energy savings
Industry Association

ESIA Submission:

NSW Government
Energy Savings Scheme
Rule and Regulation Change 2025

4 April 2025 (Ext 23 April)

Submitted to Department of Climate Change, Energy, Environment and Water
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1. Introduction

The Energy Savings Industry Association (ESIA) welcomes the opportunity to provide this submission to the New South Wales Government for the **NSW Energy Savings Scheme Rule and Regulation Change 2025** which commenced on **4 March 2025**. This consultation is being managed by the **Department of Climate Change, Energy, Environment and Water, New South Wales Government**.

The ESIA has referred to https://www.energy.nsw.gov.au/nsw-plans-and-progress/regulation-and-policy/energy-security-safeguard/energy-savings-scheme

The ESIA attended an online webinar hosted by NSW DCCEEW on 19 March.

About ESIA

The Energy Savings Industry Association (ESIA) is the peak national, independent association representing and self-regulating businesses that are accredited to create and trade in energy efficiency certificates in market-based energy savings schemes in Australia. These activities underpin the energy savings schemes which facilitate the installation of energy efficient products and services to households and businesses. Members represent most of the energy efficiency certificate creation market in Australia. Schemes are established in Vic, NSW, SA and ACT. Members also include product and service suppliers to accredited providers under the schemes. As well, the ESIA represents member interests in national and state initiatives that include energy efficiency and demand reduction, such as the Federal Government's Carbon Farming Initiative energy efficiency methods and the NSW Peak Demand Reduction Scheme.

Further engagement

We welcome the opportunity to discuss this submission further, please contact the ESIA Executive Director at comns@esia.asn.au.

This submission can be made public.

2. Consultation questions and ESIA responses

2.1 Commercial lighting energy savings formula (CLESF)

1. What are your views on the proposal of discontinuing the CLESF?

Retain CLESF

While some ESIA members consider CLESF discontinuation acceptable, others are strongly opposed and seek continuation as explored below.

Rather than completely discontinuing the CLESF, the ESIA recommends retaining the activity, even with significantly less incentive for various upgrade types. This is because:

- some upgrade types are not well saturated (e.g. NBBL);
- providing even a small incentive supports marketing opportunities including bundling of various lighting and other energy efficiency and peak demand reduction solutions; and
- upgrades will still occur where otherwise highly inefficient legacy technologies will continue in situ for years to come – including in many lower tier buildings such as offices, factories and sports facilities.

Retain strong support for Non Building Based Lighting (NBBL) upgrades

The ESIA recommends continuing strong support for **Non Building Based Lighting upgrades as part of CLESF**, given the persistently low penetration to date for both public and private lands including use as sports fields, roads, car parks and mining.

This ESIA response refers to information provided in previous ESIA submissions, including Figures below that remain relevant. Figure 1 from 2023, first included in ESIA Submission to NSW Government, ESS Lighting Targeted Consultation 29 September 2023, p4, which the ESIA understands for Sports and outdoor lighting has shifted little from 'Low'.

Figure 1: On the street experience: typical retrofit lighting upgrade 'hot' opportunities and market penetration observations (ESIA 3 Oct 2023)

On-the-street experience: typical retrofit lighting upgrade 'hot' opportunities and market penetration observations (ESIA 3 Oct 2023)															
Typical upgrade	Activity Type	Incumbent	LED Upgrade	Typical Efficacy (Available at Bunnings)	Typical Efficacy (Current ESS LED Upgrades)	Best Available Efficacy	Long-term effective upgrade			Market Penetration				
								Watt reduction	% Watt reduction	VIC	NSW	ACT	SA	QLD
Residential	HEER E1	50W dimmable downlight	5W dimmable downlight	80 - 90lm/W	100lm/W	110lm/W	High	45W	90%	Medium	Medium	Low	Low	Low
	HEER E11	75W incandescent/ 45W halogen	11W LED bulb	90 - 100lm/W	110 - 130lm/W	140 - 160lm/W	Low	68-38W	90-85%	Medium - High	Medium	High	Medium	Low
	HEER E1	50W non-dimmable downlight	5W non-dimmable downlight	80 - 90lm/W	100lm/W	110lm/W	Low	45W	90%	High	Medium	High	Medium	Low
Commercial														
Office buildings	HEER E5/CLF	35W florescent troffer	15W LED panel	80 - 90lm/W	100 - 120lm/W	130 - 150lm/W	High	14W	31%	High	Medium	Low	Medium	Low
Office buildings	HEER E5/CLF	35W florescent batten	15W LED batten	90 - 100lm/W	110 - 130lm/W	140 - 160lm/W	High	11W	31%	High	Medium	Low	Medium	Low
Sports lighting	CLF	2000W sports light	600W sports light	90 - 100lm/W	120 - 140lm/W	140 - 160lm/W	High	1400W	70%	Low	Low	Low	Low	Low
Factory small-medium	CLF	400W metal halide high bay	85W LED high bay	120 - 140lm/W	140 - 160lm/W	170 - 190lm/W	High	300W	75%	High	Medium	High	Medium	Low
Factory medium-large	CLF	400W metal halide high bay	85W LED high bay	120 - 140lm/W	140 - 160lm/W	170 - 190lm/W	High	300W	75%	Medium	Medium	Medium	Medium	Low

This activity has also continued under the Victorian Energy Upgrades program (Activity 35) as recommended by the ESIA and has seen, in the current financial year, more than 300,000 VEECs registered.

ESIA members engaging in these upgrade types have noted the complexity of evidence requirements for outdoor and public lighting and note that the **Public Lighting Method** has limited application given it is restricted to DNSP owned and operated assets, not council-owned assets.

Further, ESIA members have suggested:

- there may be more than 20,000 council-owned public lamps in metropolitan Sydney with little LED penetration given capital cost is a significant barrier with substantial variation of luminaire type in theme with local amenities and these may be 2-4 times the cost of standard fittings.
- incentivise smart controls as they can save a further 25-30% in energy consumption.
- consider co-benefits including reduced light pollution, improved aesthetics and a positive impact on reducing vandalism and or crime due to improved lighting that won't be realised if the incentivise is removed.
- changes to the ESS Rule wording to amend Clause 9.4A.1(b) to include councils: 'the Luminaire is an asset owned and/or maintained by a Distributor or Road and Maritime Services or **Council**'. This would enable council assets to be retrofitted using the **Public Lighting Energy Savings Formula**. Many NSW councils are familiar with the methodology through their DNSP's accelerated/bulk LED replacement programs.
- the Rule could be supported by an update recognising Councils' specific procurement requirements (as per Section 55 of the NSW Local Government Act and their own procurement policies) as an approved 'certification scheme' by the ESS scheme administrator, enabling project approval by the Council with approved luminaires that comply with the relevant AS/NZS standard and that support uptake of more efficient LED technology, and appreciating that councils seek to meet various local amenity aesthetics and needs to sports and outdoor space requirements for brightness unique settings including narrow pathways.

Introduce a Super LED methodology to support LED-to-LED replacement

The ESIA continues to advocate for a Super LED method, noting that the ESS Rule change consultation paper doesn't support this. The ESIA recommendation is based on the following case study first included in the ESIA Submission to NSW Government, ESS Lighting Targeted Consultation 29 September 2023, p9.

Figure 2: Commercial lighting penetration comparing Victoria to NSW 2010-2023 (GEM Oct 2023)

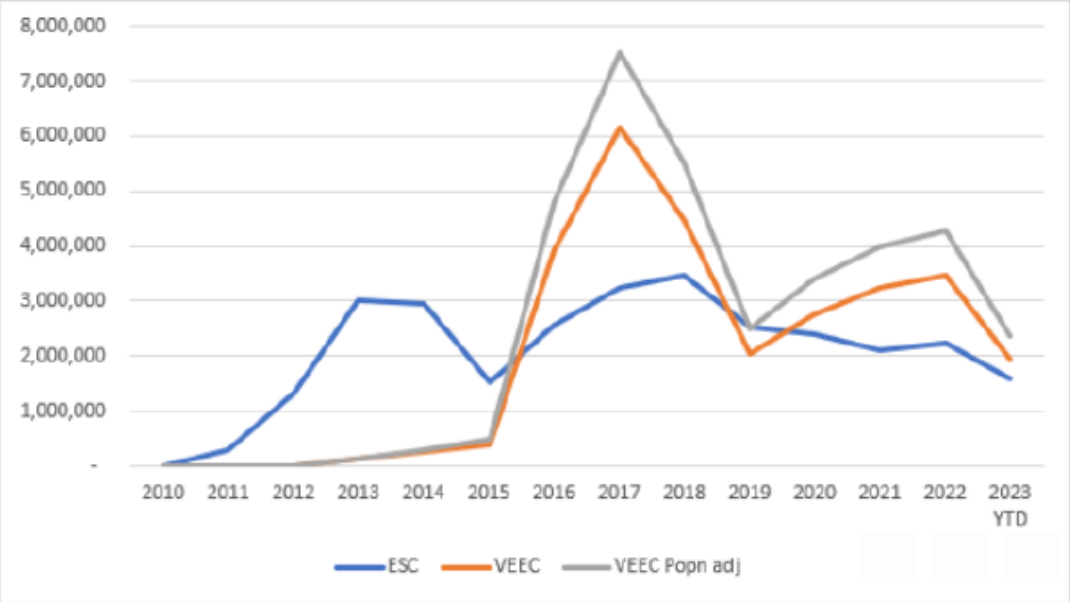

Figure 2 illustrates that NSW saw significant uptake rates from 2011 to 2015 where the average lumens per watt (lm/w) were significantly lower, thus the LCP for a standard LED high bay was approximately 200watts. NCBA considered a small sample of jobs audited in 2013, with the most common high bay the LEDFL150W (LCP of 204.9). Today, an LED high bay has significantly higher lm/w, therefore the expected LCP for an upgrade sits between 50-80watts, with further energy reductions arising from smart sensors inbuilt directly into the luminaire. This greatly exceeds off-the-shelf base case LED offerings such as those at Bunnings: refer to Figure 3 below which ESIA members have verified have not changed significantly since 2023 when it was first included in ESIA Discussion Points: Lighting meeting with OECC, 2 June 2023, p3.

Figure 3: Lighting products sold via the EE schemes versus retail store (ESIA 26 May 2023)

AVERAGE EFFICACY COMPARISON			
LED Product	Emerald lumens/watt	Bunnings lumens/watt	Difference
Batten	170	98	58%
Panel	149	89	60%
Downlight	110	88	80%
Highbay	193	140	72%
Bulb	152	96	63%

Based on these findings, the ESIA continues to consider that a Super LED methodology as previously consulted on has significant merit - at minimum - to incentivise the replacement of inefficient LED technology to support energy efficiency and subsequent bill reductions.

For example, in manufacturing premises, replacing a 205watt LED high bay with a

50watt high bay (with inbuilt occupancy and daylight-linked control) is estimated to result in 880kWh of savings per high bay per annum, or a bill reduction of $264 per year.

Based on the ESIA's previous submission, actual mean time to refurbish of 6.5 years for 2025, this is a total energy reduction of 5.72MWh (or $1,716). Refer to Figure 4 and Table 1 below, both first included in ESIA Submission: NSW Targeted Consultation Workshop: Lighting in the ESS, 29 September 2020, p5.

The six ESCs that could be generated under a Super LED method would be essential to ensure the product can compete with less efficient products available at Bunnings and other outlets.

Figure 4: Mean time to refurbish: Consultants' Assumed versus Industry Actual (ESIA 2020)

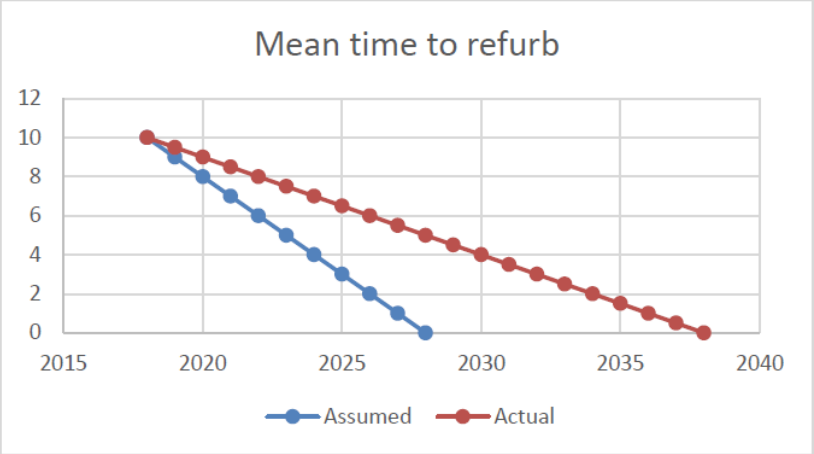

Table 1: Mean time to refurbish: Consultants' Assumed versus Industry Actual (ESIA 2020)

Year	Assumed Mean	Actual Mean
2018	10	10
2019	9	9.5
2020	8	9
2021	7	8.5
2022	6	8
2023	5	7.5
2024	4	7
2025	3	6.5
2026*	2	6
2027	1	5.5
2028	0	5
2029		4.5
2030		4
2031		3.5
2032		3
2033		2.5
2034		2
2035		1.5
2036		0.5
2037		1
2038		0
(*) Potentially switch to NCC IPD method requirements		

For further context on ESIA's work on Lighting incentives including calculation methodology and efficiency benchmarks, please refer to previous ESIA submissions and papers:

- ESIA Submission - ESS Lighting Targeted Consultation - 29 Sept 2023;
- ESIA Discussion Points - Lighting meeting with OECC - 2 June 2023; and
- ESIA Feedback - Targeted Consultation Workshop - ESS Lighting - 29 Sept 2020.

2. What are your views on the transition period of 6 months after the amended Rule is gazetted?

There are mixed views.

A reasonable transition time should be from the period of gazettal not from the date of gazettal proposed in the consultation paper published on 4 March 2025.

Clarity is sought on certificate registration as and when changes proceed. For example, if installation is completed on 31 December, does the ACP have until 30 June of the following year to register certificates?

There are specific challenges for various complex commercial lighting projects that may take longer than six months to deliver safely and compliantly. For example, large-scale tunnel upgrades that require detailed SWMS, road closures scheduled well in advance and work to be undertaken in shifts late at night may not be able to comply with the proposed transitional arrangements.

The ESIA suggests that should CLESF be discontinued, projects with a signed Nomination Form and Proof of Deposit before the date that CLESF is discontinued should be eligible for ESC registration.

The last date for that activity should represent the creation date and not the certificate registration date.

The ESIA suggests that where an activity is to be discontinued, the regulator makes this area a priority focus as transitional arrangements can be high risk for poor behaviour.

3. What are your views on keeping other lighting upgrade activities (public lighting, HEER) and methods (PIAM&V method and MBM) unchanged?

The ESS should continue to support the public and residential lighting sectors.

There are ACP concerns that there is currently on mechanism for ACPs to verify whether a previous claim has been made for a site and this needs to be rectified as duplicate claims are a key risk areas for all stakeholders.

ESIA members strongly agreed that the NSW government cannot assume that any changes to other lighting methods under the ESS would shift additional uptake to PIAM&V or MBM methods.

M&V can be excellent for large multi-measure upgrades that include lighting, or for

substantial standalone lighting projects. For example, 300+ high bays or 1000+ fluorescents, assuming isolated circuit measurement is feasible. It also allows claiming true operating hours, which may benefit some projects. But many sites won't meet these thresholds, making a continued deemed method essential to drive efficient lighting adoption in smaller commercial and industrial settings.

The PIAM&V method's *Other Implementations (OIMPs) Estimate Method* allows the excluding of savings from other site upgrades only if ESCs were created for them. Without a deemed method for smaller lighting projects, some PIAM&V projects may become ineligible due to unclaimed lighting savings, potentially causing them to fail. This strengthens the case for a deemed pathway or, alternatively, adjustments to the non-routine event rules under M&V.

However, we disagree with the Government's contention that ambitious energy efficient lighting activities can be appropriately incentivised under PIAM&V and MBM. Within PIAM&V alone, barriers to entry for any reasonably ambitious lighting project include:

- costly targeted sub-metering of the specific lighting circuit to ensure ESCs can be registered in a timely manner. Even if this exists, due to the level of expertise required to claim certificates under this method, the earliest expected timeframe would still be three months' post-installation, thus making it difficult to include as an upfront discount. Should this not be available or cost-prohibitive, Option C approaches would take up to 18 months to process given the necessity to cover a full seasonal operating cycle (12 months). It has also been suggested that Option C is unlikely to work to verify lighting savings due to two key challenges:
    - Lighting typically accounts for only 10–20% of total site consumption, and upgrades often replace just a portion of fixtures. Verifying a small percentage of savings within a whole-facility measurement boundary is difficult, and the Accuracy Factor will almost certainly decimate the number of ESCs.
    - The (likely) presence of at least some heating/cooling systems in the measurement boundary would require a 12-month pre- and post-upgrade period, adding risk and uncertainty that could derail most projects.
- minimum project size: due to the highly technical and specific skillsets required, PIAM&V projects typically have minimum costs associated, in the realm of $15,000 per project once accounting for any additional metering costs or the long operating cycle timeframe.
- only accounting for the costs of claiming the certificates alone, a site would need to have a minimum of 80 high bays, or 615 twin fluorescent fittings. However, to reach a proportionally attractive incentive for the end-user, the minimum number would need to be two-to-three times this size.

As a result, it is unlikely that ambitious lighting projects would be incentivised at any SME, and we would expect that only non-additional upgrades from large businesses would be claimed, where lighting is one of many ECMs being undertaken at the site. Please note, we do not call for the exclusion of lighting under PIAM&V, as in these cases the removal of lighting savings from a full project can be complicated, costly and ultimately detrimental for the end-user, but rather we highlight that a Super LED method is a far better and targeted approach to achieving the desired outcome of incentivising ambitious and energy efficient lighting activity.

Do you have any comments on the market maturity of LEDs in the residential and public sectors?

The residential sector still presents upgrade opportunities.

The public lighting sector is far from saturated and remains a highly effective way of achieving at-scale change out of old inefficient lights via highly engaged and cash-strapped energy customers, including local councils.

2.2 Gas boiler activities

4. **What are your views on removing deemed gas-based activities D11, D12, D21, F8 and F9 and gas boiler installations/replacements under PIAM&V and MBM?**

Regarding activities F8 and F9, ESIA members active in this area understand the reasons that removal has been proposed, however we believe these activities should be retained for steam boilers.

ESIA members also see that renewable gas (methane) and guarantee of origin certificates will help support the transition of existing natural gas equipment to renewable fuels and hence the addition of higher efficiency new products today does not represent stranded assets.

Today, there is no currently viable alternative method to incentivise the electrification of these heat sources in a C&I setting. Currently there is only one manufacturer with heat pump products registered for F16 that would be suitable for small boiler replacements, but nothing in the 500kW (thermal) + range for **water heating**.

Due to the current product registration requirements, further registration of products by manufactures is unlikely. There are no current commercially viable solutions for replacement of steam boilers, and this is likely to take > 10 years to reach maturity, hence there is a long period where the installation of new efficient boilers will be a better outcome than these upgrades not proceeding.

Recent work completed by an ESIA member for large energy users in Victoria, found several barriers to electrification of gas fuelled processes in an industrial setting. Key barriers include high capital cost of equipment, electrical infrastructure upgrades (both on site and distribution grid upgrades), and the sensitivity to the electricity: gas price ratio in the current settings which do not make electrification options viable at present. The current high electricity prices make the operational costs of running electric boilers or electrode boiler uneconomical.

Further, there should be consideration for the use of biogas/bio methane as a low carbon alternative, whether delivered on site, or over the grid using financial instruments (e.g. renewable gas certificates), which may be a commercially viable alternative for many industrial sites for the foreseeable future.

The ESIA requests that the ESS clarifies that replacement of gas boilers with electric options remains eligible under PIAMV & MBM.

The ESIA supports the removal of **hot water** gas boiler installations/replacements

under PIAM&V/MBM as an eligible activity.

The ESIA does not support the removal of **steam gas boiler** installations/replacements under PIAM&V/MBM as an eligible activity for the following reasons:

- currently for steam boilers, there are no viable electrification alternatives. Electric boilers are expensive and have very high operating costs. In addition, they have a COP of ~1 which means that with the current ratio of gas and electricity emission factors, they will lead to increased CO2 emissions. Steam heat pumps are also not commercially available and have a low COP of ~1.6.
- there may be cases where a PIAM&V is being performed for another ECM, but site is also performing a boiler replacement at the same time. If the boiler replacement is in the measurement boundary, it will make the other ECM ineligible for ESCs.
- renewable gas (methane) is likely to be a faster and more economical pathway to achieving decarbonisation for steam boilers that electrification.

With the above in mind, the removal of boiler replacements/installations as an eligible activity should only apply to hot water boilers and not steam boilers.

5. **What are your views on the implementation timeframe of this proposal (which is at the time the Rule comes into effect in mid-2025)?**

   Provided that the ESIA response to the previous questions is given due consideration the proposed timeframe seems reasonable where incentives would be removed.

6. **Do you support removing the eligibility for ESS incentives under performance efficiency improvements of gas boilers in the future?**

   For the same reasons already stated, the ESIA believes that gas efficiency activities – including for larger-scale hot water and steam boilers – should remain available. Once more, the unintended consequence of the updated certificate conversion factors is well understood, but there seems to be a more appropriate solution to that have the proposed GCF for fuel-switching/electrification activities and have a different conversion factor for gas efficiency activities. This way, gas efficiency will not be incentivised as if it were an electrification project.

2.3 Warranty requirements for heat pump hot water system activities

7. **What are your views on requiring ACPs to provide customers with a minimum 5-year whole-of-system product warranty for all eligible systems?**

   ESIA does NOT support ACPs having to provide customers with a product warranty. This is not the case with any other activity under energy savings schemes and is overreach on the role of the ACP.

   While ESIA fully supports efforts to improve product quality and consumer protections, shifting warranty responsibility to ACPs is not the appropriate solution. Instead, we recommend:

   a. **Holding manufacturers and installers accountable** for their products and

services as is standard protocol outside of such schemes.

b. **Strengthening installer regulation** including audit, compliance and enforcement through NSW Fair Trading and the NSW Building Commission.
c. **Introducing a supplier & installer register** to track and address poor performance across the relevant regulators (including across states).
d. **Providing whistleblower protections for ACPs** to report non-compliant manufacturers and installers.
e. **Requiring warranty assurances at the ESS product approval stage**, not via ACPs: this would align with the VEU approach which in this case is desirable.

There are significant concerns amongst ESIA members about the implications of the proposed change for ACPs and the broader market, noting that the proposed change will likely not achieve what it aims to achieve. The ESIA notes:

- Manufacturers continue to be best placed to provide and honour warranties for their products. Shifting this responsibility to ACPs would bring significant risks, including:
  - **strategic externalisation of risk**: manufacturers may reduce their focus on product reliability if they can 'offload' accountability for warranty claims.
  - **warranty handling**: ACPs that are not manufacturers or product suppliers would need to gain the technical skills to assess and manage warranty claims which is a very different skill set to those on a typical ACP.
  - **potentially amplifying the issue**: manufacturers with lower-quality products can still enter the market.

- Warranty requirements need to be made very clear, and should generally follow standard protocols established outside of energy savings schemes, in particular:
  - equipment variation of warranty duration for key component types, e.g.:
    - tanks;
    - compressors; and
    - ancillary components e.g. temperature mixing valves (TMVs), temperature-pressure relief (TPR) valves, piping, lagging, residual-current devices (RCDs);
  - labour, e.g.:
    - variation of warranty duration for key component types etc.; and
  - a reasonable delineation boundary between product versus installation warranty.

  Noting also that solution providers, including installers, remain best placed to honour labour warranties. Shifting this to ACPs would pose the same challenges as detailed above for product warranties.

- ACPs should be responsible for ensuring that:
  - manufacturers provide at least warranty periods required; and
  - installers are appropriately licensed and insured, and compliance certificates are issued for installations.

  Beyond this, ACPs must be able to rely on existing regulatory mechanisms to enforce product and service quality.

- ACPs often engage with dozens or even hundreds of suppliers and installers. Imposing accountability on ACPs for third-party failures would:
  - create an unmanageable administrative and financial burden.

- discourage ACP participation, reducing the effectiveness of the ESS.
- overlap and conflict with industry regulators' responsibilities.

- The ESIA-suggested supplier and installer register could:
  - list compliant suppliers and installers, ensuring accountability while maintaining competition.
  - track suppliers and installers with a history of poor compliance.

Alternatively, if ACPs are forced to absorb significant warranty risk, they will need to raise their ESC creation fees substantially. This will likely:

- increase costs for consumers;
- reduce overall scheme participation; and
- shift financial risk from manufacturers to the ESS framework, distorting market efficiency.

8. **What are your views on including the requirement for ACPs to also provide a minimum 5-year installation warranty?**

   Not reasonable. (See answer to previous question.)

2.4 Refrigerated display cabinet – Activity Definition F1.2

9. **What are your views on discontinuing the eligibility of integral refrigerated display cabinets for ESS incentives, under F1.2?**

   In principle, the ESIA finds it disappointing that this activity will be discontinued given that there is a legitimate pool of market opportunities for more efficient integral display cabinets for small to medium enterprises.

   However, given the challenges experienced in roll out to date, the continued suspension seems reasonable, noting that the reintroduction of some product classes in the future should not be ruled out.

10. **Are there any other proposals for how the NSW Government can address the issues highlighted above, through the ESS Rule?**

    The ESS Rule could address issues by introducing a carefully designed 'fit-for-purpose' assessment of the proposed upgrade including an assessment of product, purpose and installation environment. The ESIA would welcome engagement in assessment design and testing.

2.5 Sale of New Appliances

11. **What are your views on discontinuing SONA?**

    The ESIA has concerns regarding due process in the NSW government proposing to discontinue the SONA method under the ESS which has played a role in promoting the adoption of energy efficiency appliances.

    The ESIA membership has mixed views on the activity, however, there is no recent evidence of analysis on the outcomes to date.

ESIA membership engaged in supporting businesses in SONA understands from some participating product retailers that the NSW ESS incentives have supported retailers in choosing more efficient stock, and in at least one case in modifying the specification of original equipment manufacturer (OEM) product manufactured for sale in Australia so that they have a higher energy star rating.

The ESIA requests that the 2018 study be released that was commissioned by the NSW Government which showed the overall efficiency of the relevant appliances had risen but did not show that this was a result of incentives created by the SONA method. It is understood the study was based on data supplied by only some retailers (those who self-reported), that the data was collected seven years ago and that its conclusions were reached by comparing the star rating of appliances sold, between states. If this is so, the study would not be representative of a reasonable sample of retailers, is now seven years out-of-date and failed to consider that the buying decisions of national retailers are made by national procurement teams; that changes in stock management practices, promotion and selling more efficient appliances because of the SONA method incentive would not be confined to NSW, which could explain why no significant differences were evident in the star rating of appliances sold in NSW versus other jurisdictions.

The ESIA requests that further, more-up-to-date research is warranted.

This could include evaluating the effectiveness of the 2020 amendment to the eligibility requirements for all appliance categories incentivised through the SONA method, which aimed to ensure that only the most efficient appliances were eligible for ESS incentives. (This ongoing review and adjustment process demonstrates the NSW Government has been committed to enhancing the effectiveness of the SONA method.)

Findings from the updated study could then be used to refine and focus the SONA method. This could well be considered in tandem with the VEU given the Victorian government has proposed to consider such an activity under the VEU.

12. What are your views on the transition period of 3 months after the amended Rule is gazetted?

Either way, if the NSW Government decides to discontinue the SONA method without further consideration, or make changes, a more reasonable transition time longer than three months is required. Three months after the amended Rule is gazetted is insufficient notice. ACPs and appliance retailers generally operate on 12-month budget and reporting cycles. Removing the SONA method only three months after gazettal (which we understand is expected to be mid-2025, only six months from the commencement of the ESS Rule consultation) is too little notice. A minimum adjustment period of six months (such as proposed for the removal of the CLESF method) is necessary to allow retailers, ACPs and other stakeholders to adapt their business strategies, marketing efforts and inventories. This longer transition period would help mitigate any negative impacts on operations and ensure a smoother transition to business without the SONA incentive.

2.6 NABERS method

13. Do you support the proposed NABERS baseline method for the school and retail store sectors?

Yes, although it may not result in major uptake.

2.7 Market state of heat pump hot water system activities

14. What are your views on addressing the issues related to modelling, installation and consumer protection? What are the other key issues with heat pump hot water systems?

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15. Apart from warranty requirements, are there any other measures to address concerns of early equipment failures or to strengthen consumer protection for hot water systems such as the availability of spare parts or after-sales customer service?

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16. What ESS Rule changes would you recommend to address the issues highlighted above (and the additional issues you identified in Question 14)?

Refer to ESIA Discussion Paper - NSW ESS&PDRS C&I Hot Water Heat Pump Concerns & Ops for Consideration - at 3 Dec 2024. The ESIA met with NSW DCCEEW to explore the paper during April 2025, with further engagement anticipated in the weeks following.

2.8 Market state of air-conditioning activities

17. What are the other opportunities and issues with air-conditioning activities that have not been identified in this consultation paper?

The ESIA would welcome a more targeted consultation in the coming weeks. (This question was not fully explored by the ESIA AC Working Group as it was not included in the consultation paper overarching summary.)

Initial ESIA member insights suggest that that less than 5% of installations under the ESS are multi-split AC systems, compared to a 46.16% share under the VEU.

Some major barriers to uptake have been identified by the ESIA. A review of how multi-split systems are treated under the ESS is warranted to enable wider adoption of this efficient technology. In brief, a major barrier is the difficulty manufacturers face in registering multi-split systems in GEMs, a prerequisite for certificate eligibility. Further, to improve uptake and reduce barriers, the ESS should simplify the calculation of multi split AC systems.

18. How could the ESS best address the opportunities and risks highlighted in this consultation paper (and the additional ones you identified in Question 17)?

Continue to engage on an ongoing basis with industry, including testing modelling assumptions.

2.9 Telemarketing and door-knocking campaigns

19. What are your views on banning telemarketing and door-knocking campaigns in NSW?

While alignment with Victoria is generally reasonable to consider on a range of fronts, Victoria historically had less guardrails including no co-payment and more high-volume low-cost upgrade types, which combined resulted in more telemarketing and doorknocking for activities likely to be 'free' at door.

Until telemarketing and doorknocking present a strong risk for the NSW ESS, they should not be banned simply based on a theory of 'alignment'.

20. What are the short-term and long-term impacts of banning telemarketing and door-knocking campaigns?

Short term impacts require businesses reliant on these approaches to pivot to other methods including, as currently is the trend, targeted social media campaigns. The challenge for the regulators then shifts to auditing appropriate behaviour via these channels and determining effective compliance and enforcement.

Longterm impacts are yet to be determined given the ban in Victoria has just reached one year since commencement.

2.10 Updating certificate conversion factors

21. What are you views of the certificate conversion factors being proposed?

ESIA members in general welcome the proposal to update the Gas Certificate Conversion Factor (GCCF) under the ESS, however, several challenges have been raised that still need to be addressed.

The ESIA acknowledges the Green Energy Trading / National Carbon Bank of Australia submission to this consultation for the details provided below.

The ESIA requests the following:

- for the modelling of the forward emissions factors to be disclosed, e.g. what were the forward projections assumed and how the 1.01 was calculated. This would help market participants for form a view on how this can change in future.
- the forward average of deemed emissions factors should reflect the deemed lifetime of the activity, e.g. gas replacement activities such as HPHW and Heating/AC have deemed lifetimes of 12 years, whereas M&V activities has 10-year deemed lifetime.

The ESIA suggests:

- the GCCF be set in advance for a rolling multi-year basis e.g. three years with an update every two years;

- the NSW government communicates that it will continue to change the GCCF as the emissions intensity of electricity reduces.
- activity-specific emissions factors should be applied to address the fact that different appliances use energy at different times of the day where emission intensity of generation is quite different. (See Figure 4 below)
- Under electrification activities where PV is installed, then a lower emission factor should be applied and the GCCF should reflect zero emission electricity and would therefore be more than 2.5. (See Figure 3 below) There is a significant pool of market opportunity: according to Green Energy Markets, at 30 June 2024, excluding system upgrades and replacements, there were 827,000 residential households that had a solar PV system and 51,500 commercial premises with a PV system less than 100kW. (See Figure 5 below for residential sized solar PV systems installed since 2018). Over the previous seven years, more than 620,000 PV systems were installed in NSW with a total capacity of 4,654MW. The average system size over that period was 7.5kW, whereas the average system size has been increasing and in 2024 was 8.7kW.

Figure 3 – Projected Gas Certificate Conversion Factor (Source GEM)

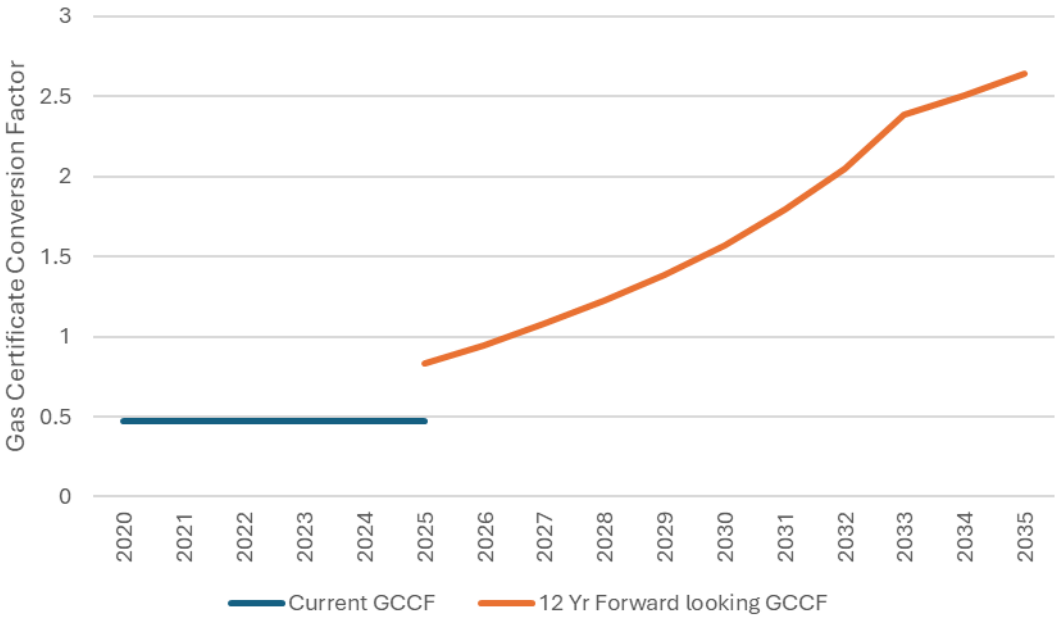


Figure 4 – Average electricity emission factors by time of day (Source GEM)

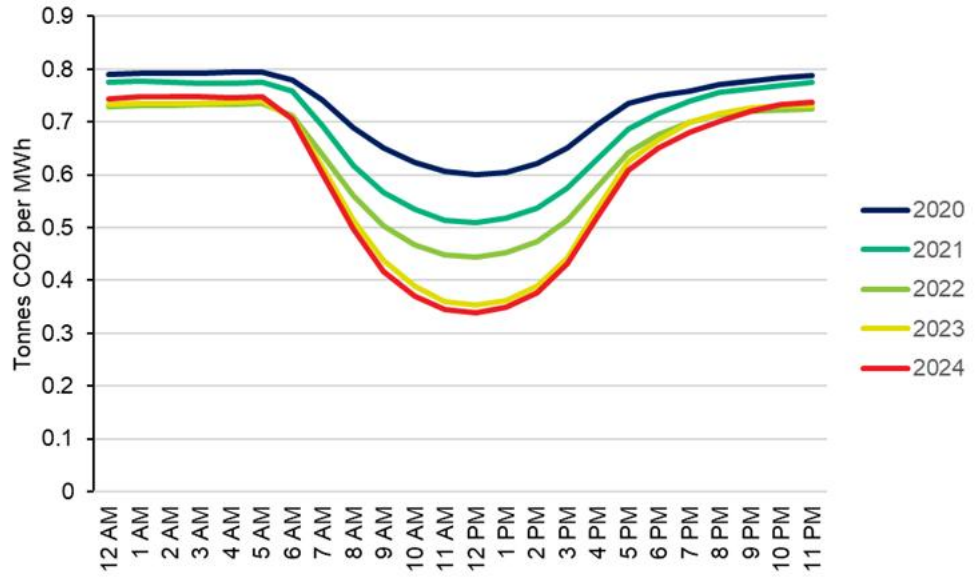
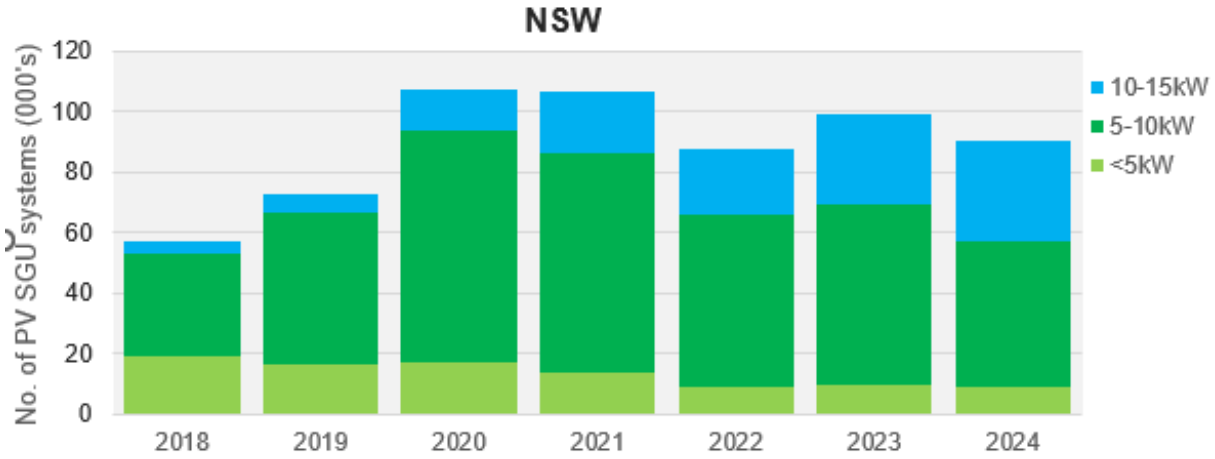


Figure 5 – Residential sized PV systems installed in NSW from 2018 to 2024 (Source GEM)



22. Are there any other data sources to forecast the non-renewable primary energy factors for NSW grid electricity?

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23. Do you agree with using the 10-year average of the forecasted non-renewable primary energy factors for grid electricity to update the certificate conversion factors of other fuel types?

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For more information regarding this submission, please email ESIA Executive Director, comns@esia.asn.au