The world seems particularly chaotic this winter. The climate news is diabolical, with fears about melting of the Arctic permafrost and the ancient ice stores of the Himalayas. There is a Royal Commission into the brutal treatment of children in prison in the Northern Territory. And that is before we get to ISIL terrorism and other mass shootings in Europe and America.

There is Britain's brain-snap exit from Europe and the punchline that Boris Johnston and the other Tory geniuses have no clear plan for it. And there is The Donald. The Republican Party's candidate for President of the United States of America; Donald Trump.

All these problems require sane collective action, which means democratic use of the power of the state. The good news – and don't we need some - is that after three decades, our handcuffs are coming off. Since the 1980s (or even the mid-1970s according to Michael Pusey) the west has slowly strangled itself and the rest of the world with a political obsession that goes under the name of "neoliberalism" (or "the Washington Consensus" or as Pusey called the Australian version, "economic rationalism").

During the recent Federal election Australia took a step away from the naïve adoration of markets and lower taxes. The Coalition had to accept that generous superannuation tax breaks for the super wealthy are not good policy. Both sides of the aisle heard the message that wealthy property investors are less deserving of tax breaks than first home buyers. The Coalition may be set on giving a $51 billion hand out to corporate Australia but it is unpopular and may be resisted in the Senate.

It is against this background that we want to put forward a new idea, framed in response to a recently published essay titled *Balancing Act*, by George Megalogenis, an Australian author (and

economics graduate). Our idea is that renewable energy provides the perfect act of renewal for the democratic state at this time.

In *Balancing Act*, an issue of the Quarterly Essay series, Megalogenis pinpoints the driver of much of the malaise in Australian policy making; neoliberalism or the 'open model' as he calls it. He says that it time to accept that the open model which both sides of politics have implemented over the last thirty years gives us no path to future prosperity and the voters, yearning for long-term vision, want "a return to some form of government intervention in the economy" (*Balancing Act*, p. 3).

In our response to his *Quarterly Essay*, we want to briefly explore how Megalogenis's arguments about the need for state intervention could be used to
- slash greenhouse gas emissions
- build a reliable consensus in climate politics
- help fix the economic model.

Our argument is that the new conversation about government intervention in the economy provides a way to solve the climate riddle, by moving beyond the 'market fetish'.

Megalogenis writes
> The Coalition can't lay claim to the future until it adjusts to the two big shocks of our age. The first shock is that the version of capitalism favoured by the conservatives is broken… The second shock is that the international community may finally be ready to tackle climate change. (*Balancing Act*, p.57)

Policy solutions that match the global warming threat require transformation, not tinkering. As Megalogenis rightly points out, these processes of restructuring require governments to stop simply devolving agency to the invisible hand of the market.

The return to regulation in the economy could revitalise the environmental agenda, cutting through the impasse of carbon politics with a healthy dose of nation building in the area of renewable energy. It would replace fifteen years of neoliberal environmental orthodoxy with a new agenda that is both more rigorous and more popular.

Neoliberal environmentalism

Environmentalism from the 1960s until the 1980s was a diverse movement. There were public transport and urban design activists calling for more rational, convivial cities. Conservationists campaigned to protect biodiverse forests from destruction. Greenpeace put its ships in the way of nuclear testing and toxic waste dumping. Deep greens proposed new cultural paradigms to replace consumerism and economic growth.

Then at some point in the late 1990s the climate threat became so great that it rightly dominated the environmental agenda in Australia and around the world. This occurred at the same time in history that free market ideology was ascendant. The timing was tragic.

Until this point, environmentalists responded to global warming with tools that had already worked in achieving environmental and other policy progress. These were forms of government regulation: bans on some chemicals and practices, standards on imported and locally manufactured products, incentives for clean production, plans for rational design of cities around mass transit.

Unfortunately however, greens became convinced that the best and perhaps only way to save the climate was to monetise it. (Or more accurately, to monetise tradeable rights to pollute the climate.) We reduced the complexity of a global system out of control into the mere absence of a price signal.

Rather than build a social movement for transformation, we operated like technocrats. We learned to speak in what The Australia Institute's Richard Denniss calls 'econobabble'. Too tentative to pick winners - solar and wind over coal and gas - we hid behind economic talk of carbon prices and market architectures. It is no wonder the public cooled to global warming.

The emerging criticism of the open economy doctrine now allows us to return to a more rational and constructive conversation. Megalogenis says "The debate we have to have is on the role of government in the economy" (*Balancing Act*, p.11). The practical program he prescribes starts with public investment in infrastructure.

Our view is that the first candidate for this infrastructure development should be the switch to clean energy for electricity and transport. Australia's economic opportunity here is vast as we have prodigious renewable energy resources which are tragically underdeveloped. We also have the opportunity to create goods for export.

Recent announcements in electric vehicles indicate just how rapidly the world will move towards green industries. The Netherlands and Norway are looking to have only electric vehicles sold by 2025 and India has an astonishing goal to replace all of its petrol and diesel cars with electric vehicles by 2030.

If the Paris climate agreement succeeds, this would require wealthy countries such as ours to decarbonise our energy sector by about mid century. For long-term assets such as energy infrastructure, achieving a complete rebuild before 2050 means starting immediately with a concerted program of investment. This is a massive economic undertaking and requires strong government intervention. According to the International Energy Agency, rebuilding a clean energy system by 2050 would cost US$44 trillion globally. (Crucially, it would *save US$115 trillion*, because fuels such as the sun and the wind are free as well as renewable.)

Giles Parkinson, the editor of *RenewEconomy*, reckons that Australia will end up spending $130 billion on electricity networks over 20 years from 2000 to 2020. He calls this 'pure folly', propping up last century's old, dirty, one-way electricity model, when our competitors are investing in renewable energy, battery storage and smart grids that will deliver cheaper, cleaner, more secure energy. Our mal-investment will be of little use when energy companies like AGL eventually retire their coal-burning plants. Australia cannot afford waste on this scale. Nor can our climate bear the consequences of further delay.

What is needed to transform the energy system is for government to set a clear goal to decarbonise by mid-century and take firm hold of economic levers to make it happen. The National Energy Objective - the foundation of all energy policy in the country - needs to be modernised to include decarbonisation as a goal, alongside secure and efficient delivery of energy.

This greening of the energy and transport sectors would create real investment in long-term, productive assets. It will generate jobs and new industries. It is a perfect example of the kind of government action that Megalogenis recommends.

The reason that we are both so upbeat about the renewables boom is that it offers everything that carbon politics failed to deliver. Where carbon markets are abstract, renewables are tangible; solar panels and wind turbines you can touch. Carbon markets created a small number of direct jobs within the banking sector - which is hardly the world's most loved profession - but building renewables and a smart grid will generate millions of mostly blue collar jobs around the world, according to a recent report from the intergovernmental International Renewable Energy Agency.

Where carbon price schemes are ultimately just another globalised market - like currencies or commodity futures - renewables can be owned and operated by local communities. For example, most of the wind farms in Denmark are local co-operatives. Shareholding or direct ownership of clean energy – especially rooftop solar – gives it an unassailable social license, with electoral support across the political spectrum.

With the rise of smart grid technologies, even urban communities can own their own 'virtual' power stations; roof-top solar and household battery power, traded and optimised in real time, providing reliable energy to replace baseload coal.

Energy as innovation

Prime Minister Turnbull has called for innovation. Smart energy is innovation on steroids. Australia already has start-ups making hardware and software that we should export to a world hungry for clean energy. Reposit is building solar and battery storage systems that sell their aggregated energy into the grid, like a virtual power plant. Redflow is developing consumer and utility-scale batteries on the 'flow' design, which can provide very high durability energy storage and safety and sustainability improvements over conventional lithium-ion batteries.

A combination of 'push' policies that stimulate innovation and 'pull' policies that provide stable demand for renewables (and storage and smart grids) would liberate a wave of entrepreneurship for the Prime Minister. These products, services and new business models are more responsible exports than coal and they are becoming more competitive. Even if no top-down mandate for clean energy emerges from the Paris climate agreements, the natural growth of unsubsidised renewables will be worth US$7,800 billion by 2040 according to Bloomberg New Energy Finance.

The most important reason to rebuild climate politics around renewables (as distinct from carbon markets) is the politics itself. Renewable energy has a super-majority of support (70% plus of the electorate), in major markets all around the world. Polling commissioned by the Australia Institute

found that three quarters of Australians would support a party that boosted solar and battery storage and 63% are prepared to endorse a national switch from fossil fuels to renewables by 2030.

Even in Australian wind districts, where a vocal minority of opportunistic politicians have whipped up anti-wind farm panic, an amazing majority prefer wind and solar to coal or gas. Detailed polling in ten wind districts in 2011 found 83% of people support wind power. Carbon markets are nowhere near as popular.

Tony Abbott's 'great big new tax' scare campaign killed carbon markets in the popular imagination (assuming they were ever truly popular to start with). Similarly toxic misinformation makes it impossible to conceive of a bipartisan national carbon market policy in the US. Strange, extreme ideas are also percolating up in the Tory party in England, including paranoid notions that wind turbines cause 'infrasound' sickness and death.

Prime Minister Turnbull's post-election cabinet reshuffle has created a perfect political setup to take a renewable energy leap forwards. Energy Minister Josh Frydenberg has taken on the Environment portfolio. It is a high risk situation for Frydenberg, because the 'jobs versus environment' frame through which these issues get seen means he appears to have to choose either energy or the climate. Encouragingly, he recently told a clean energy conference that his job was to "move energy into the environment [portfolio]".

As one of us has written in The Guardian,

> It depends entirely on whether the two sides of the portfolio – energy and the environment – are set in conflict or in harmony with each other.
>
> ... If Frydenberg does not move quickly to capitalise on this innovation, then he is caught between coal and a hard place. He either fails one half of his portfolio or fails the other half.
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> … Unleashing the renewables revolution is the only way that the new minister can do something significant for the environment and at the same time, build Australia's energy resources and energy security. This is an opportunity that Greg Hunt never had when he was environment minister.

Renewables are the best and perhaps the only way to save the debate about saving the climate. If Megalogenis is right, then Australia has a narrow window of opportunity to use government intervention to reinvent our economy and rebuild crumbling infrastructure.

The stakes are cultural as well as economic. Dark forces and racist politicians are on the march around the world. Restoring public faith in a collective, democratic space is a protection against the demagoguery that Trump is bringing to the gates of the White House, if not to the Oval Office itself. Clean energy infrastructure is the first and best candidate for a new approach to nation building on a planet in peril.