

“OUT, DAMNED (GREEN) SPOT!” THE NEO, THE NEM, AND EXTERNALISING THE PLANET

Mark Byrne
Energy Market Advocate
Total Environment Centre



Macbeth

Lady Macbeth:

Out, damned spot! out, I say!

One: two: why, then, 'tis time to do't.

Hell is murky!

Fie, my lord, fie! a soldier, and afeard? What need we fear who knows it, when none can call our power to account?

Yet who would have thought the old man to have had so much blood in him...

Here's the smell of the blood still: all the perfumes of Arabia will not sweeten this little hand. Oh, oh, oh!

TEC's NEM work

- Since 2004
- Advocating for more DSP/decentralised energy
- Goal is safe climate

The NEO

- NEL S. 7—National electricity objective
- The objective of this Law is to promote efficient investment in, and efficient operation and use of, electricity services for the **long term interests of consumers** of electricity with respect to—
 - (a) price, quality, safety, reliability and security of supply of electricity; and
 - (b) the reliability, safety and security of the national electricity system.

National Grid Management Protocol, 1992

“To encourage the most efficient, economical and environmentally sound development of the electricity industry consistent with key National and State policies and objectives”

Why include the environment?

1. The NEM is not an island
2. Consumers want it
3. Related state and territory legislation often has environmental objectives
4. Assumption re state/federal responsibilities problematic
5. It's not working

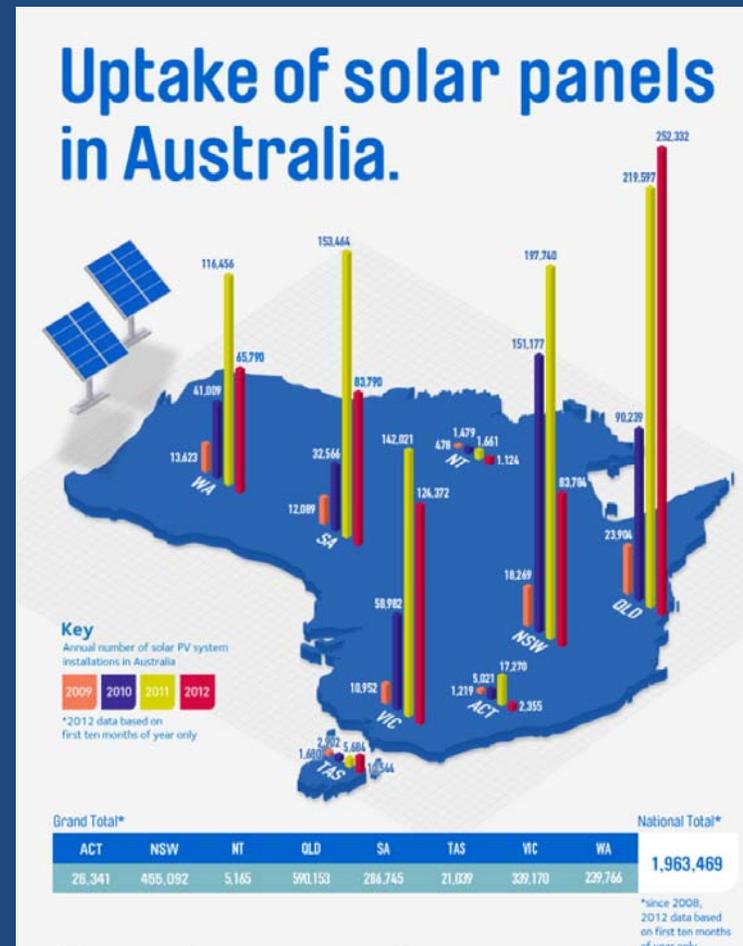
1. The NEM is not an island

“climate change, water policy, fiscal settings or broader environmental management... intersect closely with energy policy, and... it is important to be clear about the nature of the interrelationships and ensure that they are delivering mutually supporting outcomes as efficiently as possible”

Energy White Paper 2012 p 8

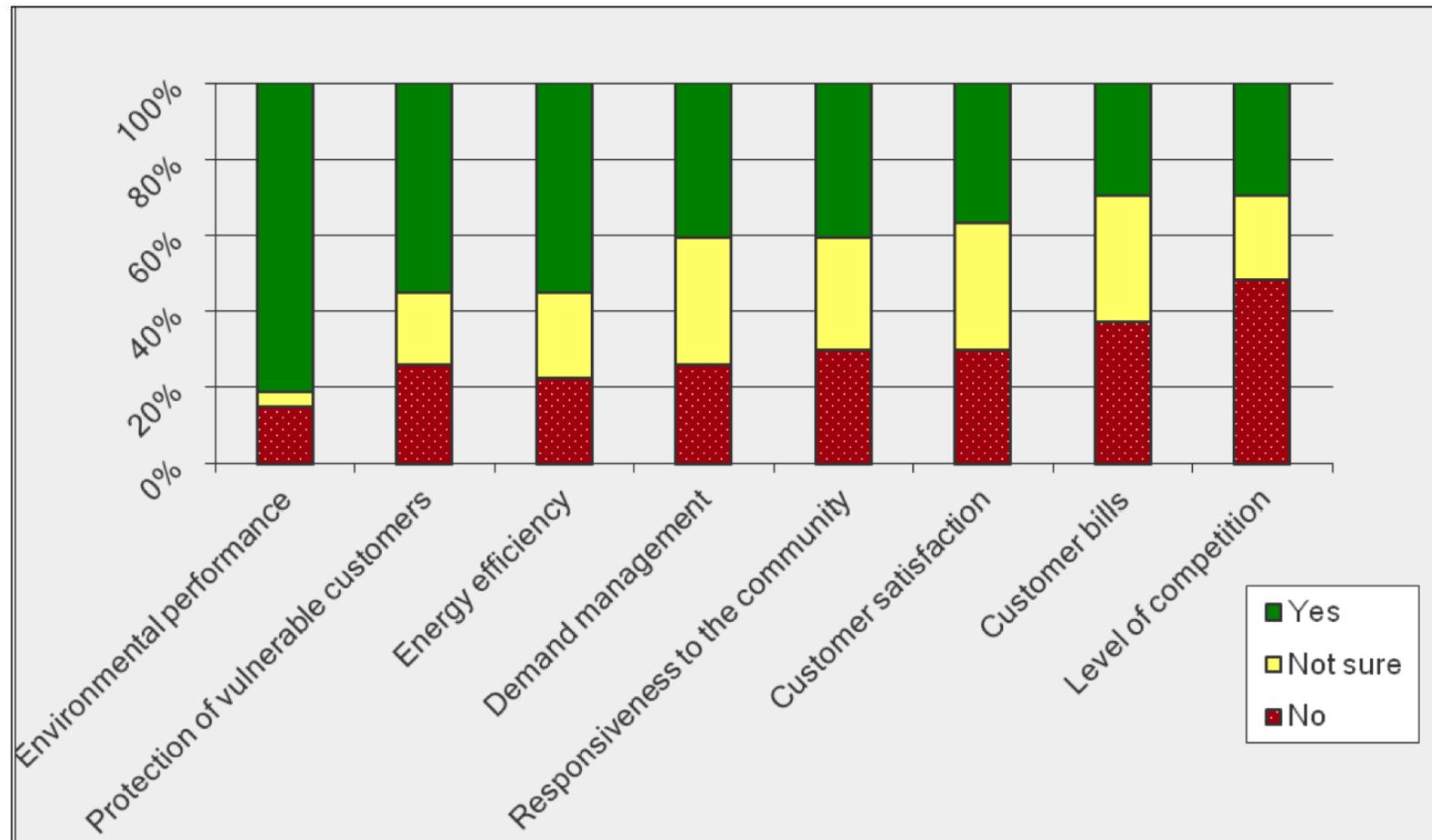
2. Consumers want it

- 800,000 GreenPower customers
- 2 million solar homes
- 2 million ceiling insulation installations



2. Consumers want it

Figure 1: Which other criteria should be in the NEO? (Survey results, all stakeholders)



3. Environmental objectives in related legislation

NSW State Owned Corporations Act

8 Principal objectives of company SOCs

(c) where its activities affect the environment, to conduct its operations in compliance with the principles of ecologically sustainable development contained in section 6 (2) of the [Protection of the Environment Administration Act 1991](#),

4. The Federal/State thing

The rules governing the planning and delivery of the electricity transmission network are not within the statutory role of the Department of Planning and Infrastructure. However, as part of its environmental assessment, the Department must be satisfied that appropriate justification is made for the project.

5. It's not working

- Feed-in tariffs
- Connecting renewables
- Reform to respond to environmental issues takes too long

Plan A: include the environment

The objective of this Law is to promote efficient investment in, and efficient operation and use of, electricity services for the **long term interests of consumers** of electricity with respect to—
(a) price, quality, safety, reliability, security of supply **and environmental sustainability** of electricity...

OR

Delete (a) and (b)

Objections and responses

1. 'We are economic regulators'
 - *The NEO already has competing criteria*
 - *The NEM already has an environmental mandate via the AEMA 2006*
2. 'It'd make life too hard'
 - *Other jurisdictions cope quite well*
3. 'It ain't broke'
 - *Escalating prices*
 - *Emissions intensity kept increasing until carbon price*

AEMA 2006

Objectives at 2.1 (b) include

“address greenhouse emissions from the energy sector, in light of the concerns about climate change and the need for a stable long-term framework for investment in energy supplies.”

How do others cope?

- **UK – Ofgem**

“Ofgem’s duty to contribute to the achievement of **sustainable** development was introduced in 2004. In 2008, the Energy Act promoted this duty, placing it on an equal footing with our duties to meet reasonable demand and financing authorised activities. The Act also highlighted that our principle objective, to protect the interests of consumers, refers to future as well as existing consumers. These changes underline Ofgem’s important and developing role in shaping the future of gas and electricity industries in a sustainable manner.”

- **CAL – CPUC Energy Division**

“We provide objective and expert analyses that promote reliable, safe and **environmentally sound** energy services at lowest reasonable rates for the people of California.”

- **Canada – National Energy Board**

“We regulate pipelines, energy development and trade in the Canadian public interest. The public interest is inclusive of all Canadians and refers to a balance of economic, **environmental** and social considerations that changes as society’s values and preferences evolve over time.”

Plan B: Reinterpreting the current NEO

- NEO specifies criteria for assessing long term interest of consumers
- BUT what is meant by “efficient investment in, and efficient operation and use of, electricity services”?

Economic efficiency

‘Maximising the production of goods and services for a given use of resources’

- AEMC recognises 3 types
 - Allocative efficiency – the most efficient allocation and use of resources
 - Productive efficiency – producing outputs at least cost
 - Dynamic efficiency – new or innovative ways to produce outputs, but also recognising that decisions about investment have long term impacts

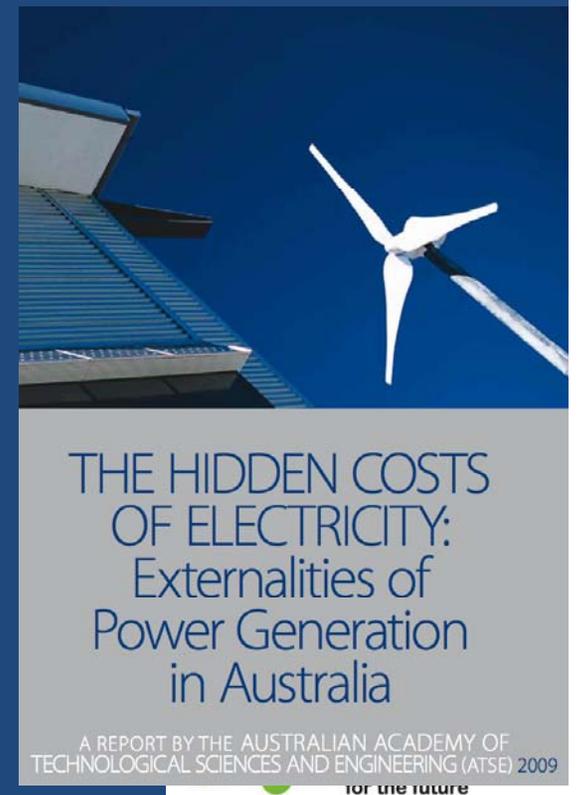
“We... recognise there can or may be circumstances in which improvements in economic efficiency and the long term interests of consumers may not coincide.”

Price and efficiency

- Current interpretation of price' is short run marginal cost – ie \$/MWh into market
- 'Long term interest of consumers'
 - = long term economic efficiency
 - = pricing externalities
- Environmental externalities include
 - Costs of climate change mitigation, damage + adaptation
 - Costs of health impacts of energy production
 - Costs of biodiversity loss

ATSE 2009 report

- Based on a CO2 cost of \$31/tonne, *'greenhouse gas damage costs for currently deployed fossil fuel technologies in Australia range from \$A18/MWh for natural gas to \$A39/MWh for brown coal'* (additional to the existing wholesale price)
- By contrast, the externality costs for renewables varied between \$1.50 for wind to \$5 for solar PV



Not supported by AEMC

‘Where externalities, e.g. carbon emissions, are priced by the organisation with that role, then... the wholesale electricity market arrangements, for example, will factor those costs into decisions by market participants and outcomes faced by consumers. If your concern is that a particular externality is not priced appropriately or not priced at all then... that is an issue to raise with the organisation responsible for pricing that externality rather than an issue about how efficiency is considered under the NEO.’

Plan C: ignore the NEO

- Work on win-wins for consumers + environment
 - Energy efficiency – eg NESI
 - Peak demand reduction
 - Fair payment for PV exported to grid
- But short term consumer and environmental interests don't always coincide – eg
 - Carbon price
 - Load shifting

Where to from here?

- A. Little political support for changing NEO (except via Merits Review review)
- B. AEMC does not support internalising environmental externalities:
- C. Till the worm turns, TEC focused primarily on Plan C

2012 Senate inquiry

“The way I think about it is with a football team analogy: everyone on the team has the same objective; it is just that we have different positions and different roles. Apologies to those who do not come from rugby states but, if the bonehead thinks that the five-eighth is not doing a good job, the worst thing he can do is try and do the five-eighth's job for him. Our role in relation to rules that relate to economic efficiency is part of one role in what people expect out of this sector. There are other manifestations of government that obviously deal with environmental issues in a systemic sense, such as climate change and, in a local sense, land use planning and emissions—NO_x and SO_x and salts and things from the plants. You could make the same comment about suggestions around social objectives. Again, there are other parts of government that address that.” (John Pierce)