The NEG: A grand plan or much ado about very little?

Economic Society of Australia,
Policy in the Pub
Melbourne, 16 May 2018

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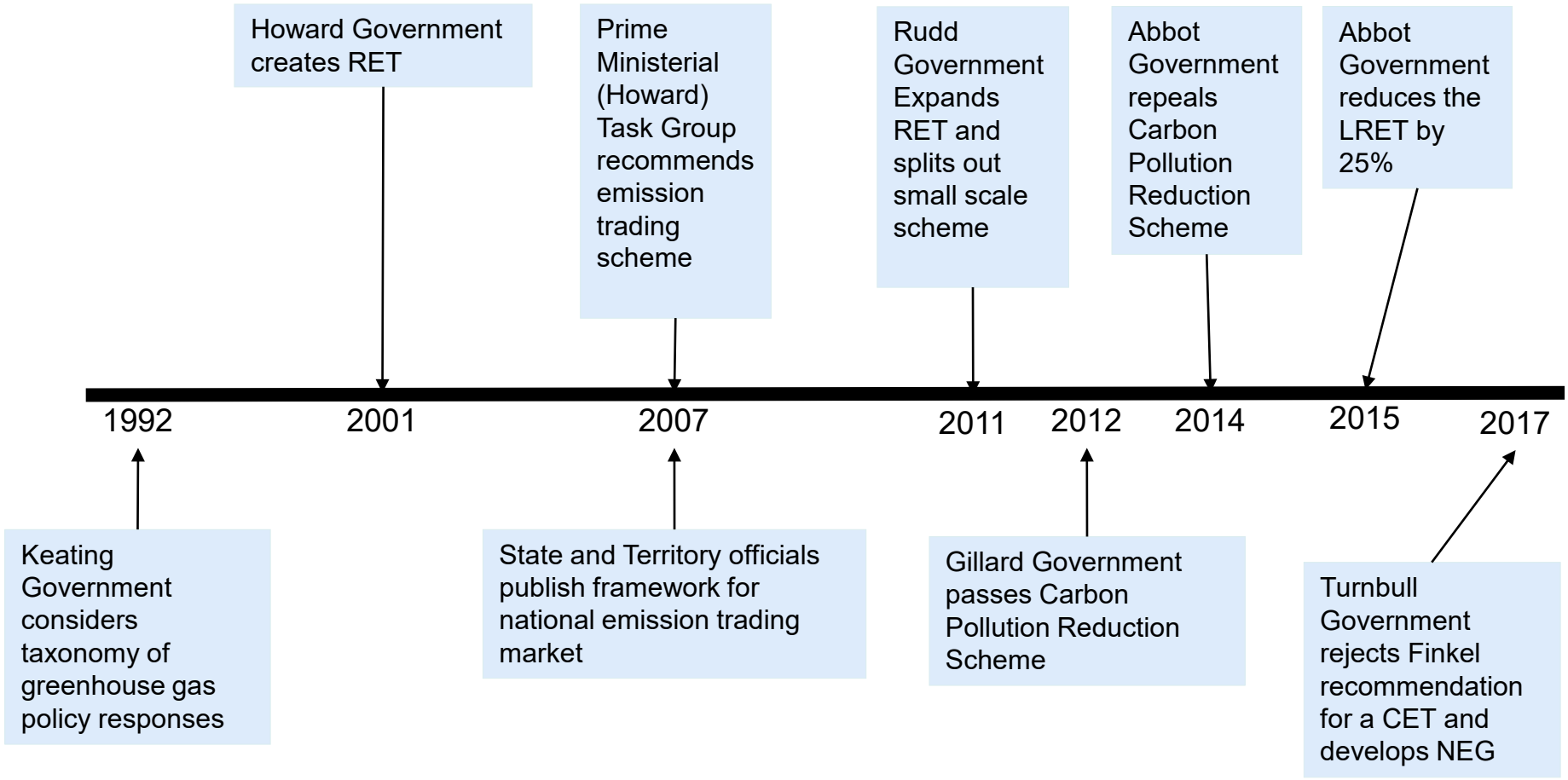
Outline

- Timeline of Australia's emission reduction and renewable energy policy
- A short history of the NEG
- Political and technology context
- How it is meant to work
- Comparison of NEG with RET and CET
- Summary of issues
- Whereto from here?

Australia's (federal) emission reduction and renewable energy policy: a tortured debate



"There is nothing new under the sun." (Ecclesiastes 1:9)

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A short history of the National Energy Guarantee

- **August 2017:** Energy Security Board (ESB) established pursuant to Finkel recommendation of new entity to oversee implementation of his panel's recommendations.
- **October 2017:** Government rejects Finkel recommendation for CET and shortly after letter from ESB recommends Reliability Guarantee and Emissions Guarantee. Prime Minister announces policy. NEG obliges retailers to contract with generators to reduce retailer emission intensity below a target; and (roughly) to contract for production in proportion to their sales.
- **November 2017:** ESB modelling suggests NEG will maintain production from coal generation and slightly increase investment in renewables, relative to business as usual.
- **February 2018:** Response to initial consultation found widespread concern about complexity of physical and financial contracts associated with approach to emissions guarantee and reliability guarantee.
- **April 2018:** Revised approach ("High Level Design") changes reliability guarantee so that retailer contracting for capacity is unlikely. Emissions guarantee now to be achieved by obliging retailers to contract with generators to associate their production with that retailer, in registry separate to the NEM. COAG Energy Council authorises next stage of development.

Political context

- Two main federal parties differ: on whether GHG emission reduction is a priority, on contribution energy sector should make to meeting Paris Agreement commitment, and on pricing carbon explicitly. Jurisdictional political differences align with federal.
- After long history of policy uncertainty and disagreement, several industry, civil and customer groups demand “bi-partisan agreement” (whatever that might be).
- Combination of differing objectives and pressure to agree provides incentives:
  - For the Government to reach agreement but in way that ties future governments’ hands to the current Government’s objectives.
  - For the Opposition to reach agreement but in way that allows it to “scale up” if it later wins government.
- Things economists consider important in market design – price transparency, transaction costs, market liquidity, tradeability, consumer protection, efficiency, avoidance of windfall gains – are not the focus of policy development now.

Technology context

Levelised cost of electricity ($/MWh)	2017-18	2029-30
Wind @ 40%	$ 63.70	$ 61.98
Solar PV @ 32% (single axis tracking)	$ 64.08	$ 40.28
Gas - OCGT (VIC) @ 10% (Neutral gas price)	$ 197.25	$ 191.14
Gas - CCGT (VIC) @ 50% (Neutral gas price)	$ 98.53	$ 97.96

New wind and solar already cheaper than new fossil and the gap gets wider

Source: AEMO, Integrated Systems Plan assumptions workbook

Installed capacity projections (MW)

Neutral Rooftop PV uptake as in Neutral, Strong and Weak scenarios

	2017-18	2029-30
NSW	2,265.6	8,552.7
QLD	2,985.1	6,959.1
SA	861.7	2,566.4
TAS	153.6	297.9
VIC	1,669.0	4,996.8

Continued rapid expansion in distributed energy is forecast

Source: AEMO, Integrated Systems Plan assumptions workbook

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How is the NEG is meant to work ?

- **Reliability guarantee:**
  - In principle similar to capacity obligation scheme developed in France over last seven years, but in Australia retailers contracting with generators for physical supply is inconsistent with mandatory energy-only market.
  - ESB has proposed various steps to make such contracting highly unlikely, and instead for AEMO to act as capacity buyer of last resort.

- **Emissions guarantee:**
  - Retailers required to reduce emissions from electricity sales below a hurdle intensity (tonnes CO2-e per MWh sold)
  - Obligation on retailers to buy (from generators) the right for those generators' production to be assigned to that retailer's account.
  - All contracts for assignment of rights to be registered in newly created registry.
  - If retailers don't contract they will be assigned avg. emission intensity of unassigned generation.
  - National and international emission permits possibly allowed.
  - Emission Intensive Trade Exposed (EITE) load is carved out in some way.
  - No financial penalty for non-compliance. Non-financial penalties not certain.
  - Targets to 2030 fixed before 2020.

How is the NEG is meant to work ?

	Obligation on retailers	Penalty for non-compliance	Bankable	Price transparency	Transaction costs	Windfalls	Incentive for emission reduction
RET	Annually surrender a number of certificates (LGC) created by renewable generators	$93 per LGC (tax effective)	Yes (and also limited ability to below)	Liquid spot market, several brokers post prices	Low, certificate creation and acquittal well established and easily monitored	Plant operational before policy ineligible to create certificates	Does not discriminate amongst fossil-fuel generators
CET	As for RET but lower emission generators can also create certificates	Not specified but presumably on lines of RET	Would be as for RET	Would be as for RET	Would be as for RET	Presumably would be as for RET	Does not discriminate amongst fossil-fuel generators below hurdle (but easy to fix)
NEG	Buy rights to associate production with sales	None identified	No	Poor, by design. Both supply and demand uncertain. Widely traded financial products unlikely.	High, buyer and seller to notify, new registry, inter-regional trade, distributed production and storage	Potential windfall for existing low emission producers	Discriminates across technology

Summary of issues

- **Emission targets:** Government modelling says NEG will not reduce coal generation and will slightly increase renewable capacity, relative to business-as-usual (BAU). Other modellers more optimistic on BAU and less optimistic on NEG. NEG imposes large emission reduction obligation on other sectors of the economy – expensive reduction elsewhere will have to substitute cheap emission reduction from electricity.
- **Price discovery:** By design, price discovery is impeded. Hard to see how aggregation or financial instruments will develop. Purchase of international emission credits will not help (Australia's Paris Agreement commitment is to reduce *Australia's* emissions). Likewise, purchase of ACCUs is zero sum and can not be counted as electricity emission reduction.
- **Windfall gains:** risk of windfall gains (at customers' expense) particularly for pre-RET renewables/low emission gen (Snowy and Tas Hydro particularly). EITE carve out may mean additional windfall for certain retailers.
- **Banking:** inability to bank or borrow means use-it-or-lose-it, and so more volatile prices.
- **Penalty for non-compliance:** absence of financial penalty for non-compliance undermines price discovery (as intended) and policy credibility.
- **Transaction costs to participants:** buyers and sellers finding each other for trade of non-standard product, complexity in grandfathering existing PPAs, complexity in allowing customers to satisfy obligation themselves (as with RET), EITE administration and accountability.
- **Administrative costs:** New registry, compliance, enforcement likely to add significant additional administrative and oversight costs. Why go to all this bother when a good mechanism already exists?

Whereto from here ?

- ESB to release next report in August.
- Apparently intractable differences in emission reduction objective make “bi-partisan” agreement difficult, as the long history shows. But for want of satisfying the clamour for agreement, participants loathe to argue too much about market design.
- Very important for economists to engage – market design matters in ways few anticipate.
- Finally, in answer to the question, the NEG is neither a grand plan nor much ado about very little.