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# Energy Savings Agency: The Greens' plan to fix Australia's energy system

Our electricity system is in bad shape. Power bills have skyrocketed in recent years, mainly because of unnecessary investment in new poles and wires. Meanwhile, huge opportunities to save energy and reduce 'peak' electricity demand have been ignored.

The old parties know these problems exist, but they lack the courage to stand up to the big energy companies and State Governments to take cost pressure off Australians and cut pollution. Make no mistake, several State Governments want to maximise profit from their generators and distribution systems. Selling less electricity is not in their interest. That is why reform of the electricity market is too slow and why intervention is essential.

In order to reduce electricity bills and greenhouse gas emissions Australia must:

- a) Help energy consumers generate their own power with 'distributed' generators, such as from rooftop solar systems.
- b) Reduce electricity demand 'peaks', to avoid further unnecessary investment in 'poles and wires'.
- c) Improve energy efficiency, a huge opportunity for consumers and business to reduce costs.

To drive progress aggressively in each of these areas the Greens will create a new independent Energy Savings Agency. Its objectives will be to lower electricity bills, cut greenhouse gas emissions and improve the efficiency of energy supply and use. It will pursue these objectives by the provision of information, analysis, advocacy and financial support. By removing barriers to cheaper and cleaner energy options it will create a more balanced and efficient energy market that prioritises the long term economic, social and environmental interests of Australians.

## Key problems to be addressed by the Energy Savings Agency

### a) Electricity wholesalers, retailers and networks are hindering the growth of 'distributed' generators

Distributed generators, including the one million roof mounted solar photovoltaic (PV) systems, can reduce peak energy demand events and reduce the need for investment in new 'poles and wires'. They can also constrain wholesale prices by changing the 'merit order', since solar and wind have low marginal costs of production compared even to coal. This in turn is reducing the emissions profile of Australia's electricity industry.

Distributed generation is a 'disruptive technology'; it is typically modular, rapidly deployed, increasingly cost-effective and cuts across the established business models of electricity networks and retailers like mobile phones did to telecommunications. A multi-billion dollar market in distributed generation is rapidly emerging.

Electricity network operators and retailers often have a vested interest in hindering the growth of distributed generation. Owners of distributed generators frequently do not receive a fair price or conditions for electricity they export to the grid and face barriers to connecting to the electricity grid.



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While the peak period for PV generation is not the same as the period of peak grid demand (3-5 pm in summer, slightly later in winter), there is some overlap; in addition PV systems can be mounted to face the north-west to west to ensure that generation more closely matches consumption; and advances in small-scale storage technologies are likely to make it easier for households and businesses to meet their own energy needs on-site. Retailers are reacting to this trend by increasing fixed charges and by advocating for lower or no feed-in tariffs.

All the PV industry is asking for is a level playing field. If PV owners received a fair price for the energy they produce and are not unreasonably prevented from accessing the electricity grid, the industry will thrive.

### **b) Peak demand in driving increasing electricity costs**

The growth in electricity demand during peak periods — which has grown almost twice as fast as average demand over the past decade — is a particularly strong driver behind the record growth in electricity prices. 25 per cent of the average electricity bill reflects the cost of building poles and wires used just 40 hours of the year — akin to building a 40-lane Sydney Harbour Bridge for a couple of annual traffic snarls.

Electricity demand management (i.e. either using less energy during peak hours, or by shifting the time of energy use to off-peak periods) is often a cheaper alternative to addressing peak demand than building more poles and wires and power stations. However, the incentives for this form of peak demand management are weak. *The Australian Decentralised Energy Roadmap*<sup>1</sup> found that the order of just 7 to 18% of the available peak load management potential has been exploited.

The Roadmap also reported that as much as one-third of the capital expected to be invested in our networks could be avoided by managing peak demand through distributed energy solutions. In the current regulatory period alone (2011-2015), that is equivalent to around \$15 billion of network investment.

It is important to target energy efficiency and peak demand simultaneously: if energy efficiency programs reduce energy consumption without addressing the peak demand problem capital investment in our networks will remain unchanged. Consumers' efforts to curb rising electricity costs will be to no avail.

In conjunction electricity tariffs need to be appropriately framed to ensure that consumers who invest in making energy or peak demand savings are not unduly penalised for their actions, as would occur should the fixed component of network charges be allowed to dominate.

Time is of the essence. The longer we wait to promote demand management, the more money will be wasted on unnecessary infrastructure. However, reform of the national electricity market to support demand management has been painfully slow because the market is dominated by energy utilities that for decades have made billions of dollars by building infrastructure and passing the cost on to consumers. Changes to national electricity policy requires agreement by state, territory and federal governments, and even when successful, changes to national electricity market rules can take two years to develop and come into effect.

As network investment regulation occurs on a five year cycle, it could take many years for consumers to experience the benefit of reform through the existing structures. Urgent, stop-gap measures are therefore required to deliver benefits from peak demand management, while longer-term regulatory reforms are developed and implemented.

### **c) Efforts to improve energy efficiency are uncoordinated, ad hoc and ineffective**

Improving energy efficiency (or 'energy productivity') is not only the fastest way to reduce both our electricity bills, which have rocketed in recent years, but it also reduces greenhouse gas emissions while we do it. McKinsey & Company estimate that by exploiting all cost saving energy efficiency opportunities Australia could to reduce emissions in 2020 by 20 per cent below 1990 levels at no net cost to the economy.<sup>2</sup>

Australia is one of the least-efficient users of energy in the OECD, and is lagging behind the rest of the world in energy efficiency policy. We have a plethora of weak energy efficiency measures across the country, rather than few strong measures. The National Strategy on Energy Efficiency is underfunded and has failed to properly coordinate energy efficiency policy. A national energy efficiency strategy and reforms to the National Electricity Market could re-direct billions of dollars of unnecessary investment in poles and wires towards cheaper, cleaner alternatives — demand

<sup>1</sup> Institute for Sustainable Futures, University of Technology Sydney, 2011.

<sup>2</sup> This is because the contribution to the economy of the negative cost opportunities is enough to pay for other abatement measures up to a marginal cost of A\$62 per tonne CO<sub>2</sub>e, representing 270Mt of abatement. From: McKinsey & Company 2008, *An Australian Cost Curve for Greenhouse Gas Reduction*, McKinsey Australia Climate Change Initiative.



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management, energy efficiency, and renewable energy — with savings for the consumer and environment.

The Government, as part of the Clean Energy Package, committed to expediting the establishment of a National Energy Savings Initiative to replace the state-based energy efficiency trading schemes, but three years on is yet even to complete a Regulatory Impact Statement, let alone to legislate for its introduction.

### To address these three challenges the Greens will:

Establish a new independent, expert and well-resourced Energy Savings Agency (ESA) to promote distributed generation, peak demand management and energy efficiency. It will have both policy and program responsibilities as follows:

#### Policy responsibilities:

1) Formulating recommendations about **fair prices electricity retailers should offer for distributed generation** from a range of sources, including battery storage. Calculating the economic value of electricity exported to the grid is complex and contested. To date this task, at least as far as solar PV is concerned, has been undertaken by entities such as IPART in NSW, Victorian Competition and Efficiency Commission and the Queensland Competition Authority. Their approach, however, has been widely criticised as being limited and so unduly conservative as to be unfair to the owners of distributed generators (see box 1).

The recommendation of the ESA should be transparent, specific to particular technology types and could vary by region and/or time of day, noting the value of distributed generation is higher at peak times and in areas of requiring network upgrades. The Government will be required to either implement the recommendations and compel all electricity retailers to offer at least the rate recommended by the ESA or publish comprehensive statement of reasons as to why they were failing to do so.

2) Making recommendations for ambitious **Peak Demand Management targets for electricity network businesses**. Network businesses should be the focus of peak demand targets as they are required to provide infrastructure to meet forecast peak demand, peak demand is a major driver of their costs and investment and network investment has been the largest contributor to rising electricity bills in recent years. Networks businesses are also best placed to identify places and times of current and future constrained capacity of,

and demand on, their networks and the potential for Demand Management. The ESA should develop its recommended targets in consultation with the network businesses, demand management service providers, consumer representatives and other key stakeholders.

This objective is based on a recommendation of the Australian Decentralised Energy Roadmap. The Roadmap proposed the following conservative targets to be delivered within five years:

- \$1 billion p.a. in energy savings (comprising avoided network investment and customer energy savings)
- 3000 MW of peak demand reduction, below business as usual
- 10 million tonnes of carbon dioxide emissions avoided.

These targets should be adopted as a clear “collaborative targets”. If networks do not respond adequately to the targets in this form within 18 months, then the ESA would recommend a rule change to ensure the targets become mandatory

3) Developing independent recommendations for **regulatory reform of the National Electricity Market**, including for example, revision of the National Electricity Market Objective (NEO) to include an environmental objective. The NEO is the fundamental driver behind regulatory process in the electricity market. At present, it does not include environmental or greenhouse considerations. As noted by the Total Environment Centre during the recent Senate Inquiry into Electricity Prices:

*The current NEO does not support climate and renewable energy policies, and struggles when their implementation appears to conflict with the overarching objectives of the NEM ... This disconnect is apparent, inter alia, in relation to the costs and connection times associated with renewable energy projects at all scales, from humble rooftop PVs to the largest wind farms.*

4) Making recommendations for a **national energy efficiency target** and the design of a national energy efficiency trading scheme to achieve it. The scheme will, like the national Renewable Energy Target, create an energy savings obligation on electricity retailers to surrender tradable energy efficiency certificates. The recommendations will be based in part upon the abundance of policy research which has accumulated over more than a decade. The Commonwealth Government will



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be required to either implement the recommendations or publish comprehensive statement of reasons as to why they were failing to do so. The National Energy Efficiency Target could absorb the existing state based schemes in NSW, Victorian and South Australia and be administered by the Clean Energy Regulator.

### Program responsibilities:

5) Administering a **Demand Management Fund**. The aim of the Fund will be to cost-effectively moderate peak demand by purchasing activities from third parties that seek to reduce peak demand. The Agency will be able to:

- stand in the market offering to purchase peak energy reductions from network businesses and other Demand Management providers at a predetermined price (linked to the estimated benefits of peak demand reduction); and/or
- conduct periodic requests for bids to achieve peak demand outcomes for each year over a forward time horizon, say every six or twelve months; and/or
- work closely with network businesses and/or demand management operators to fund identified peak demand activities and achieve voluntary targets; and/or
- activate/control purchased demand management actions during wholesale or network peak periods to directly achieve peak demand reductions.

The Demand Management Fund will run for an initial five years, guaranteeing funding of \$400m each year and aiming to achieve at least the collaborative targets described above. This objective is also based on a recommendation of *The Australian Decentralised Energy Roadmap*.

6) Publishing a comprehensive **annual national Energy Savings Review** of the market for energy efficiency, peak demand management and distributed generation. The Review will quantify energy and peak demand savings and costs across all policy and programs in Australia, the value of savings to residential and business consumers, the impact on energy bills and prices, the value of avoided network and generation infrastructure and number of persons employed.

7) **Identifying opportunities and barriers** to energy efficiency, demand management and distributed energy, developing policies and programs to promote uptake and monitoring and reporting on the performance of existing measures. This should include estimating the potential value of both customer savings and avoided infrastructure costs.

8) **Providing Ombudsman services to resolve disputes** between demand management or distributed energy providers on the one hand and energy retailers and network operators on the other. Currently there are some existing State based Energy Ombudsmen but their role is restricted to resolving disputes between energy customers and their providers. The ESPA should also investigate claims that many network operators hinder the process of connecting distributed generators to the grid.

The Energy Savings Agency will be similar to the existing Climate Change Authority in that it will be a highly credible, permanent, independent statutory Agency designed to depoliticise and progress a complex area of reform. It will have a Chair and eight other board members of significant stature, most of whom should have demonstrated expertise in energy efficiency, demand management and distributed generation. It will have independent staff led by a Chief Executive Officer. Administration costs have been estimated by the Parliamentary Budget Office to be \$5 million per year.

### Box 1. What is a fair value for electricity generated by PV systems?

Many State Governments, until recently, offered relatively generous feed-in tariffs for electricity 'fed into' the electricity grid. These subsidies have now been replaced by what are supposed to be subsidy free 'fair and reasonable' tariffs.

Fair value rates has been estimated by entities such as IPART in NSW, Victorian Competition and Efficiency Commission's and the Queensland Competition Authority to be generally less than 10c per kilowatt hour, but the PV industry argues that these calculations ignore some important benefits of distributed PV and that a true fair value tariff is much closer, if not equal to the retail cost of electricity.

These entities underestimated fair value because the benefits of avoided electricity distribution costs were undervalued because they used an average distribution loss factor which failed to take into account the fact that PV generates at times when distribution losses are much higher than average.

In addition they calculated the value of electricity produced by PV systems based on electricity spot prices which are likely to be lower (on average) than the wholesale prices, therefore underestimating its true value.



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### The Position of the other Parties

#### **The Labor Party**

The Labor Government, as part of the Clean Energy Package, did commit to expediting the establishment of a National Energy Savings Initiative to replace the state-based energy efficiency trading schemes, but three years on is still yet to complete a Regulatory Impact Statement. It does not have a firm position on additional measures to promote the uptake of peak demand management or distributed generation.

#### **The Coalition**

The Coalition does not have a firm position on additional measures to promote the uptake of energy efficiency, peak demand management or distributed generation.

[greensmps.org.au](https://greensmps.org.au)

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