

How Climate Change Policies Impact Co2 Emissions

From Paper: **Reduction in greenhouse gas emissions from national climate legislation**

- Climate change laws and policies have cut global CO₂ emissions by 38 Gt over two decades.
- An additional 4 GtCO₂e in other greenhouse gases were avoided, summing to nearly one year's global emissions.
- In 2016, CO₂ emissions were 5.9 GtCO₂ lower than they would have been without climate action.
- The study used data from 133 countries and 2,394 country-year observations to estimate the impact of climate legislation.
- Climate policies have particularly stabilized emissions in industrialized regions like the OECD and EU.
- Effective climate governance requires strong legal frameworks and disciplined implementation.
- Future policies must be more robust and better implemented to meet Paris Agreement goals.

Sources:

- [Grantham Research Institute](#)
- [Nature Climate Change](#)

From Paper: **How climate policy commitments influence energy systems and the economies of US states**

- U.S. states have led the charge in enacting diverse climate policies over the past two decades, including market restructuring for electricity, non-fossil fuel usage standards, pollution limits, and incentives for renewable energy technologies.
- The paper advances research by analyzing state climate policy designs' nuances and their comprehensive impact, moving beyond binary or additive assessments.
- A climate policy index was developed to encapsulate a wide range of policy instruments, capturing the variability in states' climate policy commitments and designs.
- A 1 standard-deviation increase in climate policy stringency correlates with a 5% decrease in CO2 emissions from the electricity sector and a 2% decrease across the economy.
- The study found no evidence that stronger climate policies lead to increased renewable energy production or decreased fossil fuel energy production. Instead, there's an association with overall reductions in electricity consumption..
- Importantly, the research did not find adverse effects on state economies from stringent climate policies, such as job losses, wage depression, GDP growth stunting, or increased electricity prices.
- Despite these positive outcomes, the analysis suggests current state policies may not be sufficient to meet the Paris Climate Accord targets, requiring more substantial CO2 emission reductions.

Source: [Nature Communications](#).