



ESIA Submission: NSW Government ESS Rule Change 2022 Consultation

4 November 2022
(Extended to 8 November)

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1. Introduction

The Energy Savings Industry Association (ESIA) welcomes the opportunity to provide this submission to New South Wales Government for the consultation which commenced on 14 October 2022. This consultation is being managed by the Office of Energy and Climate Change (OECC).

The ESIA has referred to: <https://www.energy.nsw.gov.au/nsw-plans-and-progress/regulation-and-policy/energy-security-safeguard/energy-savings-scheme> including documents that form this consultation, and attended a public forum on 18 October.

This submission can be made public.

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 Officer at comns@esia.asn.au.

2. Overarching perspectives

2.1 Matters relevant and in scope of this consultation

1. Emissions factors

The ESIA welcomes the inclusion of fuel switching activities to the NSW ESS.

The ESIA requests that the NSW government provide information about **how the factors for the relevant fuels will change and how regularly**. This transparency will provide some level of predictability and certainty to invest and reduce risk, as it will:

- i. provide long term investment signals; and
- ii. prevent perverse outcomes where low emission equipment is replaced with higher emission equipment.

The ESIA suggests that an effective approach could be for the government to:

- i. **make it clear how the relevant factors have been calculated** for each fuel type.
- ii. **establish the relevant factors that will apply for the next three years.** The reducing emission intensity of the NSW electricity grid is relatively easy to estimate over the next three years and could apply to upgrades occurring during 2023, 2024 and 2025.
- iii. **commit to updating the future factors as part of its annual Rule change** process. For example, in the 2023 Rule change, based on publishing factors for the next years, publish the factors that will apply for 2026 (in addition to those already published for 2024 and 2025).
- iv. **consider that three years of predictability continues to be appropriate,** bearing in mind the time it takes to build product and skills capability and implement projects.

2. Treatment of ESCs and LGCs

The NSW Energy Security Safeguard consultation paper made it clear that ESCs could be created from the installation of eligible activities that also create STCs or LGCs.

The draft ESS Rule 2022-2023 is not clear on this matter.

The ESIA requests that the ESS Rule explicitly state that ESCs *and* LGCs/ STCs can be co-created for any eligible activity.

3. New activities yet to be announced

Industry is waiting for new activities to be announced.

4. Commercial lighting activity

The ESIA notes that the NSW is yet to respond to the consultation process launched in 2020 that considered the phaseout of certain components of the commercial lighting activity under the ESS.

The ESIA would welcome a briefing with the government to explore its likely approach, in particular noting that:

- the commercial lighting sector is not a single homogenous market, and each subsector needs to be considered separately; and
- industry to be given sufficient consultation, notice and transition time to navigate any changes to the activity.

5. Refrigeration cabinets activity is not mentioned in the consultation

The ESIA membership has divergent views on the current newly introduced co-payment requirement for Activity F1.

Some members feel that the \$250 flat rate remains appropriate.

Other members suggest that the co-payment amount be varied. The view is that the flat rate is currently resulting in a perverse incentive for energy users to keep their old inefficient unit, instead of having it removed, and instead choosing a *non-replacement* incentive for new installations, even though this is less generous than the incentive for *replacement*.

The ESIA suggests that the government consider, if it is planning on changing the co-payment arrangement, exploring:

- a different minimum co-payment amount for ‘new’ versus ‘replacement’; and
- a different rate based on other attributes of the unit such as ‘Product Class’ and ‘unit volume’.
 - Product Class is a factor that ACPs must already account for in the ESS calculation, so it would be straight forward to incorporate into processes.
 - unit volume may be a useful indicator in certain cases, but perverse in others.

A two-tier or multiple co-contribution price point (new/replacement plus Product Class/unit volume) could better support a reasonable incentive to consumers.

Some members suggest making a co-payment applicable when installing new, and not for replacement.

6. Measurement and verification (M&V)

- a) There is a diversity of views amongst ESIA M&V-active members on various responses to this section of the consultation. This submission is an acceptable response, however, there remain nuanced views as to optimal approaches and solutions. This is to be expected due to the nature of M&V. The quarterly NSW ESS M&V Technical Workshops remain an essential component in development of this space.
- b) Effective Range proposed changes are welcomed.
- c) Relative Precision has not been included and clarity around this option is urgent.
- d) The issue of the regulator only being engaged at the final audit stage with limited and unclear pathways for challenging audit outcomes continues to provide make-or-break uncertainty and risk for ACPs and energy customers to participate in this method under the ESS.

The ESIA requests that the regulator be more flexible on amendments during audit. This will require a change to the Audit Guide. This is especially important for the new NRE-A process as there will be grey areas and varying interpretations.

- e) It needs to be clarified whether and how projects will be ‘grandfathered’ if they straddle the period of a Rule change. For example, if a project audit doesn’t happen until after the gazettal of relevant legislation.

It seems reasonable for such projects to be grandfathered unless the situation adversely affects certificate creation. A perverse outcome will be if, for example, projects affected by COVID-19 are delayed until the new legislation comes into effect.

3. Responses to consultation questions

Transitional Arrangement

1. Can you foresee any part of the new ESS Rule for which it will be difficult to get 'business-ready' within the proposed timeframe?

No comment.

Structural Review of clauses 1-6

2. Do the proposed changes make the requirements of the Rule clearer?

Yes.

3. Are there any other changes to clauses 1-6 that would improve the clarity of the Rule?

Not sure.

4. Will the change to the definition of gas have a material impact on the expected number of ESCs that will be created?

No comment.

Inclusion of fuel switching

5. Do you agree with the proposed fuels?

Yes.

6. Do you agree with the proposed fuel definitions?

Yes.

7. Do you agree with the proposed amendment to clause 5.4(f)?

Yes.

8. Do you agree with the proposed deletion of clause 5.4(g)?

Yes.

9. Do you agree with the proposed amendment to clause 5.4(h)?

Yes.

10. Do you agree with the proposed amendment to clause 5.4(j)?

Yes.

11. Do you agree with the inclusion of the proposed clause 5.4(m)?

Yes.

12. Do you agree with the inclusion of the proposed clause 5.4(n)?

Yes.

13. Do you agree with the inclusion of the proposed clause 5.4(o)?

Yes.

14. Do you agree with the inclusion of the proposed clause 5.4(p)?

Yes.

15. Do you agree with the proposed removal of Activity Definition D19?

There appears to be an error in the definition of D19 in the consultation paper.

However, the ESIA supports the current state of play: that Activity D19 - replace an existing gas water heater with an air source heat pump water heater, which was introduced in January 2022, should stay unchanged in the ESS Rule.

16. What other concepts need defining/elaborating on? Please provide supporting evidence to justify your response.

Yes.

The ESIA recommends including some specific calculation methods for renewable irrigation activities. We seek:

- the inclusion of some deemed and semi-deemed activities for smaller irrigation pumping systems; and
- that provision be made for direct measurement of energy savings.

PIAM&V: Updated Definitions

17. Do the definitions make the terms easier to understand and apply? Please provide supporting evidence to justify your response.

Yes.

18. What other concepts need defining/elaborating on? Please provide supporting evidence to justify your response.

Relative Precision.
Accuracy Factor.

PIAM&V: Metered Calibration Requirements for Utility Grade Meters

19. Does this change reduce the administrative burden of meter calibration requirements? If not, please provide supporting evidence to justify your response.

Somewhat: this is generally a good landing point.

IPART has a perceived preference for options other than Option C verification which can be limiting.

More guidance (that is non-prescriptive) on non-utility metering would be useful as this is where most grey areas arise. For example, could a meter validation such as in NABERS be included as a pathway to satisfy the requirement?

Key concerns include:

- calibration is expensive and field calibration is often problematic.
- there is a lack of guidance on accuracy and calibration around measurement of the independent variable, for example, production rate metering.
- production rate metering calibration (if there is any) is difficult and there are limited numbers of service providers skilled in this work.
- it can be difficult to calibrate gas or flow meters. Field calibration is not available in most circumstances and removing meters to send to a lab is very expensive, more than the replacement cost of all but the largest gas meters. The ESIA proposes that it be acceptable to check that the meter mechanism is operating freely and to calibrate the transmitter if it is a separate transmitter.
- if the meter is not 100% accurate (as opposed to repeatable), but used for both baseline and operating periods, then clarify if any energy consumption adjustment is needed.
- regarding validation, in remote locations and agriculture settings, manual record keeping can be the norm and is acceptable. This is particularly relevant to replacement of diesel-driven irrigation pumps with solar pumps.

The ESIA suggests:

- a) the text be amended to 'validate' rather than 'calibrate'.
- b) guidance be provided with regards to accuracy as it pertains to measurement of the independent variable(s). For example, may it be assumed that Bureau of Meteorology data is measure without error, similar to utility metering of the dependent variable?

PIAM&V: Non-Routine Events and Adjustments

20. Does this Rule change provide more flexibility to the method for addressing Non-Routine Events? If not, please provide supporting evidence to justify your response.

- a) The proposed Rule change expands the tool kit by providing more options to apply to a situation but is not necessarily more flexible.
- b) There continues to be a lot of complexity and potential for grey areas. The new options will only really be tested at audit. Therefore, the need to allow for amendments during audits remains a vital option, such as amending calculations in consultation with the auditor. This possibility needs to be included in the Audit Guide.
- c) The public forum presentation by expert Bruce Rowse stated a 'loose approach' to assessing similarity in range. This will likely lead to disagreement which could adversely impact an ACP's work conducted in good faith. This

situation reiterates the need to allow amendments during audit.

- d) It is not obvious that the OIMPS method only applies to Other Implementations for which ESCs have been created. This situation needs emphasising in published materials.
- e) Due to the Certificate Conversion Factor changing, there will be an issue of mismatch between reductions for projects created under the old Rule and projects that calculate ESCs using the new Rule.

How will the auditor and IPART work with this? Notably, the OIMP starts with the number of ESCs already created using the old factor. Then, additional ESCs will be created using the latest gas factor.

An example scenario of this ambiguity which needs to be addressed:

Gas Upgrade Project 1 is the subject of a *PIAM&V claim*. It occurs on 1/12/22. This requires a 12-month operating period.

Gas Upgrade Project 2 is the subject of a *deemed claim*. It occurs on the same day 1/12/22 and creates ESCs using a Gas Certificate factor of 0.39. A total of 390 ESCs are created from *1,000 MWh of gas savings* on the life of the project (10 years).

For Project 1, using the OIMP method, the deduction made is based on the 390 ESCs. However, at the time of calculation of the project - at the end of the 12-month operating period) on 1/12/23, the 390 ESCs would only present *830 MWh of gas savings* due to a change in the ESC conversion factor to 0.47.

This means that the use of this OIMP method would effectively force additional ESCs to be created from the 170 MWh of gas savings which have already created ESCs using the lower factor.

This seems incongruent with Clause 6.4 of the Draft Rule. However, deducting these projects in any other way would contravene the new NRA requirements of the Rule.

ESIA suggested solution to resolve to issue:

Change the 'Certificate Conversion Factor' term in the OIMP calculation to 'Certificate Conversion Factor at the time of the OIMP ESC Registration'.

- f) Why has the OECC approach stopped short of Other Implementations (OIMPs) for which ESCs have *not* been created? This approach was considered during the targeted consultation and not considering it at this time continues to pose higher risk to projects being considered.
- g) This issue needs to remain a key agenda item for ongoing quarterly M&V technical workshops hosted by the OECC in collaboration with the regulator and the ESIA.

PIAM&V: Minimum Statistical Requirements

21. Do you agree with the proposed mandatory introduction of the minimum statistical requirements into the ESS Rule? If no, please provide your reasons.

- a) No. the Accuracy Factor already deals with the limitations. Proposing minimum statistical requirements does not necessarily add certainty but can add significant limitations.

For example, one ACP stated that two projects for which 70,000 ESCs were created would not succeed under this proposed approach. These ESCs rewarded gas consumption savings of 78%. The remaining gas use was not for unrelated production, could not be modelled effectively and could not be metered out. (More details can be provided upon request.)

- b) The ESIA suggests that if the government is concerned about Accuracy Factor, then adjust it. For example, for below $0.5R^2$, then the Accuracy Factor is 100%. If the savings relative precision is 10% or greater, then consider use savings relative precision.
- c) There is concern that this approach does not align with IPMVP as that protocol does not require mandatory minimum statistical requirements.

'Models should not be rejected or accepted solely on the basis of R^2 ', as stated in IPMVP Uncertainty Assessment Guide, EVO 10100 – 1:2019, July 2019, p15 – 1.7.1 Coefficient of Determination R^2 . It is generally accepted that there is no universal standard for a minimum acceptable R^2 value, as it is highly dependent on the context.

If there are two separate processes, ie ESS and IPMVP, then that creates challenges for the energy consumers, ACPs and auditors.

It would be most helpful if the IPMVP literature could be relied upon by ACPs as the universal benchmark – which indeed it is. It is a major issue that the ESS administrator can exercise discretion in interpreting the ESS Rule and deciding when the IPMVP is authoritative, and when subjectively, it is not.

- d) Good projects will be excluded by these proposed limitations. (Examples are provided in other ESIA member submissions.)

The proposed Co-efficient of Variation requirement does not reduce risk. If there are concerns, then consider that it may be more appropriate to adjust the Accuracy Factor than apply the proposed mandate. For example, guidance may be that if R^2 is below 0.5 and savings relative precision is 10% or greater, then consider a more rapid declining Accuracy Factor.

- e) Finally, there has been, and will continue to be, discrepancy between ACPs' stance on minimum statistical requirements.

The ESIA recommends that minimum statistical requirements be governed with a more flexible approach whereby an independent third party CMVP or AMVP auditor can review and approve variation outside of these parameters

This is the case in comparable schemes when statistical requirements are not met in entirety. For example, under the CFI ICER Method Determination 2021: Section 33, p27, 13/12/21. (Source:

33 Declaration relating to non-compliance with minimum statistical requirements

- (1) A regression baseline emissions model need not comply with subsection 32(1) (the *minimum statistical requirements*) if an independent measurement and verification professional has made a declaration that complies with this section declaring that:
- (a) the regression baseline emissions model substantially complies with the minimum statistical requirements; and
 - (b) the areas of non-compliance with the minimum statistical requirements are not material to the integrity and accuracy of the regression baseline emissions model; and
 - (c) the regression baseline emissions model is satisfactory for the purposes of calculating the emissions abated by the implementation despite the model not fully meeting the minimum statistical requirements for the reasons outlined in the declaration.
- (2) A declaration complies with this section if:
- (a) the declaration is signed by the independent measurement and verification professional; and

Carbon Credits (Carbon Farming Initiative—Industrial and Commercial Emissions Reduction) Methodology Determination 2021 27

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22. Does reducing the minimum threshold for the Coefficient of Determination improve the flexibility of the methods. If no, please provide your explanation and examples.

Yes, on the one hand as it is best practice, however it could have an adverse impact if made *mandatory*.

PIAM&V: Drafted/Future Changes

23. What form of relationship would best relate the Accuracy Factor to the relative precision of the estimated energy savings? Please provide details and examples.

IPART and the guide need to align on this matter. It needs to be clear that there is only one way to calculate the uncertainty in the Savings estimate. However, if an inexperienced ACP refers to the Uncertainty Guide it is not clear what they need to do.

ESIA members note that some concepts have not been translated verbatim from the IPMVP to the ESS Rule. The IPMVP centres on 'Avoided Energy', that is, taking one model, adjusting it and comparing to measurements. However, the ESS centres on Normalised Savings, working with two models:

- Relative Precision of the model; and
- Uncertainty of savings.

It may be appropriate for the OECC to clarify terminology and be consistent in its use.

Notably, Relative Precision is based on Standard Error. Metering Error in an integral part of Standard Error in Normalised Savings Modelling.

If there is appetite for the OECC to make changes, then it is suggested that the CFI ICER method approach could be considered, see below, CFI – Industrial and Commercial Emissions Reduction) Methodology Determination 2021, Division 9 – Calculating accuracy factors, 13/12/21.

Division 9—Calculating accuracy factors

56 Accuracy factor

- (1) The accuracy factor for implementation h for a reporting period is worked out using the following table.

Accuracy factors		
Item	Relative precision of the emissions abated by implementation h for the reporting period at 95% confidence level	Accuracy factor
1	less than 25%	1.0
2	25% to 200%	The factor AF_h calculated under subsection (2)
3	greater than 200%	0

- (2) The factor AF_h is worked out using the formula (equation 31):

$$AF_h = \frac{8}{7} - \left(\frac{1}{175} \times RP_{hA} \right)$$

where:

AF_h means the accuracy factor for implementation h for a reporting period.

RP_{hA} means the relative precision of the emissions abated by implementation h for the reporting period, calculated using equation 28.

- (3) For subsection (1), the relative precision of the emissions abated by implementation h for the reporting period at 95% confidence level, worked out using equation 28, should be rounded to the nearest whole percentage (rounding up if the first decimal place is 5 or more).

24. What appropriate and easy to implement representation that would best describe the decay of the estimated Energy Savings of an Implementation over the forward ESCs creation period?

ESIA members are satisfied with the existing OEH Persistence Model.

The ESIA suggests that as new fuels are introduced, then update the tool to be inclusive of fuel-switching activities for which lifetime and decay factors doesn't currently exist in the tool.

The Victorian Energy Upgrades (VEU) program has published material which could be considered and adopted. For example, the OECC could provide a link to the VEU webpage which deals with biomass (Refer to <https://www.esc.vic.gov.au/victorian-energy-upgrades-program/activities-offered-under-veu-program/project-based-activities/measurement-and-verification-method#tabs-container2> including the downloadable Biomass Boiler document published 7 August 2020.)

Further work could be undertaken in collaboration with the ESIA and tool developer.

MBM: Normalised Baseline Calculation Method

25. Does the proposed change clarify the calculation of the normalization method? Please provide supporting evidence to justify your response.

Yes, the proposed changes provide some clarity.

MBM: Determining Subsequent Baseline Measurement Periods

26. Does the proposed change provide clarity that an ACP may set a new baseline Measurement Period based on a new implementation of the same RESA at the site? If not, please provide supporting evidence and suggestions to justify your response.

Yes, the proposed changes provide some clarity.

MBM: Clarification for Calculating Energy Savings from Fuel Switching

27. Does the proposed change clarify the requirement to calculate energy savings from all fuels? If not, please provide supporting evidence and suggestions to justify your response.

No. The proposed change appears to be arbitrary.

Refer to section 2.1.1 at the beginning of this Submission: Emissions Factors.

MBM: Introduction of New NABERS Building Types

28. Do you agree with the proposed benchmark NABERS Rating Indexes and Annual Rating Adjustments for the warehousing and cold storage sectors? Please explain and provide evidence to support your response.

The proposed approach makes sense; however, no businesses are known to be using the NABERS method effectively.

Deem Savings for PIAM

29. Does this change simplify the vintage certificates creation process.

Not sure.

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