

Promises to keep

There has been a series of announcements related to climate legislation from the United States of America in recent months. This shift to climate action in the United States sparks hope that its actions could encourage other countries to step up.

The news of US President Joe Biden signing the US\$750 billion Inflation Reduction Act into law is being heralded as the United States recommitting to climate action. The Act, which is being discussed as the first major climate and energy bill, provides additional funding for research and research infrastructure, in addition to approximately US\$370 billion to shift from the use of fossil fuels, in part through the expansion of wind and solar infrastructure. The Act passed with the Senate with support from all 50 Democrats and the deciding vote from Vice President Kamala Harris. The Act offers many positives, including the expansion of green jobs, co-benefits from pollution reduction, drought relief funding to western states that are already experiencing water shortages and the related effects of climate change, and an estimated 40% reduction in emissions by 2030 from 2005 levels.

At the individual level, tax credits of US\$7,500 are offered for the purchase of electric or fuel cell vehicles — new and used, if USA assembled. Also on offer are tax credits for improving home efficiency. The USA has high home energy use, and efficiency improvements to existing residences are a step in the right direction to reduce this. In a recent Article, Peter Berrill and colleagues looked in detail at decarbonization pathways for the US residential sector, and found that the decarbonization of electricity offered the largest emission reduction potential, while extensive renovations to existing housing were also required (P. Berrill et al. *Nat. Clim. Change* 12, 712–718; 2022).

The signing of the Inflation Reduction Act adds to the 2021 Infrastructure Investment and Jobs Act, and the bipartisan CHIPS and Science Act that was signed into law in early August 2022. The Infrastructure Act may not be as far-reaching, but there is money allocated for public transport development, approximately US\$90 billion for public transport improvements including zero- and low-emission buses, and US\$5 billion for the purchase of zero- and low-emission school buses. A further US\$47 billion is allocated for climate resilience funding to facilitate communities protecting and upgrading their critical infrastructure from extreme events.

The CHIPS and Science Act allocates US\$280 billion to revitalize the domestic



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semiconductor industry over the next five years. This includes approximately US\$67 billion for the growth of zero-carbon industries and climate-related research, as well as funding to establish a federal office to coordinate and push the development of clean-energy innovation. Unlike the Inflation Reduction Act, this bill passed with bipartisan support, likely as the focus is on domestic production and industry growth.

These political steps are a welcome contrast to the US Supreme Court ruling in June on West Virginia versus the Environmental Protection Agency, which ruled in favour of the state and limits the authority of the Environmental Protection Agency to regulate energy emissions. Without the ability to have state-level caps on carbon emissions under the Clean Air Act, the transition from fossil fuel-generated electricity is expected to slow. However, with the Inflation Reduction Act, there may be a switch to incentives, rather than punishments, that achieves an energy transition.

Also, the recent announcement that the US state of Hawaii has received its last coal ship seems to be good news. However, coal is not the dominant fossil fuel used in electricity generation on the islands and renewable energy has, to date, not scaled up

sufficiently to replace coal; this will fall to oil-generated electricity. Replacing one fossil fuel with another is not progress, and steps need to be taken to make the commitment of moving away from coal towards a greener alternative. The new national legislation will hopefully accelerate renewable infrastructure development and deployment in the state to reduce the continued reliance on fossil fuels.

Further, whilst the Inflation Reduction Act is being celebrated, its ambition and reach was reduced to ensure that it would pass through to legislation. The inclusion of fossil fuels — with land offered for oil and gas drilling, and subsidies for the industry — is lamented as this Act not being a true turning point. However, after regressive steps in recent years, this switch needs to be recognized as an important step.

With these latest Acts being signed into law, the US government is pushing in the right direction. Now, we need to see what can be delivered on these promises, and if it will spur further action domestically and abroad. □

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