CLIMATE LEADERSHIP COUNCIL

Economic Impacts of the Carbon Dividends Plan Compared to Regulations Achieving Equivalent Emissions Reductions

From the
Climate Leadership Council

Part One:

BACKGROUND AND KEY FINDINGS

Economists are virtually unanimous that a nationwide carbon fee is the most cost-effective way to lower carbon emissions. To underscore this point, more than 3,500 economists signed onto the Economists' Statement on Carbon Dividends organized by the Climate Leadership Council in 2017, calling for an economy-wide carbon fee to address climate change.

To explain this broad preference for pricing carbon, the Council commissioned a study comparing a real world regulatory scenario to its carbon dividends plan, which centers on a steadily rising carbon price whose revenues are returned to the American people. The purpose of the study was to to find out how efficient it would be to achieve similar emissions reductions through a combination of regulations and mandates versus the Council's plan.

By 2036, annual consumption per household is $1,260 higher with this pricing approach than is projected under the regulatory scenario.

The question is an important one: transitioning to a net-zero emissions economy by mid-century will require the United States to achieve deep emissions cuts with limited societal resources. An overly costly approach risks losing the public support that is necessary to address climate change over the long haul. By contrast, an approach that is less disruptive to the economy is more likely to remain popular.

According to the study by NERA Economic Consulting, a carbon dividends approach that achieves the same emissions reductions as the regulatory approach offers much better economic outcomes. **While both approaches cut emissions by roughly half by 2036, the carbon dividends approach results in an additional $190 billion per year in GDP, on average.** As both policies drive deeper emission cuts, the gap widens further: by 2036, GDP is $420 billion higher under the carbon dividends approach.

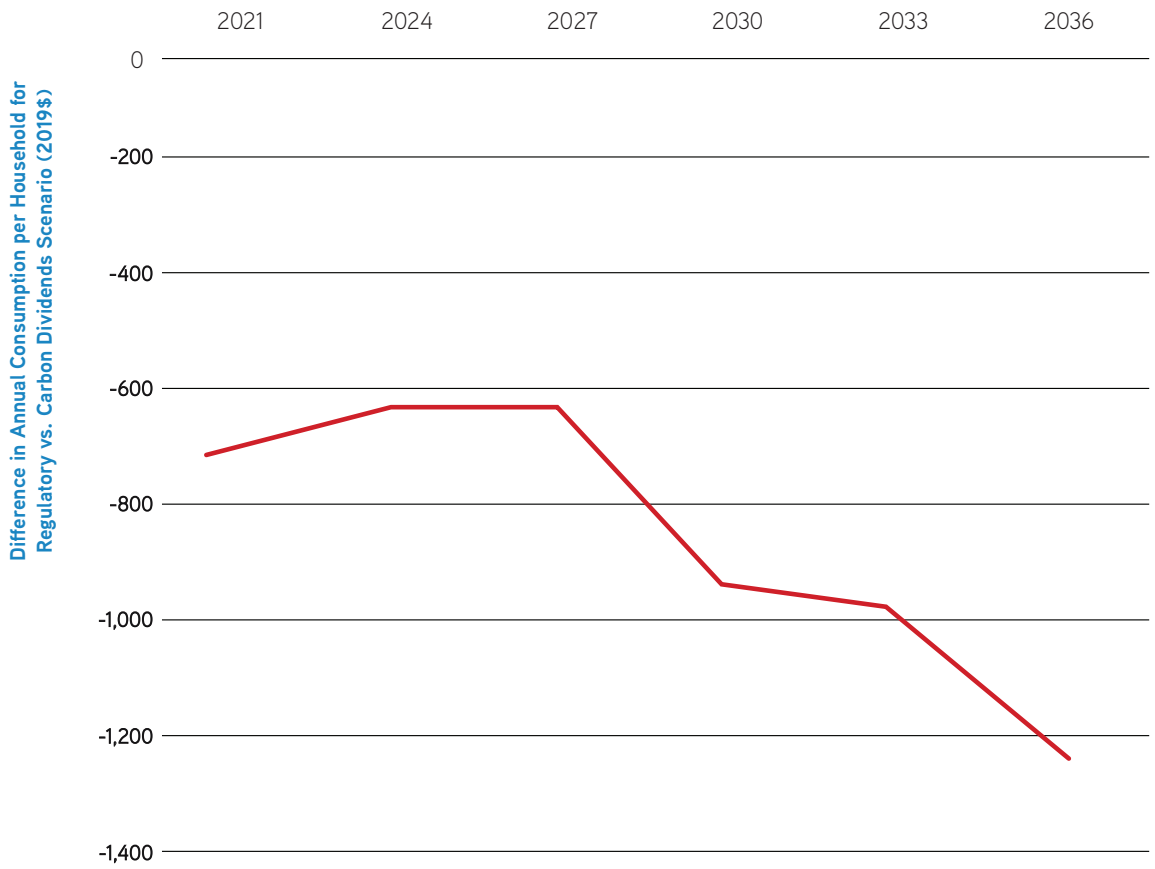
The superior cost-effectiveness of the carbon dividends plan translates into greater consumption for households. By 2036, annual consumption per household is $1,260 higher with this pricing approach than is projected under the regulatory scenario.

The study attributes these findings to the fact that a unifying price signal drives decisions across the entire economy toward reduced emissions, ensuring that the most-cost effective solutions are adopted. In essence, an economy-wide carbon price promotes all sectors of the economy working together to lower emissions. By contrast, a regulatory approach is by its nature siloed, forcing some sectors to make higher-cost reductions, while neglecting to capture lower-cost options in other sectors.

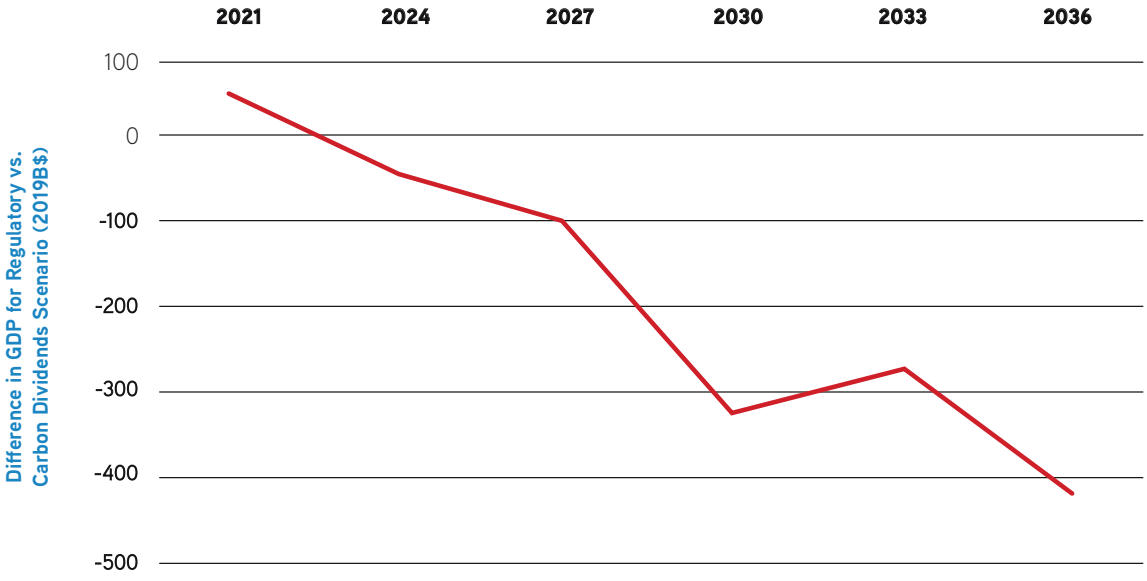
The carbon dividends plan has additional advantages. First, by returning all the net revenue from the carbon fee to households, it ensures that most lower- and middle-income households collect more in dividends than they pay out in increased energy costs. Second, it enables a border carbon adjustment (BCA) to maintain the competitiveness of U.S. businesses. As the study shows, the inclusion of a BCA would increase the output of U.S. energy-intensive manufacturers by $119 billion per year.

The scale and speed of the climate challenge will certainly require a combination of tools and approaches, including regulation. But to meet deep decarbonization goals, it's important to recognize that the single best and most cost-effective tool we have for reducing emissions is an economy-wide price on carbon.

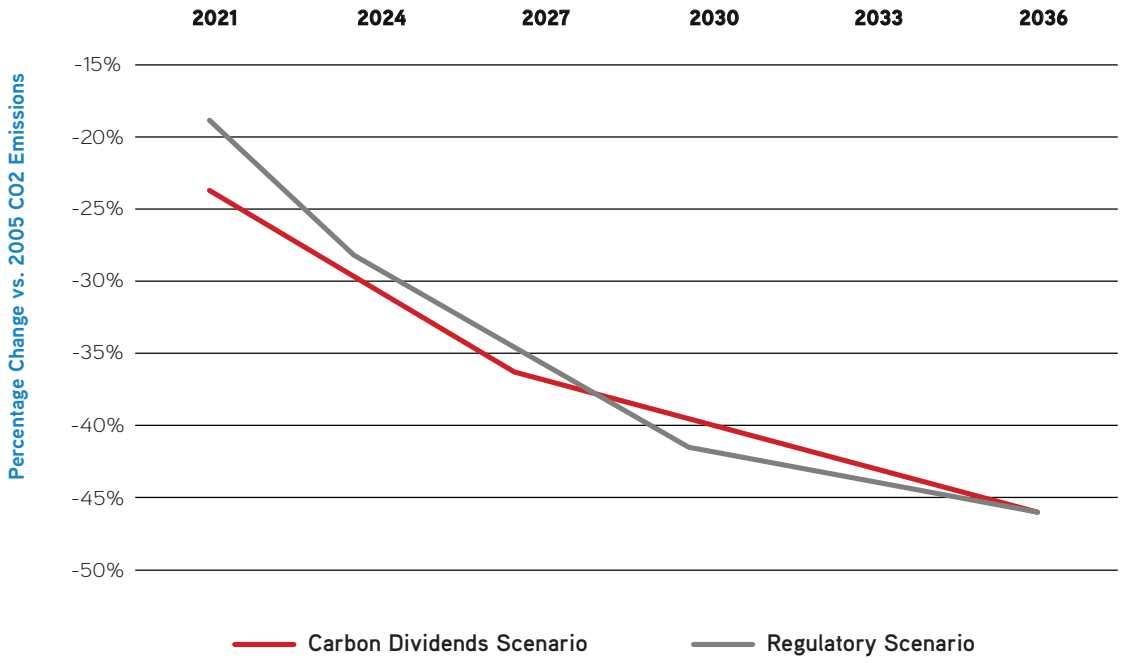
Gap in Annual Consumption per Household Between Regulatory Scenario and Carbon Dividends Scenario



Gap in GDP Between Regulatory Scenario and Carbon Dividends Scenario



Percentage Change in CO2 Emissions Relative to 2005 Levels



Part Two:

WHY A CARBON PRICE IS SO MUCH MORE COST EFFECTIVE

- A unifying carbon price covers the whole economy, driving businesses and households to find the most cost-effective emissions reductions, while a regulatory approach can only focus on specific sectors. The flexibility of the carbon fee approach becomes even more valuable over time as it becomes harder to extract more emissions reductions from the economy.

- Sector-specific regulations often lack the power of a unifying carbon price to prioritize low-carbon versus merely energy efficient energy sources. For example, energy efficiency standards applied to different energy sources reduce energy use across the board but do not incentivize shifts from higher- to lower-carbon sources.

- This shortcoming is compounded by the fact that retail electricity rates are projected to rise more under the regulatory scenario, discouraging one of the most cost-effective emissions reductions: electricification with increasingly low-carbon electricity.

- A carbon price approach will remain less costly no matter what attempts are made to modify the specific provisions of a regulatory policy. That's because a uniform carbon price naturally guides the economy to the most cost-effective emissions reductions under any set of future market or technology conditions.

Part Three:

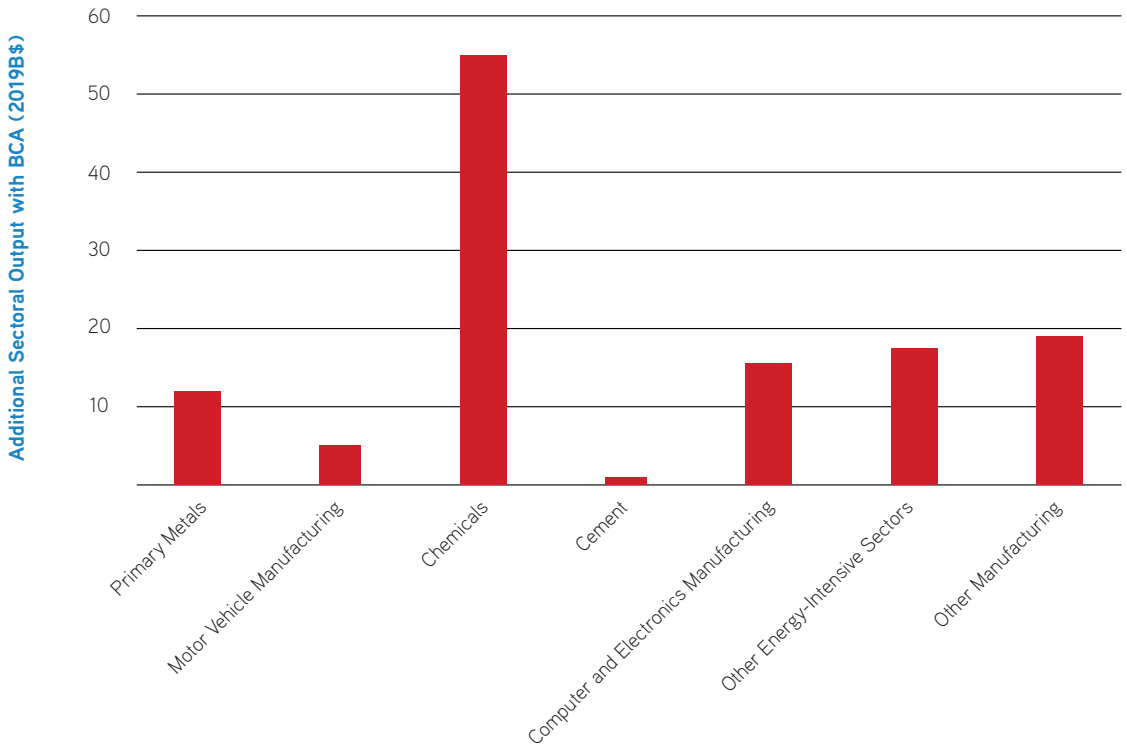
A CARBON FEE CAN BE PAIRED WITH A BORDER CARBON ADJUSTMENT TO BOOST ECONOMIC OUTPUT

Of the two approaches, only the carbon dividends model allows for a system of BCAs that will enhance the competitiveness of U.S. manufacturers, boosting overall economic output. BCAs create a level playing field between domestic industries and manufacturers overseas who face laxer environmental standards.

BCAs are an important driver of the higher economic output in the carbon dividends model. **Applying BCAs to seven manufacturing sectors results in $119 billion higher output per year by 2036 under the carbon dividends scenario than would be the case without them, NERA found.**

A BCA system is almost impossible under a regulatory approach because of the difficulty of quantifying the financial effect of regulation on a particular product.

Difference in Sectoral Output Between Carbon Dividends Scenario with BCA vs. Same Scenario without BCA



Part Four:

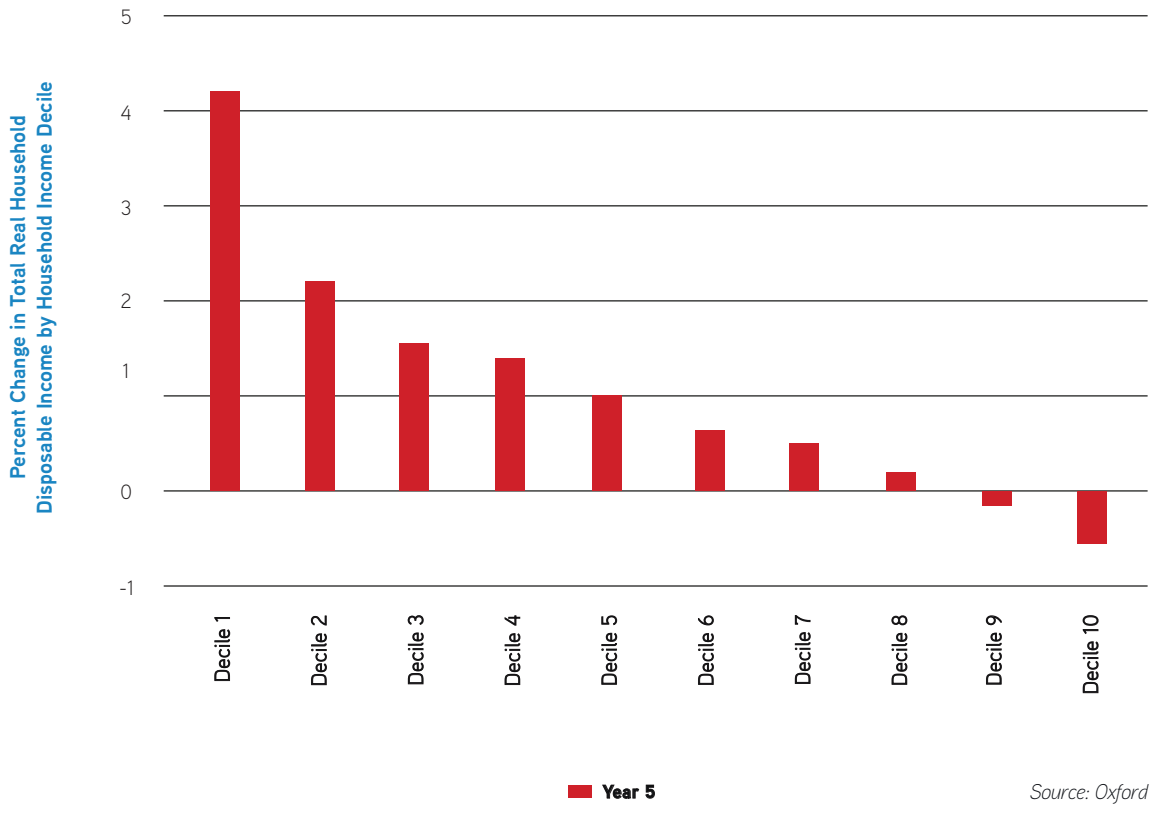
ONLY A CARBON FEE PRODUCES REVENUE THAT CAN BE RETURNED TO FAMILIES

Regulations impose costs but provide no revenues that can be used to help families to meet those costs, creating a regressive outcome.

A carbon fee generates revenue that can be cycled back to households to offset energy price increases, resulting in middle- and lower-income households actually coming out ahead.

Under the carbon dividends plan, all the net revenues from the carbon fee are returned to American households in equal quarterly checks. A family of four can expect to receive about $2,000 a year, according to the Council's projections. Eight in ten households—including the least well-off ones—will take in more, on average, in carbon dividends than they will pay in increased energy prices, a study by Oxford Economics found.

Impact of Carbon Dividends on U.S. Family Incomes



Source: Oxford Economics

METHODOLOGY

This study by NERA compares the relative economic impacts of two different approaches for achieving an equivalent amount of economy-wide CO_2 emissions reduction in the U.S. from 2021 through 2036. The first scenario is based on the carbon dividends plan promoted by the Council, and the second reflects a set of regulations typically proposed as alternatives to carbon pricing. The economic impacts of each scenario have been projected using NERA's macroeconomic model of the U.S. economy.