

# **Administration of the Renewable Energy Target**

Clean Energy Regulator

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Canberra ACT  
17 December 2018

Dear Mr President  
Dear Mr Speaker

In accordance with the authority contained in the *Auditor-General Act 1997*, I have undertaken an independent performance audit in the Clean Energy Regulator. The report is titled *Administration of the Renewable Energy Target*. 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.

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



Grant Hehir  
Auditor-General

The Honourable the President of the Senate  
The Honourable the Speaker of the House of Representatives  
Parliament House  
Canberra ACT 2600

## AUDITING FOR AUSTRALIA

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For further information contact:

**Australian National Audit Office  
GPO Box 707  
Canberra ACT 2601**

**Phone: (02) 6203 7300**

**Fax: (02) 6203 7777**

**Email: [ag1@anao.gov.au](mailto:ag1@anao.gov.au)**

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### **Audit team**

Grant Caine  
David Monk  
Jessica Carroll  
Hayley Ferreira  
Michael White

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# Summary and recommendations

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## Background

1. The Renewable Energy Target was introduced in 2001, through the *Renewable Energy (Electricity) Act 2000* (the Act), to encourage additional generation of electricity from sustainable and renewable resources and reduce greenhouse gas emissions in the electricity sector (section 3 of the Act). The Act does this by creating a market for renewable energy certificates, to drive investment in renewable energy. On the supply side of the market, participants in the Renewable Energy Target scheme (the scheme) create certificates for each megawatt hour of renewable energy generated or displaced (no longer required from the electricity grid). On the demand side, electricity retailers source these certificates to meet their share of renewable energy in proportion to the total electricity sold to their customers.
2. In January 2011, the Renewable Energy Target was split into the Large-Scale Renewable Energy Target (LRET) — the establishment or expansion of renewable power stations — and the Small-scale Renewable Energy Scheme (SRES) — the installation of small generation units (primarily solar photovoltaic systems) and solar water heaters/air source heat pumps. In January 2018, the Minister for Energy announced that the legislated LRET target of 33,000 gigawatt hours of additional electricity from renewable energy sources by 2020 would be achieved.
3. In administering the scheme, the Clean Energy Regulator (the regulator) validates scheme participants' creation, and monitors electricity retailers' surrendering, of renewable energy certificates. The Clean Energy Council has a co-regulatory role under the scheme to maintain a list of approved components for solar photovoltaic systems and to accredit designers and installers of solar photovoltaic systems. The regulator engages with other state and territory regulatory agencies and industry peak bodies (including the Smart Energy Council and Master Electricians Australia).

## Creation and validation of renewable energy certificates

4. Participants in LRET must first have their large-scale renewable energy power stations accredited under the scheme by the regulator before being able to create large-scale generation certificates. A total of 711 power stations were accredited over the period from 2001 to 2017, with a further 433 power stations projected to be accredited in 2018.
5. Between 2011 and 2017, the regulator validated an average of 16.2 million large-scale generation certificates created each year for electricity generated from accredited renewable energy power stations. The quantity of certificates validated in 2018 is projected to increase to 24 million.
6. SRES participants, or their assigned agents<sup>1</sup>, can create small-scale technology certificates for up to 12 months after the date small-scale systems are installed. The regulator validates the small-scale technology certificates created within the Renewable Energy Certificate (REC) Registry — a secure system for creating, surrendering and trading renewable energy certificates.

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<sup>1</sup> System owners often assign their right to create small-scale technology certificates to agents when entering into system purchase arrangements.

7. Since 2011, an average of about 286,500 small-scale systems have been installed each year involving the creation of over 210.5 million small-scale technology certificates in total over the period from 2011 to 2018.

### **Surrender of certificates by liable entities**

8. Liable entities are wholesale purchasers of electricity, mainly electricity retailers that are the first to acquire electricity in a grid with an installed capacity of 100 megawatts or more. The legislation provides for liable entities to surrender a certain number of large-scale generation certificates and small-scale technology certificates in proportion to the amount of electricity (less exemptions) they acquire during the year.

9. The proportions applicable to all liable entities (the renewable power percentage under LRET and small-scale technology percentage under SRES) are determined annually by the Minister, a year in advance. Liable entities that do not surrender enough certificates are required to pay a shortfall charge of \$65 (non-tax deductible) for each certificate not surrendered.<sup>2</sup> Adherence with certificate surrender obligations has remained high under SRES, but less so under LRET. Since 2016, a small number of liable entities have decided to pay significant shortfall charges in preference to surrendering the required number of large-scale generation certificates.

### **Rationale for undertaking the audit**

10. The Renewable Energy Target scheme is one of the Government's key measures to encourage investment in renewable energy sources and reduce Australia's greenhouse gas emissions. The scheme underpins a market for renewable energy certificates worth in excess of \$1.5 billion annually rising, involving a broad spectrum of participants from large energy retailers through to large and small businesses and householders. The audit aimed to provide assurance over the robustness of the scheme's operation and the achievement of its objectives.

### **Audit objective and criteria**

11. The objective of the audit is to assess the effectiveness of the Clean Energy Regulator's administration of the Renewable Energy Target scheme. To form a conclusion against the audit objective, the ANAO applied the following high level audit criteria:

- Has the regulator established appropriate arrangements to register renewable energy systems and validate renewable energy certificates?
- Is the regulator effectively monitoring the surrender of renewable energy certificates by liable entities?
- Is the regulator effectively monitoring scheme compliance and responding to non-compliance?
- Has the regulator established appropriate governance arrangements to manage the risks, operation and performance of the Renewable Energy Target scheme?

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2 Liable entities acquire large-scale generation certificates and small-scale technology certificates on the open market (at forward-contract rates or spot prices) or through power purchase agreements (often long-term contracts) with renewable power station owners/operators. Liable entities are able to carry forward a large-scale generation certificate shortfall of 10 per cent or less from one year to the next without incurring the shortfall charge.



## Conclusion

12. The Clean Energy Regulator has effectively administered the Renewable Energy Target scheme, except for the enforcement activities of its investigations unit.
13. The regulator has established effective arrangements to register renewable energy systems and validate renewable energy certificates. Scheme participants received appropriate assistance to register renewable power stations and create certificates. Large-scale power stations are accredited and registered after effective assessments, in line with scheme requirements. Certificates created by scheme participants are appropriately validated by the regulator.
14. The regulator is effectively monitoring the surrender of renewable energy certificates by liable entities. The regulator correctly calculated and imposed shortfall charges on those liable entities that did not meet their surrender liabilities.
15. The regulator has mostly effective compliance monitoring and enforcement arrangements for the scheme. Scheme intelligence and data analysis has helped in the targeting of compliance monitoring and enforcement activities. Scheme compliance risks are being addressed through compliance monitoring activities. While administrative actions have been appropriately handled by the SRES compliance team, governance of the regulator's investigations unit has been insufficient to ensure that its investigation procedures and processes are satisfactory, consistently applied and result in timely investigations.
16. The regulator has established appropriate governance arrangements to manage the risks and operation of the scheme. Effective oversight arrangements have been established for the scheme, with scheme implementation documented in multiple business and support plans. Annual certificate surrender targets have been calculated consistent with legislative requirements. The regulator's external reporting for the scheme is supported by an established performance management framework.

## Supporting findings

### Renewable energy system registrations and certificate validations

17. The regulator appropriately assisted scheme participants to register renewable energy systems and create renewable energy certificates.
18. Fit and proper person assessments have been undertaken effectively, consistent with legislative requirements. Large-scale renewable energy power stations have been accredited and registered by the regulator after undergoing assessments that met legislative requirements, although assessment procedures and documentation could be improved.
19. The regulator effectively validates the power stations' creation and calculation of large-scale generation certificates against electricity generation data throughout the year. The REC Registry has an effective on-line portal to register small-scale system installations and validate small-scale technology certificates. The maintenance of SRES integrity would be better demonstrated were the regulator to develop a strategy or plan outlining the validation tasks that should be undertaken, taking into account other external controls and activities. Where undertaken, the regulator appropriately finalised the assigned certificate validation tasks.

## **Surrender of certificates by liable entities**

20. The regulator accurately determined the renewable energy certificate surrender liabilities of liable entities. Processes to identify new liable entities, and assess exemption certificates are effective. Assessments of 'relevant acquisitions' of electricity would be more robust were they to better address standard operating procedures.

21. The regulator has effective mechanisms in place to monitor over time the position of liable entities to meet their certificate surrender liabilities when they fall due.

22. Where liable entities do not meet their certificate surrender liabilities, the regulator accurately calculates and imposes a shortfall charge, and publishes their names on the regulator's website. The regulator is actively managing the recovery of overdue shortfall charge debts.

## **Compliance monitoring and enforcement**

23. The regulator has sound arrangements to collect and disseminate externally sourced intelligence relevant to scheme participants to those responsible for scheme entry, operations and compliance and enforcement activities. The regulator undertakes analysis of intelligence data that has helped in the targeting of its compliance monitoring and enforcement activities. Improvements to compliance risk assessments and plans would better position the regulator to demonstrate that scheme risks are being appropriately managed.

24. Compliance risks with the potential to reduce the integrity of the scheme are being addressed by the regulator's compliance monitoring activities. The regulator should formally assess the extent of any residual electrical safety risks from small generation unit installations under the scheme and inform those stakeholders in the best position to effect further treatments.

25. Scheme non-compliance matters that are likely to result in administrative action have been determined consistently by the SRES compliance team. For serious scheme non-compliance cases, the governance of the regulator's investigations unit has been insufficient to ensure that all mandated investigation requirements are contained in standard operating procedures, the procedures are consistently applied and that investigations are undertaken in a timely manner.

## **Governance**

26. Effective arrangements have been established to oversee the implementation of the Renewable Energy Target scheme.

27. Scheme implementation is currently documented in multiple business plans at the corporate, divisional, branch and section level and support plans. An overarching map for the scheme would better ensure that recent organisational structure and scheme operational changes integrate and contribute to the efficient and effective management of the scheme.

28. The regulator has an established risk management framework to guide the development, implementation and monitoring of the organisation's risk management plans. Improved alignment between scheme and strategic risks, and better maintenance of the risk register's currency, would aid the regulator's risk management.

29. The renewable power percentage and small-scale technology percentage that determine annual certificate surrender targets are set annually by the Minister consistent with legislative requirements, based on the recommendations of the regulator. The percentages are calculated using formula inputs from robust sources.

30. The regulator has an established performance management framework to monitor internally and report internally and externally on the Renewable Energy Target scheme's achievements. Overall, the performance indicators used by the regulator to report under the Commonwealth performance framework require further development to be relevant, reliable and complete. The regulator's other annual external performance reporting mechanisms at the scheme- and entity-based level aid the transparency of, and accountability for, the scheme's achievements.

## Recommendations

**Recommendation no.1**  
**Paragraph 4.44**

The Clean Energy Regulator assess the extent to which its Renewable Energy Target scheme data shows any residual systemic electrical safety risks for small generation units installed under the scheme and inform those stakeholders in the best position to effect further treatments.

**Clean Energy Regulator response:** *Agreed*

**Recommendation no.2**  
**Paragraph 4.76**

The Clean Energy Regulator establish governance mechanisms to manage its investigations function that ensure mandated investigation requirements are contained in standard operating procedures, the procedures are consistently applied and that investigations are undertaken in a timely manner.

**Clean Energy Regulator response:** *Agreed*

**Recommendation no.3**  
**Paragraph 5.11**

The Clean Energy Regulator develop an overarching map to document and link the various elements of the operation and governance of the Renewable Energy Target scheme.

**Clean Energy Regulator response:** *Agreed*

**Recommendation no.4**  
**Paragraph 5.39**

The Clean Energy Regulator refine the design of its performance measurement and reporting framework to ensure it is addressing the requirements of the Commonwealth performance framework to demonstrate progress against its purpose using relevant, reliable and complete performance criteria.

**Clean Energy Regulator response:** *Agreed*

## Summary of entity response

31. The proposed report was provided to the regulator, which provided a summary response that is set out below. The response from the regulator is provided at Appendix 1.

The Clean Energy Regulator welcomes the Australian National Audit Office's (ANAO's) proposed report and agrees to all four recommendations.

Activity in the Large-scale Renewable Energy Target and the Small-scale Renewable Energy Scheme (under the Renewable Energy Target) continue to grow beyond original expectations. The 2020 large-scale target will be exceeded and strong growth in rooftop solar photovoltaic is continuing. In response to the unprecedented growth in the Renewable Energy Target, the agency continues to refine and automate its controls to adapt and keep pace.

In this context, the agency appreciates the ANAO's generally favourable commentary on the administration of the Renewable Energy Target. Work has commenced to implement improvements consistent with the recommendations.

## Key messages from this audit for all Australian Government entities

32. Below is a summary of key messages, including instances of good practice, which have been identified in this audit that may be relevant for the operations of other Commonwealth entities.

### **Governance and risk management**

- A central document to guide program administration ensures that all aspects of the program are considered and addressed cohesively.
- Entities should assess their exposure to material extra-jurisdictional risks and, where necessary, inform those stakeholders in the best position to effect further treatments.

### **Policy/program implementation**

- An effective intelligence and data analytics capability can assist regulators to target compliance monitoring and enforcement activities.
- Sample-based application assessments are best undertaken using a risk-based targeting approach.
- Well-designed IT systems capture and retain data relevant to program operations and enable reporting of program performance.
- Establishing appropriate governance arrangements for a regulator's investigation and enforcement function is important to ensure its activities are effective and timely.

### **Performance and impact measurement**

- Relevant, reliable and complete performance criteria should be designed to address the accountability needs of the Parliament and the public, focusing on the achievement of entity purpose.

## **Audit findings**

# 1. Background

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## Introduction

1.1 The Renewable Energy Target was introduced in 2001, through the *Renewable Energy (Electricity) Act 2000* (the Act), to encourage additional generation of electricity from sustainable and renewable resources and reduce greenhouse gas emissions in the electricity sector (section 3 of the Act). The Act does this by creating a market for renewable energy certificates, to drive investment in renewable energy. On the supply side of the market, participants in the Renewable Energy Target scheme (the scheme) create certificates for each megawatt hour of renewable energy generated or displaced (no longer required from the electricity grid). On the demand side, electricity retailers source these certificates to meet their share of renewable energy in proportion to the total electricity sold to their customers.

1.2 Known originally as the Mandatory Renewable Energy Target, the scheme had the initial aim to source two per cent of the nation's electricity generation from renewable sources. In 2009, this target was increased to ensure renewable energy made up the equivalent of 20 per cent of Australia's electricity (41,000 gigawatt hours) by 2020.

1.3 In January 2011, the Renewable Energy Target was split into two:

- The Large-scale Renewable Energy Target (LRET) — the establishment or expansion of renewable power stations (generally greater than 100 kilowatt hour capacity) such as solar farms, wind farms, hydro-electric and waste power stations. In June 2015, the legislated target was reduced from 41,000 to 33,000 gigawatt hours by 2020; and
- The Small-scale Renewable Energy Scheme (SRES) — the installation of small generation units (primarily solar photovoltaic systems) and solar water heaters/air source heat pumps (generally less than 100 kilowatt hour capacity). SRES has no specific legislated target, although a target is set annually by the Minister for Energy (the Minister) designed to balance demand with the forecasted number of certificates created.

1.4 The Department of the Environment and Energy is primarily responsible for the policy settings under which the scheme operates, while the Clean Energy Regulator (the regulator) administers the scheme, which involves:

- undertaking fit and proper person assessment of potential scheme participants (see Chapter 2);
- accrediting large-scale renewable energy power stations (see Chapter 2);
- validating renewable energy certificates created under LRET (that is, large-scale generation certificates) and SRES (that is, small-scale technology certificates), and exemption certificates for emissions-intensive trade-exposed activities (see Chapter 2);
- monitoring the surrender of renewable energy certificates by liable entities (see Chapter 3);

- providing a secure system for creating, surrendering and trading certificates via the Renewable Energy Certificate (REC) Registry<sup>3</sup> (see Chapters 2 and 3);
- advising the Minister on setting the statutory demand for certificates by determining the amount of certificates liable entities (electricity retailers) should surrender each year (see Chapter 5);
- monitoring and enforcing scheme participants' and liable entities' compliance with the legislative requirements of the scheme (see Chapter 4); and
- providing market data to help inform scheme participants' investment decisions and liable entities' sourcing and surrendering of certificates (see Chapter 5).

1.5 The Clean Energy Council has a co-regulatory role under the scheme to maintain a list of approved components for solar photovoltaic systems (grid connected inverters and compliant panels) and to accredit designers and installers of solar photovoltaic systems. The regulator engages with other state and territory regulatory agencies (including those responsible for electrical safety, work health and safety and fair trade) and industry peak bodies (including the Smart Energy Council and Master Electricians Australia).

## Operation of the Renewable Energy Target

1.6 Potential participants in the Renewable Energy Target scheme, including power station owners/nominees and agents under SRES, are first required to undergo a fit and proper person assessment from the regulator before being able to access the scheme.

### Creation and validation of renewable energy certificates

#### *Large-scale Generation Certificates*

1.7 Participants in LRET must first have their large-scale renewable energy power stations accredited under the scheme by the regulator before being able to create large-scale generation certificates (LGCs). After 138 power station accreditations in the first year of the scheme, annual accreditations averaged 25 over the next 14 years before increasing markedly year-on-year in 2016 and 2017 (to 98 and 124, respectively). A total of 711 power stations were accredited over the period from 2001 to 2017, with a further 433 power stations projected to be accredited in 2018 (see Figure 1.1 on the following page).

1.8 The creation of LGCs lags the accreditation of power stations. The regulator validates the energy generated by renewable energy power stations (above pre-set baselines, where applicable) on an annual, quarterly or monthly basis and reconciles this to the quantity of LGCs created by participants.<sup>4</sup> The quantity of renewable energy certificates validated annually increased slowly from 2001 before accelerating in 2009 and 2010, before the scheme split into LRET and SRES in 2011.

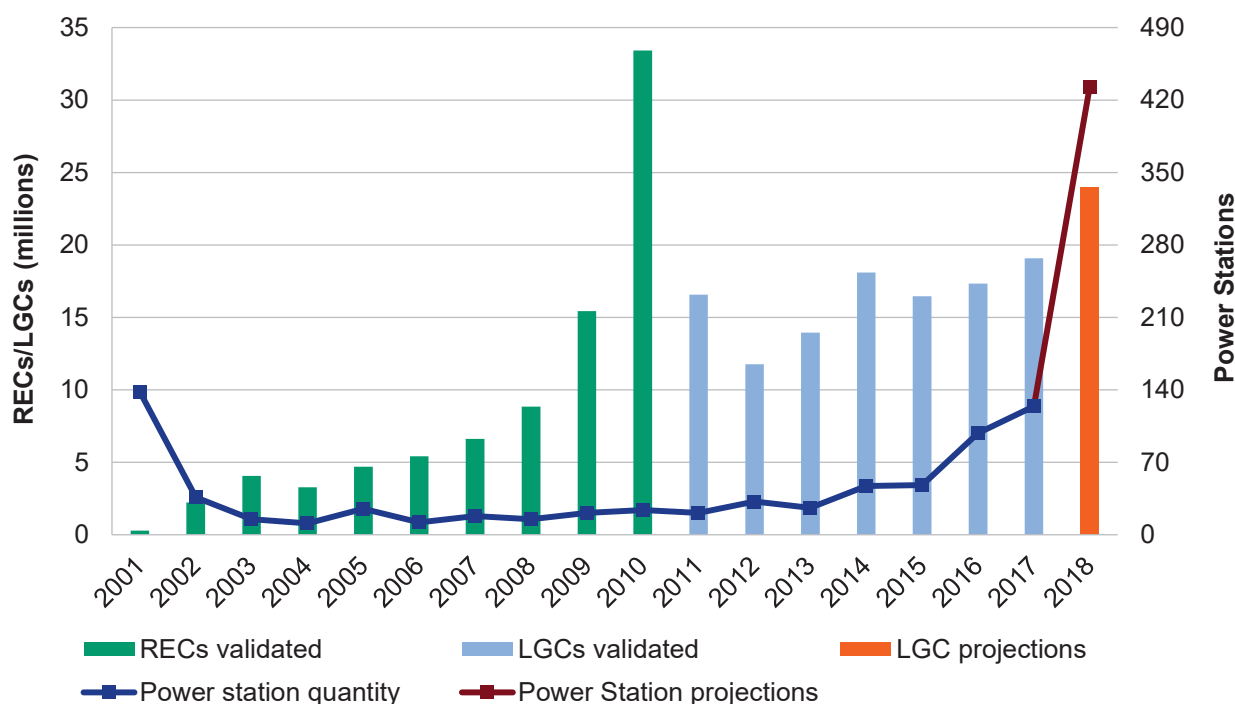
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3 The regulator does not become involved in the trading of certificates, with the exception of a clearing house operated by the regulator where small-scale certificates can be traded for a fixed price. Scheme participants are not obligated to use the clearing house.

4 Participants are eligible to create large-scale generation certificates for renewable energy generated in the previous calendar year.

1.9 Total certificates validated over the eight years between 2001 and 2008 amounted to 35.4 million, with a further 48.8 million certificates validated in 2009 and 2010 combined. Between 2011 and 2017, the regulator validated an average of 16.2 million LGCs created each year. The quantity of LGCs validated in 2018 is projected to increase to 24 million (see Figure 1.1).

**Figure 1.1: Power stations and large-scale generation certificates validated**



Source: Clean Energy Regulator.

### *Small-scale technology certificates*

1.10 Participants, or their assigned agents<sup>5</sup>, can create small-scale technology certificates (STCs) for up to 12 months after the date small-scale systems are installed. The regulator validates the STCs created within the REC Registry. Those certificates that fail validation may be eligible to be re-created (resubmitted) where the failure reason can be satisfactorily addressed.

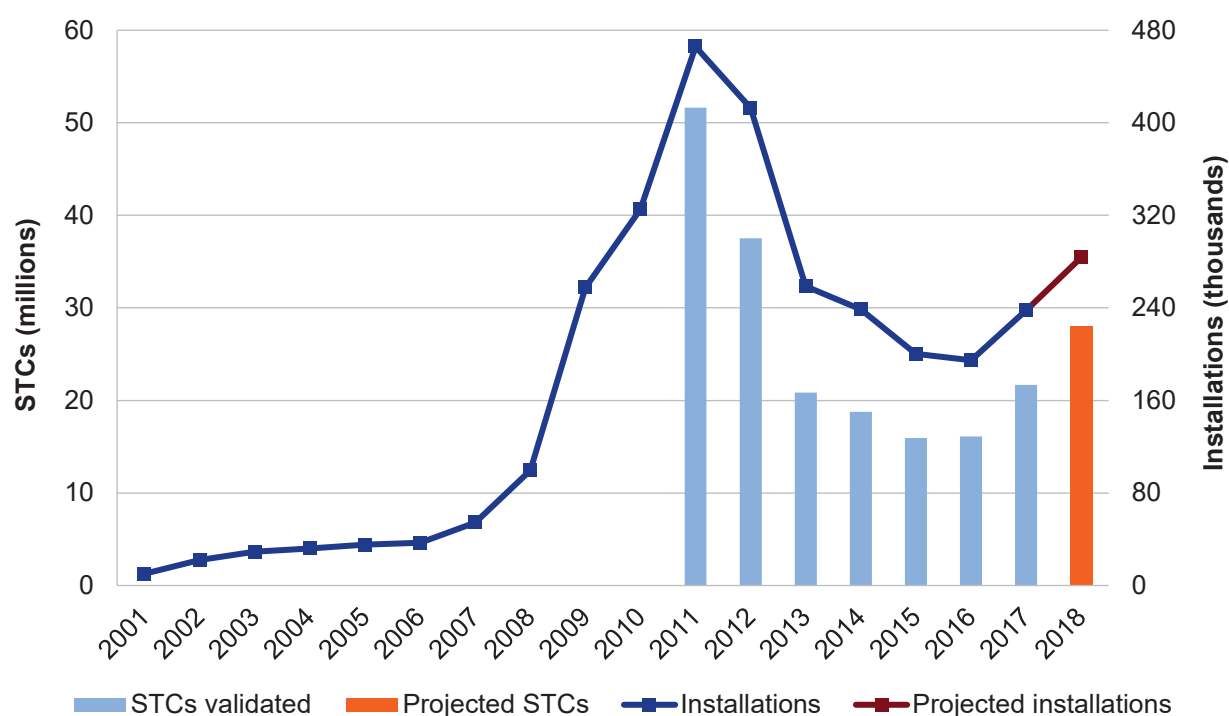
1.11 At the start of the scheme, renewable energy certificates could be created either annually or every five years for each small-scale system installation. However, the scheme was varied to allow for certificates to be fully created in advance for a maximum of 15 years<sup>6</sup> for installations after October 2007.

1.12 There were over 320,000 small-scale system installations for the first eight years of the scheme (2001 to 2009), but the installation rate increased appreciably with over 580,000 installations over the next two years (2010 and 2011). Since the scheme split into LRET and SRES, there has been an average of about 286,500 small-scale installations each year. Over 210.5 million STCs have been created since 2011 (see Figure 1.2).

<sup>5</sup> System owners often assign their right to create small-scale technology certificates to agents when entering into system purchase arrangements.

<sup>6</sup> The certificate creation period is reducing by a year for every year since 2016.



**Figure 1.2: Installations and small-scale technology certificates validated<sup>a</sup>**

Note a: Renewable energy certificates related to small-scale system installations over the period 2001 to 2010 have been included in LRET at Figure 1.1 above.

Source: Clean Energy Regulator.

## Surrender of certificates by liable entities

1.13 Liable entities are wholesale purchasers of electricity, mainly electricity retailers that are the first to acquire electricity in a grid with an installed capacity of 100 megawatts or more. The legislation provides for liable entities to surrender a certain number of renewable energy certificates (both LGCs and STCs) in proportion to the amount of electricity they acquired during the year.<sup>7</sup>

1.14 The proportions applicable to all liable entities are determined annually by the Minister, a year in advance. Liable entities that do not surrender enough certificates are required to pay a shortfall charge of \$65 (non-tax deductible) for each certificate not surrendered.<sup>8</sup> Owners of certificates can also choose to surrender certificates for any reason, with the most common reasons being to:

7 The electricity consumed in emissions-intensive trade-exposed activities (as defined in the Renewable Energy (Electricity) Regulations 2001) are eligible for exemption under the scheme, with applications for exemption assessed annually by the regulator. Emissions-intensive trade-exposed activities includes (among others) aluminium and zinc smelting, petroleum refining and newsprint manufacturing.

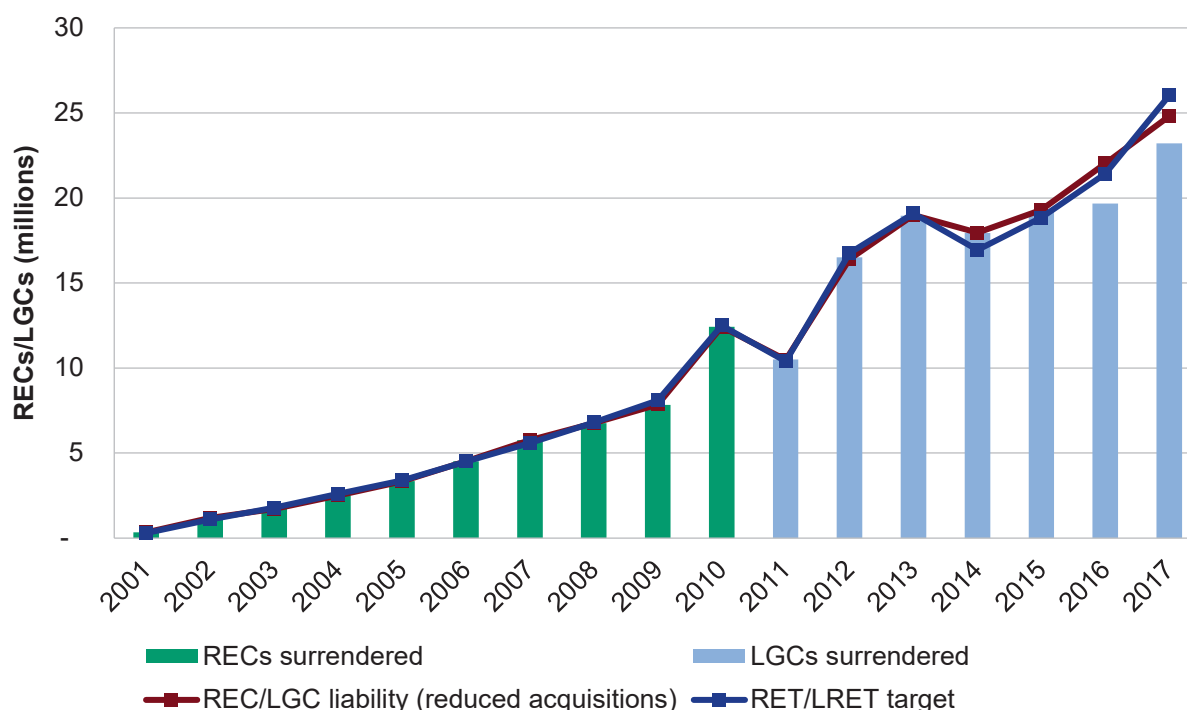
8 Liable entities are able to carry forward a LGC shortfall of 10 per cent or less from one year to the next without incurring the shortfall charge. Liable entities who have paid an LGC shortfall charge can surrender additional certificates within the following two years and get a refund (less an administrative charge) so long as the liable entity did not have a LGC shortfall in the year immediately before the year in which the refund is claimed. All STC shortfalls incur the shortfall charge, which is not refundable.

- support the generation of electricity from renewable energy sources over and above the Renewable Energy Target (for example, a state government accreditation program); and
- offset improperly created certificates that the regulator detects after the certificates have been validated.

1.15 Liabe entities acquire LGCs and STCs on the open market (at forward–contract rates or spot prices) or through power purchase agreements (often long–term contracts) with renewable power station owners/operators.

1.16 The number of renewable energy certificates (2001 to 2010) and LGCs (post–2010) surrendered annually very closely align to the calculated REC/LRET liabilities under the scheme over the period 2001 to 2015 (with annual variances of up to  $\pm 0.7$  per cent). However, LGCs surrendered in 2016 and 2017 were 10.7 and 6.5 per cent respectively, less than the calculated surrender liabilities for these years (see Figure 1.3). In these latter years in particular, a small number of liable entities decided to carry–forward a LGC shortfall and/or pay a shortfall charge in preference to surrendering the required number of LGCs (see Table 1.1 on the following page).

**Figure 1.3: Surrender of renewable energy/large scale generation certificates**



Source: ANAO, from Clean Energy Regulator data.

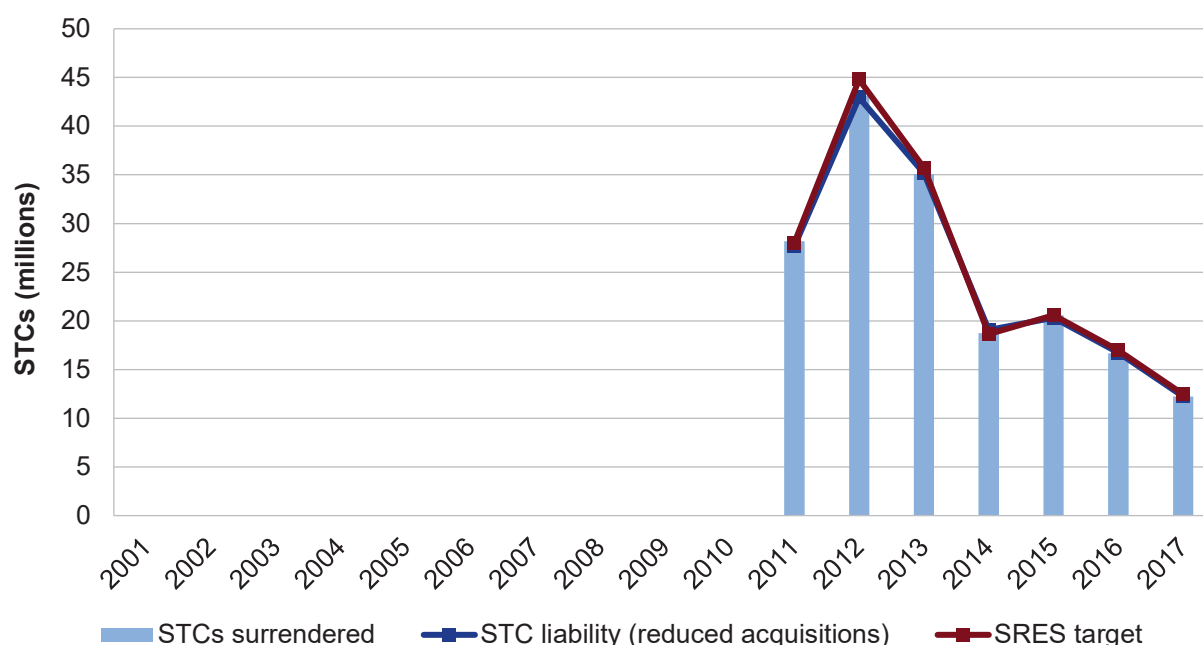
1.17 The number of STCs (post 2010) surrendered annually closely align to the calculated SRES liabilities under the scheme over the period 2011 to 2017 (with annual variances of up to  $\pm 2.0$  per cent) (see Figure 1.4 on the following page). Each year, a small number of entities have not met their STC surrender liabilities resulting in the levying of a shortfall charge (see Table 1.1).

**Table 1.1: Liable entities with certificate shortfalls**

| Year         | LGC shortfalls ≤ 10% |                | LGC shortfalls > 10% |                  | STC shortfalls                |                 |               |                               |
|--------------|----------------------|----------------|----------------------|------------------|-------------------------------|-----------------|---------------|-------------------------------|
|              | No. of entities      | LGCs           | No. of entities      | LGCs             | LGC shortfall charge (\$'000) | No. of entities | STCs          | STC shortfall charge (\$'000) |
| 2001 to 2008 | —                    | —              | 10                   | 470              | 30                            | —               | —             | —                             |
| 2009         | —                    | —              | 2                    | 15,671           | 1,019                         | —               | —             | —                             |
| 2010         | —                    | —              | 2                    | 1,606            | 104                           | —               | —             | —                             |
| 2011         | 7                    | 285            | 2                    | 2,427            | 158                           | 5               | 19,772        | 1,285                         |
| 2012         | 15                   | 9,623          | —                    | —                | —                             | 8               | 13,304        | 865                           |
| 2013         | 9                    | 6,851          | 2                    | 1,437            | 93                            | 9               | 4,342         | 282                           |
| 2014         | 6                    | 6,294          | 3                    | 18,798           | 1,222                         | 4               | 23,384        | 1,520                         |
| 2015         | 6                    | 48,443         | 7                    | 69,316           | 4,506                         | 5               | 1,900         | 124                           |
| 2016         | 7                    | 73,553         | 15                   | 2,281,530        | 148,299                       | 2               | 13,270        | 863                           |
| 2017         | 7                    | 280,107        | 22                   | 1,375,008        | 89,376                        | 5               | 5,775         | 375                           |
| <b>Total</b> | <b>57</b>            | <b>425,156</b> | <b>65</b>            | <b>3,766,263</b> | <b>\$244,807</b>              | <b>38</b>       | <b>81,747</b> | <b>\$5,314</b>                |

Legend: LGCs — large-scale generation certificates; STCs — small-scale technology certificates

Source: Clean Energy Regulator.

**Figure 1.4: Surrender of small-scale technology certificates<sup>a</sup>**

Note a: Renewable energy certificate surrenders related to the small-scale scheme over the period 2001 to 2010 have been included in LRET at Figure 1.3 above.

Source: ANAO, from Clean Energy Regulator data.

## **Achievement of the Large-scale Renewable Energy Target**

1.18 In January 2018, the regulator and Minister announced publicly that the LRET would be achieved by 2020. Once the LRET has been achieved, the value of newly-created LGCs over the period to 2030 is expected to decline appreciably. The value of STCs created annually to 2030 will be dependent on the balance of STC supply to the annual STC surrender target set by the Minister.

1.19 Renewable energy accounted for 15.7 per cent of Australia's electricity generation in 2016–17.

## **Rationale for undertaking the audit**

1.20 The Renewable Energy Target scheme is one of the Government's key measures to encourage investment in renewable energy sources and reduce Australia's greenhouse gas emissions. The scheme underpins a market for renewable energy certificates worth in excess of \$1.5 billion annually and rising, involving a broad spectrum of participants from large energy retailers through to large and small businesses and householders. The audit aimed to provide assurance over the robustness of the scheme's operation and the achievement of its objectives.

## **Audit approach**

### **Audit objective, criteria and scope**

1.21 The objective of the audit is to assess the effectiveness of the Clean Energy Regulator's administration of the Renewable Energy Target scheme. To form a conclusion against the audit objective, the ANAO applied the following high level audit criteria:

- Has the regulator established appropriate arrangements to register renewable energy systems and validate renewable energy certificates?
- Is the regulator effectively monitoring the surrender of renewable energy certificates by liable entities?
- Is the regulator effectively monitoring scheme compliance and responding to non-compliance?
- Has the regulator established appropriate governance arrangements to manage the risks, operation and performance of the Renewable Energy Target scheme?

1.22 The ANAO did not examine the co-regulatory role performed by the Clean Energy Council under the scheme.

### **Audit methodology**

1.23 The audit methodology included:

- examining scheme documentation held by the regulator, including the REC Registry, (primarily covering the period from January 2016 to early 2018);
- interviewing regulator staff; and
- seeking comments on scheme administration from key stakeholders, including scheme participants and industry peak bodies.

1.24 Results from the ANAO's sample testing in this report have been determined from representative sampling at a 90 per cent confidence level with a five per cent confidence interval unless otherwise indicated.

1.25 The audit was conducted in accordance with the ANAO Auditing Standards at a cost to the ANAO of approximately \$500,000. The team members for this audit were Grant Caine, David Monk, Jessica Carroll, Hayley Ferreira and Michael White.

## 2. Renewable energy system registrations and certificate validations

### Areas examined

This chapter examined whether the regulator provided sound guidance on the registration of renewable energy systems, effectively assessed renewable energy system registrations and appropriately validated the creation of renewable energy certificates.

### Conclusion

The regulator has established effective arrangements to register renewable energy systems and validate renewable energy certificates. Scheme participants received appropriate assistance to register renewable power stations and create certificates. Large-scale power stations are accredited and registered after effective assessments, in line with scheme requirements. Certificates created by scheme participants are appropriately validated by the regulator.

### Areas for improvement

The ANAO suggested improvements to: power station assessment procedures and documentation; and determining the validation tasks that should be undertaken to maintain SRES integrity.

### Did the regulator provide sound guidance on registering renewable energy systems and creating certificates?

The regulator appropriately assisted scheme participants to register renewable energy systems and create renewable energy certificates.

2.1 The regulator has developed appropriate online portals into the Renewable Energy Certificate (REC) Registry that elicits the necessary information to inform the regulator's assessments of registered person applicants, power station applications and/or renewable energy certificate creations under the *Renewable Energy (Electricity) Act 2000*. In cases where errors or ambiguities arise, or insufficient information or documentation has been provided, the regulator has effective processes in place to follow-up with the participants.

2.2 At times, the regulator has had to consider and respond to new industry business models that challenge the boundaries of the Renewable Energy Target scheme or the boundaries between the Large-scale Renewable Energy Target (LRET) and the Small-scale Renewable Energy Scheme (SRES). Examples include:

- enquiries from industry as to whether large-scale solar water heaters are eligible under the scheme;
- clarifying how the threshold between LRET and SRES (100 kilowatt) is to be applied for multiple installations on the same site or multiple interconnected sites<sup>9</sup>; and

9 Participants will increasingly have a greater incentive to attempt to access SRES rather than LRET as the financial benefits for participants under LRET are likely to decrease more rapidly than under SRES.

- clarifying the extent to which replacement solar photovoltaic panels are eligible to claim small-scale technology certificates (STCs) under SRES.

2.3 The regulator also has a dedicated in-house contact centre to support its regulated entities, reporting that 79 per cent of client contacts via telephone across all its schemes were resolved at first interaction in 2017–18. The regulator’s client survey found that 71 per cent of clients were satisfied or very satisfied with their interactions with its staff — down from 79 per cent in the 2016 survey.

## Did the regulator effectively assess renewable energy system registrations?

Fit and proper person assessments have been undertaken effectively, consistent with legislative requirements. Large-scale renewable energy power stations have been accredited and registered by the regulator after undergoing assessments that met legislative requirements, although assessment procedures and documentation could be improved.

2.4 The Act requires persons to be registered under the Act before becoming eligible to create renewable energy certificates, with the principle requirement being a fit and proper person assessment. In addition, the regulator must accredit renewable energy power stations before they can register large-scale generation certificates (LGCs) under the scheme.<sup>10</sup>

### Fit and proper person assessments

2.5 Under LRET, the renewable energy power station’s nominated person (initially the applicant to register a power station, which can be later changed) is the registered person eligible to create LGCs. Under SRES, owners of small generation units and solar water heaters/air source heat pumps are the registered persons that can create STCs or assign their right to create STCs to another registered person (an agent). The regulator may refuse an application if the regulator is satisfied that the applicant is not a fit and proper person.

2.6 Applicants must first establish their identity when lodging their application through the REC Registry. The regulator establishes an applicant’s identity through the Document Verification Service — a national online system that compares a customer’s identifying information (for example, Australian Passport, Australian drivers licence, and Medicare card) with a government record — using a contracted gateway service provider. Where the Document Verification Service is unable to satisfactorily verify an applicant’s identity, the regulator applies manual procedures to authenticate certified copies of identity documents. The regulator satisfactorily verified scheme applicants’ proof of identity using automated and manual processes.

2.7 In the sample of registered person applications examined by the ANAO, annotations in the REC Registry evidences the regulator conducting the checks required to establish scheme applicants were fit and proper persons. The regulator checked applicant’s details against the contents of the

<sup>10</sup> The registration of systems under SRES occurs at the same time as STCs are created (which is discussed later in this chapter).

regulator's holdings (in the Customer Relationship Manager system<sup>11</sup>) and particular open and restricted websites. Consistent with standard operating procedures, the applications were also referred to, and responses received from, the SRES compliance and fraud investigation teams, with no issues raised.

2.8 Registered person applications examined by the ANAO that had been rejected by the regulator were on grounds unrelated to the fit and proper person assessments (the applications had been made in error).<sup>12</sup> The comprehensiveness of the assessment of registered person applications would be improved were the regulator's assessment procedures to require, and evidence retained to demonstrate, that assessors had reviewed the applicants' completed fit and proper person questionnaire and declarations.<sup>13</sup>

2.9 In June 2017, the regulator endorsed a revised fit and proper person posture to determine the suitability of applicants and scheme participants to participate in schemes administered by the regulator, including the Renewable Energy Target. Under the revised posture, the regulator is broadening its consideration of fit and proper person characteristics beyond mandatory considerations to 'other matters' (subsection 11(2A)(b) of the Act) — including applicants' skills, capability, competence, business practices and good character — at scheme entry and on an ongoing basis. SRES agents were identified as the first of the regulator's clientele that would be subject to the revised posture.

2.10 In January 2018, the regulator first included information on its website informing current and prospective registered agents of the legislative requirement for them to have documented procedures and records and apply best practice standards. In late August 2018, the regulator launched 'SRES Smart' — an online program with modules, knowledge checks and a self-assessment tool to show that agents understand the expected capabilities and standards of practice necessary to participate in the scheme.

2.11 All prospective agents must complete SRES Smart before submitting a registration application. Existing agents are strongly encouraged to complete SRES Smart with those failing to have completed the program by February 2019 to be examined more closely under compliance processes. The introduction of SRES Smart is a practical mechanism to implement the regulator's expanded fit and proper person assessments encompassing new and existing SRES agents.

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11 The regulator's Customer Relationship Manager (CRM) system records the regulator's external interactions with stakeholders and clients. The CRM system also documents aspects of the regulator's observations, analysis and other intelligence associated with higher-risk entities that interact with its schemes.

12 An additional application examined by the ANAO did not result in the applicant's registration due to the non-payment of the registration fee.

13 Applicants (and their executive officers, for body corporate applicants) must declare whether or not:

- they have been convicted of an offence related to dishonest conduct, the conduct of a business, and/or making false or misleading statements in Australia or overseas;
- they breached the Acts that the regulator administers;
- an order has been made against the applicant under sections 76 and 224 of Schedule 2 of the Competition and Consumer Act 2010 (or overseas equivalent);
- they have been refused or suspended accreditation or membership of a state-based energy efficiency scheme or clean energy organisation; and
- for body corporate applicants, the applicant is subject to external administration or being wound up.



## Renewable energy system registrations

2.12 Under s.13 of the Act, a registered person may apply for accreditation of a renewable energy power station whose constituent components they either own or operate (whether alone or with other persons).<sup>14</sup> Where the regulator receives an application that contains all required information and supporting documentation, the regulator must determine within six weeks (or longer where agreed with the applicant) whether the power station, and which of its components, is eligible for accreditation. Where eligible, the regulator must approve the application and determine the station's renewable power baseline and non-eligible energy sources.

2.13 Under the Act, power stations can generate electricity from 19 eligible renewable energy sources. Of the 399 power stations accredited over the period 1 January 2016 to 30 June 2018, over 90 per cent are solar and solar and wind together account for 95 per cent of their installed capacity (see Table 2.1).

**Table 2.1: Power stations accredited over the period 1 January 2016 to 30 June 2018**

| Fuel source                                       | No. <sup>a</sup>  | Installed capacity (MW) |
|---------------------------------------------------|-------------------|-------------------------|
| Agricultural waste                                | 2 $\frac{1}{3}$   | 2.08                    |
| Energy crops                                      | 1                 | 115.00                  |
| Food processing waste (and food waste)            | 1 $\frac{2}{3}$   | 2.31                    |
| Hydro                                             | 7                 | 3.59                    |
| Landfill gas                                      | 4 $\frac{1}{2}$   | 10.37                   |
| Sewage gas and biomass-based components of sewage | 1                 | 1.48                    |
| Solar                                             | 363 $\frac{1}{2}$ | 1075.48                 |
| Waste from processing agricultural products       | 1                 | 3.10                    |
| Wind                                              | 17                | 1585.21                 |
| <b>Total</b>                                      | <b>399</b>        | <b>2798.61</b>          |

Note a: Power stations can have multiple fuel sources, therefore the fractions used in the table.

Source: Clean Energy Regulator.

2.14 Power station applications are submitted through the REC Registry, after which the regulator undertakes the assessment. Application assessment processes are documented in standard operating procedures, with a spreadsheet-based assessment tool the principal document that records the checks completed against the legislative requirements for accreditation.

2.15 When the assessment tool has been completed, an initial decision package is prepared for the delegate so that the application fee can be set in the REC Registry. Once the application fee has been set and paid, the application is considered to be 'properly made' and the delegate then has six weeks (unless a longer time is agreed) to make a decision on the application.<sup>15</sup>

14 A registered person can also apply for provisional accreditation of power stations under section 12A of the Act.

15 Power station application assessments are effectively undertaken in advance of setting the application fee such that there is minimal, if any, additional work required after the application fee has been paid before the delegate has the information required to make a decision. As a consequence, all power station applications 'properly made' were approved by the regulator within legislative timeframes.

2.16 The regulator’s tool for assessing power station applications was introduced in 2016 and addresses all matters that the legislation requires the regulator to consider before making a determination of a power station’s eligibility for registration under the scheme. The assessment tool requires assessors to assign a risk rating (high, medium or low) to each of the 45 assessment questions that culminates in an overall risk rating (high, medium or low) for the application. High risk-rated assessed applications require approval by a senior executive of the regulator, while medium- and low-rated applications can be approved at the senior officer level.

2.17 While the regulator has provided its assessors with a few broad examples of applications that could be rated as high risk (for example, power stations with multiple fuel sources or greater than one megawatt capacity), there is no guidance to help assessors to make a risk determination question-by-question. The consistency of risk ratings assigned to individual assessment questions, and to applications overall, would be enhanced were the regulator to provide improved guidance to assessors on risk considerations.

2.18 In the sample of power station registration applications since 2016 examined by the ANAO, the regulator determined all were eligible and approved and registered them after an appropriate assessment of applications’ contents and supporting documentation against legislative requirements. Nevertheless, gaps in the assessment procedures and documentation, and the regulator’s management information systems, could result in the regulator inappropriately validating LGCs created by ‘conditionally accredited’ power stations before receiving evidence that operating approval has been granted by state/local authorities and/or safety certificates have been issued. The regulator informed the ANAO that it has now introduced procedures that require its assessors to check that all outstanding power station accreditation documentation has been received before validating the power station’s first LGC claim.

## Did the regulator appropriately validate the creation of renewable energy certificates?

The regulator effectively validates the power stations’ creation and calculation of large-scale generation certificates against electricity generation data throughout the year. The REC Registry has an effective on-line portal to register small-scale system installations and validate small-scale technology certificates. The maintenance of SRES integrity would be better demonstrated were the regulator to develop a strategy or plan outlining the validation tasks that should be undertaken, taking into account other external controls and activities. Where undertaken, the regulator appropriately finalised the assigned certificate validation tasks.

2.19 The regulator has different processes and procedures in place to validate renewable energy certificates created under LRET and SRES, each of which is examined below.

### Large-scale Renewable Energy Target

#### *Validation of large-scale generation certificates*

2.20 Under the Act, an accredited power station’s nominated person can create a LGC for each whole megawatt hour of electricity generated during a year (the ‘generation year’) in excess of the power station’s 1997 renewable power baseline. The LGCs must be created before the end of the

year following the generation year. Once created, the regulator determines the LGCs' eligibility for registration via its validation process.<sup>16</sup>

2.21 The power station's entitlement to create LGCs is based on the station's electricity generation data submitted to the regulator (at least annually or as frequent as monthly). The data is usually in spreadsheet form based on key readings taken from metered instruments at the facility as outlined in the power station's 'LGC Methodology' determined by the regulator at the time of the station's accreditation.<sup>17</sup> The regulator calculates the LGC creation entitlement using the station's LGC Methodology and data and, when satisfied with the assessment of eligible electricity generation, the regulator will enter the LGC creation entitlement in the REC Registry.

2.22 If the power station has yet to create or under-created LGCs for the generation period, the nominated person is advised of the LGC creation entitlement. The regulator also reconciles the LGCs created later against the creation entitlement. Where the power station has over-created LGCs for the generation period, the regulator will fail the excess.<sup>18</sup>

2.23 As at 30 July 2018, the regulator had thus far validated almost 45.5 million LGCs for the 2016, 2017 and 2018 generation years.<sup>19</sup> Nearly two-thirds of these LGCs related to wind-source power stations (see Table 2.2 on the next page for LGCs validated by fuel source).

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16 Each LGC created has a unique identifier.

17 The LGC Methodology tailors the generic formula for calculating electricity generated by a power station (as set out in the Renewable Energy (Electricity) Regulations 2001) to the specific components of each accredited power station.

18 In circumstances where power stations have over-created LGCs and the regulator has already validated the LGCs (for example, corrections to past data submissions made by the power station or errors identified through the regulator's compliance activities), the regulator may advise the power station to under-create the same number of LGCs during the next generation period. An enforceable undertaking or court action can be initiated where the over-creation is material and may be the result of serious non-compliance or fraud.

19 Power stations are able to create LGCs for the 2017 generation year until the end of 2018, and for the 2018 generation year until the end of 2019.

**Table 2.2: Large-scale generation certificates validated for 2016–2018 generation years as at July 2018**

| Fuel Source                                       | No. of Power Stations | No. of LGCs <sup>a</sup> |
|---------------------------------------------------|-----------------------|--------------------------|
| Agricultural waste                                | 9                     | 19,164                   |
| Bagasse                                           | 24                    | 2,292,023                |
| Black liquor                                      | 2                     | 765,167                  |
| Food and agricultural wet waste                   | 1                     | 17,863                   |
| Food processing waste                             | 3                     | 15,818                   |
| Hydro                                             | 83                    | 3,944,031                |
| Landfill gas                                      | 52                    | 2,004,619                |
| Biomass based components of municipal solid waste | 4                     | 79,983                   |
| Photovoltaic                                      | 6                     | 322                      |
| Sewage gas                                        | 7                     | 202,679                  |
| Sewage gas and biomass based components of sewage | 11                    | 147,358                  |
| Solar                                             | 327                   | 3,767,688                |
| Waste coal mine gas                               | 6                     | 2,140,255                |
| Wind                                              | 85                    | 30,097,785               |
| <b>Total</b>                                      | <b>620</b>            | <b>45,494,755</b>        |

Note a: The number of large-scale generation certificates registered over the time period was 44,871,172, indicating that nominated persons who created 623,583 certificates have not (yet) paid the fee to finalise the certificates' registration.

Source: Clean Energy Regulator.

2.24 In the sample of LGC creations validated by the regulator since 2016 examined by the ANAO, all were created by the power station's nominated person, assigned a unique identifier, and reconciled against the regulator's entitlement calculations based on the power stations' data. No LGC over-creations occurred and the appropriate delegate approved the LGCs created. Nevertheless, LGC Methodologies are not readily accessible for all power stations and there is no established process to ensure that updated LGC Methodologies are applied. The regulator informed the ANAO that since August 2018 it has been steadily populating a repository that will record, consolidate and track LGC methodologies used in assessing LGC claims.

2.25 In October 2018, the regulator increased automation within the REC Registry that will:

- allow clients to: pre-populate the REC Registry with electricity generation data from the Australian Energy Market Operator<sup>20</sup> or other party; or manually enter generation data into the REC Registry; and

20 The Australian Energy Market Operator is responsible for operating Australia's largest gas and electricity markets and power systems, including the National Electricity Market (the interconnected power system in Australia's eastern and south-eastern seaboard) and Wholesale Electricity Market and power system in Western Australia.

- implement a risk assessment framework where low risk-rated LGCs created by power stations will have a greater probability of being ‘automatically’ validated within the REC Registry (subject to the payment of the LGC creation fee) than higher-rated LGCs.<sup>21</sup>

### *Electricity Generation Returns*

2.26 Under the Act, accredited renewable energy power stations are required to submit an Electricity Generation Return annually by 14 February in the year following a generation year. The returns include the amount of electricity generated during the year (in total, and from eligible energy sources) and the number of LGCs created during the year (for that generation year, and for the previous generation year). Failure to lodge an Electricity Generation Return can result in the power stations’ suspension from the scheme. In 2017, the regulator suspended 49 power stations from the scheme for failing to lodge their 2015 Electricity Generation Return and 30 power stations from the scheme for failing to lodge their 2016 Electricity Generation Return.

2.27 Although the purpose of the returns is not specified in the legislation, the regulator has used the returns’ contents as a check against the electricity generation data the regulator received during the generation year when validating LGCs (see earlier in this chapter). In the sample of 2015 and 2016 Electricity Generation Returns assessments examined by the ANAO, the reconciliations identified only minor differences that could be accounted for as either rounding or timing issues regarding electricity generation data. The delegate approved the assessment results, although on two occasions the regulator retained only the unsigned copy of the brief to the delegate.

2.28 As there is no legislative requirement for the regulator to take any action for submitted returns, the regulator has not considered the assessment of Electricity Generation Returns to be a priority task in the past. The regulator has up to four years to amend the contents of a return being submitted and, for most power stations, the returns’ contents are not used to validate LGCs. During 2018, the regulator streamlined its return assessment procedures and undertook to clear the backlog of 2015 and 2016 Electricity Generation Returns yet to be assessed.

### **Small-scale Renewable Energy Scheme**

2.29 Under the Act, STCs can be created for small generation units and solar water heaters/air source heat pumps within 12 months of installation where they meet the eligibility, installation, and information and documentary evidence conditions established in the Act and its regulations.

2.30 In regard to solar water heaters/air source heat pumps, eligibility requires the device to be listed on the regulator’s Register of Solar Water Heaters and the provision of statutory declarations to the regulator for larger solar water heaters (greater than 700 litre capacity). In regard to small generation units, eligibility requires installers to be appropriately accredited, electrical work to be undertaken by licensed electricians, state/territory conditions regarding the unit’s siting and grid connection (where applicable) to be met, and the provision of written statements that the installed unit met, and was installed to, the appropriate standards.

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21 All High risk-rated LGCs will still be subject to a detailed manual assessment by the regulator. Current risk configurations will see all LGC creations subject to a detailed assessment at least every six months.

### *Small-scale technology certificates validated by the regulator*

2.31 Almost universally, system owners assign their rights to create STCs to another registered person (an agent). Agents were responsible for the creation of 99.9 per cent of STCs in the REC Registry. STCs are created for small generation units and solar water heaters/air source heat pumps in advance of the displacement or generation of electricity (termed the 'deeming period').<sup>22</sup>

2.32 The REC Registry records all details relevant to small-scale system installations and STCs created, and the regulator's validation and registration of the created STCs (discussed below). Over the period 1 January 2016 to 30 June 2018, the regulator validated the creation of over 50 million STCs (all assigned a unique identifier) from over 558,000 small generation units and solar water heaters/air source heat pumps (see Table 2.3).

**Table 2.3: Small-scale technology certificates created over the period 1 January 2016 to 30 June 2018 validated by the regulator**

| Fuel Source                          | No. of Installations | Installed capacity (MW) | Small-scale technology certificates validated <sup>a</sup> |
|--------------------------------------|----------------------|-------------------------|------------------------------------------------------------|
| <b>Small Generation Units (SGUs)</b> |                      |                         |                                                            |
| Solar                                | 401,765              | 2,478.33                | 46,927,156                                                 |
| Hydro                                | 21                   | 0.05                    | 456                                                        |
| <b>Total SGUs</b>                    | <b>401,786</b>       | <b>2,478.38</b>         | <b>46,927,612</b>                                          |
| <b>Solar Water Heaters (SWHs)</b>    |                      |                         |                                                            |
| Solar                                | 112,714              |                         | 3,456,188                                                  |
| Air Source Heat Pump                 | 44,222               |                         | 1,284,052                                                  |
| <b>Total SWHs</b>                    | <b>156,936</b>       |                         | <b>4,740,240</b>                                           |
| <b>Total</b>                         | <b>558,722</b>       |                         | <b>51,667,852</b>                                          |

Note a: The number of small-scale technology certificates registered over the time period was 51,558,275, indicating that persons who created 109,577 certificates have not (yet) paid the fee to finalise the certificates' registration.

Source: Clean Energy Regulator, as at 28 July 2018.

2.33 Based on the information recorded in the REC Registry, the solar-source STCs created from 1 January 2016 to 30 June 2018 and validated by the regulator have been calculated correctly consistent with legislative requirements. The contents of the Register of Solar Water Heaters was appropriately applied to solar water heater installations based on brand and model (determined by testing the population), and zone rating (determined by sampling installation postcodes for the correct assignment of zone ratings).<sup>23</sup> STCs validated for photovoltaic solar panel installations were calculated correctly based on the unit's reported power rated output and deeming period

22 The deeming period for solar water heaters/air source heat pumps is 10 years and up to 15 years for small generation units. STCs for small generation units can be created annually, every five years or fully upfront until 2030. The maximum deeming period for small generation units is currently 13 years.

23 The process for reviewing and updating the contents of the regulator's Register of Solar Water Heaters was not examined in the audit.

(determined by testing the population), and zone rating (determined by sampling installation postcodes for the correct assignment of zone ratings).<sup>24</sup>

### *Validation process for small-scale technology certificates*

2.34 The regulator's process for validating STCs created by agents is managed, undertaken and documented within the REC Registry.<sup>25</sup> When STCs are created in the REC Registry, algorithms and business rules determine which installations are subject to particular validation tasks. Validation tasks include:

- Intervention tasks comprising:
  - targeted and random sampling of installations to verify their bona-fides by: requesting and reviewing compliance paperwork associated with the installations<sup>26</sup>; making phone calls to system owners; and/or reviewing photographic maps to examine the site pre- and post-installation;
  - custom tasks based on customised risk profiles established within the REC registry to address known risk areas, usually based on intelligence and compliance activities; and
  - special tasks that allow assessors to perform additional validation tasks; and
- System checks that use internal business rules to detect:
  - similarities to past installations (including similar or duplicate addresses, and duplicate product and serial numbers);
  - installer logistics (relating to the number of same-day installations and distance between installations); and
  - installations that are near or past the 12-month deadline to create STCs.

2.35 Over the two-and-a-half-year period from January 2016 to June 2018, renewable energy certificates were created for 589,408 small-scale system installations. Of these installations, 387,470 (65.7 per cent) had no assigned validation task, while the remaining 201,938 installations were assigned 300,917 validation tasks (or an average of 1.5 tasks for each installation).

2.36 Over the two-and-a-half years, the ratio of validation tasks to installations has reduced significantly — from four tasks for every five installations in January 2016 to 1.1 tasks for every three installations in June 2018. Most of the reduction is due to fewer assigned 'intervention tasks' (that is, compliance paperwork, phone call, mapping, custom and special tasks) — from one task for every two installations in January 2016 to less than one task for every five installations in June 2018. Figure 2.1 illustrates the number of intervention tasks and system checks assigned relative to installations over time.

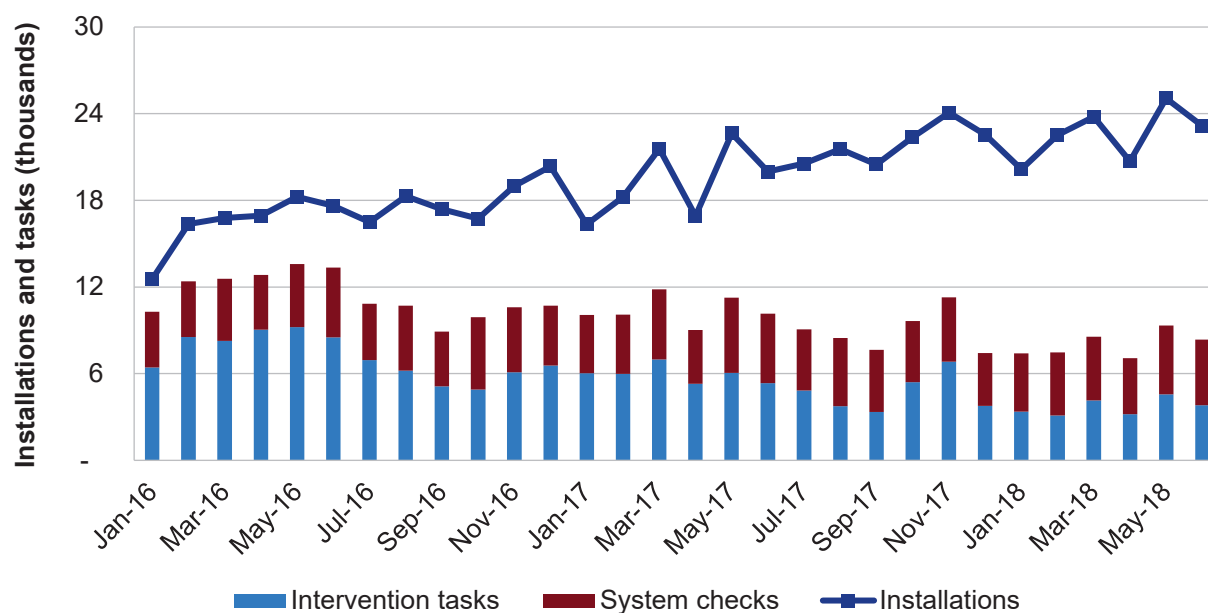
24 Zone ratings, assigned to each postcode, represent climatic conditions that influence the quantity of electricity displaced or generated by the units.

25 The exception is the regulator's storage of paperwork associated with small unit installations that the regulator seeks and obtains selectively.

26 Compliance paperwork can include electrical safety certificates or plumbing certificates and evidence that the systems installed are approved components that meet the required quality standards.



**Figure 2.1: Number of validation tasks assigned relative to installations**



Source: REC Registry data from the Clean Energy Regulator.

2.37 The regulator informed the ANAO that the quantum of validation tasks are assigned and finalised in the context of other controls and activities associated with scheme entry, intelligence gathering and analysis, compliance monitoring, and enforcement. Over time, new tools have been introduced external to, and within, the SRES task validation process that the regulator considers has improved the rigour of its validation of STCs overall. SRES Smart (discussed earlier) is an example of an external tool. The Australian Energy Market Operator data matching project<sup>27</sup> and Solar Panel Validation Pilot project<sup>28</sup> are examples of tools that assist with the targeting of validation tasks.

2.38 Nevertheless, the regulator has not developed an explicit strategy or plan outlining the types, quantum and targeting of validation tasks it considers should be undertaken to maintain SRES integrity, in light of other external controls and activities. Currently, the types, quantum and targeting of validation tasks are determined by user-adjustable variables in the REC Registry. The settings for variables can and have been changed by the regulator either globally (to calibrate the number and variety of tasks assigned) or for individual agents (in response to compliance intelligence or incidents). However, the reasons for, the expected outcomes of, and who approved, most of the changes were not documented or retained.

27 The Australian Energy Market Operator data matching project determines changes in electricity generation data recorded by household meters in the National Electricity Market to validate the installation of new solar photovoltaic systems.

28 The Solar Panel Validation Pilot is establishing a mechanism for the solar panel supply chain to validate the authenticity of installed solar panels. As well as providing greater assurance that STCs are not being claimed for non-compliant solar panels, it should reduce the likelihood of claims arising for non-installations and data entry errors requiring subsequent correction. The Solar Panel Validation project is scheduled to roll-out fully in late-2018.



2.39 The rigour of the STC validation process would be better demonstrated were the regulator to develop a strategy or plan for assigning validation tasks, and develop and enforce procedures for authorising and documenting reasons for changes to REC Registry user-adjustable variables.

#### *Finalisation of assigned validation tasks*

2.40 Validation tasks associated with particular installations are assigned to assessors and can be finalised in one of four ways after supervisory review:

- assessors can undertake the assigned validation tasks resulting in the task being 'passed' or 'failed';
- where assessors attempt a task but it could not be completed the tasks can be marked as 'can not assess'; or
- tasks (usually those of lower risk) can be 'skipped' by assessors to refine the balancing of the assessors' workloads.

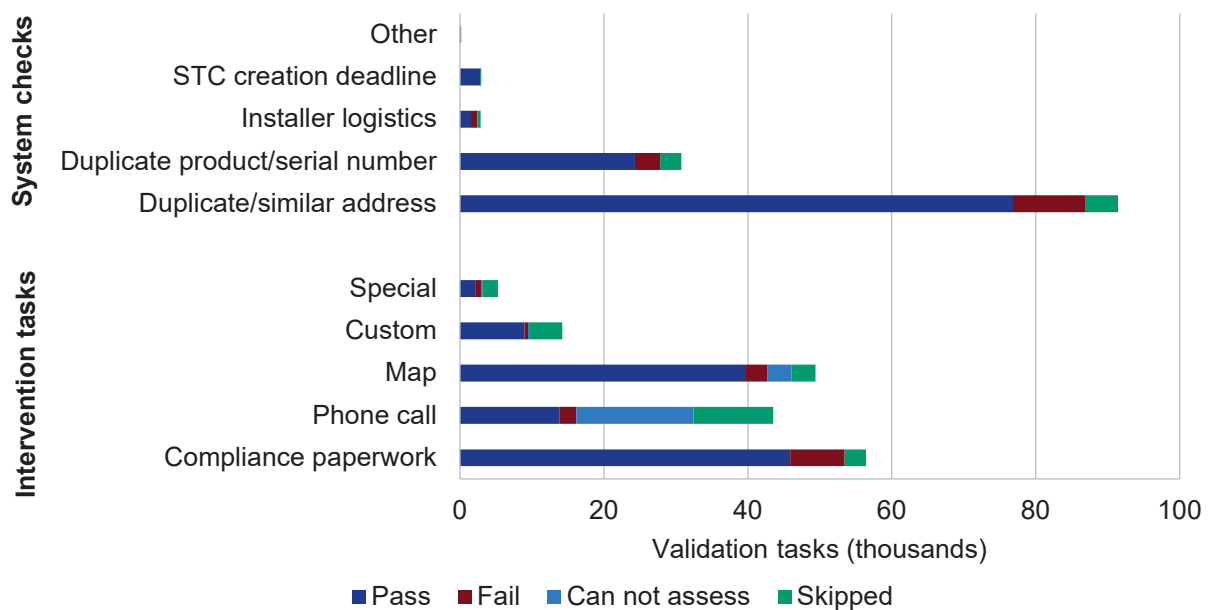
2.41 STCs are validated by the regulator unless validation tasks have been 'failed' or the where the agent contacts the regulator requesting the failure (in cases where agents identify an error with the STCs they created). When STCs have been failed by the regulator, the relevant registered person is notified by email of the failure reason(s) and whether the installation and its STCs are eligible for re-registration/re-creation. Most STC creations that fail validation are eligible to be re-created. Over the two-and-a-half-year period from January 2016 to June 2018, the regulator validated over 91 per cent of installations on the first attempt, and has only prohibited the re-creation of STCs on the first or subsequent attempt, for 1.6 per cent of installations.

2.42 Of the 296,989 finalised validation tasks<sup>29</sup>, 168,841 (56.9 per cent) were intervention tasks — 88.4 per cent of which were compliance paperwork (56,416), map (49,394) and phone call (43,528) tasks — and the remaining 128,148 (43.1 per cent) were system checks — 95.3 per cent of which were duplicate/similar address (91,422) and duplicate product/serial number (30,748) tasks. The distribution of validation tasks by type and finalisation method is illustrated in Figure 2.2 on the following page.

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29 Excludes 1155 assigned validation tasks still pending assessment and a further 2773 tasks assigned to installations after their validation.

**Figure 2.2: Validation task by finalisation method<sup>a</sup>**



Note a: A further 5655 installations were failed by the regulator for reasons unrelated to the validation tasks undertaken (if any) as explained in paragraph 2.41.

Source: REC Registry data from the Clean Energy Regulator.

### Validation tasks undertaken

2.43 In the samples of intervention tasks undertaken by the regulator in the two-and-a-half years between January 2016 and June 2018 examined by the ANAO:

- *Compliance paperwork tasks* — in all instances the regulator’s decision to pass the task or fail the STCs<sup>30</sup> was based on appropriate matching of REC Registry information to the installation’s paperwork;
- *Mapping tasks* — the regulator’s review of photographic images of the installation address pre- and post-installation lead to the appropriate decision to validate or fail the STCs, with only one error noted.<sup>31</sup> While standard operating procedures require reasons to be included in the REC registry when mapping tasks have been finalised as ‘can not assess’ (where mapping applications were unable to pinpoint the installation address), nearly a third did not include such reasons;
- *Phone tasks* — where system owners are able to confirm the installation or otherwise, the tasks are passed or failed accordingly. While standard operating procedures require reasons to be included in the REC registry when phone call tasks have been finalised as ‘can not assess’ (where owners chooses not to participate in the calls or cannot be contacted), 14.6 per cent did not include such reasons.<sup>32</sup>

30 None of the compliance paperwork tasks undertaken by the regulator has been finalised as ‘can not assess’.

31 This error was within the tolerable limits for the ANAO to have sufficient confidence in the regulator’s assessment of mapping tasks.

32 When STCs were failed, the reasons were documented and communicated to the STCs’ creators in all cases.

2.44 Assessors undertake enquiries to determine the accuracy of the system check validation tasks that are automatically assigned within the REC Registry. At times, this has involved requesting and examining the installations' compliance paperwork and reviewing maps, which may or may not be recorded as special tasks generated by the assessors. Other actions taken by assessors include contacting agents/installers, reviewing installation frequency exemptions from the Clean Energy Council, getting photographs of system serial numbers, and requesting site audits. The appropriateness of the design of system checks, as a group, is supported by:

- the significant proportion of failed installation validations (averaging 12.1 per cent over two-and-a-half years); and
- only 0.1 per cent of system check tasks undertaken resulting in a 'can not assess' finalisation.

2.45 Improved enforcement of standard operating procedures regarding the documentation of reasons for finalising map and phone call tasks as 'can not assess' would make the validation process more robust.

### Skipped tasks

2.46 Although a significant proportion of validation tasks assigned have been finalised by being 'skipped' (31,944 tasks — 10.8 per cent), reasons for their finalisation in this way was not often documented. As noted earlier, standard operating procedures indicate that lower risk tasks can typically be skipped to balance staff workloads, but what constitutes 'lower-risk tasks' has not been defined.

2.47 The five most common categories of validation tasks assigned (see Figure 2.2 above) — that collectively account for over 90 per cent of all validation tasks — have been 'skipped' an average of 9.1 per cent of occasions (ranging from a low of 5.0 per cent for duplicate/similar address tasks to a high of 25.4 per cent for phone call tasks). In addition:

- custom and special tasks established specifically to address particular risk areas or concerns have often been recorded as skipped — on 31.6 and 40.7 per cent of occasions, respectively — although the regulator contends that for many this occurs only after being considered and satisfactorily resolved;
- 13,275 installations (6.6 per cent of installations with assigned validation tasks) had their only assigned validation tasks skipped by the assessment team; and
- over 98 per cent of 'skipped' tasks did not have reasons documented for their finalisation in this way.

2.48 The robustness of the validation process would improve were the regulator to:

- clarify in standard operating procedures which lower-risk tasks can be skipped;
- delineate between tasks that have been considered/resolved and those skipped; and
- document reasons in the REC Registry for skipping higher-risk tasks.

### 3. Surrender of certificates by liable entities

#### Areas examined

This chapter examined whether the regulator accurately determined liable entities' certificate surrender liabilities, monitored whether these liabilities were met, and took appropriate action when the liabilities were not met.

#### Conclusion

The regulator is effectively monitoring the surrender of renewable energy certificates by liable entities. The regulator correctly calculated and imposed shortfall charges on those liable entities that did not meet their surrender liabilities.

#### Did the regulator determine accurately the liable entities' renewable energy certificate surrender liabilities?

The regulator accurately determined the renewable energy certificate surrender liabilities of liable entities. Processes to identify new liable entities, and assess exemption certificates are effective. Assessments of 'relevant acquisitions' of electricity would be more robust were they to better address standard operating procedures.

3.1 Entities that are 'liable entities' under the *Renewable Energy (Electricity) Act 2000* (the Act) are liable to surrender large scale generation certificates (LGCs) and small-scale technology certificates (STCs) in proportion to their annual 'relevant acquisition' of electricity (reduced by any exemptions), and submit accompanying documentation to the regulator. Subject to certain exceptions, 'relevant acquisitions' are generally acquisitions of electricity on a grid with a capacity of 100 megawatts or more from the Australian Energy Market Operator, Independent Market Operator, or an electricity generator (sections 31 and 32 of the Act).

3.2 Liable entities' certificate surrender liabilities are determined primarily from information contained in Energy Acquisition Statements that liable entities are required to submit annually (discussed below).

#### Identifying new liable entities

3.3 Although persons are required to inform the regulator when their grid capacity first exceeds 100 megawatts, the regulator keeps a watching brief to identify (and then contact) new entities that may meet the threshold for becoming a liable entity. The regulator:

- conducts a quarterly check for new liable entities using information sources such as the Australian Energy Market Operator and Australian Energy Market Operators WA website reporting of newly registered customers and the Australian Energy Regulator, and Utilities Commission NT websites for newly licenced electricity retailers;
- undertakes communication and engagement activities, including presentations at industry forums, aimed at promoting awareness of liable entity responsibilities; and

- analyses Energy Acquisition Statements for liable entities not participating in the scheme (for example, where a liable entity reports acquiring electricity from an entity that should be, but is currently not, a liable entity).

3.4 An internal audit into Renewable Energy Target liabilities in November 2017 identified a risk that some small retailers acquiring electricity through remote networks may have not been identified as liable entities. In addition, the internal audit identified additional sources of information (including the National Greenhouse and Energy Reporting Scheme managed by the regulator, and data held by state/territory regulators) that the regulator could use to verify that all liable entities have been captured in the scheme. The regulator agreed to a recommendation to address these findings in advance of the 2017 Energy Acquisition Statement assessment year (discussed below).

3.5 The regulator's determination of liable entities and their 'relevant acquisitions' have also been challenged by new electricity generation and consumption models, not envisaged at the time of the implementation of the renewable energy legislation in 2000. For example, the use of battery storage systems (that at different times consume and generate electricity) and 'behind the meter' generation, such as 'solar leasing' (where energy companies install solar panels that they own on rooves owned by homeowners/small-scale commercial operators, who may be bound to purchase the electricity generated by the panels). In such circumstances, the regulator:

- analyses the new models and considers treatment options;
- develops policy positions to apply the existing legislation to the new situations that balances legislative intent with resource implications (for the industry and the regulator); and
- works with the Department of the Environment and Energy to facilitate regulatory amendments to clarify the application to the Act and regulations to the new models.

## Energy Acquisition Statements

3.6 Liable entities are required to prepare and submit online their Energy Acquisition Statements through the Renewable Energy Certificate (REC) Registry by 14 February following the assessment year. The information these statements contain includes the relevant acquisition of electricity for the assessment year, any exemption certificates claimed (discussed below), any claimed amendments to previous years' energy acquisition statements, and the quantity of LGCs and quarter-four STCs<sup>33</sup> submitted to acquit their certificate liability for the assessment year.<sup>34</sup> The failure to lodge Energy Acquisition Statements by the due date (or without getting an extension from the regulator) can result in the regulator making its own assessment of the liable entities 'relevant acquisitions' (known as a default assessment).

3.7 The regulator assesses all Energy Acquisition Statements submitted by liable entities. Standard operating procedures require assessments to:

- review the data entries in the REC Registry for errors;

33 Liable entities surrender STCs on a quarterly basis during an assessment year, with the first three quarters' surrender calculations documented in separate surrender instruments (discussed later in this chapter).

34 Liable entities that surrender an insufficient number of certificates to acquit their liability are also required to submit a Renewable Energy Shortfall Statement (discussed later in this chapter).

- compare the reported relevant acquisitions to third-party data (such as settlement data from the National Electricity Market and South West Interconnected System (WA)) where possible;
- undertake additional testing (such as open source reviews or request data from liable entities to substantiate reported amounts<sup>35</sup>) for high- and medium-rated liable entities<sup>36</sup>; and
- complete a file note documenting the assessment.

3.8 Assessments are to be reviewed by a separate officer before being submitted to the delegate for approval.

3.9 In 2016 and 2017, 117 of the 119 liable entities submitted their Energy Acquisition Statements by the due date, with the regulator making default assessments for the remaining two liable entities each year (that resulted in the levying of shortfall charges of about \$1.9 million in 2016 and \$434,200 in 2017). Overall, the submitted statements have been assessed consistent with standard operating procedures<sup>37</sup>, with the exception of the retention of documentary evidence that the:

- regulator undertook additional testing for six of the eight statements from high- and medium-risk rated liable entities examined by the ANAO (indicating a shortcoming in the regulator's implementation of the internal audit recommendation from November 2017 to identify the specific information sources used during the assessment process); and
- assessments were reviewed by a separate officer before being submitted to the delegate for approval for 19 of 76 assessments examined by the ANAO.

3.10 The regulator would get greater assurance around the robustness of the Energy Acquisition Statements were decision delegates to ensure that standard operating procedures for their assessment were being followed. There is also potential to expand the risk criteria used to determine high- and medium-rated liable entities to factor in past inaccurate reporting of relevant acquisitions to the regulator (which occurred in three of 11 assessments examined by the ANAO).

### **Exemption certificates for emissions-intensive trade-exposed activities**

3.11 Under the renewable energy legislation, entities that conduct one or more of the 53 specified emissions-intensive trade-exposed (EITE) activities<sup>38</sup> may apply for exemption certificates annually, which can be traded to liable entities to reduce their 'relevant acquisitions' of electricity and, thus, their liability to surrender LGCs and STCs. For the 2017 assessment year, 162 applications were submitted (all approved by the regulator) covering 43 EITE activities at 145 sites for exemptions totalling about 40,200 gigawatt hours.

35 For example, electricity meter readings recorded in spreadsheets retained by the liable entities.

36 The criteria for determining the risk-rating of liable entities include: non-lodgement of, or revisions to, previous years' statements; the size of the liability; the levying of shortfall charges; delays to payment of shortfall charges; and unsatisfactory audit outcomes (where undertaken).

37 The ANAO also undertook separate testing that verified that the LGCs and STCs surrendered were unique and could be traced to the LGCs and STCs that had been earlier created by registered persons and validated by the regulator.

38 Emissions-intensive trade-exposed activities includes (among others) aluminium and zinc smelting, petroleum refining and newsprint manufacturing.

3.12 The regulator assessed 2016 and 2017 EITE exemption applications using standard operating procedures that addressed regulatory requirements. Applications were supported by appropriate documentation (including an independent audit report, where required), information sourced from the applicant and a signed statutory declaration from the applicant. Application assessments were documented in the assessment template, and quality checked by a separate officer before being approved by the delegate. After their approval, details of the exemption certificates were published in the REC Registry.

3.13 Although 2016 and 2017 applications for EITE exemption certificates were handled appropriately, the regulator discovered and corrected in 2017 a long-standing issue affecting liable entities holding exemption certificates greater than their relevant acquisitions for a particular assessment year. Legal advice obtained confirmed that the regulator should have allowed the affected liable entities to carry-forward the surplus exemptions for possible use in future years, rather than extinguished any surplus exemptions. The regulator advised the 15 liable entities affected and reduced their current year's surrender liabilities by 42,046 LGCs and 97,178 STCs collectively — notionally valued at \$6.4 million.

### **Did the regulator effectively monitor whether liable entities met their renewable energy certificate surrender liabilities?**

The regulator has effective mechanisms in place to monitor over time the position of liable entities to meet their certificate surrender liabilities when they fall due.

3.14 The regulator employs separate processes for monitoring whether liable entities are meeting their surrender liabilities for STCs and LGCs, which are outlined below.

#### **Quarterly surrender of small-scale technology certificates**

3.15 Liable entities surrender STCs on a quarterly basis during an assessment year. The calculation of the quarterly surrender amounts is usually based on the entities' previous year's reduced acquisitions (that is, relevant acquisitions less any exemption certificates) and the current year's small-scale technology percentage applicable to all liable entities, with the result distributed by quarter (35 per cent in quarter one, 25 per cent in quarter two and 25 per cent in quarter three). Quarter four's surrender amounts are determined by reference to the liable entities' reduced acquisitions reported in their annual Energy Acquisition Statements for the assessment year less STC surrenders from quarters one to three.

3.16 Until late 2017, the REC Registry allowed the regulator to approve or reject STCs offered for surrender — a process that allowed any over-surrendered certificates to be returned to liable entities each quarter. However, a review of the scheme's implementation against regulatory requirements conducted by the regulator in late 2017 identified that the renewable energy target legislation did not support such a process. Under the legislation, certificates are taken to be surrendered when the surrender instrument is lodged (with the exception of invalid certificates). The regulator immediately suspended its certificate surrender approval/rejection process.

3.17 Unlike LGC surrenders, there is no ability for liable entities to carry forward STC shortfalls or for shortfall charges to be refunded. Liable entities that do not surrender enough STCs by the due



dates incur a non-refundable charge of \$65 for each certificate in shortfall. The regulator monitors liable entities' surrendering of STCs on a daily basis to determine: the extent to which they are meeting surrender liabilities; and which liable entities may need to be contacted to encourage certificate surrendering. At the end of each quarterly surrender period, the regulator determines from the information in the REC Registry which entities have and have not met their STC surrender liabilities — with high adherence reported for the 2017 assessment year (100 per cent in quarters one and two, and 99.98 per cent in quarter three). The ANAO verified that the quarterly surrender process operated as intended.

### **Renewable Energy Target compliance and communications strategy**

3.18 Since 2015, market concerns of a shortage of large-scale generation certificates (LGCs) forced the LGC spot rate above the LGC shortfall charge of \$65 for each certificate. The increasing price provided a financial incentive for some liable entities (particularly those not impacted by income tax considerations) to consider paying the shortfall charge, and perhaps use the refund provisions in future years when the price of LGCs may be lower.<sup>39</sup> LGC surrender adherence for the 2016 assessment year was less than 90 per cent, significantly lower than earlier years, due primarily to shortfalls attributable to two large liable entities — even though regulator analysis determined an adequate volume of certificates was available to cover all surrender liabilities of liable entities.

3.19 In preparation for the 2017 assessment year, the regulator developed a compliance and communications strategy containing messaging and communication activities directed towards renewable energy target stakeholders to encourage liable entities to fully meet their liabilities via LGC surrender. The strategy included criteria for determining on a risk basis those liable entities that were more likely not to meet their full surrender liabilities via certificate surrender and proposed targeted communication activities (primarily emails and phone calls) accordingly.

### **Did the regulator take appropriate action where liable entities did not meet their renewable energy certificate surrender liabilities?**

Where liable entities do not meet their certificate surrender liabilities, the regulator accurately calculates and imposes a shortfall charge, and publishes their names on the regulator's website. The regulator is actively managing the recovery of overdue shortfall charge debts.

### **Imposition of shortfall charges**

3.20 At the time that Energy Acquisition Statements fall due (which is 14 February following the assessment year, unless granted an extension by the regulator), those liable entities that have not surrendered enough LGCs and/or STCs to acquit their certificate surrender liabilities are also required to submit Renewable Energy Shortfall Statements to the regulator. The shortfall statements set out the liable entities' LGC and/or STC shortfall for the assessment year, any shortfall or surplus certificates carried-over from the previous year (applicable to LGCs only) and the resulting shortfall charge (calculated at \$65 for each certificate in shortfall).

39 Since 2015, LGC spot rates have been greater than the nominal shortfall charge of \$65 per certificate, but less than the tax-effective shortfall charge of \$93 per certificate.



3.21 Payment of any shortfall charge is due when the Energy Acquisition Statements are lodged, with late payments accruing interest charges on a daily basis. The failure to lodge shortfall statements by the due date (or without getting an extension from the regulator) can result in the regulator making its own assessment of certificate shortfall charges (known as a default assessment), with interest accruing from 14 February.

3.22 The number of liable entities that have incurred certificate shortfalls and shortfall charges are summarised in Table 1.1 in Chapter 1. Consistent with section 134 of the Act, the regulator publishes on its website a list of liable entities that have large-scale or small-scale certificate shortfalls.

3.23 As part of its auditing of the regulator's 2016–17 financial statements, the ANAO found that the regulator's assessment of 2015 and 2016 Energy Acquisition Statements was not undertaken in a timely manner to gain sufficient assurance that LGC shortfall revenue was materially correct. This finding was categorised as a low business or financial management risk to the regulator. In its audit of the regulator's 2017–18 financial statements, the ANAO observed significant improvements in the timeliness of the regulator's assessment of the 2017 Energy Acquisition Statements.

3.24 Notwithstanding this assessment timeliness finding, shortfall charges for the 2016 and 2017 assessment years have been accurately calculated by reference to information contained in the affected liable entities' Energy Acquisition Statements and data from electricity market operators (with no material differences identified). Invoices for the shortfall charges were appropriately generated in the regulator's financial information system.

### **Management of shortfall debts**

3.25 As a general principle, amounts owing to the Commonwealth should immediately be paid in full when they become due for payment. However, as outlined in the regulator's Debt Management Policy, in certain circumstances it may be appropriate to defer the time for payment, allow payment by instalments or waive the amount owing to the Commonwealth. The regulator's Chair and other delegated senior officers have the power to make such decisions under the *Public Governance, Performance and Accountability Act 2013* delegations for the Renewable Energy Target scheme.

3.26 Up to 2016–17, debt management was the responsibility of the business area which raised the debt. From 2017–18 the regulator's Finance area became responsible for managing all 'high risk/high value' debt, which includes shortfall charge debts. Once the business area identifies payments as overdue, the debt is handed over to the Finance area to seek repayment, usually through a deferral or instalment arrangement (where appropriate). Failure to establish an acceptable payment arrangement can result in the regulator commencing legal proceedings.

3.27 As at 30 June 2018, 12 liable entities had total outstanding Renewable Energy Target liability debts of \$7.1 million — \$6.9 million of which was more than 90 days overdue. The regulator is actively managing debt recovery with actions that include:

- managing payment plans;
- issuing invoices and chasing up debts following reassessments of shortfall charges (including interest) in June 2018;

- issuing statutory demands under section 459E of the *Corporations Act 2011*;
- issuing winding-up orders; and
- undertaking the required processes as an unsecured creditor for entities that are currently in administration.

## 4. Compliance monitoring and enforcement

### Areas examined

This chapter examined whether the regulator had sound arrangements to gather and manage compliance intelligence and assess compliance risks, undertook compliance activities that are addressing compliance risks, and took appropriate action to address alleged non-compliance.

### Conclusion

The regulator has mostly effective compliance monitoring and enforcement arrangements for the scheme. Scheme intelligence and data analysis has helped in the targeting of compliance monitoring and enforcement activities. Scheme compliance risks are being addressed through compliance monitoring activities. While administrative actions have been appropriately handled by the SRES compliance team, governance of the regulator's investigations unit has been insufficient to ensure that its investigation procedures and processes are satisfactory, consistently applied and result in timely investigations.

### Areas for improvement

The ANAO made two recommendations aimed at improving the: management of electrical safety risks; and the conduct and timeliness of serious non-compliance investigations.

The ANAO has also suggested improvements to:

- scheme entry controls and processes for entities under investigation; and
- the inspection program's quality assurance reviews and use of results to inform installer suspensions from the scheme.

### Did the regulator have sound arrangements to gather and manage compliance intelligence, assess compliance risks and plan accordingly?

The regulator has sound arrangements to collect and disseminate externally sourced intelligence relevant to scheme participants to those responsible for scheme entry, operations and compliance and enforcement activities. The regulator undertakes analysis of intelligence data that has helped in the targeting of its compliance monitoring and enforcement activities. Improvements to compliance risk assessments and plans would better position the regulator to demonstrate that scheme risks are being appropriately managed.

4.1 Compliance intelligence and sound risk assessment processes underpin an effective regulatory regime. Compliance intelligence received and analysed on a timely basis by the regulator can inform the periodic assessment of the risks to the effective operation of the Renewable Energy Target scheme. These risk assessments can then be used to develop compliance strategies and plans that target the greatest compliance risks.

## Collection and analysis of compliance intelligence

4.2 In addition to the data hosted in-house, the regulator has access to multiple external data sources to help with gathering intelligence regarding the regulation of its schemes and compliance monitoring of the schemes' participants. The regulator's intelligence and analytics team proactively monitors open data sources (including alert emails from other Australian Government regulators, such as the Australian Securities and Investment Commission (ASIC)) for relevant mentions of entities of interest, facilities and projects, as described below. The intelligence and analytics team can access open and restricted sources on request (usually for entities/persons of interest) and also has access to (but is not responsible for managing) emails sent to the regulator's fraud inbox that scheme participants and the public can use to report any potential fraudulent or non-compliant behaviour observed.

4.3 The open source searches and ASIC alert emails are based on search-strings of key words/phrases and pre-populated profiles (based on entity names/Australian Business Numbers), respectively, developed by the regulator.<sup>40</sup> The intelligence and analytics team assigns an intelligence risk rating (Low, Medium, High or Very High) to each article and emails based on its content, with action taken dependent on the rating. All articles and alert emails, regardless of rating, are retained in a repository spreadsheet and dedicated email box, respectively.

4.4 The ANAO examined all 28 articles identified by the open source searches and a sample of ASIC alert emails over the period January 2016 to March 2018 relevant to the Renewable Energy Target scheme and found that:

- four articles had incorrectly received an intelligence risk rating of Medium instead of High but had nonetheless been entered into the Customer Relationship Manager (CRM) system<sup>41</sup> as required;
- one High-rated article had not been entered into the CRM system when required; and
- the ASIC alert emails had received the correct intelligence risk rating, but the details from five High-rated alert emails (relating to 16 separate entities) could not be traced to the CRM system and had not been assigned case numbers (contrary to standard operating procedures).<sup>42</sup>

4.5 While the regulator has effective processes for gathering and disseminating intelligence, it would be beneficial to establish a quality assurance process for rating and handling open source search articles and ASIC alert emails.

### *Scheme compliance and enforcement activities as a source of intelligence*

4.6 In addition to its externally sourced intelligence, the regulator gathers intelligence on scheme participants internally at scheme entry, while they participate in the scheme, and through other compliance monitoring and enforcement activities. Some of this intelligence can indicate that particular scheme participants pose an elevated risk to scheme compliance and integrity. In

40 The regulator informed the ANAO that the search-strings and profiles are regularly updated.

41 The CRM system records the regulator's external interactions with stakeholders and clients and also documents aspects of the regulator's observations, analysis and other intelligence associated with higher-risk entities that interact with its schemes.

42 These omissions occurred during a short time period under the watch of a staff member not normally involved in handling ASIC alert emails.

such circumstances, it is in the interests of the regulator to apply mechanisms to limit or more closely scrutinise the more risky scheme participants' involvement in the scheme.

4.7 Where the ANAO examined the regulator's response to alleged scheme non-compliance (discussed later in this chapter), the ANAO also considered whether available mechanisms — including CRM system alerts, account suspensions and/or SRES custom risk profiles<sup>43</sup> — were put in place to address any elevated risks the entities of interest posed to the scheme. In the cases examined by the ANAO:

- the CRM system included the more important, direct entities of interest (but at times excluded indirect entities of interest, such as panel importers);
- agents of interest had been suspended in about half of relevant cases<sup>44</sup>, but the suspensions were imposed more than a year after the investigation commenced for all but one agent; and
- custom risk profiles for the parties of interest were infrequently established.

4.8 The suspensions and custom risk profiles that had been imposed/established were not at the behest of those responsible for investigating the non-compliance matters (but were put in place by other regulator staff). The regulator does not have procedures describing the circumstances when intelligence collected from its compliance and enforcement activities should result in account suspension or the creation of custom risk profiles. Additional scheme entry controls and processes for those entities under investigation would provide greater assurance to the regulator that the risks to the scheme posed by these entities are being effectively managed.

## Data analytics to inform compliance monitoring activities

4.9 In addition to recording and distributing throughout the regulator the 'raw' intelligence obtained from open source searches and alert emails, the intelligence and analytics team has produced tailored data analysis on the Renewable Energy Target scheme on request. Analysis related to the scheme produced by the intelligence and analytics team since 2016 includes:

- *Liable entities* — comparing information obtained from the Australian Energy Regulator's public register of retail exemptions to information in the REC Registry and from the Australian Energy Market Operator (on multiple occasions using different metrics);
- *Large-scale Renewable Energy Target (LRET)* — comparing power station generation data to metered data compiled by the Australian Energy Market Operator; and preparing client profiles of nominated persons to provide background material in advance for site visits; and
- *SRES* — identifying non-installations; identifying non-conforming panel serial numbers by comparing them with accepted panel serial number syntax for several panel manufacturers; and preparing profiles of installers targeted under Project Sentinel (discussed below).

43 A custom validation task is created when a new small generation unit installation that meets the parameters of a custom risk profile is lodged for registration. The unit's registration cannot be completed until the custom validation task is finalised (see Chapter 2).

44 Relevant cases include all cases handled by the Investigations area, and cases handled by the SRES compliance team involving the reckless or deliberate improper creation of small-scale technology certificates (STCs).

4.10 All recipients of the tailored data analysis informed the ANAO that the analyses were of a high standard and provided value. The area responsible for LRET indicated that the generation/metered data comparison provided valuable assurance over LRET's integrity and the large-scale generation certificates (LGCs) created and validated.

4.11 Since June 2018, the intelligence and analytics team has produced a monthly report for the regulator's Business Leadership Team committee that summarises intelligence received by category, identifies notable intelligence trends, highlights key intelligence received for higher-risk entities and identifies priorities for future intelligence activities.

#### *SRES compliance intelligence projects*

4.12 Within the regulator, areas other than the Intelligence and Analytics team are also involved in intelligence-gathering projects. In early 2018, the SRES compliance team established Project Sentinel to get compliance intelligence regarding agents' preparedness for, and attitude towards, becoming the focus of regulatory compliance under the scheme. Historically, agents under SRES have relied on the regulator's controls (mostly at scheme entry) to detect small-scale technology certificates (STCs) that have been improperly created and then claimed a 'mistake of fact' defence. The regulator has recently shifted its regulatory posture to put the onus on agents becoming the scheme 'sentinel' — responsible for, and in having an obligation to apply, reasonable due diligence and compliance procedures to ensure that correct information is supplied to the regulator.

4.13 Under this project, the regulator attended the business premises of 80 of the top 100 SRES agents and found that the majority understood the need to have robust due diligence and compliance processes. Nevertheless, some were assessed as high risk as they generally did not have effective due diligence and compliance processes, and did not grasp the importance of and/or show enthusiasm or support for, such processes. These higher risk agents are likely to be the focus of future compliance monitoring activity.

4.14 The regulator's analysis of intelligence data has helped in the targeting of its compliance monitoring and enforcement activities.

#### **Assessing compliance risks**

4.15 In March 2017, the regulator refreshed its whole-of-agency and cross-scheme approach to compliance, in conjunction with a redevelopment of the entity's risk register. The regulator has identified and assessed compliance risks at the sub-scheme level which, for the Renewable Energy Target scheme, relate to:

- the creation of ineligible LGCs under LRET;
- the creation of ineligible STCs under SRES; and
- liable entities not surrendering sufficient certificates.

4.16 For each sub-scheme compliance risk, the regulator has identified multiple causes and consequences, mapped current controls (preventative, detection and responsive) to the causes and consequences, and identified additional treatments (where necessary) to lower the risk's current rating to the target rating. Each sub-scheme compliance risk has between seven and nine causes/consequences and between 14 and 17 current controls. The controls listed are a mixture of

databases, capabilities, and compliance processes and documents (including plans and operating procedures).

4.17 The regulator's compliance risk focus at the sub-scheme level rather than at the operational level is too high and the current suite of listed controls too disparate to provide clarity over the extent to which scheme risks are being addressed. An internal audit into SRES dated May 2018 made a similar observation and separately listed some of the SRES operational risks and current compliance activities (although it did not attempt to integrate the two lists). A compliance focus at an operational risk level would more readily identify the effectiveness of current compliance activities to address these risks and the treatments necessary to lower current risk ratings, as necessary.

### **Compliance planning and priorities**

4.18 Separate compliance plans at the sub-scheme level were first developed during 2017, covering 2017–18, with contents that vary greatly. The LRET compliance and enforcement plan closely aligns with the contents of sub-scheme compliance risk assessment and has a controls focus. The SRES compliance plan does not mention the sub-scheme compliance risk assessment. The SRES plan is designed primarily to position and focus the intended activities of the SRES compliance team, which is a sub-set of all SRES compliance monitoring and enforcement activities. The compliance plan for liable entities (which also encompasses aspects of the regulator's other schemes) lists activities undertaken within one branch of the regulator and does not mention the sub-scheme compliance risk assessment and the controls or operational risks the activities are expected to address.

4.19 In early 2017, the regulator published for the first time its annual Compliance Priorities (for the 2017 calendar year) across all schemes to provide increased transparency to its clients, and thus encourage greater voluntary compliance and add weight to decisions on appropriate enforcement action. For the Renewable Energy Target scheme, the priority areas identified included:

- SRES — monitoring agents fit and proper person status and removing from the scheme any with unacceptable compliance records; monitoring installation dates during the change of deeming period; and matching data with partner agencies to detect non-compliance and fraud;
- LRET — matching reported generation data to data held by partner agencies; and
- liable entities — monitoring entities' preparedness to surrender LGCs; publishing the names of entities that do not surrender enough LGCs; and pursuing entities' unpaid shortfall charges.

4.20 In September 2018, the regulator reported the summarised outcomes from the focus areas of the Compliance Priorities 2017, and identified its Compliance Priorities for 2018–19. The 2018–19 focus areas for compliance monitoring contain greater specificity than those of 2017, including that the regulator will: apply more rigorous manual checks where the automatic solar panel validation system under SRES is not used; require LRET participants to take greater responsibility for the accuracy of data they provide to the regulator; and cross-match liable entities against the regulator's other schemes and assess claimed self-generation exemptions.



4.21 While compliance priorities are reported annually, a compliance plan that comprehensively addressed all compliance monitoring activities — encompassing scheme entry, scheme operations and other compliance monitoring and enforcement activities — would better position the regulator to demonstrate that scheme risks are being appropriately managed. It would provide an improved line of sight to ‘business as usual’ compliance and enforcement activities and those activities of heightened priority that feature in the published annual compliance priorities.

### Are the regulator’s compliance monitoring activities addressing compliance risks?

Compliance risks with the potential to reduce the integrity of the scheme are being addressed by the regulator’s compliance monitoring activities. The regulator should formally assess the extent of any residual electrical safety risks from small generation unit installations under the scheme and inform those stakeholders in the best position to effect further treatments.

4.22 As noted in Chapter 2, the regulator manages some scheme compliance risks at scheme entry through fit and proper person assessments, power station registration assessments and validation tasks undertaken for large-scale generation certificates (LGCs) and STCs created by nominated persons/agents. After scheme entry, the regulator continues to manage compliance risks through some discrete, but related, compliance activities, which include a small generation unit inspection program, power station and liable entity audit program, and SRES compliance monitoring program.

### Inspections of small generation units

#### *Inspection requirements*

4.23 The regulator is required under the *Renewable Energy (Electricity) Act 2000* (the Act) to arrange inspections of a statistically significant selection of small generation units that are installed each year for conformance with Australian standards and any other relevant requirements. Compliance failures are to be communicated to the state, territory or Commonwealth authorities responsible for enforcement and administration of the standards (section 23AAA). The Act was amended to include this inspection requirement as a quality assurance framework in light of safety and quality concerns arising from the Home Insulation Program and Green Loans Program. The inspections are also a means to get assurance that the agents’ attestations to the regulator regarding installation compliance are robust.

4.24 The inspections are undertaken by inspectors appointed by the regulator. The regulations require inspectors to hold an unrestricted licence for electrical work, have enough expertise, have had sufficient training, and be of good repute. In a sample of applications to become an inspector assessed by the regulator that were examined by the ANAO, the regulator appropriately determined the applications after getting certified copies of applicant’s accreditation with the Clean Energy Council, electrical licence and national police check.

4.25 Inspections have been undertaken between two months to nearly 1.5 years after the regulator has validated the installation’s renewable energy certificates. Inspectors used detailed checklists to verify that small generation units (exclusively solar photovoltaic systems) have



been installed according to Australian standards and the Clean Energy Council's installation and accreditation guidelines.

4.26 The checklists adequately address all relevant standards and guidelines with the exception of off-grid systems (which make up a very small proportion of installations under the scheme and are not inspected), compliance paperwork checks (which are undertaken on a sample basis at scheme entry — see Chapter 2) and battery installations. The regulator informed the ANAO that battery inspections were not undertaken as the inspection program is designed to inspect the solar photovoltaic systems that have been installed and claimed STCs under SRES, and not other electrical components.<sup>45</sup>

4.27 Inspectors enter the inspection results in the regulator's on-line inspection portal. Inspections conclude with an overall rating on a five-point scale from 'industry best practice' to 'unsafe' (see Table 4.1 for each rating). Reports summarising the inspection results are prepared for the regulator (generally within two months of the inspection date), with copies distributed to the occupier, owner, installer, designer and agent. Where the inspector determines that the installed system is 'unsafe', the inspector is required to immediately make the system safe (by switching it off) and notify the same parties plus the regulator, state/territory electrical safety regulator and network service provider within 24 hours of the extent and nature of the safety risk.<sup>46</sup> Rectification work required to correct non-compliances is the responsibility of the system owners.

**Table 4.1: Ratings assigned to small generation units inspected**

| Inspection rating      | Descriptor of non-compliance, risk and examples                                                                                                                                                                           |
|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Industry best practice | No non-compliances.                                                                                                                                                                                                       |
| Complies               | Non-regulatory issues (negligible risk) — for example: insufficient ventilation space between roof and modules; shutdown procedure not displayed; or rooftop penetrations may need to be sealed.                          |
| Adequate               | Minor or medium non-compliance (low or medium risk) — for example; owner not provided a description of the system and how it operates; insufficient clearance around the inverter; or lightning protection non-compliant. |
| Sub-standard           | Rectification work required (high risk) — for example: risk of inverter falling; freestanding panels not secure; or direct current (DC) isolator at the inverter is incorrectly wired.                                    |
| Unsafe                 | Unsafe (severe risk) — for example: exposed live wiring; water ingress into the DC isolator box; or rooftop panels not secure.                                                                                            |

Source: ANAO, based on information from the Clean Energy Regulator.

### *Inspection results*

4.28 From 2011, when the inspection regime was established, to mid-August 2018, the annual distribution of inspection ratings has been generally consistent for the 24,371 inspections undertaken — noting that the standards have become more stringent over time, increasing the

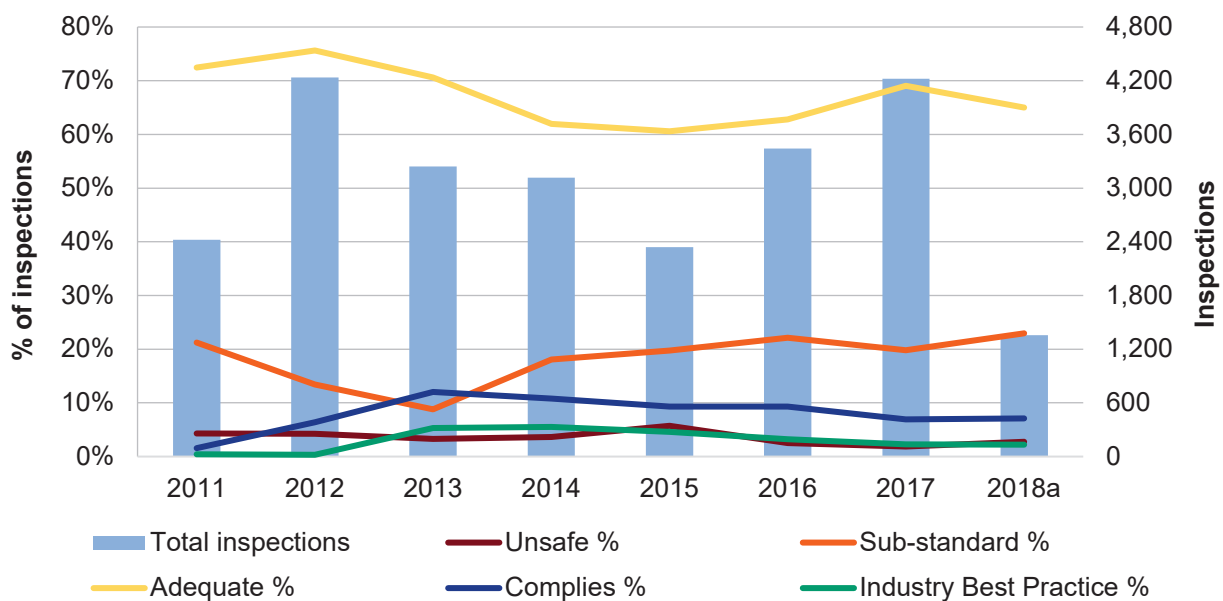
45 The regulator has inspected a small number of battery installations on behalf of the Department of the Environment and Energy using a checklist developed by an industry working group that included the regulator. The battery inspection reports were provided to the department only.

46 If inspectors note unsafe components connected to solar photovoltaic systems, such as batteries, they are obliged to ensure the sites are made safe under the conditions of their state electrical licences.

compliance ‘bar’.<sup>47</sup> Between 21.7 and 25.7 per cent of inspected installations were rated as ‘unsafe’ or ‘sub-standard’ each year, with the exception of 2012 and 2013 when lesser proportions — 17.6 and 12.1 per cent, respectively — were so rated.

4.29 Over the period 2011 to 2015 inclusive, ‘unsafe’-rated installations averaged 4.2 per cent each year, before decreasing in 2016 and 2017, to 2.5 and 1.9 per cent, respectively, then increasing in 2018 to 2.7 per cent. Analysis by the regulator in 2015 indicated that 80 per cent of the ‘unsafe’ installations since the inspection program commenced were caused by water ingress in direct current (DC) isolator enclosures on rooftops that created an electrical safety risk. Figure 4.1 illustrates the number and distribution of inspection ratings over time.

**Figure 4.1: Distribution of inspection ratings over time: 2011 to mid-August 2018**



Note a: Inspections to date.

Source: ANAO, from the Clean Energy Regulator.

4.30 A consultant engaged to review the regulator’s inspection regime in 2018 considered the sample size necessary to have a ‘statistically significant selection’ as required by the legislation. The consultant reported that selecting 5520 inspections over a two-year period would produce standard errors of 0.4 per cent for ‘unsafe’ systems and two per cent for ‘sub-standard’ systems. The regulator has exceeded 5520 inspections in every two consecutive year period since the inspection regime began, except for 2014 and 2015 when 5455 inspections were undertaken.

47 The regulator informed the ANAO that there is often a spike in sub-standard inspection findings following the release of an updated standard. As inspection results are disseminated, industry practices adjust accordingly.

4.31 Of the 6543 inspections undertaken over the period January 2016 to November 2017, installations inspected were predominantly chosen at random (98.4 per cent)<sup>48</sup>, with a small number of 'site-specific' inspections (103) specifically requested by the Department of the Environment and Energy (as part of targeted research). In a sample of randomly assigned inspections examined by the ANAO, the inspectors adhered to the inspection checklist and reporting obligations in all instances. In an additional sample of 'unsafe'-rated inspections examined by the ANAO, in all instances inspectors adhered to the additional actions and reporting obligations that are required for 'unsafe' systems (which are outlined in paragraph 4.27 above).

4.32 The 6543 installations inspected were undertaken by 1676 different installers (with these installers collectively installing over three-quarters of all small generation units over the period January 2016 to June 2018). Of these installers, 768 (45.8 per cent) had at least one of their inspected installations rated as 'sub-standard' or 'unsafe' — including 157 installers that had all their inspected installations rated as either 'sub-standard' or 'unsafe'.<sup>49</sup>

4.33 The regulator informed the ANAO that the Clean Energy Council — the body responsible for installer accreditation, training and disciplinary action — uses the regulator's inspection program data and intelligence to inform the Council's disciplinary actions to suspend or cancel installers' accreditation. The Clean Energy Council reports annually on the number of installer 'demerit points' issued, suspensions and cancellations.

4.34 The regulator can also suspend installers from scheme participation for up to 12 months where they have been subject to at least three adverse inspection findings (that is, inspection ratings of 'sub-standard' or 'unsafe') — but has not thus far imposed this sanction. In September 2017, the regulator focused one of its SRES compliance monitoring projects on installer conduct. The regulator wrote to 35 installers with multiple adverse inspection findings to remind them of the potential to suspend them from the scheme should they continue to be found to have sub-standard or unsafe installations. The regulator informed the ANAO that subsequent monitoring of these installers identified one as having further adverse inspection findings. The regulator is pursuing action against this installer.

4.35 The regulator's inspection regime would be more effective were it to continuously monitor inspection results for multiple adverse findings against installers and suspend installers where appropriate.

### *Inspection quality assurance*

4.36 The regulator has established a quality assurance program for the inspections regime. While the regulator quality assured 951 inspections conducted over the period January 2016 to February 2018, it has not drawn conclusions as to what the results indicate about the overall quality of its inspection program. The results are instead used primarily as a tool to help with the allocation of future inspections.

48 Random selections are adjusted to remove installations: in parts of Australia that are outside zones where inspection companies work; that pose a conflict of interest for the inspector; and where the occupier refuses inspection consent. The areas excluded from the inspection program are Australia's external territories where less than 3000 small-scale systems have been installed.

49 The 157 installers included: five installers with three inspected installations; 20 installers with two inspected installations; and 132 installers with one inspected installation.

4.37 A sample of quality assurance reviews examined by the ANAO found that they appropriately determined that the inspections had the required occupier consent, independence declarations and photographic evidence. However, the reviews lacked an assessment as to whether the overall rating was commensurate with individual findings and whether occupiers were notified of unsafe installations. While the ANAO determined from the sample of inspections it examined that occupiers were notified of unsafe installations, the consistency of overall ratings to individual findings for each inspection is worthy of greater consideration by the regulator.

4.38 There is great variability in the range of inspection ratings assigned by each inspector — greater than would be expected for a homogenous population of randomly assigned inspections. Such results question the consistency of the individual findings and overall ratings assigned within, and between, inspections. The regulator has provided ratings guidance for individual findings but none for the overall result. While some inspectors have rated installations inspected overall according to the worst rating assigned to an individual finding, others have used their discretion to assign a rating worse than assigned to an individual finding based on collective factors.

4.39 Improved guidance for inspectors to rate inspections overall and ensuring quality assurance reviews examine whether overall ratings are commensurate with individual findings would provide additional assurance that inspections are robust.

#### *Addressing risks arising from uninspected installations*

4.40 Extrapolating the regulator's reported inspection results (outlined above) to the millions of installed small generation units, there would have been hundreds of thousands of 'sub-standard' installations and tens of thousands of 'unsafe' installations under the scheme since it commenced in 2001. State and territory electrical safety regulators are primarily responsible for electricity safety within their respective jurisdictions. Nevertheless, over time the regulator has taken action itself or provided information to assist other parties it sees that are in a better position to address the electrical safety risks arising from small generation units installed under the scheme. These include:

- publishing periodically summaries of inspections program results;
- regulator presentations at inspection stakeholder forums and Clean Energy Council events where electrical safety risks, issues and trends are discussed;
- requesting state and territory electrical safety regulators share the results of their small generation unit inspection programs with the Clean Energy Council to aid the latter's oversight of installer quality;
- the regulator's technical engagement through fora such as Standards Australia and various Clean Energy Council committees/directorates; and
- recently developing a batteries inspection checklist (in the absence of an up-to-date Australian Standard) in cooperation with industry/government peak bodies.

4.41 In October 2015, the regulator informed the Minister of its inspection program results and trends over time and the actions it had been taken (as outlined in the paragraph above) to address concerns regarding solar photovoltaic system product quality and safety. The regulator also briefed the Department of the Environment and Energy in October 2015 on the emergence of residential grid battery storage and their associated safety risks. The regulator informed the department that:

- various industry analysts had forecast a large uptake of residential batteries within the next five years;
- the current lack of an Australian Standard for grid connected battery storage systems presented a potential concern for the safe, reliable and quality installation of battery systems<sup>50</sup>; and
- it had concerns regarding the capacity of existing electrical work and safety regimes in the states and territories to appropriately address electrical safety risks posed by a rapid uptake of residential battery storage.

4.42 More recently (over the period from August to October 2018) the regulator has:

- written to state and territory work health and safety authorities to raise awareness of the risks to work health and safety in their jurisdictions from the rapid increase in small generation unit installations and uptake of residential battery storage;
- coordinated the development of work health and safety messaging for distribution by industry bodies to their respective membership; and
- supported the Department of the Environment and Energy writing to the Electrical Regulatory Authorities Council<sup>51</sup> and state and territory safety regulators about the need to mitigate electrical safety risks associated with the increased penetration of residential– and commercial–scale battery systems in Australia.

4.43 The regulator has actively considered, and taken actions towards addressing, electrical safety risks associated with small generation units installed under the scheme. Additional benefits would arise were the regulator to formally assess its Renewable Energy Target scheme data (including the long-run inspection program data) for any residual systemic electrical safety risks and inform those stakeholders in the best position to effect further treatments.

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50 Safety standards for grid connected battery storage systems were in the early stages of development. Potential safety risks identified included electric shock, gas explosion or fire, chemical exposure, and mechanical hazards associated with the manufacture, installation, housing, maintenance and disposal of batteries.

51 The Electrical Regulatory Authorities Council is the peak body of electrical safety regulators in Australia and New Zealand. ERAC acts to ensure electrical safety regulatory systems are contemporary and harmonised wherever possible.

## Recommendation no.1

4.44 The Clean Energy Regulator assess the extent to which its Renewable Energy Target scheme data shows any residual systemic electrical safety risks for small generation units installed under the scheme and inform those stakeholders in the best position to effect further treatments.

**Clean Energy Regulator response: Agreed.**

4.45 *The Clean Energy Regulator is required to undertake a statistically significant inspection program and provide the results to state and territory regulators who have the power to enforce non-compliance with standards and to guide changes to standards. The Clean Energy Council is also provided with the information so that it can undertake its accreditation, disciplinary and guidance-setting processes.*

4.46 *We have provided milestone reports to those bodies, and published such reports, but acknowledge there would be value in summarising any key causes and trends in unsafe system findings from the inspection program in our long run data and providing that summary to such bodies for their consideration on any further treatments that may be required.*

4.47 *Although the Renewable Energy Target does not incentivise energy storage (e.g. chemical batteries), we believe there could be value in looking at the types of issues we have observed in solar photovoltaic systems from our administration of the scheme - and bring those potential risks to the attention of state and territory electrical safety regulators for their consideration with respect to the expected rapid uptake of batteries and any treatments that may be required.*

## Audit program for power stations and liable entities

4.48 The regulator's National Greenhouse and Energy Reporting Scheme (NGERS) has a well-established audit program of entities that interact with that scheme. In 2017, the regulator decided to use the NGERS auditing framework to undertake a pilot audit program under the Renewable Energy Target scheme to:

- assess the feasibility of using NGERS auditors<sup>52</sup> for the Renewable Energy Target scheme;
- provide assurance for a sample of power stations and liable entities; and
- gain knowledge from auditors on assessing compliance and outcomes from site visits.

4.49 Power stations and liable entities targeted for audit (four of each) were selected to broadly represent the types of power stations/liable entities encountered under the scheme (but avoiding entities with known compliance issues). Of the eight audits, two found no issues, five found non-material issues (relating to meter calibration, incorrect method leading to under- or over-crediting, and data transcription errors) and one audit contained a qualified audit opinion relating to insufficient evidence to demonstrate an entity's ownership of power station components.

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52 NGERS auditors are persons from the private sector appointed by the regulator after undergoing a vetting and registration process.



The regulator considered that the pilot audit program achieved its aims and decided to establish an annual audit program for the scheme from 2018 onwards.

4.50 Under the 2018 audit program, the regulator selected five power stations and seven liable entities for audit to get assurance, or in response to concerns, regarding the accuracy of reported data and/or compliance of their operations with the legislation. These audits have commenced, and some have been finalised. Depending on the audit results, follow-on action may include the re-submission of reported data, improvement recommendations and enforcement of ongoing compliance requirements.

4.51 The audit program provides valuable insights into potential compliance risk areas applicable to the cohort of power stations and liable entities, as well as the operation of audited entities and their compliance with scheme requirements.

### **SRES compliance monitoring program**

4.52 The regulator established a specialist SRES compliance team in early 2017 to proactively monitor and respond to serious risks that may cause the improper creation of STCs or undermine the scheme. The compliance team was designed to tackle what the regulator saw as the generally greater compliance risks associated with SRES by increasing: targeted early intervention (including intelligence-gathering projects — discussed earlier), compliance monitoring activities (discussed below); and civil administrative actions to enforce the Act (discussed later in this chapter).

4.53 Soon after its establishment in early 2017, the SRES compliance team obtained approval to undertake a series of compliance monitoring projects (at least one a quarter) to determine compliance levels and inform ongoing treatments.<sup>53</sup> Early projects examined the quality of installers' installations determined from independent inspections (discussed in paragraph 4.34 above) and Project Sentinel (discussed in paragraph 4.12 above).

4.54 Although the frequency of compliance monitoring projects is less than originally envisaged, the projects delivered to date have appropriately targeted non-compliance risk areas of the scheme.

### **Did the regulator take appropriate action to address alleged non-compliance with scheme requirements?**

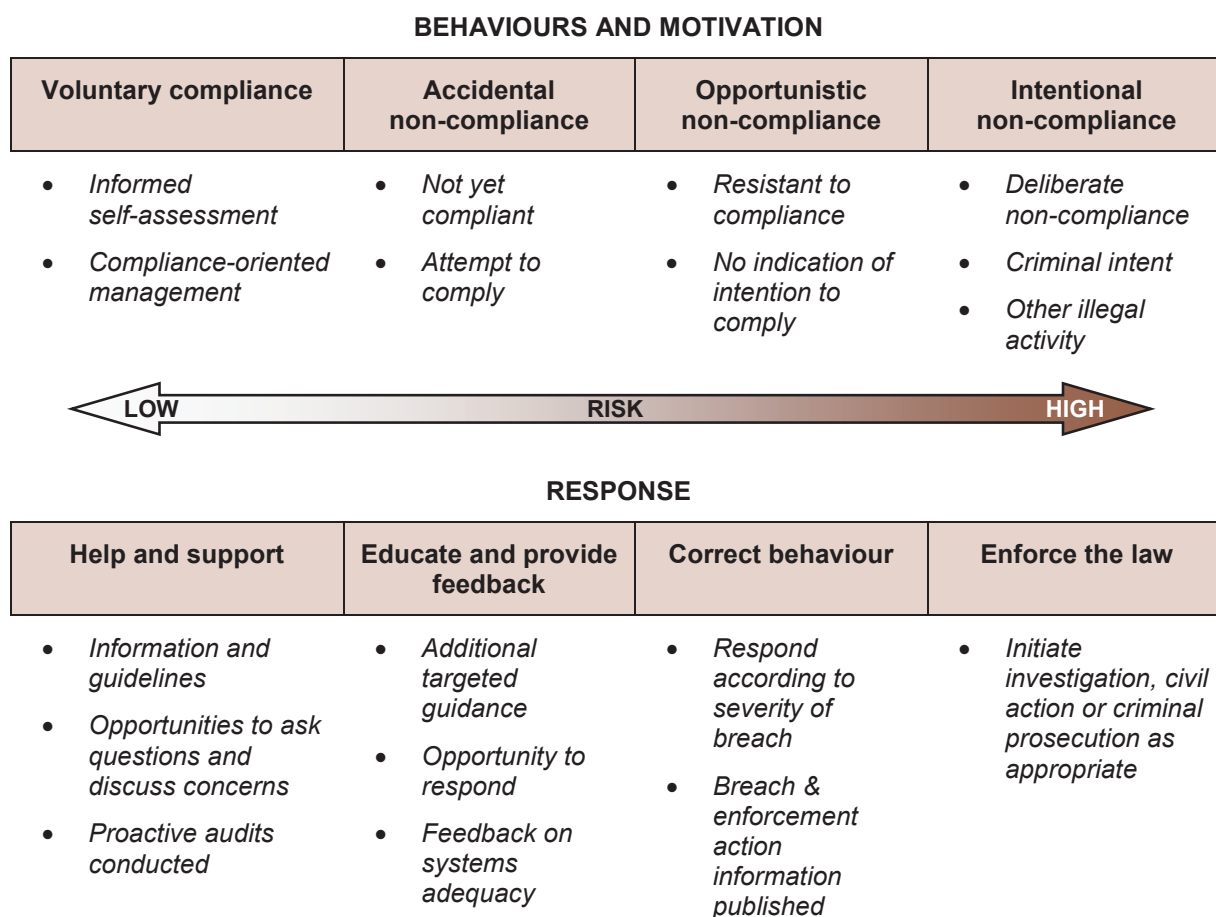
Scheme non-compliance matters that are likely to result in administrative action have been determined consistently by the SRES compliance team. For serious scheme non-compliance cases, the governance of the regulator's investigations unit has been insufficient to ensure that all mandated investigation requirements are contained in standard operating procedures, the procedures are consistently applied and that investigations are undertaken in a timely manner.

53 The potential treatments identified included targeted engagement (onsite visits), advisory notices to remedy non-compliance and, for more serious breaches, enforceable undertakings and administrative actions (for example, deregistration and/or suspension from the scheme).

## Compliance and enforcement policy and organisational arrangements

4.55 The regulator has developed a *Compliance, Education and Enforcement Policy* (March 2015) to optimise the compliance with the laws it administers. Under the policy, the regulator encourages voluntary compliance and responds to non-compliance using a risk-based approach along a spectrum that takes into account the seriousness of the contravention, likely consequences and participant behaviour and motivation. The regulator's compliance and response model is illustrated at Figure 4.2.

**Figure 4.2: Regulator's compliance and response model**



Source: Clean Energy Regulator.

4.56 The regulator manages scheme compliance/non-compliance at multiple junctures within the scheme. At scheme entry, the regulator undertakes fit and proper person assessments, assesses applications for power station registrations and validates the creation of STCs and LGCs (discussed in Chapter 2). Under the normal scheme operations, the regulator monitors the provision of information by scheme participants and liable entities required by legislation, undertakes default assessments as necessary, and levies and collects shortfall charges (discussed in Chapters 2 and 3). The additional compliance monitoring and enforcement activities undertaken by the regulator for the scheme are discussed in this chapter.



4.57 Within the regulator, enforcement of the Act was historically the responsibility of its investigations unit. In early 2017, the regulator acknowledged that its traditional approach of investigations leading to a criminal prosecution was not improving scheme compliance — as evidenced by only three finalised court appearances since 2012, none involving an agent. At that time, the SRES compliance team was established, in part, to undertake and coordinate civil administrative actions to enforce the Act. The actions taken by the regulator to address suspected non-compliance through the SRES administrative actions and the investigations unit are discussed below.

### **SRES administrative actions**

4.58 Since its establishment in early 2017, the SRES compliance team has maintained a compliance case log that as at February 2018 listed 192 cases undertaken, matters referred elsewhere and information reports received by the team. The log is primarily used as a work allocation tool and summary information repository but was found to contain numerous data omissions, including outcomes for closed cases, case priority ratings and case categorisations. The most common category for entries in the log was ‘other’, which limits the usefulness of categorisations. The log’s usefulness as a reference source for how similar cases have been managed/decided in the past, and as a management reporting tool, would be improved were the log to more clearly distinguish between cases and information reports, be fully completed and kept up to date, and contain more informative categorisations.

4.59 Standard operating procedures to guide the SRES compliance team when investigating non-compliance matters were first developed and approved in June 2018 during the audit, some 16 months after the team was established. The procedures establish appropriate processes for investigating matters for potential administrative action that canvass triaging, case management, case closure and protocols for referring matters between the SRES compliance team and the investigations unit.

4.60 The ANAO reviewed a sample of the SRES compliance team cases of a more serious nature — all cases categorised as ‘panel fraud’ (15 after excluding information reports and referrals) and ‘no system installed’ (three after excluding information reports and referrals).<sup>54</sup> The actions taken in these cases are illustrated in Figure 4.3 on the following page. As standard operating procedures for undertaking cases in the SRES compliance team had not been developed at the time, the ANAO examined whether case management fundamentals — case planning document, case closing document and consistent case outcomes — were evident in the cases examined and found:

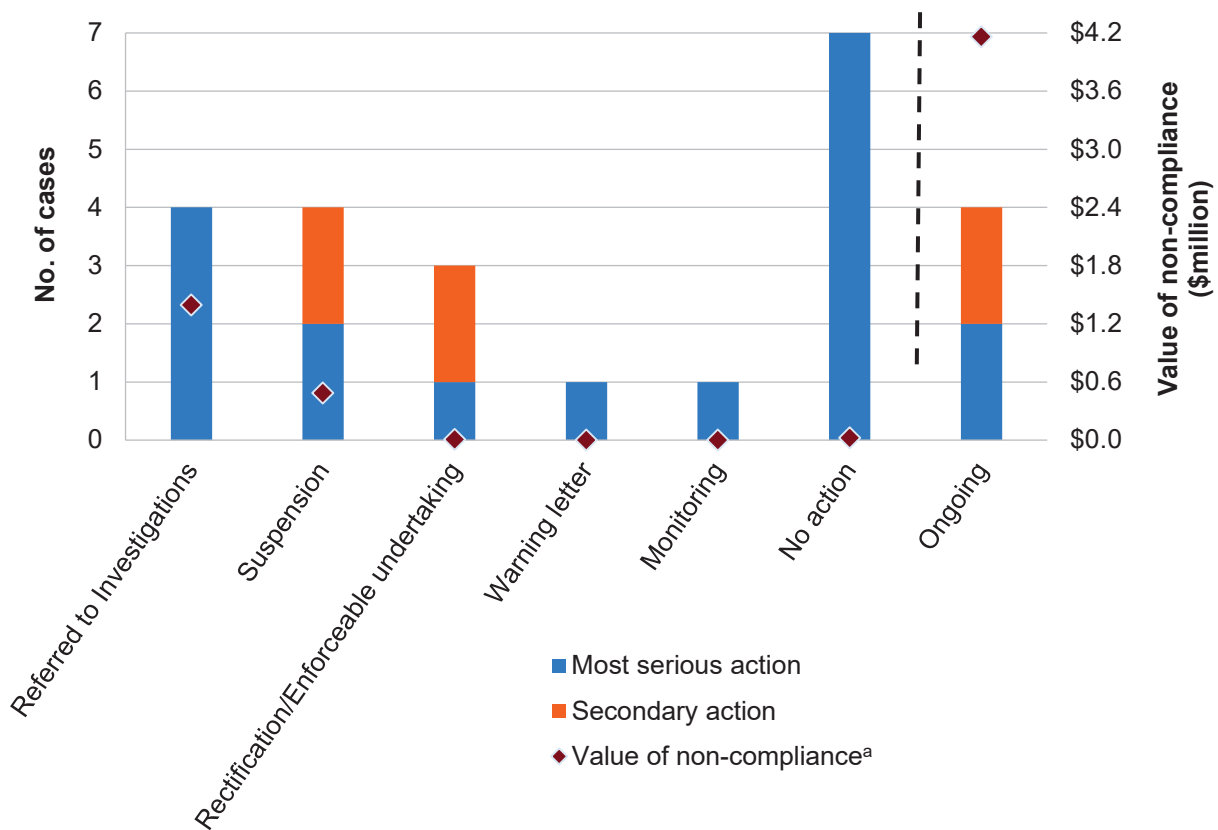
- two-thirds of cases had a case plan;
- that although 14 out of 15 closed cases had an authorised closure document, available enforcement options other than one(s) chosen were not canvassed on most occasions; and
- case outcomes were generally consistent with the regulator’s compliance and enforcement model (with cases involving larger improper STC creations more likely to involve agent suspensions or referrals to the investigations unit).

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54 These two categorisations are commensurate with matters that can also be subject to cases managed by the Investigations unit.

4.61 Although the establishment of the SRES compliance team has increased the number and range of enforcement actions taken to address SRES non-compliance, the timeliness of action is an area that could receive additional focus. The average duration for ‘panel fraud’ and ‘non system installed’ cases that have been closed was 4.8 months (ranging from 23 days to 417 days) while, as at 31 August 2018, the four open cases have being ongoing for an average of 1.2 years (ranging from 290 days to 564 days).

**Figure 4.3: SRES compliance: results from panel fraud and no system cases**



Note a: Value of non-compliance calculated by reference to the number of STCs improperly created. STC value assumed at the STC clearing house price of \$40 for each certificate.

Source: ANAO, from Clean Energy Regulator data.

## Investigations

4.62 The investigations unit investigates serious non-compliance matters that could result in criminal or civil court proceedings.

4.63 The regulator’s *Compliance, Education and Enforcement Policy* outlines the range of responses available to respond to contraventions of the legislation that the regulator administers. For the renewable energy target legislation, these include targeted education, administrative actions (including warning letters, enforceable undertakings, suspensions and de-registrations), and civil and criminal prosecutions.

4.64 The regulator has established and implemented standard operating procedures for undertaking investigations based on the *Australian Government Investigation Standards* (2011)

that regulators are required to apply. However, the regulator's procedures clearly address only 18 of the 27 mandatory investigation standards (66.7 per cent) and about half of the 106 suggested standards that apply to its management of investigations.<sup>55</sup> It would be prudent for the regulator to review its coverage of investigation standards in its standard operating procedures, particularly the omitted mandatory standards.<sup>56</sup>

4.65 The Renewable Energy Target scheme dominates the non-compliance matters that the regulator investigates, with 64 of all 67 investigation matters over the period January 2016 to February 2018 involving the scheme. The use of false installer, designer and/or electrician details for small-scale system installations have been the most common allegations investigated. The most serious non-compliance allegations involve claims for systems not installed and the use of false/unapproved equipment. The outcomes from the scheme investigations according to the type of potential breach behaviour over the reviewed period are summarised in Table 4.2.

**Table 4.2: Results of investigations into potential scheme breaches (January 2016 to February 2018)**

| Type of potential breach behaviour                        | No.       | Investigation result                  |                           |                                    |                      |                                           |                      |
|-----------------------------------------------------------|-----------|---------------------------------------|---------------------------|------------------------------------|----------------------|-------------------------------------------|----------------------|
|                                                           |           | Closed/No further action <sup>a</sup> | Referred to existing case | Administrative action <sup>b</sup> | Criminal prosecution | Internal / External referral <sup>c</sup> | Active investigation |
| False installer/electrician/designer details recorded     | 26        | 11                                    | 1                         | 11                                 | –                    | 1/–                                       | 2                    |
| No system installed                                       | 13        | –                                     | 7                         | 3                                  | 1                    | –/1                                       | 1                    |
| False installed equipment details recorded                | 9         | 1                                     | 1                         | –                                  | –                    | 2/–                                       | 5                    |
| Forged signature recorded                                 | 5         | 1                                     | –                         | 3                                  | –                    | –/–                                       | 1                    |
| False installation/project dates recorded                 | 4         | –                                     | –                         | 2                                  | –                    | 1/–                                       | 1                    |
| False declaration recorded                                | 3         | –                                     | 1                         | –                                  | –                    | 1d/1                                      | –                    |
| Improperly assigned right to create STCs                  | 2         | 1                                     | –                         | 1                                  | –                    | –/–                                       | –                    |
| Accessed REC Registry agent account without authorisation | 1         | –                                     | –                         | –                                  | –                    | 1/–                                       | –                    |
| Failure to comply with instructions                       | 1         | 1                                     | –                         | –                                  | –                    | –/–                                       | –                    |
| <b>Total</b>                                              | <b>64</b> | <b>15</b>                             | <b>10</b>                 | <b>20</b>                          | <b>1</b>             | <b>6/2</b>                                | <b>10</b>            |

Note a: Includes matters determined as no offence, not substantiated or further investigation not warranted.

Note b: Includes warning letters (13), voluntary surrender of STCs (two), enforceable undertakings — re-inspections (two), account suspension (two), and rectification (one).

55 *Australian Government Investigation Standards* 'Investigation Practices' and other subsections not relevant to the regulator's circumstances have been excluded from this analysis.

56 The omitted mandatory standards relate to complaints handling, investigation timeframes, project management, investigation team communications and briefs of evidence contents.

Note c: Matters have been referred: internally to the SRES Compliance team, Intelligence and analytics area and LRET branch; and externally to state/territory police and the Australian Competition and Consumer Commission.

Note d: Sole LRET matter. All other scheme investigations relate to SRES.

Source: ANAO, from Clean Energy Regulator data.

4.66 The ANAO reviewed a sample of investigations relating to the two highest risks behaviours — all ‘no system installed’ (six) and ‘false installed equipment details’ (eight) cases (excluding those referred to an existing case) that were opened and/or closed during the period January 2016 to February 2018. These investigations were undertaken by appropriately qualified investigators.

4.67 For the cases examined, three of the five key investigation milestones — recording of allegations, case acceptance and case finalisation/transfer — were undertaken mostly in line with standard operating procedures. The remaining two key investigation milestones — initial evaluation of cases and investigation plans — were generally not undertaken in line with standard operating procedures.

4.68 Of the six investigations opened during the period:

- one matter had no documented initial evaluation. For the five other opened cases, documentation was lacking to demonstrate that the initial evaluation:
  - considered whether the matter involved a serious crime or complex criminal investigation — all cases (mandatory investigation standard);
  - involved consultations with other areas within the regulator — four cases (mandatory investigation standard);
  - considered whether the incident occurred — two cases;
  - considered whether the matter involved an offence — one case; and
  - considered whether the allegation was worth pursuing, the options available to deal with the matter, and the need for the regulator to investigate — all cases<sup>57</sup>; and
- the required investigation plan template was not used to plan any of the investigations, with the regulator instead using an abbreviated ‘investigation update’ template. The update template did not address the investigations’ objective, scope, risks, and steps, as well as the resource, personnel and operational requirements of the investigations.

4.69 Of the nine cases finalised/transferred during the review period:

- two cases were transferred to the SRES compliance team, with one case using the update template and the other having notes in the case management system documenting the transfer;
- the required closure brief template had been completed for five cases (although a signed copy of one brief had not been retained); and
- two briefs of evidence had been referred to, and accepted by, the Commonwealth Director of Public Prosecutions (CDPP).

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57 The investigation procedures require each accepted case to be assessed against the contents of the Case Categorisation Table (that determines the seriousness of the suspected offence and possible sanctions) and Case Prioritisation Table (that determines the priority of the investigation). However, evidence of the assessment of each accepted case against the contents of these tables is not retained by the regulator.

4.70 The penalties imposed or pursued by the regulator for the investigations unit's seven closed cases/referrals to the CDPP have been consistent with the compliance and enforcement model outlined in the *Compliance, Education and Enforcement Policy*. In the three most serious cases, the agent unwittingly provided fraudulent paperwork to the regulator that resulted in the improper creation of STCs. Remedies imposed for these matters included rectification (where an agent replaced the unapproved panels) or attempted recovery of the STCs and agent suspensions, with those who supplied the fraudulent paperwork to the agents (installers and/or retailers) subject to criminal prosecution by the regulator or state/territory police. Warning letters were sent to three other agents where a REC Registry audit prevented the improper creation of STCs. The regulator closed one case without sanction where a panel supplier had corrected some mislabelling on solar panels.

4.71 The average duration for the 44 renewable energy target closed cases (excluding those referred to an existing case) was almost one year (ranging from 19 days to 5.1 years) while, as at 31 August 2018, the 10 open cases have been ongoing for an average of 2.6 years (ranging from 298 days to 6.2 years). Although extended timeframes can occur in civil or criminal prosecution cases, only one of the closed cases involved a criminal prosecution and prosecutions are not being pursued for most of the open cases.

4.72 Ten of the 14 cases the ANAO examined contained a least one period of three months or more where there was no recorded investigation activity (including four cases with two such periods) ranging from 92 days to 391 days for each case. The regulator had allocated a high priority to five of the 14 cases yet three had periods of no recorded investigation activity of 105, 208 and 391 days, respectively. Reasons for the periods of no recorded investigation activity were not evident from the case management system. In March 2018, the regulator informed the ANAO that 180 days or less was now the target timeframe for completing investigations (calculated from the receipt of an allegation to the closure of the case or its referral to the CDPP or another entity). The timeliness of the regulator's completion of investigations requires great improvement to meet this completion target timeframe.

4.73 The regulator's investigations unit was overseen by an Investigations and Enforcement Committee over the period from July 2016 to August 2017.<sup>58</sup> This Committee was established to provide advice and support and provide senior management with oversight of critical enforcement decisions and recommendations. The Committee met on 11 occasions, and meeting minutes indicate that it gave advice on caseload/overall prioritisation at one meeting and on selected individual case priorities at six meetings.

4.74 The Investigation and Enforcement Committee was disbanded after the August 2017 meeting and replaced by a Compliance Management Committee that is now a sub-committee of the regulator's business leadership team committee (discussed in Chapter 5). The Compliance Management Committee's aim is to position the regulator's compliance culture, and champion approaches and settings to non-compliance that are consistent, coherent, predictable and measurable. While monthly and quarterly performance reports distributed throughout the regulator contain statistics on numbers of open and closed cases and closure method (by month/

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58 The Committee was chaired by the senior executive responsible for the investigations unit, with membership including the senior executives responsible for SRES, audit and intelligence/analytics.

quarter and year to date) and a list of recent scheme enforcement actions, they provide no insight into compliance with investigation requirements or case durations.

4.75 The governance of the regulator's investigations unit has been insufficient to ensure that mandated investigation requirements are contained in standard operating procedures, the procedures are consistently applied and that investigations are undertaken in a timely manner. In the context of the recent organisational restructure, the regulator is developing revised operational and governance arrangements for its Compliance branch, which incorporates the investigations function.

## **Recommendation no.2**

4.76 The Clean Energy Regulator establish governance mechanisms to manage its investigations function that ensure mandated investigation requirements are contained in standard operating procedures, the procedures are consistently applied and that investigations are undertaken in a timely manner.

**Clean Energy Regulator response:** *Agreed.*

4.77 *A new branch was established in early September 2018 to bring together non-compliance support and investigations. Standard Operating Procedures are being updated to align with the Australian Government Investigation Standards and modern regulatory practice. Governance arrangements have been implemented to ensure investigations are undertaken in a timely manner, including new performance measures for preliminary investigations (3 months) and in-depth investigations (12 months) and record keeping.*

## 5. Governance

### Areas examined

This chapter examined whether the regulator has appropriate arrangements to support the operation of the Renewable Energy Target including for: scheme oversight, implementation planning, risk management, certificate surrender target setting, and performance monitoring and reporting.

### Conclusion

The regulator has established appropriate governance arrangements to manage the risks and operation of the scheme. Effective oversight arrangements have been established for the scheme, with scheme implementation documented in multiple business and support plans. Annual certificate surrender targets have been calculated consistent with legislative requirements. The regulator's external reporting for the scheme is supported by an established performance management framework.

### Areas for improvement

The ANAO made two recommendations aimed at improving: scheme administration by developing an overarching map; and the regulator's performance criteria.

### Did the regulator establish effective oversight arrangements for the scheme?

Effective arrangements have been established to oversee the implementation of the Renewable Energy Target scheme.

5.1 In addition to the Renewable Energy Target scheme, the regulator administers the National Greenhouse and Energy Reporting Scheme and the Emissions Reduction Fund. All three schemes have similar requirements and processes for controlling scheme entry, ongoing participation in the scheme and managing scheme compliance. Since 2014–15, the regulator has organised its structure according to these primary functions rather than by scheme, resulting in the responsibilities for the regulator's administration of its schemes, including the Renewable Energy Target, to be widely distributed across the regulator.

5.2 While the functional distribution of organisational responsibilities has served the regulator well in the administration of the Renewable Energy Target scheme, in June 2018 the regulator announced its new organisational structure would be implemented from early September 2018. The primary change is the establishment of scheme-specific branches for each of the regulator's three schemes, with compliance-related activities for all three schemes centralised in a separate branch. The regulator considers that scheme-specific branches will allow senior management to engage more deeply with their schemes.

5.3 In addition to line management responsibilities, the regulator has three well-established governance committees that collectively consider all principal matters involved with: the policy



settings, operational issues, and performance, of the Renewable Energy Target scheme (among others); and the governance of the regulator itself. These committees are the:

- Clean Energy Regulator board — comprising the Clean Energy Regulator chair and members, and the regulator’s executive general managers;
- strategic leadership team — comprising the regulator’s executive general managers;
- business Leadership team — comprising the regulator’s general managers and selected managers.<sup>59</sup>

5.4 The Minister has also been kept informed of scheme developments through monthly administrative updates from the regulator on matters such as the renewable energy power station ‘pipeline’, certificate prices, market liquidity, certificate surrenders and shortfalls, and serious non-compliance findings. The Minister also received specific briefings on:

- the annual setting of the renewable power percentage (for the Large-scale Renewable Energy Target (LRET)) and small-scale technology percentage (for the Small-scale Renewable Energy Scheme (SRES)) (which are discussed later in this chapter); and
- solar photovoltaic system product quality and safety (discussed in Chapter 4).

### **Did the regulator establish fit-for-purpose planning arrangements to guide the scheme’s operation?**

Scheme implementation is currently documented in multiple business plans at the corporate, divisional, branch and section level and support plans. An overarching map for the scheme would better ensure that recent organisational structure and scheme operational changes integrate and contribute to the efficient and effective management of the scheme.

5.5 Scheme administration within the regulator is served by an annual planning framework comprising the regulator’s corporate plan and annual plan and business plans at the divisional, branch and section level throughout the organisation.<sup>60</sup> In addition, the regulator has developed some plans that support scheme administration generally — such as the 2018–20 Fraud Control Plan and Stakeholder Engagement Framework 2016 — and the Renewable Energy Target scheme specifically — such as the SRES 2017–18 Compliance Plan and 2017 LRET Compliance and Enforcement Plan.

5.6 The regulator’s current corporate plan summarises its: operating environment (including drivers that could significantly impact or change the agency’s administration of its schemes); capability development (through the recently redeveloped Agency Operating Model); and approach to regulation, agency culture, governance arrangements, risk management (including the identification of the agency’s four strategic risks) and performance evaluation. The regulator’s corporate plan and annual plan, while acknowledging the Renewable Energy Target scheme as one of three schemes the regulator administers, also outlines the regulator’s strategies and priorities according to objectives that cut across all schemes:

59 Other regulator staff attend committee meetings for particular agenda items, as required.

60 Finalisation of the 2018–19 division, branch and section plans has been delayed due to the organisational restructure that took effect in September 2018.

- Engaged, active and compliant clients;
- Efficient and effective administration;
- A trusted, relevant and expert institution; and
- Secure and enduring regulatory infrastructure.

5.7 The regulator's annual divisional, branch and section plans are aligned to the strategies and priorities listed in the corporate and annual plans, with the addition of specific deliverables and links to the regulator's key performance indicators. The listed priorities and deliverables are a combination of all-scheme and scheme-specific.

5.8 The regulator also has an appropriate range of support plans — either specific to the Renewable Energy Target scheme or across-scheme — that assist in the management of various aspects of the Renewable Energy Target scheme. Examples include general and scheme-specific stakeholder and communications strategies and plans, and scheme-specific compliance and enforcement plans.

5.9 The Renewable Energy Target scheme, however, lacks an overarching management document that maps and coordinates its administration. The scheme did not have such a document when it was inherited from the Office of the Renewable Energy Regulator on 2 April 2012 when the regulator was established. Since that time, the scheme's administration has been based on the planning framework described in paragraph 5.5 above.

5.10 The current planning approach does not provide a comprehensive view of scheme management. An overarching map would ensure that all pertinent aspects of the scheme's administration and operation are addressed cohesively (in conjunction with scheme support plans), particularly in light of the regulator's organisational restructure, and compliance management findings and issues identified in this audit.

### Recommendation no.3

5.11 The Clean Energy Regulator develop an overarching map to document and link the various elements of the operation and governance of the Renewable Energy Target scheme.

**Clean Energy Regulator response:** *Agreed.*

5.12 *Notwithstanding that the Renewable Energy Target is a long established program, the Clean Energy Regulator agrees that there is benefit in developing an overarching map to explain the overall approach to the scheme's administration.*

## Did the regulator manage effectively the risks to the scheme's operation?

The regulator has an established risk management framework to guide the development, implementation and monitoring of the organisation's risk management plans. Improved alignment between scheme and strategic risks, and better maintenance of the risk register's currency, would aid the regulator's risk management.

5.13 At the enterprise level, the regulator has an established Risk Management Framework encompassing:

- a risk management policy that outlines the regulator's approach to, and accountabilities and responsibilities for, managing risk;
- a risk appetite statement that outlines the level of risk consequence the regulator is willing to accept in its pursuit of its purpose and objectives (which, in the context of the Renewable Energy Target scheme, includes an appetite for accepting occasional low levels of non-compliance, in the interests of lowering transaction costs);
- a strategic risk context statement that provides a broad view of external and internal factors that could impact on the regulator's ability to achieve its objectives; and
- risk management guidance tools (including a risk matrix updated in October 2017) that support day-to-day use of the framework, integration of existing processes and reflect reporting mechanisms through current committee arrangements within the regulator.

5.14 During 2017, the regulator approved and updated its four strategic risks and risk register. The updated risk register has established improved linkages between risks, their causes and consequences, current controls and risk treatments. Further improvements to the register's content would improve alignment between the regulator's strategic and operational (corporate and scheme) risks and the determination of the need for further risk treatment.

5.15 For example, the 'we are not an effective regulator' strategic risk has a current risk rating of medium and a targeted risk rating of low, with its sole risk treatment being 'scheme and sub-scheme compliance plans'. Yet none of the risk treatments for Renewable Energy Target scheme-related risks (one for SRES, one for LRET and one for liable entities)<sup>61</sup> — two of which have current risk ratings of high and a targeted risk rating of medium — makes mention of compliance plans. In fact, the SRES-related scheme risk has no risk treatments identified although the current risk rating is higher than the targeted risk rating. In addition, while the risk register has a facility to record the effectiveness of current controls, the regulator is yet to populate the register with this information (although control effectiveness for strategic risks has been assessed but recorded outside of the risk register).

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61 These risks were:

- provision of incorrect information to the regulator results in the issue of ineligible small-scale technology certificates; and
- provision of incorrect information leads the regulator to register ineligible large-scale generation certificates.

5.16 The status of the strategic, scheme and corporate risks is regularly reported to the regulator's three governance committees. At least annually, the Clean Energy Regulator Board reviews the validity of, and ratings for, the regulator's strategic risks. In addition, progress towards the implementation of treatments for strategic risks and scheme risks rated higher than medium are reported to the Board each quarter. The 2017–18 third quarter report to the Board, dated March 2018, noted that the LRET, SRES and liable entities compliance plans had been addressed under the 'we are not an effective regulator' strategic risk treatment.<sup>62</sup> The report also noted that a review subsequent to the completion of the SRES compliance plan identified new controls and treatments — which have yet to be recorded in the risk register as at July 2018.

5.17 The regulator's risk management of the Renewable Energy Target scheme would be improved were it to review the alignment of the scheme's risks to its strategic risks and keep the contents of the risk register better up-to-date. The regulator informed the ANAO in October 2018 that a review of its strategic risks has commenced and will examine the alignment between its scheme, corporate and strategic risks.

### Did the regulator provide robust advice to the Minister regarding annual certificate surrender targets?

The renewable power percentage and small-scale technology percentage that determine annual certificate surrender targets are set annually by the Minister consistent with legislative requirements, based on the recommendations of the regulator. The percentages are calculated using formula inputs from robust sources.

5.18 The renewable power percentage (RPP) and small-scale technology percentage (STP) determine the proportion of the electricity acquired by liable entities that are to be sourced from LRET and SRES, respectively. The number of large-scale and small-scale renewable energy certificates each entity is liable to surrender annually is determined by applying the RPP and STP to the electricity each acquired during the year (as outlined in their electricity acquisition statements).

5.19 The *Renewable Energy (Electricity) Act 2000* (the Act) requires the specification of the RPP (for LRET) and the STP (for SRES) in the regulations on or before 31 March each year (sections 39 and 40A). The Act also prescribes the matters that the Minister must take into consideration when setting these percentages. Failure to set the percentages by the annual deadline would result in the legislated default percentages coming to force — an event that has not occurred to date.<sup>63</sup> In addition to calculating an annual STP, there is a legislative requirement to calculate and publish non-binding estimates for the STP for the following two years — the aim of which is to provide a broad indication of what the STP could be in future years.

5.20 Each year, the regulator calculates the RPP and STP according to standard formulae that takes into account a range of information from various sources, as outlined in Table 5.1.

62 The contents of the LRET, SRES and liable entities compliance plans are discussed in Chapter 4.

63 Default percentages are calculated using the previous year's:

- RPP adjusted by the proportional change in the large-scale target from the previous year to the current year; and
- STP adjusted by the proportional change in STC creations from the previous year's actual creations to the current year's estimate.

5.21 RPPs have generally increased over time (from a low of 5.62 per cent in 2011 to 16.06 per cent in 2018) in line with the increasing large-scale target (which will plateau at 33,000 gigawatt hours in 2020). STPs have varied significantly over time (from a low of 7.01 per cent in 2017 to a high of 23.96 per cent in 2012), primarily as a result of significant differences between the estimated and actual number of small-scale technology certificate creations in some years.

5.22 While the regulator's advice to the Minister on the annual RPP and STP has been calculated consistent with legislative requirements, there has been unexplained variability between years in the calculation of some formulae inputs. Formulae inputs have been rounded inconsistently (either to the nearest megawatt hour, gigawatt hour or 1000 gigawatt hours), cut-off dates for REC Registry figures have varied, and estimates based on past trends have taken into account a varying number of years (from two to four years). This variability influences the calculation of the annual RPPs and STPs to varying degrees. The regulator has acknowledged the undesirable variability in the calculation of RPPs and STPs and is drafting a standard operating procedure to address this issue.

**Table 5.1: Information sources used in the calculation of annual certificate surrender targets**

| Information source                            | RPP input                                                                                                                                                                                                                                                                                                                                           | STP input                                                                                                                     |
|-----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| Renewable Energy Target legislation           | <ul style="list-style-type: none"> <li>Previous and current year' large-scale targets</li> </ul>                                                                                                                                                                                                                                                    | n/a                                                                                                                           |
| REC Registry                                  | <ul style="list-style-type: none"> <li>Previous years' RET liability</li> </ul>                                                                                                                                                                                                                                                                     | <ul style="list-style-type: none"> <li>Previous years' small-scale technology certificates created and surrendered</li> </ul> |
|                                               | <ul style="list-style-type: none"> <li>Estimate of current year EITE exemptions</li> <li>Estimate of current year liable electricity (non-national energy market)<sup>a</sup> [before 2018]</li> <li>Estimate of current year liable electricity (national energy market and non-national energy market)<sup>a</sup> [from 2018 onwards]</li> </ul> |                                                                                                                               |
| Australian Energy Market Operator             | <ul style="list-style-type: none"> <li>estimate of current year liable electricity (national energy market)<sup>a</sup> [before 2018]</li> </ul>                                                                                                                                                                                                    |                                                                                                                               |
| Consultants with electricity market expertise | n/a                                                                                                                                                                                                                                                                                                                                                 | <ul style="list-style-type: none"> <li>estimates of current and future years' STC creations<sup>b</sup></li> </ul>            |

Note a: Before 2018, Australian Energy Market Operator data was used to determine liable electricity from national electricity market and REC registry data used to determine liable electricity from other sources. In 2018 the regulator used REC registry data to determine all liable electricity, after ensuring the results of the new approach were within established tolerable limits from the results of the previous approach.

Note b: Two or three consultants provide separate estimates that, after being assessed by the regulator, were averaged to arrive at each year's estimate.

Source: ANAO, from Clean Energy Regulator data.

5.23 The regulator has provided its calculations of the annual RPP and STP to the Minister in a timely manner, along with the information the Minister must take into account when setting the percentages. To date, the Minister has set the annual percentages according to the advice from the regulator.

## Did the regulator establish an effective performance monitoring, measurement and reporting framework?

The regulator has an established performance management framework to monitor internally and report internally and externally on the Renewable Energy Target scheme's achievements. Overall, the performance indicators used by the regulator to report under the Commonwealth performance framework require further development to be relevant, reliable and complete. The regulator's other annual external performance reporting mechanisms at the scheme- and entity-based level aid the transparency of, and accountability for, the scheme's achievements.

5.24 The regulator has an established performance monitoring and measurement framework for the Renewable Energy Target scheme that supports the preparation of regular internal management reports and annual external performance and accountability reports. Each month, the regulator prepares an agency-wide performance report distributed to its senior management that, among other things, summarises the scheme's outputs for the month and year-to-date and describes notable trends and other new information relevant to the scheme. In addition, each quarter the agency-wide performance report tracks progress towards achieving its key performance indicators as identified in the regulator's corporate plan and Portfolio Budget Statements.

5.25 The ANAO examined the regulator's reporting of scheme performance under the Commonwealth performance framework (described below) and through other established mechanisms, including the annual Renewable Energy Target Administrative Report, scheme-specific reporting in regulator's annual report, and the Regulator Performance Framework.

### Commonwealth performance framework

5.26 The Commonwealth performance framework<sup>64</sup> emphasises the importance of the clear alignment of an entity's purpose to its outcomes, and an entity's performance information, providing the Parliament and the public with information to assess the entity's progress towards achieving its outcomes. Entities publish three key documents annually to provide a line of sight between their use of public resources and the results achieved — the corporate plan, Portfolio Budget Statements, and annual performance statements.

5.27 The ANAO examined whether performance criteria related to the Renewable Energy Target scheme, as specified in the regulator's annual performance statements, aligned with those contained in the regulator's corporate plan and Portfolio Budget Statements, and were appropriate — that is, relevant, reliable and complete.

### *Performance criteria alignment*

5.28 All performance indicators presented in the regulator's 2016–17 and 2017–18 Corporate Plans, themed by objective (refer to paragraph 5.6 above), were included in the 2016–17 and 2017–18 Annual Performance Statements, respectively. The performance indicators over successive corporate plans have remained relatively stable, with improvements made to some

64 The Commonwealth Performance Framework comprises the *Public Governance, Performance and Accountability Act 2013*, the accompanying Public Governance, Performance and Accountability Rule 2015 and guidance issued by the Department of Finance.



indicators over time. One performance indicator relates solely to the Renewable Energy Target scheme — number/volume of renewable energy certificates validated/registered. All remaining indicators are framed generically to cover all the regulator's schemes, although the performance attributable to two of these indicators is broken down by scheme.

5.29 One corporate plan performance indicator related to the Renewable Energy Target scheme was also presented in the regulator's Portfolio Budget Statements. The 2016–17 Portfolio Budget Statements contained one performance criterion/target for the current and out-years — '≥ 95% compliance with certificate surrender obligations by liable entities'. The 2017–18 and 2018–19 Portfolio Budget Statements contain a similar performance criteria/target — '≥ 95% of regulated [and liable] entities are materially compliant with their statutory obligations' — that broadened performance reporting to encompass compliance with various legislative requirements across all the regulator's schemes.

5.30 The regulator's 2016–17 Annual Performance Statements inaccurately indicates that the 2016–17 target was achieved. The 2016–17 statements incorrectly measured performance using the broader, revised metric of compliance applicable from 2017–18 — reporting 99.6 per cent of regulated and liable entities were compliant. However, a breakdown of performance by scheme indicates that only 93.8 per cent of liable entities met their certificate surrender obligations in 2016–17, a shortfall of 1.2 percentage points from the target.

#### *Relevant and reliable performance criteria*

5.31 Two of the characteristics of appropriate performance criteria are relevance and reliability. Performance indicators are considered to be:

- 'relevant' where they identify benefits/beneficiaries, address the objective/purpose and provide enough information in a clear and concise manner; and
- 'reliable' where they are capable of being measured to demonstrate progress (including a documented target or baseline); and are free from bias.

5.32 Overall, the performance indicators used by the regulator to report on its achievements under the Renewable Energy Target scheme require further development to be relevant and reliable. Of the 15 performance indicators reported by the regulator in its 2017–18 Annual Performance Statements:

- seven were assessed as having sufficiently justified their relevance. The deficiencies in relevance justifications for the remaining eight indicators were: insufficiently demonstrated focus on the regulator's purpose/objective; unclear benefits/beneficiaries; and insufficient description of indicators to enable them to be understood; and
- one was assessed as having sufficiently justified its reliability. The deficiencies in reliability justification for the remaining 14 indicators were: the absence of performance targets; insufficiently defining indicator 'qualifiers' (for example, 'significant'); insufficiently describing measurement methods; not measuring all aspects of indicators; not justifying measurement assumptions; and self-assessed measurements.



### *Complete performance criteria*

5.33 The third characteristic of appropriate performance criteria is completeness. Performance indicators are considered to be complete where they:

- collectively address the entity's purpose — accelerating carbon abatement for Australia — through the activities identified in the corporate plan; and
- provide a balance between: effectiveness and efficiency indicators, quantitative and qualitative data; and short-, medium- and long-term performance.

### **Performance criteria addressing regulator purpose**

5.34 To determine the extent to which the regulator's performance criteria collectively addressed its purpose, the ANAO attempted to link the performance criteria to the high-level activities associated with the Renewable Energy Target scheme. However, the regulator's corporate plans do not identify the high-level business-as-usual activities associated with its objectives/schemes (contrary to Department of Finance guidance)<sup>65</sup>, instead focusing on strategic priorities that are 'beyond ... business as usual activities'.<sup>66</sup> Consequently, the ANAO has itself identified the scheme's high-level activities based on audit coverage.

5.35 Some performance indicators used have been narrowly interpreted by the regulator or are narrowly focused to the exclusion of some high-level activities associated with the scheme. In this regard:

- 'compliance levels of regulated and liable entities' currently measures the submission of energy acquisition statements, but does not measure the surrender of renewable energy certificates<sup>67</sup>, the submission of energy generation returns or the payment of shortfall charges;
- 'proportion of applications processed within statutory or agreed timeframes' currently measures applications to accredit power stations and become registered persons, but does not measure applications for emissions-intensive trade-exposed exemption certificates; and
- three indicators currently focus on serious non-compliance — civil proceedings, briefs to the Commonwealth Director of Public Prosecutions and enforceable undertakings — but current indicators do not report on compliance risk management, compliance monitoring activities (including intelligence gathering, inspections, audits and SRES compliance projects) or other administrative enforcement actions.

5.36 The regulator's 2018–22 Corporate Plan has introduced an additional generic performance indicator — proportion of non-compliance cases brought back into compliance — that broadens the regulator's consideration of non-compliance to also include suspensions of REC Registry registrations and accounts.

65 Department of Finance guidance indicates that 'an entity's corporate plan ... should focus on high-level activities through which the results captured by its performance frameworks are achieved'. (Department of Finance, *Resource Management Guide No.132: Corporate plans for Commonwealth entities*, January 2017, p. 13.).

66 Clean Energy Regulator, *Corporate Plan 2018–22*, August 2018, p. 12.

67 The extent to which certificates were surrendered in line with obligations was part of this indicator's metric in the 2016–17 Annual Performance Statements.

## Balance of indicator types, data types and timeframes

5.37 Overall, the performance indicators used by the regulator require further development to be considered sufficiently balanced. The ANAO found that:

- nearly three-quarters of the regulator's performance indicators focus on activities, outputs and inputs — proxies for effectiveness — with only four direct measures of effectiveness<sup>68</sup>;
- the regulator's corporate plans do not include any efficiency measures;
- an appropriate range of qualitative and quantitative indicators and data has been used<sup>69</sup>; and
- all the regulator's performance indicators are expressed in short-term timeframes due to the absence of performance targets for most indicators and the lack of a demonstrable progression of performance over time.

5.38 Refinements to the regulator's corporate plan and Annual Performance Statements to facilitate reporting against its purpose using relevant, reliable and complete performance criteria would improve the regulator's accountability for its performance to the Parliament and the public.

### Recommendation no.4

5.39 The Clean Energy Regulator refine the design of its performance measurement and reporting framework to ensure it is addressing the requirements of the Commonwealth performance framework to demonstrate progress against its purpose using relevant, reliable and complete performance criteria.

**Clean Energy Regulator's response:** *Agreed.*

5.40 *The Clean Energy Regulator is committed to continuing to mature its performance reporting framework under the Commonwealth performance framework. The findings set out in the report will inform our ongoing efforts to refine and mature our key performance indicators into the future and to ensure they are relevant, reliable and complete. The agency will continue work to address a number of the findings of the report, including the development of robust performance targets, maturing the existing key performance indicators by measuring outcomes and impacts of the agency's performance as well as publishing more detailed information on key performance indicators in its Corporate Plans.*

68 Proxy measures can be used in circumstances where effectiveness may not be measurable, due to cost or a lack of complete information. Consistent with Department of Finance guidance, entities should clarify the reasons why effectiveness cannot be measured and the proxy measures are suitable. (ANAO analysis of the Department of Finance, *Resource Management Guide No.131: Developing good performance information*, April 2015, p. 28.)

69 The qualitative indicators include client satisfaction measures that, although expressed in quantitative terms, are of a qualitative nature. In addition, performance against most quantitative indicators in the annual performance statements includes a qualitative commentary that improves the reader's understanding of the regulator's performance.

## Other performance reporting mechanisms

5.41 The regulator's other annual external performance reporting mechanisms that aid the transparency of, and accountability for, the Renewable Energy Target scheme's achievements are discussed below.

### *Renewable Energy Target Administrative Reports*

5.42 Section 105 of the *Renewable Energy (Electricity) Act 2000* requires the regulator to give the Minister a report on the working of this Act annually for presentation to the Parliament. The Renewable Energy Target Administrative Reports contain a broad range of descriptive information, including emerging trends, and performance metrics (actuals and projections) for the Renewable Energy Target scheme. Performance metrics include:

- annual statistics for, and previous year comparisons of the:
  - number and capacity of small- and large-scale system installations;
  - number of small- and large-scale renewable energy certificates validated;
  - liable entities' achievement of their surrender liabilities for small- and large-scale certificates; and
  - results of the inspections program (see Chapter 4 for further information);
- projections for small- and large-scale installations in the coming years; and
- quantitative and qualitative information on market liquidity — that is, the balance between the supply and demand for certificates that underpins the pricing of renewable energy certificates.

5.43 The Administrative Reports also report on:

- progress towards meeting the 2020 LRET, with the 2017 Administrative Report indicating that there was enough capacity in the large-scale projects firmly announced<sup>70</sup> to meet the LRET target of 33,000 gigawatt hours by 2020; and
- LRET's impact on electricity prices, based on modelling undertaken annually by the Australian Energy Market Commission. The Commission indicated that LRET accounted for an estimated 2.4 per cent (or an average \$8.13 for each quarter) of householders' average electricity bill in 2017.

### *Annual Report*

5.44 In addition to containing the regulator's annual performance statement, the regulator's annual reports summarise the latest financial year achievements of the Renewable Energy Target scheme with the information reported similar to that covered in the scheme's Administrative Reports.

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70 'Firmly announced' projects are those that are either: accredited; under construction; or had a power purchase agreement in place and were expected to reach financial close and begin construction in 2018.

### *Regulator Performance Framework*

5.45 The Regulator Performance Framework, introduced from 2015–16, requires all regulators that administer, monitor or enforce regulation to undertake an annual self–assessment against six common key performance indicators outlined in the framework that articulate the Government’s overarching expectations of regulator performance.

5.46 The six indicators are:

- regulators do not unnecessarily impede the efficient operation of regulated entities;
- communication with regulated entities is clear, targeted and effective;
- actions undertaken by regulators are proportionate to the risk being managed;
- compliance and monitoring approaches are streamlined and coordinated;
- regulators are open and transparent in their dealings with regulated entities; and
- regulators actively contribute to the continuous improvement of regulatory frameworks.

5.47 The Regulator Performance Framework Self–Assessment Report 2016–17 reported that the regulator had achieved every measure under each of the six indicators. The report also identified: the regulator’s achievements against areas of continuous improvement or ongoing focus from the first self–assessment report of the previous year; and areas of continuous improvement or ongoing focus for 2017–18. The contents of the regulator’s Self–Assessment Report 2016–17 were validated by three peak bodies representing a broad cross–section of clients participating in the regulator’s schemes.

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Grant Hehir  
Auditor-General

Canberra ACT  
17 December 2018

## **Appendices**

## Appendix 1 Entity response



Mr Grant Hehir, Auditor-General  
Australian National Audit Office  
GPO Box 707  
Canberra ACT 2601

Dear Mr Hehir

### Administration of the Renewable Energy Target

Thank you for the opportunity to respond to the Australian National Audit Office's (ANAO's) proposed report on the *Administration of the Renewable Energy Target*.

I welcome the report and recommendations, noting positive findings including: the effective arrangements to register renewable energy systems and validate renewable energy certificates; the effective monitoring of the surrender of renewable energy certificates by liable entities and imposition of shortfall charges where surrender liabilities are not met; and the appropriate governance arrangements to manage the risks and operations of the scheme.

The agency accepts all four recommendations, and has already commenced work to implement improvements consistent with the recommendations.

I would like to thank the ANAO for its careful assessment and valuable comments on the administration of the Renewable Energy Target.

Yours sincerely

David Parker AM  
Chair, Clean Energy Regulator  
10 December 2018