# Impacts of Federal Climate Legislation

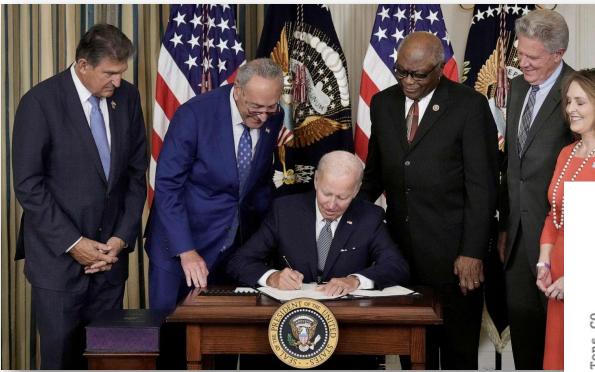
## Environmental and Energy Study Institute Briefing 2 November 2022



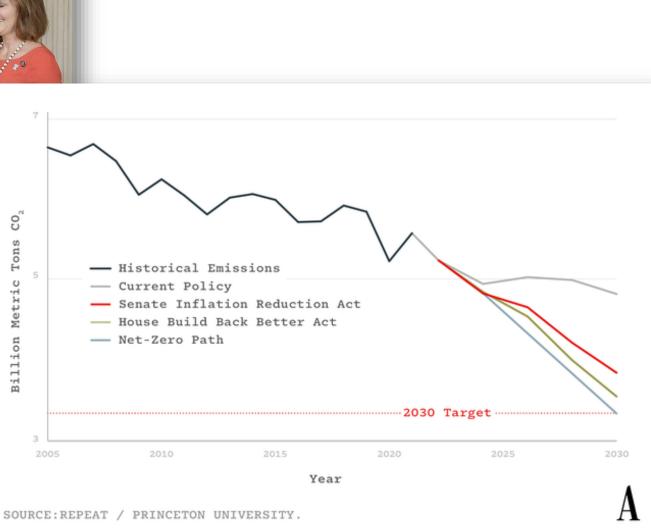
## Erin Mayfield, Ph.D.

Hodgson Family Assistant Professor of Engineering Director, Sustainable Transitions Lab and Clinic



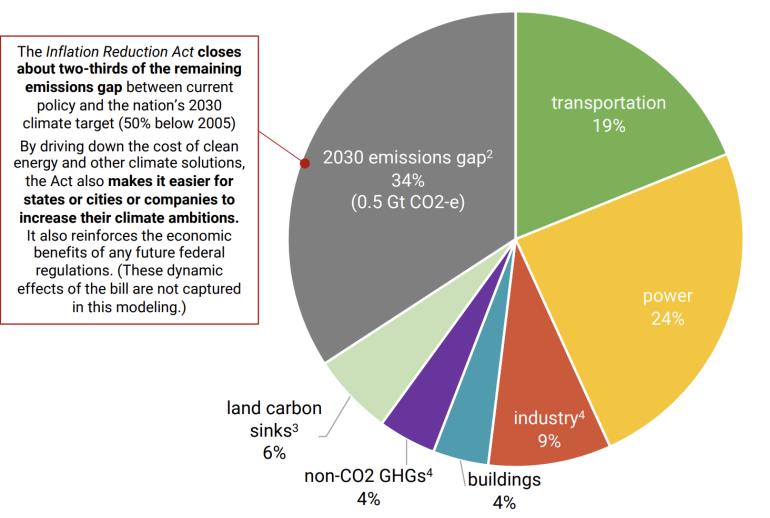


Inflation Reduction Act of 2022 has the potential to reduce emissions by 40% below 2005 levels



## Contributions to Additional Net U.S. Greenhouse Gas Emissions Reductions Below Current Policy Needed to Reach 2030 Climate Target

percentage of net emissions reductions relative to Current Policy (including the Bipartisan Infrastructure Law) to reach 50% below 2005 levels (-1.5 Gt CO2e)



#### Senate Inflation Reduction Act

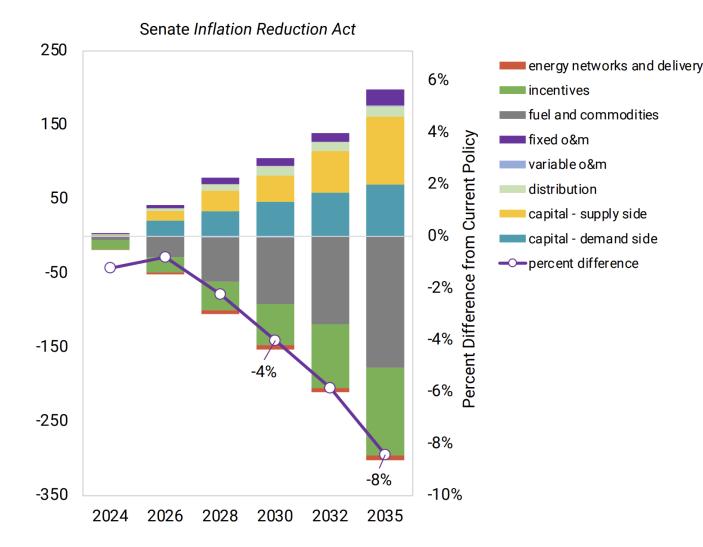
## Annual Capital Investment in Energy Supply Related Infrastructure billion 2022 USD per year

**Current Policy** (including Bipartisan Infrastructure Law) Senate Inflation Reduction Act 900 ■ other biofuels and synthetic fuels 800 hydrogen CO2 transport & storage 700 fossil power w/ccs ■ fossil power nuclear 600 wind solar 500 transmission 400 300 200 100 0 2024 2026 2028 2030 2032 2035 2024 2026 2028 2030 2032 2035

The Inflation Reduction Act could drive over \$4.1 trillion in cumulative capital investment in new American energy supply infrastructure over the next decade (2023-2032).

#### For more info: <a href="https://repeatproject.org/">https://repeatproject.org/</a>

#### Change in Annual U.S. Energy Expenditures vs Current Policy billion 2022 USD

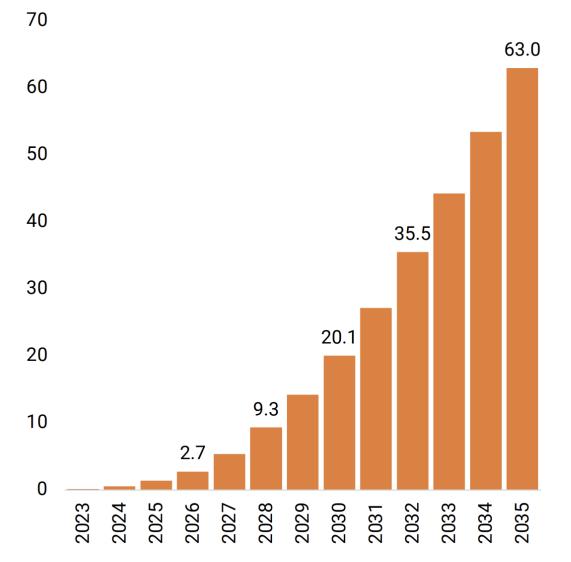


Enacting the Inflation Reduction Act would lower annual U.S. energy expenditures by at least 4% in 2030, a savings of nearly \$50 billion dollars per year for households, businesses and industry. That translates into hundreds of dollars in annual energy cost savings for U.S. households.

Tax credits, rebates, and federal investments in the Act will shift costs from energy bills to the progressive federal tax base, lower the cost of electric and zero emissions vehicles, heat pumps, and efficiency upgrades for individuals and businesses, and finance investments in energy productivity improvements and carbon capture equipment by industry.

### **Cumulative Avoided Premature Deaths vs Current Policy**

Thousand avoided moralities

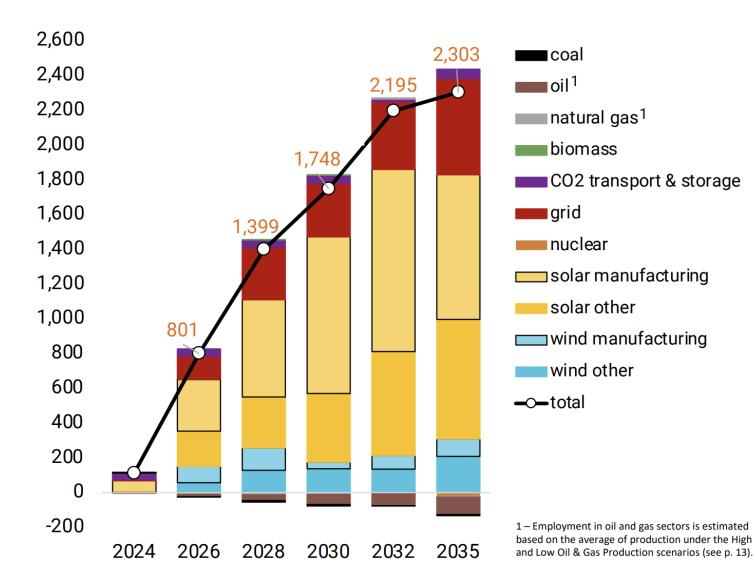


**Enacting the Inflation Reduction** Act could avoid over 35,000 premature deaths (\$315 billion in avoided damages) over the next decade.

For more info: <a href="https://repeatproject.org/">https://repeatproject.org/</a>

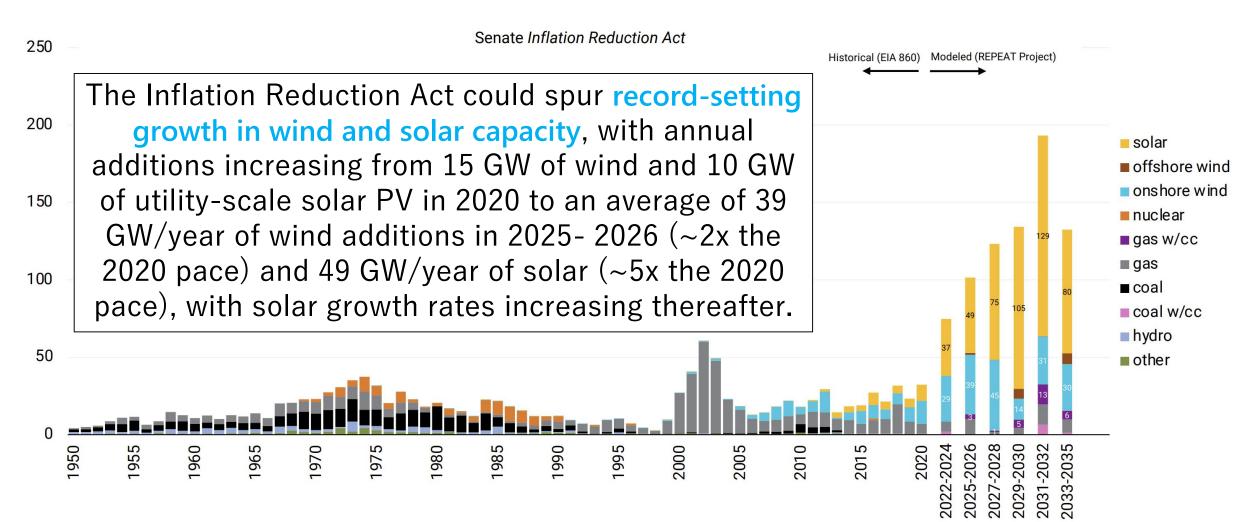
## Annual Supply-Side Employment

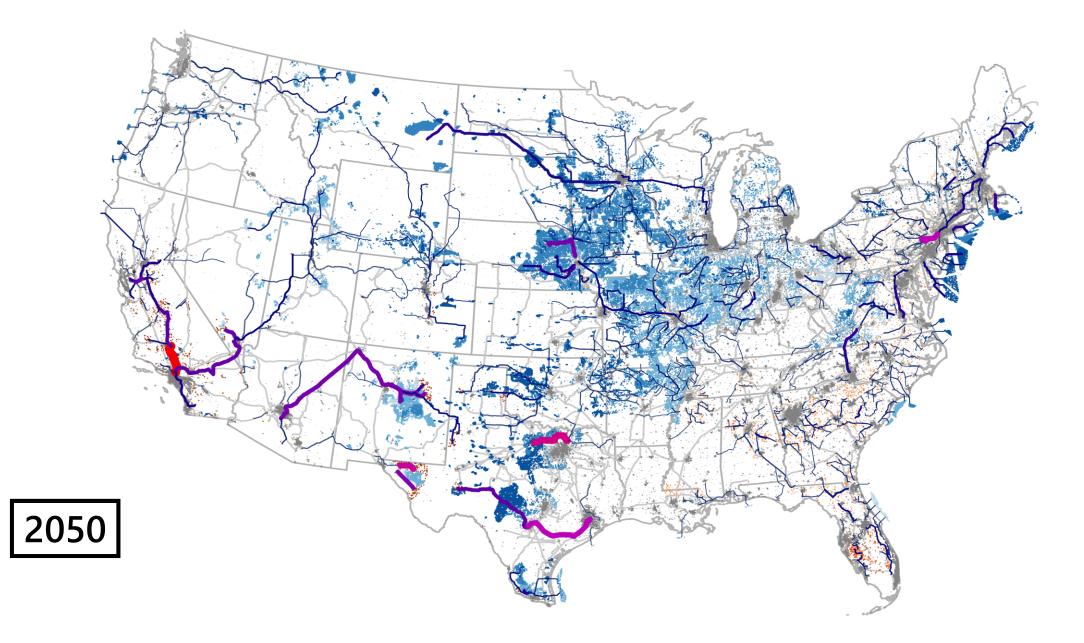
Thousand jobs



Enacting the Inflation Reduction Act could create over 1.7 million more energy supply-related jobs by 2030.

Historical Annual Capacity Additions vs. Modeled Annual Average Capacity Additions gigawatts/year





#### For more info: netzeroamerica.princeton.edu

## Thank you.

## Erin Mayfield, Ph.D.

- ⊠ mayfield@dartmouth.edu
- www.erinmayfield.com
- 🎔 @ErinNMayfield

