

NET-ZERO CLIMATE-CONTROL POLICIES WILL FAIL THE FARM



By Trevor W. Lewis and M. Ankith Reddy



ECONOMIC RESEARCH CENTER
at THE BUCKEYE INSTITUTE

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TABLE OF CONTENTS

Executive Summary	2
Introduction	6
Lessons from Around the World	9
Europe: High Prices for Energy, Manufacturing, and Food	
Sri Lanka: Fertilizer or Famine	
America’s Net-Zero Experiment: Dire Economic Consequences	17
Impacts of Cutting U.S. Oil and Gas Supplies	
Choking Off Chemicals’ Feedstock	
Green New Deal Can’t Power Farms	
Environmental, Social, Governance Reporting Requirements: Making Food More Expensive	25
Quantifying Carbon Costs of Environmental, Social, Governance: The Methodology	27
Quantifying Carbon Costs of Environmental, Social, Governance: The Results	32
Recommendations for Avoiding the Failure of Net-Zero Policies	39
Conclusion	43
About the Authors	44

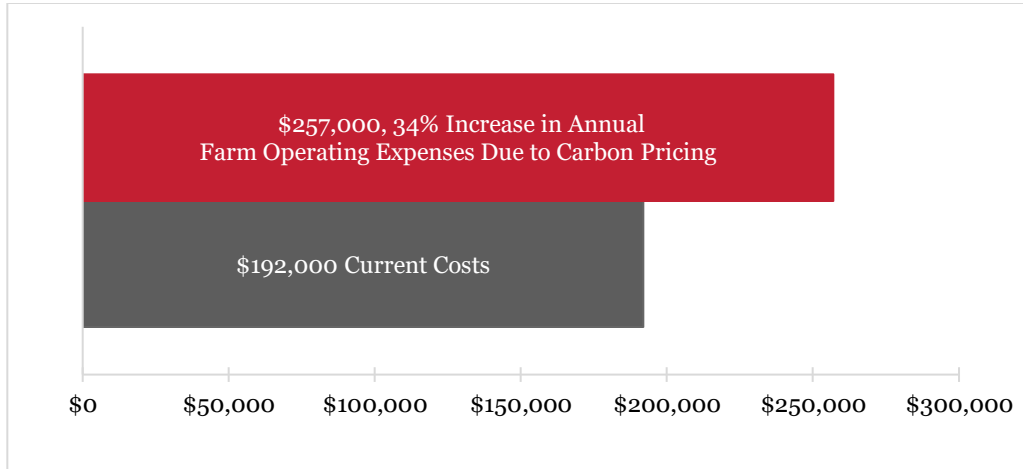
EXECUTIVE SUMMARY

Federal policymakers are pursuing expensive climate-control and emissions policies that have largely failed in Europe—and the American farm and household will be required to pay for them. President Trump withdrew the United States from the ideological Paris Climate Accords that burden U.S. industry with strident carbon emissions reduction efforts theoretically designed to reach unreachable emissions objectives. President Biden rejoined the accords on his first day in office, and his administration has pursued a quixotic goal of “net-zero” carbon emissions by regulation and legislation ever since. After recommitting the United States to the net-zero climate-control agenda, the president and Congress revived significant misguided features of the once-failed “Green New Deal” through the Inflation Reduction Act. Then, the Biden administration used executive power to restrict oil and natural gas supply, make chemical feedstocks more expensive to buy and produce, and enlisted the Securities Exchange Commission to require new “environmental, social, governance” or ESG reports to track carbon emissions from farm to table. These federal initiatives and requirements will prove expensive and economically destructive here—just as they have been in Europe.

To better appreciate the true costs that American farms and households will likely pay for the Biden administration’s net-zero policies and objectives, The Buckeye Institute’s Economic Research Center developed a model corn farm that must play by the government’s new carbon emissions rules. The farm’s operational costs, as expected, all rose significantly. Diesel fuel needed for trucks, tractors, and combines became more expensive. As did propane needed to power grain dryers and heat barns. And prices for the nitrogen fertilizer needed to grow crops rose, too. The economic model then traced how those additional operating costs affected food prices for the American consumer. Once again, prices rose to compensate farmers for the government’s actions. The results are predictable and unsurprising, but many U.S. policymakers seem unwilling to address or even acknowledge them. That has to change, or the United States will face dire economic consequences instead.

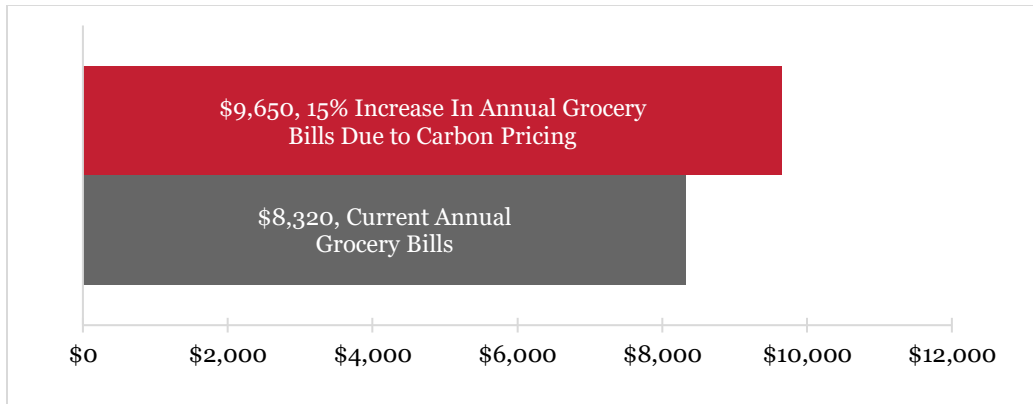
Complying with net-zero emissions policies and corporate ESG reporting requirements will increase prices of farm inputs, the costs of which will ultimately be passed onto consumers at grocery stores and restaurants.¹ Farmers will see costs rise by at least 34 percent.

Farm Operating Expenses Under ESG



Pricing in food’s carbon emissions will increase an American family of four’s household grocery bills \$1,300 per year.

Increase in Annual Grocery Bills



¹ Emily Joner and Michael A. Toman, **Agricultural Greenhouse Gas Emissions 101**, Resources for the Future, September 8, 2023.

Carbon emission intensive foods like cheese and beef could increase more than 70 percent per pound.

Price Increases of U.S. Groceries

Item	Percent Increase
American Cheese	78%
Bananas	59%
Beef	70%
Bread	7%
Butter	24%
Chicken	39%
Coffee	13%
Dozen Eggs	36%
Flour	32%
Milk	9%
Oranges	3%
Pork	28%
Potatoes	22%
Rice	56%
Spaghetti	13%
Strawberries	47%
Sugar	43%

Corrective action can be taken at every level. President Biden is unlikely to decommit the U.S. from the Paris Climate Accords he just rejoined, but the next president can and should. Republicans in Congress can pursue meaningful bipartisan collaboration with Democrats from energy-producing and agricultural states to tap the brakes on runaway spending and net-zero regulations. State legislatures can limit some of the ill effects of ESG-minded activists by ensuring fair insurance and lending practices for businesses and farms. And U.S. shareholders can vigilantly hold corporate leaders and boards accountable for poor ESG-guided investment decisions and mandates that needlessly raise producer costs and consumer prices. Without taking remedial steps to fix the problems being perpetrated by international agreements and federal climate-control rules, the

American economy, businesses, farms, and consumers will pay the price, and that price must be understood.

INTRODUCTION

On President Joe Biden's first day in office, he recommitted the United States to the Paris Climate Accords,² a binding international agreement that has had devastating economic effects in Europe that will soon be replicated in America.³ The agreement, first signed by the United States in 2016, targets "net-zero" greenhouse gas (GHG) emissions, defined by the United Nations as "cutting greenhouse gas emissions to zero or as close to zero as possible, with any remaining emissions re-absorbed from the atmosphere."⁴ To achieve that target, the Biden administration agreed to reduce America's emissions by 50-52 percent by 2030 and to reach economy-wide net-zero GHG by 2050.⁵ Achieving the administration's desired decarbonized economy will require aggressive climate-emission reduction policies that drain and replace fossil fuels from every sector of the U.S. economy. The Biden administration has already begun implementing stringent regulatory policies designed to dramatically reduce carbon dioxide (CO₂) emissions from the oil, natural gas, and chemicals industries, and the administration's looming rule on "environmental, social, governance" (ESG) reporting threatens to force carbon compliance onto every other emission-intensive industry. Contrary to assurances from the U.S. Security and Exchange Commission (SEC),⁶ American agriculture, which accounts for 10 percent of America's total CO₂ emissions, will not be spared. Farmers and ranchers will need to reduce their emissions by adopting "climate smart agricultural practices (including, for example, cover crops), reforestation, rotational grazing, and nutrient management practices."⁷ Compliance with these policies will be monitored by ESG's new statutory carbon emissions reporting requirements. These policies and mandates have costs and benefits that have not been thoroughly examined or understood and that oversight needs correcting.

Ostensibly to curb rampant inflation following the pandemic lockdowns, Congress and the Biden administration worked together to enact the Inflation Reduction Act

² **The United States Officially Rejoins the Paris Agreement**, press statement from Secretary Antony J. Blinken, U.S. Department of State, February 19, 2021.

³ **The Paris Agreement**, United Nations Climate Action (Last visited November 2, 2023).

⁴ **What is Net Zero?**, United Nations Climate Action (Last visited November 2, 2023).

⁵ The White House, **Fact Sheet: President Biden Sets 2030 Greenhouse Gas Pollution Reduction Target Aimed at Creating Good-Paying Union Jobs and Securing U.S. Leadership on Clean Energy Technologies**, April 22, 2021.

⁶ Mark Segal, **SEC Chair Says Climate Disclosure Rule Feedback Pushes Back on Scope 3 Reporting as Less Developed**, Unreliable, ESG today, September 28, 2023.

⁷ **Nationally Determined Contribution: Reducing Greenhouse Gases in the United States: A 2030 Emissions Target**, unfccc.int, April 15, 2021.

of 2022 (IRA)—deceptively named legislation that includes much of the regulatory regime necessary for reaching the Paris Climate Accords’ net-zero emissions goals. The IRA contains massive federal subsidies for the progressive environmental agenda over the next 10 years,⁸ effectively reviving the failed “Green New Deal” (GND) introduced by Rep. Alexandria Ocasio-Cortez in 2019. The GND had proposed a 10-year plan to achieve net-zero greenhouse gas emissions through various means, including pressing farmers and ranchers to “remove pollution and greenhouse gas emissions from the agricultural sector as much as is technologically feasible.”⁹ Following that lead, the IRA includes more than \$43 billion in U.S. Department of Agriculture (USDA) subsidies to carry out a “green” transition for America’s farms and ranches.¹⁰

The Biden administration has also adopted the Green New Deal’s goal of “ensuring that the Federal Government takes into account the complete environment and social costs and impacts of emissions.”¹¹ To do that, the administration has leaned on sympathetic activist investors and encouraged the SEC to pursue ESG policy-making through new reporting requirements that will put the burden of monitoring, reporting, and offsetting emissions on farmers and ranchers. ESG-reporting obligations will force new emissions monitoring protocols and computer software to track carbon emissions associated with virtually every aspect of the farm. Farmers rely on diesel fuel to drive their equipment; propane powers their grain dryers and heats their barns; and nitrogen fertilizer, weed killers, and bug sprays are all synthesized from natural gas and oil byproducts, which makes agriculture one of the most fossil-fuel-dependent industries worldwide. The new ESG requirements will be expensive for farmers to produce and maintain—and that cost will be realized by consumers.

Europe, fully committed to the Paris Climate Accords’ decarbonization plan, provides a forecast of the agricultural and economic consequences likely to result from the ESG-reporting agenda. After implementing strict ESG-reporting mandates, European banks, for example, became reluctant to lend to farmers with high nitrogen and methane emissions.¹² Reduced credit strained family farms. Europe’s emissions cap-and-trade policies exacerbated the problem and helped

⁸ Joint Committee on Taxation, **Estimated Revenue Effects of Division A, Title III of H.R. 2811**, April 26, 2023.

⁹ U.S. House of Representatives, **H. Res. 109**, February 7, 2019.

¹⁰ The White House, **Inflation Reduction Act Guidebook**, last updated September 21, 2023.

¹¹ U.S. House of Representatives, **H. Res. 109**, February 7, 2019.

¹² **Net-Zero Banking Alliance**, United Nations Environment Programme (Last visited November 3, 2023); Vincent Gauthier, **How banks can move toward net zero agriculture portfolios**, Environmental Defense Fund, February 24, 2022; Virginia Furness, **UK farmers hungry for climate finance but banks want more data**, Capital Monitor, January 25, 2022.

put generational farmers out of business.¹³ Those policies also raised prices of farm-related energy and fertilizer, which, in turn, raised the price of food and groceries.¹⁴ Europe immolated its farming industry and made the continent's food supply more expensive and less secure.

Adopting similar policies in the United States will yield similar results. A policy that encourages or requires an electric farm truck, for instance, will raise monthly insurance premiums by 25 percent, increase maintenance costs, and decrease productivity. And the immense weight of electric tractors causes severe damage to soils, effectively and ironically negating the benefits of preferred sustainable farming practices like no-till and cover crops. Relying more heavily on renewable power sources will destabilize the power grid and raise energy prices for farm incubation and refrigeration. ESG requirements will add the cost of carbon to every agricultural act—fertilizer prices will rise 27 percent, grain drying costs 38 percent—and 22 percent of a U.S. farm's expenses will be paying a de facto carbon-reduction tax.

As in Europe, higher farming costs to comply with net-zero emissions policies will be passed along to consumers who will pay higher prices at grocery stores and restaurants.¹⁵ In the wake of the Inflation Reduction Act, U.S. food prices rose 12.9 percent in 2022,¹⁶ and American households can expect to pay an additional \$1,300 per year for carbon emissions from farms. Historic inflation rates have plagued the U.S. economy since President Biden took office. Rejoining the Paris Climate Accords and pursuing an activist environmental agenda that imposes expensive regulatory requirements to meet aggressive emissions-reduction targets have only added to the cost of living in the United States—and those costs, especially for food, are expected to rise if the administration continues to follow the European net-zero trend. Farmers and families will struggle to make ends meet, and a progressive U.S. climate policy will be partly to blame. Before continuing down this perilous path, federal regulators and lawmakers should learn the economic lessons from the failed net-zero agricultural policy experiments in Europe and Sri Lanka.

¹³ **Farms and Farmland in the European Union – Statistics**, Eurostat Statistics Explained, November 2022.

¹⁴ **EU Agricultural Prices Continued to Rise in Q2 2022**, Eurostat, September 30, 2022.

¹⁵ Emily Joner and Michael A. Toman, **Agricultural Greenhouse Gas Emissions 101**, Resources for the Future, September 8, 2023.

¹⁶ Bureau of Labor Statistics, **Consumer spending increased 9.0 percent in 2022**, October 4, 2023.

LESSONS FROM AROUND THE WORLD

Europe: High Prices for Energy, Manufacturing, and Food

Net-zero policies require industries across economic sectors to reduce carbon emissions. But in setting net-zero goals and standards, European policymakers largely ignore the critical role that the so-called fossil fuels still play in modern economies. Oil consumption and gross domestic product (GDP), for example, are almost perfectly positively correlated.¹⁷ The United States is the world's largest consumer of oil and natural gas,¹⁸ and it has the highest GDP.¹⁹ Likewise, China is the world's second-largest and third-largest single-nation consumer of oil and natural gas, respectively,²⁰ and it has the world's second-largest economy.²¹ The fossil fuel-to-GDP correlation is unsurprising inasmuch as oil and natural gas provide the foundation for chemical and agricultural industries, both drivers of economic growth. The European Union is both the world's third-largest economy²² and consumer of oil.²³ But, as if unaware of this correlation and economic reality, European leaders have pursued unrealistic policy plans and objectives in the name of eliminating carbon-based emissions. And since introducing various emissions reduction strategies, like “cap-and-trade,” which try to put a price on emissions, Europe's economy, in general, has struggled to achieve meaningful economic growth above zero percent²⁴, and economies in some member states, like Germany, have even begun shrinking.²⁵

¹⁷ William E. Rees, **The Human Ecology of Overshoot: Why a Major ‘Population Correction’ is Inevitable**, *World*, Volume 4, p. 509 – 527.

¹⁸ **Frequently Asked Questions: The Top 10 oil consumers and share of total world oil consumption in 2021**, U.S. Energy Information Administration (Last visited October 4, 2023); **GDP (current US\$)**, World Bank national accounts data (Last visited November 3, 2023).

¹⁹ **Frequently Asked Questions: The Top 10 oil consumers and share of total world oil consumption in 2021**, U.S. Energy Information Administration (Last visited October 4, 2023); **GDP (current US\$)**, World Bank national accounts data (Last visited November 3, 2023).

²⁰ **Frequently Asked Questions: The Top 10 oil consumers and share of total world oil consumption in 2021**, U.S. Energy Information Administration (Last visited October 4, 2023); Ziwei Zhang, Shangyou Nie, and Erica Downs, **Inside China's 2023 Natural Gas Development Report**, Center on Global Energy Policy, September 11, 2023.

²¹ **GDP (current US\$)**, World Bank national accounts data (Last visited November 3, 2023).

²² Pallavi Rao, **These are the EU countries with the largest economies**, *World Economic Forum*, Feb. 1, 2023.

²³ **Oil Refining**, European Commission (Last visited November 16, 2023).

²⁴ Balazs Koranyi, **Europe's problems are far bigger than a shallow recession**, Reuters, November 14, 2023.

²⁵ **Economic Forecast for Germany**, European Commission (Last visited November 16).

Under the Paris Climate Treaty, the European Union (EU) pledged to reduce emissions 55 percent below 1990 levels by 2030. These policies included establishing an emissions trading scheme, carbon border adjustment mechanisms (CBAM), closing natural gas fields, curbing nitrogen fertilizer use, and shutting down generational farms. In 2003, the EU introduced a “cost-effective” cap-and-trade program²⁶—known as the EU Emissions Trading Scheme (EU ETS)—to create a market for carbon emissions. Under that scheme, the EU creates and allocates allowances or “credits” to member nations. The total number of credits represents the maximum emissions the European economy is permitted to emit in that year. Each year, ETS decreases the total number of emission credits available to member nations.²⁷ Member countries and industries may purchase these allowances, effectively creating a market for emissions in which buyers bid on available credits, and prices rise as the credit supply dwindles.²⁸ Incremental steps phase in the program. Phase I began in 2005, and power plants and other energy-intensive industries were the first required to participate.²⁹ Phases II and III both reduced the number of credits offered and expanded the program to cover more industries and further cut emissions.³⁰

Nice in theory, the program has faced steep pragmatic hurdles. A 2019 United Nations report, for example, predicted that nearly every participating country would miss its pledged Paris Climate Agreement targets.³¹ The EU responded and demonstrated its commitment to the Paris Climate Agreement by substantially cutting the number of emissions credits offered in EU ETS Phase IV. Beginning in January 2021, Phase IV started reducing credit allowances by 2.2 percent annually. This move shrank the credit pool too quickly, pitting emitting industries against each other and sparking an expensive bidding war³² between Europe’s power plants, refineries, manufacturers, and chemical producers³³ that tripled the price of EU ETS credits from \$30 to \$90 in 2021.³⁴

²⁶ **EU Emissions Trading System (EU ETS)**, European Commission (Last visited November 2, 2023); **Development of EU ETS (2005 – 2020)**, European Commission (Last visited November 2, 2023).

²⁷ **Development of EU ETS (2005 – 2020)**, European Commission (Last visited November 14).

²⁸ *Ibid.*

²⁹ *Ibid.*

³⁰ *Ibid.*

³¹ Juliane Berger et al., **Emissions Gap Report 2019**, United Nations Environment Programme, November 2019.

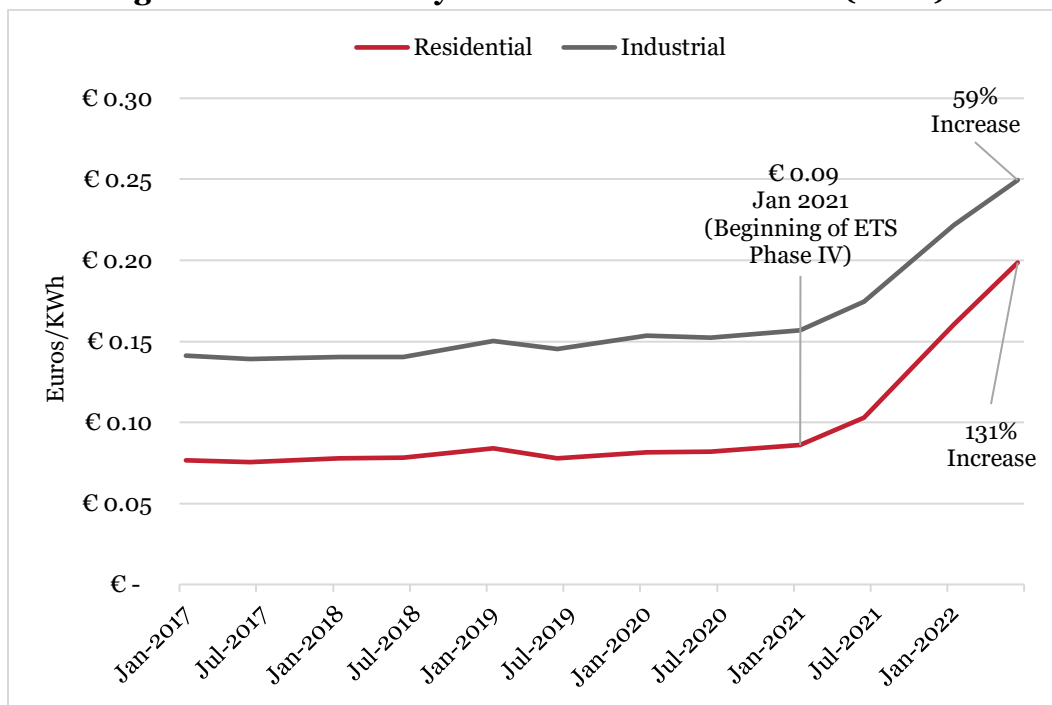
³² **Emissions cap and allowances**, European Commission (Last visited November 2, 2023)

³³ **Emissions Trading Scheme – Stationary Installations**, Ireland Environmental Protection Agency (Last visited November 2, 2023); Martina Iginì, **EU Carbon Price Tops Symbolic €100/Tonne For the First Time**, Earth.org, February 24, 2023.

³⁴ **EU Carbon Permits**, Trading Economics (Last visited November 15, 2023).

Faced with rapidly accelerating costs, Europe’s electric companies have since shouldered some of the burden while passing their higher costs on to consumers. Residential and industrial power prices rose 131 and 59 percent, respectively, between January 2021 and January 2022.³⁵ (Figure 1.) Russia’s invasion of Ukraine in February 2022 made matters worse, spiking European power prices 92 percent between June 2021 and June 2022.³⁶ Caught between poorly conceived economic policy choices and dwindling resource supply caused by geopolitical turmoil, European businesses, and families should not expect energy prices to fall anytime soon. In fact, they will likely only get worse. EU ETS credit prices are projected to reach 130 euros (\$137.8) by 2030, further tightening industry and household budgets. The “temporary” power conservation methods like cold showers and clothesline drying that many Germans experienced in summer 2022 will probably become mainstays of an electricity-poor Europe.³⁷

Figure 1: EU Electricity Prices Per Kilowatt Hour (KWh)³⁸



³⁵ **Electricity price statistics**, Eurostat (Last visited November 1, 2023); Benjamin Wehrmann, **What German households pay for electricity**, Clean Energy Wire, January 16, 2023.

³⁶ **Electricity price statistics**, Eurostat (Last visited November 1, 2023)

³⁷ Philip Oltermann, **German Cities Impose Cold Showers and Turn off Lights amid Russian Gas Crisis**, *The Guardian*, July 28, 2022.

³⁸ **Electricity price statistics**, Eurostat (Last visited November 1, 2023)

Heavy-handed climate policies have also made European companies less competitive internationally. Germany's chemical fertilizer industry, for example, has been hit especially hard by rising EU ETS credit prices and taxes that have driven up domestic production costs to facilitate stringent emissions reduction policies. The response by German manufacturing and chemical companies: relocate. German firms have now invested \$650 billion, moving their operations to the United States. But Germany supplies significant chemical and manufactured goods to Europe, which means that more of those products must now be imported.

The EU responded to German offshore fertilizer production in the United States by levying the world's first carbon tariff³⁹ in October 2023. CBAM⁴⁰ is a tax added to imported goods to prevent companies from manufacturing goods less expensive in countries with lower emission standards.⁴¹ Europe's CBAM stops European chemical companies from shipping cheaper U.S.-produced fertilizer back to Europe. But the tariff simply raises prices that many European households and farmers will have to pay for foreign-made goods and fertilizers—all in the name of paying for carbon dioxide emitted while making goods in another country.

Although European farmers are not yet required to participate in the EU ETS Phase IV program, they have not escaped the effects of Europe's climate-control regime. Several EU countries and industries have forced farmers to reduce their emissions to meet national and privately backed climate targets. European banks have begun withholding loans and funds from farmers with high GHG emissions.⁴² In 2021, the Netherlands began debating rules that would buy out certain farms in order to meet the EU-imposed emission reduction goals. And in May 2023, the EU approved the Netherlands' plan to pay \$1.61 billion and use eminent domain to acquire farms and livestock to reduce emissions.⁴³ Then, in June 2023, the Netherlands announced that it would shut down gas production at the Groningen field on October 1, 2024,⁴⁴ which will make manufacturing nitrogen fertilizer and other agro- and petrochemicals in continental Europe more expensive. Belgium also plans to restrict nitrogen fertilizer emissions, prompting Belgian farmers to

³⁹ Mitchell Beer, **Europe Launches World's First Carbon Border Adjustment Rule**, Energy Mix, October 9, 2023.

⁴⁰ **Carbon Border Adjustment Mechanism**, European Commission (Last visited November 3, 2023).

⁴¹ Raymond J. Kopp, William Pizer, and Kevin Rennert, **Carbon Border Adjustments: Design Elements, Options, and Policy Decisions**, Resources for the Future, October 10, 2023.

⁴² **Dutch gov't to buy out farmers to reduce livestock emissions**, Al Jazeera English, May 20, 2023.

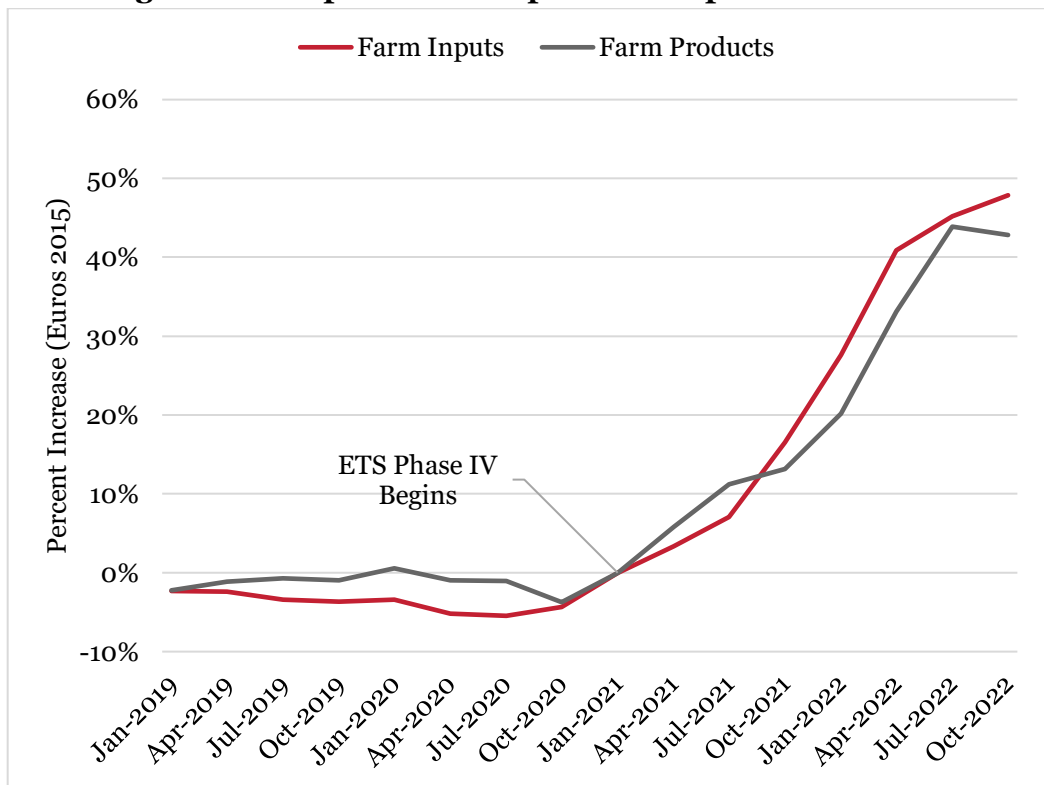
⁴³ **EU okays \$1.61 billion for Dutch government to buy out farmers, reduce nitrogen**, Reuters, May 3, 2023.

⁴⁴ **Netherlands to end Groningen Gas production by Oct 1**, Reuters, June 23, 2023.

block the capital streets with tractors and burning tires in protest. “No Farmers, No Food,” read one protester’s sign.⁴⁵

Mass livestock culls and new nitrogen fertilizer limits jeopardize Europe’s increasingly fragile food security. Since the beginning of ETS Phase IV (January 2021-December 2022), the cost of farm fertilizers and soil improvers increased 49 percent.⁴⁶ As expected, the price of farm products like cereal grains, oils, fruits, and eggs rose 42 percent. (Figure 2.)⁴⁷

Figure 2: European Farm Input and Output Price Indices



⁴⁵ Susannah Savage, **Aggro-culture: Farmers’ protest brings Brussels’ EU Quarter to a standstill**, Politico, March 3, 2023.

⁴⁶ **EU Agricultural Prices Continued to Rise in Q2 2022**, Eurostat, September 30, 2022.

⁴⁷ *Ibid.*

Over the same time, average food costs increased 22 percent. (Table 1.)⁴⁸

Table 1: Food Price Indices⁴⁹

Item	January 2021	December 2022	Percent Increase
Average Food Costs	136.7	167.2	22%
Bread/Cereals	137.3	171.7	25%
Meat	134.2	161.5	20%
Milk Cheese/Eggs	142.2	175.1	23%
Fats/Oils	124.2	208.9	68%

As Europe’s chemical companies face increasing prices for ETS credits, a state-mandated input for production, the cost of producing fertilizers has increased considerably. These companies have passed the carbon price of their fertilizer onto farmers, who have, in turn, passed most of the cost onto European consumers. The rising food prices have forced many Europeans to look abroad for more affordable international food options. In 2022, for example, the EU needed to raise its high-quality beef import quota with the United States,⁵⁰ and food imports increased generally by 32 percent due in part to declining domestic corn production.⁵¹ Ultimately, European households must pay the price for the EU’s regulatory regime, the reduced production, the more expensive imports, the tariffs, the shipping, and the foreclosed farms and factories. And with the international adjusted carbon tariff taking effect, European families will have no choice but to pay higher prices for animal proteins and dairy products. These are the results that Europe’s net-zero central planners have wrought.

⁴⁸ **Agriculture and Rural Development**, European Commission (Last visited November 16, 2023).

⁴⁹ *Ibid.*

⁵⁰ **European Union: US Beef Imports into the EU High Quality Beef Quota Increased in 2022**, U.S. Department of Agriculture, March 1, 2023.

⁵¹ **Good performance of EU agri-food trade in 2022 despite challenges**, European Commission, April 13, 2023.

Sri Lanka: Fertilizer or Famine

Carbon pricing⁵² or emissions trading schemes⁵³ are commonly seen as the most economically efficient method for reducing GHG emissions. In Europe, a large and relatively diverse landmass and economy, they led to higher food prices. But Sri Lanka shows what could happen when nitrogen and climate-control emission reduction goals are enforced on a smaller, more fragile economy: famine.

In May 2021, Sri Lankan President Gotabaya Rajapaksa claimed that chemical fertilizers posed a threat to public health and threatened the country's long history of "sustainable food systems."⁵⁴ He promptly banned the use of artificial fertilizers. That same year, President Rajapaksa relayed similarly negative feelings about chemical fertilizers at the United Nations Climate Change Summit in Scotland and justified his decision by citing emission reduction benefits: "Reactive nitrogen emissions from overuse of artificial fertilizer is a major contributor to climate change. In 2019, Sri Lanka spearheaded the Colombo Declaration on Sustainable Nitrogen Management, which seeks to halve Nitrogen waste by 2030."⁵⁵ Public health concerns and emission reduction informed the Sri Lanka policy. President Rajapaksa, for example, was historically and heavily influenced by scholar and environmentalist activist Vandana Shiva, who cheered the decision, lauding the plan to create a "poison free" world.⁵⁶ And less nitrogen fertilizer means less GHG emissions, which would help Sri Lanka meet its Paris Climate pledge to reduce emissions by 14.5 percent by 2030.⁵⁷

Nine months after the ban took effect, Sri Lanka fell into a climate policy-induced famine, with yields for some crops falling as much as 30 percent.⁵⁸ Declining crop yields contributed to food inflation, with prices ultimately rising 89 percent in

⁵² **Effective Carbon Rates 2021**, Organization of Economic Co-operation and Development, 2021; **Extended Brief on the Proposed Oil and Gas Cap**, by Andrew Leach, House of Commons, Standing Committee on Natural Resources, Parliament of Canada.

⁵³ **Emission trading systems**, Organization of Economic Co-operation and Development (Last visited November 20, 2023).

⁵⁴ Kelly Torrella, **Sri Lanka's organic farming disaster, explained**, Vox, July 15, 2022.

⁵⁵ **Speech by President Gotabaya Rajapaksa at the "World Leaders Summit of COP26", UN Climate Change Conference, Scotland, UK**, Permanent Mission of Sri Lanka to the United Nations, November 2, 2021; Ted Nordhaus, **In Sri Lanka Organic Farming Went Catastrophically Wrong**, Foreign Policy, March 5, 2022.

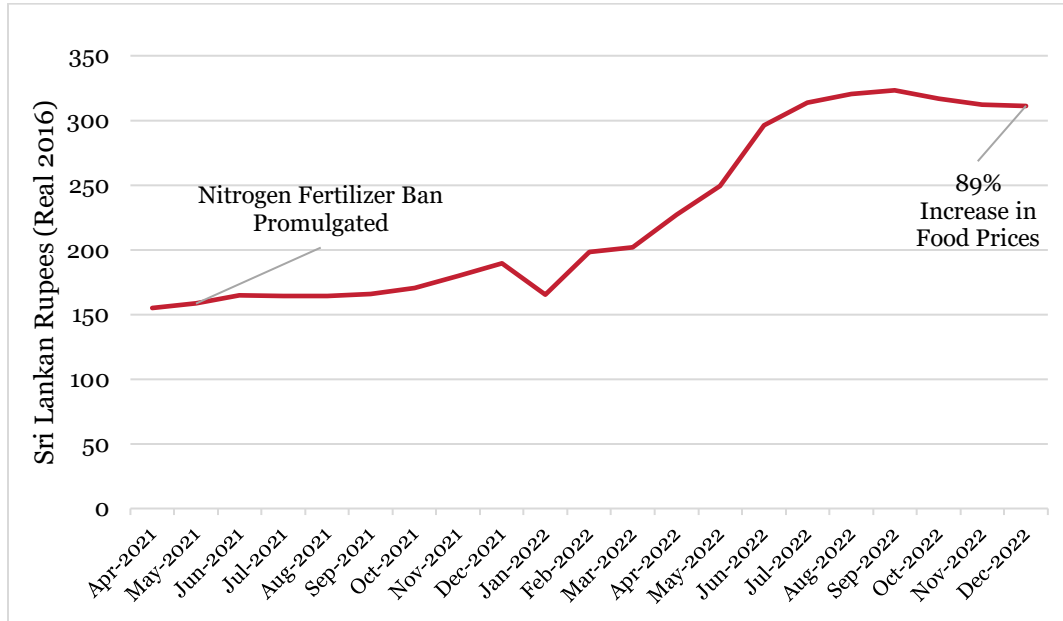
⁵⁶ Tunku Varadarajan, **Sri Lanka's Green New Deal Was a Human Disaster**, *The Wall Street Journal*, July 14, 2022.

⁵⁷ **Sri Lanka**, Climate Promise, September 2021.

⁵⁸ Chad De Guzman, **The Crisis in Sri Lanka Rekindles Debate Over Organic Farming**, *Time*, July 13, 2022.

2022.⁵⁹ (See Figure 3.) And the rising food costs have induced famine. A quarter of Sri Lankan adults have skipped meals so their children can eat. And half of Sri Lankan families have had to let their children go hungry.⁶⁰

Figure 3: Sri Lanka Food Costs⁶¹



⁵⁹ Shyamika Jayasundara-Smits, **Sri Lanka’s disastrous 2022 ends with a sliver of optimism**, East Asia Forum, January 13, 2023.

⁶⁰ **Sri Lanka: Half of Families Reducing Children’s Food Intake As The Country Slips Further Into Hunger Crisis**, Save the Children, March 2, 2023.

⁶¹ **Colombo Consumers’ Price Index CCPI**, Sri Lankan Government (Last visited November 2, 2023).

AMERICA'S NET-ZERO EXPERIMENT: DIRE ECONOMIC CONSEQUENCES

Sri Lanka may present an extreme example of failed sustainability and climate policy, but Europe's population, temperate climate, growing seasons, and diets are similar to those in the United States and provide an ominous warning. One key difference is Europe's wholesale adoption of the Paris Climate Accord's net-zero policies.

When the United States first joined the Paris Climate Accords in September 2016, it pledged to reduce total carbon dioxide equivalent (CO₂e) emissions by 26-28 percent below 2005 emissions rates by 2025.⁶² By 2020, the United States had nearly achieved that initial goal, decreasing total GHG emissions by 24 percent below 2005 levels. (See Figure 4). The Energy Information Administration projected that even if America experienced record-setting economic growth and reindustrialization, the U.S. would still be at or below the threshold set by the Paris Climate Agreement.⁶³ Much of that successful emissions reduction was due to the glut of natural gas caused by the domestic shale revolution's onshore production. That glut, which reduced the price of natural gas,⁶⁴ had two significant emissions effects. First, it enticed U.S. utilities to use natural gas—a cleaner-burning energy source—for electric power.⁶⁵ And second, it made natural gas a cost-competitive chemical feedstock for fertilizers, plastics, chemicals, herbicides, and pesticides.

⁶²Natural Resource Defense Council, *The Road From Paris: The United States Progress Toward Its Climate Pledge*, Issue Brief, November 2017.

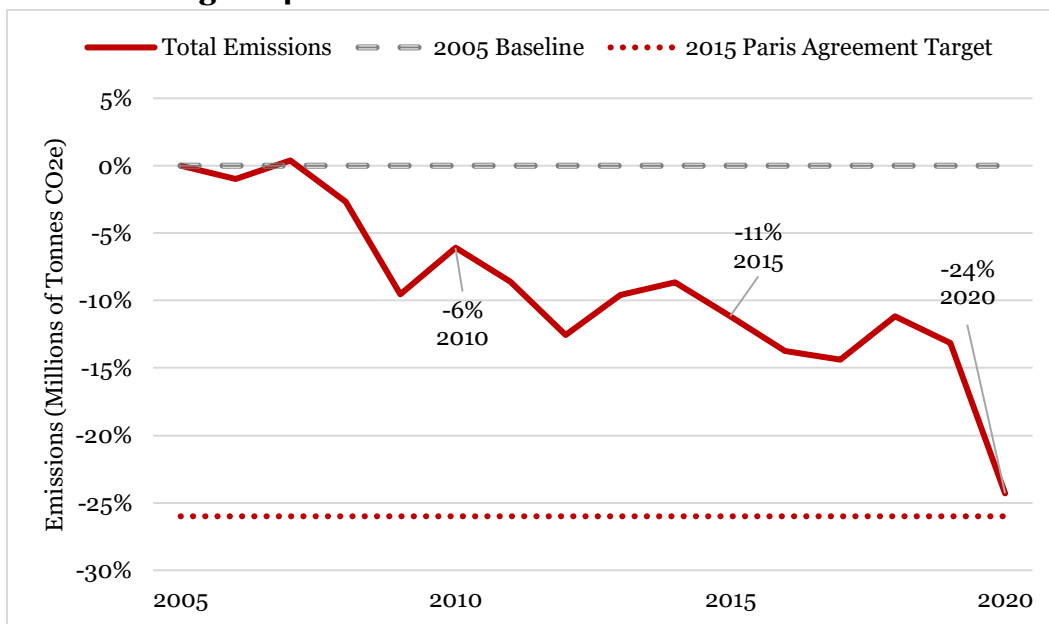
⁶³Earth Institute, *What is the U.S. Commitment in Paris?*, Columbia Climate School, December 11, 2015; *Climate Change Indicators: U.S. Greenhouse Gas Emissions*, U.S. Environmental Protection Agency (Last visited October 29, 2023); *Energy-related CO₂ emissions could fall 25% to 38% below 2005 levels by 2030*, U.S. Energy Information Administration (Last visited October 29, 2023).

⁶⁴*Henry Hub Natural Gas Spot Price*, U.S. Energy Information Administration (Last visited November 2, 2023). Natural gas prices had fallen from an average of \$8.86 per million British thermal units (MMBtu) in 2008 to an average of \$3.04/MMBtu for the decade spanning 2011 to 2021.

⁶⁵*Energy and Security: Developments in the energy field and questions of international security*, The University of Texas at Austin: Strauss Center (Last visited November 3, 2023); Daron Acemoglu, Philippe Aghion, Lint Barrage, and David Hemous, *Climate Change, Directed Innovation, and Energy Transition: The Long-Run Consequences of the Shale Gas Revolution*, working paper, National Bureau of Economic Research, September 11, 2023.

Despite having achieved its original Paris Climate Agreement goal, President Biden recommitted the United States to the Paris Climate Accords and promised to reduce emissions by 50-52 percent below 2005 emissions by 2030. But there is no second shale revolution on the horizon to help fulfill this pledge. Instead, the Biden administration has promulgated a series of subsidies, regulations, taxes, and executive orders to restrict the supply of oil and natural gas. Reducing that supply will raise prices for refineries, chemical plants, fertilizer manufacturers, and ultimately, the farmers who rely on the products those industries produce. Without a new shale revolution to help cut emissions, the regulatory apparatus will try to meet the administration’s quixotic goals by cutting oil and natural gas supplies, replacing fossil-fuel energy with renewable power sources, and requiring farmers to reduce emissions on their farms. Much like they did in Europe, these net-zero policies will have dire impacts on farmers and food prices.

Figure 4: U.S. GHG Emissions from All Sources⁶⁶



Impacts of Cutting U.S. Oil and Gas Supplies

The Biden administration’s primary tactic to achieve net-zero emissions targets has been to reduce America’s oil and natural gas supplies through regulation, delay, and revocation. Complying with a net-zero-inspired provision in the Inflation Reduction Act, the Department of the Interior (DOI) began raising oil and

⁶⁶ **Climate Change Indicators: U.S. Greenhouse Gas Emissions**, U.S. Environmental Protection Agency (Last visited October 29, 2023).

natural gas royalty rates for onshore oil and gas wells in April 2022.⁶⁷ Royalty rates are a tax on energy producers, making it harder for drillers to profitably drill on federal lands.⁶⁸ A proposed DOI rule released on July 25, 2023, began the process of codifying the higher royalty rates. Then, in August 2023, the Biden administration finalized a rule banning new offshore oil and natural gas leasing.⁶⁹ In September 2023, the Biden administration proposed yet more bans on drilling new oil wells on highly productive shale oil lands in New Mexico,⁷⁰ an ominous move for shale oil drillers who need constant access to new land to drill and replace rapidly declining production from shale wells.⁷¹

Even without domestic production restrictions, the United States does not produce enough heavy oil to satisfy the demand for diesel fuel vital to farmers. Most of America's heavy oil comes from Alberta, Canada. The Keystone XL pipeline would have expanded Alberta's export capacity and dropped the price of heavy oil for Houston refineries, but President Biden revoked the Keystone XL pipeline permit by executive order on his first day in office.⁷² That order made America's diesel supply dependent on heavy oils from Venezuela and Saudi Arabia—adding shipping expenses, transportation risks, and geopolitical insecurity to the diesel supply chain.

Artificially restricting access to oil and natural gas through federal climate-based policies has economic consequences. The world has seen some of the consequences of restricted supply already in the wake of Russia's invasion of Ukraine in February 2022⁷³ and protests in Libya⁷⁴ that sent crude oil prices up to \$120 per barrel twice.⁷⁵ An International Monetary Fund (IMF) study highlighted the role of

⁶⁷ **Biden Increases Oil Royalty Rate and Scales Back Lease Sales on Federal Lands**, *The Associated Press*, April 16, 2022.

⁶⁸ U.S. Bureau of Land Management, **Proposed update to Fluid Mineral Lease and Leasing Process**, July 24, 2023.

⁶⁹ Zack Budryk, **Biden Administration Reinstates Obama-era Offshore Drilling Safety Rules**, *The Hill*, August 22, 2023.

⁷⁰ Thomas Catenacci, **Biden admin unleashes 50-year mining, oil drilling ban across thousands of acres in New Mexico**, Fox News, September 18, 2023.

⁷¹ Benjamin Storrow, **Offshore oil is about to surge**, *Climate Wire*, March 22, 2023.

⁷² Matthew Brown, **Keystone XL pipeline nixed after Biden stands firm on permit**, *Associated Press*, June 9, 2021.

⁷³ Annabelle Liang and Daniel Thomas, **Ukraine war: Oil prices fall back after cap on Russian crude kicks in**, *BBC*, December 5, 2023.

⁷⁴ Kimberly Peterson and Candace Dunn, **Conflict in Libya since 2011 civil war has resulted in inconsistent crude oil production**, U.S. Energy Information Administration, August 12, 2022.

⁷⁵ **U.S. Crude Oil First Purchase Price**, U.S. Energy Information Administration (Last visited November 16, 2023).

surging fossil fuel prices that raised Europe’s cost of living in 2022 by 7 percent.⁷⁶ In America, decade-high oil and natural gas prices led to surging inflation, and U.S. gas prices hit an all-time high, crossing \$5.00 per gallon in June 2023.⁷⁷

A hot summer and drought in the U.S. caused wind turbines to stop turning and hydroelectric power shortages across the country.⁷⁸ Natural gas was in high demand, and utility companies quickly bought as much as they could to maintain power grid stability. As a result, August 2022 saw natural gas prices crest \$9.00 per thousand cubic feet, a decade high.⁷⁹ And Americans paid dearly for it. Electricity bills rose 14.3 percent, double the inflation rate.⁸⁰ Fortunately, American drillers were still able to provide energy companies with enough oil and natural gas to keep businesses and households lit, but the Biden administration’s climate initiatives have hindered, not helped, that effort.

Choking Off Chemicals’ Feedstock

Restrictions on U.S. oil and natural gas drilling, which ultimately depletes oil and gas supplies, will have the same impact in America that Europe’s natural gas import limits and looming closure of its largest natural gas field have had in Europe: chemical companies will be less competitive internationally. In 2022, U.S. chemical companies faced rising input costs brought on by rapidly rising natural gas and energy prices.⁸¹ Now, chemical companies face nearly \$7 billion in compliance costs from the Biden administration’s 13 proposed European-style regulations on chemical producers.⁸² American Chemical Council president Chris Jahn emphasized in a September 2023 press conference that “the cumulative regulatory impact we are talking about here is unprecedented in [the chemicals industry]... there are more major reg[ulations] pending in regards to [the

⁷⁶ Anil Ari et al., **Surging Energy Prices in Europe in the Aftermath of the War: How to Support the Vulnerable and Speed up the Transition away from fossil fuels**, International Monetary Fund, working paper, July 29, 2022.

⁷⁷ **U.S. All Grades All Formulation Retail Gasoline Prices**, U.S. Energy Information Administration (Last visited November 16, 2023).

⁷⁸ Kirby Lawrence, **Average cost of wholesale U.S. Natural Gas in 2022 highest since 2008**, U.S. Energy Information Administration, January 9, 2023; Jayme Lozano Carver, **Why the Texas grid causes the High Plains to turn off its wind turbines**, Texas Tribune, August 2, 2022; Laila Kearney, **Soggy California winter set to charge up state’s hydropower sector**, Reuters, April 3, 2023.

⁷⁹ **Natural Gas**, U.S. Energy Information Agency (Last visited November 16, 2023).

⁸⁰ Stephen Singer, **Electricity prices surged 14.3% in 2022, double overall inflation: US report**, Utility Dive, January 19, 2023.

⁸¹ **Natural Gas**, U.S. Energy Information Agency (Last visited November 16, 2023).

⁸² **Snapshot: Anticipated Regulation Burden/Costs Facing the Chemical Sector**, American Chemical Council, September 20, 2023

chemicals] industry than the last three administrations combined.”⁸³ At the top of the regulatory list is the SEC’s proposed ESG-reporting rule, which will cost the industry an estimated \$2.4 billion.⁸⁴

Restricted oil and gas supplies raise oil and gas prices, which make it more expensive for chemical producers to synthesize chemicals for basic products on which U.S. households and farmers rely. Farm pesticides, herbicides, and fertilizers synthesized from oil and natural gas will be more expensive to make, and farmers will have little choice but to pass those higher costs on to American consumers.⁸⁵ In late 2021, nitrogen fertilizer prices soared 235 percent⁸⁶ due to elevated global demand, surging natural gas prices that reduced fertilizer production,⁸⁷ and the closure of two major European fertilizer plants.⁸⁸ The USDA estimated that the spike in fertilizer prices increased farmer’s operating costs for growing corn and wheat by 35 and 36 percent, respectively.⁸⁹ Those higher production costs led to the largest increase in food prices—nearly 11 percent—in over 40 years.⁹⁰ And although inflation has since slowed, food and fertilizer prices have not returned to pre-2021 levels.⁹¹

Green New Deal Can’t Power the Farm

The Green New Deal’s net-zero emissions policies, revived by the Inflation Reduction Act, encourage by regulatory rule a national shift from fossil-fuel-powered vehicles and equipment to electric vehicles (EVs) and equipment. That transition is problematic—especially for farmers and food prices—for several reasons.

⁸³ American Chemical Council, **Chemistry Creates, America Competes**, September 20, 2023.

⁸⁴ American Chemical Council, **Snapshot: Anticipated Regulation Burden/Costs Facing the Chemical Sector**, September 20, 2023.

⁸⁵ **Products made from oil and natural gas**, U.S. Department of Energy Office of Fossil Energy (Last visited November 16, 2023).

⁸⁶ Angelica Williams and Amy Boline, **Fertilizer prices spike in leading U.S. market in late 2021, just ahead of 2022 planting season**, U.S. Department of Agriculture Economic Research Service, February 9, 2022.

⁸⁷ Shelby Myers, **Too many to count: Factors Driving Fertilizer Prices Higher and Higher**, Farm Bureau, December 13, 2021.

⁸⁸ Patrick Knight, **Major Fertilizer Plant Closures in Europe Instil Price Rise and Threat to Food Supply**, Chemanalyst, September 17, 2021.

⁸⁹ **Impacts and Repercussions of Price Increases on the Global Fertilizer Market**, U.S. Department of Agriculture Foreign Agricultural Service, June 2022.

⁹⁰ Steve Morris, **Sticker Shock at the grocery store? Inflation Wasn’t the only reason food prices increased**, U.S. Government Accountability Office, April 11, 2023.

⁹¹ **Consumer Price Index for All Urban Consumers: Food in U.S. City Average**, FRED (Last visited November 16, 2023).

First, EVs are significantly less reliable and more expensive to purchase, repair, power, and maintain than combustion engine vehicles, making them impractical and ill-suited to working farms. Farm equipment must be durable and capable of operating in all weather conditions. Tractors and farm equipment must operate in offroad environments and on poorly paved roads under constant risk of collisions that can permanently damage an electric vehicle’s sensitive parts, rendering it useless.⁹² EV batteries drain faster in extreme cold and heat,⁹³ and EVs lose range in the rain due to lower resistance between the car and the road and power diversion to the windshield wipers and headlights.⁹⁴ Water damage from rain or flooding can damage and prematurely kill an EV’s battery.⁹⁵ And although electric cars have fewer parts, they require more maintenance and expensive repairs than conventional gas-powered cars. Replacing an electric vehicle battery typically costs from \$5000 – \$15,000,⁹⁶ and general EV repairs require more labor and cost 25 percent more than standard combustion vehicles.⁹⁷ Insurance companies have noticed these extra costs and raised premiums by 25 percent on electric vehicles.⁹⁸ And the immense weight of the battery makes electric tractors poorly suited for farms because it damages soil, reduces speed, and consumes more energy equivalent than a conventionally powered tractor.⁹⁹ These heavy farm vehicles would effectively negate the soil-health benefits accrued from no-till farming, a government-sanctioned “green” farming practice.

These reliability and financial concerns make EVs unattractive as farm equipment and will make running a successful farm more expensive, but Biden administration

⁹² **What happens when your car is totaled**, USAA, December 5, 2022; **The real costs of driving and insuring your electric vehicle**, USAA, August 30, 2023.

⁹³ Kyle Stock, **A heat wave will cook your EV’s battery, if you let it**, *Los Angeles Times*, July 13, 2023.

⁹⁴ Mike, Becker, **How does the weather affect the range of an electric car?**, EVadapt, October 12, 2023.

⁹⁵ **Responding to Electric Vehicle Fires Caused by Salt Water Flooding**, U.S. Fire Administration, October 20, 2022.

⁹⁶ **The real costs of driving and insuring your electric vehicle**, USAA, August 30, 2023.

⁹⁷ Dave LaChance, **CCC report: Repair costs, turnaround times higher for EVs**, Repairer Driven News, July 12, 2022; Lora Kolodny, **Hertz pulls back on EV plans citing Tesla price cuts, high repair costs**, CNBC, October 26, 2023; Ryan Mandell, **Plugged-In: EV Collision Insights Q2 2023**, Mitchell, August 10, 2023; Andrew Lambrecht, **EVs are More Expensive to Repair In Collisions**, Study Finds, InsideEVs, August 28, 2023.

⁹⁸ Dillon Leovic, **How Much Does Electric Car Insurance Cost?**, ValuePenguin, June 1, 2023; Ryan Brady, **Electric Car Insurance: What to Know Before you Buy**, Nerdwallet, July 7, 2023.

⁹⁹ J Sitompul, H Zhang, R Noguchi, and T Ahamed, **“Optimization Study on the Design of Utility Tractor Powered by Electric Battery” IOP Conference Series: Earth and Environmental Science**, (2019); Oscar Lagnelöv, Gunnar Larsson, Anders Larsolle, and Per-Anders Hansson, **“Impact of Lowered Vehicle Weight of Electric Autonomous Tractors in a Systems Perspective” Smart Agricultural Technology**, Volume 4, (August 2023).

rules will all but force farmers to buy or subsidize them anyway. The Department of Transportation’s new tailpipe emissions standards on heavy-duty trucks and passenger cars will require two-thirds of all vehicles sold in 2032 to be electric.¹⁰⁰ But thus far, electric truck makers have failed to profitably deliver reliable electric trucks suitable for the farm despite significant federal subsidies. In 2023, two electric truck manufacturers filed for bankruptcy.¹⁰¹ Ford Motor Company lost roughly \$36,000 on every F-150 Lightning truck that rolled off its assembly line.¹⁰² To offset those losses, Ford raised its prices on standard trucks,¹⁰³ which means that farmers and other heavy-duty truck buyers have been involuntarily subsidizing the EV transition and paying more than necessary for their truck preferences—hardly an endorsement of the EV option.

Second, a nationwide transition to electric energy depends entirely on intermittent, unreliable zero-emission sources of electric power, namely wind and solar. Wind and solar do not produce power consistently throughout the day, and the variation in renewable power generation makes it harder for operators to schedule power demand, which makes energy prices volatile and ultimately more expensive.¹⁰⁴ In Texas and California, the first and second largest producers of variable renewable electricity in America,¹⁰⁵ renewable power production during daylight hours surges, causing power prices to plummet, but in the early evening when power prices peak, natural gas power plants need to be brought online. During hot August nights in Texas, power prices hit \$4,000 per megawatt-hour (MWh) in 2023,¹⁰⁶ which meant that farmers hatching broiler chickens at an industrial scale paid six cents per KWh—a 666.67 percent increase in incubation costs during the elevated price period.¹⁰⁷ For farmers who use electric incubators

¹⁰⁰ **Biden-Harris Administration Proposes Strongest-Ever Pollution Standards for Cars and Trucks to Accelerate Transition to a Clean-Transportation Future**, U.S. Environmental Protection Agency Office of Air and Radiation news release, April 12, 2023.

¹⁰¹ Thomas Catenacci, **Electric truck company touted by Trump as ‘an incredible concept’ files for bankruptcy**, Fox Business, June 27, 2023; Nick Carey, **Electric truck maker Volta Trucks files for bankruptcy in Sweden**, Reuters, October 17, 2023.

¹⁰² Paul Lienert and Nathan Gomes, **Ford again warns on EV results, withdraws 2023 forecast**, Reuters, October 27, 2023.

¹⁰³ Sean Tucker, **2024 Ford F-150 Gets Across-the-board Price Increase**, Kelly Blue Book, October 6, 2023.

¹⁰⁴ Severin Borenstein, **The West Coast’s Bleak Energy Winter**, Energy Institute at HAAS, January 30, 2023.

¹⁰⁵ **1.11 Net Generation from Renewable Sources excluding hydroelectric by state July 2023**, U.S. Energy Information Administration (Last visited October 4, 2023).

¹⁰⁶ Saul Elbein, **Texas electricity price surges amid record heat and demand**, *The Hill*, June 26, 2023.

¹⁰⁷ G.T. Tabler, I.L. Berry, and A.M. Mendenhall, “**Energy Costs Associated with Commercial Broiler Production**” *Avian Advice*, Volume 5, Number 4 (Winter 2003) p. 1 – 4.

or refrigerators, an unstable electricity grid could mean thousands of dollars lost on unhatched chicks or spoiled produce.

To facilitate a zero-emissions electric grid buildout would raise electricity prices and threaten reliability.¹⁰⁸ Nevertheless, the federal government has offered billions of grant dollars to build renewable energy sources across the country.¹⁰⁹ The USDA offered \$11 Billion to rural communities to build solar arrays, wind farms, and high-voltage transmission lines.¹¹⁰ But, renewable power is only feasible if natural gas power plants remain ready to replace gaps in generation. The only alternative are daily blackouts.¹¹¹ Instead of securing natural gas stopgaps, however, the Biden administration has threatened this critical component in rural America. On June 3, 2023, President Biden signed the Fiscal Responsibility Act (FRA),¹¹² which expedites the federal permitting reform for all energy infrastructure projects, especially natural gas pipelines. But less than two months later, the White House Council on Environmental Quality proposed new rules to expedite renewable projects while reinstating the bureaucratic red tape on natural gas projects that the FRA had just removed.¹¹³

The Biden administration's efforts to force farmers to adopt electric equipment ill-suited to farming and to replace natural gas generators with unreliable renewable energy sources is a recipe for unsustainable farming. Unfortunately, Washington's central planners seem oblivious to that stubborn fact and remain committed to making Europe's mistakes.

¹⁰⁸ Institute for Energy Research, **The Challenges and Costs of Net-Zero and the Future of Energy**, August 2023.

¹⁰⁹ **Federal Financial Interventions and Subsidies in Energy in Fiscal Years 2016 – 2022**, Energy Information Administration, August 1, 2023.

¹¹⁰ **Biden-Harris Administration Makes Historical \$11 Billion Investment to Advance Clean Energy Across Rural America Through Investing in America Agenda**, United States Department of Agriculture Rural Development news release, May 16, 2023.

¹¹¹ Isaac Orr, **American Experiment modeling finds EPA's Carbon Rule would cause blackouts in MISO, cost \$246 billion**, American Experiment, August 9, 2023.

¹¹² **Fiscal Responsibility Act of 2023**, Public Law 118-5, Congress.gov, June 3, 2023

¹¹³ **Biden-Harris Administration Proposes Reforms to Modernize Environmental Reviews, Accelerate America's Clean Energy Future, and Strengthen Public Input**, White House press release, July 28, 2023; Patrice Douglas, **Biden's Permitting Proposal Would Backfire, Add Red Tape for Affordable Energy Projects**, RealClear Energy, September 19, 2023.

ENVIRONMENTAL, SOCIAL, GOVERNANCE REPORTING REQUIREMENTS: MAKING FOOD MORE EXPENSIVE

ESG reporting requirements have become increasingly important and burdensome. Their initial focus offered financial planners information about a company's emissions so that investors could assess whether the company aligned with a fund's sustainable investment goals. And now, as Blackrock's CEO emphasized in 2022, "climate risk [is] investment risk," and "transparency around your company's planning for a net zero world [is] an important element of that." ESG requirements were originally directed at oil companies and led investors to eschew investing in oil production, with investment in petroleum extraction sitting at record lows.¹¹⁴ But ESG attention has crept out of the fossil-fuel space and into other industries, including agriculture. With its heavy use of artificial fertilizers and fossil fuels, livestock methane emissions, weed and bug sprays, and genetically modified crops, agriculture has been targeted by ESG fiduciaries. As Jeremy Coller, a leading ESG fund manager, said, "[w]hen it comes to climate change, cows are the new coal."¹¹⁵

ESG reporting is currently optional, but in March 2022, the SEC proposed a mandatory ESG disclosure rule that would apply to every publicly traded company.¹¹⁶ The rule would mandate costly ESG emissions reporting for a firm's entire supply chain, requiring large publicly traded food processing companies, grocery stores, and restaurant groups to track and report emissions from farm to table. Large companies looking to reduce their overall emissions would stop purchasing food from farmers with high emission rates, once again applying financial costs and pressures to the American farmer. In a letter to the SEC, 118 members of Congress expressed their concern with the rule's¹¹⁷ "significant and

¹¹⁴ **MacroVoices #385 Dr. Anas Alhajji: 2024 Energy Markets Outlook & More**, MacroVoices, July 20, 2023.

¹¹⁵ Jeremy Coller, **When it comes to climate change, cows are the new coal**, Context, Thomson Reuters Foundation, November 8, 2022.

¹¹⁶ **SEC Proposes Rules to Enhance and Standardize Climate-Related Disclosures for Investors**, U.S. Securities and Exchange Commission press release, March 21, 2022.

¹¹⁷ Tyler Olson, **SEC's proposed ESG rule will leave small farms in the lurch, lawmakers from both parties say**, Fox Business, May 26, 2022.

unworkable regulatory burden” that will misplace “time and energy... into complying with this new regulation [and] will divert American farmers away from their primary goal of producing our food, fuel, and fiber.”¹¹⁸ And those congressional cost concerns are warranted. In 2022, ESG-related reporting expenses reached \$8.4 billion. For farmers and ranchers, hiring a single ESG consultant can cost at least \$25,000, with prices increasing with the scale of the operation.¹¹⁹

As ESG ratings reach the farm either by the SEC’s new climate disclosure rule or regulation, there will be downstream consequences.¹²⁰ Banks with obligations to ESG-conscious shareholders will withhold loans from farmers with poor practices, as they do in Europe.¹²¹ Insurance companies using climate models to write carte blanche premiums¹²² will raise rates to cope with perceived climate risks and use ESG metrics to calculate new premiums for farmers—moves that risk putting farmers out of business. Similarly, food processors and restaurant groups may only deal with farmers who meet their ESG requirements or help lower their emissions scores. In 2018, farmers were projected to pay an additional \$1,200 annually in ESG compliance, resulting in the closing of small businesses and destabilizing food security.¹²³ Additionally, in 2018, nearly 70 percent of farmers were using non-computerized tools that would need to be updated to comply with ESG standards.¹²⁴ Under the SEC’s mandatory disclosure rule, farmers who sell their produce to publicly traded companies will have no choice but to purchase the monitoring software and begin quantifying their emissions. But their costs won’t stop there.

¹¹⁸ **Letter to Securities and Exchange Chair Gary Gensler from Members of the U.S. House of Representative**, 117th Congress 2nd Session, May 25, 2022.

¹¹⁹ Rick Brundrett, **Serious business: How ESG mandates can hurt small SC firms**, The Nerve, May 12, 2022.

¹²⁰ Shelby Myers, **Overreach of SEC Proposed Climate Rule Could Hurt Agriculture**, American Farm Bureau Federation, May 6, 2022.

¹²¹ **Net-Zero Banking Alliance**, United Nations Environment Programme (Last visited November 3, 2023); Vincent Gauthier, **How banks can move toward net zero agriculture portfolios**, Environmental Defense Fund, February 24, 2022; Virginia Furness, **UK farmers hungry for climate finance but banks want more data**, Capital Monitor, January 25, 2022.

¹²² Ken Sweet, **Homeowners face rising insurance rates as climate change makes wildfires, storms more common**, Associated Press, September 20, 2023.

¹²³ Nina Sparling, **US Farm Management Software Market to Reach \$1.62bn – Report**, AgFunder Network Partners, April 4, 2018; ZeroHedge, **New ESG Rules are Hurting American Farmers**, Oil Price.com, July 2, 2022.

¹²⁴ ZeroHedge, **New ESG Rules are Hurting American Farmers**, Oil Price.com, July 2, 2022.

QUANTIFYING CARBON COSTS OF ENVIRONMENTAL, SOCIAL, GOVERNANCE: THE METHODOLOGY

The Economic Research Center (ERC) at The Buckeye Institute uses publicly available emissions and consumer spending data and a basic carbon pricing methodology to estimate the economic impact that Biden administration policies designed to meet net-zero carbon emissions pledges under the Paris Climate Accords will have on American farmers and households.

The ERC assumes the best-case scenario in which the net-zero target is achieved through an efficient carbon pricing system with no deadweight loss or costs of enforcing the policy. The ERC does not include the cost of purchasing the emissions monitoring technology that farmers will need to purchase before they can begin mitigating or offsetting emissions. The ERC could only find one cost projection for emission monitoring software. Without a much larger sample size, the ERC could not determine how much a farm will need to pay to monitor emissions. The ERC also does not consider the bureaucratic costs associated with preparing the emission reports for companies or any legal fees incurred.

Estimating the Cost of Environmental Social Governance

ESG-reporting requirements and other climate-related disclosure policies are still too nascent to measure accurately. But, based on global experiences with net-zero policies, the goals of ESG reporting, and emissions data from fossil-fuels, the ERC can estimate the economic impact a carbon pricing system will have on farms and consumers.

The ERC assumes that the SEC's new ESG rule and other state regulations will create a de facto carbon pricing system by requiring companies to monitor emissions from their entire supply chain and produce disclosure reports. Further, the ERC assumes that Farmers who sell their meat and produce to publicly traded companies will need to report their emissions to publicly traded companies who will be subjected to the rule.

Designing the Model Farm

The ERC constructs a model American corn farm to estimate the impact of ESG-reporting requirements on farms. Corn has the most available fertilizer usage data, it is the largest crop in the country, and most U.S. farms will plant it in rotation

with other crops during a harvest year. Corn's high nitrogen fertilizer and grain drying requirements make it the most energy and emissions-intensive crop to grow.¹²⁵ The ERC's model farm is 725 acres, the average size corn farm reported by the United States Department of Agriculture.¹²⁶ The ERC estimates its model farm's operating costs and total emissions from fertilizer, diesel fuel, and propane-powered grain drying. These three emitters are large sources of emissions more easily tracked by ESG consultants. ESG consultants may focus on other environmental impacts such as riparian and lacustrine fertilizer run-off, soil health, and GMOs. These and other potential ESG concerns are not related to carbon emissions, making them much harder to estimate mitigation costs, and are not included in the model.

Operating Costs

The ERC's model operating cost estimate focuses on harvesting one average crop of corn. The ERC assumes the national average yield of 172 bushels per acre, as reported by the University of Illinois Urbana-Champaign.¹²⁷ The ERC assumes 1.25 lbs. of nitrogen fertilizer per bushel of corn, as reported in a fertilizer management study published by Louisiana State University in 2021,¹²⁸ for a total farm fertilizer usage of 97.4 short tons. The ERC uses the June 2023 price of \$1116 per ton for nitrogen fertilizer, as reported in the University of Illinois Urbana-Champaign's FARMDOC daily,¹²⁹ for a total farm price of approximately \$109,000.

The ERC's model fuel consumption relies on field operation and maintenance and total tillage. The ERC's estimate for tillage farm operations derives from Iowa State University's *Farm Energy Study: Energy Consumption for Row Crop Production*,¹³⁰ which estimates that conventional till farms consume 6 gallons of fuel per acre for a conventional till and a no-till field. The ERC's model farm assumes a conventional till operation to determine overall farm costs, but the ERC also models fuel consumption for no-till farms to assess whether no-till farms will be economically harmed by ESG-reporting policy.

¹²⁵ Mark Hanna, John E. Sawyer, and Dana Petersen, **Energy consumption for row crop production**, Iowa State University, June 2012.

¹²⁶ Monica Saavoss, Tom Capehart, William McBride, and Anne Effland, **Trends in Production Practices and Costs of the U.S. Corn Sector**, U.S. Department of Agriculture Economic Research Service, Economic Research Report Number 294, July 2021.

¹²⁷ Gary Schnitkey, Nick Paulson, Jim Baltz, and Carl Zulauf, **Corn and Soybean Yields in 2022**, Farmdoc Daily, December 13, 2022

¹²⁸ Rasel Parvej et al., **Corn Nitrogen Management**, Louisiana State University, March 2021.

¹²⁹ Gary Schnitkey, Nick Paulson, and Jim Baltz, **Nitrogen Fertilizer Prices Stabilize at High Levels in Spring 2023**, University of Illinois, farmdoc Daily, June 13, 2023.

¹³⁰ **Energy Consumption for Row Crop Production**, Farm Energy, Iowa State University, June 2012.

The ERC estimates using 4,350 gallons of total diesel fuel on the conventional farm and 1813 gallons on the no-till farm. The ERC estimates the price of diesel fuel using the average diesel price of \$3.25 per gallon over the last decade, as reported by the U.S. Energy Information Administration.¹³¹ The ERC averaged fuel prices over a decade as a check against inherent price volatility. Assuming that 10-year average price per gallon, the diesel costs for a conventional till farm total \$14,137.50. But farm operations must be performed regardless of diesel prices, so fuel costs may represent a greater share of farm expenses than modeled here.

The ERC model farm reduces crop moisture content by five percent with a propane-powered grain dryer because over 80 percent of all grain dryers in America are powered by propane.¹³² The ERC uses the Propane Education and Research Council's publicly available tool to estimate that 12,900 gallons of propane will be needed.¹³³ The ERC uses the average propane price of \$2.68 per gallon from October 2022 to March 2023 for a total cost of \$34,572.¹³⁴

Farm Emissions

The ERC estimates carbon dioxide emissions on the model farm from fertilizer, diesel, and propane. The ERC uses a report published by the Royal Society to estimate that producing one metric ton of androgynous ammonia, the purest form of nitrogen fertilizer, produces 1.6 metric tons (tonnes) of CO₂ emissions.¹³⁵ The ERC uses EIA's fuel emissions estimates of 5.75 KG of CO₂ per gallon of propane and 10.19 KG of CO₂ per gallon of diesel to estimate its model farm's propane and diesel fuel emissions.¹³⁶ Total CO₂ emissions from fertilizer, propane, and diesel fuel were 155.9, 148.4, and 44.3 tonnes, respectively.

¹³¹ **U.S. No 2 Diesel Retail Prices**, U.S. Energy Information Administration (Last visited November 2, 2023).

¹³² **Propane's role in the ag market: An overview of key applications**, LPGas, July 17, 2023.

¹³³ **Grain Dryer Propane Use Calculator**, Propane Education and Research Council (Last visited November 2, 2023).

¹³⁴ **Weekly U.S. Propane Residential Price**, U.S. Energy Information Administration (Last visited November 16, 2023).

¹³⁵ Bill David et al., **Ammonia: zero-carbon fertiliser fuel and energy store**, The Royal Society, February 2020; Abdullah Emre Yüzbaşıoğlu, Ali Hikmet Tatarhan, and Ahmet Ozan Gezerman, "**Decarbonization in ammonia production, new technological methods in industrial scale ammonia production and critical evaluations**," *Heliyon*, Volume 7, Issue 10, October 25, 2021; and fertilizer emissions converted to short tons by The Economic Research Center at The Buckeye Institute from metric to short tons;

¹³⁶ **Carbon Dioxide Emissions Coefficients**, U.S. Energy Information Administration, October 5, 2022.

Monetizing Emissions

The ERC assumes that ESG-reporting requirements will ultimately lead to monetized agricultural emissions. That is, a farm's carbon emissions will receive a tangible economic value that will then need to be offset by new agricultural practices. The ERC assumes carbon pricing will monetize emissions using the widely accepted social cost of carbon (SCC) metric, with a price of \$185 per tonne derived from the "Comprehensive evidence implies a higher social cost of CO₂" study published by Resources for the Future fellow, Kevin Rennert. The ERC monetizes farm emissions by multiplying the model farm's total emissions by the SCC.

Carbon Pricing

The ERC assumes that carbon pricing created by ESG requirements will not be collected like traditional carbon taxes. Instead, reporting entities likely will price total emissions reduction using the SCC to report the total value of emissions reduced and placing a private carbon fee on Scope 3 emitters. Farms will be expected to pay this fee either by investing in net-zero infrastructure, adopting new farming practices, or buying carbon emission offsets.

Impact on Consumers

The ERC uses publicly available data from government agencies, universities, and business analytic software to estimate the costs of ESG-reporting requirements and carbon pricing that the ERC assumes will be passed on to consumers.

The ERC uses the Consumer Expenditure Survey to find what the average American household (\$70,000 per year) spends on groceries per year: \$8,320. The ERC uses data from the University of Michigan's Center for Sustainability (UMCS) to estimate the total carbon emissions for an average American household per year: 48 tons.¹³⁷ UMCS reported that 10-30 percent of a household's annual emissions come from their groceries' supply chain. The ERC takes the midpoint of that estimate, 15 percent of total emissions, to find that a typical household's emissions from food is equivalent to 7.2 tons of CO₂e.

The Bureau of Labor Statistics and the USDA track the monthly average price of meats, produce, grains, and dairy products.¹³⁸ These goods reflect typical American consumption habits. The ERC uses Carboncloud's Climatehub, a Swedish carbon emissions database that tracks CO₂e emissions from food products in grocery

¹³⁷ **Carbon Footprint Factsheet**, Center for Sustainable Systems, University of Michigan, 2021.

¹³⁸ **Announcement of Class and Component Prices**, U.S. Department of Agriculture, November 1, 2023; **Average Retail Food and Energy Prices, U.S. City Average and West Region**, U.S. Bureau of Labor Statistics (Last visited November 2, 2023).

stores, to estimate the carbon emissions of the following grocery items for which there is current BLS or USDA pricing data: rice, spaghetti, flour, bread, American cheese, cheddar cheese, milk, potatoes, oranges, bananas, lemons, strawberries, sugar, coffee, beef, bacon, and eggs.¹³⁹ The ERC assumes these items reflect a typical American weekly grocery list.

¹³⁹ **Climate Hub**, CarbonCloud (Last visited November 2, 2023); **Announcement of Class and Component Prices**, U.S. Department of Agriculture, November 1, 2023; **Average Retail Food and Energy Prices, U.S. City Average and West Region**, U.S. Bureau of Labor Statistics (Last visited November 2, 2023).

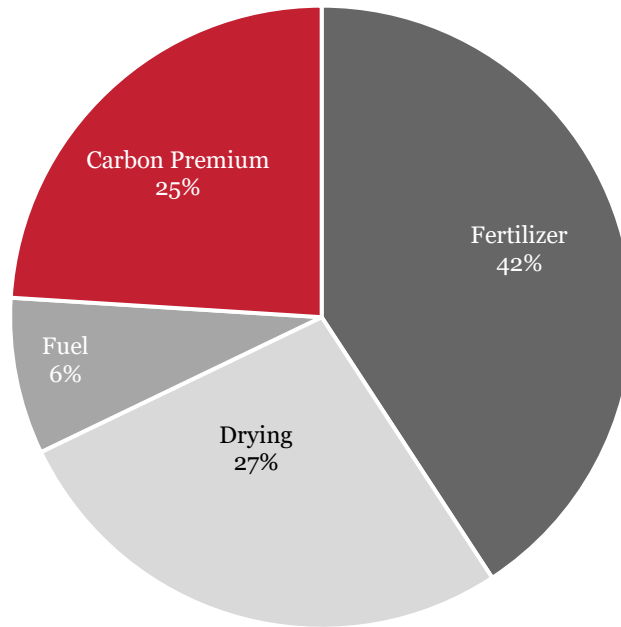
QUANTIFYING CARBON COSTS OF ENVIRONMENTAL, SOCIAL, GOVERNANCE: THE RESULTS

The monetized cost of CO₂e emissions significantly increased the cost of U.S. farming operations and the retail price of food.

Farming Operations

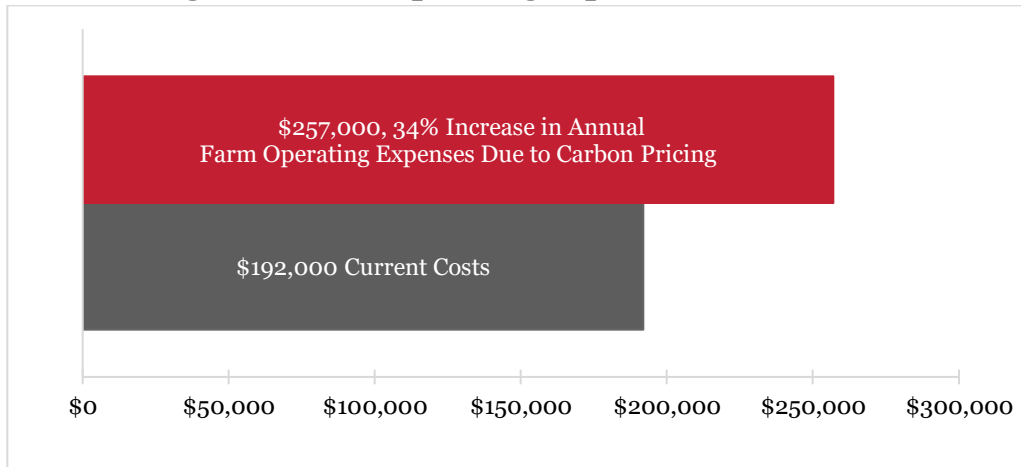
Carbon pricing—comprising 25 percent of total farm operating costs (Figure 5)—significantly raises the cost of operating a farm. Because ESG-reporting requirements require emissions monitoring, farms that can afford to monitor carbon emissions will need to offset the monetized carbon emissions from fertilizers, grain drying, and fuel use, which will increase annual operating costs by 34 percent. (See Figure 6.)

Figure 5: Tracked Carbon Price of Farming¹⁴⁰



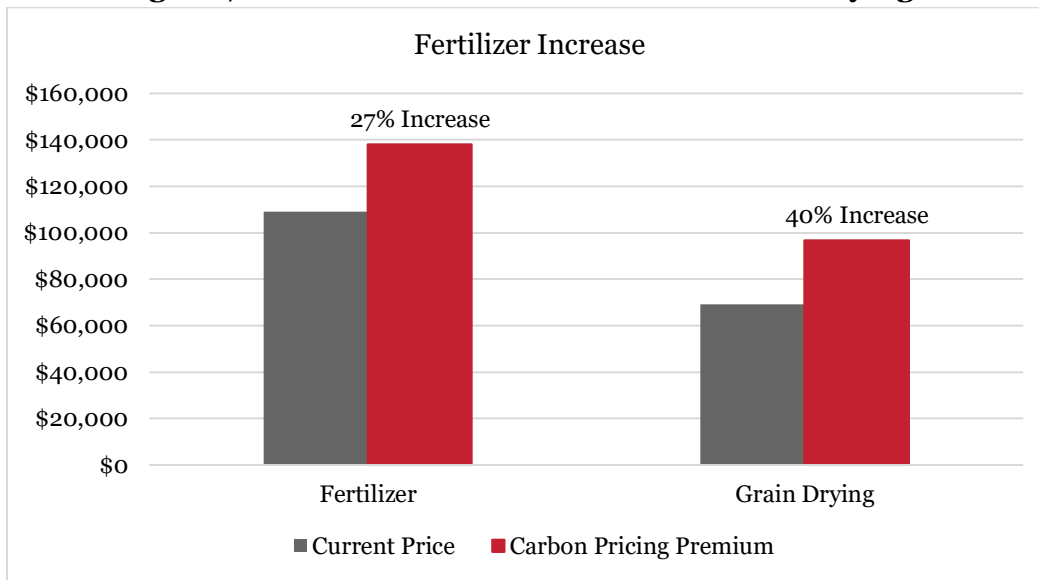
¹⁴⁰ Tracked carbon prices are: fertilizer and fuel. Graph produced using data from the following sources: Bill David et al., *Ammonia: zero-carbon fertiliser fuel and energy store*, The Royal Society, February 2020; Fertilizer emissions converted by The Economic Research Center and The Buckeye Institute from metric to short tons; Gary Schnitkey, Nick Paulson, and Jim Baltz, *Nitrogen Fertilizer Prices Stabilize at High Levels in Spring 2023*, University of Illinois, farmdoc Daily, June 13, 2023; Sarah Sellars, *Synthetic Nitrogen Fertilizer in the U.S.*, University of Illinois, farmdoc Daily, February 17, 2021; Monica Saavoss, Tom Capehart, William McBride, and Anne Effland, *Trends in Production Practices and Costs of the U.S. Corn Sector*, U.S. Department of Agriculture Economic Research Service, Economic Research Report Number 294, July 2021; *Grain Dryer Propane Use Calculator*, Propane Education and Research Council (Last visited November 2, 2023); *Carbon Dioxide Emissions Coefficients*, U.S. Energy Information Administration, October 5, 2022; and Economic Research Center calculations.

Figure 6: Farm Operating Expenses Under ESG¹⁴¹

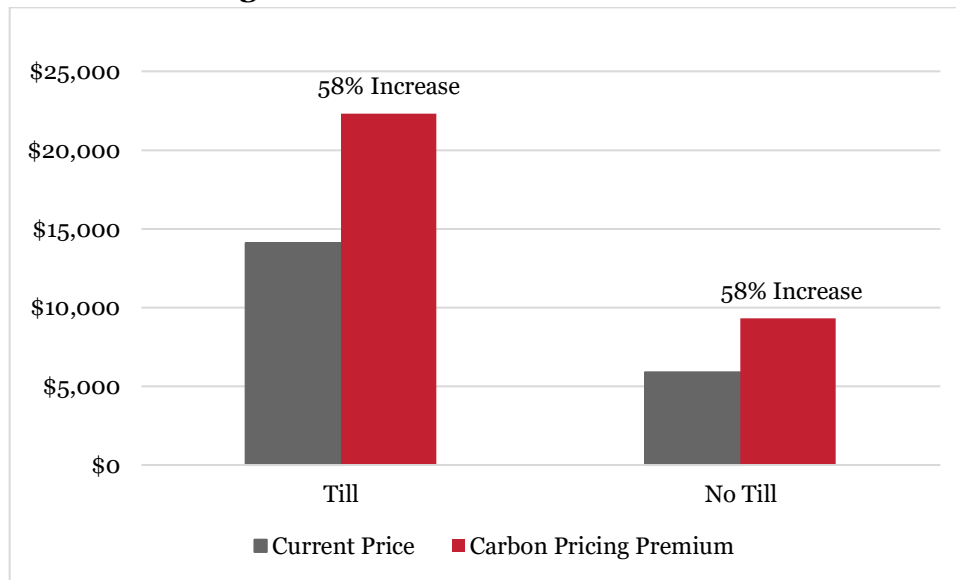


¹⁴¹ Graph produced using data from the following sources: Bill David et al., *Ammonia: zero-carbon fertiliser fuel and energy store*, The Royal Society, February 2020; Fertilizer emissions converted by The Economic Research Center and The Buckeye Institute from metric to short tons; Gary Schnitkey, Nick Paulson, and Jim Baltz, *Nitrogen Fertilizer Prices Stabilize at High Levels in Spring 2023*, University of Illinois, farmdoc Daily, June 13, 2023; Sarah Sellars, *Synthetic Nitrogen Fertilizer in the U.S.*, University of Illinois, farmdoc Daily, February 17, 2021; Monica Saavoss, Tom Capehart, William McBride, and Anne Effland, *Trends in Production Practices and Costs of the U.S. Corn Sector*, U.S. Department of Agriculture Economic Research Service, Economic Research Report Number 294, July 2021; *Grain Dryer Propane Use Calculator*, Propane Education and Research Council (Last visited November 2, 2023); *Carbon Dioxide Emissions Coefficients*, U.S. Energy Information Administration, October 5, 2022; and Economic Research Center calculations.

Figure 7: Carbon Price of Fertilizer and Grain Drying¹⁴²



¹⁴² Graph produced using data from the following sources: Bill David et al., *Ammonia: zero-carbon fertiliser fuel and energy store*, The Royal Society, February 2020; Fertilizer emissions converted by The Economic Research Center and The Buckeye Institute from metric to short tons; Gary Schnitkey, Nick Paulson, and Jim Baltz, *Nitrogen Fertilizer Prices Stabilize at High Levels in Spring 2023*, University of Illinois, farmdoc Daily, June 13, 2023; Sarah Sellars, *Synthetic Nitrogen Fertilizer in the U.S.*, University of Illinois, farmdoc Daily, February 17, 2021; Monica Saavoss, Tom Capehart, William McBride, and Anne Effland, *Trends in Production Practices and Costs of the U.S. Corn Sector*, U.S. Department of Agriculture Economic Research Service, Economic Research Report Number 294, July 2021; *Grain Dryer Propane Use Calculator*, Propane Education and Research Council (Last visited November 2, 2023); *Carbon Dioxide Emissions Coefficients*, U.S. Energy Information Administration, October 5, 2022; and Economic Research Center calculations.

Figure 8: Diesel Fuel Price Increase¹⁴³

ESG-reporting requirements and carbon pricing obligations will cost farms nearly \$65,000 per year to offset or defray the cost of CO₂ emissions. The farm in this scenario will pay \$109,000 for nitrogen fertilizer this year, but the carbon cost of the fertilizer will raise the price by \$29,000, roughly 27 percent of the fertilizer's underlying value. (Figure 7.) The ERC's findings corroborate a World Economic Forum report that estimated that the price of fertilizer will need to rise 25 percent to comply with net-zero emissions policies.¹⁴⁴ Carbon pricing also added \$27,000 per year, a 40 percent premium, to the original \$69,000 per year cost of drying corn. (Figure 7.) Diesel fuel's carbon emissions raised annual diesel expenses by 38 percent on till and no-till farms. (Figure 8.)

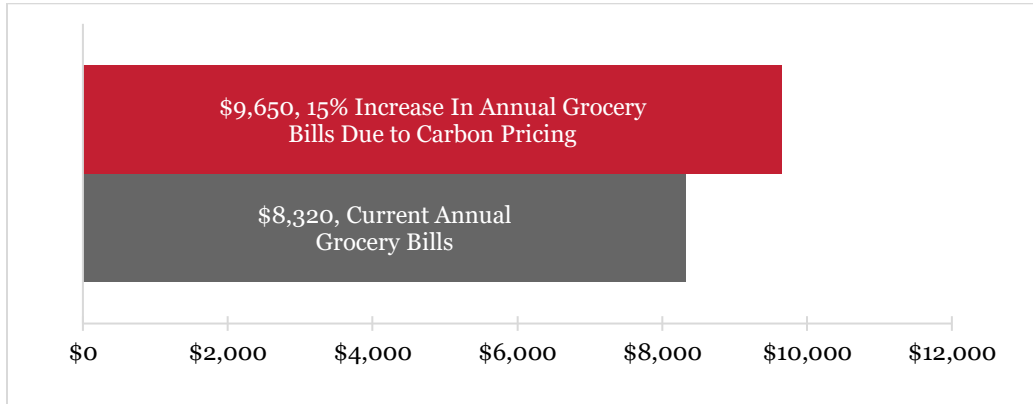
¹⁴³ Graph produced using metrics from **Energy consumption for row crop production**, Iowa State University, June 2012; **Midwest No 2 Diesel Retail Prices**, U.S. Energy Information Administration (Last visited November 2, 2023); Kevin Rennert et al., "**Comprehensive evidence implies a higher social cost of CO₂**," *Nature*, Volume 610, p. 687 – 692, September 1, 2022; Monica Saavoss, Tom Capehart, William McBride, and Anne Effland, ***Trends in Production Practices and Costs of the U.S. Corn Sector***, U.S. Department of Agriculture Economic Research Service, Economic Research Report Number 294, July 2021; and ERC calculations.

¹⁴⁴ World Economic Forum, **Net-Zero Industry Tracker 2022 Edition**, July 2022.

Consumers

The average American household (two children, \$70,000 annual income) spends \$8,320 per year on groceries. Carbon pricing will increase the average U.S. grocery bill by \$110 per month, \$1,330 annually, or 15 percent.¹⁴⁵ Figure 9 shows the annual increase in grocery prices when carbon emissions are included in the price.

Figure 9: Increase in Annual Grocery Bills¹⁴⁶



¹⁴⁵ Calculated by dividing \$1,330 by 12 months.

¹⁴⁶ Table calculated using data sourced from the following: **Table 1203, Consumer Expenditure Surveys**, United States Bureau of Labor Statistics, 2021; **Carbon Footprint Factsheet**, Center for Sustainable Systems, University of Michigan, 2021.

Table 2 denotes the price increases of individual U.S. groceries, which are more extreme than in Europe (Table 1), primarily because the SCC used in the U.S. is twice that of the EU ETS credits.

Table 2: Price Increases of U.S. Groceries¹⁴⁷

Item	Price Per Lb.	Emission Costs	Total Price Per Lb.	Percent Increase
American Cheese	\$4.73	\$3.70	\$8.43	78%
Bananas	\$0.63	\$0.37	\$1.00	59%
Beef	\$5.26	\$3.70	\$8.96	70%
Bread	\$2.54	\$0.19	\$2.72	7%
Butter	\$3.13	\$0.74	\$3.87	24%
Chicken	\$1.90	\$0.74	\$2.64	39%
Coffee	\$6.09	\$0.82	\$6.91	13%
Dozen Eggs	\$2.04	\$0.74	\$2.78	36%
Flour	\$0.57	\$0.18	\$0.75	32%
Milk	\$3.93	\$0.37	\$4.30	9%
Oranges	\$1.62	\$0.04	\$1.67	3%
Pork	\$6.50	\$1.85	\$8.35	28%
Potatoes	\$1.09	\$0.24	\$1.34	22%
Rice	\$1.00	\$0.56	\$1.55	56%
Spaghetti	\$1.40	\$0.19	\$1.59	13%
Strawberries	\$2.61	\$1.22	\$3.83	47%
Sugar	\$0.95	\$0.41	\$1.36	43%

¹⁴⁷ Table calculated using data sourced from the following: **Announcement of Class and Component Prices**, U.S. Department of Agriculture, November 1, 2023; **Average Retail Food and Energy Prices, U.S. City Average and West Region**, U.S. Bureau of Labor Statistics (Last visited November 2, 2023); **Climate Hub**, CarbonCloud (Last visited November 2, 2023).

RECOMMENDATIONS FOR AVOIDING THE FAILURES OF NET-ZERO POLICIES

Americans cannot afford the extra cost that net-zero emissions policies will add to their grocery bills, so they should oppose them at the federal, state, and local levels.

Withdraw from the Paris Climate Accords

President Biden recommitted America to the Paris Climate Accords and is unlikely to reverse course—but the next U.S. president can and should. President Trump withdrew from the accords after President Obama signed on, and the next president can do the same in 2025. The next president can also pare back many of the Biden administration’s European-inspired climate regulations on America’s energy, chemical, and agricultural industries.

Revoke as much of the IRA’s Net-Zero Funding and Tax Credits as Possible

Paying for the IRA’s \$369 so-called investments in renewable energy¹⁴⁸ and faulty green technology like carbon capture and sequestration¹⁴⁹ came at the cost of American economic growth. The IRA’s 15 percent minimum corporate tax¹⁵⁰ negated the positive impact of the Tax Cuts and Jobs Act of 2017’s corporate tax reforms.¹⁵¹ Despite rosy emissions predictions by the Biden administration’s EPA,¹⁵² modeling from BloombergNEF indicates that the IRA will fail to reach the net-zero target.¹⁵³ In April 2023, House Republicans passed the Limit, Save, Grow Act,¹⁵⁴ which pared back many of the credits and subsidies given to renewable energy producers by the Inflation Reduction Act. The Congress’ Joint Committee on Tax estimated that the Limit, Save, Grow Act would conserve over \$515

¹⁴⁸ Travis Fisher, **The Inflation Reduction Act’s Energy Subsidies Are More Expensive Than You Think**, Cato Institute, September 5, 2023.

¹⁴⁹ **Comment on EPA’s Proposed Rule for New and Existing Fossil Fuel-Fired Power Plants**, The Buckeye Institute et al., August 8, 2023.

¹⁵⁰ **IRS issue interim guidance on new corporate alternative minimum tax**, U.S. Department of Treasury, December 27, 2022.

¹⁵¹ William McBride and Alex Durante, **New Study Finds TCJA Strongly Boosted Corporate Investment**, Tax Foundation, October 31, 2023.

¹⁵² **Inflation Reduction Act Overview**, U.S. Environmental Protection Agency, January 2023.

¹⁵³ **Report Shows that Inflation Reduction Act Alone Won’t Set United States on Track for Net Zero**, BloombergNEF, August 2, 2023.

¹⁵⁴ **House Republicans Pass Limit, Save, Grow Act to Rein in Wasteful Spending and Grow the Economy**, Ways and Means Chairman Jason Smith Press Release, April 26, 2023.

billion.¹⁵⁵ But it does not go far enough. Congress should also repeal the 15 percent corporate minimum tax and freeze IRA-directed funds thrown into the net-zero money pit.

Congress Must Build Bipartisan Anti-ESG Coalition

Anti-ESG Republicans in Congress must court like-minded Democrats to resist ESG-related mandates. In a deeply divided Congress, bipartisan collaboration will be needed and remains possible. Democrats in both houses have broken party ranks to oppose ESG before,¹⁵⁶ and Republicans will need to work with Democrats¹⁵⁷ in energy-producing and agricultural states that will bear the brunt of ESG mandates and other net-zero policies.

Proactive and Targeted ESG Bans

In March 2023, Congress passed a bill banning the Department of Labor that would have greenlit retirement plans usage of ESG metrics to direct investment decisions.¹⁵⁸ Although this measure was reactionary, Congress should proactively resist the spread of ESG requirements by other federal agencies. For example, Congress should consider barring the Farm Credit Administration¹⁵⁹ from requiring farm lenders to adopt sustainability reporting and concomitant ESG metrics.

Pass Laws Preventing Ideological ESG Investment and Lending

State level ESG policies should prevent state agencies, fund managers, insurers, and lenders from using ESG criteria to guide investment decisions and set insurance policies and premiums. Tennessee, Kansas, Arkansas, and Texas have all passed anti-ESG legislation that prevent financial service providers from using ESG criteria. By barring insurers, fiduciaries, and asset managers from using ESG metrics, state legislatures can apply market pressures to stop pushing ESG-driven decision-making. Tennessee's SB 0955 required the Tennessee Treasurer to make investment decisions based on financial factors and specifically barred ESG metrics from being used when investing state funds.¹⁶⁰ Similarly, Kansas' HB 2100

¹⁵⁵ Joint Committee on Taxation, **Estimated Revenue Effects of Division A, Title III of H.R. 2811**, April 26, 2023.

¹⁵⁶ Tori Otten, **Every Democrat Who Voted With Republicans to Block a Rule on Sustainable Investing**, *The New Republic*, March 1, 2023.

¹⁵⁷ **Blue Dog PAC**, *Bluedogdems.com* (Last visited November 20, 2023).

¹⁵⁸ **Barr's Anti-ESG Legislation Sent to President Biden After Bill Signing Ceremony**, Congressman Andy Barr press release, March 9, 2023.

¹⁵⁹ Farm Credit Administration, **fca.gov** (Last visited November 20, 2023).

¹⁶⁰ Kaitlin Housler, **Governor Lee Signs Bill Prohibiting ESG Investments in Tennessee**, *The Tennessee Star*, May 18, 2023; **Public Funds and Financing SB 0955 HB 1286**, Tennessee General Assembly, 2023 (Last visited November 30, 2023).

prevented state agencies from using ESG criteria when awarding government contracts. And it stopped financial advisors from using ESG metrics when making investments for the state retirement system, obligating them to seek the highest investment returns regardless of emission intensity.¹⁶¹ Arkansas' Act 411 established an ESG oversight board under the State Treasurer that logs all financial service providers who use ESG metrics to discriminate against energy producers, firearm manufacturers, or any other industry.¹⁶² Once on the list, Act 411 allows the treasurer to divest any public funds and retirement holdings held by the ESG financial institution.¹⁶³ Texas Senate Bill 833 prevents insurance providers from using “environmental, social, or governance models, scores, factors, [and] standards” when offering policies and setting premiums.¹⁶⁴ States that have not already done so should consider adopting the anti-ESG provisions in these bills. And states that have adopted anti-ESG legislation should consider augmenting those laws with anti-ESG measures used in other states.

Corporate and Shareholder Response to ESG Metrics

Corporate boards in industries that will be negatively impacted by ESG reporting and other net-zero policies should inform shareholders about how ESG-reporting requirements will affect operations and long-term shareholder value. Shareholders can then use this information when voting on ESG metrics. Activist institutions have stacked corporate boards with ESG advocates, but shareholders can vote against ESG resolutions and hold board members accountable for failed ESG policies and investment decisions.¹⁶⁵ In 2022, 1 out of 4 climate disclosure rules passed shareholder votes.¹⁶⁶ U.S. shareholders must exercise their privilege to vote against ill-advised corporate ESG resolutions. Investors who oppose ESG-based policies can also vote directly with their dollars and purchase a stake in anti-ESG funds and exchange-traded funds.¹⁶⁷

¹⁶¹ **Conference Committee Report House Bill 2100**, State of Kansas, 2023; Governor Laura Kelly, **Message from the Governor regarding House Bill 2100**, State of Kansas, April 24, 2023.

¹⁶² **House Bill 1307**, State of Arkansas 94th General Assembly, 2023 (Last visited November 30, 2023).

¹⁶³ **House Bill 1307**, State of Arkansas 94th General Assembly, 2023 (Last visited November 30, 2023).

¹⁶⁴ **Relating to Consideration by Insurers of Certain Prohibited Criteria for Ratemaking Senate Bill 833**, Texas State Legislature, September 1, 2023 (Last visited November 30, 2023).

¹⁶⁵ Matteo Tonello, **Shareholder Voting Trends (2018-2022)**, Harvard Law School Forum on Corporate Governance, November 5, 2022.

¹⁶⁶ *Ibid.*

¹⁶⁷ Mahi Roy and Alyssa Stankiewicz, **What's Inside Anti-ESG Funds?**, Morningstar, June 7, 2023.

Promote Good, Affordable Farming Practices at the Local Level

Every American farmer has the power to make a meaningful impact by practicing proper farming methods that can maximize yields and help feed the nation. The IRA set aside \$18 billion for climate-smart agricultural practices: no-till and cover crops.¹⁶⁸ But top-down solutions from Washington won't work because they lack the local and regional knowledge needed for successful farming. Farmers must decouple farming practices from their purported climate benefits and use the methods that are best for their farms, families, and produce. No-till farming and cover crops can offer significant soil health, erosion control, and cost-saving benefits for farmers.¹⁶⁹ But, studies suggest that the federal government may be overselling its emission reduction benefits,¹⁷⁰ and both practices have significant drawbacks if not deployed thoughtfully and carefully. Although no-till farming may improve some farm conditions, most farms will not reap benefits for several years while the soil rejuvenates,¹⁷¹ which makes the practice a non-starter for farmers who live on income from harvest to harvest. Cover cropping may offer some modest emission reduction benefits, but a recent analysis out of Stanford suggests that cover crops may also decrease corn and soybean yields.¹⁷² At a minimum, these studies caution against massive funding to expedite a slapdash rollout of "climate-smart" farming. Local field days sponsored by land-grant universities can help farmers learn how best to apply these practices in their regions and improve their success rates on the farm.

¹⁶⁸ **Inflation Reduction Act Leaves Farmers and Traditional Conservation Programs Behind**, U.S. Senate Committee on Agriculture, Nutrition, & Forestry, September 14, 2023.

¹⁶⁹ Garrett Duyck and Diane Petit, **Seeing is Believing: Soil Health Practices and No-Till Farming Transform Landscapes and Produce Nutritious Food**, U.S. Department of Agriculture, December 19, 2016.

¹⁷⁰ Emma Bryce, **No-till may not be the agricultural panacea we thought it was**, Anthropocene, August 5, 2022.

¹⁷¹ Frank Lessiter, **30 Years of Building Soil Health Undone with 1 Pass, Strip-Till Farmer**, November 17, 2022.

¹⁷² Rob Jordan, **There's room for improvement in a popular climate-smart agricultural practice, Stanford-led study shows**, *Stanford News*, November 8, 2022.

CONCLUSION

Government climate-control policies ensconced in the Paris Climate Accords, the Inflation Reduction Act, and ESG-guided mandates carry a hefty price tag, especially for U.S. farms and the American consumer. Europe has tested many of these policies aggressively for years, and the results have been an unmitigated failure. Energy prices across Europe have skyrocketed. Chemical companies have been unable to compete globally and have looked for exit strategies to find more profitable environs. Food prices have soared as farms have been battered by higher input, insurance, and lending costs—and tried to pass those higher expenses on to European consumers. Tariffs have targeted European industries that have looked elsewhere to make their products more affordable. Despite these resounding warnings from European counterparts, U.S. policymakers have recommitted American industry to the same net-zero emissions standards and have imposed the same kinds of costly mandates on farms and businesses that will ultimately reduce food and energy supplies without achieving their intended benefits. Oil and gas producers, chemical companies, and the American farm will likely shoulder the heaviest compliance burden, but they will inevitably share the cost with U.S. consumers as the government-induced high prices for fuel, fertilizer, and food ripple across the economic pond. Misguided climate-control policies can and should be resisted at every level. The next American president should again withdraw from the Paris Climate Accords, Congress should muster bipartisan support to challenge ESG mandates, state legislatures should ensure fair lending and insurance practices for constituent industries, and shareholders must vote against ESG investment practices and hold corporate leaders accountable for pursuing failed ideological ends on the company dime. The full price of climate-control policies and directives needs to be measured and understood, especially the costs they will inflict on American farms and households.

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Net-Zero Climate-Control Policies Will Fail the Farm

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