



MAC Energy Efficiency Group

23RD May 2019

Tina Maiese
Senior Policy Officer
Energy and Technical Regulation
Department for Energy and Mining
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Dear Tina,

Re: REES Review – Issues Paper

MAC Energy Efficiency Group (MAC) welcomes the opportunity to make a submission on the REES Issues Paper released on the 30th of April, 2019.

MAC is an independent quality assurance business that provides energy efficiency compliance training, desktop and field audits under REES, VEET, ESS and the EEIS. MAC currently works with two of the REES obliged Energy Retailers and multiple Activity Providers currently delivering activities under the REES. The team members of MAC have been involved with REES compliance (in various capacities) since its inception in 2009.

In this submission are detailed key adjustments that MAC deems consequential in the ability of stakeholders to continue to deliver successfully on the objectives and targets of the Scheme in its current form and beyond 2020.

If you have any questions regarding this submission, please contact me on 1300 020 381.

Regards,

Merrily Hunter
Managing Director
MAC Energy Efficiency Group

Scheme Objectives

1. If the scheme continues should the objectives be revised?
 2. If so, what changes should be made?
 3. Should REES continue to ensure that activities delivered are additional to 'business as usual'?
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The objectives of the scheme from 2014 were to:

“Reduce household and business energy use, with a focus on low-income households. This will provide associated energy costs and greenhouse gas emission benefits”

MAC supports the current objectives in its focus on low-income households and reducing energy consumption and costs. However, we recommend that due to the changing energy market the focus should be broadened to encompass demand management in the commercial and residential sector.

The REES has been successful in its delivery of residential energy saving initiatives and in commercial lighting, however the activity mix and market has reached a point of maturity which should be reflected in the Scheme's broader objectives. If the objective was revised to encompass demand management and energy savings, the issue of additionality is removed as the Scheme is focussed on bringing forward upgrades and energy savings that may not have been realised for some time. This takes a macro view of the fundamental purpose of scheme and its role in adapting households and businesses in a today's energy market.

MAC is supportive of the Scheme continuing its focus on low-income households however, we recommend that more consideration is given to the discretionary income that this demographic has in being able to contribute to upgrades. The issue of 'business as usual' and 'additionality' is not as pressing due to the price conscious decisions that these households are more inclined to make.

An example of this is in downlight upgrades, with the reduced abatement introduced in 2017 to address the issue of additionality, the activity now requires households (regardless of their priority status) to contribute towards the upgrade as the abatement no longer covers the cost of the product and installation. This has resulted in the activity no longer being offered to the residential sector in South Australia due to the poor conversion rates of customers primarily due to the contribution – not because of the technology or activity. MAC recommends that the DEM retrospectively reviews the REES-R creation data between 2016-2019 on this specific activity to see the impact of this abatement reduction on the market.

The focus of ensuring these activities are only delivered above and beyond the assumption of 'business as usual' has increased the cost of the program and has resulted in poor uptake and participation rates of priority group households in any activity that requires contribution. We recommend that if the Scheme continues, the objective “with a focus on low-income households” is clearly considered when a decision of abatement values is being made.

Commercial or Residential

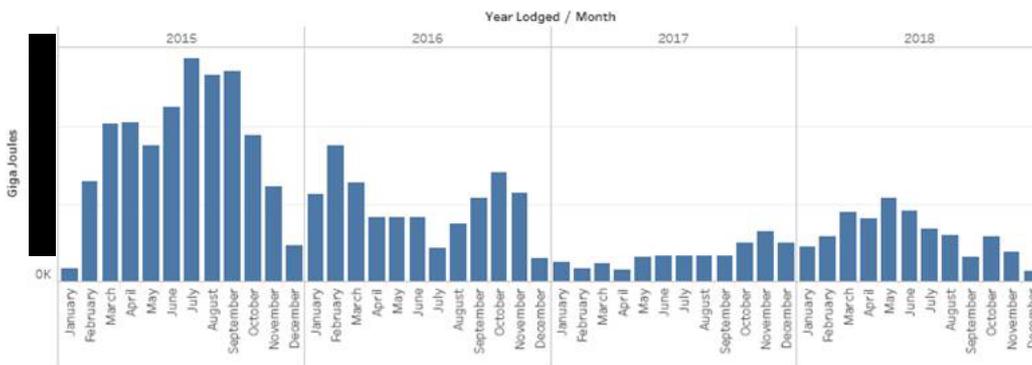
4. Should the REES focus on energy use in the residential sector, or the commercial sector, or both?
5. Has the expansion of REES to allow commercial activities been a success?
6. Should additional commercial activities be included? If so, which activities?
7. Should there be a residential sector target to prevent commercial activities ‘crowding-out’ residential activities?
8. Should REES retain rules to focus commercial activities on small business, such as the restriction on energy savings from each lighting upgrade?

MAC supports the current objectives which set out to reduce both household and business energy use, with both sectors being critical to the overall success of the Scheme.

The expansion of REES to allow commercial activities was a success in 2015-2017 in reducing scheme costs and driving lighting upgrades to small businesses. In late 2017, abatement rates were reduced by adopting Air conditioner values issued by NSW, then in 2018 values declined again as a result of NSW calculator changes introducing discount factors for regional and metropolitan areas. This has had a dramatic effect on commercial lighting activities in REES and these abatement changes have driven up costs and reduced participation of this sector due to the increased customer contribution requirement. The reduced abatement combined with the capping of 900GJ per site has created unnecessary costs and resulted in a prematurely constrained market.

For purpose of this submission, MAC has been provided with sensitive data from an Activity Provider demonstrating the creation rate impact these policy decisions have created. **Nb.**It has not resulted in a dramatic increase in residential activities, merely increased the costs of the program overall and reduced creation rates.

Residential Activities by Month '15-'18



Commercial Activities by Month '15-'18

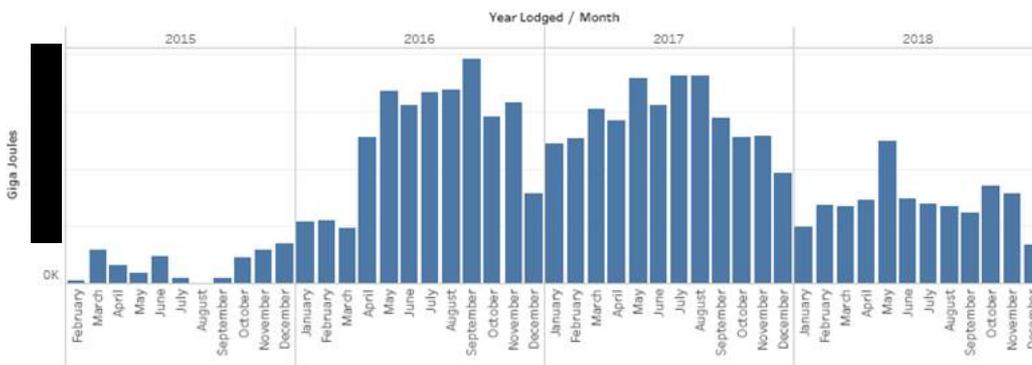


Figure 1: Residential and Commercial Activities by month (2015-2018)

Commercial Lighting was introduced as an activity in 2015, and due to the limited experience of Activity Providers (APs) in the space as well as the provision of Bulletin requirements, there was a small volume of commercial lighting activities completed in its first year. This changed in 2016 and 2017 where creation rates were at their highest. It is important to note that due to the difficulties faced in creating energy savings in priority group households, it is common for Energy Retailers to drive incentives and over create in the first 18 months of a new 3-year Stage of REES. In 2017, Commercial activities surpassed Residential as the majority of Retailers had already created in excess of their Priority Group Households (PGH) targets and Commercial abatement was the least cost channel to target achievement.

In the 2018-2020 tranche of REES, we are not seeing the same 'front heavy' approach to residential as we have in the previous 3 chapters of REES targets. This is primarily due to the reduced abatement values and the market in SA hitting saturation for the 'free-issue' activities that can be carried out in PGH. The market continues to weaken and Retailers and AP have been forced to increase prices and reach in an attempt to achieve targets.

It is our view that many Retailers will struggle to achieve their 2020 PGH targets with the current activity mix and reduced abatement values. Residential activities have shown a downward trend over Stage 3 (2015-2018). This trend has been attributed by some stakeholders as a result of the predominant focus on commercial lighting activities, however, further investigation into the cost of acquiring regional and metropolitan residential customers typifies the issue of the cost of converting these customers.

In September 2018, MAC detailed in a submission to the Department of State Development (now, Department of Energy and Mining), the difficulties in acquiring new customers across both metropolitan and regional locations. In short, a campaign was run [REDACTED] targeting regional areas (to avoid peak saturation existing in metropolitan postcodes). This campaign resulted in average lead generation costs of \$450 per customer (refer to Appendix A for further details).

The cost of generating and fulfilling activities to meet targets are shared across Retailer's customer base. By setting a residential sector target, there may be significant implications as the costs passed through to customers would need to increase. The marketing budget required would need to be increased significantly to allow for larger marketing lead generation activities.

Furthermore, changes to the abatement that were made from 2017 to 2018 have decreased the average GJ generated per household, in our previous submission (please refer to Appendix A), this was estimated at 40% per household. Changes to abatement impact take up as the activity can no longer be achieved at "no-cost" to the customer.

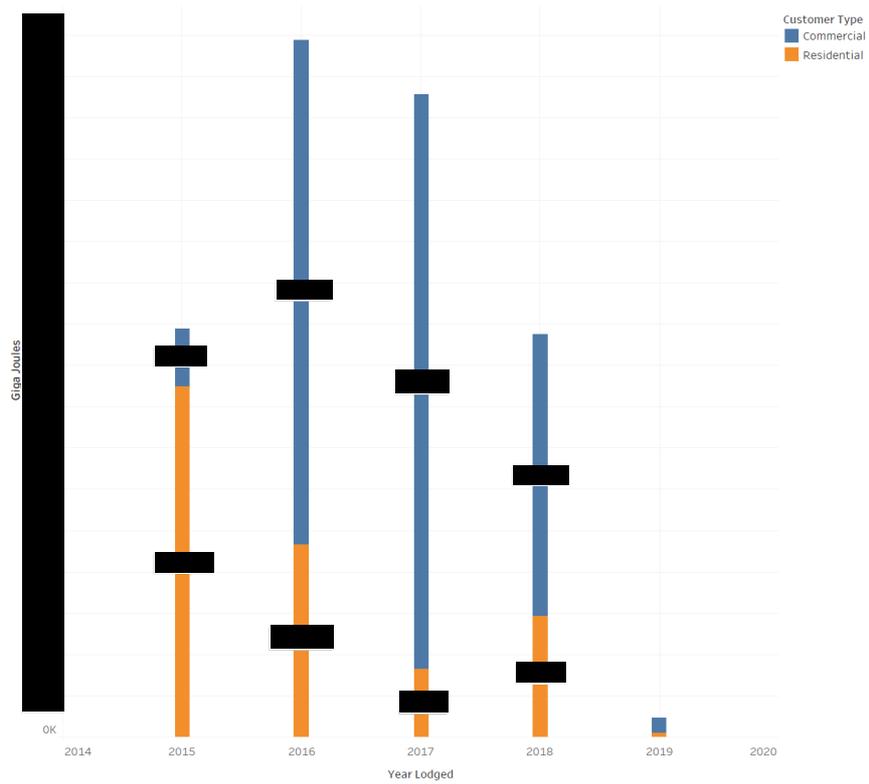


Figure 2: Ratio of energy savings between residential and commercial activities

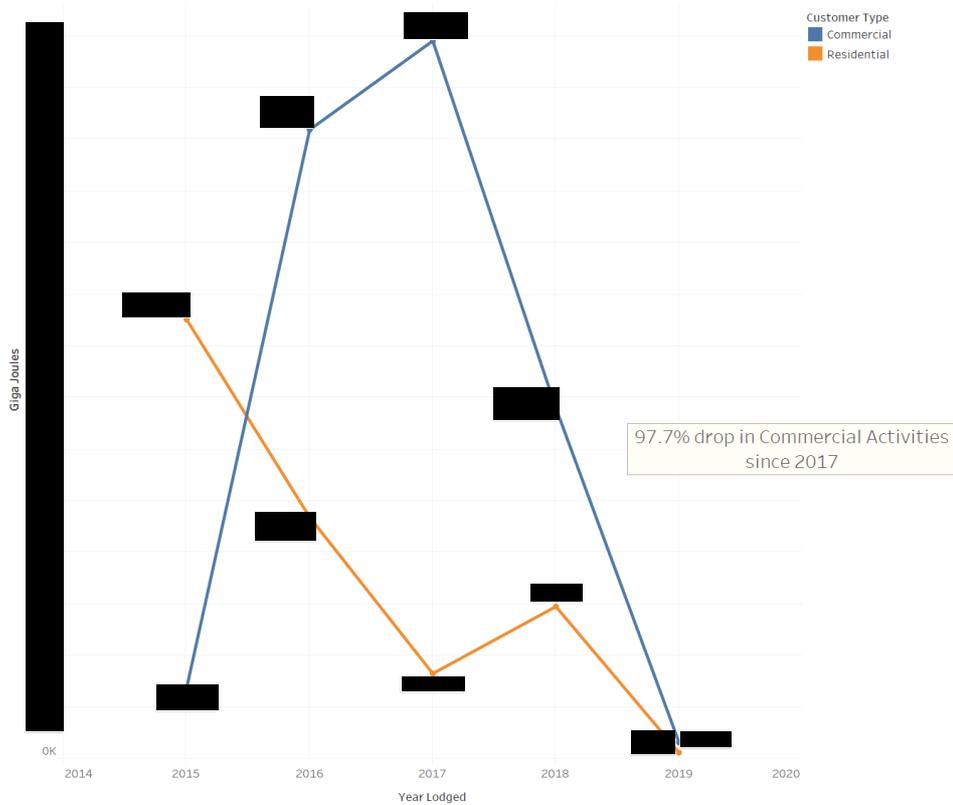


Figure 3: Trends in energy savings between commercial and residential activities

Converse to commercial lighting activities, residential activities saw a steady decrease since 2015 and to date, both activities have dropped to record lows in 2019. This may not be indicative of the activity failing, but of a culmination of factors such as regional multipliers, market saturation and capped saving

per site. Lighting upgrades should continue to be used as an eligible activity but may ultimately fail if the activity stipulations are not updated, if not, 2020 will likely see multiple Retailers shortfall on their targets for the first time.

Based on these data trends, we are supportive of the REES expanding their commercial activities to a broader mix and adopt activities seen in the NSW ESS and VIC VEU such as Project Based Assessment methods, PIAM-V as well as Hot Water upgrades. We also recommend that the DEM consider more outlying technologies such as Geothermal installations to address heating and cooling demand.

MAC is of the opinion that the original purpose behind setting the 900GJ cap on commercial activities to target SME sites has reached maturity. We support the removal of the 900GJ cap and encourage the DEM to consider allowing revisits to sites that have previously only received partial technology or space upgrades. If new commercial activities are introduced beyond 2020 such as PBA and PIAM-V, retaining the 900GJ cap will adversely impact the uptake of these activities and broader participation of the commercial sector.

As demonstrated by the AP's data below, the variance between commercial lighting small-scale and large-scale customers is significant. Over 2018, only 7% of large-scale customer had upgrades versus small scale. 2019 displays the same percentage of large-scale customers.

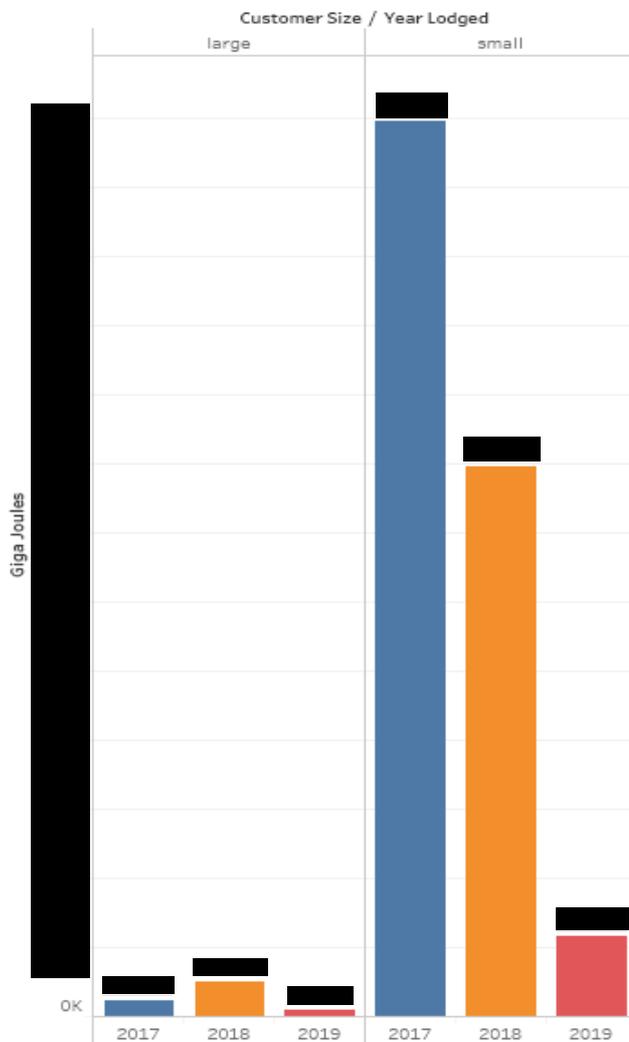


Figure 4: Large- and small-scale customers (2017 - 2019 to date)

Large scale customers are required to make a minimum contribution per GJ and are capped at 900GJ per site. Due to the aforementioned reasons, take up of this activity is minimal. Large scale customers typically operate larger sites with more lighting equipment. Due to the restrictions, they're unable to access the same benefits as small sites and in efforts of the AP maintaining lighting uniformity across the site, the customer is required to pay for additional lights that do not benefit from any REES incentive.

In lifting the cap of 900GJ, this will allow larger scale customers to benefit from total site upgrades and energy savings with more immediacy than they may have previously considered. In NSW and VIC, commercial lighting activities do not carry a cap, which allows a wide variety of business accessibility to upgrades and access the full benefit.

MAC is also supportive of the separation of commercial lighting technologies and allowing site 'revisits' as seen in the ACT EEIS. This is due to many APs only offering single technologies ie. Linear tubes. In the early years of REES (2015/2016). The single site visit restricts the commercial customer's ability to access incentives for all of their lighting to be upgraded such as high-bay lighting and downlights. With the advancement of technology and the streamlining of compliance, APs are now in a position to offer a broader range of lighting technology to consumers and we are supportive of the DEM permitting revisits to those sites.

If REES continues, MAC recommends that ESCOSA is provided with the funding and authority to introduce policy or measures to avoid the South Australian market being impacted by changes made in the NSW ESS. The dependency on NSW ESS tools to verify abatement rates in SA has caused adverse impact on the market and introduced discount factors that are not reflective of the market conditions and the non-tradeable nature of REES.

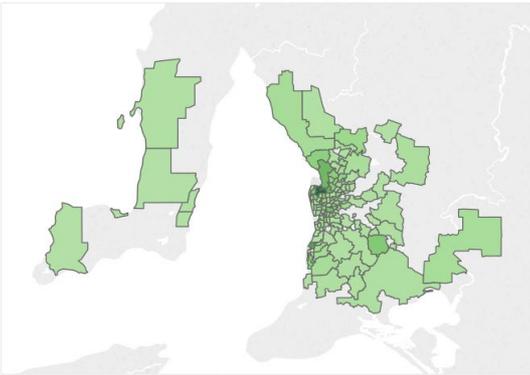
NSW ESS has an uncapped program and a tradeable platform which allows APs and Retailers to adjust their pricing to reflect the impact of policy decisions. They have been running their Commercial activities for 10 years and have different reasons for introducing discount factors. The REES has only been operating the commercial sector for 3 years and has a capped program. By introducing abatement reductions in these early years, the DEM has caused premature curtailing of the market and increased costs of abatement.

Lighting Activities

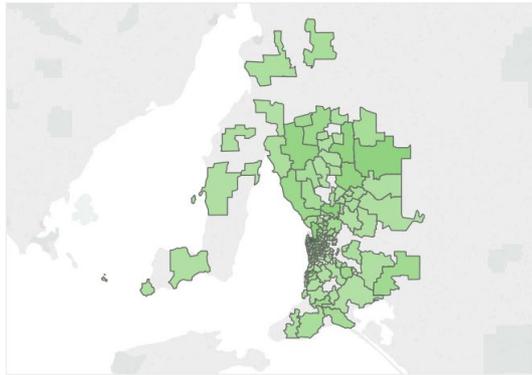
9. Have lighting upgrades become business as usual?
10. If REES continues as an energy efficiency scheme, should lighting upgrades remain an eligible activity?
11. If lighting upgrades remain, should they be restricted to certain sectors or regions where LED upgrades are less likely to be business as usual?

Figure 6 is a heatmap displaying the distribution of commercial lighting activities carried out between 2016 and 2019. Activities are spread throughout metropolitan areas at the introduction of the activity and reaching more regional areas in the later years as the abatement and saturation of the small business sector is achieved in metropolitan locations.

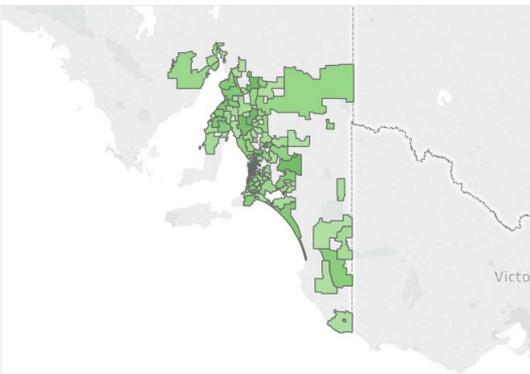
2016 Commercial Lighting Activities



2017 Commercial Lighting Activities



2018 Commercial Lighting Activities



2019 Commercial Lighting Activities

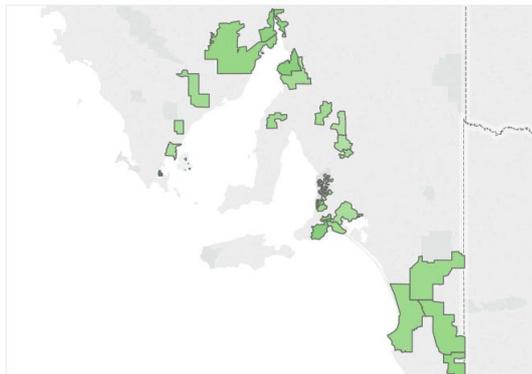


Figure 5: Heatmaps of commercial activities, 2016-2019

MAC is not supportive of any restrictions being placed on commercial lighting activities to drive abatement in more remote sectors however, it is supportive of multipliers or additional abatement values being applied for remote locations as seen in the VEU and ESS. The additional abatement assists in the travel costs associated with APs delivering activities in these areas and encourage APs to adopt more regional centers and hire local businesses to deliver their upgrades rather than relying on metropolitan based teams.

MAC is of the opinion that the residential lighting (LED A bulbs replacing incandescent) may be reaching 'business as usual' status, however, we do not believe that downlight replacements nor commercial lighting upgrades have achieved the same notability. Residential incandescent replacements have been an activity available for a decade under the REES, downlights however, due to the contribution and low abatement, has not achieved the same market penetration. The reduction in activities is reflective of the policy changes to abatement creating a need for customer contribution as well as the cap of 900GJ creating a barrier for commercial customers to participate in a whole-of-site upgrade.

As per the AS1680 lighting uniformity requirements, a customer is unable to have only half of their space upgraded (accessing the free or discounted lights only) they are required to upgrade the entire area. An example of this is if a site has 20 high bays and they can only have 15 upgraded under REES before hitting the 900GJ cap, they need to pay full retail rates for the remaining 5 to be upgraded which may be upwards of \$1500. This scenario is commonplace and creating additional hurdles for participation. Lowering the abatement levels has further widened this gap and maintaining the 900GJ cap will continue to see the market declining.

Priority Group Households

12. If the scheme continues should it retain a focus on assisting low income households?
13. Are priority group households sufficiently clearly defined and easily located?
14. Should there be specific targets or incentives to encourage activities in remote or regional areas? How might this affect costs?
15. Have the changes to the definition of priority group adequately covered those households most in need of assistance from the REES?
16. What is the best way to increase the opportunities for low income households to benefit from 'deeper' retrofit activities through REES?
17. Is there a more effective way to define the customers who are most likely to benefit from receiving REES activities and audits?

In the Australian Energy Regulator's FY 2016 annual retail energy market report*, it identified that the proportion of consumers in hardship programs range from less than 1 per cent in NSW, Queensland, ACT and Tasmania, whereas in South Australia this rises to 1.8 per cent. It also identified that the highest level of disconnections in all jurisdictions was in South Australia where 1.4 per cent of electricity consumers experienced disconnections due to non-payment.

It is important that low income households continue to benefit from technology that can reduce their energy costs, and be able to access energy audits to further educate householders on more efficient usage or necessary retiring of different appliances.

Targets for priority group energy audits have steadily increased over the Stage 3 (2015-2017) and in current Stage 4 (2018-2019). Under the REES Code, households can only be visited once whilst the same customer is living in the premises. Due to this, the volume of householders "available" to have an audit conducted is reducing every year, making targets more difficult to achieve.

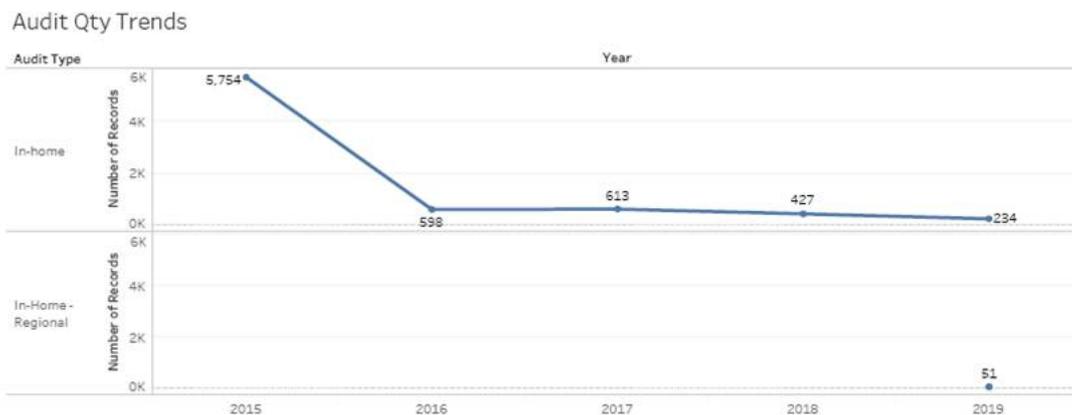


Figure 6: Audit quantity trends between 2015-2019

As mentioned earlier in this submission, Retailers traditionally over create in the first 18 months of a REES Stage to avoid risks of market saturation in later years. However, we have not seen this same trend carry forward into the 2018-2020 REES Stage 4, which is related to the low uptake and market saturation point for this activity.

MAC suggests that the REES Code is amended to allow priority households that have been previously visited to be revisited, similar to a "fresh start" applied by the VEU on their residential lighting. This will allow householders that had an audit performed over the past 10 years under REES to be re-assessed.

The benefit to householders is that they are able to re-instate better energy use behaviours if the measures and lessons are not being implemented or to gain new knowledge on appliances that may have not been present during the first energy audit.

The distribution of residential activities demonstrated in Figure 8 indicates that attempts are already being made to expand activities into more regional areas, however audit volumes are still falling short of Retailer targets.

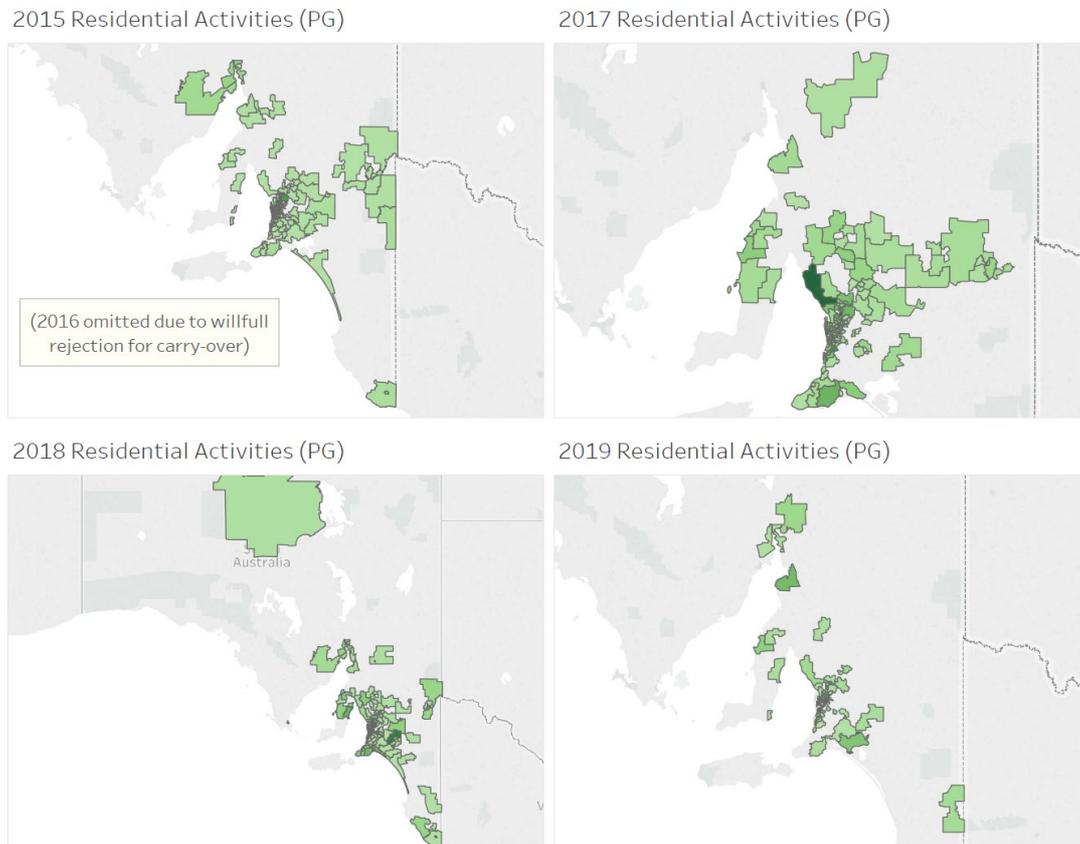


Figure 7: Heatmap of commercial lighting activities between 2015-2019

Ambitious targets may be implemented but without greater incentives or an increase to Retailer Penalty on their PGH targets, the ability of target achievement in future years will be impeded. The opportunity costs associated with undertaking regional activities create a barrier for APs and Retailers alike, dampening the effectiveness of the scheme and viability of the initiative. The increased costs of delivering PGH activities and audits is close to price parity with the \$17.40GJ penalty rate applied for Retailer shortfall.

We recommend that the penalty applied for PGH targets is revised and increased to be more aligned to other State schemes, please refer to our previous REES submission in Appendix A (point 5) for more information.

Energy Audits

18. How should energy efficiency outcomes from energy audits be verified?
 19. Are the current qualification requirements for energy auditors appropriate, and are auditors adequately trained to deal with priority group households?
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MAC currently verifies energy efficiency audit performance by listening to post audit phone surveys on the findings provided. This additional compliance step is only provided by some APs, however we have found this to be an efficient method in assessing whether a householder has received a comprehensive audit of their home and believe this should be a mandatory evidence requirement.

In addition to a voice verification call, MAC recommends that a template is considered and issued to APs on which to complete their Home Energy Assessments (HEAs). The template should outline the expectations associated with the provision of energy saving recommendations to the hardship household.

MAC has observed in-field a broad array of templates being issued to customers, some are comprehensive with specific and customized energy saving recommendations, others merely have a tick box of generic energy saving tips or even as minimal as the appliance itself being listed ie. "Heating" without an action or recommendation next to it. This creates a varied customer experience highly dependent on which Activity Provider (APs) the customer elects to use for their HEA. To ensure customer value and consistency is being delivered under the program we recommend greater clarity on the recommendations being provided to customers and how they relate to that household.

We understand that the current qualifications required by Assessors is sufficient for the services being provided to households. However, we do see the benefit in creating a more robust training regime covering safety on site not only with hazards but also in dealing with hostile situations and incident reporting.

Whilst the data shows that priority group households may be reaching saturation for home energy assessments, we encourage the continuation of this target and recommend that the eligibility is expanded to incorporate non-priority households and small businesses. If the scheme expanded to include small business audits, we would encourage the DEM to consider adding further qualification requirements to ensure that auditors are delivering these assessments in line with the Australian standard. E.g. Level 2 Auditors.

Expanding to Demand Management

20. Should REES primarily focus on reducing energy use or managing energy demand?
 21. Is there a place in an energy efficiency scheme for technology that enables energy management rather than directly reducing energy use? If so, what activities should be included, and how should they be credited?
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MAC supports REES objectives expanding to encompass a broader energy market focus on energy savings and demand management initiatives. The two measures are complementary and should be considered in all transitional/adaptive initiatives for existing businesses and households in South Australia.

An new initiative that could be considered is this implementation of peak demand air-conditioner systems (as seen in QLD) <https://www.energy.gov.au/rebates/energy-efficient-air-conditioning-incentive-energex> providing rebates of up to \$400 for installing a new peak responsive unit. The current REES abatement available for energy efficient air-conditioners is not sufficient to drive uptake of this



activity, the abatement levels will need to be considered when modelling an activity designed to drive a mass market approach. Please refer to our previous REES submission in Appendix A for further detail.

Newer technologies such as Geothermal installations should also be considered in the mix of heating and cooling activities. (<https://www.alintaenergy.com.au/geo/>) This technology is being rolled out in housing estates in NSW and has already started installations in South Australia. Ground Source Heat Pumps (GSHP) have proven energy savings and dramatically reduces the energy required for heating and cooling a household or business. Introducing an incentive or REES based activity for Geothermal installations would be complementary to the Scheme objectives and could serve to accelerate uptake, supporting an emerging energy technology for households and businesses.

Funding

22. If the scheme continues beyond 2020, how should it be funded?

MAC is supportive of the current funding arrangement in place for the REES.

Deeper Retrofits

23. To reduce scheme costs and encourage a 'whole-of-house' integrated approach to energy efficiency, should there be a 'bonus' added to the deemed value when multiple activities are carried out at the same house?

24. Should REES require a minimum number of activities or a minimum amount of energy savings to be delivered at each home or business? How would this be done?

25. Should the Victorian Residential Energy Scorecard, or similar, be introduced to REES to measure deemed savings from whole of house upgrades? How would this be done?

MAC recommends that further restrictions are not applied to residential activities under REES, such as the introduction of a minimum number of activities or saving per household. This would further increase costs and reduce eligible household participation.

MAC is supportive of initiatives and incentives that promote multiple energy saving measures being undertaken in the household. This would reduce administration and encourage residents to take up more activities than they may have previously considered.

Summary

The REES has been successful in driving the uptake of energy efficiency measures in households and businesses for the last 10 years. Over this time thousands of sites have benefitted not only in energy savings but in education on effectively managing household energy. MAC would like to see the REES continue beyond 2020 and believes that for the Scheme to continue on this success it will need some fundamental changes to its existing framework and minimum activity requirements prior to the next Stage (2021-2023).

The REES has the opportunity to drive true change in the market and transform the way households and businesses use energy. To do this, all businesses (small and large) should be eligible to participate without a cap on their energy savings (900GJ). A shift in focus is required so that rather than ensuring BAU is avoided, instead encourage participation in the Scheme and reduce the cost of the program by removing barriers, quantity caps and relying on NSW tools for abatement calculations.

Whilst MAC is supportive of reducing onerous compliance requirements, we are conscious of the need to uphold quality standards and to ensure that activities are undertaken in accordance with Industry Standards, Regulations and Codes. We recommend that greater resources and funding is provided to ESCOSA to enable them to carry out random site inspections and compliance verification activities. We have found throughout our years delivering quality assurance services that desktop auditing can only reveal part of the picture in how an activity has been delivered in the field.

We encourage the DEM and ESCOSA to increase their presence in compliance field inspections to be in line with other States schemes such as the VEU, EEIS and ESS to uphold the integrity and compliance of upgrades.

We remain supportive of the scheme and the benefits that it provides to South Australian residents and businesses. If you wish to discuss any of the observations, charts or recommendations provided in this submission, please feel free to contact us at QA@maceegroup.com.au or 1300 020 381.