

Tim Stock
Manager Clean Energy Programs
Energy Delivery and Coordination
NSW Department of Planning and Environment
Division of Energy, Water and Portfolio Strategy

energysavings.scheme@planning.nsw.gov.au

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To whom it may concern,

RE: ESS Rule Change 2017-18 consultation paper

Thank you for the opportunity to respond to the NSW Government's proposal to change the ESS 2016 Rule.

Energy Makeovers is committed to the ESS and believe it will continue to make an important contribution to energy productivity and carbon abatement in NSW.

Our submission is in two parts:

1. Energy Makeovers' response to the questions posed in the consultation paper
2. Additional changes to the ESS Rule we believe should be made

We would especially draw your attention to our comments about problems with the current and proposed definition of Small Business Building at 2.7 below, especially as it directly impacts the commercial viability of the HEER method.

We would welcome a request to provide further information about anything provided below and/or to participate in any workshop discussions pertaining to the consultation process.

1 RESPONSE TO THE QUESTIONS POSED IN THE CONSULTATION PAPER

Q1: Do you agree with the proposal to preserve preceding transitional arrangements within the Rule?

Yes, we support the proposal to preserve preceding transitional arrangements within the Rule.

Q2: Do you agree with the intention to collect additional customer data, including NMI and DPI?

Should the NSW Government wish to obtain, analyse and/or publish an OES' historical electricity usage details, it will be necessary to first obtain an OES' permission. This will complicate a market offer and add to an ACP's administrative burden and therefore, cost.

Generally, we don't support increasing the administrative burden of any of the ESS activities, as would be the case should we be required to additionally obtain from an Original Energy Saver (OES) a copy of their electricity bill (or gas bill), and their permission for the NSW Government to obtain/analyse/publish their historical usage data. This is especially so where an ACP is providing an aggregation service in which case, not only will it be required to change its processes but also those of its customers; the person delivering the implementation to the OES. Such changes can result significant costs for the ACP and

Energy Makeovers Pty Ltd

7 / 25 Claremont St
South Yarra VIC 3141

T 1300 90 14 16

energymakeovers.com.au

ABN 77 131 681 859

its customers, especially when there are a high number of implementations, which will ultimately need to be recovered from the OES.

Should the NSW Government decide to add to the ESS a requirement to collect an OES' NMI and/or DPI numbers, then we ask for exemptions where the implementation is made under the Sale Of New Appliances (SONA) or Removal Of Old Appliances (ROOA) methods. This is because the Energy Saver (the person nominating the ACP) is not the Original Energy Saver. Under SONA, the Energy Saver is an appliance retailer. Under ROOA, it's the person removing the old appliance. Because of this, ACPs do not have direct contact with OESs (or may not have) and therefore, will find it impossible or difficult to obtain an NMI and/or a DPI number.

SONA

Appliance retailers who aren't also ACPs (such as Energy Incentive Team aka Harvey Norman) provide de-identified sales transaction data, invoices and stock on hand and/or dispatch records to an ACP. ACPs do not/cannot (for privacy reasons) be provided with OES contact details or have any direct contact with the OES and therefore have no way to obtain an NMI number. The cost to a retailer of changing POS processes and/or requiring a OES to provide an NMI when purchasing an appliance would be untenable; effectively ending the commercial viability of the SONA method.

ROOA

When directly collecting an old refrigerator from an OES it may be possible for an ACP to also obtain an NMI number however, an ACP won't always provide a direct service in which case, won't have direct contact with an OES. EM's business model predominately relies on an appliance retailer's delivery contractors removing old refrigerators when delivering new, requiring the collection of only minimal evidentiary data. EM's first point of contact with the refrigerator will be at a depot or marshalling yard where it will decommission/degas the old refrigerator. Centralised decommissioning/degassing is undertaken by EM to reduce service delivery costs, the only way of making the ROOA method commercially viable. We have worked hard with IPART to reduce the evidence requirements at the implementation site so we don't overburden a retailer's delivery contractors. Adding a requirement that they should also obtain an electricity bill (or at least the NMI number) would be sufficient, we believe, to make the whole business model commercially unviable.

Furthermore, in the instance of implementations made under SONA and ROOA, it may be that an OES' historical electricity usage data will not provide any useful data. This is because the electricity savings at or between households will vary too greatly over time for a reliable comparison to be made unless other data (e.g. household size, persons in the household, the presence of AC and/or pool pumps, frequency of use of appliances, ambient air temperature inside household) is also collected; energy savings will be hidden in the noise.

Q3: Do you agree with the proposal that ACPs are required to ensure that the LED lights installed under the PIAM&V method meet the relevant equipment requirements outlined in the ESS Rule?

No, EM does not agree.

The innovative/unique nature of lighting efficiency upgrades possible under the PIAM&V method may be made ineligible if subject to the equipment requirements designed for

mass market lighting products typically used under the deemed lighting methods. EM believes it is important for PIAM&V to be as non-proscribed as reasonably possible, so as to promote the design of innovative efficiency solutions.

Q4: Do you agree with the proposed changes to the Maximum Time Period for Forward Creation when using the default decay factors?

No response.

Q5: Do you agree with allowing ACPs to top up ESCs for one or more consecutive years at the same time, provided they calculate Additional Energy Savings for each year separately?

No response.

Q6: Do you agree with the proposal that ACPs are required to ensure that the LED lights installed under the Metered Baseline Method meet the relevant equipment requirements outlined in the ESS Rule?

The innovative/unique nature of lighting efficiency upgrades possible under the Metered Baseline method may be made ineligible if subject to the equipment requirements designed for mass market lighting products, typically used under the deemed lighting methods. EM believes it is important for the Metered Baseline method to be as non-proscribed as reasonably possible, so as to promote the design of innovative efficiency solutions.

Q7: Do you agree with the proposal to update the SONA Equipment Electricity Savings tables?

The ESS Rule Change 2017-18 Consultation Paper proposes ‘...to adjust the Equipment Electricity Savings to use a baseline that reflects the sales weighted average star rating of appliance sales in 2017’. Also, that it is proposed to continue the practice of discounting the baseline by 0.5 energy stars.

We believe these two measures, especially when taken together, are excessive and that the impact on the ability of the SONA method to change the long-term behaviour of retailers will be subsequently degraded.

We would like the NSW Government to consider an annual adjustment methodology that would have a less deleterious impact on the incentives retailers need to bring about enduring behaviour change.

Q8: Do you agree with the proposed Asset Lifetime values?

No response.

Q9: Do you agree with the proposed transition period?

No response.

Q10: Do you consider that the proposed Asset Lifetime values should be rounded to the nearest year, or that that the proposal for portions of years is more appropriate?

No response.

Q11: Do you agree that a Maximum NLP cap should be applied to all types of HID highbay lamps, or do you think it should only be applied to specific technology types of highbay lamps?

No response.

Q12: Do you have any comments on the proposed maximum NLP cap?

No response.

Q13: Do you agree with the inclusion of a sub-clause for Maintained Emergency Lighting?

No response.

Q14: Do you agree with including a “built in” category for mercury vapour and metal halide lamps with integrated ballasts?

No response.

15: Do you agree with introducing standalone, simplified equations to the public lighting sub-method?

Yes, EM supports simplified equations for the Public Lighting sub-method.

Q16: Do you agree with allowing BCA Class 3 buildings to become eligible sites under the HEER and ROOA sub-method?

Yes, EM supports allowing BCA Class 3 buildings to become eligible sites under the HEER and ROOA sub-methods.

Q17: Is the U value of the windows a better indicator of efficiency than the Window Energy Rating Scheme (WERS) star rating?

No response.

Q18: Is the warranty period a good indicator of the lifetime of the [draft proofing] product? Is there a better way to distinguish products with longer lifetimes?

No, EM does not believe that a warranty period is a good indicator of the lifetime of the draft proofing product and therefore does not believe it is useful to assign DSFs based on product warranty length as per activity definitions E7 And E8.

In practice we observe that generally, long warranties are provided by a manufacturer/distributor only when a prospective customer needs special reassurance e.g. a solar power system, a car. These are ‘high involvement’ goods where a prospective customer perceives a possible substantial cost/risk overtime if the product should fail. In the case of low cost products where a prospective customer doesn’t need special reassurance b/c the perceived cost/risk over time is low, aka ‘low involvement goods’, a manufacturer/distributor will provide the statutory warranty of 12 months. This is not because the product is likely to last for 12 months only but because offering a longer warranty won’t make a material difference to sales volume but could conceivably increase the manufacturer/distributor’s risk.

In the instance of relatively low cost consumables we don’t believe the warranty length offered is a useful proxy for a product’s life expectancy. Adhesive draft prevention products for doors and windows, for example, could easily last 10 years+ despite only have a warranty period of 12 months, especially if applied to infrequently opened doors and windows.

Q19: Is the ten-year lifetime for fixed chimney dampers reasonable? If not, please provide an alternative approach and supporting evidence to justify your response.

No, EM believes the effective lifetime of a fixed chimney damper should be greater than 10 years as metal chimney damper could easily outlast the house. An OES would have little/no reason to replace or remove a chimney damper once installed and unlike an electronic appliance such as a lamp or clothes dryer, is entirely mechanical in nature. It is therefore unlikely to fail over extended periods of time, especially considering the little use (opening and closing) it would usually get.

We would like the NSW Government to considered extending the lifetime used to calculate the DSFs in E9 from 5 years in the ESS 2016 Rule to 20 years in the new.

On the matter of requiring a manufacturer's warranty of at least 5 years, we don't believe this is a useful proxy for ensuring the quality of a chimney damper. For further information about this, please see our response to Q19.

Q20: What evidence could be used to show the requirement that the installed End-User Equipment must allow the egress of air when the exhaust fan is in operation?

Under the HEER lighting activities E1-5, E11, IPART requires that the installer completes and signs a post-implementation declaration. A statement could be included in this or a similar declaration asking the installer to confirm that installation of the damper has not impeded normal operation of the exhaust fan; that the exhaust fan continues to evacuate air from the room post implementation.

IPART might also require of an ACP a pre/post geotagged photo of the implementation, taken by the installer.

Please refer to 2.1 and 2.2 in the next section of our submission for further comments about the exhaust fan damper activity.

Q21: Is it reasonable to consider the replacement of an existing exhaust fan with a new self-sealing exhaust fan as a high-cost activity to be added into Schedule D, as opposed to a low-cost activity which would be added in Schedule E?

Yes, EM believes that replacement of an existing exhaust fan with a new self-sealing exhaust fan should be treated as a high-cost activity and therefore, added into Schedule D.

Please refer to 2.1 and 2.2 in the next section of our submission for further comments about the exhaust fan damper activity.

Q22: Can the requirement that the window or door must not face south (between 135 degrees and 225 degrees of true north) be easily evidenced?

No response.

Q23: Is the requirement to hold a NSW White Card an appropriate measure to ensure safety for working at height?

No response.

Q24: Should deemed savings factors for external blinds that are operated manually, rather than automated, be discounted to account for the risk that user behaviour is not as assumed in the modelling?

No response.

Q25: Please provide any comment on the proposed table of BCA Climate Zones by postcode.

EM supports the inclusion of a BCA Climate Zone table as it will remove ambiguity and therefore, commercial risk.

Q26: Do you have any interest in becoming accredited to undertake pool pump replacements using the HEER method? Why/why not?

Yes. The changes proposed in the draft ESS Rule are a great improvement on the current Rule and may be sufficient to support a viable business case.

Please refer to 2.6 in the next section of our submission for further comments about the pool pump replacement activity.

Q27: Regarding evidence requirements, how can we ensure a pool pump was installed prior to replacement?

Under the HEER lighting activities E1-5, E11, IPART requires that the installer completes and signs a post-implementation declaration. A statement could be included in this or a similar declaration asking the installer to confirm that a pool pump was installed prior to the implementation.

IPART might also require of an ACP a pre/post geotagged photo of the implementation, taken by the installer.

Please refer to 2.6 in the next section of our submission for further comments about the pool pump replacement activity.

Q28: Are the savings factors representative of the average efficiency improvements achieved by an efficient pool pump? If not, please provide supporting evidence to justify your case.

No response.

Q29: Do you have any interest in a new activity for ventilators under the ESS? If not, please provide further explanation and supporting evidence to justify your response.

Energy Makeovers strongly supports the addition of new activities under the HEER, and the NSW Government's commitment to ongoing improvements and corrections, especially where the improvements make activities more commercially attractive or reduce cost and risk.

Some of the DSFs in the tables at D13 and D14 appear high enough to make a viable business case for engagement, especially where an implementation will occur on a Small Business Building site. Work will be undertaken by Energy Makeovers in the first half of 2018 in order to properly assess the opportunity.

Please also refer to our comments about problems with the current and proposed definition of Small Business Building at 2.7 below.

Q30: Do you agree with the Eligibility, Equipment and Implementation requirements proposed for ventilators in Activity Definitions D13 and D14 of the draft ESS Rule? If not, please provide an alternative approach and supporting evidence to justify your response.

No response.

Q31: Do you agree with ensuring only new boilers or water heaters can be installed under Activity Definitions F8 and F9?

No response.

2 ADDITIONAL CHANGES TO THE ESS RULE WE BELIEVE SHOULD BE MADE

2.1 Exhaust fan sealing activity E12, venting outside

Point 3 of 'Eligibility Requirements' in E12 MODIFY AN EXHAUST FAN WITH A SEALING PRODUCT restricts eligible exhaust fans to those that 'exhaust air directly to the outside of the building'.

This restriction represents a missed opportunity because:

- a) there is enormous energy wasted heating/cooling air that has entered from the attic space through open exhaust fans in kitchens and bathrooms; these will be excluded
- b) most exhaust fan installed in NSW houses vent to the attic space, few vent outside and those that do, usually already have dampers.

EM believes that 'Eligibility Requirements' in E12 should be modified to read:

'3. Only exhaust fans that exhaust air directly to the outside or into the attic space of the building can be sealed.'

The change we recommend would act to align E12 more closely with 15D of the VEET Regulations which do not restrict the exhaust fan sealing activity to exhaust fans that exhaust air directly outside.

2.2 Exhaust fan sealing activity E12, residential only

Point 1 of 'Eligibility Requirements' in E12 MODIFY AN EXHAUST FAN WITH A SEALING PRODUCT restricts eligible exhaust fans to those on a site that is a residential building.

This restriction represents a missed opportunity because many Small Business Buildings, which would likely have a heavier air conditioning load would be excluded.

EM believes that 'Eligibility Requirements' in E12 should be modified to read:

'1. The Site must be a Residential Building or a Small Business Building.'

The NSW Government should also consider separate, higher DSFs for Small Business Building sites because, as per other HEER activities, greater energy savings should be expected to follow installation of an exhaust fan damper on Small Business Building sites than Residential Building sites.

Please also refer to our comments about problems with the current and proposed definition of Small Business Building at 2.7 below.

2.3 Exhaust fan sealing activity E12, Deemed Savings Factor

Energy Makeovers would like the NSW Government to consider raising the Deemed Savings Factor in E12 MODIFY AN EXHAUST FAN WITH A SEALING PRODUCT of the Draft Rule to 1.8 so that it more closely aligns with 15D of the VEET Regulations.

2.4 Removal of co-payment requirement, HEER and CLF

Removing the co-payment requirement in the Commercial Lighting method and the Home Energy Efficiency Retrofit (HEER) method will accelerate the uptake of energy efficiency implementations, greatly assisting the NSW Government to achieve its target of zero net emissions by 2050.

In the residential sector, the 21C activity under the VEET (swapping halogen downlights with LEDs) grew to 1,000 site implementations a day (at its peak), resulting an estimated 0.75% reduction in household consumption in the first 6 months of 2016. In contrast, there has been little activity in the residential sector in NSW. We believe that removing the co-payment requirement from HEER method of the ESS, especially for low income households, will positively impact uptake.

2.5 Insulation activities D6-D9

We believe that the insulation activities D6-D9 should commence immediately under the Home Energy Efficiency Retrofit (HEER) method. A large percentage of houses have insufficient or no insulation and are instead using electricity and/or gas to heat and/or cool. Consequently, there exists a large abatement opportunity which could be realised relatively quickly.

We believe that the installation of insulation under D6-D9 could be performed safely and that the development of compliance guidelines to control for what risk exists would be a relatively straight forward matter; that the activity is no less safe than many other activities currently allowed in the ESS.

We believe allowing D6-D9 activities under the HEER method would significantly stimulate uptake by ACPs of the HEER method generally, with householders directly benefiting.

We would welcome an invitation to participate in a working group to consider ways of quickly and safely activating the insulation installation activities D6-D9 currently dormant under the HEER method, or at least exploring what would need to be in place for the NSW Government to consider activating it in the near future.

2.6 Pool pump replacement activity D5, HEER vs. SONA

Swimming pools, in particular pool pumps, can easily represent a third of a household's energy consumption and can be found in approximately 15% of NSW homes (extrapolated from ABS data.)

The report "Pool Pumps: An Investigation of Swimming Pool Pumps in Australian and New Zealand, A research report prepared for the Department of the Environment and Energy, August 2016" made these observations (in summary):

- a) Price appears to be the main driver in the purchasing decisions of consumers.
- b) Many consumers do not know the types of pumps they have in their pool and show a lack of engagement.
- c) Consumers are seeking advice from pool professionals to help them in their purchasing decisions showing the importance of these professionals in influencing the decision making in relation to pool and spa pumps.

Energy savings are currently calculated under the Home Energy Efficiency Retrofit (HEER) method. We believe there are several reasons why the pool pump replacement activity D5 should instead be calculated under the Sale of New Appliances (SONA) method, including:

- a) Administrative Streamlining
Evidence and validation requirements of the HEER method represents too greater a cost and time impediment to support largescale uptake of pool pump replacement under the HEER. On the other hand, data collection and validation under the SONA method would be relatively low cost and streamlined.

b) Reliance on Expert Advice

Consumers typically rely on expert advice when choosing between pool pump technologies. This advice typically comes from sellers, usually pool shop retailers. The SONA method will provide a financial incentive to retailers if their advice leads to a customer purchasing a more efficient pool pump technology, the HEER method won't. Purchasers of pool pumps typically follow the advice of retailers and will therefore purchase more efficient pool pumps if they're recommended by retailers.

c) Disincentive of Multiple Trades

Pool pumps are not usually replaced by electricians (simply a matter of plugging it in) or plumbers (there's no mains water connection and often no cutting and gluing of pipes), but by swimming pool contractors usually working for a pool shop. Under the HEER method an ACP interested in the pool pump replacement activity will be faced with the prospect of engaging multiple trades, a strong disincentive to taking up the activity. Under the SONA method, no such disincentive exists.

2.7 Small Business Building, re definition required

The current and proposed definition of Small Business Building in the draft ESS Rule will not lead to small business implementations under HEER and should be changed.

The draft proposes to that definition of Small Business Building should be 'a building comprising total floor space less than 200 square metres and classified as a BCA Class 3, 5, 6, 7b, 8, 9 or 10 building'.

Energy Makeovers understands this to mean that a Small Business Building must be a stand-alone structure used for business purposes with a total floor space of less than 200SQM, which excludes small businesses that are only part of a larger building for example:

- a) a converted terrace house now used for business purposes and adjoining others
- b) a café occupying the ground floor of an apartment building
- c) a garage converted into an office space that adjoins a house
- d) a retail shop in a shopping complex

We believe the current and proposed definition of Small Business Building naturally excludes these types of small business spaces because the overall buildings they occupy will have an aggregated floor space of 200SQM or greater.

We are aware of very few instances of stand-alone buildings used for business purposes that have a floor space less than 200SQM. Certainly, they are hard to unambiguously identify, which represents considerable commercial risk to an ACP.

We would like the NSW Government to consider changing the definition of Small Business Building so that it encompasses situations where the small business OES uses only part of the building, for example:

"Small Business Building" means a building or space within a building exclusively used by a small business comprising total floor space less than 200 square metres and classified as a BCA Class 3, 5, 6, 7b, 8, 9 or 10 building.

A simple way to distinguish such instances might be to require that the space occupied by the small business has its own postal address, or sublease agreement.

The NSW Government might wish to consider annual electricity consumption as an alternative to total floor space in which case the definition of Small Business Building might be changed to:

“Small Business Building” means a building or space within a building used exclusively by a small business comprising total floor space less than 200 square metres or having an annual electricity consumption not greater than 160MWh and classified as a BCA Class 3, 5, 6, 7b, 8, 9 or 10 building.

2.8 HEER general lighting activity E11, understated savings

Energy Makeovers believes that the DSFs at E11 probably understate real energy savings.

Average Sydney home lighting comprises 16.7% general purpose halogen lamps and 16.9% general purpose incandescent lamps (as distinct from CLFs). By providing the same DSF for all general lighting types it may be that the relatively efficient CLF lamp is unfairly skewing the average in its direction; understating the energy saving achieved when high wattage (e.g. 75W) halogen and incandescent general lighting lamps are replaced with LED lamps (e.g. 7W).

We would like the NSW Government to consider reviewing the assumptions used to calculate the DSFs at E11. Upgrading general lighting may in fact produce an efficiency benefit more in line with the DSFs used at E1 because higher wattage general lighting properly accounted for may bring the average consumption of general lighting closer to 35W.

2.9 HEER general lighting activity E11, installed or supervised by an electrician

Energy Makeovers would like the NSW Government to consider removing the requirement to have an electrician install or supervise the installation of a general purpose lamp with a B22 or E27 base. Such lamps replacements are commonly and safely carried out by OES'. HEER accreditation requires evidence of training for all staff engaged in the activity. Training modules could be easily updated to include safe procedures for replacing a light bulb.

The removal of this requirement would harmonize the general lighting upgrade activity E11 with the equivalent VEET, REES and EEIS activities, which we understand don't require an electrician to replace such lamps.

Please contact me should you require any further information about our response.

Sincerely,



Mark Wilson
General Manager NSW
0437 252 830

mark.wilson@energymakeovers.com.au