

April 2016



# GRATTAN

Institute

**Energy transformation:  
How will we use and pay for power?**

**Sustainable cities, Perth  
4 May 2016**

## Overview

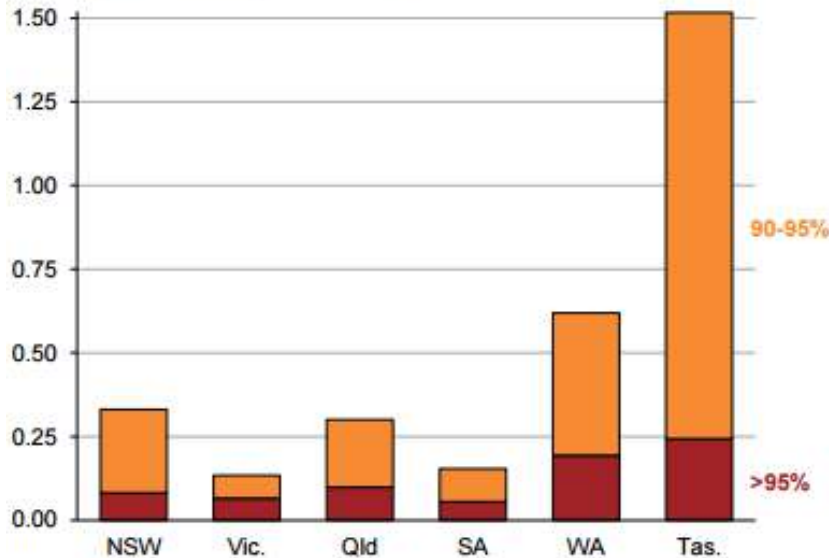
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- The way we currently pay for power is both unfair and too expensive. Reforming electricity network tariffs is a policy priority for Australian governments, but progress is either limited or stalled.
- Australians have adopted solar PV for their homes at an unprecedented level, driven by generous subsidies. All electricity consumers have paid, far too much. Policy and regulation need to catch up with technologies and consumer choices.
- Climate change policy and energy policy are fundamentally interdependent. In 2016, bipartisan commitment to major reductions in greenhouse gases provides an opportunity for a bipartisan approach to domestic policy.
- The Coalition Government has avoided a tax and electricity price increases, and the 2020 target is in sight. But its policies will need strengthening to meet post-2020 targets.
- Labor has now committed to a bigger 2030 target, a combination of emissions trading schemes, and 50% renewable electricity.
- We need a realistic policy roadmap that builds on the Coalition's current climate policies while maintaining direction towards the long-term target.

## Network tariffs: what's wrong?

### We now have more assets than we want or need

Percentage of time networks operated at more than 90 per cent of annual peak demand, 2011 to 2014



Notes: Weighted average across all networks in each state.  
Source: Grattan analysis of AEMO (2015a), AEMO (2015b), and IMO (2015).

### Contributing factors:

- A poor regulatory framework created perverse incentives
- Bad forecasts of consumption and demand
- Stringent reliability standards in some states
- The way we pay does not reflect the cost of supply
- Changing consumer behaviour

## **The case for tariff reform**

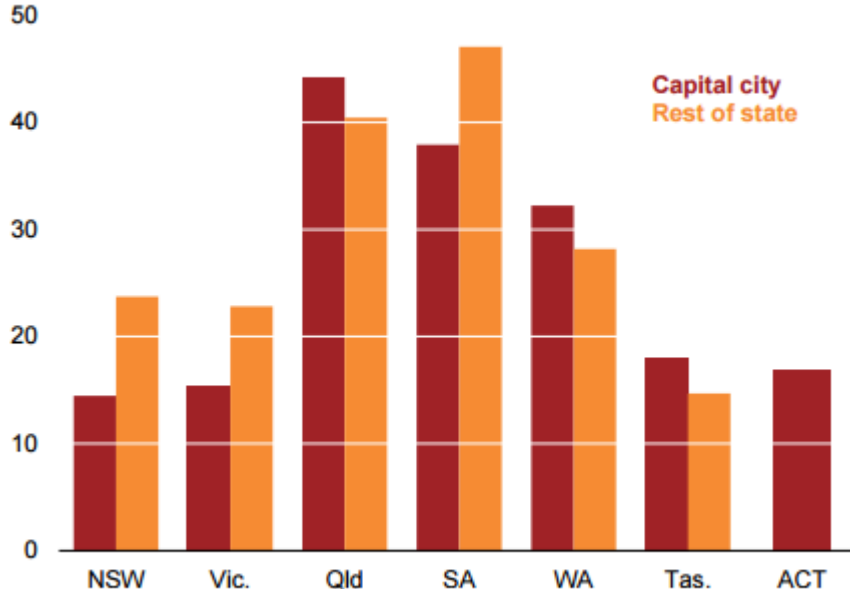
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- **Cost-reflective tariffs will be fairer**
- **Cost reflective tariffs will reduce the cost of network infrastructure**
- **Cost-reflective tariffs will encourage the efficient use of new technologies**
  
- **In WA, Reducing existing cross-subsidies through demand tariffs could reduce annual electricity bills for more than half of the south-west's consumers by an average of \$120. Some consumers will see a reduction of more than \$500**
- **Better targeted subsidies in regional WA, combined with demand tariffs could reduce annual electricity bills for more than 75 per cent of vulnerable consumers in remote areas by an average of \$275.**
- **WA is ideally placed to see the efficient adoption of technologies such as solar panels with batteries**

**There will be challenges because tariff reform creates winners and losers.**

## Distributed generation: a new paradigm

Rooftop solar PV penetration rates, percentage of owner-occupied houses, Feb 2015



Note: includes detached and semi-detached houses.  
Source: Grattan analysis of CER (2015), ABS (2011)

### A huge household take-up of solar PV

- Federal certificate schemes
- State feed-in tariffs
- Network tariffs

The benefits have outweighed the cost by nearly \$10 billion

But the economics of solar PV are changing

New tariffs will make solar less attractive, but decisions will be more efficient.

Solar PV with storage can be a real transformation

Getting off the grid is still far off

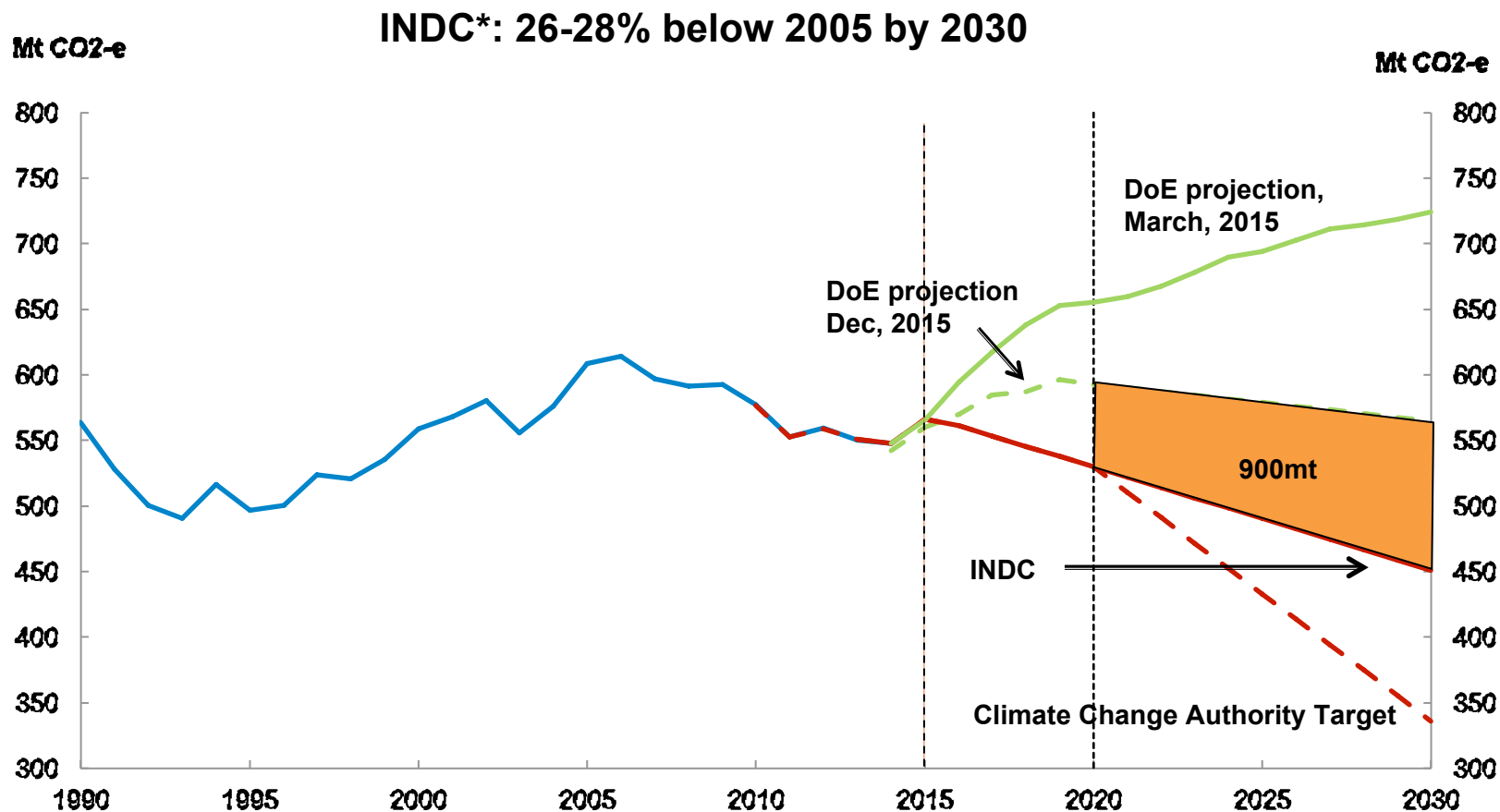
## **Distributed generation: what governments should do**

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**Distributed generation can contribute to a fairer, cheaper and low-emissions electricity sector:**

- **Get network pricing right**
- **Deal with redundant assets**
- **Fix network regulation**
  - **Change the investment test**
  - **Introduce regular forecast adjustments**
  - **Formalise write-downs**
- **Remove barriers to off-grid solutions**

# Australia's non-trivial emissions reduction challenge



Source: Grattan extension on DoE 2015/16  
Emissions projections  
INDC: Intended Nationally Determined Commitment

## The climate policy window may be opening again

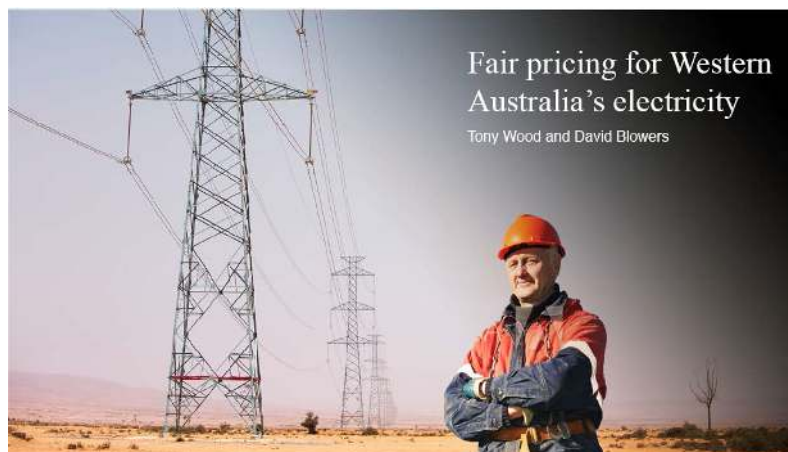
In 2016, there is much in common:

- Commitment to the Paris Agreement
- Commitment to deep decarbonisation
- Same 2020 target
- Same RET

Coalition Government	Labor Opposition
Emissions reduction fund	Emissions trading for electricity
Safeguard mechanism	Emissions baselines for major facilities
Vehicle emissions standards	Vehicle emissions standards
Energy productivity (40% by 2030)	Energy productivity (100% by 2030)
Review in 2017	Review in 2020

**There is an opportunity to head towards a commonly agreed objective without getting mired in the divisive debate of the past.**





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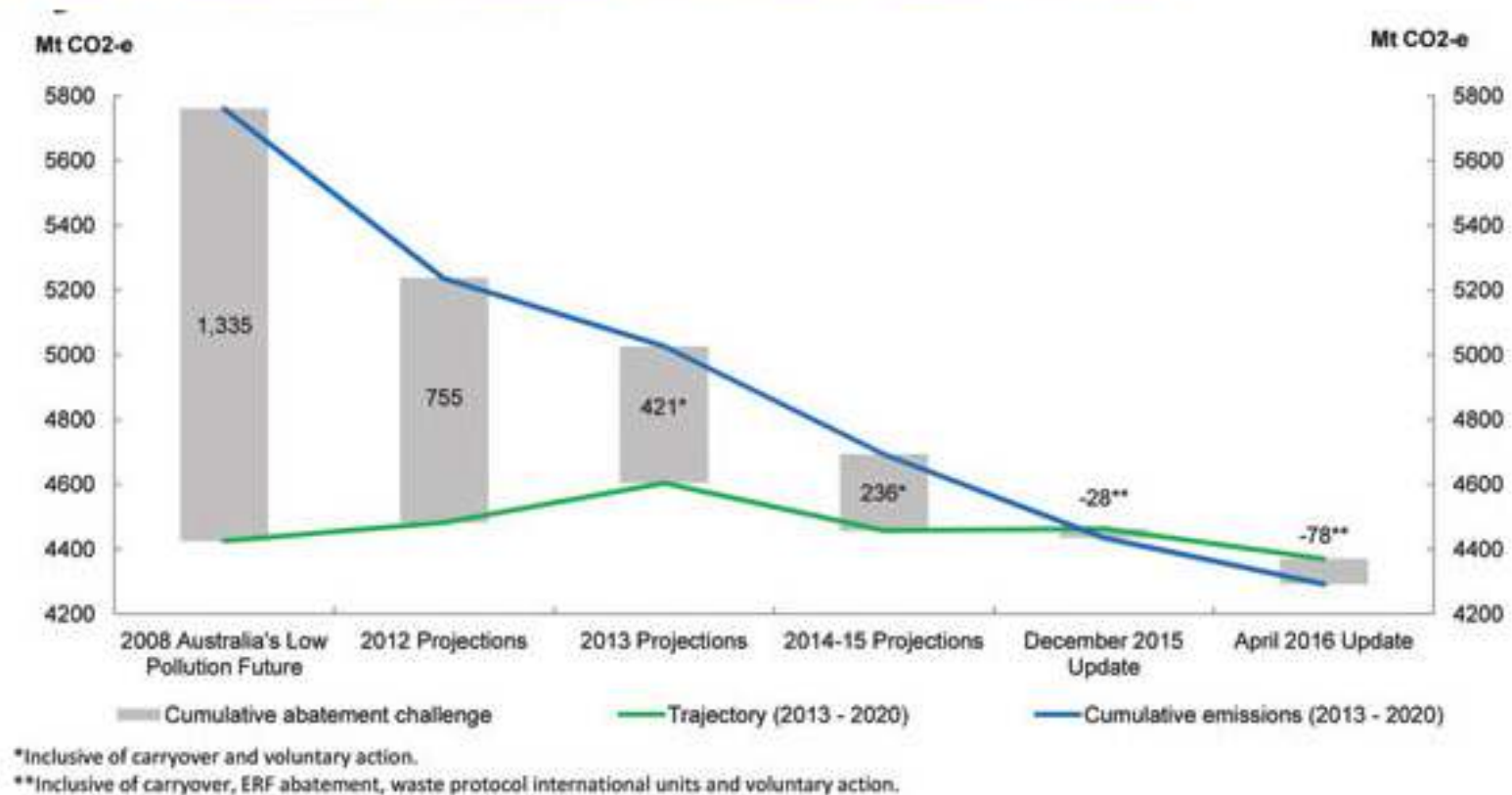
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## Australia's is on track to surpass its 2020 target

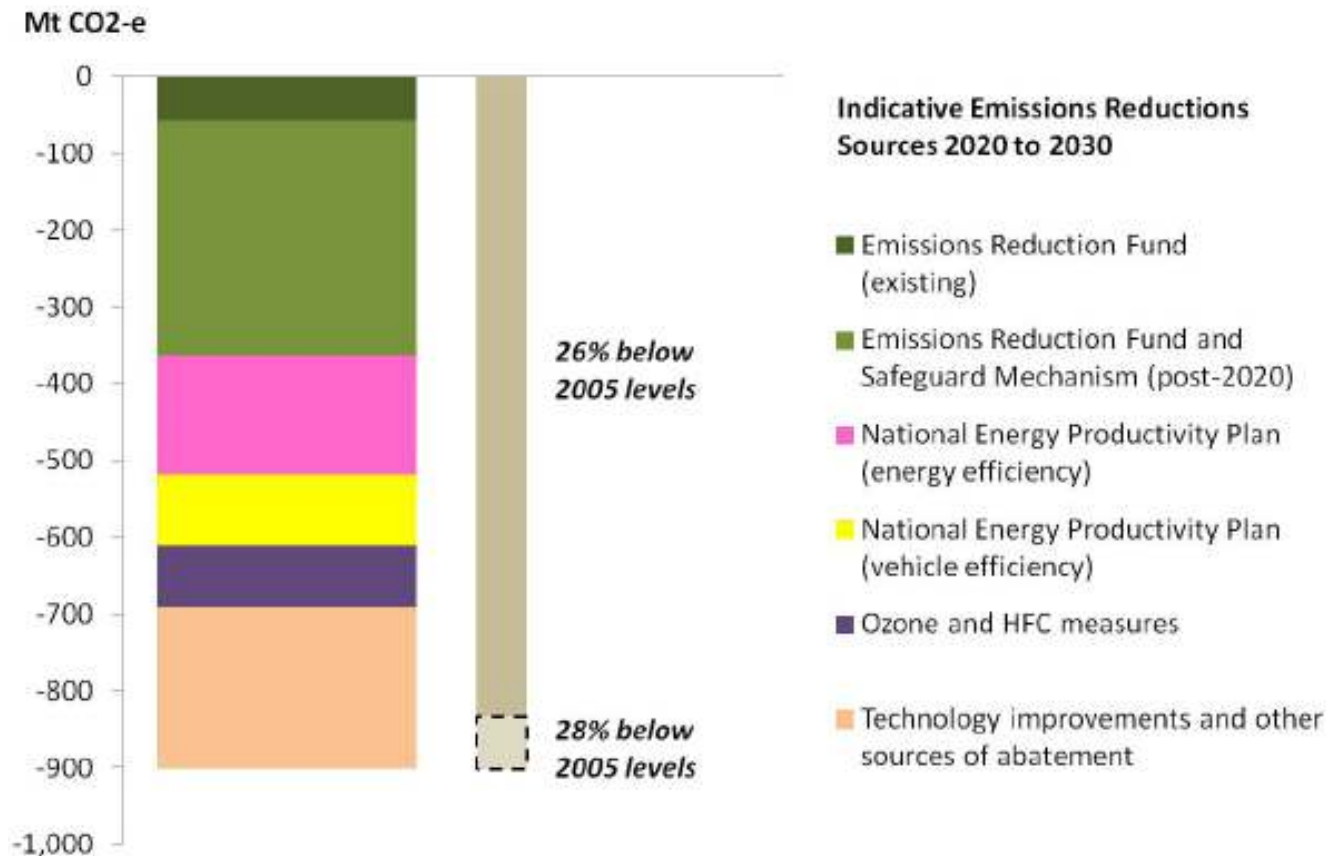
Figure 1 Change in the cumulative abatement task over time



Source: Department of Environment, April 2016

**This achievement depends on Australia's Kyoto carryover of 128mt CO<sub>2</sub>-e**

# Current policy based on a 900mt reduction wedge



Source: Department of Environment "Australia's 2030 climate change target"

**The numbers will be increasingly debated**

# The 2016 climate policy menu

## The criteria

- Credibility
- Political viability\*
- Flexibility
- Adaptability
- Public acceptability\*
- Low cost

## Related issues

- Acceptance of international units.
- Assistance for emissions-intensive, trade-exposed (EITE) industries.
- Scheme coverage.
- Complementary policies.
- Use of scheme revenue.

## The choices

- Cap and trade emissions trading
- Carbon tax
- Intensity baseline and credit
- Emissions purchasing
- Regulation
- Tradable green certificates

## The politics

- A toxic, rollercoaster history
- Coalition has opted for a 26% reduction and a non-trading, combination of policies
- Labor has committed to 45% reduction, emissions trading and 50% renewables
- Paris Agreement remains delicately poised
- State governments are looking to act



## A 3-step plan

### Box 2: Core elements of the roadmap

The roadmap starts with the current policy mix. The major elements of the current policy are the ERF and the Safeguard Mechanism. The roadmap consists of the following steps:

#### Step 1: Tighten Safeguard Mechanism baselines

- Link baselines to Australia's emissions reduction target.
- Expand the range of activities that are recognised for creating ACCUs under the ERF.
- Abolish government purchasing of ACCUs to maximise the supply of available credits to liable entities.
- Allow facilities to purchase international offsets.
- Strengthen the enforcement options.

#### Step 2: Increase incentives for low-cost emissions reduction

- Introduce a one-sided, absolute baseline scheme (excluding electricity sector) with more sharply reducing baselines.
- Introduce an intensity baseline scheme for the electricity sector.
- Introduce auctioning of permits by government.

#### Step 3: Replace baselines with permits and increase coverage

- Reduce baselines to zero while government auctions an increasing number of permits.
- Expand coverage to include businesses with annual emissions of at least 25,000 Mt CO<sub>2</sub>-e and fuel suppliers.
- Over time, develop methodologies to include uncovered sectors.

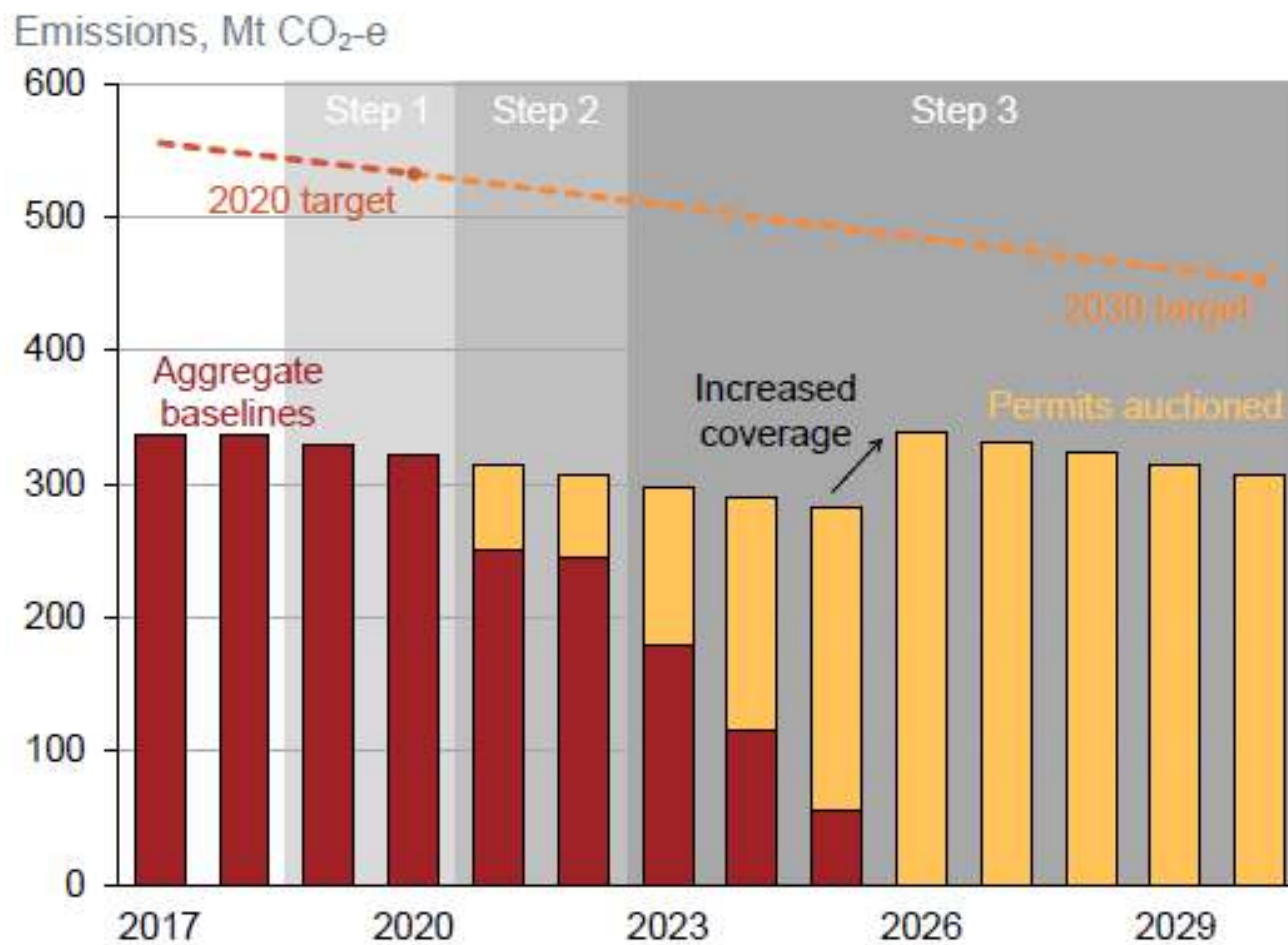
Other policies will be needed to complement the central policy and reduce emissions in uncovered sectors. These include:

- carbon offsets in agriculture
- vehicle emissions and energy efficiency standards
- initiatives to encourage research and development.

The Renewable Energy Target should also continue as planned, although it should not be extended.

Assistance to EITE industries should be limited to instances where there is a genuine risk of carbon leakage. The government may choose to support other industries that face negative impacts, but any assistance must be tightly targeted.

## A credible and predictable plan



## A roadmap to sustainable policy

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### **This roadmap is**

**Credible:** The policy is linked to Australia's emissions reduction targets and places limits on emissions. The policy creates incentives for emissions reductions across the Australian economy.

**Politically viable:** The roadmap builds upon the Coalition Government's existing policy. But it also provides a pathway for Labor to head towards its preferred policy.

**Flexible:** The roadmap sets a limit on emissions – either through baselines or permits – that are linked to Australia's target. If the target changes then the limits change too.

**Adaptable:** The roadmap sets out a path to an economy-wide, market-based scheme.

**Publicly acceptable:** During the transition, the roadmap uses a mechanism that reduces the impacts on electricity prices – an intensity baseline scheme. Reducing the price impacts will help generate public acceptance of the roadmap. A gradual transition will also allow politicians time to garner support.

**Low cost:** As successive steps are taken towards the ultimate goal, the cost of reducing emissions becomes less: first through the inclusion of international offsets; then the release of permits into the scheme; and finally through expansion of the coverage.