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# Climate change

## **Australians have the smarts and the grit to tackle climate change – we just need the politics to catch up**

Disruptions to our climate caused by greenhouse gases are putting at risk our way of life in Australia. The Black Summer bushfires and our record drought are just two examples of the human, economic and environmental costs of runaway climate breakdown. But Australians have the smarts and the grit to address climate change. Renewable energy is the cheapest form of power and our country is blessed with the world's best supply of it. And we are world leaders in green manufacturing. The opportunities are there if we are clever enough to seize them. Regional Australia especially stands to benefit massively from a shift to a zero-carbon economy. The next 50 years could be the brightest ever for regional Australia. I have a plan to make sure they are.

### **Policy Paper**

Dr Helen Haines MP – Federal Member for Indi

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## Dangerous disruption to our climate puts at risk our way of life and costs our economy

### Human activity is changing the climate

As a former researcher and academic, I take science and evidence seriously. And **the science of climate change is abundantly clear**. Since the industrial revolution, the climate has warmed by around 1°C due to human activity, largely from the burning of fossil fuels<sup>i</sup>.

The amount of carbon dioxide in the atmosphere has increased from around 315 parts per million in 1958 to around 411 today. Carbon dioxide traps incoming heat in the atmosphere, increasing the temperature of the planet. The climate will continue to heat up as long as we continue to emit these heat-trapping greenhouse gases.

**If we want to stabilise the climate at a safe level, we need to get to net zero emissions.**

That means we need to be drawing down as much carbon dioxide – in our soils, vegetation and products – as we are emitting.

The science tells us that as a planet, we must be at net zero emissions by 2050, and as a developed country with abundant renewable resources, Australia should get to net zero much earlier than that<sup>ii</sup>.

### The costs of inaction on climate change are massive

It will cost money to reduce our emissions – but the costs of failing to tackle climate change are far greater than the costs of inaction. A major study found that the potential damages from climate change at current emissions trajectories are \$585 billion in 2030, \$762 billion in 2050 and more than \$5 trillion in cumulative damages by 2100<sup>iii</sup>. **A zero-carbon transition is the economically rational thing to do.**

But our policy goals should not just be guided by economics but by questions of **our way of life**. Bushfires, droughts and heatwaves cause significant **health impacts** – placing huge stresses on people's mental health, causing heatstroke especially among older Australians, and significant respiratory disease. All of these disasters will get worse in a hotter and drier climate.

By 2050, Wodonga could experience triple the number of days over 35°C and almost double the number of extreme bushfire threat days. North-East Victoria could experience 35% reduction in our spring rains<sup>iv</sup>. **Robust action on climate change is about protecting our rural industries, our sporting culture, our health, our lazy and carefree summers.**

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## Acting to tackle climate change would create immense opportunities for Australia – but we are missing the boat

### The Government is not doing enough to act

Australia's climate will only stabilise at a safe level if global emissions get to zero. Australia emits around 1.3% of the world's total greenhouse gases, and we contribute about another 5% through our fossil fuel exports<sup>v</sup>. This means we need to do three things:

- Get our **domestic emissions to zero**;
- **Play a constructive role** in global climate negotiations to drive deeper emission cuts;
- Replace our emissions-intensive exports with **zero-carbon exports**.

Cutting our own emissions to zero won't solve the problem – but we can't solve the problem with getting our emissions to zero. It's the first – critical – step to secure our future.

But according to the Government's own data, Australia's greenhouse gas emissions declined by just 0.1% in 2019<sup>vi</sup>. At this rate **it would take over a thousand years to reach zero emissions**. This is not good enough.

Australia has huge potential to be a **global energy superpower** by developing zero-emissions manufacturing technologies for products like cement, ammonia, steel, aluminium and hydrogen. This will not only reduce global emissions but will create whole **new industries** right here at home. We need to **invest massively** in these sectors, with billions of targeted research to build our economic base for the next century and drive down global emissions by selling the world our innovation.

### By failing to act, we are missing out on opportunities

**Australia lags the world in seizing the opportunities** of the coming low-carbon transition. One recent study found we have the fifth worst climate policy out of 61 developed countries<sup>vii</sup>. As a result, the most innovative companies that are developing low-carbon products and green manufacturing – sectors that will underpin global prosperity for the next 50 years – are going overseas.

Australia has a massive opportunity to develop a comparative advantage in green steel<sup>viii</sup>, but Sweden is taking the lead with long-term research funding and a partnership between Government and industry<sup>ix</sup>. Similar opportunities exist in green hydrogen, renewable electricity exports, green ammonia, community energy, and zero-carbon cement. But to lead the world, we need to invest.

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## I have a plan to tackle climate change and capture these opportunities for regional Australia

I will work to:

### 1. Secure a stable climate and energy policy focussed on driving emissions and cost reductions, and growing new industries

**Australia is currently without a coherent climate change and energy policy.** The Government has ruled out extending the Renewable Energy Target, ruled out the Clean Energy Target proposed by Alan Finkel, and ditched plans to implement its own National Energy Guarantee policy. As such, we are left with a piecemeal approach that will fail to reach our 2030 emissions reduction targets. This kicks the can down the road for the next generation.

A sensible climate and energy policy would:

- Create a long-term price signal to incentivise shift to **zero-carbon electricity**;
- Invest significant money in development and deployment of **new technology**;
- Include measures to **decarbonise transport** through electrification;
- Promote **energy efficiency** in buildings, industry and electricity use;
- Provide targeted funding for new **green manufacturing** industries.

### 2. Create a community energy fund to support the development of a network of community energy hubs across Australia

Over the next 20 years, 15 gigawatts of coal power, 63% of our national fleet, will reach end-of-life and retire from our grid<sup>x</sup>. At the same time, due to increasing demand for electricity, the grid operator predicts we will need up to 47 gigawatts of new grid-scale renewables and 21 gigawatts of dispatchable energy like pumped hydro and batteries<sup>xi</sup>. Over the coming decades, the **energy system will be completely rebuilt, with hundreds of billions invested, mostly in regional Australia.**

We need a policy framework to ensure that **regional communities are driving and benefitting** from this transformation. **Community energy** – where local people develop, own and benefit from new energy projects – is a key way to do this. Already, there are over 100 community energy groups across Australia developing their own projects like solar arrays, wind farms and batteries.

This community-owned energy infrastructure brings **new sources of income, lower electricity bills, and revenue to local councils.** Distributed energy generation and storage also provides **energy security**, especially in the face of disasters like bushfires.

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We need a comprehensive policy framework to enable more regional communities to benefit from locally-owned power. Such a policy should:

- Fund **start-up grants** to community energy groups to develop projects;
- Provide **expert support** to groups through regional support hubs;
- Ensure everyday communities can **invest in large-scale renewable** projects;
- De-risk community energy through **government underwriting** of new investments.

### 3. Develop renewable energy initiatives across Indi including residential, community and commercial projects

Indi is blessed with **abundant renewable energy potential** and I want to see that potential realised. Across the Hume region, there are 151 sites that have been identified as potentially suitable for **pumped hydro energy storage**. Together, these sites have a combined storage capacity of 6,500 gigawatt-hours, which is 13 times more than is needed to power an entirely renewable Australia<sup>xii</sup>.

There is already around one gigawatt of renewable energy installed in our region, and interest in another 2.7 gigawatts of large-scale solar<sup>xiii</sup>. Our region also produces around 1.5 million tonnes of organic waste every year that could power a **local bioenergy industry** supplying 18 million gigajoules of energy every year. It is for these reasons that the Ovens-Murray area was identified by the energy market operator as one of Australia's "**renewable energy zones**" where new renewables should be clustered. My goals are to:

- Develop a network of local **electric vehicle charging stations** across Indi;
- Work with communities to attract commercial **solar power projects** to the region;
- Support local groups to apply for **ARENA grants** for energy and storage projects;
- Secure funding for **energy efficiency in buildings** rebuilt after the bushfires;
- Deploy **islandable mini-grids** to promote energy security in bushfire-prone towns.

### 4. Develop a national strategy for agriculture and climate change

Agriculture is the **lifeblood of regional Australia**. But a dangerously disrupted climate could threaten entire industries or render large swathes of the country unviable for farming. Our best projections suggest that by 2050, cotton yields could decline 17%, beef production by 33% and overall agricultural productivity could decline 17% due to climate change<sup>xiv</sup>. If we continue on our current path, accumulated agricultural losses from climate change are projected to exceed \$19 billion by 2030 and \$211 billion by 2050<sup>xv</sup>.

To date, there is **no cohesive national strategy** to mitigate the negative impacts of climate change and build the resilience of Australia's farming sector for a changed climate. We urgently need to **develop such a strategy** and it must include:

- Funding for **targeted research** into the impacts of climate change on agriculture;
- **Support for farmers** to transition to new crops, technologies and practices;
- Targets and incentives for **reducing emissions** in the agricultural sector;
- A mechanism to compensate farmers for **ecosystem services** and land-based **carbon sequestration**.

## 5. Establish a research facility into climate resilience and adaptation for regional Australia

In my former life a rural health researcher, I know that to solve a problem, you need to properly understand it. Regional Australia is at the **frontline of a changing climate** – we suffer the worsening droughts, the floods and the bushfires that will increasingly affect our country. Yet the Government is barely investing in our ability to cope with these future changes.

In 2017, the Government cut funding to the National Climate Change Adaptation Research Facility (NCCARF), which conducted crucial research into how Australia can prepare for a changed climate in areas like health and infrastructure. Similarly, the Bushfire and Natural Hazards Cooperative Research Centre (CRC), which helps us understand how to prevent and manage bushfires, will have its funded terminated in June 2021. In the light of Black Summer, this decision is hard to believe.

Both of these facilities must have their **funded restored in perpetuity**. And given the focus of the research is on regional Australia, these research groups should open facilities based in regional Australia.

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### References:

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- <sup>iii</sup> Australia's Clean Energy Future: Costs and Benefits, Melbourne Sustainable Society Institute, 2019, p.3
- <sup>iv</sup> State of the Climate Report: Ovens-Murray Climate Projections, CSIRO, 2019, p. 3
- <sup>v</sup> Production Gap Report, Stockholm Environment Institute, 2019
- <sup>vi</sup> Quarterly Update of Australia's National Greenhouse Gas Inventory, June 2019, p.8
- <sup>vii</sup> Climate Change Performance Index, 2020, p.9
- <sup>viii</sup> Start With Steel, The Grattan Institute, 2020
- <sup>ix</sup> <https://www.ssab.com/company/sustainability/sustainable-operations/hybrid>
- <sup>x</sup> *Draft 2020 Integrated System Plan*, Australian Energy Market Operator, 2019, p.10
- <sup>xi</sup> *Draft 2020 Integrated System Plan*, Australian Energy Market Operator, 2019, p.10
- <sup>xii</sup> *Hume Renewable Energy Roadmap*, Victorian Department of Environment, Land, Water & Planning, 2018, p. 28
- <sup>xiii</sup> *Hume Renewable Energy Roadmap*, Victorian Department of Environment, Land, Water & Planning, 2018, p. 32
- <sup>xiv</sup> *Change in the Air*, Farmers for Climate Action and the Australian Farm Institute, 2019, p. 39
- <sup>xv</sup> *Change in the Air*, Farmers for Climate Action and the Australian Farm Institute, 2019, p. 11