

## Putting the customer back in front

How to make electricity cheaper

Tony Wood



## Shock to the system

Dealing with falling electricity demand

Tony Wood and Lucy Carter



## Getting gas right

Australia's energy challenge

Tony Wood and Lucy Carter



# GRATTAN

Institute

## Creating low carbon energy supply

## Carlton Connect

Tony Wood  
Grattan Institute  
Melbourne, October 2014

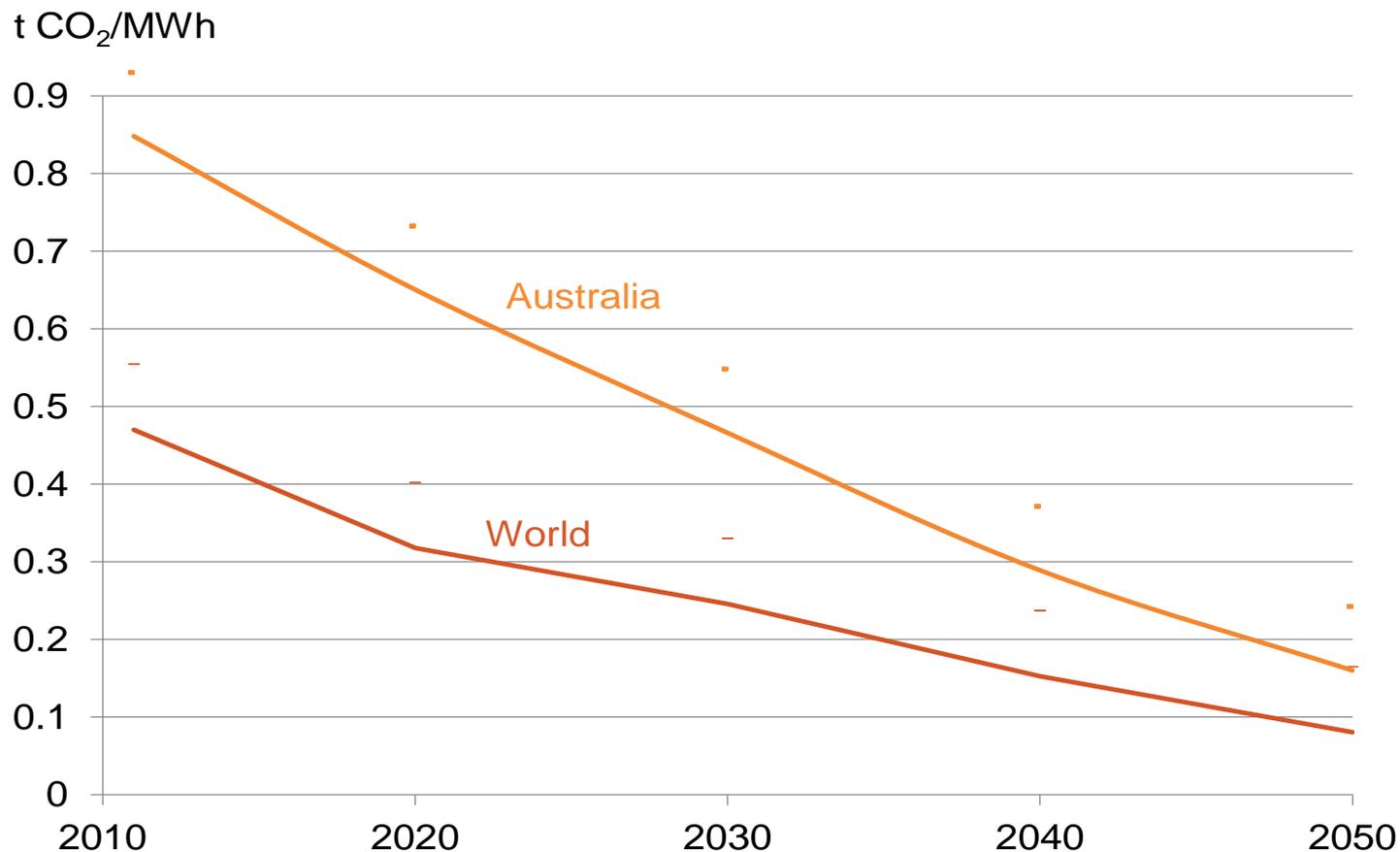
## Outline

---

- Clean (low-emission) energy investment shares the same challenges as all new technologies, with the added, and major challenge, of needing policy drivers.
- Successes have generally been narrow and volatile, so there are still lessons to be learned about what works, what doesn't and unintended consequences
- Effective policy needs to build on clear objectives and understand the arguments of vested interests.

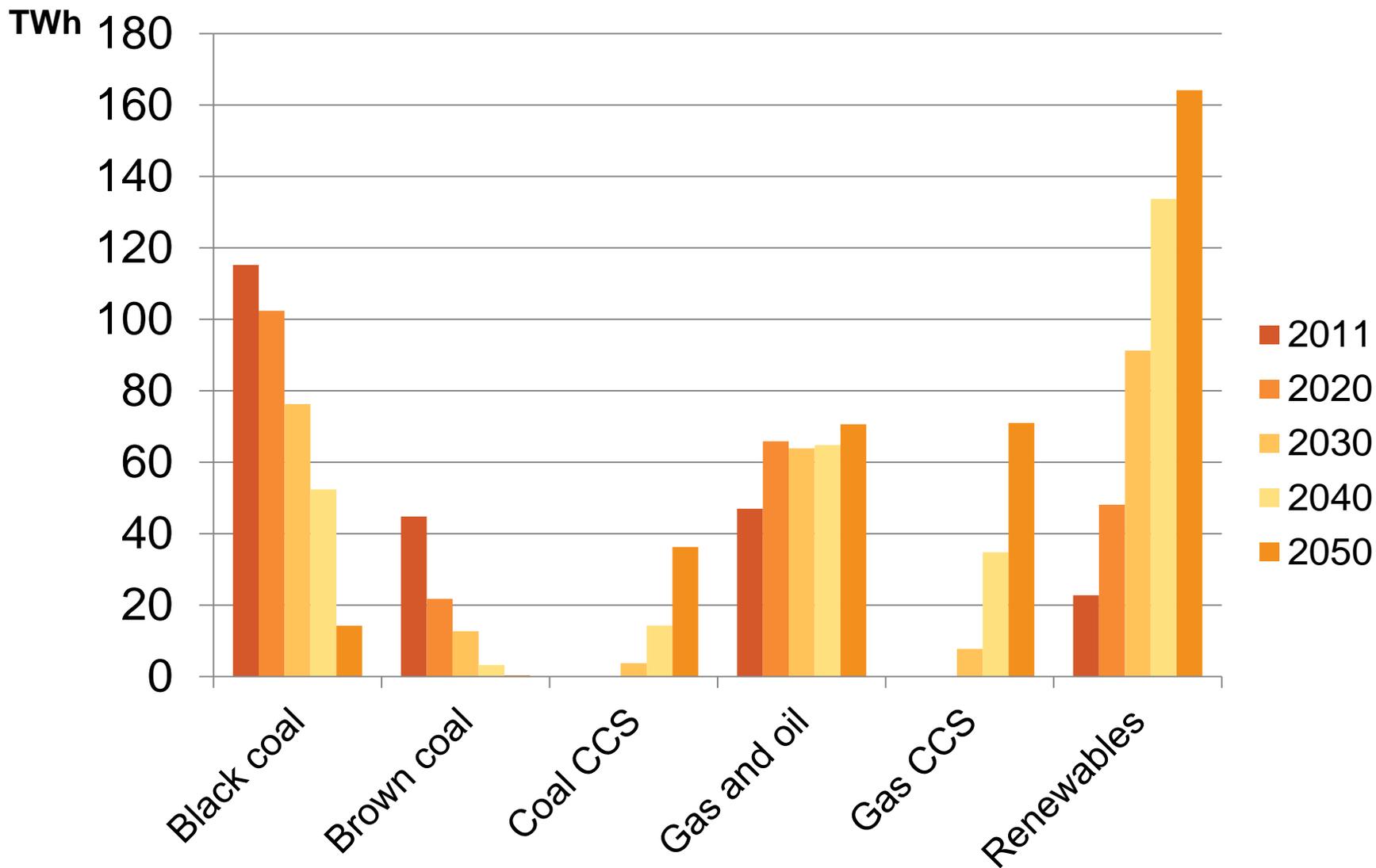
## Low-emission energy has value in a broader context

### Projected electricity emissions intensity (450/550 ppm)



Source: Australian Treasury

## A dramatic transformation is implied

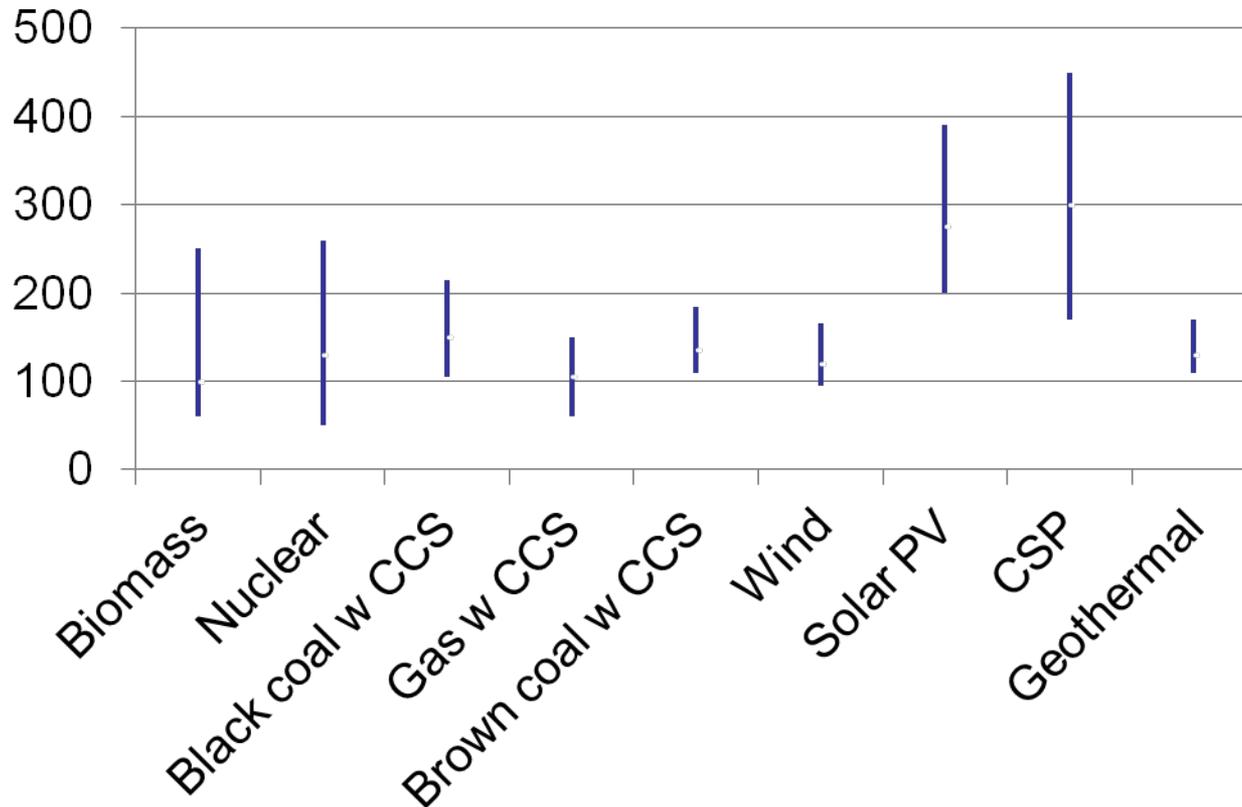


Source: Australian Treasury

**Easy to model, hard to deliver**

## Cost estimates: illuminating and unhelpful

### NEM LCOE – A\$/MWh



Source: Grattan Institute from industry estimates

**They are all too expensive, unless the market values “clean”**

## Government intervention - why?

---

- The challenge is to decarbonise Australia's electricity sector within forty years, whilst maintaining security of supply and affordability
- Despite current projections, none of the assessed technologies can produce power at a scale and at costs similar to today's electricity
- Pricing emissions is the best start, but will not be enough, due to:
  - Government regulatory barriers, including transmission and subsidies for existing technologies
  - High costs and low returns:
    - Finance, minimum scale, resource data and regulation
    - No premium, carbon price discounting
    - Systemic under-pricing of carbon

## Government intervention – how?

---

- Promote an efficient market
  - Provide a credible, long-term pricing signal maximise predictability
  - Map resources
  - Reduce existing subsidies
  - Reform network regulation
- Support low emission technologies
  - Research and development – national interest and comparative advantage
  - Demonstration and early deployment – support a variety of options
  - Re-cast the policy framework to constitute a necessary and sufficient set of conditions for investment

## Specific approaches have specific characteristics

Policy	Strengths	Weaknesses
Capital support	Can address spillover risk Removes policy risk	Does not lead to scale History shows poor deliverability
Firm revenue support	Provides strong investor certainty	Price setting is usually a fraught process Can drive “winner’s curse”
Market based support	Delivers a target efficiently	Delivers on-the-shelf technology Creates confusion within an ETS Becomes an industry subsidy

**Unintended consequences and political cycles are constant features**

## So, what?

---

- There is great uncertainty regarding policy drivers for low emission demand and technology developments for supply of clean energy technologies.
- Clarity of objective is the first step. The rest of the policy framework should be based on addressing market failures and barriers once an emissions constraint has been introduced, however that is structured.
- Other objectives for clean energy can sound appealing but will ultimately lead to the fatal flaws.
- The requirements of policy are credibility, flexibility and predictability. Certainty is an illusion
- Governments need to address early-mover technology and carbon market risks.

## Putting the customer back in front

How to make electricity cheaper

Tony Wood



## Shock to the system

Dealing with falling electricity demand

Tony Wood and Lucy Carter



## Getting gas right

Australia's energy challenge

Tony Wood and Lucy Carter



# GRATTAN

Institute

## Creating low carbon energy supply

## Carlton Connect

Tony Wood  
Grattan Institute  
Melbourne, October 2014