the Energy Division, who held an appropriate delegation to approve expenditure under the department's Chief Executive Instructions).¹⁰⁷

105 The term 'preferred applicant' is used when the signing of a funding agreement is dependent on successful negotiations between the Government and the highest-ranked applicant.

106 The Ministers attending the announcement were: the then Minister for Climate Change and Energy Efficiency; the then Minister for Resources and Energy; the then Minister for Broadband, Communications and the Digital Economy; and the then Minister Assisting the Minister for Climate Change and Energy Efficiency, whose electorate would include some Smart Grid, Smart City projects.

107 DCCEE had previously also prepared a Regulation 9 approval briefing for its nominated approver, an Assistant Secretary (who approved the spending proposal on 1 September 2010). However, this approval was no longer valid when the program was transferred to RET.

4.50 The brief outlined: background information on the Smart Grid, Smart City Program; the assessment process; the IAP recommendation and the Government's support for the preferred applicant; the amount of expenditure requested and a confirmation from RET's Energy Division Business Manager that funds were available; an assessment of the value for money of the proposed expenditure; and a risk management plan. The approver also had prior understanding and oversight of the development of the Smart Grid, Smart City Program, and to a more limited extent the assessment process, through his membership on the Steering Committee. The approver signed the FMA Regulation 9 approval, authorising the expenditure of \$93 million in grant funding, on 6 October 2010.

Conclusion

4.51 As part of its overall Smart Grid, Smart City Program planning activities, DEWHA included information on aspects of the assessment process in a range of program documents. Further, key stakeholders, such as the Steering Committee, had a broad understanding of the planned grant selection process. The development of a fit-for-purpose grant assessment and selection plan would have better placed the department to manage the assessment and selection process. In particular, a plan of this type would have assisted in clarifying roles and responsibilities, and in outlining how the planned complex assessment process was to be implemented.

4.52 While DEWHA appointed a probity adviser for the grant assessment and selection process, the adviser provided limited oversight of the process. A probity plan was not prepared, and the probity adviser did not attend meetings of the IAP or provide confirmation that the assessment and selection process aligned with the published guidelines. There was also scope to strengthen the arrangements for documenting the management of conflicts of interest. Ultimately, the arrangements established to manage probity issues for the program fell short of generally accepted practices for a grant program of this type.

4.53 DEWHA sought to implement a grant assessment and selection process that capitalised on a range of expertise, as had been recommended in the pre-deployment study. The Expert Panel review process was detailed and involved reviewers providing scores and written reviews against up to 32 sub-criteria, in accordance with their particular areas of expertise. However, a number of the 17 reviewers on the Expert Panel did not respond to all the

criteria assigned to them. While DEWHA's analysis indicated that incomplete reviews did not adversely affect the rankings, there was scope for the department to have better managed this process.

4.54 In undertaking the merit assessment, the Chair of the Panel advised that the IAP took into consideration each member's assessment of the applications against the published selection criteria and the Expert Panel assessment. However, the merit assessment process was not always adequately documented—for example, the individual assessments were not retained, and the process was not clearly set out in the IAP meeting minutes or its final report.

4.55 The IAP also developed a matrix of seven program objectives and attributes against which to assess the two highest-ranked applications, with the intention of confirming the highest-ranked applicant's suitability to deliver against the objectives of the program. While providing additional assurance regarding the proposed ranking of applicants, there would have been merit in foreshadowing the possible use of supplementary assessment processes in the Grant Guidelines and internal guidance documents.

4.56 DCCEE provided appropriate advice to its Minister and the Government on the grant assessment and selection process and the recommendation of a preferred applicant. On the basis of this advice, the Minister and the Government supported the panel's recommendation.

4.57 Under the grants administration framework, all grants must be approved by a Minister or an official holding the appropriate delegation to approve expenditure of public monies. The decision-maker (approver) for the Smart Grid, Smart City Program, a RET official, held the appropriate delegation and was provided with comprehensive advice from the department to underpin this decision. The decision-maker for the grant was not, however, clearly identified in internal planning documents or published guidance materials. Clearly identifying the decision-maker (approver) for grant programs helps to reduce the risks of misunderstanding and confusion in the approval process.

4.58 Overall, there were appropriate arrangements to inform applicants, stakeholders and the general public about the outcome of the assessment process. All applicants were notified prior to the public announcement, and the result was published on the department's website within the required timeframe. Applicants were also offered debriefs on the process and those aspects of their application where there was scope for improvement.

Recommendation No.2

4.59 To improve accountability and transparency in grants administration, the ANAO recommends that the Department of the Environment reinforces the importance of:

- implementing probity arrangements that are proportionate to the complexity and risks of grant programs; and
- retaining documentation to appropriately evidence grant assessment and selection processes.

Department of the Environment's response:

4.60 *Agreed. The Grants Policy and Advice team is currently working with the Portfolio Project Management Office to develop a Project Plan template specifically for grants programmes. This includes an attachment on the 'Business Rules' for each programme, including details on how applications are assessed and recorded and how assessors deal with conflict of interest issues. The inclusion of 'Business Rules' in the Department's project planning process will further strengthen adherence to the departments grant administration framework.*

5. Managing the Funding Agreement

This chapter examines the negotiation of the Smart Grid, Smart City Program's funding agreement and the arrangements put in place to manage compliance with the obligations established under the funding agreement.

Introduction

5.1 Funding agreements (or grant agreements) are used to formalise the provision of Commonwealth grant funding to a grant recipient. The agreement specifies the terms and conditions under the grant, including any expected outputs from the grant recipient. Funding agreements need to be well drafted, be tailored to the specific granting activity and include clearly defined expectations for all parties involved.¹⁰⁸

5.2 The ANAO examined: the negotiation of the funding agreement initially by DCCEE and subsequently by RET¹⁰⁹; the key features of the agreement; and RET's implementation of the agreement, including reporting requirements, milestone payments, agreement variations (Change Orders) and compliance activities.

Negotiating the funding agreement

5.3 Negotiating a funding agreement to facilitate the deployment of the Smart Grid, Smart City Program required DCCEE and RET to develop an agreement that was: enforceable; based upon an analysis of program risks; designed to protect the Commonwealth's interests; and designed to assist the agency to effectively manage all planned activities of the program and contribute towards good governance and accountability.

5.4 The period immediately following the announcement of the preferred grant recipient in June 2010 involved intensive negotiation between DCCEE and Ausgrid. It concluded several months later (in early October 2010) with the

108 Department of Finance and Deregulation, *Commonwealth Grant Guidelines—Policies and Principles for Grants Administration*, Canberra, July 2009, pp. 24–26. The second edition was published in June 2013.

109 As outlined in Table 1.2 in Chapter 1, DCCEE was responsible for the program's administration from March to September 2010. The program was transferred to RET in September 2010 and, in September 2013, was transferred to the Department of Industry.

finalisation and agreement by RET and Ausgrid on the final funding agreement.

5.5 The ANAO's review of departmental records and interviews with RET and Ausgrid staff, indicated that the negotiations were conducted in a professional manner. Where necessary, DCCEE and RET engaged assistance from subject matter experts to help facilitate discussions around technical elements of the agreement. The previous program implementation activities, such as the pre-deployment study and the development of the Grant Guidelines, together with the comprehensive proposals made by Ausgrid in its application, helped to define the activities to be included in the funding agreement and to manage the expectations of both parties. The terms and conditions established under the funding agreement were consistent with the information that had been provided to the delegate for FMA Regulation 9 and 10 approval of the grant funding (as discussed in Chapter 4).¹¹⁰

5.6 The funding agreement was finalised and signed on 8 October 2010. It provided Ausgrid with \$93 million (plus GST) of Commonwealth grant funding over three years. Additionally, it was agreed that the program would be supplemented through in-kind contributions in excess of \$400 million from Ausgrid and its consortium partners.

Key features of the funding agreement

Agreed deliverables

5.7 The Smart Grid, Smart City Program was to be implemented over three years, commencing from the date both parties signed the agreement on 8 October 2010 until 30 September 2013.¹¹¹ The deliverables (which were defined as Activity Target Outcomes—ATOs) were to be completed during this time and were appropriately detailed in the funding agreement. There were 68 ATOs categorised into 13 activity/application areas (as set out in Table 5.1).

110 FMA Act Regulation 13 requires that the terms of all funding agreements be fully consistent with the terms approved by the delegate under Regulation 9.

111 The final completion date was set for September 2015 to provide for the completion of all required reporting elements in the funding agreement, as well as an information website (the Information Clearing House), which is to be publicly available two years after project activities are complete.

Table 5.1: Smart Grid, Smart City Program Activity Target Outcomes

No.	Application Area	Number of Related ATOs
1	Customer Applications	23
2	Active Voltage and Power Factor Correction	4
3	Distributed Storage	4
4	Fault Detection, Isolation, Restoration	5
5	Electric Vehicles	7
6	Substation and Feeder Monitoring	7
7	Wide Area Measurement	3
8	Distributed Generation	4
9	Smart Metering Infrastructure	1 ⁽¹⁾
10	Telecommunications	1
11	Interoperability	8
12	Information Dissemination	1
13	Community and Industry Engagement	0 ⁽²⁾

Source: ANAO summary of Schedule 4—Smart Grid, Smart City Program Funding Agreement.

Note 1: Individual Smart Metering Infrastructure activities were connected to the activities listed under 'Customer Applications' and therefore was only counted as one ATO for this application area.

Note 2: There were no individually listed ATOs for this activity, but the activity as a whole was expected to be completed under the funding agreement.

5.8 The funding agreement also included a number of administrative arrangements and additional obligations, such as reporting requirements, procedures for processing milestone payments, the expected participation of Ausgrid in working groups¹¹², dispute resolution processes, privacy and security treatments, and insurance/indemnity cover.

5.9 While the deliverables agreed to in the funding agreement closely reflected those proposed by Ausgrid in its grant application, as the program progressed, Ausgrid experienced challenges in achieving these deliverables (detailed in the 68 ATOs). Ausgrid informed the ANAO that the deliverables it had proposed in its grant application had been based on a 'best case' scenario of time, budget, and available resources and technology. Ausgrid emphasised the demonstration/'green field' nature of the program, and considered that in hindsight, a number of the ATOs included in the funding agreement were too

¹¹² Working groups referred to were the *Smart Grid, Smart City Standards Working Group* and the *Smart Grid, Smart City Strategic Policy and Regulatory Steering Committee*.

prescriptive and focused on specific numbers and results, which may not have been an appropriate framework to conduct a demonstration project/trial. On occasion, the requirement to meet the detailed requirements of the funding agreement ATOs had been a source of tension between the parties. The Department of Industry noted that, although the funding agreement included detailed requirements for deliverables, it provided a degree of flexibility, such as the Change Order mechanism that allowed both parties to request changes (partly in recognition of the demonstration nature of the program seeking to implement new technologies).

Consortium members

5.10 A number of the planned activities were to be undertaken by consortium members and subcontractors. The funding agreement, therefore, included reference to these consortium members and/or sub-contractors.¹¹³ The consortium members were required to contribute both financially and/or in-kind to the program through legally-binding agreements with Ausgrid.

5.11 The contributions of consortium partners or sub-contractors were to be managed by Ausgrid, not the department. It was also Ausgrid's responsibility to ensure that the activities performed by other parties were carried out in a manner consistent with the requirements stated in the funding agreement.

Milestone payments

5.12 The funding agreement linked payments to compliance with the funding agreement as a whole, achievement of project milestones and deliverables, and timely provision of required reports of an acceptable standard. This approach was seen as giving greater control over the project's progress to the funding provider, and can help to ensure the delivery of work to a satisfactory standard before the release of payments.

5.13 Additionally, the funding agreement included clauses regarding 'delays in achieving ATOs' and their potential to adversely impact on the program through underperformance. The agreement specified that:

- Ausgrid must take all reasonable steps to minimise delays in completing an activity; and

¹¹³ The consortium members identified in the funding agreement were: IBM Australia Ltd; GE EnergyAustralia Pty Ltd; AGL Energy Ltd; Sydney Water Corporation; Hunter Water Australia Pty Ltd; and Newcastle City Council.

- if a delay became apparent, Ausgrid must advise in writing, the nature and reason for delay, its proposed management of the delay, an expected date for the milestone to be achieved and the likely impact of the delay.

5.14 These clauses enabled RET to make partial payments to Ausgrid, or postpone further payments, until delayed activities were completed or acceptable reports were provided.

Administering the funding agreement

5.15 The funding agreement established formal communication mechanisms by setting out the: objectives of the program; roles and responsibilities of the parties; activities to be completed; reporting and monitoring arrangements; dispute resolution procedures; and the documentation/reports to be provided. These provisions set out a clear basis for the conduct of both parties to the agreement. Further, the funding agreement required both parties to participate in fortnightly meetings (via teleconference or in person) and bi-monthly face-to-face meetings to discuss progress and results.

5.16 RET and Ausgrid developed sound working relationships and appropriate communication arrangements for managing the funding agreement. Informal communication arrangements involved key staff from RET and Ausgrid participating in face-to-face meetings, along with regular telephone and email contact.¹¹⁴ These informal arrangements helped build each party's understanding regarding the progress of funded activities, and the emerging challenges facing both parties. They also assisted in resolving issues in a timely manner.

5.17 The ANAO observed that there were some project management and oversight challenges for RET as a result of reduced resourcing, as discussed in Chapter 3. However, the constructive relationship management arrangements adopted for the delivery of the program helped to overcome a number of these challenges.

Reporting requirements

5.18 The funding agreement required Ausgrid to submit a range of plans and reports for review and endorsement. These included:

114 RET's offices were located in Canberra, and Ausgrid's head office is in Sydney, New South Wales.

- an Annual Financial Report, summarising funds received and expended over the previous year;
- a range of operational and financial plans (updated and submitted to RET every six months) including a Risk Management Plan, a Project Management Plan, a Community and Industry Engagement Plan, a Monitoring and Measurement Plan, and an Annual Budget;
- Operational Reports submitted every quarter; and
- Monitoring and Measurement Reports (MMRs) that were to be submitted every six months and subsequently released to the public.

5.19 RET used these reports to: help monitor the progress of program activities; identify and resolve delivery issues; inform the department's senior managers on the program's progress; and as the basis for making grant payments.

Operational Reports

5.20 Under the funding agreement, RET was required to review the Operational Reports and determine whether relevant funding agreement milestones had been met by Ausgrid, before further grant payments were released. The Operational Reports detailed:

- progress against the ATO milestones;
- the work that had been undertaken in the previous quarter, in accordance with the agreed ATOs;
- revisions to the Risk Management Plan;
- financial information for the quarter;
- any proposed changes to the project plans or ATOs;
- a summary of all communications activities and issues; and
- a summary of any security or privacy issues that may have arisen.

5.21 As at November 2013, all required reports had been submitted by Ausgrid, with each report containing the required information. Of the 10 reports reviewed by the ANAO, RET had requested amendments and re-submission of each report. The requested amendments ranged from structural changes to the early reports through to the provision of information required under the funding agreement regarding the progress of individual projects. This process increased the workload for Ausgrid and RET, and

extended program timeframes as there was substantial revision sought and additional time required for reconsideration and approval. The funding agreement and other guidance materials had not clearly outlined the content of the reports to be provided by Ausgrid, to give the department adequate assurance that project ATOs were being met and progress against the program's overall objectives was being made. RET sought to address its concerns relating to the quality of submitted reports through regular engagement with Ausgrid. There was, however, scope for RET to more clearly record and retain its acceptance and final approval of the Operational Reports once additional information was considered.¹¹⁵

Monitoring and Measurement Reports

5.22 As noted earlier, Monitoring and Measurement Reports (MMRs) were prepared by Ausgrid and provided to RET for review prior to release to the general public.¹¹⁶ These reports, which were to be provided at six-monthly intervals, gave regular updates on the progress and outcomes of the program, including achievements across the 13 activity areas (see Table 5.1).

5.23 The ANAO reviewed four of the MMRs for timeliness and alignment with the funding agreement's reporting requirements.¹¹⁷ The first two MMRs had been delivered by Ausgrid and accepted by RET in accordance with the funding agreement schedule. In relation to the provision of MMR 3, RET approved AusGrid's request for a two month extension. Once the report was provided by AusGrid, the department's requests for additional information and the subsequent assessment of this information resulted in a delay in final approval of over three months. While MMR 4 was provided by AusGrid within two weeks of the scheduled submission date¹¹⁸, the finalisation of the report was also significantly delayed (by over four months) because of revisions requested by the department.

115 For example, the Operational Reports contained a document management page that was intended to record its acceptance and final approval, but this was often incomplete. RET provided evidence of its approval and acceptance for most of the Operational Reports via additional documentation, such as emails.

116 MMRs are made publicly available to industry and interested stakeholders on the Smart Grid, Smart City Program website, available from <<http://www.smartgridsmartcity.com.au/About-Smart-Grid-Smart-City/Resources-and-results.aspx>> [accessed 16 December 2013].

117 The funding agreement initially required Ausgrid to provide six MMRs. However, in June 2013 Ausgrid and RET agreed to combine the fifth and sixth MMRs into a final program report, which was provided to government in late 2013.

118 RET approved Ausgrid's request for a two-week extension for the submission of MMR 4.

5.24 The content and coverage of the MMRs increased over time, partly reflecting the increased completion of trial activities and also in response to RET's requests for the MMRs to include greater detail. The Final Report for the program is being developed with the assistance of a subcontracted third party. It is intended that the report will summarise all the activities of the Smart Grid, Smart City Program; provide a cost benefit analysis of the use of 'smart' technologies; and provide a business case for key applications and technologies of a smart grid that could lead to industry adoption across Australia. In December 2013, the Department of Industry advised the ANAO that it had received the draft final report from Ausgrid. A public version of the report is scheduled to be released early in 2014.

Grant payments

5.25 Adequate and well-documented arrangements to ensure financial accountability are pivotal for effective grant acquittal.¹¹⁹ As outlined in paragraph 5.12, grant payments were to be made to Ausgrid, subject to compliance with the funding agreement. This included successful achievement of project milestones, provision of required reports, and compliance with invoicing requirements. The funding agreement also stipulated that Ausgrid must ensure that grant funding was used only for the purposes of completing new activities, in accordance with the relevant annual budget and overall budget, and in accordance with the agreement. RET was responsible for ensuring that Ausgrid complied with the terms and conditions of the funding agreement and that achievement of milestones was adequately substantiated before payments were released.

5.26 Under the funding agreement, each milestone payment was scheduled to occur quarterly (dependent on Ausgrid meeting milestone requirements). The amount to be paid was to reflect the agreed project budget for the following quarter—that is, payment was one quarter in advance of expenditure. This was intended to provide Ausgrid with adequate funds to deliver the required project milestones. In the period from November 2010 to June 2012, there were eight payments made to Ausgrid, ranging from just over \$1 million to \$16.2 million. The total amount paid to Ausgrid to June 2012 was

119 *Commonwealth Grant Guidelines 2009*, op cit., p. 25.

\$84.2 million (excluding GST). There were no payments to Ausgrid during 2012–13.¹²⁰

5.27 The ANAO's review found that overall, there were appropriate and transparent arrangements for the release of grant milestone payments. These included an invoice from Ausgrid, due diligence by RET to confirm that relevant funding agreement milestones had been met¹²¹, approval for payment from the relevant Division Head, and a completed payment form submitted to RET's finance area for processing. Ausgrid also informed the ANAO that it did not consider that there were any issues with the department's processing of its invoices for payment.

5.28 Milestone Payment Number 8, made in June 2012, was subject to a funding agreement Change Order. During 2011–12 Ausgrid had underspent against its projected budget, due mainly to delays in the sourcing, testing and rolling-out of smart meter hardware. As at November 2011, RET predicted that the program would be underspent by around \$17 million (there had also been a \$25 million underspend in the previous financial year). In these circumstances agencies generally seek approval to rollover (referred to as rephasing) funding to the next financial year. However, advice from the then Department of Finance and Deregulation (Finance) indicated that the rollover of funding would only be approved in exceptional circumstances, with unspent funds generally required to be returned to government.

5.29 RET investigated options to allocate the unspent 2011–12 funding. The department advised that it had considered that, if the funds were returned to the Government, it may be unable to meet the funding agreement payment obligations due in 2012–13, potentially exposing the Government to legal action from Ausgrid or the early termination of the program.

5.30 RET sought internal legal advice regarding a proposed advance payment to Ausgrid. The advice indicated that the proposed Change Order was allowable under the funding agreement, and that 'the proposal would give the department sufficient rights to enforce Ausgrid's performance of the agreement, and recover the funds if necessary'. The advice also noted that

120 In early September 2013, RET made a final payment of \$8.7 million (exc. GST) to Ausgrid. In total, Ausgrid received payment of \$93 million (excl. GST), in line with the funding agreement.

121 As outlined in paragraph 5.21, there was scope for RET to have strengthened its record-keeping practices to better demonstrate that Operational Reports had been accepted and approved prior to the release of program funds.

advancing the payment would not reduce Ausgrid's obligations to deliver the project in full, on time and on budget, but that it would make it more difficult to enforce that obligation 'because it is easier to withhold funding than to recover funding already paid'.

5.31 Risks identified by the department and its internal legal adviser included:

- interest foregone—Ausgrid would earn interest on around \$17 million in program funding, which would otherwise have accrued to the Australian Government (although under the funding agreement, all interest earned was required to be re-invested in the project or returned to the Government at the termination of the agreement)¹²²;
- increased risk of criticism of the Government and department's project management procedures by the ANAO or other audits (this was to be mitigated by RET's legal and management teams managing the process to ensure full accountability for public funding); and
- increased risk of being unable to reclaim expenditure from Ausgrid in the future, should it fail to deliver on outcomes (RET noted that Ausgrid was a well-resourced entity, likely to remain solvent, and so was well positioned to re-pay any Australian Government funds, in the event that it was required).

5.32 Ultimately, RET made an advance payment to Ausgrid of \$16.2 million (plus GST) on 29 June 2012. This approach eliminated the underspend by bringing forward two of the future milestone payments scheduled for 2012–13.¹²³ The early payment resulted in over \$84 million (in excess of 90 per cent of the total agreed funding) being paid to Ausgrid, around two-thirds of the way into the program period and before many of the key projects had been fully implemented. While carefully considered by RET, the early release of grant funding was not in keeping with the intent of the policy advice received or generally accepted principles of sound program management. It also presented a number of risks to RET's effective management of the agreement—in particular its ability to withhold future

122 In July 2012, the Reserve Bank of Australia Cash Rate Target was 3.5 per cent. Using this figure, potential interest earned on \$16.1 million (the amount paid in Milestone Payment Number 8) would be \$563 500 per annum, or \$46 958 per month.

123 The Change Order and payment were approved by RET senior management.

grant payments to help ensure the delivery of project activities to a satisfactory standard.

Varying the Funding Agreement

5.33 The funding agreement stipulated that any changes likely to vary an agreed outcome and/or committed activity be agreed through a formal change order process. The ability to vary the agreement provided Ausgrid and RET flexibility to address unforeseen events. The funding agreement contained a standard change order template and RET also developed a guide to assist both parties in initiating and/or responding to change order requests. As at November 2013, 13 change orders had been agreed, including requests to: vary consortium membership; remove agreed activities because of technology redundancy or incompatibility; reallocate funds; and extend the retail trial. The majority of change order requests were processed in a timely and appropriate manner and in accordance with the procedures outlined in the funding agreement. RET retained relevant documentation regarding the variations, including any requests for advice and supplementary information, and appropriate approvals were obtained.

Compliance monitoring / data verification

5.34 RET's internal guidance on grants management required monitoring and acquittal arrangements, including project and program evaluation methods to be developed as part of the terms and conditions for its funding agreements. Under the Smart Grid, Smart City Program funding agreement, RET's verification of Ausgrid's compliance with the agreed terms and conditions and milestone achievements was required prior to the approval of milestone payments.

5.35 As outlined earlier, RET used Ausgrid's reporting as a key tool to review progress against agreed milestones. In general, grant monitoring arrangements that are based on a grant recipient's self-reporting of progress against outcomes, provide a limited assurance. However, RET commissioned several technical experts to undertake compliance activities to provide additional assurance in addition to the information provided by Ausgrid. These included:

- a review of the Sample and Trial Design report, which determined the minimum number of customer participants required for the network and retail consumer trials (discussed further in Chapter 6);

- review of Ausgrid Project Management Plans, Community Engagement Plans and the Risk Management Plan; and
- analysis and verification of data reported by Ausgrid in Operational Reports and MMRs, which is also to be used to inform the final project report.

5.36 In several cases, the technical advice provided to RET resulted in decisions to implement remedial actions to minimise project delivery risk. These review activities also assisted RET to gain greater insights into project progress. This was particularly important given that RET's Smart Grid, Smart City team was based in Canberra and Ausgrid's business is based in Sydney, with the program being implemented across New South Wales (Newcastle, the Hunter Valley and areas of Sydney).

5.37 While a documented compliance strategy was not in place at the commencement of the program (as discussed in paragraph 3.16), a Compliance Plan was prepared in July 2012, at the request of RET's Program Management and Development Committee. The Compliance Plan set out the key obligations of Ausgrid under the funding agreement, and RET's role in assessing delivery of milestones and approving grant payments. The plan, while high-level, provided a useful guide to the program team. However, there was little evidence that the Compliance Plan had been used to inform planning or implementation of compliance activities conducted since July 2012. The Department of Industry informed the ANAO that risk management registers were used to inform compliance activities.

Conclusion

5.38 The negotiation of the Smart Grid, Smart City Program funding agreement was conducted in a professional and appropriate manner. The endorsed funding agreement appropriately reflected the program grant parameters approved by the decision maker and clearly documented the obligations of the funding provider (RET) and the funding recipient (Ausgrid). In particular, the agreement established detailed Activity Target Outcomes to be achieved by Ausgrid. It also established a clear framework for reporting, releasing payments and managing the relationship between the two parties.

5.39 This framework was complemented by the productive and professional working relationship developed by RET and Ausgrid. The department's regular monitoring of the funding agreement also facilitated improved

reporting by Ausgrid against project milestones and activities. RET encouraged Ausgrid to focus on the funding agreement requirement that robust information and data was provided to inform broader industry adoption of smart grid applications across Australia.

5.40 In general, grant milestone payments examined by the ANAO were made in accordance with funding agreement requirements and were appropriately documented. The department did, however, make an advance payment of \$16.2 million (plus GST) in June 2012 to address a program underspend. While RET informed the ANAO that the early payment to Ausgrid was carefully considered and made with the intention of protecting the Australian Government's interests, it brought the total amount paid to Ausgrid as at June 2012 to 90 per cent of the grant funding, prior to the achievement of key deliverables. This approach was not in keeping with the intent of the policy advice received from Finance relating to program underspends or generally-accepted principles of sound program management. It presented a number of risks for the effective management of the agreement, in particular the department's ability to manage potential under-performance, by withholding future grant payments.

5.41 RET's approach to managing Ausgrid's compliance with the funding agreement relied primarily on the reporting requirements outlined in the funding agreement and review of those reports by the department. It was supported by technical advisers engaged to provide assurance over a range of activities and projects reported by Ausgrid. However, the early development and implementation of a compliance strategy that identified key compliance risks and outlined an approach to address these risks would have better placed RET to monitor compliance under the funding agreement.

6. Program Achievements

This chapter examines the progress made in delivering the funded activities and the achievement of the stated objectives for the Smart Grid, Smart City Program.

Introduction

6.1 When announcing the Smart Grid, Smart City Program in the May 2009 Federal Budget, the Government stated that the initiative was aimed at creating, in one Australian city, town or region, an energy network that integrates a smart grid with smart meters in homes, to enable greater energy efficiency, reduced emissions and the use of alternative energy sources, such as solar power.¹²⁴ It was expected that the program would be completed by the end of September 2013. This timeframe allowed Ausgrid (with RET oversight) three years to implement a number of complex projects and to gather and disseminate robust project data, in accordance with the funding agreement.

6.2 The ANAO examined the program's progress (to the end of June 2013) and the extent to which the objectives and intended outcomes of the program have been achieved. In particular, the ANAO focused its examination on the customer applications retail trial, which was the largest component of the program.

Progress on key Smart Grid, Smart City projects

6.3 As at 30 June 2013, Ausgrid reported that a large proportion of the projects to be delivered under the Smart Grid, Smart City funding agreement had been completed. The remainder were scheduled to be completed by September 2013 as data collection phases concluded, analysis was undertaken, and infrastructure was decommissioned, where necessary.¹²⁵ A high-level overview of progress against key program deliverables is provided in Table 6.1 on the following page (reflecting information provided by Ausgrid in its April–June 2013 Operational Report).

124 Australian Government, *Budget Measures: Budget Paper No. 2: 2009–10*, Commonwealth of Australia, p. 199.

125 With the exception of the retail trial, which was extended to the end of February 2014 (as is discussed further in this chapter).

Table 6.1: Reported progress on Smart Grid, Smart City applications (as at 30 June 2013)

Application	Ausgrid / RET Reported Progress
Customer Applications Stream <ul style="list-style-type: none"> • Network Trial • Retail Trial • Feedback Technology • Smart Meter Infrastructure • Electric Vehicles 	<p>Network trial deployed, with smart meters installed and participating customers trialling feedback technologies from July 2013.</p> <p>Retail trial extended to the end of February 2014. Sales period completed, majority of smart meters installed in homes of signed-up customers, and beginning to collect data.</p> <p>Early findings for the network and retail trials were reported in the Monitoring and Measurement Report IV (MMR IV).</p> <p>Twenty electric vehicles deployed with six fast charge points installed, and 46 standard charging points installed. Trial in final stage of data collection.</p> <p>Electric vehicle findings and data reported on the Information Clearing House (ICH).</p>
Energy Resource Management <ul style="list-style-type: none"> • Distributed Generation • Distributed Storage 	<p>Most required infrastructure had been deployed, with data being gathered.</p> <p>Ausgrid experienced difficulties in identifying appropriate sites in Newcastle for two small wind turbines, and gaining approval for a large-scale grid battery in Newington, Sydney.</p> <p>Detailed technology and data analysis was underway, for input to the final program report (due to be provided to the Government in late 2013 and published 2014)</p> <p>Earlier findings were reported in MMR IV.</p>
Grid Applications (Trialling smart technologies within the distribution network) <ul style="list-style-type: none"> • Active Volt-Var Control • Fault Detection, Isolation and Restoration • Substation and Feeder Monitoring • Wide Area Measurement • Pre-fault Projects • Feeder Taxonomy 	<p>All trials were in data collection and analysis phase.</p> <p>Some findings were reported in MMR IV, with detailed analysis and findings intended to provide input to the final program report.</p>

Application	Ausgrid / RET Reported Progress
Information Dissemination <ul style="list-style-type: none"> Community Engagement Industry Engagement, including Strategic Policy and Regulatory Steering Committee Information Clearing House (ICH) 	<p>Community engagement activities were ongoing in 2013. These included the public shopfront in Newcastle, the Smart Grid, Smart City website, the Smart Home blog and community information days, presentations to industry and community workshops, and e-newsletters to subscribers.</p> <p>The Information Clearing House (data website) was launched at an industry workshop in March 2013.</p> <p>The Strategic Policy and Regulatory Steering Committee met in March 2013 (making a total of five meetings to 30 June 2013).</p>
Interoperability Capacity of a smart grid to operate with other technologies, such as the National Broadband Network (NBN), 'smart' water and gas meters ¹	<p>The NBN was not available in Newcastle at the time of the Smart Grid, Smart City Program. Ausgrid selected a consultant to conduct laboratory trials of potential synergies between smart meters and the NBN.</p> <p>As at June 2013, Sydney Water was trialling integration of smart water meters into a smart grid.</p> <p>Ausgrid was not able to source an appropriate smart gas meter, so the trial for the interoperability of gas meters was scoped out of the project.</p>

Source: Smart Grid, Smart City Funding Agreement, 8 October 2010. Operational Report Quarter 4, 2012–13, October 2013.

Note 1: 'Smart' water and gas meters allow for the continuous monitoring of water or gas consumption as it occurs, providing 'close to real time' information to users on their consumption.

Achievement of the program's objectives

6.4 The Grant Guidelines and funding agreement set out the objectives of the program, with the wording of the first objective amended slightly in the funding agreement. Figure 6.1 on the following page sets out the objectives of the program and the measures of successful achievement of the objectives.

Figure 6.1: Program objectives and success measures**Objectives:**

1. *[Grant Guidelines]* Deploy a commercial scale rollout that tests the business case for key applications and technologies of a smart grid;
[Funding Agreement] Deploy a demonstration and/or commercial scale rollout, as specified in the Guidelines, that informs a business case for key applications and technologies of a smart grid;
2. Build public and corporate awareness of the economic and environmental benefits of smart grids and obtain buy-in from industry and customers;
3. Gather robust information and data to inform broader industry adoption of smart grid applications across Australia; and
4. Investigate synergies with other infrastructure (such as gas and water) and the National Broadband Network.

Successful achievement of the objectives would be determined by the extent to which Ausgrid:

- provided information and data that was accepted by the Commonwealth as robust and relevant to inform a business case for the wider industry adoption of smart grid applications in Australia;
- identified and reported on any regulatory and standards issues related to the wider adoption of smart grid networks as a result of conducting the activity [that is, the project]; and
- clarified and quantified the benefits of smart grid applications as a result of conducting the [project] by providing information and analysed data, including:
 - cost and benefit studies where appropriate, and
 - information on the integration of the smart grid applications and technologies into underlying activities (that is, business-as-usual activities for the electricity distributor).

Source: Funding Agreement between the Commonwealth of Australia and Ausgrid, Schedule 1, clause 1.5.

6.5 The ANAO's examination of the Smart Grid, Smart City Program's achievements against each of the objectives outlined above is discussed in the following sections.

Objective 1: Deploy a demonstration and/or commercial scale rollout

6.6 As previously outlined, the Grant Guidelines or other publicly released documents did not define a commercial-scale rollout. The pre-deployment study had indicated that in order to produce robust data, the Smart Grid, Smart City Program may require a minimum of 9500 customers, and this figure was also provided in a briefing to the Government in September 2010.

6.7 Ausgrid data (which has been reviewed and accepted by RET), indicates that demonstration trials of grid-side applications, such as fault detection, isolation and response and wide area measurement have been successfully deployed and are gathering data.¹²⁶

6.8 The retail trial, which was a key component of the program and was intended to provide a commercial-scale demonstration of the customer applications that would underpin a broad rollout of smart metering and feedback technologies, is examined in the following case study.

Case Study

Customer applications retail trial

Introduction

A key element of the Smart Grid, Smart City Program was strong customer engagement with electricity customers. This engagement was to involve the installation of smart meters into customers' homes, and the deployment of feedback technology, such as in-home monitors or smart phone applications. This would allow customers to access immediate information on their energy use and its cost, thereby facilitating behaviour change to help save on electricity bills.

Proposed and revised participation numbers

While the Grant Guidelines had not specified the number of customers that applicants should include in their proposed retail trial, the pre-deployment study had stated that the program may need to include up to 9500 customers in order to produce robust data in the customer application trials. Ausgrid's grant application included a proposal to include up to 50 000 customers in the customer applications trials—30 000 with 'mandatory' smart meter installations and provision of feedback technologies as part of a 'network' trial, and up to 20 000 in the 'opt-in' retail trial. The remaining grant applicants proposed customer applications trials involving 10 000, 11 500 and 20 000 customers respectively. While not ultimately a deciding factor, the IAP's assessment report noted that Ausgrid had proposed a significantly higher customer involvement than the second-ranked applicant.

In accordance with the funding agreement, Ausgrid commissioned an energy management consultant to assist in the development of the retail and network trials. The consultant's report recommended a significant decrease in the originally proposed numbers of participants in the network and retail trials—to 4453 with a 'stretch target' of 8333 for the retail trial (originally up to 20 000) and 12 667 for the network trial (originally up to 30 000). The revised number of participants was largely due to a new sampling approach proposed by the consultant, which would, according to Ausgrid, 'deliver the statistical representative results required, in a more timely manner and in a way that [was] more cost effective'.

Continued over page

126 The ANAO did not independently assess these grid-side applications.

Case Study

Customer applications retail trial

RET also engaged a consultant to assist it to validate the data provided in the report. Overall, the consultant found that the sampling design could 'reasonably be expected to produce statistically significant results for the identified hypotheses'. In relation to the reduced participation rates, the consultant stated that caution would be required to ensure sample sizes were kept at or above target levels, to maintain significance.



Challenges during implementation of the trial

While Ausgrid's application had included a Retailer Engagement Plan and an agreement with two retail providers to partner in the delivery of the retail trial, these two retail providers withdrew from the program in mid-2011. Ausgrid initially encountered difficulties in securing a new retail partner, but in July 2012 signed a partnership agreement with EnergyAustralia (formerly TRUenergy). The delay in engaging a retail provider meant that details of the tariffs and services to be offered in the retail trial were not finalised until late 2012, with sales (customer recruitment) activities commencing in November 2012.

Ausgrid also experienced a number of technical issues in deploying the smart meters that were required for the retail and network trials. These included problems sourcing appropriate meters, with some failing initial software testing, and difficulties fitting the larger smart meters onto the footprint of traditional power meters. Further, Ausgrid encountered issues in relation to the signal strength required for the smart meters to communicate data. As a result, the number of suitable households was significantly reduced.

The Department of Industry also advised the ANAO that the rate of customer dissent for participation in the trial was higher than expected. Ausgrid and the department were continuing to investigate the reasons for customer dissent, with negative publicity regarding other smart meter rollouts (particularly in Victoria) considered a factor. Under retail electricity regulations, customers also had a mandatory 'cooling off' period between signing up to participate in the trial and the installation of a smart meter. Overall, the technical and customer dissent issues resulted in a 'drop-out' rate of over 50 per cent between a successful sale of a retail trial product and a customer's active participation in the trial.

Extension of the retail trial

In May 2013, RET and Ausgrid agreed to extend the retail trial beyond the 30 September 2013 planned closing date for the program. An extension was deemed necessary as it would allow the capture of data for up to a 12-month period, including the important summer period during which electricity 'peak demand' days typically occur more often (the pre-deployment study had emphasised the importance of the customer application trial, including retail, capturing two years' worth of data). The extension was estimated to cost approximately \$4.5 million, with funding generated from underspends in other areas of the program.

Source: ANAO analysis of Ausgrid and Department of Industry information.

Outcomes of the retail trial

6.9 As at December 2013, the Department of Industry advised the ANAO that there were 4000 customers participating in the retail trial. While Ausgrid had ‘sold’ the retail trial products to 8508 customers, a total of 4508 either opted out of the trial or were removed by Ausgrid due to technical or installation issues.

6.10 The final number of participating customers (4000) falls short of the 4453 identified in the Sampling and Trial Design report as the minimum necessary to achieve statistically significant findings (as noted previously, there was also a ‘stretch target’ of 8333 participating households, which was achieved in sales, but not conversion to participation in the trial). The 4000 participants figure represents 20 per cent of the (up to) 20 000 retail trial participants foreshadowed in Ausgrid’s grant application and set out in the original funding agreement. It is also significantly less than the estimates proposed by the other (unsuccessful) grant applicants.¹²⁷

6.11 In addition, as outlined in the case study, the pre-deployment study had recommended that the retail trial be implemented over at least two years, to mitigate the risks associated with the occurrence of unusual weather patterns in a single year.¹²⁸ As a consequence of the reduced timeframe and participation rate, the retail trial has not generated the volume or breadth of data that was initially envisaged.

6.12 The ANAO’s interviews with a range of stakeholders indicated that members of Australia’s electricity sector were particularly interested in data from the retail trial. It was anticipated that this information would assist them when planning implementation of smart grid technologies, such as smart meters, and in the development of smart grid electricity retail products. The delay in implementing the retail trial has meant that data on this aspect of the program will not be available for inclusion in the final Smart Grid, Smart City Program report, due to be published in early 2014, which will provide detailed findings for the program. The Department of Industry advised the ANAO that

¹²⁷ The Department of Industry advised the ANAO that it considered the other applicants would have experienced similar challenges as those faced by Ausgrid, in implementing a customer applications retail trial.

¹²⁸ Department of the Environment, Water, Heritage and the Arts, *Smart Grid, Smart City: A new direction for a new energy era*, op.cit., pp. 62–63.

a supplementary report will be prepared that will incorporate retail trial data to the end of February 2014.

6.13 Costs associated with implementing the trial have been reported by Ausgrid across a number of categories, such as feedback technologies (for example, in-home display units), marketing costs and technical implementation costs. Some of these costs included costs for the network trial (for example, reported costs for the feedback technologies included those provided for the network trial). However, Ausgrid and the Department of Industry advised the ANAO that the cost for the implementation of the retail trial at completion of the program would be in the order of \$20 million (or around one-fifth of the total program expenditure), which equates to an implementation cost of around \$5000 for each participating customer.

Objective 2: Build public and corporate awareness

6.14 The second program objective was to ‘build public and corporate awareness of the economic and environmental benefits of smart grids and obtain buy-in from industry and consumers’. The funding agreement set out a number of communications and awareness activities, with Ausgrid required to develop a Community and Industry Engagement Plan. This plan was reviewed and updated by Ausgrid and RET on a six-monthly basis.

Corporate/industry awareness

6.15 Many of Ausgrid’s communication activities were aimed at the electricity industry and related stakeholders. Communication activities included a number of industry workshops and seminars, and participation (by invitation) on an industry committee (the Strategic Policy and Regulatory Steering Committee—SPRSC).

6.16 The formation and ongoing involvement of an industry committee was foreshadowed in the Grant Guidelines and incorporated into the funding agreement. The SPRSC met at six monthly intervals over the period of program implementation. Its membership included electricity distributors and retailers, industry peak bodies, consumer representatives, and Australian Government agencies. The committee’s terms of reference required it to: facilitate collaboration and information sharing between project stakeholders; undertake regulatory research; and engage with existing industry working groups on matters related to smart grid rollout.

6.17 As KPIs or other measures of industry awareness (such as a survey of industry/corporate stakeholders) were not established, it is difficult to determine the extent to which the Smart Grid, Smart City Program has contributed to the building of corporate/industry awareness of the potential benefits of smart grids. The ANAO observed, in a number of interviews with key industry stakeholders, that there is a general acceptance of the contribution that smart grids can make towards more prudent management of electricity delivery and pricing by industry and governments.

Broader community awareness

6.18 Key community engagement activities delivered under the program included:

- the Smart Grid, Smart City Program website, developed and hosted by Ausgrid;
- the Smart Grid, Smart City public information shopfront in Newcastle, opened in September 2011;
- marketing activities aimed at recruiting customers for participation in the network or retail trials or the energy resource management trials;
- the Smart Home in Newington, Sydney, in which two ‘smart families’ lived for 12 months each, in return for recording information on their electricity use, writing a blog, and participating in public seminars and other events; and
- promoting the program to local media (a number of items appeared in television, radio programs and newspapers).

6.19 To determine the level of customer engagement with the program and broader awareness of smart grid issues, Ausgrid conducted four consumer surveys between August 2011 (used as the baseline for comparison) and June/July 2013. The latest survey results indicated a small increase in community awareness of the program in the trial areas (Hunter Valley/Newcastle and Sydney). The surveys also found there was significant progress yet to be made to achieve broad-scale acceptance from customers, which was an objective of the Smart Grid, Smart City Program.

Objective 3: Gather robust information and data

6.20 The third objective for the program was to ‘gather robust information and data to inform broader industry adoption of smart grid applications across Australia’. The program has gathered large volumes of data via its grid applications and customer applications projects. As discussed in Chapter 5, a key role for RET in managing Ausgrid’s performance under the funding agreement was to review and accept the data and information being provided through the agreed reporting framework. The ANAO reviewed a range of Ausgrid and RET information for a number of projects including the: distributed generation trial, which was testing the impact of increased renewable energy generation on the existing electricity grid, including by small-scale wind turbines and photovoltaic solar panels; and distributed storage trials, which were testing the reliability and impact of battery storage systems. The ANAO also reviewed information from the electric vehicle (EV) trial with a view to gauging its provision of robust information and data to key stakeholders (see case study on following page). Overall, the trial gathered a comprehensive range of information and data, and the trial website (the Information Clearing House) contained a number of trial reports, as well as raw trip data from the EVs.

Case Study

Electric vehicle trial



The electric vehicle (EV) trial was designed to examine driver behaviours and implementation models for installing recharging sites were examined, with the outcomes and data generated in the trial expected to inform future industry development and adoption of the technology.

The trial commenced in February 2011. Acquisition and installation of appropriate recharge points, and testing of the cars and their data collection tools, occurred over a period of approximately 13 months, with the road trial—cars on the road as either ‘fleet’ (that is, business use) or ‘home’ use, and collecting data—commencing in March 2012 and running until June 2013.

Each car was provided with a data logger that used a Global Positioning System (GPS) to record distance travelled, average speed, and journey time. The driver was required to enter information, such as the destination, passenger numbers, and battery level at the start and end of their trip.

Sourcing appropriate recharge sites posed difficulties for the project, with up to half of the scoped sites deemed unsuitable, or the owner (for example, a petrol station) would not agree to the installation of an EV recharge point. Ausgrid eventually installed 46 standard recharge points at Ausgrid offices and public locations, as well as in 12 homes for the home use trial (at a cost of \$3 000 each) and six rapid-recharge stations (mostly along the freeway between Sydney and Newcastle) at a cost of \$50 000 each. While data outlining the use of the rapid recharge stations had not been published, Ausgrid data as at June 2012 (the most recent data) indicated that overall use of the public recharging stations was very low (0.36 per cent of the total).

As at June 2013, the EV trial had cost around \$3 million, with a projected final cost of \$4.4 million. This included \$1.5 million in project management costs, \$926 000 for leasing and maintenance of the vehicles and associated software, \$645 000 for charge point installation, and \$269 000 in other costs.

As at December 2012 (the latest available data via MMR IV), the 20 vehicles had undertaken over 12 000 trips, covering 152 000 km and using 20 Megawatts of electricity. Data collected has been presented on the Smart Grid, Smart City Information Clearing House, in a number of written reports and as raw trip data.

Source: ANAO analysis of Ausgrid and Department of Industry data. Picture: Smart Grid, Smart City website.

Objective 4: Investigate synergies with other infrastructure

6.21 The final objective was for the program to ‘investigate synergies with other infrastructure (such as gas and water) and the National Broadband Network’. As outlined in Table 6.1, trials for interoperability with the NBN were limited to laboratory tests, due to the NBN not being available in trial areas during the program’s implementation. The Department of Industry advised that these tests were completed as at October 2013. Similarly, tests of smart water meters were significantly delayed due to technical issues. In

August 2013, Ausgrid reported that there would be 153 smart water meters installed at the homes of customers participating in the network and retail trials. Interoperability with gas metering was removed from the project scope due to the unavailability of appropriate meters. Overall, the limited nature of the interoperability trials meant that the program did not fully investigate synergies with other infrastructure, as originally envisaged.

Conclusion

6.22 Demonstration trials are a valuable tool for governments considering the implementation of new policies or technologies, although such trials are generally subject to higher technical risks.¹²⁹ The Smart Grid, Smart City Program involved the deployment of a broad range of smart grid technologies that, at the time of establishment in 2009, had not been undertaken in Australia.¹³⁰ The objectives of the program reflected the intention of the Government for the program to provide useful and valid data to inform a potential broader rollout of smart grid technologies in Australia, and to identify the issues that would need to be addressed by both government and industry to help achieve this objective.

6.23 Overall, internal information and published material from the program indicates that it has made a significant contribution of data and information to support further development of smart grids in Australia. However, some elements of the program have not progressed as originally envisaged. The investigation of compatibility between smart grids and other infrastructure (including the NBN) was affected by technological limitations, and at the time of this report, information was not available to help determine whether public and corporate awareness of the economic and environmental benefits of smart grids had been enhanced by the program.

129 ANAO Better Practice Guide—Innovation in the Public Sector, December 2009, Canberra, p. 24.

130 While there has been a broad rollout of smart meters in Victoria, the Smart Grid, Smart City Program has sought to implement an integrated demonstration smart grid, which involves smart meters and a range of other grid-side and customer-side applications.

6.24 Further, the delivery of the retail trial, which was to provide information about customer engagement with smart meter technologies, achieved participation rates that were lower than established targets and did not run for the envisaged two years' duration. This was due to a range of technological issues and higher-than-expected customer resistance to the installation of smart meters. Despite lower participation rates, the estimated cost of the retail trial (around \$20 million) was not reduced, and accounted for around one-fifth of total expenditure. While not achieving a 'commercial-scale' rollout as initially required under the program guidelines¹³¹, the retail trial has identified the challenges that government and industry will need to consider if implementing a broader rollout of smart meters and their associated technologies.



Ian McPhee
Auditor-General

Canberra ACT
29 January 2014

¹³¹ This objective was modified in the funding agreement to require the deployment of **a demonstration and/or commercial scale** rollout [emphasis added].

Appendices

Appendix 1: Agencies' responses

Department of the Environment



Australian Government
Department of the Environment

Dr Gordon de Brouwer
Secretary

Ref: 2013/01432

Ms Barbara Cass
Group Executive Director - Performance Audit Services Group
Australian National Audit Office
GPO Box 707
Canberra ACT 2601

Dear Ms Cass

I refer to your letter of 22 November 2013 seeking a response to the ANAO's proposed audit report on the Administration of the *Smart Grid, Smart City Program Performance Audit* as it relates to this Department.

The Department's formal response to the report is provided below for inclusion in your final report.

Formal Response:

The Department of the Environment (the Department) agrees with Recommendation Number 2 at *Attachment A*.

The relevant finding of the report largely relates to processes and events prior to a major reform in the Department's grants management practices. In June 2011 the Department implemented a *Grants Administration Framework*, which comprises comprehensive administrative tools for staff to provide policy and legislative guidance and better practice in developing and managing grants activities. This framework has recently been reviewed to ensure alignment with the updated *Commonwealth Grant Guidelines (June 2013)*.

On the specifics of the recommendation, it was the practice at the time for grant teams to have the discretion to seek appropriate probity advice. For this programme, the Department agrees that the scope of the appointed independent probity advisor could have been expanded.

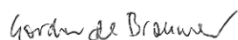
The Department appreciates that the report acknowledges that changes in administrative responsibility occurred at key stages of programme implementation and that this could potentially have affected the management of the programme and records retention. The current departmental *Grants Administration Framework* emphasises the need for grant managers to ensure they keep robust records of the processes used in delivering grants, particularly in regard to assessment and selection processes. This requirement has been reinforced by the Certificate of Compliance process which forms part of the compliance framework.

The Department had, within the period in which this programme was active, embarked on other governance initiatives, and appreciates that the report acknowledges that the Department worked effectively within condensed timeframes to establish the programme: in particular, that the Department appropriately managed project planning, risk planning, stakeholder engagement, and the tender process for the pre-deployment study.

I am confident that the Department is now better placed to deal with the type of matters raised in the audit.

Thank you for providing the opportunity to comment on the proposed audit report.

Yours sincerely



Gordon de Brouwer
24 December 2013

Attachments:

Attachment A - Responses to recommendation number 2.

Department of Industry



Australian Government

Department of Industry

Secretary

Ms Barbara Cass
Group Executive Director
Australian National Audit Office
GPO Box 707
Canberra ACT 2601

Dear Ms Cass,

Thank you for your letter of 22 November 2013, seeking comments from the Department of Industry on the proposed audit report on the administration of the Smart Grid, Smart City Program.

The Department welcomes the conclusion of the Australian National Audit Office (ANAO) that overall, the administering departments established appropriate arrangements to support the implementation of the Smart Grid, Smart City Program.

The Department's response to Recommendation 1 is at [Attachment A](#).

As requested, the Department has provided a response for inclusion in the body of the report at [Attachment B](#).

The Department has also noted the ANAO's comments about the early payment of funding to Ausgrid. The Department attaches a high priority to sound program management. I understand the decision to make an early payment was taken only after further advice was sought, as highlighted in the ANAO's report at paragraphs 5.29 and 5.30. The risks of not being able to make the payment were also highlighted to the ANAO.

Finally, I acknowledge the professional approach taken by the ANAO team during the audit process.

Yours sincerely

A handwritten signature in dark ink, appearing to read 'G. A. Beauchamp'.

Glenys Beauchamp

20 December 2013

Phone: (02) 6213 6650 Fax: (02) 6213 6657 Email: Glenys.Beauchamp@industry.gov.au

Industry House - 10 Binara Street, Canberra City, ACT 2601 - GPO Box 9839 Canberra ACT 2601 - www.industry.gov.au - ABN: 74 599 608 295

ATTACHMENT A

Department of Industry response to ANAO Recommendation

Recommendation 1:

To enhance program performance reporting, both internally and to external stakeholders, the ANAO recommends that the Department of Industry:

- *Develop relevant, reliable and complete key performance indicators; and*
- *Report against established indicators on the extent to which the program's objectives and outcomes are being achieved.*

Department of Industry Response: *Agreed*

The Department of Industry agrees with Recommendation 1. As noted by the ANAO in the report, the Department provided extensive information on the progress and outcomes of the program to stakeholders through a range of communication channels. The Department acknowledges that it is best practice to ensure indicators report on the extent to which the programmes objectives and outcomes are being achieved.

ATTACHMENT B

ANAO AUDIT OF THE SMART GRID SMART CITY PROGRAM

Summary of Department of Industry's response for inclusion in the Report Summary

The Department welcomes the conclusion of the Australian National Audit Office that overall the four administering departments of this program established appropriate arrangements to support the implementation of the Smart Grid, Smart City Program.

The Department of Industry agrees with Recommendation 1. As noted by the ANAO in the report, the Department provided extensive information on the progress and outcomes of the program to stakeholders through a range of communication channels. The Department acknowledges that it is best practice to ensure indicators report on the extent to which the programmes objectives and outcomes are being achieved.

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Appendix 2: Services and feedback technologies offered to customers participating in the network trial

1. Ausgrid approached customers directly to participate in the network trial, with customers offered one or a combination of the following services/devices:

Service/Technology	Detail
Home Energy Rebate	<p>Ausgrid planned between 10 and 15 special rebate events during the trial, typically running between 4pm and 8pm on a weekday. Customers would receive an SMS alerting them to the rebate period, plus a reminder before it began.</p> <p>If customers could reduce their consumption during the rebate event (measured against their average consumption as calculated by Ausgrid), they would receive a rebate of \$4.50 per kilowatt reduction.</p> <p>The rebates were provided via pre-paid visa cards, as Ausgrid could not provide rebates on electricity bills because they are not a retail provider.</p> <p>The purpose of this trial was to measure customers' willingness to change behaviour in specific peak events, in response to incentives.</p>
Home Energy Assessment	<p>SGSC Home Energy Assessment was a free onsite energy consultation to help customers understand the drivers of electricity costs in their homes. These assessments were conducted in April/May 2013.</p> <p>After the assessment, each participant received a report with electricity saving recommendations tailored to their home. The recommendations aimed to reduce electricity bills without adversely affecting lifestyle.</p>
Home Energy Monitor	<p>The Home Energy Monitor is a portable device to help track energy use. Using smart meter data, the unit provides near real time information about the dwelling's energy consumption. It displays the accumulated power usage in kWh and dollars, estimating the cost to the customer.</p> <p>The small unit is portable so users can test the effect that turning various appliances on and off has on overall energy consumption.</p>



Service/Technology	Detail
<p>Home Energy Online</p> 	<p>The Home Energy Online product provided historical information about the customer's home energy use via any online computer or certain smart phones. Using smart meter data, the interactive web-based tool provided access to historical feedback about electricity usage and associated estimated costs. Customers could access current information, as well as details from the past week, month or year. The online product also provided information on potential greenhouse gas emissions.</p> <p>Customers could compare their power use with that of similar households and Ausgrid ran a number of quizzes and competitions (for example, reducing power usage over several days or a week) to win a tablet computer or other products.</p>
<p>Home Energy Network</p> 	<p>The Home Energy Network builds on the services provided by the Home Energy Online portal, by allowing customers to also view the power consumption of individual household appliances. A special switch was installed between the appliance and the electricity plug, to allow measurement of individual appliance energy use.</p> <p>The Home Energy Network also allows customers to turn these appliances on and off remotely certain smart phones or any online computer.</p>
<p>Advanced In-Home Display</p>	<p>The Advanced In-Home Display was a tablet-like device that would provide more information than the Home Energy Monitor. During the life of the retail trial Ausgrid sought permission to de-scope the AIHD devices as the provider was no longer manufacturing them.</p>
<p>Google power meter</p>	<p>Google Power Meter was a software program developed by Google and trialed in the USA, which would provide free access to data on home energy use via an internet log-in (much like the Home Energy Online product outlined above). The software required the household to have a smart meter and, the agreement of the household's electricity provider. In July 2011, Google announced that it was discontinuing the project.</p>

Source: Smart Grid, Smart City website, available from <<http://www.smartgridsmartcity.com.au/>> [accessed 10 January 2014].

Appendix 3: Tariffs/products offered in the retail trial

1. EnergyAustralia offered four tariff products to customers that volunteered for the retail trial:

Tariff Name	Description
Budget Smart	<p>This tariff retained the standard electricity pricing regime, but provided customers with a 12.5 per cent discount on their total electricity bill if they maintained their account in credit.</p> <p>Customers were alerted via SMS when their account balance was getting low. Customers were not penalised if their account went into debit, but they did not receive any discount on electricity usage until their account returned to credit.</p> <p>Customers were offered the Budget Smart tariff as a stand-alone product or bundled with either a Home Energy Monitor, Home Energy Online, or Home Energy Network technology (the same technologies, but branded as EnergyAustralia).</p>
Price Smart	<p>This tariff trialled a time of use pricing structure, offering a 53 per cent discount every day between 2pm and 8pm.</p> <p>The tariff also included up to 14 'peak pricing events', of between 2–4 hours each, during which pricing would substantially increase (nearly 14 times the usual charge). Customers were given advance warning of these events, but could not opt out of them.</p> <p>Customers were offered the Price Smart tariff as a stand-alone product or package bundled with either a Home Energy Monitor, Home Energy Online, or Home Energy Network technology (the same technologies, but branded as EnergyAustralia).</p>
Season Smart	<p>This tariff offered a 59 per cent discount on electricity use between 2pm and 8pm during Spring and Autumn only. In Summer and Winter, pricing substantially increased (more than tripled) between 2pm and 8pm. Customers were offered feedback technologies (but not the Home Energy Network).</p>
Flow Smart	<p>The intention of this tariff was to reward customers for reducing energy use during six pre-notified air-conditioning events. During these events, the compressor in the customer's air-conditioner would be remotely switched off for 15 minutes per hour. The fan would continue to operate. Customers would be notified of an impending event and be able to choose whether to participate. Customers could earn up to \$44 for each event, giving a total potential reward of \$264.</p> <p>As at July 2013, no eligible customers had been identified to participate in this tariff (that is, there were no suitable air conditioners in customers' homes).</p>

Source: Smart Grid, Smart City website, available from <<http://www.smartgridsmartcity.com.au/>> [accessed 10 January 2014].

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