

REVIEW INTO THE SOUTH AUSTRALIAN RETAILER ENERGY EFFICIENCY SCHEME - REES ISSUES PAPER APRIL 2019

Submission

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I have added comments into the review paper in addition to providing answers to the questions posed. I have done this mainly to provide context or to challenge some of the assumptions within the document.

Broadly speaking I have found the review document to be limiting and limited. Limiting if the submission only follows the questions and limited in vision, scope and courage.

Why not consider a larger scheme that delivered greater benefits to the SA community of households and businesses? Double the size of the scheme, introduce the full suite of activities including NABERS and Project Based Assessments. Apply a discount on the MEPS value to more realistically approximate the energy use of the old motors and so on. This review is to look at the scheme for the three years beyond 2020 and yet it is staying very firmly below the parapet. South Australians deserve a bold vision for energy efficiency action.

1 Background

The purpose of this Issues Paper is to seek the views of stakeholders on the future of the Retailer Energy Efficiency Scheme (REES) after the current stage ends in 2020.

The current objective of the REES is 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.

*The REES commenced on 1 January 2009. The REES has delivered 1.8 million tonnes of greenhouse gas reductions (2009-2014) and over 10.6 million gigajoules of energy savings (2015-2018). **

Over 360,000 households and over 5,000 businesses have benefited from the scheme since it commenced in 2009. Continuation of REES beyond 2020 will be the subject of government consideration post review.

It's worth noting that there is very likely a significant under reporting of delivery from the scheme due to the schemes structure. Households and Businesses will at times move beyond the cap of the scheme and pay for upgrades that they would not have otherwise been undertaken. Examples may be houses and businesses that would get the maximum number of lights installed and then pay the installation company to complete the upgrade. A further example of under reporting is where entire or part claims fail due to the highly technical compliance rules whilst still having had the energy efficiency upgrade. Some of these costs will add to the cost of the scheme.

I would suggest this under reporting would be at least 10 percent and more likely closer to 20 percent of the total.

2 The Current Scheme

Under the REES, energy retailers are set annual targets for the delivery of energy efficiency activities. And set targets to deliver a prescribed amount of the energy efficiency activities to priority group households and to provide energy audits to priority group 'vulnerable' households.

(Following the departments advice) The Minister sets the overall targets to be achieved by the REES and these are apportioned to each obliged retailer by the REES administrator. REES energy savings targets for the period 2018-2020 are 6.9 million gigajoules (GJ) of energy savings and 22,101 audits.*

Whilst the population of SA is a quarter of Victoria it is worth noting that the equivalent energy efficiency scheme (VEU) is almost ten times as large at over 70 million GJ in the same timeframe. This means the REES is delivering less than a half of the energy efficient benefits per person.

Energy retailers can meet their targets by delivering measures from a pre-approved list of energy efficiency activities, each of which is deemed to contribute a given quantity towards their targets. The REES is designed with the intention that all energy efficiency achieved is in addition to what would have otherwise occurred under other Commonwealth or State Government policies and programs. (Or BAU)

Each energy retailer participating in the REES decides on what mix of pre-approved energy efficiency activities it will undertake to meet its energy efficiency targets.

These decisions are understandably based on normal financial factors where many activities specified within the scheme are simply not viable. The viability is ascertained by the costs and difficulties of undertaking the activity compared to the GJ (\$) in return.

The GJ available per activity is the result of calculating the energy saving multiplied by various other values to reflect longevity and likelihood of it being undertaken without the scheme (not additional). Unfortunately, the issue of additionality and the discounts applicable to the raw energy saving are arguable and disputed.

Unfortunately there is no appropriate forum to table let alone resolve the disputed values.

The dept relies on an expert to provide advice on what may or may not be considered BAU. Due to the unusual nature and rarity of schemes like this, the expertise applied may be less than appropriate as a singular point of reference.

Decisions within REES that may have significant effect on the scheme and its application within the South Australian community (Resi and Comm) have been highly questionable in my view. Representation of such views to the Dept over several years has not had the desired results. A stakeholder panel or steering group established to consider these matters would be useful.

a) Scheme Objectives

The original objectives of the REES were to:

Improve energy efficiency and reduce greenhouse gas emissions within the residential sector.

Reduce total energy costs for households, particularly low income households. Businesses were added in 2014.

Some stakeholders have questioned whether the emerging challenges in the energy market in South Australia justify a broadening in the scheme objectives to target summer peak network demand reduction, network minimum demand management, or network reliability and security.

In keeping with the REES objectives, the scheme administrators seek to ensure that REES energy savings are additional to that which would otherwise be achieved under current and planned regulatory requirements, or which would otherwise occur through BAU.

The concept of BAU is not clearly described and should be challenged to ensure it's application is justifiable.

a) Consultation Questions

If the scheme continues should the objectives be revised?

The term efficiency simply needs to broaden from energy saving alone to include a time and quality element. Efficient use could easily be expanded from the current narrow definition.

If so, what changes should be made?

Should REES continue to ensure that activities delivered are additional to 'business as usual'?

Yes, each of the 4 existing schemes broadly have the same objective with regard to BAU.

It is worth noting that a healthy market driven scheme rarely operates like BAU even when the activity is identical.

Again it is this behaviour that needs to be considered with an understanding of how many barriers there are to action

(knowledge, inertia, affordability etc) and how an incentivised activity is rolled out by a profit driven company. There is also an argument that the outcome is better when performed compliantly under a scheme than when not controlled under BAU.

Three examples

- whilst regular incandescent lights are no longer readily available, they will only be replaced by LED or CFL's when the existing ones have failed and the extras in the cupboard have been exhausted. They will then be replaced one by one and disposed of in the bin. Under the schemes all of the lights are likely to be changed and disposed of correctly. This brings forward the energy efficiency gain in a controlled manner using quality products and installation services.

- Industrial lighting is expensive and often difficult to change as it may require special equipment and capability. We have often found lights that are not operating and whilst these can not be claimed under the scheme, they may be replaced at the same time as the rest are being changed. The cost of the equipment across all lights is far more efficient than one by one.

- Commercial lighting (Fluorescent) and Residential (down lights) should be changed in a manner that involves changing the wiring to avoid the old ballast and transformers. The additional cost associated will mean that BAU would probably avoid the better but more expensive outcome with the replacement of globe only. In many/most instances this not only results in a shorter life of the product but also a very poor power factor which then impacts the entire circuit and possibly the entire site.

Indeed the benefits of an upgrade to a quality product in the most beneficial manner delivers a greater benefit than the energy efficiency scheme generally calculates which is only looking at the energy efficiency gain.

Down lights in the REES is the extreme example having been discounted heavily to a fraction of the value in the other schemes due to concerns over additionality. This is an anomaly that has made the activity unviable and has been the subject of complaints for some time.

A final example is the use of the MEPS efficiency rating as a baseline for motors within the schemes. This masks the efficiency gain of replacing a 20 year old motor by considering that BAU would have installed a motor achieving MEPS. Whilst this is true to an extent, unfortunately it does not allow the schemes to incentivise the business owner to replace more than the oldest motor at the end of its life (many motors last for 25 or more years). If more incentive was available by using a lower baseline, more motors would be replaced delivering significant energy savings for both the company and the state. The unjustified quantum of concern regarding additionality is very short sighted.

The definition of BAU needs to clearly consider not just the replacement of the single product but the disruptive nature of a market based scheme and how it goes about the replacement of the product.

b) Commercial or Residential

In 2015 REES expanded to include a limited number of commercial activities such as lighting upgrades, high efficiency whitegoods, and refrigerated display cabinets.

It would be interesting to know how many Gj's have come from the whitegoods and RDC's even though the energy savings available are very significant.

The activities other than lighting appear to be barely viable given their low Gj value which is a shame as the scheme could make a significant impact here and save a great deal of energy.

The previous REES review showed this expansion would likely be cost effective and would introduce economies of scale, providing greater scope for higher energy saving targets.

As above – it would be interesting to see what assumptions were used in the review.

Lighting upgrades have been the most commonly delivered commercial activity.

Energy savings from commercial activities now comprise over 75 per cent of total REES energy savings. Some stakeholders have noted that without a residential priority group target, commercial activities would comprise an even greater proportion of REES energy savings.

I agree.

Currently the REES rules for commercial lighting upgrades, which is the most common commercial activity, restricts the energy savings from each eligible upgrade to 900 GJ. This serves to direct a large proportion of commercial lighting upgrades to small businesses.

True to an extent. It actually serves to direct the upgrades away from the large businesses where the approximately \$5,000 cap on rebate value per job becomes of little interest when the upgrade costs \$100,000. So in recognising that, the sales people direct their efforts to the small businesses. This is important in understanding what is actually going on.

Large industrials and commercial buildings will not automatically start to be included as the small business sector are saturated as the sales people will not find any more success than they do now if they direct their efforts into this segment.

b) Consultation Questions

Should the REES focus on energy use in the residential sector, or the commercial sector, or both?

Not sure what is behind the question – obvious answer is both but is there something else going on?

Has the expansion of REES to allow commercial activities been a success?

Again – the numbers speak to this? Commercial lighting only though

Should additional commercial activities be included? If so, which activities?

Of course – Project Based, NABERS, Ventilation fans etc

Should there be a residential sector target to prevent commercial activities ‘crowding-out’ residential activities?

Short answer is yes but it should be because the scheme should be delivering benefits to the residential sector of SA because they need to be protected from high costs and there are still savings to be made in this sector (ie down lights)

Should REES retain rules to focus commercial activities on small business, such as the restriction on energy savings from each lighting upgrade?

There are easier ways to focus on SME - apply a multiplier to those activities applied to businesses with usage of less than 160mw.

The 900Gj cap is really an approach to apply a modest Gj target to as many businesses as possible. A larger overall target would allow greater savings to be applied even to SME's.

Whilst the 900Gj cap worked reasonably well for lighting, it would restrict activity in any activity that is more complex. A \$5,000 incentive will not come close to paying for the investment of time and resources in Project Based or a compressor/chiller/HVAC upgrade that costs a couple of hundred thousand dollars.

So – no, it is time to rid the scheme of this handbrake! Or leave it on lighting but not cap for other activities.

The adoption of the HEER approach in NSW would work

There is also an argument for a second visit in much the same way as second visits for Resi have recently been allowed. Many businesses stopped the lighting upgrade at the point where the incentive was no longer available. They have ended up with some old remaining.

c) Lighting Activities

Since REES began in 2009, various lighting activities have had a significant uptake and since 2015, energy savings from commercial lighting have comprised the most dominant activity. Deemed energy savings values for lighting upgrades have been reduced several times, because of the increasing penetration of LEDs and to ensure REES incentives remain additional to a ‘business as usual’ scenario.

Energy obligation schemes across Australia are increasingly looking at whether lighting upgrades should remain an eligible activity within the schemes.

All activities should be periodically reviewed. It would be interesting to know what criteria is used in such reviews.

Lighting is likely to become more difficult to do as saturation is reached although there are various segments that have not been well serviced as yet. Non Building based and some Building classes within Commercial are examples of where lighting can continue for some time to be upgraded.

NSW moved to panel only replacements of the entire fitting to encourage a step change to new technology.

In 2018 the COAG Energy Council agreed to phase out inefficient halogen lamps and introduce minimum standards for LED lamps in line with European Union (EU) standards. The phase out will remove remaining incandescent light bulbs and a range of halogen light bulbs from the Australian market, where an equivalent LED light bulb is available.

c) Consultation Questions

Have lighting upgrades become business as usual?

Full lighting upgrades are rare outside of a refurb or the schemes. BAU involves replacing blown lights with ones from Bunnings. Proper LED changeover requires rewiring and often complete luminaire replacement – this should not be confused with BAU.

If REES continues as an energy efficiency scheme, should lighting upgrades remain an eligible activity?

Whilst lighting remains an energy efficiency activity there is no reason to not have upgrades in the scheme.

If lighting upgrades remain, should they be restricted to certain sectors or regions where LED upgrades are less likely to be business as usual?

As above, full lighting upgrades are only BAU in a refurb which is covered by J6. You could discount these as Vic has.

d) Priority Group Households

Prior to the REES, the Government funded the 'Energy Efficiency Program for Low Income Households', which delivered energy audits and upgrades to low income households. The low income focus of this program was incorporated into the REES through the priority group household targets, recognising that low-income households typically spend a greater proportion of their disposal income on energy costs than other households.

Some stakeholders have indicated that inclusion of the priority group targets adds to recruitment costs of the scheme, and that this sector is approaching saturation for activities such as low flow showerheads, lighting, standby power controllers and audits.

True on both counts.

The REES scheme is significantly more expensive than the other schemes and Priority customers is one reason. The others relate to the 900Gj cap, the highly pedantic compliance regime including the application of 1680 as a requirement rather than a guideline which it was created as.

The lack of market based trading also contributes to cost.

Partly in response to these concerns, the definition of 'priority group' has been expanded to include:

customers who are participating in retailers' hardship programs;

customers who receive a referral from a registered financial counsellor; and

customers who are participating in a retailers' 'Payment Plan'.

In addition, from 1 January 2019, activity L1 (Install an LED General Purpose Lamp) was amended to allow the Activity to be delivered twice per premises, providing all other aspects of the specification are met. The number of individual L1 lamp replacements allowed to be delivered in any one premises was also increased from 20 to 40.

These have helped

There has been some concern expressed that regional customers are underrepresented among REES beneficiaries, and this could be addressed by classifying regional customers as part of the priority group. The proportion of activities delivered in regional and remote areas varies from year to year, with the latest data indicating around 15 percent of all activities were delivered in regional and remote areas.

Adelaide has a population of a bit over 1.3m which is about 80% of the state's 1.67m so the 15% isn't too far from right – maybe a little extra incentive could be used? The additional cost associated with working in Regional when the highly restrictive cap on lights was in place prior to this year meant that it was difficult to make the activities viable.

This was a poor design for regional activities.

Typically, retailers will concentrate delivery of specific products in metropolitan areas and as these markets become saturated, then roll out the products in more regional areas.

It is more difficult and costly to undertake activity in regional areas. The retailers and the third parties do not concentrate on metro for any other reason. The activities for regional would have been higher if the scheme had have been designed in such a manner to make undertaking the work attractive.

REES aims to be consistent and to align with schemes in other jurisdictions where this is appropriate, to minimise cost impacts on retailers who are obliged under multiple schemes. Currently, most other jurisdictions' schemes, other than the EEIS in the ACT, do not have specific targets for low income or vulnerable households.

NSW and to a lesser extent Vic have struggled to deliver to households in recent years. The HEER in NSW is an attempt to counter this. The outcomes of the scheme in NSW is certainly the poorer for it as households gained very little benefit.

Some stakeholders have argued the REES should evolve away from delivery of low cost activities to priority group households toward higher cost upgrades that deliver deeper savings. This may require amendments to the REES to use the scheme to fund a stand-alone low income program.

Other stakeholders, particularly community organisations, have strongly supported maintenance or increasing of priority group targets, to assist the most vulnerable in our community.

d) Consultation Questions

If the scheme continues, should it retain a focus on assisting low income households?

I believe that the forced obligation to deliver energy saving activities to priority housing has been one of the better aspects of the REES. It should only reduce as saturation is achieved.

Are priority group households sufficiently clearly defined and easily located?

Yes, but they will always be more costly to deal with.

Should there be specific targets or incentives to encourage activities in remote or regional areas? How might this affect costs?

Other schemes provide a positive multiplier for regional activity to count for additional costs.

Have the changes to the definition of priority group adequately covered those households most in need of assistance from the REES?

Yes

What is the best way to increase the opportunities for low income households to benefit from 'deeper' retrofit activities through REES?

The scheme perversely changed values for downlights which makes this common residential lighting unviable. (Space heating).

Recent changes for insulation may help a little as well.

Is there a more effective way to define the customers who are most likely to benefit from receiving REES activities and audits?

Possibly – talk to ACOSS or similar

e) Energy Audits

The REES Regulations specify the number of energy audits to be undertaken by each retailer and how to manage energy audit shortfalls. The minimum specification for an energy audit is included under the REES Code, which establishes requirements on energy retailers as a part of their retail licence. This Code also includes the competencies that a person needs to have to conduct an energy audit under the REES.

The current specification can be met through a simple, walk-through audit rather than a more detailed engagement with the customer. Some stakeholders have suggested the outcomes of the audits would be improved if the specification was made more comprehensive, such as requiring use of the Victorian Residential Efficiency Scorecard. Any additional complexity in the audit standard may increase the cost of the scheme, but more comprehensive audits with effective customer engagement may be of more value to the householder. It has also been suggested that introducing 'before' and 'after' auditing might enable a flexible 'deemed saving' methodology for REES.

To encourage delivery of audits in regional or remote postcodes, audits in these areas are taken to have a value of one and half credits toward a retailer's Energy Audit Target, up to a maximum of 30 per cent of the Target.

e) Consultation Questions

How should energy efficiency outcomes from energy audits be verified?

Are the current qualifications requirements for energy auditors appropriate, and are auditors adequately trained to deal with priority group households?

f) Expanding to Demand Management

The peaky nature of South Australia's electricity demand, driven largely by residential air conditioning use in summer, has been cited as one cause of increasing electricity prices through the need to invest in rarely used infrastructure. To date, the REES has focused on energy efficiency without specifically targeting peak demand reduction activities. Similarly, increased rooftop solar PV penetration is presenting electricity network security challenges at times of low electricity demand during spring and autumn. To date, REES has not targeted activities which might increase the security of the electricity network.

Some stakeholders have suggested that REES could be re-designed to improve network reliability and security, and/or to target measures to put downward pressure on wholesale electricity prices. Activities could be designed to reward upgrades based on their demand management capabilities. Potential activities could include demand response enabled air conditioners, load controlled pool pumps, and smart homes.

Most modern air cons are DR enabled due to EU requirements. The issue is to incentivise buyers to allow these to be 'seen' and operated in response to Demand events. Similarly Pool pumps can be DR enabled.

Load controlled Pool pumps I assume are variable speed, soft start etc – this is an energy efficiency but possibly I have the definition wrong?

Other recent Government initiatives, such as the Demand Management Trials Program, have targeted incentives toward advancing the use of demand response and distributed energy resources to benefit customers and the grid.

f) Consultation Questions

Should REES primarily focus on reducing energy use or managing energy demand?

Does it matter which is the primary focus – they can both be dealt with in parallel and the viability/attraction of the activities will drive the focus.

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?

There are a number of DR controllers available to either retro fit or simply activate that are available to households (air cons, pool pumps) and commercial/industrial (HVAC, chillers etc).

Giving them a GJ based value that assumes they will be used half a dozen times a year and recognises the cost and activation effort will allow these activities to be delivered. The Energex model for Air Cons is directly relevant and has delivered close to 150,000 household air cons. And these were retrofitted!

I believe this was a SA pilot that QLD picked up and SA stopped. Not sure why?

g) Funding

When the REES was initially established, the scheme design considered different funding models. The current approach of obligating retailers to undertake the scheme and recover the costs from their customers as part of their tariffs was adopted, and the scheme rules were designed to encourage retailers to meet their targets as cost effectively as possible.

I have never heard that the SA scheme encouraged cost effectiveness. We have raised this on numerous occasions that the REES has included unnecessary encumbrances which add to the cost and have been surprised by the lack of concern in this regard.

It would be quite easy to strip away some of the complexities built in to the scheme and reduce administration costs. Some stakeholders have questioned the fairness of the funding model on the basis that some non-beneficiary South Australian households provide a net cross-subsidy to beneficiary households.

Some people use public funded hospitals more often than others or drive further on roads than others. Same argument. The trick is to raise to another level and look at the outcomes more broadly

Most international energy efficiency schemes are at least partially funded through energy tariffs. In some schemes, there is partial subsidisation from governments, or co-funding of some energy efficiency measures by householders themselves, although the latter may be a barrier to participation by low income customers.

g) Consultation Questions

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

Continue as is but you could make it cheaper to work within.

h) Deeper Retrofits

REES specifies the approved energy efficiency activities that retailers can use to meet their targets. Energy efficiency activities are drawn from a list of pre-approved measures. Implementation of these measures is deemed to contribute a given quantity of energy savings. Each measure is also the subject of a minimum specification requirement for implementation.

Some stakeholders have suggested that, from a customer perspective, the REES would be improved if an integrated approach was taken to improving home energy efficiency rather than the delivery of just one or two activities. Others have suggested lighting will soon saturate the market and that there will be a need to incentivise other energy efficiency activities.

One mechanism to incentivise deeper residential retrofits may be to introduce a REES activity that 'deems' an energy saving for improving a residential building's energy rating, using a tool such as the Victorian Residential Energy Efficiency Scorecard, or similar.

Another solution may be to amend REES specifications to require a minimum number of activities or a minimum amount of energy savings to be delivered at each home or business.

h) Consultation Questions

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?

Sure, this can be tried but a similar approach failed in NSW a few years ago. The simple fact is that activities tend to be delivered by specialist organisations and often customers find it too confronting to do numerous activities at once.

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?

No

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?

This could be trialed.

Thanks for the opportunity to participate.

Bruce