

# NSW Energy Savings Scheme - Compliance and Operation in 2013

Annual Report to the Minister

**Energy Savings Scheme**  
July 2014



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ISBN 978-1-925193-26-8

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# 1 Executive summary

The NSW Energy Savings Scheme (ESS) is a state-based scheme with the principal objective of reducing the consumption of electricity in NSW by encouraging energy saving activities.

The ESS is established under Part 9 of the *NSW Electricity Supply Act 1995* (the Act). The Act sets out annual energy savings targets to 2020, and obliges all electricity retailers operating in NSW and other specified parties – known as Scheme Participants – to meet these targets by purchasing and surrendering Energy Savings Certificates (ESCs or certificates). It also provides for parties to be accredited to create those certificates from specific energy savings projects. These parties are voluntary participants in the ESS, and are known as Accredited Certificate Providers.

The energy savings targets are expressed as a percentage of a Scheme Participant's annual liable electricity acquisitions. They started from 1% in 2009<sup>1</sup> and increased annually to reach 5% in 2014, after which they remain steady until 2020.<sup>2</sup> The target sets the demand for certificates by Scheme Participants, while Accredited Certificate Providers and their accredited energy savings projects determine the supply.

The Independent Pricing and Regulatory Tribunal of NSW (IPART) is both Scheme Regulator and Scheme Administrator for the ESS. In these roles, we monitor and report annually to the Minister for Resources and Energy on:

- ▼ Scheme Participants' compliance with their obligations under the ESS
- ▼ Accredited Certificate Providers' compliance with their obligations, and
- ▼ the estimated actual energy savings achieved under the scheme.

This is our 2013 annual report on the ESS. It reports on the compliance performance of participants and actual energy savings achieved, and also outlines key administration activities during the 2013 calendar year.

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<sup>1</sup> The first compliance period of ESS was the half year to 31 December 2009. The energy savings target was 0.5% for the half year or 1% as a nominal annual rate.

<sup>2</sup> Schedule 5 of the Act.

## 1.1 Energy savings target and achievements

For 2013, the energy savings target was 4.5% of each Scheme Participant's liable acquisitions for the year.<sup>3</sup> For all Scheme Participants combined, this was equivalent to 2,295,718 megawatt hours (MWh), or 2,433,461 certificates.

As at 30 June 2014, Accredited Certificate Providers had created 4,148,778 certificates for energy saving activities in 2013, equivalent to 3,913,942 MWh of energy saved. Since the scheme commenced in mid-2009, a total of 8,826,129 certificates have been created, equivalent to 8,326,537 MWh of energy saved.

In general, the certificates associated with an energy saving activity are created after the energy savings have occurred. However, the ESS allows certificates for certain types of activity to be created in advance of the savings occurring (known as deeming),<sup>4</sup> and for some limited forward creation of certificates.<sup>5</sup> When deeming and forward creation are taken into account, we estimate that the ESS resulted in actual energy savings of:

- ▼ 1,619,407 MWh during the period 2009-2012
- ▼ 1,206,574 MWh during 2013, and
- ▼ 5,500,556 MWh over the next 10 years of 2014-2023 (Table 2.1).<sup>6</sup>

These actual energy savings in 2013 represent a 2% reduction in electricity generation in NSW for the year.

## 1.2 Creation, ownership and surrender of certificates

The Registry records the creation, transfer and surrender of certificates by participants. The majority of certificates created in the scheme (72%) have been from lighting projects – mainly commercial lighting activities. Under this method, energy savings are made from a wide range of lighting retrofits – ranging from the replacement of lights in a car park, to the complete refurbishment of lighting in industrial facilities.

The Registry recorded the transfer of more than nine million certificates in 987 trades during 2013, demonstrating that the certificate market was very active.

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<sup>3</sup> Schedule 5 of the Act.

<sup>4</sup> Section 9 of the Energy Savings Scheme Rule of 2009.

<sup>5</sup> Section 7.4 of the Energy Savings Scheme Rule of 2009.

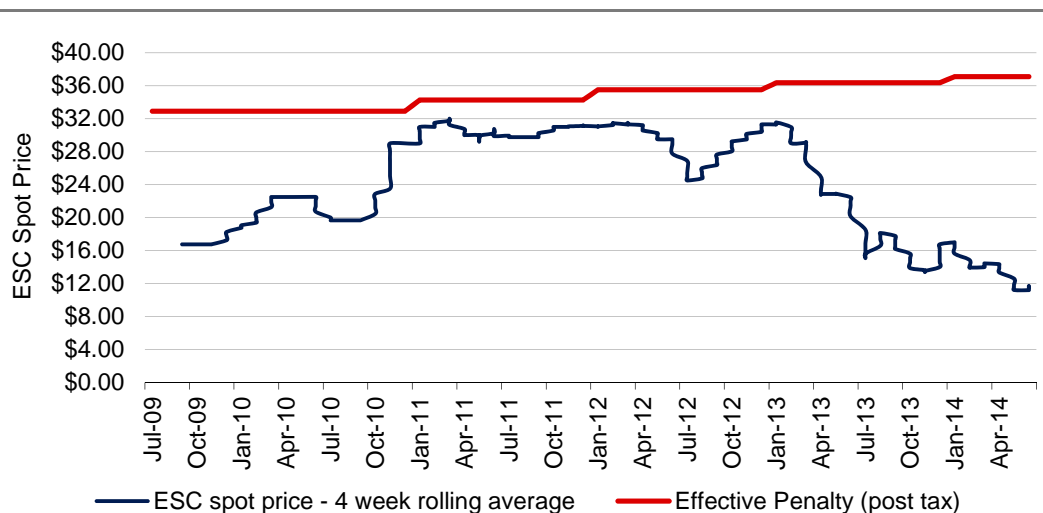
<sup>6</sup> Section 174 of the Act requires an estimate of the actual energy savings that have been realised with regard to the number of certificates created.



### 1.3 The certificate spot price and surplus

The certificate spot price declined significantly during 2013 – from \$31.30 in January to \$17.00 in December. In the first half of 2014, it continued to decline and was at a historical low of \$11.05 in May 2014 (Figure 1.1). We attribute this fall primarily to the surplus of certificates in the market, and market uncertainty on the proposed ESS Rule change and its commencement date.<sup>7</sup>

**Figure 1.1 The certificate spot price, July 2009 to June 2014**



**Note:** This figure shows a four-week rolling average of the last market spot price. The data account only for certificates traded through NGES and may not reflect the price paid by certificate buyers at the times shown. The Scheme Administrator recommends that persons seek independent advice before buying or selling certificates, and cautions against making decisions based solely on this chart.

**Data source:** The Green Room, published by Nextgen (see [www.nges.com.au](http://www.nges.com.au)).

In 2013, certificates created by Accredited Certificate Providers were greater than the certificates required by Scheme Participants to meet compliance obligations for the year. The outcome is a surplus of 1.7 million certificates in 2013 – a significant increase compared with 2012 when the surplus was just under 700,000 certificates. After five years of scheme operation the cumulative actual certificate surplus (when calculating actual certificates created and surrendered) is over 2.5 million certificates.

The fall in the certificate price has decreased the cost of compliance by Scheme Participants and ultimately, reduced the impact of the scheme on the cost of electricity to consumers. However, it will also impact the viability of Accredited Certificate Providers' energy saving projects.

<sup>7</sup> Two separate amendments to the ESS Rule commenced on 1 June 2014 and 1 July 2014.

In previous annual reports, we have provided our projections of supply and demand for certificates. We are now publishing these projections in more timely market updates on our website, rather than in our annual report. However, we still provide analysis of the trends in the certificate price and surplus (see section 2.3) and report on how our previous projections performed (see section 3.1.10).

#### **1.4 Administration of the ESS during 2013**

During 2013, we accredited 51 new energy savings activities, and cancelled nine activities – resulting in a net increase of 42 accredited activities during the year. Most of the new accreditations were for commercial lighting activities, which increased rapidly in 2011 and are now the dominant accredited energy savings activity in the scheme.

The number of applications for the use of emerging lighting technologies (ELT) remained high in 2013. We processed 1,448 applications and accepted 2,431 new products for use in the scheme during 2013. All applications were processed through our online ELT portal.

We continued our workshops to increase participation in the scheme and help stakeholders better understand participation and obligations in the ESS. We conducted 14 workshops with 136 participants in 2013. Feedback on our workshops was positive, and our new online delivery method enables us to conduct more workshops that are tailored to participants' needs.

#### **1.5 Compliance**

IPART closely monitors the activities of Scheme Participants and Accredited Certificate Providers to ensure the integrity of the scheme is maintained. One of our key concerns is ensuring that certificates are created only where genuine energy savings have occurred. We use audits undertaken by independent third parties to verify energy savings, with almost all over-created certificates being voluntarily forfeited.

We added two new audit firms to the Audit Services Panel in 2013, increasing the number of firms to 14. The panel conducted 18 audits of Scheme Participants' annual energy savings statements and 85 audits of Accredited Certificate Providers' energy savings activities, a 47% increase in audit activity compared with 2012.

### 1.5.1 Scheme Participants' compliance during 2013

During 2013, 47 Scheme Participants were operating in NSW – an increase of 31% compared with 2012. Scheme Participants' compliance performance for this year was very good:

- ▼ All met their individual target by either surrendering sufficient certificates or carrying forward a shortfall.
- ▼ Together, they surrendered 2,490,506 certificates, which is equivalent to 98% of the total number of certificates required to meet their combined compliance obligations for the year plus the combined shortfall they carried forward from 2012.
- ▼ They carried forward energy savings shortfalls to 2014 equivalent to 44,403 certificates, or 2% of their combined obligations.
- ▼ None chose to pay a penalty in lieu of surrendering certificates.

In 2013, the Government amended the definition of “liable acquisitions” in the Act to require Scheme Participants to report on all non-market settled electricity purchases. This amendment may reduce the number of certificates that Scheme Participants were required to surrender and penalties that were paid in previous years. We are working with the NSW Department of Trade and Investment on the proposed changes to the *Electricity Supply (General) Regulation 2001* (the Regulation) that implement the change to the Act.

### 1.5.2 Accredited Certificate Providers' compliance during 2013

During 2013, there were 114 Accredited Certificate Providers and 176 RESAs operating and able to create certificates. This is an increase of 37% and 32% respectively when compared with 2012. There was also an increase in the number of non-compliance events in 2013 (from 45 in 2012 to 65 in 2013), which largely reflects the increase in Accredited Certificate Providers, as well as increases in certificate creation and audit activity. All non-compliance events were satisfactorily resolved and all over-created certificates were voluntarily forfeited, ensuring that all certificate creation was valid.

The non-compliance events during 2013 comprised:

- ▼ 45 instances of improper creation of certificates, which resulted in the over-creation of 41,941 certificates (around 1% of certificates created during the year), of which only six were considered material. All over-created certificates were voluntarily forfeited.
- ▼ 14 instances of failure to submit a complete and correct report by the required deadline, all minor in nature.
- ▼ Six instances of failure to engage an auditor by the required deadline or failure to meet other conditions of accreditation.

## 1.6 Developments in the ESS during 2014

The ESS will undergo significant change in 2014 as a result of two amendments to the ESS Rule – the *Energy Savings Scheme (Amendment No. 1) Rule 2014* that commenced on 1 June 2014 and the *Energy Savings Scheme (Amendment No. 2) Rule 2014* that commenced on 1 July 2014, which replaces Amendment No. 1. The key objectives of the amendments are to:

- ▼ encourage the take-up of a broader range of energy efficiency activities
- ▼ remove unnecessary red-tape that creates a barrier to households and businesses accessing incentives, and
- ▼ ensure consumers receive lasting savings through quality products and services.

We are ensuring that participants are well informed about the changes, that new energy savings activities are well managed, and that our compliance strategy remains appropriate.

## 1.7 Scheme Regulator and Scheme Administrator during 2013

IPART is both Scheme Regulator and Scheme Administrator of the ESS. As allowed under the Act, the Tribunal has delegated the exercise of these functions to an ESS Committee.<sup>8</sup> In 2013, the ESS Committee comprised:

- ▼ Mr James Cox as Chairman (January-August)
- ▼ Mr Simon Draper as Chairman (September-December), and
- ▼ Dr Brian Spalding and Mr Eric Groom as Committee Members (January-December).

The ESS Committee met a total of 17 times during the year, and reported scheme activity to the Tribunal during the year as required.

## 1.8 What does the rest of this report cover?

The rest of this report discusses the compliance and operation of the ESS during 2013 in more detail:

- ▼ Chapter 2 discusses scheme outcomes during 2013 in terms of energy savings achieved and the certificate market
- ▼ Chapter 3 details our activities in administering the scheme and the compliance performance of Scheme Participants and Accredited Certificate Providers

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<sup>8</sup> Section 152(4) of 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.

- ▼ Chapter 4 describes the challenges ahead in administering changes to the ESS Rule and managing future growth in the scheme, and
- ▼ The glossary provides a general guide to the terminology used in the ESS.

Background information about the ESS is available on our website at [www.ess.nsw.gov.au](http://www.ess.nsw.gov.au). For an overview of the scheme, see our fact sheet “Overview of the ESS” at [www.ess.nsw.gov.au/How\\_the\\_scheme\\_works](http://www.ess.nsw.gov.au/How_the_scheme_works).

## 2 Scheme performance

The principal objective of the ESS is to create a financial incentive to reduce the consumption of electricity by encouraging energy saving activities. We measure the scheme's performance by estimating the energy savings achieved under the scheme and activity in the certificate market – which encompasses the creation and surrender of certificates and the certificate price.

### 2.1 Energy savings achieved

Under the ESS, the certificates created by some RESAs represent both savings in the year of creation and estimated savings in future years. This is because the ESS Rule allows certificate creation in advance of actual energy savings when the energy savings are small. This is referred to as forward creation and 'deeming'.

Under the Project Impact Assessment Method, it is possible to forward create certificates for up to five years of estimated energy savings at the start of the RESA. In these cases, the certificates claimed are discounted by an approved percentage to account for some uncertainty, and may be 'topped up' at the end of the forward-creation period if savings can be verified.

Under the Deemed Energy Savings Method, the lifetime or 'deemed' energy savings are estimated up-front and the certificates are forward-created from the time the activity is implemented. The deeming period depends on the type of activity, and ranges from 1.5 years to 25 years.

As required under the Act, we have estimated the actual energy savings resulting from the ESS's operation, both during 2013 and over the coming 10 years.<sup>9</sup> As certificates can be created in advance of energy savings, an estimate of the actual energy savings occurring in future years is calculated by pro-rating the certificates created in any year across the forward creation or deeming period of the energy savings activity. Our estimates indicate that as a result of certificates created between 2009 and 2013, the ESS resulted in actual energy savings of:

- ▼ 1,619,407 MWh during the period 2009-2012
- ▼ 1,206,574 MWh during 2013, and
- ▼ 5,500,556 MWh over the next 10 years of 2014-2023. (Table 2.1)

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<sup>9</sup> Sections 174(2)(d) and 174(2)(e).

**Table 2.1 Estimated energy savings (MWh) by calculation method**

Calculation method	2009/12 <sup>a</sup>	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 <sup>b</sup>	Total
<b>Project Impact Assessment Method</b>	335,007	138,907	84,285	53,925	29,378	11,622	1,197	0	0	0	0	0	<b>654,322</b>
<b>Deemed Energy Savings Method</b>													
Commercial Lighting Formula	295,034	575,410	579,321	579,321	579,321	579,321	579,321	578,930	576,340	532,409	337,400	5,627	<b>5,797,756</b>
Default Savings Factors	265,156	109,896	109,632	109,230	106,594	49,798	11,063	6,234	72	20	18	8	<b>767,721</b>
Power Factor Correction	26	22	22	22	22	22	22	22	22	17	0	0	<b>215</b>
High Efficiency Motor Formula	0	0	0	0	0	0	0	0	0	0	0	0	<b>0</b>
<b>Deemed Energy Savings Total</b>	<b>560,216</b>	<b>685,327</b>	<b>688,975</b>	<b>688,573</b>	<b>685,937</b>	<b>629,141</b>	<b>590,406</b>	<b>585,186</b>	<b>576,434</b>	<b>532,445</b>	<b>337,418</b>	<b>5,634</b>	<b>6,565,692</b>
<b>Metered Baseline Method<sup>c</sup></b>													
Baseline per unit of output	585,916	186,939	0	0	0	0	0	0	0	0	0	0	<b>772,855</b>
Normalised baseline	18,099	111,206	0	0	0	0	0	0	0	0	0	0	<b>129,305</b>
Normalised by NABERS scheme	107,032	69,919	0	0	0	0	0	0	0	0	0	0	<b>176,951</b>
Baseline unaffected by output	13,137	14,276	0	0	0	0	0	0	0	0	0	0	<b>27,413</b>
<b>Metered Baseline Total</b>	<b>724,184</b>	<b>382,340</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,106,524</b>
<b>Total estimated energy savings</b>	<b>1,619,407</b>	<b>1,206,574</b>	<b>773,260</b>	<b>742,498</b>	<b>715,315</b>	<b>640,763</b>	<b>591,603</b>	<b>585,186</b>	<b>576,434</b>	<b>532,445</b>	<b>337,418</b>	<b>5,634</b>	<b>8,326,537<sup>d</sup></b>

**Notes:** Totals may not add due to rounding.

All data is in MWh.

While the ESS closes at the end of 2020 (Section 178 of the Act), energy savings continue to be realised beyond that date.

- a** For the period from 1 July 2009 to 31 December 2012.
- b** Section 174(2)(e) of the Act requires the Scheme Administrator to estimate the energy savings created under the Scheme over the next 10 years having regard to the number of energy savings certificates that have been created.
- c** Forward creation or deeming does not apply for certificates created under the Metered Baseline Method.
- d** Represents total energy savings achieved under the ESS based on total certificates created.

## 2.2 Creation, ownership and surrender of certificates

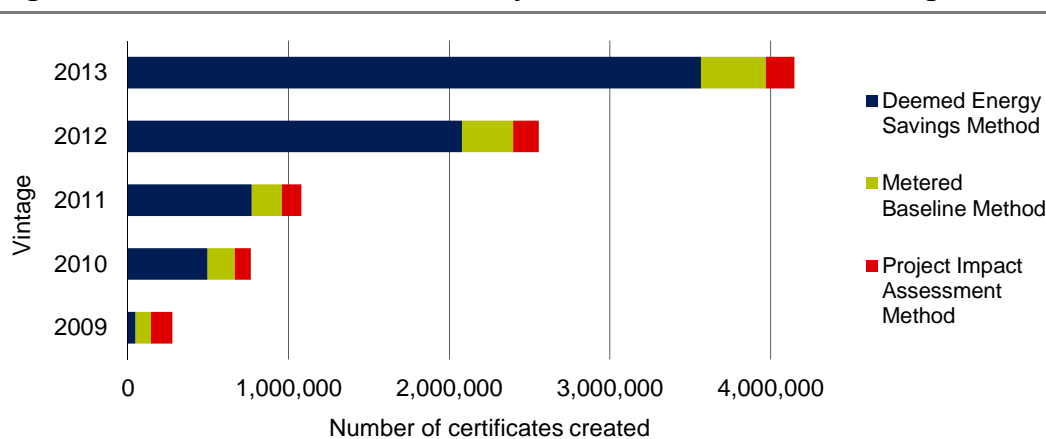
As Scheme Administrator, we are required to establish and keep the publicly available registers of Accredited Certificate Providers and energy savings certificates. The ESS Registry performs this function and is available online at <https://www.ggas-registry.nsw.gov.au>.

The Registry records information about all Accredited Certificate Providers, their accreditations and certificates they created. It also records information about each certificate, including the creator, vintage, energy savings calculation method used and activity undertaken. In addition, it tracks the current status of a certificate – live (available for transfer or surrender), surrendered or forfeited.

### 2.2.1 Creation of certificates

The Registry recorded the creation of 4.1 million 2013 vintage certificates<sup>10</sup> – a 62% increase on 2012. As in previous years, most certificates were created from projects using the Deemed Energy Savings Method, and most of those were commercial lighting replacement activities using the Commercial Lighting Formula sub-method. Lighting projects have been the dominant energy savings activity under the scheme, which include activities such as replacing fluorescent tubes with more efficient LED tubes and installing occupancy sensors to control lights in low use areas. (Figure 2.1, Figure 2.2 and Table 2.2).

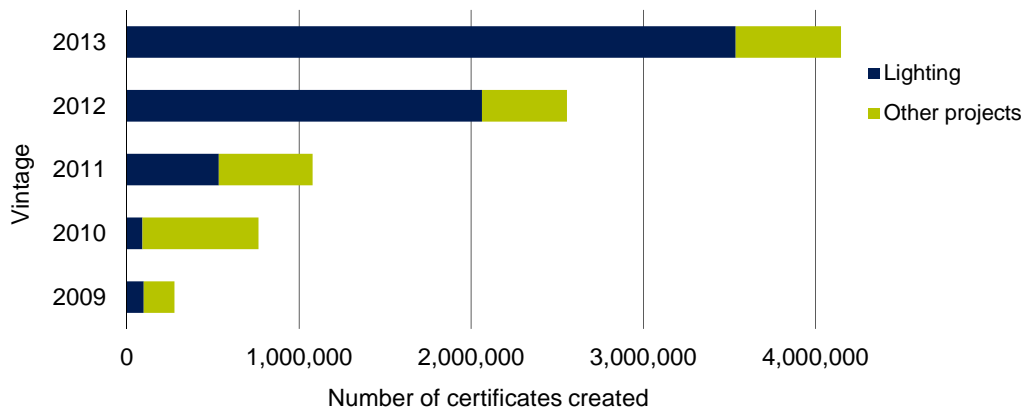
**Figure 2.1 Creation of certificates by calculation method and vintage**



Data source: ESS Registry as at 30 June 2014.

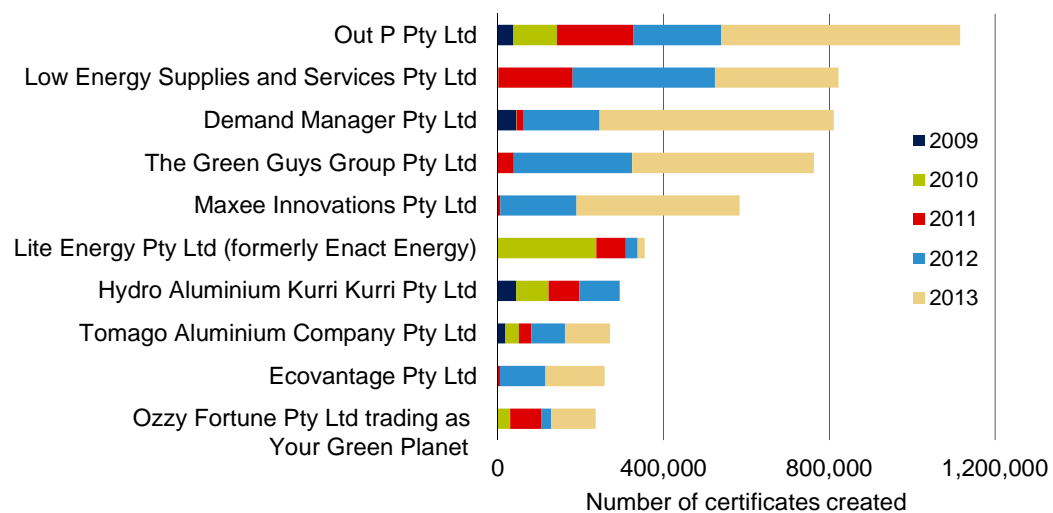
<sup>10</sup> 2013 vintage certificates relate to energy savings activities undertaken during the 2013 calendar year. However, certificates can be created up to six months after the end of the calendar year therefore a 2013 vintage certificate can be registered from 1 January 2013 to 30 June 2014.



**Figure 2.2 Creation of certificates from lighting and other projects**

Data source: ESS Registry as at 30 June 2014.

Out P Pty Ltd (previously Out Performers) remains the largest creator of certificates in the scheme, having created just over 1.1 million certificates since the scheme began. Other large creators of certificates are Low Energy Supplies & Services, Demand Manager, The Green Guys Group and Maxee Innovations, all of which have created more than 500,000 certificates each (Figure 2.3).

**Figure 2.3 Accredited Certificate Providers – 10 largest certificate creators**

Data source: ESS Registry as at 30 June 2014.

### 2.2.2 Transfer of certificates

The Registry records a transfer of a certificate as the change in ownership between any two owners, irrespective of any other relationship that may exist between the parties. For example, it includes transactions such as a subsidiary company transferring certificates to its parent entity. During 2013, the Registry recorded 987 transfers of certificates between parties involving more than nine million certificates (some of which were transferred on multiple occasions).

### 2.2.3 Surrender of certificates

Scheme Participants meet their energy savings target through the surrender of certificates. Once a certificate has been surrendered, it is removed from the scheme and cannot be reused.

The Registry recorded the surrender of 2,491,055 certificates for 2013. Almost all were surrendered by Scheme Participants to meet their compliance obligations (see Section 3.3). The remaining 549 certificates were surrendered by an Accredited Certificate Provider for compliance purposes. This occurred in May 2014 and will be reported in our 2014 compliance report.

The Registry also allows any member of the public to own certificates which can be surrendered to offset emissions – known as voluntary surrender. No certificates have been surrendered in this way since the scheme commenced.

### 2.2.4 Forfeiture of certificates

Accredited Certificate Providers voluntarily forfeit certificates where certificates were improperly created. Once a certificate has been forfeited, it is removed from the scheme and cannot be reused.

There were 81 forfeitures involving 50,327 certificates during 2013. Most of these were to resolve non-compliance by Accredited Certificate Providers where an improper creation of certificates occurred (see section 3.4.1 for details). Forfeitures can also result from errors during the registration process. Certificates that have been forfeited are not considered valid. Therefore, they are not included in the certificate creation data reported in section 2.2.1 and Table 2.2.

### 2.2.5 Certificates available for surrender in future compliance years

At 30 June 2014, there were 2,585,687 certificates of 2013 vintage or older available for surrender in future compliance years. This figure is the sum of valid certificates created less certificates surrendered since the scheme began.

Further information about creation, transfer and surrender of certificates is available on the ESS Registry at <https://www.ggas-registry.nsw.gov.au> under *Find > Search ESS*.

**Table 2.2 Number of certificates created by energy savings calculation sub-method and project type**

	2009	2010	2011	2012	2013	Total
<b>Number of certificates created by energy savings calculation sub-method</b>						
Deemed Energy Savings Method - Commercial Lighting Formula	10,123	70,343	502,382	2,043,448	<b>3,519,325</b>	6,145,621
Metered Baseline Method - baseline per unit of output	89,497	153,475	144,079	234,020	<b>198,155</b>	819,226
Project Impact Assessment Method	134,886	99,390	122,097	158,623	<b>178,585</b>	693,581
Metered Baseline Method - normalised baseline	0	0	0	19,185	<b>117,878</b>	137,063
Metered Baseline Method - normalised by NABERS scheme	4,073	14,339	37,577	57,465	<b>74,114</b>	187,568
Deemed Energy Savings Method - Default Savings Factors	37,733	425,982	269,177	35,304	<b>45,588</b>	813,784
Metered Baseline Method - baseline unaffected by output	630	856	3,869	8,570	<b>15,133</b>	29,058
Deemed Energy Savings Method - Power Factor Correction Formula	0	0	228	0	<b>0</b>	228
Deemed Energy Savings Method - High Efficiency Motor Formula	0	0	0	0	<b>0</b>	0
<b>Number of certificates created each year</b>	<b>276,942</b>	<b>764,385</b>	<b>1,079,409</b>	<b>2,556,615</b>	<b>4,148,778</b>	<b>8,826,129</b>
<b>Number of certificates created by project type</b>						
Lighting (CLF)	10,123	70,343	502,382	2,043,448	<b>3,519,325</b>	6,145,621
Multiple activities	7,720	13,735	15,829	68,815	<b>190,329</b>	296,428
Process Change/Control Systems	118,871	173,527	145,209	231,358	<b>147,560</b>	816,525
Building Upgrade	4,073	14,339	37,577	56,379	<b>72,014</b>	184,382
HVAC/Chiller	7	16,683	37,878	40,965	<b>65,030</b>	160,563
Refrigerator & freezer removal	0	0	0	35,196	<b>45,500</b>	80,696
Refrigeration	0	1,606	9,696	23,428	<b>39,254</b>	73,984
Compressed Air	4,424	19,200	24,274	30,297	<b>24,880</b>	103,075
Fans/Pumps	6,968	9,245	8,216	6,453	<b>21,083</b>	51,965
Lighting (PIAM)	87,023	19,725	28,943	20,168	<b>17,440</b>	173,299
High Efficiency Motors	0	0	0	0	<b>3,970</b>	3,970
Power Systems	0	0	0	0	<b>2,305</b>	2,305
Whitegoods	701	258	38	108	<b>88</b>	1,193
Lighting (DSF)	0	1,039	2,831	0	<b>0</b>	3,870
Power Factor Correction	0	0	228	0	<b>0</b>	228
Showerheads	37,032	424,685	266,308	0	<b>0</b>	728,025
<b>Number of certificates created each year</b>	<b>276,942</b>	<b>764,385</b>	<b>1,079,409</b>	<b>2,556,615</b>	<b>4,148,778</b>	<b>8,826,129</b>

**Note:** Small differences in some data compared to previous Annual Reports reflects certificates that have been forfeited after the report was released.

**Data source:** ESS Registry as at 30 June 2014.

### 2.3 The certificate price and surplus

We monitor trends in the published certificate spot market price, as these can influence the supply of certificates and provide an indication of the state of the market.<sup>11</sup> The certificate price declined significantly during 2013 – from \$31.30 in January to \$13.00 in November, recovering slightly to \$17.00 in December. In 2014, it continued to decline and was at a historical low of \$11.05 in May 2014. We attribute this price fall primarily to the surplus of certificates in the market, and market uncertainty on the proposed ESS Rule change and its commencement date.<sup>12</sup>

For the first three years of the scheme, certificates created by Accredited Certificate Providers were less than the certificates required by Scheme Participants to meet compliance obligations in those years. This changed in 2012 when certificates created exceeded Scheme Participants' total compliance obligation by almost 700,000. The surplus in 2013 was more than double the 2012 surplus at 1.7 million certificates (Table 2.3).

**Table 2.3 Supply and surplus of certificates (created and required for surrender)**

Compliance Year	Certificates created by Accredited Certificate Providers	Certificates required to meet compliance obligations for the compliance year	Surplus for the compliance year	Cumulative surplus
2009	276,942	289,118	(12,176)	(12,176)
2010	764,385	858,004	(93,619)	(105,795)
2011	1,079,409	1,414,315	(334,906)	(440,701)
2012	2,556,615	1,857,069	699,546	258,845
<b>2013</b>	<b>4,148,778</b>	<b>2,433,461</b>	<b>1,715,317</b>	<b>1,974,162</b>

However, during the first three years of the scheme some Scheme Participants paid a financial penalty in lieu of surrendering certificates. In total, these penalties were equivalent to 568,089 certificates. As a result, the actual certificate surplus has been positive in each year when calculating actual certificates created and surrendered. It has also cumulatively increased in each year (Table 2.4).

<sup>11</sup> Published data indicates that spot trades constitute only a small proportion of total certificate transactions as most transactions are forward trades where the price is agreed between two parties. Nevertheless, the spot price provides a useful guide to broad movements in the certificate price over time.

<sup>12</sup> Consultation on the proposed amendments to the ESS Rule commenced in late November 2013, with the new Rule initially proposed for gazettal on 1 March 2014 for commencement on 1 April 2014. Two amendments to the ESS Rule were subsequently gazetted on 30 May 2014, for commencement on 1 June 2014 and 1 July 2014.

**Table 2.4 Supply and surplus of certificates (actual)**

Compliance year	Total certificates created	Total certificates surrendered	Surplus for the compliance year	Cumulative surplus
2009	276,942	148,928	128,014	128,014
2010	764,385	651,655	112,730	240,744
2011	1,079,409	1,063,564	15,845	256,589
2012	2,556,615	1,885,240	671,375	927,964
<b>2013</b>	<b>4,148,778</b>	<b>2,491,055</b>	<b>1,657,723</b>	<b>2,585,687</b>

The financial penalty creates an effective ceiling for the certificate price. It was set as \$32.00 (inclusive of company tax) at scheme commencement and is adjusted each year in line with the Consumer Price Index.<sup>13</sup> Accordingly, the penalty price has increased slightly each year and, as may be expected, the certificate price has remained below the penalty price. Figure 1.1 on page 3 shows the effective certificate price ceiling against the historical spot market certificate price (where known).<sup>14</sup> It can be seen that the spot market certificate price has fluctuated over time:

- ▼ rising from \$16.75 in August 2009 to \$32.00 in February and March 2011 (the highest price to date)
- ▼ remaining high during 2011 and 2012 (the years when penalty payments were high), and
- ▼ falling significantly throughout 2013 and the first half of 2014 (as both the certificate surplus and possible changes to the ESS Rule created uncertainty in the market).

<sup>13</sup> Schedule 5A of the Act and clause 82 of the Regulation.

<sup>14</sup> We use the certificate spot price sourced from The Green Room report published by Nextgen. This does not cover all certificate trades, therefore the historical certificate price is based on incomplete data and should be interpreted with caution.

## 3 Scheme administration and compliance by participants

As Scheme Administrator and Scheme Regulator, we have developed our framework for managing the administration and compliance of participants. We accredit organisations to conduct energy savings projects as Accredited Certificate Providers, provide support to participants in the scheme, and monitor and assess their compliance performance.

### 3.1 Administration of the ESS during 2013

As Scheme Administrator, we assess applications for accreditation, amendment and cancellation of Accredited Certificate Providers. We also assess applications for use of emerging lighting technologies, and applications for membership of the Audit Services Panel. The sections below describe these administration activities, as well as the actions we took during 2013 to improve our administration of the scheme.

#### 3.1.1 RESAs accredited during 2013

To be accredited as a RESA, an energy saving activity needs to meet the criteria for one of the three methods for calculating energy savings set out in the ESS Rule – the Project Impact Assessment Method, the Metered Baseline Method, and the Deemed Energy Savings Method. Once an application is deemed complete and the application fee is paid, we review the information provided against the requirements of the Act, Regulation, the ESS Rule and our published policies and procedures.

During 2013, we accredited 51 new RESAs. As Figure 3.1 shows, these included:

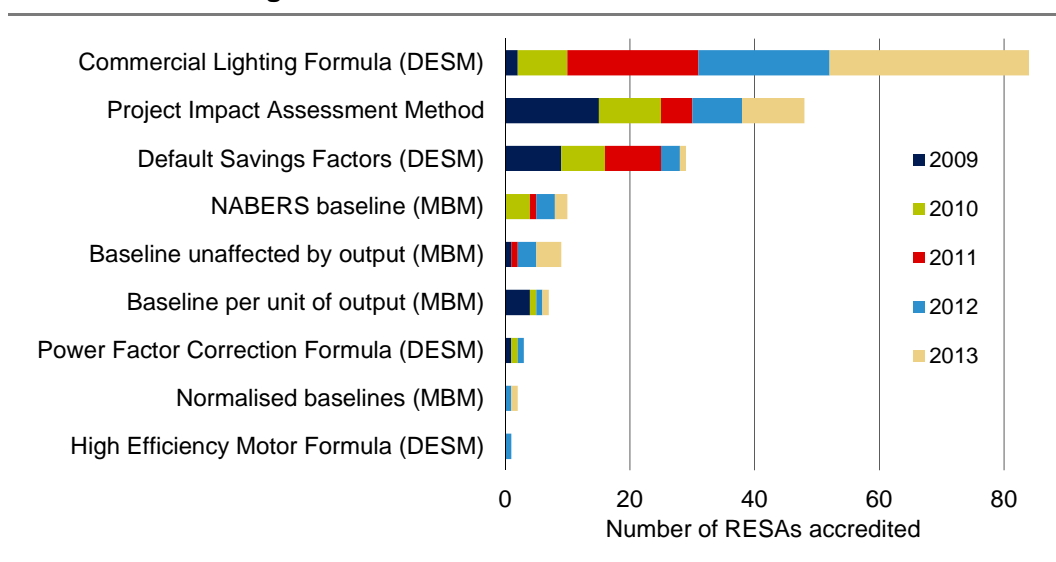
- ▼ 32 RESAs using the Commercial Lighting Formula, a sub-method of the Deemed Energy Saving Method (DESM). This is currently the most common method used, making up over 40% of all RESAs accredited to date. It is simple to apply, and makes use of deeming (claiming future energy savings) at the time of certificate creation, with consequential discounting of those savings. It does not require technical monitoring or ongoing measurements to determine energy savings, but does require quarterly reporting.

- ▼ 10 RESAs using the Project Impact Assessment Method. This method, which makes up 25% of all RESAs accredited to date, covers a broader range of activities than the Commercial Lighting Formula and is more technically complex, for example, upgrading machinery at a mining site where the savings, although significant, are a fraction of the consumption of the overall site.
- ▼ Nine RESAs using the other sub-methods of the Deemed Energy Savings Method, for example, high-efficiency motor upgrades, or various sub-methods of the Metered Baseline Method (MBM), for example, installing active control systems on fans or motors where the savings can be verified through metering.

Figure 3.1 also shows that only one new project was accredited under the Default Savings Factors sub-method of the DESM in 2013. The number of new RESAs using this sub-method has declined since 2011 when the ESS Rule was amended to remove showerhead replacement activities from the scheme.

Further information about accredited RESAs is available on the ESS Registry at <https://www.ggas-registry.nsw.gov.au> under *Find > Search ESS*.

**Figure 3.1 Approvals for accreditation by year accredited and energy savings calculation method**



**Notes:** DESM stands for Deemed Energy Savings Method, MBM stands for Metered Baseline Method.

### 3.1.2 RESAs amended, cancelled or transferred during 2013

From time to time, the accreditation conditions imposed on Accredited Certificate Providers are amended. Amendments typically involve changing the number of certificates that can be created and the audit regime. During 2013, we approved amendments to 40 existing RESAs.

We also cancelled nine RESAs and approved the transfer of an accreditation from one organisation to another. The cancellations were due to the Accredited Certificate Providers withdrawing from the ESS after they ceased carrying out eligible energy savings activities or changing company structure.

### **3.1.3 Approvals for emerging lighting technologies during 2013**

Accredited Certificate Providers can apply to IPART to have emerging technologies accepted for use in projects – this allows innovation for technology that is not standard under the ESS Rule. To be accepted, the Accredited Certificate Provider must provide information on the technology's electromagnetic compatibility (EMC) and electrical safety, lamp circuit power and asset lifetime. An application for the use of emerging lighting technologies must include supporting information justifying its use in the ESS, and the application is assessed against performance and safety standards.

During 2013, we processed 1,448 applications for emerging lighting technologies covering 3,198 products, and accepted 2,431 new products for use in the scheme. Applications may be withdrawn by the applicant or cancelled by IPART if the applicant cannot provide sufficient evidence to support the application.

Further information about emerging lighting technologies is available at [www.ess.nsw.gov.au/Projects\\_and\\_equipment/Emerging\\_lighting\\_technologies](http://www.ess.nsw.gov.au/Projects_and_equipment/Emerging_lighting_technologies).

### **3.1.4 In-person and online workshops during 2013**

We hold both in-person and online workshops to help potential applicants, Accredited Certificate Providers and auditors better understand ESS participation and obligations. Since 2011 we have conducted free pre-application workshops to increase program participation and teach potential applicants how to successfully apply for accreditation. These workshops help applicants understand the ESS legislation and obligations placed on Accredited Certificate Providers. They have resulted in better quality applications being submitted.

In 2013, we made our workshops available online for the first time. We held 14 online workshops and two in-person workshops with 136 participants across all sessions.

Further information about our workshops, including registration, is available at [www.ess.nsw.gov.au/Online\\_Workshops](http://www.ess.nsw.gov.au/Online_Workshops).



### 3.1.5 Consultancy on commercial lighting

We completed our review of commercial lighting activities in August 2013 to improve our administration and understanding of these activities. Following the report by Beletich Associates and the submissions from stakeholders, we released our Response to Consultation. We outlined 11 actions encompassing:

- ▼ lighting standards and compliance with the Rule
- ▼ training
- ▼ performance of lighting equipment, and
- ▼ Safety and Electromagnetic Compatibility requirements.

A number of actions require changes to the ESS Rule and we notified the policy agencies of our recommendations relating to these actions. The remaining actions have been progressed and in some cases completed, such as implementation of the *Document Pack*.

The *Beletich Report*, *Issues Paper* and *IPART Response to Consultation* are available at [www.ess.nsw.gov.au/beletich2013](http://www.ess.nsw.gov.au/beletich2013).

### 3.1.6 Emerging lighting technology portal

In early 2013, we launched our emerging lighting technology (ELT) portal to manage requests for acceptance of emerging lighting technologies (see Section 3.1.3). The ELT portal allows Accredited Certificate Providers to submit ELT requests electronically, track assessment progress, and retrieve acceptance letters. The portal also facilitates communication between the ESS team and the Accredited Certificate Provider in situations where more information is required for a specific request.

The ELT portal was updated in early 2014 to further streamline our processing of ELT requests and provide for better reporting on the types of lighting equipment used in commercial lighting activities. The changes included:

- ▼ aligning product categories with those generally used by the lighting industry and certification bodies
- ▼ improving usability, and
- ▼ further clarifying the applicable product category for different types of lighting equipment.

The portal is available at [www.ess.nsw.gov.au/ELT/ELT\\_Login](http://www.ess.nsw.gov.au/ELT/ELT_Login).

### **3.1.7 ESS IT System**

In 2013, we initiated a project to develop a new streamlined IT system to better manage our applications and compliance processes for the benefit of participants and stakeholders. The objectives of the new system are to improve stakeholder interaction and reporting, assist the ESS team in managing scheme expansion and increase administration efficiency.

In January 2014, we engaged SMS Management & Technology to conduct the 'discovery' phase for our system. During this phase we conducted workshops with internal and external stakeholders, including a session with Accredited Certificate Providers, to identify the needs of different stakeholders.

We intend to begin the 'development' phase in mid-2014, and expect to launch the IT system in the second-half of 2014.

### **3.1.8 Performance standards**

In late 2013, we initiated a project to establish performance standards of our administration of ESS. To assist us, we held a workshop with stakeholders to seek their views on what works well, what could be done better, and their expectations for administration processing times. In 2013, our processing times improved despite an increase in the number of applications we received. For example, our average time for processing RESA applications in 2013 was 103 days compared to 125 in 2012, while our average time for processing ELT applications was 33 days in 2013 compared to 49 in 2012.

We are developing a set of operational targets for various activities undertaken in the ESS and will regularly report against them.

### **3.1.9 Progress towards harmonizing the ESS and VEET**

During 2013 we continued to work with the Victorian Essential Services Commission, which administers the Victorian Energy Efficiency Target (VEET) scheme, to align the ESS and VEET scheme wherever possible. However in early 2014, the Victorian Government announced that the VEET scheme would close at the end of 2015. We continue to work with the Essential Services Commission and incorporate their learnings into our administration of the ESS as appropriate.

### 3.1.10 Current and projected supply and demand for certificates

The price of certificates varies due to supply and demand and can fluctuate considerably depending on market conditions. Historically, certificates have traded at prices around \$11.00 - \$32.00 per certificate.<sup>15</sup> We regularly publish market estimates for both supply and demand of energy savings certificates based on a number of assumptions and sources of information. Our most recent Market Update was published in February 2014 and we estimated that:

- ▼ certificate demand for 2013 would be between 2.17 million and 2.42 million (actual demand was 2.4 million)
- ▼ certificate supply for the 2013 compliance year would be approximately 3.64 million (actual supply was 4.1 million), and
- ▼ the most likely range of surplus certificate creation of 2013 vintage would be around 1.62 - 1.85 million (actual surplus was 1.7 million).<sup>16</sup>

Our next Market Update will be published in late July 2014 and available on our website at [www.ess.nsw.gov.au/certificate\\_market](http://www.ess.nsw.gov.au/certificate_market). It will provide an estimate of projected supply and demand for certificates for the 2014 compliance year.

## 3.2 Managing compliance

As Scheme Regulator and Scheme Administrator we monitor and assess the compliance performance of Scheme Participants and Accredited Certificate Providers. To manage compliance we use a risk management approach and impose requirements on participants, including regular auditing and reporting.

Auditors provide independent verification that Scheme Participants have met their obligations under the ESS. They also provide assurance that energy savings claimed by Accredited Certificate Providers are real and that energy savings certificates are created in accordance with the requirements of the scheme. Our *Compliance and Performance Management Strategy* and *Audit Guideline* describe how audits are used and applied in the ESS.

### 3.2.1 Managing Scheme Participants' compliance

A Scheme Participant's compliance performance is based on it submitting its Annual Energy Savings Statement (AESS) to IPART by the required deadline, and surrendering sufficient certificates to meet its Individual Energy Savings Target.<sup>17</sup> If a Scheme Participant does not surrender the required number of certificates, it may be liable for a financial penalty as set out in the Regulation.

<sup>15</sup> The Green Room reports, Nextgen, *nges.com.au*.

<sup>16</sup> It should be noted that a high degree of uncertainty exists with respect to future certificate demand and supply and any estimates should be interpreted with caution.

<sup>17</sup> See Section 1.1 and Chapter 2 of this report.

Prior to submitting the AESS, the Scheme Participant must engage an auditor from the Audit Services Panel to assess whether the statement is complete and correct – that it sets out the Scheme Participant’s calculation of its individual energy savings target, including:

- ▼ the particulars of its liable acquisitions and any deductions in respect of partially exempt loads
- ▼ the extent to which it met the target by surrendering certificates, and
- ▼ any energy savings shortfall it is carrying forward and any penalty it is required to pay.

When an AESS is submitted, we review the data and audit report, cross check certificate numbers with the ESS Registry and undertake a reasonableness check. Where an error or misstatement is identified, we make an amendment. The process is finalised when we issue a Notice of Assessment, which advises the Scheme Participant of any shortfall penalties it must pay and the acceptance of certificates it has offered for surrender on the ESS Registry.

### **3.2.2 Managing Accredited Certificate Providers’ compliance**

When we accredit an Accredited Certificate Provider to carry out a Recognised Energy Savings Activity (RESA), we impose audit and reporting requirements as part of the conditions of accreditation.<sup>18</sup> We determine these requirements using a risk management approach that involves:

- ▼ assigning a risk rating (low, medium, high or extreme) for the RESA
- ▼ establishing an audit and reporting regime based on this risk rating
- ▼ rewarding good compliance performance and responding promptly and fairly to poor compliance, to maintain the integrity of the scheme and restrict compliance costs on Accredited Certificate Providers
- ▼ providing an opportunity for parties subject to auditing to keep audit costs as low as possible while still maintaining the integrity of the scheme, and
- ▼ clearly stating the error materiality threshold and describing how errors are treated.

Where the risk is considered to be high or extreme, we may require pre-registration audits. These audits must be completed (with a satisfactory result) before the Accredited Certificate Provider can register (and sell) certificates. These audits provide the highest level of assurance.

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<sup>18</sup> See Section 1.2 and Chapter 3.

We can also make a Deed of Agreement with an Accredited Certificate Provider to provide additional assurance. We seek these agreements on a voluntary basis. Their terms and conditions vary to reflect the Accredited Certificate Provider's individual circumstances, but generally they require it to withhold from trade a portion of the certificates it creates until an audit is completed. Typically, this portion is a set percentage of certificates depending on the risk rating of the RESA, and reduces to zero after three successive audits with no material error.

In extreme cases, we can suspend the accreditation of an Accredited Certificate Provider. Typically, we would consider this approach when we have serious concerns about the activities and evidence of serious instances of improper certificate creation. We have only used this measure once since the ESS commenced.

### 3.2.3 Compliance and Performance Monitoring Strategy and Audit Guideline

Our *Compliance and Performance Monitoring Strategy* (CPMS) provides guidance on our approach in managing and monitoring the compliance and performance of Scheme Participants and Accredited Certificate Providers. The main sections of the CPMS:

- ▼ describe the tools we use to monitor, assess and manage the compliance and performance of Scheme Participants and Accredited Certificate Providers
- ▼ explain how we use audits for Accredited Certificate Providers in more detail, including how we determine the specific audit requirements of individual Accredited Certificate Providers or RESAs, and
- ▼ outline our approach and the mechanisms available to us to manage poor compliance.

Our *Audit Guideline* provides information to auditors about how we manage the audit process, as well as our expectations about how audits are conducted. The main sections of this guideline:

- ▼ outline the requirements auditors must meet to be able to conduct audits under the ESS
- ▼ explain our approach to audits, including the audit process and guidance on audit procedures (ie, sampling), and
- ▼ describe the elements an audit report needs to contain and how to report audit findings to IPART.

The CPMS and Audit Guideline are our core compliance documents. Both are available on our website at [www.ess.nsw.gov.au](http://www.ess.nsw.gov.au). The CPMS was updated in early 2014 and the updated version is on our website.

### 3.2.4 Audit Services Panel

All audits must be undertaken by a member of our Audit Services Panel, with IPART (acting as either the Scheme Administrator or Scheme Regulator) as the principal client. Audits are paid for by the Scheme Participant or Accredited Certificate Provider.

Applications for membership to the panel may be made at any time. We assess applications against specific selection criteria to ensure that each firm has both the institutional capacity to support the audit process, and appropriate lead auditors with demonstrated skills and experience to conduct audits under the ESS.

Panel members provide services in accordance with the Audit Services Panel Agreement. In addition to auditing, they may provide advice or consultancy services to Accredited Certificate Providers or to IPART under this agreement where no conflict of interest exists. Panel members may not be accredited as an Accredited Certificate Provider because of potential conflicts of interest.

During 2013, we received four applications to join the Audit Services Panel and approved two of these. The other two applicants did not provide the required information in their applications. The additions to the panel brought the total number of members to 14 firms, with a total of 29 lead auditors, during 2013.

Further information about the Audit Services Panel, including a list of panel members, is available at [www.ess.nsw.gov.au/For\\_Auditors](http://www.ess.nsw.gov.au/For_Auditors).

## 3.3 Compliance by Scheme Participants

Scheme Participants include all holders of NSW electricity retail licences; NSW electricity generators that supply directly to retail customers in NSW; and market customers in NSW that purchase electricity directly from the National Electricity Market (NEM). Their key compliance obligations include:

- ▼ Calculating their individual energy savings target for the year.
- ▼ Obtaining and surrendering sufficient certificates to meet this target, or carrying forward some or all the resulting energy savings shortfall (within the 10% limit) and/or paying a shortfall penalty.
- ▼ Lodging its AESS for the calendar year with IPART by the compliance date in the following year.
- ▼ Ensuring this AESS is complete and correct, covering:
  - the Scheme Participant's calculation of its individual energy savings target
  - the particulars of its liable electricity acquisitions and any deductions in respect of partially 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.
- ▼ Lodging an independent audit report with the AESS, unless exempted from this obligation.<sup>19</sup>

The sections below detail Scheme Participants' compliance with these obligations in 2013, as well as historical compliance trends.

### 3.3.1 Scheme Participant performance in 2013

During 2013, there were 47 Scheme participants, including 43 retail electricity suppliers, two electricity generators, and two market customers. 40 Scheme Participants fully met their 2013 individual energy savings targets under the ESS, including any remaining obligations for the 2012 compliance year. Of these, 28 surrendered sufficient certificates to meet their energy savings target, while a further 14 did not directly purchase or sell electricity in NSW and so were not required to surrender any certificates.

The five Scheme Participants that did not fully meet their individual energy savings targets identified a shortfall equal to or less than 10% of their target. Therefore, all were able to carry forward their total shortfall to 2014. None elected to pay a shortfall penalty.

Three Scheme Participants did not comply with the requirement to submit their audited AESS by the compliance deadline of 30 April 2014. However, these participants did submit this statement subsequent to the deadline.

Two Scheme Participants did not comply with the requirement to submit their audited AESS by the compliance deadline of 30 April 2014 and did not subsequently submit this statement. However, both of these Scheme Participants confirmed that they had no liable acquisitions for the 2013 compliance year.

One Scheme Participant surrendered additional certificates in 2013 following an amended assessment of its 2012 compliance obligation.

Table 3.1 outlines the compliance performance of individual Scheme Participants. Table 3.2 reconciles the certificates required to meet Scheme Participants' combined compliance obligation for 2013 with certificates surrendered.

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<sup>19</sup> Scheme Participants submitting nil returns can complete a simplified AESS which does not require an audit. In addition, we can grant audit exemptions for Scheme Participants that had low electricity purchases for the year and/or a very simple AESS.

**Table 3.1 Scheme Participants' compliance for the 2013 compliance year**

<b>Compliance performance</b>	<b>Scheme Participant</b>
<b>Surrendered sufficient certificates to meet individual 2013 energy savings target</b>	Alinta Energy Retail Sales Pty Ltd
	Aurora Energy Pty Ltd
	Ausgrid
	Click Energy Pty Ltd
	Delta Electricity <sup>a</sup>
	Diamond Energy Pty Ltd
	Endeavour Energy
	EnergyAustralia Pty Ltd
	EnergyAustralia Yallourn Pty Ltd
	ERM Power Retail Pty Ltd
	GoEnergy Pty Ltd
	GridXPower Pty Ltd
	Infigen Energy Markets Pty Limited
	Lumo Energy (NSW) Pty Ltd
	M2 Energy Pty Ltd (previously Dodo Power and Gas)
	Macquarie Generation <sup>a</sup>
	Momentum Energy Pty Ltd
	Origin Energy Electricity Limited (including Cogent Energy and Sun Retail) <sup>c</sup>
	Origin Energy Eraring (previously Eraring Energy) <sup>b</sup>
	Progressive Green
	Red Energy Pty Ltd
	Sanctuary Energy Pty Ltd
	Simply Energy
	Stanwell Corporation
Tomago Aluminium Company Pty Ltd <sup>b</sup>	
WINenergy	
<b>Did not directly purchase or sell electricity in NSW in 2013 and therefore were not required to surrender certificates</b>	Actew AGL Retail Ltd
	CS Energy Ltd
	EDL Retail Pty Ltd
	Ergon Energy Queensland Pty Ltd
	Essential Energy
	International Power (Retail) Pty Ltd
	Metered Energy Holdings Pty Ltd
	Neighbourhood Energy Pty Ltd
	OzGen Retail Pty Ltd
	Pacific Hydro Retail Pty Ltd
	People Energy Pty Ltd
	Poole Energy Pty Ltd
	Powershop Australia Pty Ltd
	Trustpower Australia Holdings Ltd
<b>Surrendered certificates to meet part of 2013 energy savings target and chose to carry forward the remaining energy savings shortfall to 2014</b>	AGL Sales (Queensland Electricity) Pty Ltd
	AGL Sales Pty Ltd
	Australian Power and Gas (NSW)
	Powerdirect Pty Ltd
	Qenergy Pty Ltd

<sup>a</sup> A direct supplier of electricity.

<sup>b</sup> A market customer. Section 101(2) of the Act defines a market customer as: a customer that has classified any of its electricity loads as a market load and that is registered with the Market Operator as a market customer under the National Electricity Rules (within the meaning of the National Electricity (NSW) Law).

<sup>c</sup> Origin Energy submitted a single AESS covering Origin Energy Electricity, Cogent Energy and Sun Retail.



**Table 3.2 Reconciliation of certificates required to meet combined compliance obligations and certificates surrendered, 2013**

<b>Certificates required to meet 2013 compliance obligations</b>	<b>2,433,461</b>
<i>Add:</i> Certificates required to meet shortfalls carried forward from 2012	100,232
<i>Less:</i> Shortfall carried forward to 2014	(44,403)
<i>Less:</i> Penalties paid in lieu of certificate surrender	0
<i>Add:</i> Certificates surrendered to satisfy amended assessments from previous compliance years	1,216
<b>Total certificates surrendered</b>	<b>2,490,506</b>

### 3.3.2 Deductions for exempt loads

Section 119 of the Act provides for the Minister to grant exemptions from the ESS for part of the electricity load used by entities in ‘emissions-intensive and trade-exposed’ industries or activities.<sup>20</sup> These entities are set out in a Ministerial Order published by the Minister for Resources and Energy in the Government Gazette.<sup>21,22</sup> Scheme Participants that sell electricity to these entities are entitled to deduct the exempt portion of their sales when calculating their annual liable acquisitions.

The *Scheme Regulator Exemptions Rule No. 1 of 2009* outlines the manner in which Scheme Participants must calculate and claim deductions, and specifies the evidence they must provide to the Scheme Regulator to support these deductions. An amended version of the Exemptions Rule commenced on 14 November 2013. The purpose of the amendment was to provide more flexibility for the Scheme Participant and give the Scheme Regulator more discretion to determine whether a claim for deduction has been substantiated.

During 2013, 21 entities had exemptions for 30 specified locations. These included:

- ▼ **Eight locations with exemptions for 60% of the load.** The activities undertaken at these locations included the production of glass containers, chlorine gas, sodium hydroxide, ammonium nitrate, nitric acid, ethanol, hydrogen peroxide, magnetite concentrate and polymer grade propene.

<sup>20</sup> These entities must provide their electricity retailer with details of their exempt load in order to claim the exemption. The retailer then deducts this proportion of the load from its annual liable electricity acquisitions, thereby reducing its annual energy savings target (in MWh).

<sup>21</sup> 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 (either 60% or 90%).

<sup>22</sup> The amended Ministerial Order published on 21 December 2012 applies for the 2013 year. See [www.nsw.gov.au/gazette](http://www.nsw.gov.au/gazette).

- ▼ **21 locations with exemptions for 90% of the load.** The activities undertaken at these locations include the manufacture of paper, newsprint, packaging and flat glass, the production of lime, clinker, magnesia, carbon black, ethylene and polyethylene, coke and iron, as well as steel making, aluminium smelting and petroleum refining.
- ▼ **One location with exemptions for both 60% and 90% of the load** depending on the activity undertaken.

Nine Scheme Participants supplied electricity to these entities at these locations. In total, the deductions they claimed for exempt loads represented approximately 17% of the total electricity supplied in NSW in 2013.

For more information on the Ministerial Order and the Exemptions Rule, see our website at [www.ess.nsw.gov.au/For\\_Liable\\_Entities](http://www.ess.nsw.gov.au/For_Liable_Entities) and fact sheet “Overview of the ESS” at [www.ess.nsw.gov.au/How\\_the\\_scheme\\_works](http://www.ess.nsw.gov.au/How_the_scheme_works).

### 3.3.3 Energy savings shortfalls carried forward

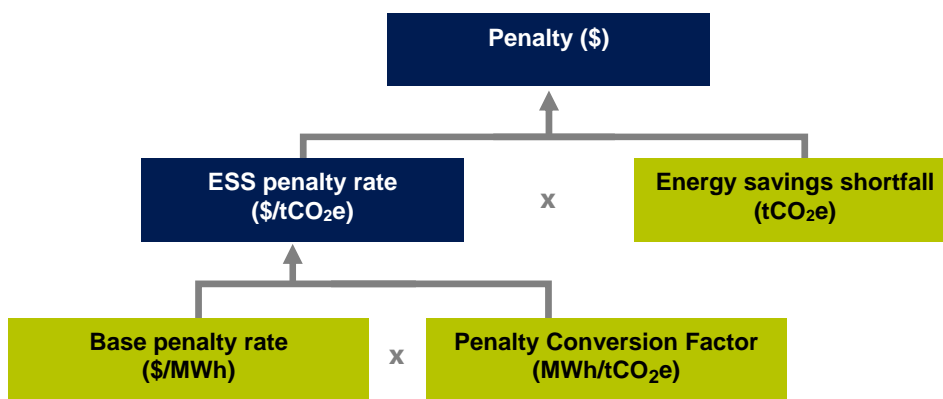
Section 116 of the Act provides that a Scheme Participant with an energy savings shortfall for a given year can elect to carry forward at least some of this shortfall to the next year – up to a maximum of 10% of its individual energy savings target. Any shortfall carried forward must be met in the following compliance year.

For 2013, five Scheme Participants elected to carry forward a total of 44,403 certificates to the 2014 compliance year. This represents 2% of Scheme Participants’ combined compliance obligation for 2013.

### 3.3.4 Energy savings shortfall penalties paid

Section 112 of the Act provides that a Scheme Participant with an energy savings shortfall for a given year (which it has not carried forward to the following year) is liable to pay a penalty for that shortfall. This effectively allows the Scheme Participant to ‘buy out’ its compliance obligations for that year. (Box 3.1 explains how this penalty is calculated).

In 2013, no Scheme Participants chose or were required to pay a shortfall penalty.

**Box 3.1 Calculating the penalty associated with an energy savings shortfall**

The Scheme Participant's penalty liability is calculated by multiplying its energy savings shortfall by the ESS penalty rate for that year. This rate is established by taking the base penalty rate (listed in the *Electricity Supply (General) Regulation 2001* (the Regulation) and expressed in \$ per MWh), then multiplying it by the penalty conversion factor (listed in Schedule 5A of the *Electricity Supply Act 1995*). This converts the base rate to \$ per tCO<sub>2</sub>-e (which is the unit of measurement for energy savings shortfalls).

Every year, the base penalty rate is indexed by changes in the CPI using an equation listed in the Regulation. For 2013, the ESS penalty rate was \$25.45 per tCO<sub>2</sub>-e.

### 3.3.5 Audits of Annual Energy Savings Statements

As Scheme Regulator, we require Scheme Participants to have their AESS audited by a member of the Audit Services Panel prior to submission (unless they have been granted an exemption or submitted nil returns). These audits provide assurance that any energy savings shortfalls have been calculated correctly. The auditor is required to verify that inputs and arithmetical calculations are correct, and claims for exemptions for electricity sold to exempt parties are supported by appropriate evidence.

For 2013, the Audit Services Panel undertook 18 AESS audits, which covered 21 Scheme Participants' statements. These audits were conducted in early 2014, prior to the compliance deadline of 30 April 2014.

Of the remaining 26 Scheme Participants, 12 were granted exemptions from these audits as they had limited input data and audit assurance was unnecessary. 12 submitted nil returns and did not require audits. Two did not submit returns, but did not require audits.

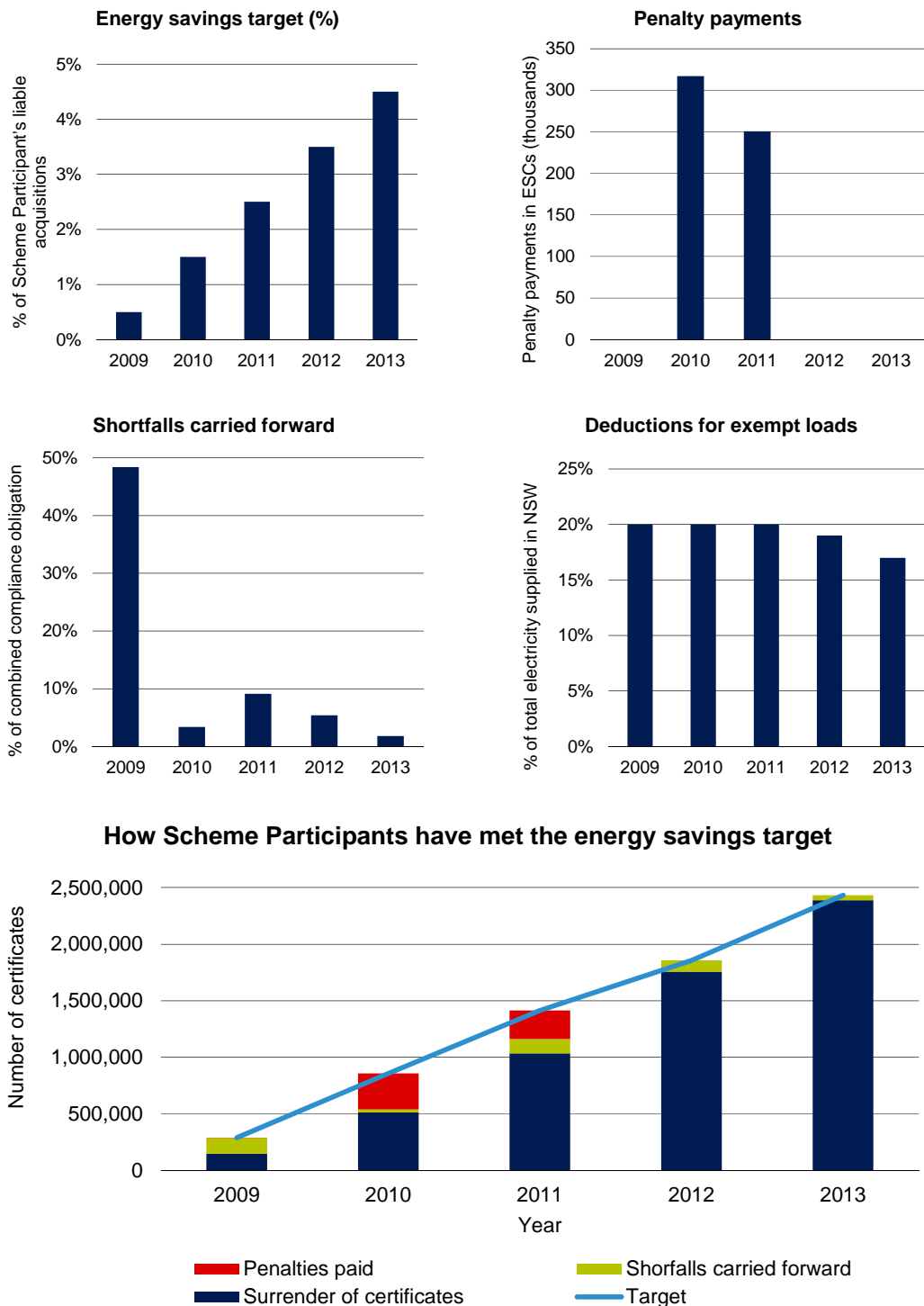
### 3.3.6 Scheme Participants' historical compliance performance data and trends

When the ESS began in July 2009, there were 29 Scheme Participants, the energy savings target was 0.5% and 289,118 certificates were required to meet compliance obligations for the year. Five years later in 2013, the number of Scheme Participants had increased to 47, the energy savings target had increased to 4.5% and the number of certificates required to meet compliance obligations was almost 2.5 million.

Figure 3.2 shows trends in Scheme Participants' compliance over this period. In particular, it shows changes in:

- ▼ **Penalty payments:** In the first three years of the ESS's operation, a number of Scheme Participants paid a penalty in lieu of surrendering certificates. These payments were particularly high in 2010 and 2011 (\$7.3 million and \$6 million respectively). However, in the last two years, penalty payments have reduced to zero, as the number of Accredited Certificate Providers and certificates created increased.
- ▼ **Energy savings shortfalls carried forward:** In the first year, the shortfalls carried forward represented almost half of Scheme Participants' combined compliance obligations. (The maximum shortfall that could be carried forward in that year was set at 50%, in recognition that certificates would be in short supply at the start of the scheme. It reduced to 10% in subsequent years.) However, the shortfall carried forward quickly declined and in 2013 was only 2% of combined compliance obligations.
- ▼ **Deductions for exempt loads:** Deductions for exempt loads were steady at around 20% of total electricity supplied in NSW for the first three years of the scheme. Over the last two years, they declined to 17%.

**Figure 3.2 Key compliance trends – Scheme Participants**



**Table 3.3 Historical compliance performance data – Scheme Participants**

	2009 <sup>a</sup>	2010	2011	2012	2013
Number of Scheme Participants	29	29	33	36	47
Number of Scheme Participants that supplied electricity to entities with exempt loads	9	9	9	9	9
Deductions for exempt loads as a % of total electricity supplied in NSW	20%	20%	20%	19%	17%
Energy savings target (%)	0.5%	1.5%	2.5%	3.5%	4.5%
Total certificates required to meet compliance obligations for the compliance year	289,118	858,004	1,414,315	1,857,069	2,433,461
Total certificates surrendered	148,928	651,655	1,063,564	1,885,240	2,490,506
Maximum energy savings shortfall that can be carried forward (% of individual energy savings target)	50% <sup>b</sup>	10%	10%	10%	10%
Total energy savings shortfalls carried forward to the next year (expressed as certificates)	139,843	29,012	128,402	100,232	44,403
Energy savings shortfalls as a percentage of combined compliance obligation	48.4%	3.4%	9.1%	5.4%	1.8%
Number of Scheme Participants that chose to carry forward a shortfall to the next year	12	10	11	6	5
Number of Scheme Participants that were not required to surrender certificates for the compliance year	5	4	7	7	14
ESS penalty rate (\$per tCO <sub>2</sub> -e)	\$23.03	\$23.03	\$23.99	\$24.86	\$25.45
Number of Scheme Participants that chose to pay a penalty	3	8	4	0	0
Total penalties paid (expressed as certificates)	347	316,952	250,790	0	0
Total penalties paid (expressed as \$)	\$7,990	\$7,299,425	\$6,016,150	\$0	\$0
Number of audits of Annual Energy Savings Statements	14	18	13	17	18

<sup>a</sup> For the six month period to 31 December 2009.

<sup>b</sup> The maximum amount of energy savings shortfall for 2009 was 50%.

### 3.4 Compliance by Accredited Certificate Providers

Accredited Certificate Providers include all organisations that have applied for and been granted accreditation to create certificates from specific energy savings activities conducted in NSW. Their key obligations include complying with:

- ▼ the requirements of the Act, the Regulation and the Energy Savings Scheme Rule of 2009 (ESS Rule), and
- ▼ the conditions of accreditation as set out in their Accreditation Notices, including submitting annual or a quarterly report statements and engaging auditors to undertake the audits of their RESAs.

The Act also sets out a range of actions that constitute non-compliance with Accredited Certificate Provider obligations, and may result in apparent breach notices, or suspension or cancellation of accreditation. These include:

- ▼ contravening the conditions of accreditation (Section 138)
- ▼ improperly creating certificates (Section 133)
- ▼ obstructing the Scheme Administrator (Section 157)
- ▼ supplying false or misleading information (Section 158).

The sections below provide an overview of Accredited Certificate Providers' compliance performance in 2013, and then discuss their audits and historical compliance performance in more detail.

#### 3.4.1 Accredited Certificate Provider performance in 2013

During 2013, 114 Accredited Certificate Providers and 176 RESAs were operational and able to create certificates for their energy savings activities. They undertook energy savings activities at thousands of sites in NSW.

Across all Accredited Certificate Providers, there were 65 instances of non-compliance during the year (see Table 3.4), an increase from 45 in 2012. More than two-thirds of these non-compliances involved improperly creating certificates, while the rest involved failing to submit a report by the required deadline or failing to meet other accreditation conditions. These instances were discovered through our administration processes and compliance audits. Only six instances were considered to be material errors which represents around 0.5% of certificates created (see Box 3.2 on page 37 for more information on how this is defined).

**Table 3.4 Instances of non-compliance by Accredited Certificate Providers**

	2010	2011	2012	2013
Improper creation of certificates (S133)	11	14	21	45
Failing to submit a report statement by required deadline (S138) <sup>a</sup>	3	15	19	14
Failing to engage an auditor by the required deadline (S138)	0	1	4	3
Failing to meet other Accreditation Notice conditions (eg, didn't set aside certificates in line with deed) (S138)	0	0	1	3
Total	14	30	45	65

<sup>a</sup> During 2009-2012, we reported non-compliance with annual reporting in this section. In 2013, this has been extended to include quarterly reporting. From 2013, reporting is on a quarterly basis for RESAs that involve the installation or modification of equipment at multiple sites. Annual reports are typically only required for single site upgrades.

### Improper creation of certificates

There were 45 instances of improper creation of certificates involving 24 Accredited Certificate Providers, all identified through the audit process. Together these events resulted in the over-creation of 41,941 certificates. This represents a very small percentage of certificates created and means that almost all certificates created during 2013 (99%) were properly created at the time of registration and represent real energy savings.

Only six of the instances of over-creation were considered to be material errors. Together, these instances involved six Accredited Certificate Providers and resulted in the over-creation of 21,692 certificates (discussed further below).

In each instance of improper certificate creation in 2013, we notified the Accredited Certificate Provider involved and asked it to voluntarily forfeit all invalidly created certificates. In all instances, the Accredited Certificate Providers agreed to this.

### Reasons for improper creation

Auditors identified a range of reasons for the instances of improper certificate creation in 2013. For some of these instances, they identified more than one reason. These reasons included:

- ▼ use of incorrect data, calculation factors or input errors
- ▼ insufficient or inconsistent evidence retained as records to support certificate claims
- ▼ creation of certificates in the incorrect vintage<sup>23</sup>
- ▼ use of unapproved nomination forms

<sup>23</sup> The calendar year in which energy savings activities occurred, or were deemed to have occurred.



- ▼ rounding and pro-rating errors in calculations
- ▼ failure to update calculations following internal quality assurance review.

### **Material instances of improper creation**

In general, the number of certificates improperly created is considered material if it exceeds 5% of the total certificate claim being audited (see Box 3.2 for more information). As noted above, there were six material instances of improper creation in 2013, involving the over-creation of 21,692 certificates. In particular:

- ▼ Lite Energy Pty Ltd invalidly created certificates for its commercial lighting activities when it created certificates prior to obtaining approval for annual operating hours. This resulted in the over-creation of 7,462 certificates (37% of the certificate claim being audited).
- ▼ Out Performers over-created 6,404 certificates due to inadequate internal quality assurance reviews of certificate calculations. This was 20% of the certificate claim being audited.
- ▼ Norske Skog over-created 2,801 certificates as a result of data error and inadequate quality assurance on calculations (9% of the certificate claim being audited).
- ▼ Summit LED Energy Australia trading as EO Lighting over-created 2,285 certificates due to errors with implementation dates and annual operating hours, and insufficient quality assurance processes (7% of the certificate claim being audited).
- ▼ Apathco Group Pty Ltd over-created 1,570 certificates due to calculation errors (13% of the certificate claim being audited).
- ▼ Haron Robson over-created 1,170 certificates as a result of insufficient record keeping and quality assurance processes (12% of the certificate claim being audited).

All these Accredited Certificate Providers voluntarily forfeited all over-created certificates, and implemented the auditor's recommendations to resolve the issues that led to the over-creation. Note that all these instances of over-creation represent material errors discovered during individual audits. Other audits of the same Accredited Certificate Providers during 2013 resulted in no material errors.

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### Box 3.2 What are material errors?

When auditing Accredited Certificate Providers, auditors are required to identify any errors that affect the integrity of the energy savings claimed or the number of certificates registered, and assess their materiality. As a guide, errors resulting in improperly created certificates are generally considered to be material if the improperly created certificates exceed 5% of the certificate claim being audited.

When an auditor finds a material error, the audit is considered a failed audit. The Accredited Certificate Provider is required to take immediate corrective actions to rectify the error, and to make good the error by voluntarily forfeiting a percentage of its total certificate claim equal to the error rate identified by the auditor. (For example, if an auditor identifies a 10% error rate, then the Accredited Certificate Provider is required to voluntarily forfeit 10% of the certificate claim being audited.)

Once these actions are taken, a re-audit may be required. We may decide to amend the Accredited Certificate Provider's conditions of accreditation to reflect the findings or recommendations of the auditor. In these circumstances, we may require the Accredited Certificate Provider to enter into a Deed of Agreement if we assess a project as being high risk (see Section 3.2.2 for information on these agreements).

When an auditor finds a non-material error, the Accredited Certificate Provider is usually given a period of time in which to take the recommended corrective actions and report to us on those actions. It is also required to make good the error by voluntarily forfeiting the number of improperly created certificates identified during the audit (rather than a percentage of its total certificate claim).

For further information on materiality and treatment of errors, refer to our *Compliance and Performance Monitoring Strategy* (CPMS) on our website ([www.ess.nsw.gov.au/For\\_Auditors/Audit\\_process](http://www.ess.nsw.gov.au/For_Auditors/Audit_process)).

**Note:** This section describes material errors under the CPMS that was in place during 2013. The CPMS was updated in the first half of 2014 and it is the updated version that is on our website.

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#### Failure to submit a report by the required deadline

Accredited Certificate Providers' reporting requirements, including the deadlines for reporting, are specified in the individual accreditation conditions of each RESA. For most RESAs, they are required to submit quarterly reports if the activity involves the installation or modification of equipment at multiple sites.

In March 2013, we decided to waive the annual reporting requirement for 24 RESAs that were also required to submit quarterly reports as part of their accreditation conditions.

Over the year, 14 Accredited Certificate Providers failed to submit complete and correct reports by the required deadline. Most of these submitted the outstanding reports after we reminded them of their obligations. However, one Accredited Certificate Provider, who has not created certificates since 2011, has not yet submitted its annual report. We have contacted this Accredited Certificate Provider regarding its obligations and possible cancellation of the RESA. We have yet not received a response but we are attempting to verify that the ACP is still operational and will take appropriate action to resolve the issue. In the meantime, the ACP is unable to create certificates.

#### Failure to engage an auditor by the required deadline

There were three instances of failure to engage an auditor by the required deadline, in respect of three RESAs. There were also five audit waivers granted due to low and/or no certificate creation. All outstanding audits were commissioned following reminders.

#### Failure to meet other Accreditation Notice conditions

One Accredited Certificate Provider failed to set aside the appropriate number of certificates under its Deed of Agreement. We contacted the Accredited Certificate Provider and the issue was rectified when it created its next batch of certificates.

One Accredited Certificate Provider created certificates in excess of the limit allowed in its accreditation conditions, and the relevant certificates were forfeited.

A further Accredited Certificate Provider modified its procedures (specifically, it removed its procedure for providing evidence of disposal/recycling) without explanation as required under its conditions of accreditation. We asked the Accredited Certificate Provider to explain and rectify this issue and its new procedure was tested in the following audit.

### 3.4.2 Audits of Accredited Certificate Providers

When we accredit an Accredited Certificate Provider to carry out a RESA, we impose audit requirements as part of the conditions of accreditation. Audit requirements may change from time to time, in line with changes in the implementation of the RESA or in response to emerging compliance risks.

Audits of Accredited Certificate Providers provide assurance that certificates have been properly created and are supported by sufficient records. They also provide assurance that the number of certificates created is accurate, based on valid information that is free from material misstatement.

The timing and type of audits varies by RESA, depending on our risk assessment. For example, audits may be required on a periodic or spot basis, or on volumetric basis (ie, when a threshold number of certificates have been created). If the risk is assessed as high, pre-registration audits may be required.<sup>24</sup>

During 2013, the Audit Services Panel undertook 85 audits of Accredited Certificate Providers, covering 43 RESAs. Of these, 11 were pre-registration audits, 64 were volumetric audits, nine were periodic audits and one was a spot audit.

### 3.4.3 Accredited Certificate Providers' historical compliance performance data and trends

In the first compliance year of the ESS,<sup>25</sup> there were 25 Accredited Certificate Providers and 32 RESAs. Five years later in 2013, there were 114 Accredited Certificate Providers and 176 RESAs.

Figure 3.3 shows trends in Accredited Certificate Providers' compliance over this period. These include changes in:

- ▼ **Instances of non-compliance:** In the first year of the ESS, there were no instances of non-compliance. The number of instances has increased each year since, in line with the increase in the number of RESAs.
- ▼ **Improper creation of certificates:** In 2010, the number of certificates improperly created as a percentage of certificate creation was high at 8.1%. However, this declined in 2011 and 2012 and remains very low at 1% in 2013. Improper creation of certificates has represented just over half of all non-compliance events over the life of the scheme, but very few certificates were over-created. Almost all these events have been rectified through voluntary forfeiture of certificates.

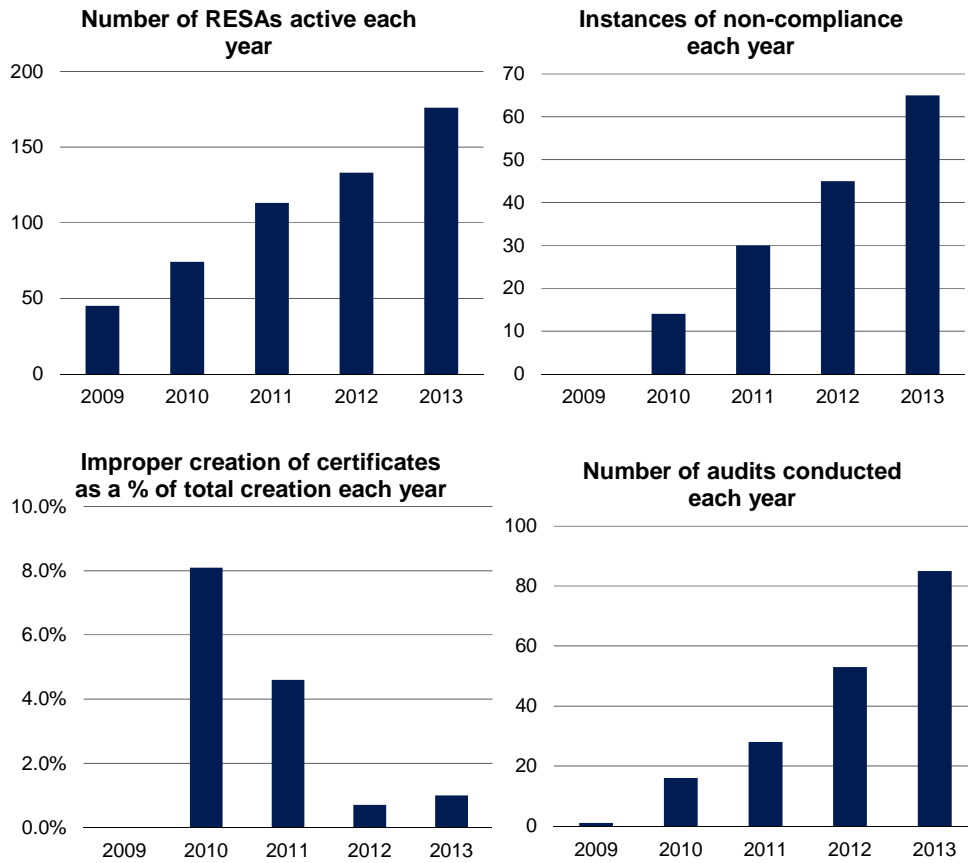
Table 3.5 provides Accredited Certificate Providers' historical compliance performance data in more detail. Of note, since the scheme began only one Accredited Certificate Provider (with three RESAs) has been suspended. This suspension was due to system failures in record keeping and quality assurance processes, and was lifted after all issued had been resolved.

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<sup>24</sup> Pre-registration audits are conducted prior to certificates being created on the ESS Registry. This reduces the likelihood of invalid certificate creation, but requires the Accredited Certificate Provider to pay the audit costs before certificates can be created and sold.

<sup>25</sup> The six months to 31 December 2009.

**Figure 3.3 Key compliance trends – Accredited Certificate Providers**



**Table 3.5 Historical compliance performance data – Accredited Certificate Providers**

	2009 <sup>a</sup>	2010	2011	2012	2013
Number of Accredited Certificate Providers operating during the year	25	40	65	83	<b>114</b>
Number of RESAs operating and able to create certificates during the year	32	63	99	133	<b>176</b>
<b>Instances of non-compliance:</b>					
Improper creation of certificates	0	11	14	21	45
Failure to submit a report by the required deadline	0	3	15	19	<b>14</b>
Failure to engage an auditor by the required deadline	0	0	1	4	<b>3</b>
Failure to meet other conditions	0	0	0	1	<b>3</b>
Total number of instances of non-compliance	0	14	30	45	<b>65</b>
Number of material instances of improper creation	0	7	5	2	6
Instances of non-compliance as a percentage of the number of RESAs	0.0%	22.2%	30.3%	33.8%	<b>36.9%</b>
Number of certificates created	276,942	764,385	1,079,409	2,556,615	<b>4,148,778</b>
Number of certificates improperly created	0	61,635	50,006	17,793	<b>41,941</b>
Number of certificates improperly created as a percentage of certificate creation for the year	0	8.1%	4.6%	0.7%	<b>1.0%</b>
Number of Accredited Certificate Providers suspended during the year	0	0	1	0	<b>0</b>
Number of audits conducted	1	16	28	53	<b>85</b>

<sup>a</sup> For the six month period to 31 December 2009.

## 4 Developments in the ESS during 2014

The ESS has grown significantly over the last five years and has become a successful scheme that is achieving its principal objective of electricity savings in NSW. Although there is a surplus of certificates, energy savings activities are increasing, the certificate market is very active and the cost of compliance by Scheme Participants is decreasing with a lower certificate price.

As the ESS moves into its sixth year of operation, we are working to ensure its continued success with the expansion of activities under the amended ESS Rule. However, this creates new challenges – to successfully manage change and growth. Additionally, the NSW Government has commenced a review of the ESS as a key action in the NSW Energy Efficiency Action Plan.

### 4.1 Amendments to the ESS Rule

In late 2013, the NSW Government proposed changes to the ESS Rule to improve the effectiveness of the ESS. The changes aim to:

- ▼ encourage the take-up of a broader range of energy efficiency activities
- ▼ remove unnecessary red-tape that creates a barrier to households and businesses accessing incentives, and
- ▼ ensure consumers receive lasting savings through quality products and services.

We have been working closely with the policy agencies, NSW Trade & Investment and the NSW Office of Environment & Heritage who write the ESS Rule, to ensure any changes can be administered efficiently. The amendments to the ESS Rule commenced on 1 June 2014 and 1 July 2014, resulting in significant changes across the scheme.<sup>26</sup> The major changes include:

- ▼ There are two new key eligibility requirements:
  - the Accredited Certificate Provider must be the Energy Saver or nominated as such before the energy savings activity is implemented
  - the Accredited Certificate Provider must be accredited for the RESA before the energy savings activity is implemented.

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<sup>26</sup> The *Energy Savings Scheme (Amendment No. 1) Rule 2014* commenced on 1 June 2014 and the *Energy Savings Scheme (Amendment No. 2) Rule 2014* commenced on 1 July 2014, which replaced Amendment No. 1.

- ▼ Data about energy savings activities must be provided to the Scheme Administrator before, or when, creating certificates for one or more implementations.
- ▼ ‘Implementation Date’ and ‘Energy Saver’ have now been defined by method, replacing the former scheme-wide definitions.
- ▼ The nominated Energy Saver can no longer pass on a nomination to another party.
- ▼ The removal of T5 adaptors and retrofitted LED linear lamps as eligible activities.

In addition, there are changes to existing calculation methods, as well as the introduction of new methods and sub-methods. These changes expand the scope of the scheme to include more technologies and provide greater access to specific sectors, primarily the residential sector.

This expanded scope requires significant changes to our administration processes and guidance material. We aim to minimise this impact on our stakeholders by communicating information simply and in a timely manner.

To maintain the high level of integrity and mitigate any risks to the scheme, we will be reviewing our compliance strategy. We aim to ensure that new energy savings activities are managed effectively and that our compliance strategy across the scheme remains appropriate.

Information about the amendment to the ESS Rule is available on our website at [www.ess.nsw.gov.au/scheme\\_changes](http://www.ess.nsw.gov.au/scheme_changes).

## 4.2 ESS Review

In late 2013, the NSW Government commenced a review of the ESS as a key action in the NSW Energy Efficiency Action Plan.<sup>27</sup> The review aims to identify how the ESS can be enhanced, and encompasses:

- ▼ the scheme’s targets, penalties and scope to drive sustainable industry growth and help meet NSW 2021 targets (ie, the annual energy savings target of 16,000 gigawatt hours (GWh) above business as usual)
- ▼ the scheme’s functions and capabilities to define roles and responsibilities to make the administration of the scheme more understandable, logical and transparent
- ▼ the state of the current energy efficiency market to identify pathways for market transformation.

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<sup>27</sup> This review is separate to the five-yearly review as required under Section 175 of the Act.



The ESS Review is being conducted by the NSW Trade & Investment and the NSW Office of Environment & Heritage with information available at [www.resourcesandenergy.nsw.gov.au/energy-consumers/sustainable-energy/efficiency/scheme](http://www.resourcesandenergy.nsw.gov.au/energy-consumers/sustainable-energy/efficiency/scheme).

## Glossary

This glossary provides a general guide to the terminology used in ESS. It is designed to be read in conjunction with the Act, Regulation and ESS Rule. This glossary should not be relied upon as a substitute for legal advice, and does not override the true definitions of these terms in the Act, Regulation or ESS Rule.

Term	Meaning
Accredited Certificate Provider	A person accredited by the Scheme Administrator to create Energy Savings Certificates relating to a Recognised Energy Savings Activity.
Act	The <i>Electricity Supply Act 1995</i> which established the ESS.
Approved Corresponding Scheme	A scheme in another jurisdiction that the Minister has determined to have similar objectives to the ESS and an equivalent compliance regime to the ESS. Once a scheme is determined to be an Approved Corresponding Scheme, persons may carry out Recognised Energy Savings Activities that are approved under the Approved Corresponding Scheme and create Energy Savings Certificates.
Base Penalty Rate	Is listed in Schedule 5A of the Act.
Baselines	The level of energy consumption, or energy intensity against which improvements are measured, and from which the calculation of Energy Savings Certificates are made.
Carbon Dioxide Equivalent (CO <sub>2</sub> -e)	The standard unit for the quantification of all greenhouse gases. One Energy Savings Certificate represents the energy savings equivalent to the abatement of one tonne of carbon dioxide equivalent (tCO <sub>2</sub> -e).
Certificate Conversion Factor	Is listed in Schedule 5B of the Act as 1.06, and is used to convert the number of MWh of Energy Savings from a Recognised Energy Savings Activity to tonnes of carbon dioxide equivalent. This is done by multiplying the MWh saved by the Certificate Conversion Factor.
Confidence Factor	A factor applied, when calculating the number of Energy Savings Certificates using either the Project Impact Assessment Method or the Metered Baseline Methods, that reflects that the accuracy of Accredited Certificate Provider's methodology. A more accurate methodology will generally result in a higher Confidence Factor, and a larger number of certificates.
Consumer Price Index (CPI)	Is the Consumer Price Index (All Groups Index) for Sydney. Under the Energy Savings Scheme, the Scheme Penalty Rate is adjusted, prior to the commencement of each calendar year, by the CPI, to give the adjusted Penalty Rate for that calendar year.

<b>Term</b>	<b>Meaning</b>
Default Savings Factors	A default figure which may be used to calculate the number of Energy Savings Certificates (ESCs) for each activity listed in Schedule A of the ESS Rule. The use of Default Savings Factors allows all the energy savings associated with the activities listed in Schedule A to be brought forward to the point at which the activity takes place.
End-user Equipment	End-user equipment refers to the electricity consuming equipment, processes, or systems, including equipment directly consuming electricity and any other equipment which controls or influences the consumption of electricity.
Energy Saver	The person contractually liable for the energy consumed by the end-user equipment or site that is the subject of a Recognised Energy Savings Activity (RESA), or the person nominated in writing to be the Energy Saver in respect of a RESA.
Energy Savings	Energy Savings refers to the calculated reduction in electricity consumption arising from a Recognised Energy Savings Activity (RESA) and calculated according to the ESS Rule.
Energy Savings Certificate (ESC)	A transferable certificate under Part 9 of the Act, which is created in accordance with the ESS Rule. A certificate represents the Energy Savings associated with the abatement of one tonne of carbon dioxide equivalent (tCO <sub>2</sub> -e).
Energy Savings Scheme Rule	The Energy Savings Scheme Rule of 2009 published by the Minister for Energy, sets out the primary eligibility requirements, calculation methodologies and arrangements for the creation of Energy Savings Certificates. This rule is amended from time to time.
Energy Savings Target	The Energy Savings Target refers to a figure, specified in Schedule 5 of the Act, that is applied to the total Liable Acquisitions in NSW to determine each Scheme Participant's Individual Energy Savings Target for each calendar year.
Entitlement Date	The date an ESS application for accreditation is accepted as being lodged in a complete and acceptable form by the Scheme Administrator, and once accredited, the date from which an Accredited Certificate Provider may create certificates.
Energy Savings Shortfall	If a Scheme Participant fails to surrender enough Energy Savings Certificates to meet its Individual Energy Savings Target for the year, it has an Energy Savings Shortfall for that year and is liable to pay a penalty for each Energy Savings Certificate it has failed to surrender.
Exempt Electricity Load	An Exempt Electricity Load is the load attributed to a person or class of person which has been granted partial exemption (60% or 90%) from the scheme by the Minister, as specified in the Ministerial Order.
Implementation Date	The Implementation Date is the date on which the Energy Savings from the Recognised Energy Savings Activity (RESA) commences.
Individual Energy Savings Target	The Individual Energy Savings Target is the number of Energy Savings Certificates which a Scheme Participant must surrender each year to meet obligations under the Energy Savings Scheme. This target is determined by multiplying the Energy Savings Scheme Target for that year by the total liable acquisitions in that year and the certificate conversion factor.

<b>Term</b>	<b>Meaning</b>
Liabile Acquisition	Is any purchase of electricity by a Scheme Participant which is purchased from the Market Operator, or from parties not registered with the Market Operator for supply to end users in NSW whose loads have not been listed as Exempt Electricity Loads.
Market Operator	Is the entity responsible for the administration and operation of the wholesale national electricity market in accordance with the National Electricity Law (currently the Australian Energy Market Operator (AEMO)).
Ministerial Order	The Ministerial Order is published annually, or when required, and lists all emissions intensive trade exposed industries, their location and proportion of electricity load granted an exemption (either 60% or 90%) under the ESS.
National Australian Built Environment Rating System (NABERS)	A ratings methodology administered by the NABERS Administrator (currently the Office of Environment and Heritage (OEH)) which can be used to calculate Energy Savings under the Metered Baseline Method. This method can be used for new or existing buildings.
Penalty Conversion Factor	Is specified in Schedule 5A of the Act, and is 0.94 for the duration of the Scheme.
(ESS) Penalty Rate	Is calculated by multiplying the Base Penalty Rate per MWh by the Penalty Conversion Factor. The ESS Penalty Rate is the amount per certificate that is applied to a Scheme Participant's Energy Savings Shortfall to calculate the monetary penalty as a result of the shortfall. The ESS Penalty Rate is listed in Schedule 5A of the Act.
Recognised Energy Savings Activity (RESA)	A specific activity, approved by the Scheme Administrator, which is implemented by an Energy Saver and increases the efficiency of electricity consumption or reduces electricity consumption with no negative effect on production or service levels.
Regulation	<i>Electricity Supply (General) Regulation 2001.</i>
Retail Supplier	A Scheme Participant under the Energy Savings Scheme. Includes all holders of an electricity retail licence in NSW.
Scheme Administrator	The body responsible for administering functions such as accrediting Accredited Certificate Providers, verifying Energy Savings activity and maintaining a registry of certificates. The NSW Independent Pricing and Regulatory Tribunal (IPART) is the Scheme Administrator for the Energy Savings Scheme.
Scheme Participant	A person who is required to comply with an Individual Energy Savings Target. Scheme Participants include all Retail Suppliers of electricity in NSW, any person directly supplying a customer in NSW or any person directly purchasing electricity from the Market Operator (other than a Retail Supplier).
Scheme Regulator	The body that monitors the compliance of Scheme Participants with their Individual Energy Savings Targets under the Act. The NSW Independent Pricing and Regulatory Tribunal (IPART) is the Scheme Regulator for the Energy Savings Scheme.
Site	A Site refers to all the End end-user equipment for which the electricity consumed is measured by the same utility meter allocated a National Meter Identifier (NMI) under the National Electricity Law, or by other meters or logging devices approved by the Scheme Administrator.