IPART Independent Pricing and Regulatory Tribunal | NSW

NSW Energy Savings Scheme Compliance and Operation in 2021

Report to the Minister

July 2022

ESS »

Tribunal Members

The Tribunal members for this report are:

Ms Carmel Donnelly, Chair
Ms Deborah Cope
Ms Sandra Gamble

The Energy Savings Scheme delegated committee members for this report are:

Ms Sandra Gamble, Chair
Mr Christopher Spangaro
Ms Fiona Towers

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The Independent Pricing and Regulatory Tribunal (IPART)

We make the people of NSW better off through independent decisions and advice. IPART's independence is underpinned by an Act of Parliament. Further information on IPART can be obtained from IPART's website.

Acknowledgment of Country

IPART acknowledges the Traditional Custodians of the lands where we work and live. We pay respect to Elders, past, present, and emerging.

We recognise the unique cultural and spiritual relationship and celebrate the contributions of First Nations peoples.

Executive summary

This is the Independent Pricing and Regulatory Tribunal of NSW's (IPART's) annual report to the Minister for Energy and Environment on the NSW Energy Savings Scheme (ESS). This report fulfills our statutory reporting requirements for the 2021 compliance year (1 January to 31 December 2021) and provides an overview of our operations during this period.

The ESS is part of the NSW Electricity Infrastructure Roadmap, the Government's plan to create a cheap, clean, and reliable electricity system and achieve net zero carbon emissions by 2050. Expanding the ESS and establishing the overarching Energy Security Safeguard (Safeguard) is expected to deliver 6 megatonnes per year of carbon emission reductions by 2030.[a]

As Scheme Regulator and Scheme Administrator, we are required to report annually on:

- the extent of compliance by Scheme Participants and Accredited Certificate Providers
- the number of Energy Savings Certificates (certificates) created and surrendered
- the estimated energy savings delivered by the ESS.

In 2021 the ESS continued to achieve its legislative objectives. The objectives of the ESS are to create a financial incentive to reduce energy consumption, greenhouse gas emissions and energy costs to households and businesses. The 2021 energy savings target established a demand for 4,512,439 certificates. This demand provided a financial incentive for Accredited Certificate Providers to create 4,262,581 certificates by implementing energy savings activities.

The number of certificates created in 2021 is less than 2020, which is largely driven by a decrease in activity for the Home Energy Efficiency and Retrofits, Sale of New Appliances and Project Impact Assessment with Measurement and Verification calculation methods. There may be various market drivers for the reduced activity, one of which is the effect of the COVID-19 lockdowns in NSW. This caused reduced access to premises and resulted in less energy savings activities being conducted across all sectors in NSW during 2021.

Around 69% of the certificates created in 2021 were due to energy savings from lighting activities in the commercial, small business and residential sectors.

Figure 1 illustrates how the objectives of the scheme were achieved in 2021.

[a] Department of Planning, Industry and Environment, *Net Zero Plan Stage 1: 2020–2030*

Figure 1 ESS performance against scheme objectives in 2021

Creating financial incentives to reduce energy consumption
The demand for certificates created by the energy savings target provided a financial incentive for Accredited Certificate Providers to carry out energy savings activities – representing 3,921,539 megawatt hours (MWh) of electricity savings and 271,152 MWh of gas savings.

Helping households and businesses reduce energy consumption
We estimate households and businesses reduced their electricity consumption by 3,547,767 MWh and gas consumption by 210,770 MWh in 2021 through energy savings activities implemented under the ESS.

Helping households and businesses reduce energy costs
The estimated bill savings for NSW households and businesses from reduced energy consumption was $574 million. The estimated net cost savings to NSW consumers was $399 million.

Reducing greenhouse gas emissions
3,064,642 tonnes of greenhouse gas emissions were avoided as a direct result of the energy savings realised through the ESS in 2021.

Reducing demand
Energy savings activities implemented under the ESS in 2021 reduced electricity demand, contributing to reducing the cost of and need for additional energy generation, transmission, and distribution infrastructure.

Compliance by Scheme Participants and Accredited Certificate Providers was high. Of the 112 Scheme Participants operating in NSW, 88 met their individual energy savings target for 2021. 24 Scheme Participants did not surrender enough certificates to meet their individual energy savings target, but 11 complied with their energy savings shortfall obligations by electing to carry forward a small shortfall to 2022. The remaining 13 Scheme Participants elected to pay the shortfall penalty.

In 2021, 48 active Accredited Certificate Providers were operating. Corresponding to the reduced activity, the number of audits has decreased. There were also fewer instances of non-compliance identified in 2021. Most of the non-compliance involved improper creation of certificates and there were 5 instances of non-compliance from failing to meet record keeping requirements. While the number of improperly created certificates has increased by around 6,800 certificates (20%), 85% of the improperly created certificates was represented by one project where the Accredited Certificate Provider followed Scheme Administrator published guidance which was incorrect. The Scheme Administrator did not require forfeiture of certificates for this project. The Scheme Administrator also issued 2 penalty notices to one Accredited Certificate Provider in 2021.

The increasing number and diverse nature of Scheme Participants continues to present challenges for regulating their compliance. Similarly, while Accredited Certificate Providers' compliance is generally improving as they become more experienced in the scheme, there are a number of ongoing and emerging compliance issues related to their operations. We are addressing these compliance challenges by increasing our proactive engagement activities, improving our guidance, and better targeting our compliance activity.

We estimate actual electricity savings of 3,547,767 MWh and actual gas savings of 210,770 MWh were realised under the scheme in 2021. In addition, an estimated 17,603,113 MWh of electricity savings and 919,801 MWh of gas savings will be delivered over the next 10 years from energy saving activities implemented since the scheme commenced.

Figure 2 summarises the scheme's performance against key reporting requirements for compliance year 2021.

Future of the ESS

In May 2020, the NSW Government introduced the Safeguard which is part of the *NSW Electricity Strategy* to reach net zero emissions by 2050, the government's plan for a reliable, affordable, and sustainable electricity system. The Safeguard:

- extends the operation of the ESS to 2050,
- includes a new peak demand reduction scheme to reduce energy consumption during hours of peak demand (legislated in September 2021 and due to commence in November 2022), and
- includes a new renewable fuel scheme to increase the production of green hydrogen and other renewable fuels (legislated in December 2021 and due to commence in 2024).

The new ESS Rule commenced in February 2022, expanding the set of eligible activities to allow for the ESS to gradually achieve greater energy savings targets. We will report on scheme performance resulting from these additional activities in our 2022 Annual Report.

Figure 2 ESS performance against statutory reporting requirements during 2021

112

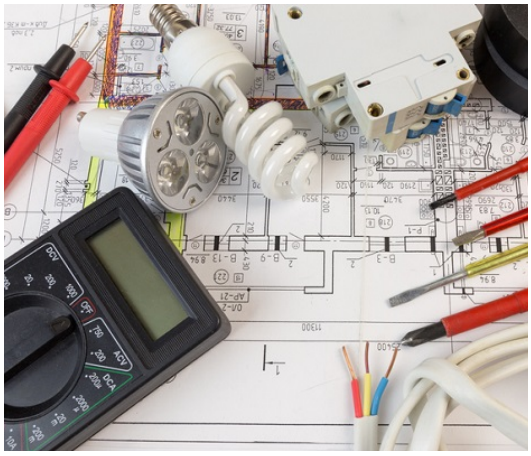
Scheme Participants

79% complied with their individual energy savings target

4.3

million certificates surrendered to meet 96% of overall energy savings target

For the 2021 compliance year, certificate surplus decreased by 6% to 5.4M certificates.



88

Accredited Certificate Providers

Compliance was high

4.3

million certificates created by Accredited Certificate Providers

4.5M notional MWh ESS target for 2021

equivalent to 4.5M certificates

3.9M MWh electricity and 0.3M MWh gas savings realised in 2021

17.6M MWh electricity and 0.9M MWh gas savings to be realised over next 10 years

Most Scheme Regulator and Scheme Administrator functions were delegated to the ESS Committee with some administrative functions delegated to the Secretariat

Contents

Chapter 1

Introduction

An overview of the Energy Savings Scheme, the role of IPART as Scheme Regulator and Scheme Administrator, and the key statutory reporting requirements.

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The *Electricity Supply Act 1995* (Act) requires the Independent Pricing and Regulatory Tribunal of NSW (IPART), as Scheme Regulator of the Energy Savings Scheme (ESS), to provide an annual report to the Minister for Energy and Environment (Minister) by 31 August each year. This report addresses each of our key statutory reporting requirements (**Table 1.1**) and provides an overview of our administration of the ESS.

We have prepared this report for the Minister, key government agencies, and key industry stakeholders (including Scheme Participants, Accredited Certificate Providers, and peak bodies). For readers of this report without a working background knowledge of the scheme, an overview of the ESS, IPART's role in regulating and administering the scheme, the governing legislation and the key reporting requirements is provided below. More detailed information about the ESS is available on our website.

1.1 About the ESS

The ESS is established under Part 1 of Schedule 4A to the Act and creates financial incentives for NSW households and businesses to invest in energy savings activities. Energy savings are achieved by installing new energy saving equipment and appliances, or by improving/replacing existing equipment and appliances with more efficient alternatives. This results in reduced energy consumption in NSW.

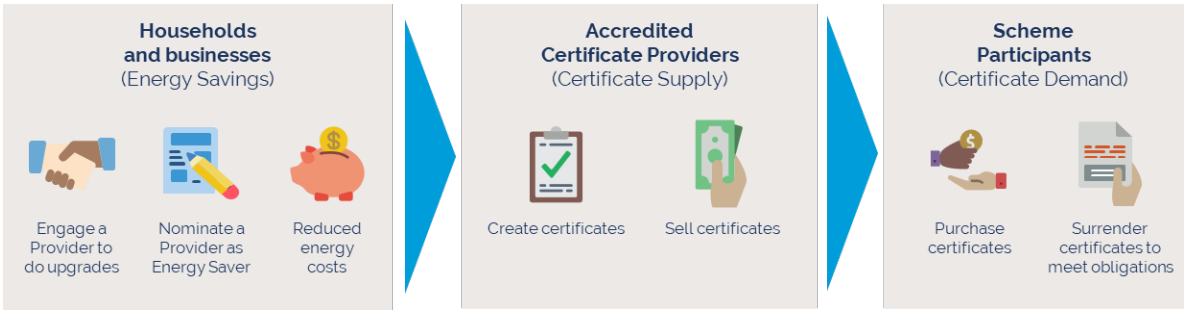
Financial incentives are in the form of tradeable Energy Savings Certificates (certificates). The Act provides for accredited organisations, known as Accredited Certificate Providers, to create certificates from energy saving activities recognised under the scheme. The notional megawatt hours[b] attributed to energy savings activities determines the number of certificates that can be created. This activity creates the supply of certificates.

Under the Act, electricity retailers operating in NSW and other specified parties, known as Scheme Participants, are required to meet an energy savings target each year. The energy savings target for a given year is a percentage of the electricity purchased by Scheme Participants for supply to end use customers in NSW. Schedule 5 of the Act sets out the energy savings targets for each year to 2050. Scheme Participants meet their individual energy savings target by purchasing and surrendering certificates equivalent to their target. This process creates the demand for certificates.

The overall process of the ESS is depicted in **Figure 1.1** and forms an integral part of the NSW Government's Electricity Infrastructure Roadmap. The roadmap is designed to transform NSW's electricity system into a cheap, clean, and reliable electricity system.

[b] A megawatt hour is equivalent to 1 million watts of electricity being used for an hour.

Figure 1.1 Overview of certificate supply and demand process



1.2 Roles within the ESS

1.2.1 Role of IPART

IPART is both the Scheme Regulator and Scheme Administrator for the ESS. The Scheme Regulator role relates to activities of Scheme Participants, while the Scheme Administrator role relates to activities of Accredited Certificate Providers. IPART is responsible for:

- administering the scheme by applying the ESS legislation (section 1.3).
- reporting on the performance of the scheme and its participants to the Minister each year (section 1.4).

As Scheme Regulator, IPART monitors compliance of Scheme Participants with their obligations to meet their individual energy savings targets each year, including through independent audits.

As Scheme Administrator, IPART:

- assesses applications for accreditation to undertake eligible activities and create certificates
- assesses applications to be a Measurement & Verification Professional or member of the Audit Services Panel
- monitors compliance of Accredited Certificate Providers
- monitors the performance of Measurement & Verification Professionals and the Audit Services Panel
- assesses emerging lighting technologies and accepts them for use in the scheme
- manages an online ESS Registry and ESS Portal.

The Tribunal, which comprised Ms Carmel Donnelly as Chair with Ms Deborah Cope and Ms Sandra Gamble as Tribunal Members delegated most of its functions to the ESS Committee,[c] which comprised Ms Sandra Gamble as Chair with Ms Fiona Towers and Mr Chris Spangaro as Committee Members.

[c] Clause 55(4) of Schedule 4A to the Act allows IPART, with the approval of the Minister, to delegate the exercise of its functions as Scheme Regulator and Scheme Administrator to another person or body.

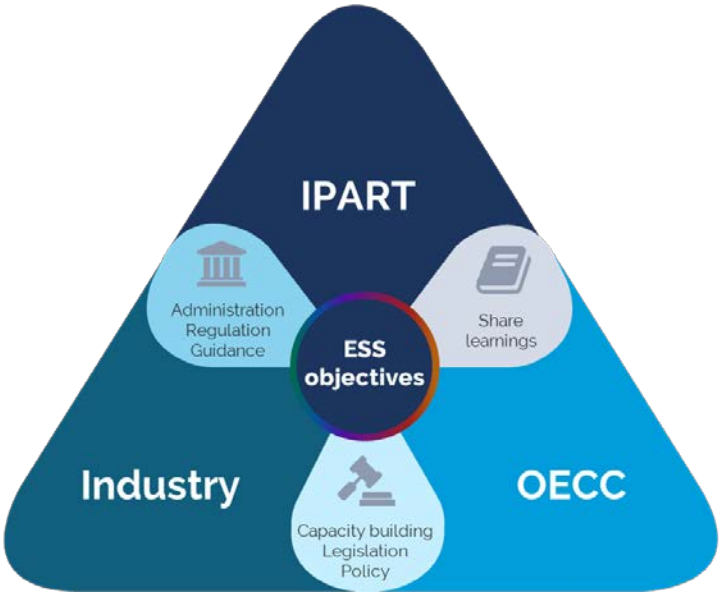
All of the functions of the Scheme Regulator and Scheme Administrator were exercised by the ESS Committee. The ESS Executive Director and ESS Directors performed certain administrative functions delegated to them by the Tribunal for administrative efficiency.

1.2.2 Key stakeholder relationships

Three key stakeholder groups contribute to the successful operation of the scheme (**Figure 1.2**):

- IPART – administers the scheme and regulates participating businesses.
- The NSW Department of Planning and Environment (now the Office of Energy and Climate Change (OECC) within NSW Treasury) – develops the policy behind, and maintains the legislation governing, the scheme.
- Industry – contributes in the roles of Scheme Participants, Accredited Certificate Providers, Measurement and Verification Professionals, members of the Audit Services Panel and through industry peak bodies.

Figure 1.2 ESS stakeholder relationships



1.3 ESS Legislation

We administer the ESS in accordance with 3 key pieces of legislation:

- the *Electricity Supply Act 1995,* which sets out the legal framework of the ESS and the functions and responsibilities of the Scheme Regulator and Scheme Administrator
- the *Electricity Supply (General) Regulation 2014* (Regulation), which supports the Act and describes the core functions of the Scheme Regulator and Scheme Administrator including:
  - for the Scheme Regulator, the principles governing compliance with the individual energy savings targets for Scheme Participants
  - for the Scheme Administrator, the requirements for accrediting and auditing Accredited Certificate Providers, and rules around the creation and transfer of certificates
- the *Energy Savings Scheme Rule of 2009* (ESS Rule), which applies to Accredited Certificate Providers and their energy savings activities and provides details about:
  - eligibility requirements
  - calculation methods for determining the number of certificates that can be created.

1.4 Reporting requirements

The Act sets out the information and data that the Scheme Regulator and Scheme Administrator must report to the Minister. **Table 1.1** lists each statutory reporting requirement, its corresponding clause in Schedule 4A to the Act and where in this report the requirement is addressed.

The Act requires the Scheme Regulator prepare and forward the annual report to the Minister by 31 August each year[d]. The Minister is required to table the report before both Houses of Parliament as soon as practicable after receiving it.

[d] The previous deadline to forward the annual report to the Minister was 31 July each year. This was updated in the Act on 15 December 2021 to be 31 August of each year.

Table 1.1 Statutory reporting requirements

Requirement of the Act	Clause of Schedule 4A	Location in report
Annual reporting requirements		
Scheme Regulator to report to the Minister on the extent to which Scheme Participants have complied with individual energy savings targets	76(1)	Section 2.1
Name of each Scheme Participant and the performance of the Scheme Participant in relation to its individual energy savings target in the year to which the report relates	76(2)(a)	Table 2.2 and Table 2.3
Total number of certificates surrendered in the year to which the report relates	76(2)(b)	Section 2.3
Total number of certificates created in the year to which the report relates	76(2)(c)	Section 4.1
Total number of certificates created in previous years but not yet surrendered	76(2)(c1)	Section 4.1.3
Assessment of the extent of any over or under supply of certificates	76(2)(c2)	Section 4.1.3
Estimate of the actual electricity and gas savings that have been realised by end users under the scheme in the year to which the report relates	76(2)(d)	Section 4.2
Estimate of the actual electricity and gas savings that will be realised by end users under the scheme in the next 10 years (based on the number of certificates created)	76(2)(e)	Section 4.2
Functions delegated by the Scheme Regulator or Scheme Administrator and the person or body to whom they were delegated	76(3)	Section 1.2.1
Other reporting requirements		
Scheme Regulator to report to the Minister on the extent to which Scheme Participants comply with obligations imposed by or under the Act	55(1)(d)	Chapter 2
Scheme Administrator to report to the Minister on the extent to which Accredited Certificate Providers comply with the Act, Regulation, ESS Rule and conditions of accreditation	57(1)(b)	Chapter 3

Chapter 2

Compliance by Scheme Participants

A report on Scheme Participant compliance with individual energy savings targets and obligations under the Act.

02

Scheme Participants include electricity retailers, direct suppliers of electricity and market customers.[e] Each Scheme Participant has legal obligations under the Act (**Box 2.1**) to surrender certificates to meet their individual energy savings target for each compliance year. This target establishes the demand for certificates and creates the financial incentive to reduce energy consumption that underpins the scheme.

A Scheme Participant's individual energy savings target is determined by multiplying their liable acquisitions[f] during the compliance year by the ESS target for the year. In 2021 the ESS target was 8.5% of all electricity purchased for supply to end use customers in NSW. A Scheme Participant must surrender a number of certificates equivalent to their individual energy savings target to comply with the target. A Scheme Participant that does not surrender sufficient certificates has an 'energy savings shortfall' and may be liable to pay a penalty.

In 2021 compliance by Scheme Participants was high. Of the 112 Scheme Participants operating in the scheme (**Table 2.1**), 88 complied with their individual energy savings target. The remaining Scheme Participants elected to either carry forward a small shortfall to 2022 or pay the shortfall penalty.

Table 2.1 Scheme Participants by type

	2017	2018	2019	2020	2021
Retailers	62	71	87	97	**105**
Direct suppliers of electricity	2	2	2	1	**1**
Retailer and direct supplier of electricity	–	–	–	1	**1**
Market customers	1	1	1	3	**5**
Total number of Scheme Participants	**65**	**74**	**90**	**102**	**112**

The number of Scheme Participants continues to rise each year. The increasing number of Scheme Participants presents challenges in regulating their participation in the scheme. We found newer Scheme Participants often do not understand, or are not aware of, their obligations. We continue to increase our support for Scheme Participants to help them understand and meet their compliance obligations. For the 2021 compliance year this included:

- contacting new Scheme Participants of the ESS to advise them on their obligations and provide them with guidance material on meeting their obligations
- facilitating an information session with Scheme Participants to outline their obligations under the ESS and the process and requirements for complying with these obligations
- contacting Scheme Participants prior to the 30 April compliance deadline to remind them of their obligations under the ESS (including audit requirements) and prompt them to submit an Annual Energy Savings Statement or nil return.

[e] Clause 4(2) of Schedule 4A to the Act defines all parties required to participate in the scheme

[f] A liable acquisition is any purchase of electricity by a Scheme Participant for supply to end use customers in NSW (Clause 10 of Schedule 4A to the Act)

Box 2.1 Scheme Participant obligations

To meet their obligations under the Act, each Scheme Participant that has made liable acquisitions in the compliance year must:

- calculate their individual energy savings target for the year
- meet their individual energy savings target by obtaining and surrendering certificates, or alternatively satisfy their obligations by:
  - carrying forward a maximum 10% energy savings shortfall to the following compliance year
  - paying an energy savings shortfall penalty
- lodge their Annual Energy Savings Statement by the compliance deadline, including:
  - the calculation of its individual energy savings target
  - the particulars of its liable acquisitions and any deductions in respect of exempt loads
  - the extent to which it met the target by surrendering certificates
  - any energy savings shortfall it is carrying forward, and
  - any penalty it is required to pay
- lodge an independent audit report of the Annual Energy Savings Statement, if required.[a]

a. An audit is typically required if the Annual Energy Savings Statement includes data about liable acquisitions from non-market sources or seeks exemptions for any electricity loads (see section 2.5). The electricity retailer must obtain details of the exempt load from the exempt entity to claim the exemption.

2.1 Scheme Participants' performance

In 2021 compliance by Scheme Participants with their individual energy savings targets was high (**Table 2.2**). Of the 112 Scheme Participants, 88 complied with their individual energy savings target of which:

- 42 surrendered enough certificates to meet their target,
- 45 had zero liable acquisitions[9],
- one had a very low liability and did not need to surrender any certificates.

[9] One of these was a default assessment by the Scheme Regulator

Of the remaining 24 Scheme Participants,

- 11 complied with their energy savings shortfall obligations by carrying forward a shortfall penalty to 2022 and
- 13 elected to pay a penalty.

Table 2.2 Scheme Participant compliance with individual energy savings target

	2017	2018	2019	2020	2021
Number of Scheme Participants	65	74	90	102	112
Number of Scheme Participants that complied with their individual energy savings target	54	63	73	89	88[a]
Number of Scheme Participants that elected to carry forward an energy savings shortfall	7	8	7	11	11
Number of Scheme Participants that elected to pay a penalty	1	2	10	2	13
Number of Scheme Participants that failed to comply with their energy savings shortfall obligations	3	1	0	0	0

a. Includes 45 Scheme Participants with an individual energy savings target of zero and 1 Scheme Participant with a very low liability.

Table 2.3 summarises the compliance performance of all Scheme Participants with their 2021 individual energy savings target obligations.

Table 2.3 Scheme Participant compliance with individual energy savings target in 2021

Compliance performance	Name of Scheme Participant	
Surrendered sufficient certificates to meet their 2021 individual energy savings target	1st Energy Pty Ltd AGL Sales (Queensland Electricity) Pty Limited AGL Sales Pty Limited AGL South Australia Pty Ltd Alinta Energy Retail Sales Pty Ltd Brighte Energy Pty Ltd Cleanpeak Energy Retail Pty Ltd Click Energy Pty Ltd CovaU Pty Limited CPE Mascot Pty Ltd CSR Building Products Limited Diamond Energy Pty Ltd Discover Energy Pty Ltd Energy Locals Pty Ltd EnergyAustralia Pty Ltd EnergyAustralia Yallourn Pty Ltd Ergon Energy Queensland Pty Ltd GEE Power & Gas Pty Ltd Hanwha Energy Retail Australia Pty Ltd Iberdrola Australia Energy Markets Pty Limited Iberdrola Australia Wallgrove Pty Limited M2 Energy Pty Ltd (trading as Dodo Power & Gas and trading as Commander Power & Gas)	Macquarie Bank Limited Momentum Energy Pty Limited MTA Energy Pty Limited Next Business Energy Pty Ltd OVO Energy Pty Ltd Pooled Energy Pty Limited Powerdirect Pty Ltd Powershop Australia Pty Limited Progressive Green Pty Ltd (trading as Flow Power) Radian Holdings Pty Ltd ReAmped Energy Pty Ltd Shell Energy Retail Pty Ltd Smart Energy Retail Pty Ltd SmartestEnergy Australia Pty Ltd Stanwell Corporation Limited Sunset Power International Pty Ltd (trading as Delta Electricity) Tango Energy Pty Ltd Tomago Aluminium Company Pty Ltd[a,b] WINconnect Pty Ltd Zen Energy Retail Pty Ltd

Compliance performance	Name of Scheme Participant	
Did not directly purchase or sell electricity in NSW in 2021 so their individual energy savings target was zero	ActewAGL Retail (Icon Retail Investments Limited and AGL ACT Retail Investments Pty Ltd) Active Utilities Retail Pty Ltd[b] AGL Macquarie Pty Limited[a] Amber Electric Pty Ltd Apex Energy Holdings Pty Ltd[a] Arc Energy Corporation Pty Ltd Aurora Energy Pty Ltd Balance Commodities and Energy Pty Ltd CleanCo Queensland Limited CleanTech Energy Pty Ltd CS Energy Limited EDL Retail Pty Ltd ElectrAg Pty Ltd Ellis Air Connect Pty Ltd Enel Energy Australia Pty Ltd Energy On Pty Ltd Evergy Pty Ltd EZI Power Pty Ltd Humenergy Group Pty Ltd Iberdrola Australia Holdings Pty Limited International Power (Retail) Pty Limited Localvolts Pty Ltd[a] Lumo Energy (NSW) Pty Ltd Lumo Energy (QLD) Pty Ltd	Lumo Energy (SA) Pty Ltd Lumo Energy Australia Pty Ltd Macarthur Energy Retail Pty Ltd Maximum Energy Retail Pty Ltd Metered Energy Holdings Pty Ltd Microgrid Power Pty Ltd Neighbourhood Energy Pty Ltd OzGen Retail Pty Ltd Positive Energy TM Pty Ltd PowerHub Pty Ltd Powow Power Pty Ltd Real Utilities Pty Limited Rush Energy Pty Ltd Sanctuary Energy Pty Ltd Savant Energy Power Networks Pty Limited Starcorp Energy Pty Ltd Sustainable Savings Pty Ltd Telstra Energy (Retail) Pty Ltd The Embedded Networks Company Pty Ltd Tilt Renewables Australia Pty Ltd Totalenergies Gas & Power Australia Pty Ltd YES Energy (SA) Pty Ltd
Surrendered certificates to meet part of 2021 individual energy savings target and chose to carry forward the remaining energy savings shortfall to 2022	Blue NRG Pty Ltd Cogent Energy Pty Ltd Electricity in a Box Pty Ltd Energy Services Management Pty Ltd Enova Energy Pty Ltd OC Energy Pty Ltd	Online Power and Gas Pty Ltd (trading as Future X Power) Origin Energy Electricity Limited Red Energy Pty Limited Simply Energy (IPower Pty Ltd and IPower 2 Pty Ltd) Sun Retail Pty Ltd
Chose to carry forward a shortfall to 2022 and elected to pay an energy savings shortfall penalty against their remaining energy savings shortfall	Altogether Group Pty Ltd Bright Spark Power Pty Ltd Darlington Point Solar Farm Pty Ltd Elysian Energy Pty Ltd GloBird Energy Pty Ltd Locality Planning Energy Pty Ltd Mojo Power Pty Ltd	Mojo Power East Pty Ltd (formerly People Energy Pty Ltd) Power Club Limited QEnergy Limited Social Energy Australia Pty Ltd Sumo Power Pty Ltd The Trustee for Finley Solar Trust

a. This Scheme Participant had a very low liability and did not need to surrender any certificates.

Six Scheme Participants failed to comply with their other obligations under the Act. Five lodged their Annual Energy Savings Statement (or nil return) after the due date of 30 April 2022. One Scheme Participant did not submit an Annual Energy Savings Statement (or nil return).

A Scheme Participant that fails to lodge an Annual Energy Savings Statement (or nil return) in accordance with the Act is guilty of an offence and may be liable for a penalty.

The Scheme Regulator did not take compliance action for the five late submissions for this year, because these Scheme Participants either submitted their Annual Energy Savings Statement after one reminder or without being prompted, and the impact on compliance with the overall energy savings target was minimal.

No action was taken against the Scheme Participant that did not lodge an Annual Energy Savings Statement as it was assessed as having zero liability.[h]

Table 2.4 Scheme Participant compliance with other obligations

	2017	2018	2019	2020	2021
Number of Scheme Participants	65	74	90	102	112
Number of Scheme Participants that complied with other obligations	60	70	78	95	106
Number of Scheme Participants that failed to comply with other obligations	5	4	7	7	6

2.2 Annual Energy Savings Statement audits

Scheme Participants are required to have their Annual Energy Savings Statement audited when the statement includes an exempt electricity load claim or non-market acquisitions. Members of the ESS Audit Services Panel conduct these audits to confirm market liable acquisitions, non-market liable acquisitions and exemption claims, as well as general inputs and calculations. Audit reports must be submitted with the Scheme Participant's Annual Energy Savings Statement by 30 April each year.

In 2021 the Annual Energy Savings Statements of 47 Scheme Participants were audited. The audits of the 47 Scheme Participants covered 99% of the total liable acquisitions for the compliance year.

Five Scheme Participants submitted their audit reports separately to their Annual Energy Savings Statements, after seeking prior approval for an extension to 6 May 2022. All other audit reports were submitted by the due date. The standard of the finalised audit reports was acceptable. Auditors found some input errors, which were mostly corrected before Annual Energy Savings Statements were submitted. One error was identified after submission of the Annual Energy Savings Statement, and this resulted in an amended assessment.

2.2.1 Failure to audit Annual Energy Savings Statements

In 2021 two Scheme Participants failed to have their Annual Energy Savings Statements audited despite not meeting the exemption criteria. The Scheme Regulator did not take any compliance action for the 2021 Compliance year for these two Scheme Participants and assessed their Annual Energy Savings Statements and supporting information through desktop review.

Both Scheme Participants were issued a notice advising them that they are required to conduct an audit of their 2022 Annual Energy Savings Statements under clause 55 of the *Electricity Supply (General) Regulation 2014*.

[h] The Scheme Regulator performed a default assessment of this Scheme Participant under clause 33 of the Act and determined that they would be a nil return – i.e. have a shortfall of Nil notional MWh and is not liable for an energy savings shortfall penalty.

2.2.2 Amended and default assessments

The Scheme Regulator amended one Energy Savings Statement due to errors identified after its submission on 30 April.

One Scheme Participant failed to lodge an Energy Savings Statement. The Scheme Participant was issued a reminder notice prior to the lodgement deadline. This Scheme Participant had market acquisitions of zero MWh. Therefore, the Scheme Administrator made a default assessment for a nil return.

2.3 Certificates surrendered

The energy savings target for 2021 was 4,512,439 certificates. 95.8% of the 2021 energy savings target has been met by surrendering certificates. Scheme Participants:

- Surrendered 4,324,637 certificates to comply with this target (95.8%)
- Carried forward to 2022 a shortfall of 167,505 certificates (3.7%)
- Have an energy savings shortfall of 20,904 certificates, (0.5%) for which a penalty will be issued.

In additional Scheme Participants carried forward a shortfall from 2020 of 235,855 certificates. Scheme Participants:

- Surrendered 235,248 certificates to meet this shortfall,
- Have an energy savings shortfall of 607 certificates, for which a penalty will be issued.

Four Scheme Participants surrendered a total of 55,000 surplus certificates. These were not accepted by the Scheme Regulator and were returned to the Scheme Participants.

A total of 4,559,885 certificates were surrendered by Scheme Participants in 2021. **Table 2.5** reconciles the certificates surrendered with the 2021 energy savings target.

Table 2.5 Reconciliation of certificates surrendered by Scheme Participants in 2021

Reconciliation of certificates	
Certificates required to meet 2021 energy savings target	**4,512,439**
Add: Certificates required to meet shortfalls carried forward from 2020[a]	235,855
Less: Shortfall carried forward to 2022[b]	(167,505)
Less: Certificate equivalent value of penalties to be paid[b]	(20,904)
Total certificates surrendered by Scheme Participants	**4,559,885**

a. Discussed in section 2.4.2
b. Discussed in section 2.4.1

2.4 Energy savings shortfalls

When a Scheme Participant does not surrender sufficient certificates to meet their individual energy savings target, there is an energy savings shortfall. A Scheme Participant may elect to carry forward a shortfall of up to 10% of their target to the following year. Any shortfall carried forward must be met in the following compliance year. Alternatively, the Scheme Participant must pay a shortfall penalty.

2.4.1 Shortfalls for current compliance year

In 2021, 24 Scheme Participants had energy savings shortfalls. The total energy savings shortfall was 4.2% of the overall energy savings target, equivalent to 188,409 certificates.

Eleven Scheme Participants elected to carry forward an energy savings shortfall to 2022. This represented a total obligation of 167,505 certificates or approximately 3.7% of the overall energy savings target for 2021. This is less than the 5.2% carried forward in 2020 and more the 2.3% carried forward in 2019.

Thirteen Scheme Participants elected to pay an energy savings shortfall penalty. The total penalty payments are equivalent to 20,904 certificates, or approximately 0.5% of the overall energy savings target for 2021. Compliance by these Scheme Participants with their 2021 obligations will be reported in our 2022 annual report.

While the number of Scheme Participants electing to pay the energy savings shortfall has increased from 2020, the total number of certificates paid by penalty is less than 1% of the overall energy savings target.

2.4.2 Shortfalls from previous compliance year

In 2020 10 Scheme Participants elected to carry forward an energy savings shortfall to the 2021 compliance year. Of these:

- 9 Scheme Participants surrendered a total of 235,248 certificates to remedy their 2020 shortfall
- One Scheme Participant has not surrendered certificates to remedy their 2020 shortfalls totalling 607 certificates. This Scheme Participant was issued a penalty invoice for the outstanding shortfall.

2.4.3 Penalties from previous compliance years

For the 2020 compliance year, 6 Scheme Participants had outstanding shortfall penalties from previous compliance years totalling $578,835. All Scheme Participants have since repaid their outstanding debt.

For the 2019 compliance year, 5 Scheme Participants were granted an extension to pay their energy savings shortfall penalty by 30 June 2021 as part of the COVID-19 concessions offered to Scheme Participants in 2019, All of these penalties have since been repaid.

2.5 Deductions for exempt loads

The Minister can grant exemptions from the ESS for part of the electricity load used by entities in emissions intensive and trade exposed industries or activities.[i] Some emissions intensive and trade exposed activities are constrained in the ability to pass through carbon costs due to international competition. The intention of the exemption is to ensure the regulatory costs associated with the ESS do not impact these activities and place them at a competitive disadvantage.

Exempt activities and locations are listed in a Ministerial Order published each year in the Government Gazette.[j] Scheme Participants that supply electricity to entities for exempt activities at these locations can deduct the exempt portion of their sales when calculating their annual liable acquisitions, which reduces their individual energy savings target.

During 2021, 20 entities claimed exemptions for 26 locations (all with 90% exemptions of their load). Various manufacturing activities are undertaken at these locations, including aluminium smelting; integrated iron and steel manufacturing; and the production of various chemicals, and glass and paper products.

Twelve Scheme Participants supplied electricity to these entities at these locations. In total, Scheme Participants claimed deductions for exempt loads of 10,780,385 MWh, equivalent to 17.6% of the total electricity supplied in NSW in 2021. This is higher than the exempt load deductions claimed in 2020 which was around 16.7%.

[i] Clause 22 of Schedule 4A to the Act.

[j] The Ministerial Order lists each exempt entity (company or business name), the trade exposed activity it undertakes, the site where the activity takes place, and the proportion of the load that is exempt under the ESS (90% for all loads in 2021). The amended Ministerial Order for 2021 was published on 16 July 2021 (NSW Government Gazette no. 319 of 2021) and replaces the Ministerial Order previously published on 23 December 2020.

Chapter 3

Compliance by Accredited Certificate Providers

A report on the extent to which Accredited Certificate Providers complied with the Act, the Regulation and the ESS Rule.

03

Accredited Certificate Providers are voluntary participants of the ESS and include all organisations accredited to create certificates from recognised energy saving activities in NSW. Accredited Certificate Providers have a range of legal obligations under the Act, Regulation and ESS Rule (**Box 3.1**). We actively monitor Accredited Certificate Provider's compliance with these obligations. A major focus of our compliance activity is the use of audits to provide assurance over certificates created for energy savings. We also receive and act on information from other sources, including customers. Where we detect non-compliance, we act to protect the integrity of the ESS.

In 2021 the level of compliance by most Accredited Certificate Providers was high. As in previous years, most identified non-compliances related to improper creation of certificates. Typical reasons for improper creation in 2021 are discussed further in section 3.2.1. **Table 3.1** summarises the numbers of Accredited Certificate Providers and accreditations for the period 2017 to 2021.

Table 3.1 Accredited Certificate Providers and accreditations

	2017	2018	2019	2020	2021
Accredited Certificate Providers[a]	91	93	91	88	88
Active Accredited Certificate Providers[b]	56	63	56	50	48
Accreditations[a]	175	172	177	177	182
Active accreditations[c]	77	93	82	81	86
New accreditations	26	15	13	8	11
Cancelled accreditations	22	18	8	8	6

a. At 31 December of the calendar year.
b. Active Accredited Certificate Providers are those that registered certificates in 2021.
c. Active accreditations are those for which the Accredited Certificate Provider registered certificates for implementations conducted in 2021.

Box 3.1 Accredited Certificate Provider obligations

An Accredited Certificate Provider's key obligations include complying with:

- The requirements of the Act, Regulation and ESS Rule
- The conditions of accreditation set out in its Accreditation Notice, such as engaging an auditor to undertake the audit of its certificate creation and record keeping.

The Act sets out offences relating to non-compliance with these obligations, including:

- improperly creating certificates (clause 36 of Schedule 4A)
- contravening the conditions of accreditation (clause 41 of Schedule 4A)
- obstructing the Scheme Administrator (clause 60 of Schedule 4A)
- supplying false or misleading information (clause 61 of Schedule 4A).

3.1 Audits of Accredited Certificate Providers

Audits of Accredited Certificate Providers help us regulate compliance (**Box 3.2**). We use pre-registration and post-registration audits to provide assurance that certificates will be or have been created in accordance with the legislation.

In 2021 the Audit Services Panel conducted 107 audits of Accredited Certificate Providers, covering 71 accreditations.

Table 3.2 Audits of Accredited Certificate Providers

	2017	2018	2019	2020	2021
Post-registration – volumetric	47	60	75	74	**50**
Post-registration – periodic	20	15	12	11	**13**
Post-registration – spot	0	0	2	0	**0**
Pre-registration	40	55	54	49	**43**
Record keeping	2	1	2	1	**1**
Total number of audits	**109**	**131**	**145**	**135**	**107**

In 2021 the number of audits decreased substantially compared to previous years. Our assessment is that this is due to several factors, including:

- an increase in certificate creation limits of Accredited Certificate Providers on volumetric audit regimes
- a reduction in activity for many Accredited Certificate Providers, possibly as a result of COVID-19, and
- cancellation of a number of accreditations which have reached the end of the eligible lifespan for certificate creation,

These outcomes generally result in audits being conducted less frequently or deferred due to lower activity. Cancelled accreditations may be replaced by new accreditations, however the early stages of an accreditation may result in lower activity as a new Accredited Certificate Provider may take time to understand their obligations under the ESS and develop their business operations.

Box 3.2 How we regulate Accredited Certificate Providers' compliance

All Accredited Certificate Providers are subject to auditing and reporting requirements as conditions of accreditation. We determine these requirements using a risk-based approach which includes assessing the compliance performance of the Accredited Certificate Provider and referring to our *Accredited Certificate Provider Compliance Guide.*[a]

We have four types of audit regimes but we typically impose a pre-registration or volumetric audit regime. Pre-registration audits are conducted before certificates can be registered. Volumetric audits are conducted after certificates have been registered. There is a limit to the number of unaudited certificates that can be registered and audits must be conducted at least once every 12 months. All audits are conducted by members of the Audit Services Panel.

Applicants are typically required to give an undertaking[b] by withholding or setting aside a percentage of unaudited certificates. This is to mitigate the risk of transferring improperly created certificates in the market. If we have identified improper certificate creations through an audit, Accredited Certificate Providers must forfeit withheld certificates.

We may also:

- order an Accredited Certificate Provider to forfeit certificates for non-compliance
- amend conditions of accreditation
- suspend or cancel accreditations, and
- issue penalty notices in certain circumstances.

a. Prior to the introduction of mandatory set-aside undertakings under clause 40 of the Regulation in 2016, we requested Accredited Certificate Providers enter into a voluntary deed, which has the same requirements.
b. The portion to be set aside starts at 10% and is adjusted in response to audit outcomes.

3.2 Accredited Certificate Providers' performance

In 2021 we identified 37 instances of non-compliance by Accredited Certificate Providers. **Table 3.3** provides a breakdown of the types of non-compliance detected.

Table 3.3 Non-compliance by Accredited Certificate Providers

Type of non-compliance[a]	2017	2018	2019	2020	2021
Improper creation of certificates (clause 36 of Schedule 4A to the Act)	49	51	63	56	**32**
Failure to meet record keeping requirements (clause 46 of the Regulation)	4	2	2	2	**5**
Failure to engage an auditor by the required deadline (clause 41 of Schedule 4A to the Act)	4	0	2	3	**0**
Failure to meet other Accreditation Notice conditions (clause 41 of Schedule 4A to the Act)	2	0	0	0	**0**
Total	**59**	**53**	**67**	**61**	**37**

a. The statistics provided in this table reflect decisions made by the Scheme Administrator.

We address instances of non-compliance through various actions. In some instances, we impose accreditation conditions, such as requiring pre-registration audits of the proposed certificate creation or reducing the number of certificates that can be registered before an audit is required.[k] In more serious cases of non-compliance, we may refer the matter to an enforcement officer to consider whether enforcement action is required.

We identified 32 instances of improper creation of certificates in 2021, involving 41,323 certificates of various vintages. These improperly created certificates are equivalent to 1.0% of all certificates created from 2021 activities. 3 of these instances were material[l], accounting for 90% of the total number of improperly created certificates.

Table 3.4 Improper creation of certificates identified in 2021[a]

Type of error and means of identification	Number of instances[b]	Certificates improperly created
Material improper creation identified by audit	3	36,993
Non-material improper creation identified by audit	28	4,328
Improper creation identified by other means	1	2
Total	**32**	**41,323**

a. Improper creation of certificates identified in 2021 involved certificates of various vintages.
b. An audit or review that identifies improper creation is reported as a single instance. An instance may include multiple cases of improper creation (e.g. an audit might identify multiple projects with instances of improper creation however it is reported as only one instance).

[k] Most Accredited Certificate Providers are on volumetric audit regimes that limit the number of certificates they can be create between audits.

[l] A material error can either be quantitative or qualitative. A quantitative material error is when the absolute error rate (as determined by the auditor) is greater than or equal to 5%. A qualitative material error typically relates to issues identified by the auditor that reduce their confidence that the auditee has adequate systems in place to support certificate creation.

Fewer instances of non-compliance were identified in 2021 compared to 2020, however there are 6,830 more certificates improperly created compared to the 34,493 improperly created certificates identified in 2020. 89% of the improperly created certificates were from one Accredited Certificate Provider (discussed further in section 3.2.2).

3.2.1 Reasons for improper creation

Typical reasons for non-compliance included Accredited Certificate Providers:

- not meeting the requirements of the method used to calculate the energy savings, which most commonly involved:
  - incorrect classification of space types under the Commercial Lighting Energy Savings Formula method
  - incorrect classification of small business sites under the Home Energy Efficiency Retrofits method
  - failing to meet the co-payment requirement under either the Commercial Lighting Energy Savings Formula method or the Home Energy Efficiency Retrofits method
  - creating additional certificates under the Project Impact Assessment Method from projects for which the Accredited Certificate Provider was not eligible to create additional certificates
- not providing sufficient or consistent evidence to support claims for certificate creation (including modifying evidence)
- creating certificates before the project's implementation date or before accreditation
- not being nominated as the energy saver on or before the implementation date.

3.2.2 Material instances of improper creation identified by audit

Through post-registration audits, we identified 3 material instances of improper creation involving 2 Accredited Certificate Providers (**Table 3.5**). These instances resulted in the improper creation of 36,993 certificates, or 1.0% of all certificates created in 2021.

Table 3.5 Material instances of improper creation identified by audit in 2021

Accredited Certificate Provider	Accreditation method	Improperly created certificates	Error rate (%)	Certificate forfeiture
E-Lite Australasia Pty Ltd	Deemed Energy Savings Method - Home Energy Efficiency Retrofits	386	9.1	0
Shell Energy Engineering Pty Ltd	Project Impact Assessment Method	35,127	76.3	0
Shell Energy Engineering Pty Ltd	Project Impact Assessment Method	1,480	20	1,480

We account for mitigating factors when considering whether certificate forfeiture is required. The Scheme Administrator did not require certificates to be forfeited in some instances.

E-Lite Australasia Pty Ltd

E-Lite Australasia Pty Ltd (E-Lite) was found to have improperly created 386 certificates using the Commercial Lighting Method calculation method. Evidence provided in the audit showed that the implementation dates for several projects were prior to the nomination date. The Scheme Administrator considered the non-compliance was due to inadequate record keeping processes to support certificate creation. E-Lite accepted the audit findings and responded positively to the audit recommendations. Since there was no suggestion that the energy savings were not genuine and the Scheme Administrator was satisfied that E-Lite's projects were nominated prior to the implementation, the Scheme Administrator did not require E-Lite to surrender certificates for the improper creation of certificates.

Shell Energy Engineering Pty Ltd

Shell Energy Engineering Pty Ltd (Shell)[m] were found to have improperly created a total of 36,607 certificates across 2 Project Impact Assessment Method audits. For one audit, Shell improperly created 35,127 certificates. This audit identified that energy savings from other energy savings upgrades were incorrectly included in the modelled energy savings. Since Shell had followed Scheme Administrator published guidance on this matter, which was inconsistent with the ESS Rule, the Scheme Administrator did not require forfeiture. To prevent future improper certificate creation, we have engaged with industry stakeholders to collaboratively update our guidance, ensuring that it both reflects the requirements of the ESS Rule and provides improved clarity for Accredited Certificate Providers.

For the remaining improperly created 1,480 certificates, the audit identified that Shell was ineligible to create additional energy savings for 4 projects. Shell has subsequently forfeited all 1,480 certificates.

3.2.3 Instances of non-material improper creation identified by audit

There were 28 instance of non-material improper creation identified through audit resulting in 4,328 certificates improperly created. 4,260 certificates (around 98%) have been forfeited and recovered. The Scheme Administrator did not require the Accredited Certificate Provider to surrender the remaining 78 certificates.

3.2.4 Instances of improper creation identified by other means

There was one instance of improper creation was identified by the Accredited Certificate Provider through its own internal review process. The Accredited Certificate Provider revised the certificate claim and voluntarily forfeited the 2 certificates identified as being over-claimed.

[m] Formerly ERM Power Engineering Pty Ltd.

3.2.5 Other non-compliance due to failure to meet other obligations

Excluding E-Lite, we identified 2 other material instances where the Accredited Certificate Provider failed to keep records required under the Act, Regulation, and their conditions of accreditation. In both cases, we required the Accredited Certificate Provider to detail the steps they would undertake to rectify the issue, and that their next audit examine whether it had implemented these actions.

We also identified 2 material instances where the Accredited Certificate Providers had systemic issues with quality assurance. These systemic issues resulted in incorrect energy savings factors used for certificate creation. We required the Accredited Certificate Providers to rectify this issue by their next audit.

3.2.6 Material errors identified by pre-registration audit

Four pre-registration audits (**Box 3.2**) identified material errors in the number of certificates Accredited Certificate Providers proposed to create. This was equivalent to 7,910 certificates. As a result of pre-registration audits, we avoided the improper creation of these certificates, demonstrating the effectiveness of pre-registration audits as a tool for mitigating improper creation.

3.2.7 Penalty notices issued

In January 2021 an IPART enforcement officer issued two penalty notices to Versace Low Energy Pty Ltd – a $20,000 penalty notice for the improper creation of certificates and a $2,500 penalty notice for contravention of the Energy Savings Scheme Rule. The penalty notices were issued for offences which occurred in the 2020 reporting period and are therefore not captured in the data above.

The first penalty notice related to incorrectly classifying the building space type for a lighting upgrade. Versace conducted a lighting upgrade in an office space but claimed certificates for a manufacturing space. By improperly modifying the space type, Versace was able to create a greater number of certificates than they were entitled to for the project.

The second penalty notice related to modifying the Lamp Circuit Power (LCP) variable when calculating baseline consumption for a lighting upgrade. Versace improperly adjusted the LCP inputs to meet the co-payment requirements. Accredited Certificate Providers are required to enter accurate information into calculations and are not permitted to alter calculation inputs.

3.2.8 Administrative reviews of compliance and enforcement actions

Accredited Certificate Providers can request an administrative review of some types of compliance and enforcement actions. Administrative reviews allow for the reconsideration of an original decision. This review can be performed internally or externally through the NSW Civil & Administrative Tribunal (NCAT).

In October 2020, IPART issued an order requiring Versace LED Low Energy to surrender 2,606 of certificates identified as being improperly created. Versace contested this order through NCAT. On 7 December 2021 NCAT ordered, with Versace's consent, that Versace must surrender 2,200 Energy Savings Certificates. Versace surrendered all 2,200 certificates on 20 December 2021.

Chapter 4

Scheme performance

A report on the number of certificates created and surrendered, the certificate surplus and the estimated energy savings delivered by the scheme.

04

Each year we analyse the supply and demand of certificates and energy savings achieved from certificate creation. This information also allows us to assess the scheme's performance against the scheme objectives. In 2021 the ESS continued to achieve the objectives set out in the Act[n] by:

- **Creating financial incentives to reduce energy consumption:** The energy savings target was 8.5% of all electricity purchased for supply to NSW end use customers in 2021. This is equivalent to 4,512,439 notional megawatt hours or 4,512,439 certificates.[o] This demand for certificates provided a financial incentive for Accredited Certificate Providers to create 4,262,581 certificates. These 2021 vintage certificates represented 3,921,539 MWh of electricity savings and 271,152 MWh of gas savings.[p]
- **Helping households and businesses reduce energy consumption and costs:** Households and businesses reduced electricity consumption by 3,547,767 MWh and gas consumption by 210,770 MWh in 2021 through energy savings activities implemented under the scheme. The estimated cost savings for NSW consumers was $399 million.[q]
- **Reducing greenhouse gas emissions:** 3,064,642 tonnes[r] of greenhouse gas emissions were avoided as a direct result of the energy savings realised through the ESS in 2021. This result complements carbon reduction schemes by making targeted greenhouse gas reductions achievable at lower cost.
- **Reducing demand:** Investment in innovative and varied energy savings activities reduced the demand for electricity in 2021. This contributed to reducing the cost of and need for additional energy generation, transmission, and distribution infrastructure.

4.1 Certificate supply and demand

In 2021 4,262,581 certificates were created by Accredited Certificate Providers, this is 14% less than in 2020. The number of certificates created was 7% less than the number of certificates surrendered in 2021 (4,581,448 certificates), resulting in a 6% decrease in the certificate surplus. There may be various market drivers for the reduced activity, one of which is the effect of the COVID-19 lockdowns in NSW.

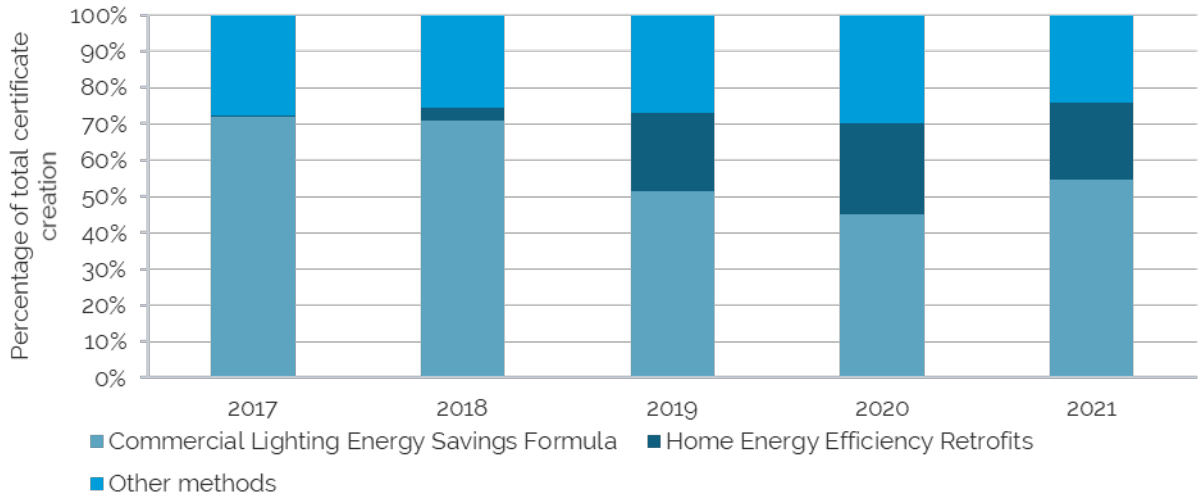
[n] The objectives of the ESS are specified in clause 1 of Schedule 4A to the Act.
[o] Number of certificates required to meet the ESS target after deducting allowed exemptions.
[p] To calculate certificates, the electricity and gas savings achieved (in MWh) are multiplied by the relevant certificate conversion factor (1.06 for electricity and 0.39 for gas) as per clause 33 and clause 33A of Schedule 4A to the Act.
[q] Net savings is based on estimated bill savings from reduced energy consumption, less charges passed through by electricity retailers ($129–$175 million).
[r] Based on full fuel cycle factors in Department of Industry, Science, Energy and Resources, National Greenhouse Account Factors 2021, August 2021.

4.1.1 Certificate creation by calculation method

As in previous years, the majority of certificates created in 2021 were due to energy savings from lighting activities in the commercial, small business and residential sectors (**Table 4.1**). Before 2019 almost all of this creation came from commercial lighting activities under the Commercial Lighting Energy Savings Formula method[s] (**Table 4.2**). However, from 2017 to 2020 there was a significant growth in the proportion of lighting activity under the Home Energy Efficiency Retrofits method, followed by a slight decrease in 2021.

In 2021 the number of certificates created using the Commercial Lighting Energy Savings Formula method increased by 4% compared with 2020 and represented 55% of the total certificates created. The number of certificates created from lighting activities under the Home Energy Efficiency Retrofits method decreased by 28% compared with 2020 and represented 21% of the total certificates created. Certificate creation activity across other methods and project types remained relatively consistent with previous years. **Figure 4.1** illustrates the changing proportions of activity under the various other methods.

Figure 4.1 Percentage of certificate creation from lighting activities



[s] ESS calculation methods are described in **Box 4.2**.

Table 4.1 Number of certificates created by project type

Project type	2009–2018[b]	2019	2020	2021	Total
Lighting	20,806,085	3,136,404	3,154,686	**2,925,048**	30,022,223
Multiple Activities[a]	2,165,938	666,392	734,358	**609,549**	4,176,237
New Appliances	1,332,755	380,251	448,878	**211,023**	2,372,907
Process Change/Control Systems	1,898,720	117,257	141,788	**150,257**	2,308,022
Heating, Ventilation and Air-conditioning	619,080	194,317	88,373	**58,648**	960,418
Home Retrofit	5,139	265,271	277,745	**256,839**	804,994
Showerheads	728,025	0	0	**0**	728,025
Building Upgrade	395,504	38,655	21,607	**13,373**	469,139
Refrigeration	276,972	27,941	48,235	**17,668**	370,816
Compressed Air	224,780	1,734	8,530	**0**	235,044
Fans/Pumps	196,452	4,906	23,901	**6,782**	232,041
Refrigerator & freezer removal	143,796	0	0	**0**	143,796
Air Handling Fans Ventilation	45,889	23,515	14,127	**13,394**	96,925
Power Systems	47,017	5,795	0	**0**	52,812
Ind Refrigeration and Freezing	14,113	0	0	**0**	14,113
High Efficiency Motors	5,539	0	0	**0**	5,539
Power Factor Correction	228	0	0	**0**	228
Total	**28,906,032**	**4,862,438**	**4,962,228**	**4,262,581**	**42,993,279**

a. Multiple activities may also include lighting activities completed under the Home Energy Efficiency Retrofits method.

b. Previous ESS Annual Reports provide a breakdown of the number of certificates created during these years.

Note. Figures are rounded to nearest integer (this rounding may result in 'zero' certificates for some years with small certificate creation). Totals may not add exactly due to rounding. Small differences in data compared with previous annual reports reflect forfeited certificates after the report was released.

Table 4.2 Number of certificates created by energy savings calculation sub-method[a]

Calculation method	2009–2018[b]	2019	2020	2021	Total
Deemed Energy Savings Method					
Commercial Lighting Energy Savings Formula	20,362,412	2,493,486	2,240,971	**2,329,395**	27,426,264
Home Energy Efficiency Retrofits	200,265	1,055,148	1,246,855	**897,651**	3,399,919
Sale of New Appliances	1,321,990	350,169	385,763	**191,256**	2,249,178
Default Savings Factors	732,854	0	0	**0**	732,854
Public Lighting Energy Savings Formula	104,955	113,326	266,992	**211,779**	697,052
Installation of High Efficiency Appliances for Businesses	44,647	55,710	107,935	**99,292**	307,584
Removal of Old Appliances	143,796	0	0	**0**	143,796
High Efficiency Motor Energy Savings Formula	1,569	0	0	**0**	1,569
Power Factor Correction Energy Savings Formula	228	0	0	**0**	228
1-for-1 Residential Downlight Replacement	0	0	0	**0**	0
Metered Baseline Method					
Baseline per unit of output	2,262,671	159,229	156,211	**177,944**	2,756,055
Normalised baseline	921,039	150,468	23,527	**47,284**	1,142,318
NABERS baseline	347,612	14,518	13,200	**6,533**	381,863
Baseline unaffected by output	144,082	8,137	1,212	**0**	153,431
Aggregated metered baseline	0	0	0	**0**	0
Project Impact Assessment Method	1,598,107	50,585	48,940	**37,600**	1,735,232
Project Impact Assessment with Measurement and Verification Method	719,805	411,662	470,622	**263,847**	1,865,936
Total	28,906,032	4,862,438	4,962,228	**4,262,581**	42,993,279

a. **Box 4.2** explains the calculation methods. Methods for which certificates are yet to be created are not included in this table.

b. Previous ESS Annual Reports provide a breakdown of the number of certificates created during these years.

Note. Figures are rounded to nearest integer (this rounding may result in 'zero' certificates for some years with small certificate creation). Totals may not add exactly due to rounding. Small differences in data compared with previous annual reports reflect forfeited certificates after the report was released.

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4.1.2 Certificate surrender

In 2021, 4,559,885 certificates were surrendered by Scheme Participants. Of these, 4,324,637 were surrendered by Scheme Participants to meet their individual energy savings targets for 2021 and 235,248 were surrendered to remedy shortfalls carried forward from 2020 (section 2.3).

There were 21,563 certificates voluntarily surrendered by the Department of Planning, Industry and Environment as part of its Small Business Upgrade Program – taking the total number of certificates surrendered in 2021 to 4,581,448.

4.1.3 Cumulative certificate surplus

At 30 June 2022 the certificate surplus was 5,338,566 certificates of 2021 vintage or older.[t] These certificates are available for surrender in future compliance years (**Table 4.3**). Typically, the surplus rises throughout the year as Accredited Certificate Providers register certificates and falls sharply in March/April of the following year when Scheme Participants surrender certificates to meet their compliance obligations (**Figure 4.2**).

Table 4.3 Supply and surplus of certificates

Year	Net certificates created[a]	Certificates surrendered	Revived certificates	Surplus for the compliance year	Cumulative surplus
2009	276,942	148,928	0	128,014	128,014
2010	764,385	651,655	0	112,730	240,744
2011	1,079,407	1,063,564	0	15,843	256,587
2012	2,553,627	1,885,240	0	668,387	924,974
2013	4,121,802	2,491,055	0	1,630,747	2,555,721
2014	3,023,249	2,700,190	26,603	349,662	2,905,383
2015	2,971,703	2,706,669	0	265,034	3,170,417
2016	4,280,155	3,766,762	0	513,393	3,683,810
2017	4,686,092	4,063,989	0	622,103	4,305,913
2018	5,148,670	4,331,734	0	816,936	5,122,849
2019	4,862,438	4,866,779	0	-4,341	5,118,508
2020	4,962,228	4,458,119	34,816	538,925	5,657,433
2021	**4,262,581**	**4,581,448**	**0**	**-318,867**	**5,338,566**

a. Small differences in data compared with previous annual reports reflect certificates forfeited after the reports were released. In 2021 12,888 certificates were voluntarily forfeited by Accredited Certificate Providers.

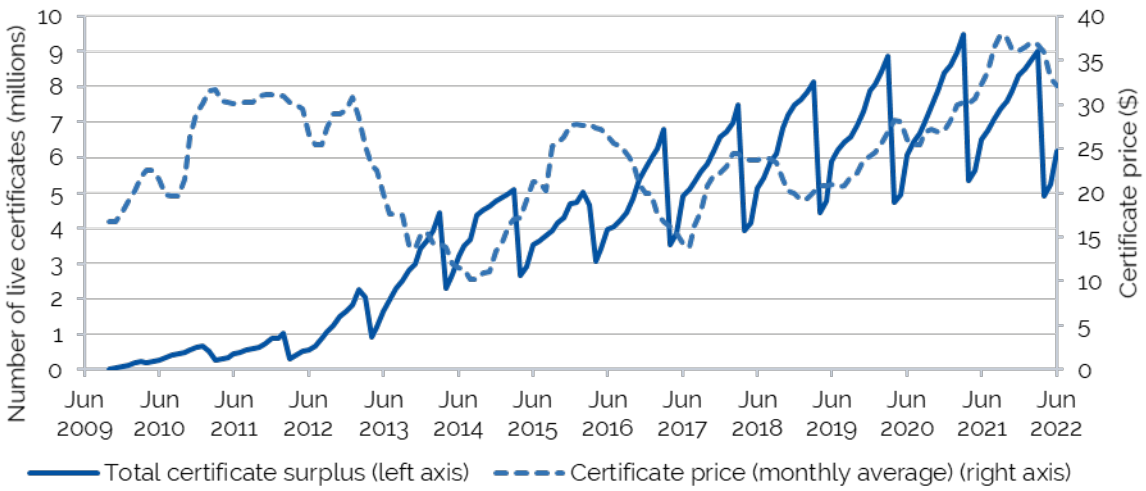
[t] At 30 June 2022 the total cumulative surplus, including certificates of 2022 vintage, was 6,188,278 certificates.

Historically, each year the cumulative surplus of certificates has steadily grown as annual certificate creation exceeded the number of certificates surrendered. In 2021, we have observed the largest single year deficit to date (249,858 certificates) which is likely attributable to reduced access to premises due to influences from the COVID-19 pandemic. The number of certificates created was 7% lower than the number of certificates surrendered. However, it is likely the current surplus of 5,338,566 certificates will exceed the number of certificates required to be surrendered for the 2022 compliance year.

4.1.4 Certificate price

The indicative certificate price[u] varied in 2021 with a low of $29 in January and a high of $39 in September (**Figure 4.2**). These prices are notably higher than indicative prices observed in 2020 which ranged from $25 to $29.

Figure 4.2 Total certificate surplus and indicative certificate price[a]



a. Based on data provided by the financial brokers, Nextgen and TFS Green Australia, for all certificates traded through brokers in both the spot market and the forward market.

In the first half of 2022 we observed a reasonably steady certificate price around $36. This price is significantly higher than those seen in the past 10 years, even with a significant certificate surplus. The scheme penalty rate for 2021 is $29.09 and increases to $29.95 in 2022.[v] As the certificate price approaches the effective penalty rate,[w] Scheme Participants may choose not to comply with their individual energy savings targets, instead they can elect to pay the shortfall penalty.

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u The price data is provided by third parties. Because it does not include price data for all certificate trades, it may not represent the actual average certificate price over time. Nevertheless, it provides a useful guide to broad movements in the certificate price.

v The base penalty rate is specified in clause 15 of Schedule 4A to the Act and is adjusted annually for movement in the Consumer Price Index.

w As civil penalties are not tax deductible, the effective penalty rate paid is typically higher than the legislated rate.

4.2 Estimated actual energy savings

We use certificate creation data to estimate the actual energy savings achieved by the scheme. For some energy savings activities, certificates may be created in advance of the savings occurring (**Box 4.1**). The projections for energy savings in future years are based on the number of certificates that Accredited Certificate Providers have 'forward created'.

To estimate these future savings, we pro-rate the certificates created in each year across the forward creation or deeming period of the relevant energy saving activity. This approach allows us to report against the statutory reporting requirements by providing an estimate of the actual energy savings realised in 2021. It also provides an estimate of the savings that will be realised in the next 10 years from certificates that have already been created.

Box 4.1 Forward creation of certificates

For some recognised energy saving activities, certificates may be created in advance of the actual energy savings occurring, where those savings will continue for up to 15 years into the future. This is referred to as forward creation and deeming.

Under the Project Impact Assessment Method and the Project Impact Assessment with Measurement and Verification Method, it is possible to forward create certificates (at the start of the energy savings period) for up to 5 years and 10 years respectively, based on estimated energy savings. The certificates are discounted by an approved percentage to account for some uncertainty and may later be 'topped up' if additional savings can be verified.

Under the Deemed Energy Savings Method – which includes the Commercial Lighting Energy Savings Formula and Home Energy Efficiency Retrofits method – the lifetime or deemed energy savings are estimated up front. The certificates are forward created from the time the activity is implemented. The deeming period depends on the type of activity and is typically 7 to 15 years.

Table 4.4 summarises the actual electricity and gas savings we estimate will be realised for the period from 2022 to 2031, as a result of certificates created between 2009 and 2021.

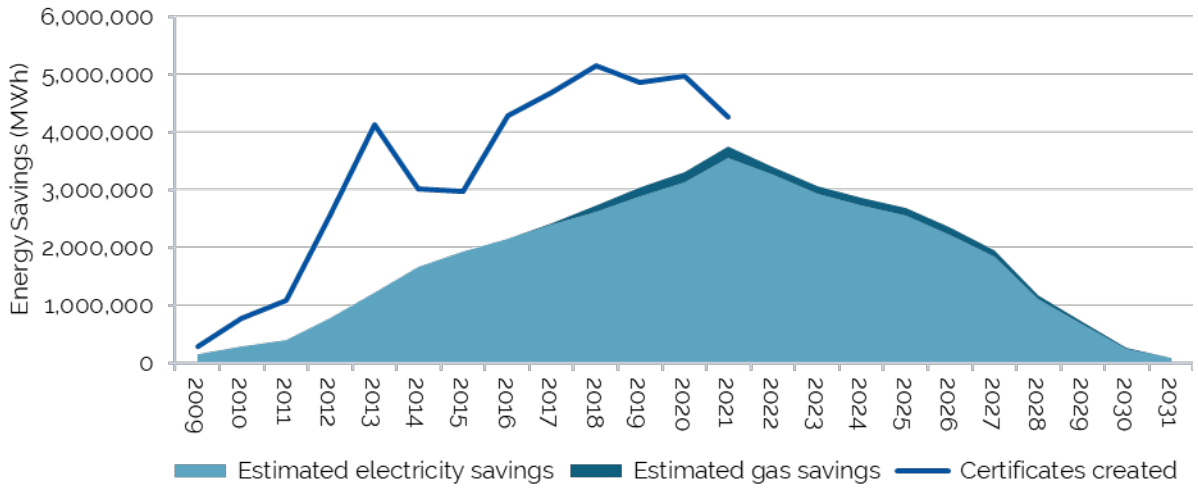
Table 4.4 Estimated actual energy savings from 2009 to 2031 (MWh)

	2009 - 2020	2021	2022 - 2031	Total
Electricity	19,598,226	3,547,767	17,603,113	40,749,105
Gas	467,068	210,772	919,801	1,597,641

The estimated actual energy savings for the year increased by 14% for electricity and increased by 17% for gas compared with 2020. This is largely due to the deemed energy savings from activities implemented in previous years continuing to be realised in 2021.

Figure 4.3 illustrates the actual electricity and gas savings the ESS has achieved, or will achieve, based on the number of certificates created between 2009 and 2021.

Figure 4.3 Certificates created and estimated actual energy savings



The ESS allows energy savings to be calculated using several calculation methods designed for particular sectors and activities. **Table 4.5** and **Table 4.6** detail the actual electricity and gas savings that have occurred or are estimated to be realised over the next 10 years, broken down by calculation method.

Box 4.2 How the calculation methods relate to energy saving activities

The **Deemed Energy Savings Method** provides for a wide range of energy saving activities, which can be applied in the residential, small business and commercial sectors. These calculation methods deem that energy savings commence at implementation and continue into the future (**Box 4.1**). Deemed methods are specific to the type of activity (**Table 4.5**).

The **Project Impact Assessment with Measurement and Verification Method** requires the development of complex energy models to accurately predict energy savings at commercial and industrial sites.

It replaced the **Project Impact Assessment Method,** which allows an engineering assessment, measurement or modelling to be used to calculate energy savings. Accredited Certificate Providers accredited to use the Project Impact Assessment method on or before 30 September 2014 may still use it to calculate energy savings for certain projects.

The **Metered Baseline Method** encompasses a range of sub-methods designed to achieve energy savings by measuring electricity or gas consumption before and after an activity is carried out. Unlike the other methods, it does not allow deeming, or forward creation of certificates. It includes the **NABERS Baseline** sub-method, which uses commercial buildings ratings from the National Australian Built Environment Rating System (NABERS) to measure improvements in energy efficiency.

Table 4.5 Estimated actual electricity savings by calculation method ('000 MWh)[a]

Calculation method	2009–2020[b]	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031[d]	Total
Deemed Energy Savings Method													
Commercial Lighting Formula	11,897	2,627	2,496	2,166	1,964	1,787	1,485	1,167	509	211	0	0	26,309
Sale of New Appliances	616	193	199	199	199	197	168	139	110	85	55	22	2,182
Default Savings Factors	691	0	0	0	0	0	0	0	0	0	0	0	691
Removal of Old Appliances	123	6	5	2	0	0	0	0	0	0	0	0	136
Installation of High Efficiency Appliances for Businesses	24	24	31	31	31	31	31	30	29	25	16	7	312
Public Lighting Formula	67	55	57	57	57	57	57	57	57	54	48	40	660
Home Energy Efficiency Retrofits	375	321	342	342	342	342	342	340	323	223	106	21	3,416
Power Factor Correction Formula	0	0	0	0	0	0	0	0	0	0	0	0	0
High Efficiency Motor Formula	1	0	0	0	0	0	0	0	0	0	0	0	1
Subtotal	**13,793**	**3,226**	**3,129**	**2,796**	**2,593**	**2,413**	**2,082**	**1,733**	**1,027**	**599**	**226**	**90**	**33,707**

Calculation method	2009–2020[b]	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031[d]	Total
Metered Baseline Method[c]													
Baseline per unit of output	2,375	143	0	0	0	0	0	0	0	0	0	0	2,518
Baseline unaffected by output	145	0	0	0	0	0	0	0	0	0	0	0	145
NABERS baseline	354	6	0	0	0	0	0	0	0	0	0	0	360
Normalised baseline	1,028	42	0	0	0	0	0	0	0	0	0	0	1,069
Subtotal	**3,901**	**191**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4,091**
Project Impact Assessment with Measurement and Verification Method	**267**	**131**	**131**	**131**	**131**	**130**	**124**	**106**	**88**	**55**	**18**	**0**	**1,314**
Project Impact Assessment Method	**1,637**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,637**
Total	**19,598**	**3,548**	**3,261**	**2,928**	**2,724**	**2,544**	**2,206**	**1,839**	**1,115**	**653**	**244**	**90**	**40,749**

a. **Box 4.2** explains the calculation methods. Methods for which certificates are yet to be created (e.g. Aggregated Metered Baseline method) are not included in this table.

b. For the period from 1 July 2009 to 31 December 2020.

c. Certificates can only be created under the Metered Baseline Method after the savings have occurred resulting in 'zero' savings for 'future' years (**Box 4.1**).

d. Clause 76(2)(e) of Schedule 4A to the Act requires the Scheme Administrator to estimate electricity savings over the next 10 years having regard to the number of certificates created.

Note. Figures are rounded to nearest integer (this rounding may result in 'zero' certificates for some years with small certificate creation). Totals may not add exactly due to rounding. Small differences in data compared with previous annual reports reflect forfeited certificates after the report was released.

Table 4.6 Estimated actual gas savings by calculation method ('000 MWh)[a]

Calculation method	2009–2020[b]	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031[d]	Total
Deemed Energy Savings Method													
Installation of High Efficiency Appliances for Businesses	31	13	13	13	13	13	13	11	7	4	1	0	131
Subtotal	**31**	**13**	**13**	**13**	**13**	**13**	**13**	**11**	**7**	**4**	**1**	**0**	**131**
Metered Baseline Method[c]													
Baseline per unit of output	156	68	0	0	0	0	0	0	0	0	0	0	224
NABERS baseline	2	0	0	0	0	0	0	0	0	0	0	0	2
Normalised baseline	15	8	0	0	0	0	0	0	0	0	0	0	23
Subtotal	**172**	**76**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**248**
Project Impact Assessment with Measurement and Verification Method	**264**	**122**	**122**	**122**	**122**	**122**	**122**	**108**	**55**	**40**	**19**	**0**	**1,218**
Total	**467**	**211**	**135**	**135**	**135**	**135**	**135**	**119**	**62**	**44**	**20**	**0**	**1,598**

a. **Box 4.2** explains the calculation methods. Methods for which certificates are yet to be created are not included in this table.

b. For the period from 1 July 2009 to 31 December 2020.

c. Certificates can only be created under the Metered Baseline method after the savings have occurred resulting in 'zero' savings for 'future' years (**Box 4.1**).

d. Clause 76(2)(e) of Schedule 4A to the Act requires the Scheme Administrator to estimate gas savings over the next 10 years having regard to the number of certificates created.

Note. Figures are rounded to nearest integer (this rounding may result in 'zero' certificates for some years with small certificate creation). Totals may not add exactly due to rounding. Small differences in data compared with previous annual reports reflect forfeited certificates after the report was released.

Chapter 5

Scheme operations

An overview of 2021 operations key developments, administrative activities, and stakeholder engagement

05

In our roles as Scheme Regulator and Scheme Administrator, we are responsible for the regulation, compliance, and administration of the scheme. This section outlines key developments impacting the scheme as well as our stakeholder engagement, core administrative functions, and response to COVID-19.

5.1 Scheme developments

5.1.1 Energy Security Safeguard

The NSW Government released the NSW Electricity Strategy (Strategy) in late 2019 which marked the beginning of a period of major reform for the ESS. The Strategy proposed extension and expansion of the ESS under a new name, the Energy Security Safeguard (Safeguard). On 13 May 2020 the *COVID-19 Legislation Amendment (Emergency Measures—Miscellaneous) Bill 2020* was passed in the Parliament of NSW. The Bill amended and restructured the Act to:

- establish the overarching Safeguard which aims to improve the affordability, reliability, and sustainability of energy.
- establish the ESS as the first scheme under the Safeguard
- insert provisions to allow for regulations to be made to establish new schemes under the Safeguard until 31 December 2021.

The Safeguard currently includes 3 separate schemes, the:

- ESS
- Peak Demand Reduction Scheme (PDRS) which aims to support activities that reduce electricity demand at peak times,
- Renewable Fuel Scheme which aims to incentivise the production of green hydrogen

The PDRS was established in September 2021 and scheme liability is set to commence on 1 November 2022. Accredited Certificate Providers will be able to create Peak Reduction Certificates from implementations of eligible activities from 1 April 2022 if certain requirements are met. However, these certificate creations are subject to the PDRS Rule which may change which is set to commence at the end of August 2022. A draft of the PDRS rule is available on the Office of Energy and Climate Change's website. The Renewable Fuel Scheme legislation was enacted in December 2021 and will commence in 2024.

5.1.2 Amendments to the ESS Rule

The NSW Government has committed to regularly updating the ESS Rule. Updates are managed by the Office of Energy and Climate Change and aim to:

- incorporate stakeholder feedback
- maintain the effectiveness of the ESS Rule through updates to savings factors and requirements and by adding activity schedules for new technologies
- complement changes to building and equipment standards

- incorporate new energy savings methods, and
- maintain the effectiveness and integrity of the ESS Rule.

The key policy shifts implemented in the most recent rule change on 28 February 2022 involved:

- updates to existing air conditioner and refrigerated cabinet activity definitions[x]
- the introduction of new heat pump and solar water heater activities[y].

We will report on new and revised activities relating to the 2022 ESS rule change in our 2022 annual report.

5.2 Stakeholder engagement

In 2021 stakeholder communication and engagement remained a priority. In consultation with our stakeholders[z], IPART has developed a Safeguard Stakeholder Engagement Strategy. The strategy was released in October 2021 and is designed to improve future engagement efforts through 7 key principles:

1. Make it easier to engage with us.
2. Keep you informed and be responsive.
3. Provide clear accurate and accessible information
4. Act fairly, with empathy and respect
5. Make timely decisions
6. Consult with you and be open to feedback.
7. Get to know you.

Our approach to stakeholder engagement will continue to align with these principles, including a commitment to open, transparent decision-making and always communicating the reasoning behind our decisions. Further consultation on stakeholder engagement will be undertaken in 2022 as we continue to seek a better understanding of our stakeholders' needs and how to meet them.

5.2.1 Increasing engagement with key stakeholders

Throughout the year we hold various events, including:

- Information Sessions,
- Stakeholder Forums,
- Auditor Workshops, and
- Consultations.

[x] *IPART, Air Conditioners and Refrigerated Cabinet - Fact Sheet - ESS Amendment Rule 2021 - February 2022*
[y] *IPART, Water Heaters - Fact Sheet - ESS Amendment Rule 2021 - January 2022*
[z] *IPART, Engagement Charter Consultation - IPART's Response to Draft Engagement Charter Submissions - March 2021*

We hold these events as needed and based on demand. A list of upcoming stakeholder engagement events may be found on the ESS website.

The annual Stakeholder Forum was held on 28 October 2021. We continue to focus these sessions based on stakeholder needs. We structured the content differently this year by surveying our stakeholders prior to the forum and then organised sessions on topics that registered the most interest. During the Stakeholder Forum, attendees were able to choose to attend the break-out sessions which were most relevant to their business. We had high level representatives from IPART, the ESS Committee, the NSW Department of Planning and Environment, and the Energy Savings Industry Association attending and presenting on panels. The session included[aa]:

- expert presentation from the NSW Department of Planning and Environment on the design and structure of the PDRS
- challenges and opportunities for regulators and business
- Audits & compliance for Accredited Certificate Providers
- commercial/residential lighting activities and lighting products
- Scheme Participant compliance

Due to safety concerns surrounding COVID-19, the forum was held online for the second time. Holding the forum online resulted in increased participation with 183 stakeholders attending in 2021, up from 130 attendees in 2020.

In 2021 we also improved our engagement with key government and industry peak bodies by:

- meeting regularly and working directly with the Energy Savings Industry Association to understand and respond to industry concerns. The Energy Savings Industry Association is an advocacy association that represents accredited providers under energy savings markets across Australia.
- increasing our collaboration with the Victorian Essential Services Commission to align ESS and Victorian Energy Upgrades program rules and processes for common lighting issues, new activities, and explore joint product registries for new hot water activities. We regularly share information and outcomes from consultations.
- working collaboratively with the Office of Energy and Climate Change on changes to the ESS Rule.
- conducting a of Project Impact Assessment with Measurement and Verification Method workshop held in conjunction with the Office of Energy and Climate Change and the Energy Savings Industry Association on 21 October 2021.

These and other ongoing collaborations aim to benefit our stakeholders by providing clearer requirements and guidance, improving efficiency, and minimising red tape.

[aa] A video recording of the 2021 Stakeholder Forum is available on the official IPART YouTube channel.

5.2.2 Stakeholder consultation

In addition to our consultation on Safeguard Stakeholder Engagement Strategy, in 2021 we also conducted a consultation on the proposed PIAM&V Method Requirements (No 2) for Deemed Method Implementations. As a direct outcome of the consultation process[bb], the following amendments were included in the final version of the PIAM&V Method Requirements (No 2):

- extending the date of effect of the Project Impact Assessment with Measurement and Verification Method Requirements (No 2) to projects with an Implementation Date on or before 31 December 2021.
- adjusting the Interactive Energy Savings Factor to apply a reduced discount where the other Implementation accounts for less than half of the Project Impact Assessment with Measurement and Verification Method savings and has a lesser impact on the accuracy of the calculations.
- including approaches to account for Energy Savings due to other Implementations under Metered Baseline Method and Project Impact Assessment with Measurement and Verification Method within the Measurement Boundary for a Project Impact Assessment with Measurement and Verification Implementation (i.e. not only Deemed Method Implementations).

5.3 Scheme administration

5.3.1 Improvements to processes and systems

We are committed to finding ways to make it easier for our stakeholders to do business with us. We continuously look for opportunities to streamline our processes, increase efficiency and reduce red tape. As part of this ongoing review and in response to stakeholder feedback, we introduced several business process and systems improvements in 2021 and early 2022, including:

- making it easier to apply for and change accreditations. We improved the efficiency of the Accredited Certificate Provider application process and enhanced our risk-based assessments. In preparation for the 2022 ESS Rule changes for new water heater activities and updates to air conditioning and refrigerated cabinets, we created a streamlined application process to align similar activities and allow for the combination of those activities into one accreditation. This is intended to increase the uptake of these activities, reduce barriers to entry and introduce efficiencies.
- introduced changes to the form of applications for accreditation and applications to make it easier to transfer an accreditation.
- added efficiencies to the product application assessment and acceptance internal process to help reduce processing times. We also updated the product acceptance section of the website to provide clearer guidance and increase consistency in application requirements.

[bb] *IPART, Consultation on PIAM&V Method Requirements (No 2) - Submissions Report - IPART - December 2021*

- updated guidance to Accredited Certificate Providers on evidence requirements for common audit, record keeping and compliance issues.
- updated the delegations and authorisations to achieve organisational efficiencies, reduce bottlenecks and resources to improve our processes and capabilities for regulatory decision making.
- updated Scheme Participant guidance materials, tools, and forms for the 2021 compliance year to provide clearer reporting guidance.
- major upgrades to our existing IT systems to integrate them into one online system called The Energy Security Safeguard Application (TESSA) which is expected to go live in 2022.

5.3.2 Core administrative tasks

Our administrative function involves facilitating the day-to-day operation of a scheme that is legally complex and changes frequently. Our core administrative tasks include assessing applications, managing Accredited Certificate Provider accreditations, and managing the membership of our Audit Services Panel and Measurement and Verification Professionals. In 2021 we:

- approved 11 applications and refused one application for accreditation (**Figure 5.1**). Processing time for applications for accreditation decreased by 38% compared with 2020 and we anticipate further reductions in 2022.
- approved 28 amendments to the conditions of existing accreditations. Most amendments were requests by Accredited Certificate Providers to change the limit on the number of certificates that can be created between audits, expand or change the activity description, or change the audit requirement or audit due date.
- cancelled 8 accreditations. All 8 cancellations were at the request of the Accredited Certificate Provider in response to our ongoing process of identifying and actively managing accreditations that were either inactive, or no longer eligible to create certificates.
- accepted 995 emerging lighting technologies for use under the ESS, which has decreased slightly from last year.
- administered the Audit Services Panel.
- approved 2 new Measurement and Verification Professionals.

Key statistics of our core administrative functions are detailed in **Table 5.1**.

Figure 5.1 New accreditations by calculation method

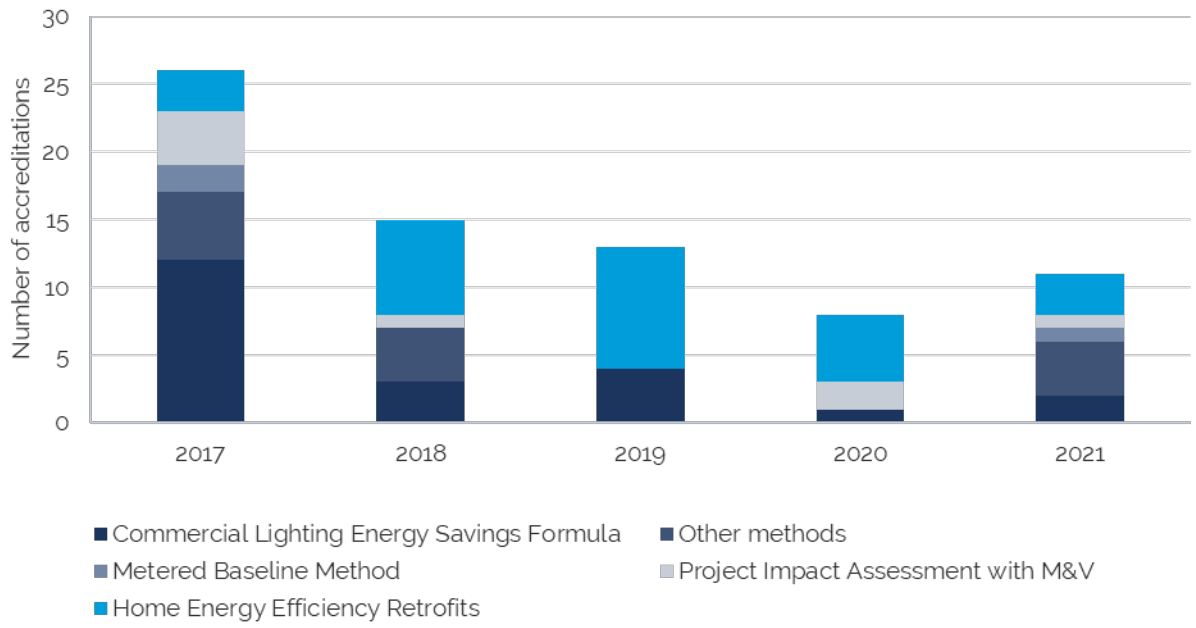


Table 5.1 Core administrative functions – statistics

Function	2017	2018	2019	2020	2021
Administration of Accredited Certificate Provider accreditations					
Number of applications approved	26	15	13	8	**11**
Number of applications refused	0	1	0	1	**1**
Number of amendments to conditions of accreditation	64	45	53	41	**28**
Number of cancellations of accreditation	22	18	8	8	**8**
Number of accreditations as at 31 December	175	172	177	177	**180**
Average number of days to process applications for accreditation[a]	118	139	171	144	**90**[b]
Number of products accepted for use under the Commercial Lighting Energy Savings Formula method[c]	1,841	1,664	1,286	1,057	**906**
Number of products accepted for use under the Home Energy Efficiency Retrofits method	N/A	90	105	137	**91**
Number of products accepted for use under the Project Impact Assessment with Measurement and Verification method	0	0	0	0	**1**
Number of lead auditors approved	0	0	1	0	**2**
Number of PIAM&V auditors[d] approved	0	0	0	0	**0**
Number of lead auditors removed	1	4	0	0	**0**
Number of PIAM&V auditors[d] removed	1	0	0	0	**0**
Number of lead auditors as at 31 December	32	29	30	30	**32**
Number of PIAM&V auditors[d] as at 31 December	6	6	6	6	**6**
Number of auditor firms as at 31 December	16	16	17	17	**24**
Applications for approval as a Measurement and Verification Professional					

Function	2017	2018	2019	2020	2021
Number of M&V Professionals approved	3	2	1	3	**2**
Number of M&V Professional approvals withdrawn	0	0	2	0	**0**
Number of Measurement and Verification Professionals as at 31 December	11	13	12	15	**17**

a. Processing times include days taken by the applicant to respond to requests for information.
b. Does not include the time taken to complete the application that was refused because there were significant matters to consider.
c. Includes applications accepted via the Victorian Energy Upgrades program pathway.
d. These auditors have been approved by the Scheme Administrator as being suitably qualified to conduct audits of certificates created under the Project Impact Assessment with Measurement and Verification (PIAM&V) method

5.4 COVID-19 response

In the years following the outbreak of the COVID-19 pandemic, we have provided assistance to Scheme Participants and Accredited Certificate Providers. This included provision of extensions to the audit and certificate surrender deadlines for Scheme Participants as well as some increased flexibility in audits for Accredited Certificate Providers. We continue to account for the impacts of the pandemic when making decisions and considering requests for audit waivers, amendments, and extensions. However, we also expect businesses that wish to retain accreditation in the ESS to make necessary adjustments in response to the pandemic.

We continue to monitor and respond to the impacts of COVID-19 on a case-by-case basis.

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