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Briefing Note

Reforming and Harmonising the NSW Energy Savings Scheme

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NSW Energy Savings Scheme

The NSW Energy Savings Scheme (ESS) is a mandatory energy efficiency scheme which applies to electricity retailers and other liable parties.[1] The ESS creates financial incentives to invest in energy efficiency, assisting consumers in reducing electricity consumption. The ESS commenced in 2009 with an efficiency target of 0.4 per cent of total electricity sales. This will increase to 4 per cent in 2014. The ESS will operate until 2020 unless replaced by a national energy efficiency trading scheme.

The Scheme creates a tradable certificates system. Parties who participate in energy efficiency activities under the Scheme can create certificates; liable parties can either create these certificates themselves or purchase certificates from other parties in order to comply with their liability.

Much of the design of the ESS conforms to world best practice[2] and the scheme has driven a range of residential, commercial and industrial energy savings projects. Most investment has been in commercial lighting and residential showerheads projects, where the ESS provides simplicity and transparency and significant upfront incentives based on predicted lifetime savings. The ESS has had a much smaller impact on the uptake of other commercial and industrial energy efficiency opportunities. For households, there are many residential opportunities that have not been taken up or are not included in the ESS.[3] In the first four years of the Scheme an estimated 8.5 million megawatt-hours of electricity will be saved.

The ESS is currently the subject of both a **rule change** and a **review**. The rule change aims to enhance the ESS within the existing legislative and regulatory settings, whereas the review considers all other aspects of ESS operation, including legislation and administration.

Rule change

The NSW Government is proposing changes to the ESS Rule which will commence in early 2014. The changes aim to ensure that the ESS realises more cost-effective energy efficiency opportunities that are currently missed by the scheme.

The changes intend to:

1. Encourage adoption of a broader range of energy efficiency actions by:
    a. Incorporating more household energy efficiency activities in order to align the EES more closely with the Victorian Energy Efficiency Target (VEET) scheme;
    b. Providing more opportunities for more businesses to access the scheme; and
    c. Minimising the overall cost of delivering activities.
2. Remove unnecessary regulatory barriers to households and businesses accessing incentives by clarifying technical requirements of the Scheme and streamlining certificate creation processes.
3. Ensure consumers receive lasting savings through quality products and services by:
    a. Requiring co-payments for low-cost activities to improve customer engagement;
    b. Clarifying product lifetime and quality test requirements;

[1] The ESS was established on 1 July 2009 under Part 9 of the Electricity Supply Act 1995.

[2] http://www.energy.nsw.gov.au/__data/assets/pdf_file/0020/507233/session-2-david-crossley.pdf, 25.

[3] These include high efficiency appliances, retrofitting the structure of the house and its fixtures, and smarter use of equipment.

c. Removing activities where there is high uncertainty over energy savings; and
d. Updating energy savings calculations in line with market changes.

Review

In August 2013, the NSW Government released the NSW Energy Efficiency Action Plan (EEAP). The first action under the Plan is to review the ESS in order to identify improvements. This includes:

- Reviewing targets, penalties and scope to help meet NSW 2021 targets;[4]
- Making the administration of the scheme more understandable, logical and transparent by better defining scheme functions, capabilities and roles and responsibilities; and
- Assessing the state of the current energy efficiency market to identify pathways for market transformation.

Other state-based schemes and reform processes

A number of other jurisdictions have energy efficiency schemes:

- The Victoria Energy Efficiency Target (VEET), which applies to households and SMEs and account for deemed savings only.
- The new Australian Capital Territory Energy Efficiency Improvements Scheme (EEIS), applicable to households and SMEs, with a focus on low income consumers.
- South Australia's Residential Energy Efficiency Scheme (REES), which applies to households only, also with a focus on low income consumers.

Comparison of energy efficiency schemes

	NSW (ESS)	**VIC (VEET)**	**ACT (EISS)**	**SA (REES)**
Start	July 2009	January 2009	January 2013	January 2009
Liable parties	NSW electricity retailers	Electricity and gas retailers with 5,000+ customers	Tier 1 - Electricity retailers with more than 5,000 customers Tier 2 - up to 5,000 customers	SA electricity and gas retailers with 5,000+ cus0tomers
Number of liable parties	33	7	1 (tier 1) 8 (tier 2)	14

[4] The current target is annual energy savings target of 16,000 gigawatt hours (GWh) above business as usual.

	NSW (ESS)	VIC (VEET)	ACT (EISS)	SA (REES)
Eligibility	Accredited Certificate Providers (ACPs)	Consumers of electricity and gas	Consumers of electricity	Electricity and gas retailers, able to engage third parties
Focus/ sub-target?	None	None	Focus on priority households – in receipt of concessions, pensioners, veterans	Focus on low-income consumers
Scale	Residential, commercial and industrial	Residential and Small and Medium Enterprise (SME's)	Residential and Small and Medium Enterprise (SME's)	Residential only
Trading	Yes	Yes	No	No, but flexibility if approved by Commission
Penalty	After tax $32.90 (2010) or $24.50 MWh*0.94 MWh/CO2 equivalent (CO2e) (conversion factor) 50% borrowing in 1st year, 20% thereafter	2009: $40 per tonne of CO2-e (tCO2-e), plus GST	$70 tCO2-e	Make good, base penalty $10 000 + $70 tCO2-e +$500 per missing audit. Borrowing 10%
Certificate size	tCO2-eq. conversion factor: 1.06kg CO2-e/kWh	tCO2-eq., VEEcs expire after 6 years	N/A	tCO2-eq. conversion factor 2009: electricity 0.98 tCO2-e/MWh and gas 0.0707 t CO2-e /GJ

Next steps

Both the ESS review and rule change appear to be well-directed towards improving the existing ESS. The logical progression is towards a national scheme, yet despite extensive discussion in the past, there appears to be little momentum or political will at present to implement such a scheme. Another option is to promote further harmonisation and integration of existing state schemes.

National scheme

A national energy efficiency scheme could take the form of either:

1. A truly national scheme implemented through Federal legislation, similar to the renewable energy target. States would wind down their schemes.
2. Harmonisation of existing state schemes and the introduction of replica schemes in states that do not currently have one.

A well-designed national energy efficiency scheme may be preferable to independent state schemes because:

- a larger market provides for greater liquidity and lower, more stable prices;
- a larger market allows economies of scale;
- consistent administration reduces costs for businesses involved in schemes in more than one jurisdiction
- some of the infrastructure savings of the state schemes are already spread across other National Electricity Market jurisdictions
- capabilities developed by state-specific energy efficiency businesses could be used in other states to mutual economic benefit

The introduction of a national energy efficiency scheme has been the subject of much discussion over a number of years. Between 2011-2013, the Federal Government investigated options for a national energy efficiency scheme, with economic modelling showing that such a scheme could deliver net economic benefit above that of the existing state schemes alone.

Under the Clean Energy Future Plan the Australian Government committed to do further work to investigate the merits of a National Energy Savings Initiative (NESI).[5] A NESI would place a requirement on obligated parties, typically energy retailers, to find and implement energy savings in households and businesses, thereby encouraging the identification and take-up of energy efficient technologies.

The commitment outlined a number of key policy issues that the design work should consider:

- the annual targets that would apply
- sectoral and fuel coverage issues
- energy savings activities to be considered eligible activities
- how a smooth transition from state-based schemes could be managed.

Further, the Clean Energy Future Plan states that the Australian Government's analysis of a NESI should explore scheme design options that:

- have broad coverage (that is, residential, commercial and industrial sectors), and

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[5] This commitment formed part of the response to the report of the Prime Minister's Task Group on Energy Efficiency, which recommended the introduction of a transitional NESI to replace existing and planned state energy efficiency schemes, subject to detailed consultation on design.

- create an incentive or a requirement to create certificates in both low-income households and in ways which reduce peak demand.

A NESI Working Group explored the costs and benefits of replacing existing and planned schemes with a NESI, including consideration of whether this would reduce complexity and duplication, and allow energy consumers in states without existing schemes to benefit. The Working Group released an information paper in July 2013.

Subject to the findings of the working group, considerations of broader energy and carbon market issues, and stakeholder feedback, the Australian Government will make a final decision on whether to adopt a NESI. A national scheme would be conditional on the endorsement of the Council of Australian Governments and agreement that existing and planned state schemes are folded into any national scheme.

At the time of writing, the Australian Government has not announced an intention to pursue a national scheme.

Harmonisation with other state energy efficiency schemes

The NSW Government has been working with the Victorian Government since 2011 to better harmonise the EES and the VEET. The EEAP commits the NSW Government to continue to work with other jurisdictions to harmonise the state-based energy efficiency trading schemes. The ESS Rule change includes a number of actions towards harmonisation.

As can be seen from the comparison above, the various state-based energy efficiency schemes differ in a number of ways; harmonisation of any of these elements would assist in moving toward a more nationally consistent approach.

Eligible activities

The EES should expand the range and depth of residential activities covered to match the VEET and other schemes. It is currently proposed that high efficiency televisions and clothes dryers be included in the ESS to provide incentives for more appliances that carry energy star ratings. This will also help to harmonise the ESS with the VEET scheme by better aligning the range of appliances for which both states offer incentives. The VEET also currently includes a number of commercial activities not covered by the ESS.[6]

Where an activity is common to VEET, similar eligibility criteria apply. However, the lifetime energy savings estimates differ from VEET incentives. Including these activities will help harmonise the ESS with the VEET scheme and increase the opportunities for businesses to save energy through simple calculation methods.

Scheme format

The ESS and VEET operate similar certificate trading scheme, with third party certificate creators, while REES and EEIS both impose obligations on energy retailers and leave it to them to contract third parties to deliver those savings. This retailer obligation has been commonly used in overseas jurisdictions, especially where there are vertically integrated energy utilities. It may therefore be prudent to consider transitioning the ESS and the VEET to this type of obligation.

[6] E.g. commercial refrigerated display cabinets, refrigeration fans, and HVAC systems.

Low income/priority sub-targets

REES and the EEIS include priority targets for low-income sector households to ensure the benefits are spread equitably. However, sub-targets can be costly9 and may exclude some vulnerable households

Although the VEET does not have a sub-target, analysis of certificates created shows that uptake was highest in areas with relative socio-economic disadvantage and that uptake of higher cost opportunities was much higher in areas with relative socio-economic advantage.

The financial incentives provided by the ESS are typically worth less than a third of the upfront cost of higher cost and higher energy savings opportunities. In the absence of additional assistance, the incentives available under the ESS are unlikely to overcome any upfront cost barrier faced by some vulnerable households.

Including gas efficiency

The Energy efficiency schemes in Victoria, South Australia, and the ACT all currently provide financial incentives for both electricity and natural gas efficiency. By covering both electricity and natural gas efficiency these schemes have:

- the ability to fully reward activities that reduce end-use service demand, which could lead to either electricity or gas savings;[7] and
- a greater diversity of potential activities that can be supported.

If the ESS covered natural gas it would deliver these benefits to the NSW energy efficiency market and allow further harmonisation with other schemes in other jurisdictions. Expanding the ESS to cover natural gas efficiency would require new legislation to place an obligation on natural gas retailers and large users. This would be a significant reform requiring testing against better regulation principles and rigorous cost benefit analysis.

Audit costs

Under VEET, audit costs are paid for by the administrator and spread evenly across the whole VEET scheme, so audit costs are not a barrier to regional delivery. Though detailed regional figures are not available, there is strong anecdotal evidence to suggest that the VEET has delivered more regional projects than the ESS.

Harmonisation with proposed Emissions Reduction Fund

Ongoing support for the ESS

In October 2013, the Australian Government released a Terms of Reference for a proposed Emissions Reduction Fund (ERF). The ERF may also fund energy efficiency projects. The ESS was designed to be complementary to a national emissions trading scheme: as an emissions trading scheme provides no significant price signal at the demand-side, a complementary mechanism is needed in order to address barriers to energy efficiency. The relationship between the proposed ERF and the ESS (and other state schemes) may be more complicated.

[7] E.g. showerheads reduce the demand for hot water, which could save electricity or gas depending on what type of hot water system the home has.

In the past, the NSW Government ceseas development of the Greenhouse Gas Reduction Scheme (GGAS) once it became clear that the Australian Government would introduce a national emissions trading scheme. This impacted the GGAS market, though the introduction of a national trading scheme was subsequently delayed. Certificate prices dropped significantly, weakening industry capacity to deliver greenhouse gas abatement and deferring delivery of low cost abatement opportunities. There is a risk is that NSW Government will in a similar manner declare that the ERF is a national scheme that removes the need for existing state-based schemes.

The NSW Government will need to consider the impact of the scope and design of the ERF on any recommended changes to the ESS arising from this review.

Energy efficiency activities in the ERF

Whle the Green Paper clearly envisages EE projects bidding into the ERF, it does not provide detail or clarity on how this will interact with existing energy efficiency schems. The Green Paper simply notes that the Government will "consult with state and territory governments to determine the most efficient and cost-effective ways to complement existing arrangements".

Additionality will be an issue and double counting of energy efficiency activities will need to be avoided. In particular, there will be a need to:

- identify whether bids into the ERF have also accessed state energy efficiency schemes;
- ensure continued commitment to energy efficiency activities to guarantee long-term abatement: e.g. the provision of low-wattage light bulbs may increase efficiency and reduce emissions, but households may not continue to replace these with the same low-wattage light bulbs in the future;
- assess the impact and implications of the different levels of emissions intensity in electricity supply across the states and territories and factor this into any bids; and
- account for the differences between projects measured on the basis of deemed energy savings and being paid up front and those projects that will take some time and be measured through a national greenhouse and energy reporting scheme.

On the other hand, the goals of the ERF and the aim of increasing efficiency may not be well-aligned: the ERF is focussed on reducing emissions by causing bidders to internalise the costs of their emissions, whereas energy efficiency schemes are designed specifically to counteract imperfect informationa and market distortions.

Harmonisation/complementarity with other EE measures:

There is additionally a need to ensure that the ESS, and any NESI, is harmonised with other important elements of energy efficiency policy, including:

- Appliance standards and labelling requirements
- Residential and commercial building codes
- The Energy Efficiency Opportunities program targeting large energy users
- The Commercial Building Disclosure Scheme
- Mandatory emissions standards for light vehicles
- Measures and concessions aimed at low income households
- Other grants and rebates, information, skills and R&D measures delivered by the Commonwealth and states

Annex 1: comparison of targets

Year	NSW (ESS)		VIC (VEET)	ACT (EISS)		SA (REES)	
	Retailer Compliance Obligation	ktCO2e	ktCO2e	Energy Savings Target	ktCO2e	ktCO2e	Audits*^
2009	0.5%	205	2,700	-	-	155	3,000
2010	1.5%	621	2,700	-	-	235	5,000
2011	2.5%	1,047	2,700	-	-	255	5,000
2012	3.5%	1,482	5,400	-	-	255	5,667
2013	4.5%			7.2%	2,679	335	5,667
2014	5.0%			13.1%	2,581	410	5,667
2015	5.0%			13.6%	2,499		