



## Policy Memo: The Costs of Energy Efficiency

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President Biden will seek to implement new standards for appliance and building efficiency in hopes of reaching net-zero greenhouse gas emissions by 2050, vowing to upgrade 6 million buildings in the U.S. over four years.<sup>i</sup> Currently, the U.S. Department of Energy estimates the building sector accounts for 35 percent of total U.S. emissions.<sup>ii</sup> The administration claims these new standards will reduce emissions and cut consumer costs but does not specify the overall price for achieving the goal other than the proposed \$2 trillion toward “climate initiatives”. Bjorn Lomborg, president of the Copenhagen Consensus Center, expects the plan to be costly:

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*Biden’s plan doesn’t specify the price for getting U.S. emissions to zero. Only one nation – New Zealand – has been bold enough to request an independent cost estimate of cutting emissions to zero by 2050. They found that the optimistic cost would reduce GDP by a whopping 16 percent. Translated to the U.S., this implies a cost of at least \$5 trillion in today’s money. Not just once, but every year. Spending 16 percent of GDP to fix part of a 2 percent problem is a bad deal. Even if the entire rich world cut all their CO<sub>2</sub> emissions tomorrow and remained shut down for the rest of the century, the*



*standard UN climate model shows it would reduce temperatures by 2100 by just 0.8°F.<sup>iii</sup>*

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According to analysis from Carbon Switch, Biden's building efficiency plan would generate \$14 billion in economic activity.<sup>iv</sup> Regardless of consumer energy costs saved and revenue generated, the overall impact of the net-zero plan would result in a far greater loss for U.S. taxpayers. If successful, the plan could cut 16 billion tons of emissions by 2050, which is nowhere near enough to meet Paris Agreement standards.<sup>v</sup> In order to meet the Paris Agreement, the U.S. would need to reduce energy use in every building by 50 percent. Carbon Switch suggests that even the best retrofit programs today only cut energy by 10-20 percent. Deep retrofits, which reduce energy by the 50 percent needed, cost on average \$40,000 per home.<sup>vi</sup>

### **"Rebound Effects" of Energy Efficiency Mandates**

There are also unintended consequences of energy efficiency policies, called "rebound effects." Jordan Lofthouse of the Utah State University Institute of Political Economy explains these effects:

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*More efficient appliances require less energy per unit of "service," and so, in theory, consumers should use less energy. Higher efficiency causes each unit of service to become cheaper. Consumers have less of an incentive to use services frugally and end up using more services than before.<sup>vii</sup>*

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**Key Point: The "rebound effect" can negate energy savings and cause the efficiency plan to backfire. The estimates on energy savings do not account for this rebound effect and reflect an inaccurate portrayal of the benefits of the plan. Additionally, appliance efficiency standards would likely face legal opposition by manufacturers. The benefits of such a massive-scale efficiency plan do not outweigh the economic burden, even with decreased energy costs for consumers.**

*The Texas Energy Project is a project of the Texas Conservative Coalition Research Institute (TCCRI), a public policy research organization based in Austin, Texas. See [txenergyproject.org](http://txenergyproject.org) and [txccri.org](http://txccri.org) for more information.*

## Endnotes

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- i “Plan for Climate Change and Environmental Justice: Joe Biden” Joe Biden for President, October 2020 <https://joebiden.com/climate-plan/>
- ii “Sources of Greenhouse Gas Emissions” Environmental Protection Agency, December 2020 <https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions>
- iii “The good and bad of Joe Biden’s \$2 trillion climate change plan: Bjorn Lomborg” Orange County Register, October 2020 <https://www.ocregister.com/2020/10/13/the-good-and-bad-of-joe-bidens-2-trillion-climate-change-plan-bjorn-lomborg/>
- iv “An Analysis of the Biden Climate Plan” Carbon Switch, January 2021 <https://carbonswitch.co/an-analysis-of-joe-bidens-climate-plan>
- v *Ibid.*
- vi *Ibid.*
- vii “How Good Intentions Backfire: Negative Effects of Federal Environmental Policies” Jordan Lofthouse, Utah State University Institute of Political Economy, October 2016 [https://www.strata.org/pdf/good\\_intentions/good\\_intentions\\_full.pdf](https://www.strata.org/pdf/good_intentions/good_intentions_full.pdf)