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REJECT THE GREEN NEW DEAL AND SIMILAR CENTRAL PLANNING SCHEMES

The Green New Deal (GND), a nonbinding resolution introduced by Rep. Alexandria Ocasio-Cortez (D-NY) and Sen. Ed Markey (D-MA) in February 2019, calls for "a new national, social, industrial, and economic mobilization on a scale not seen since World War II and the New Deal era." The GND envisions a massive expansion of federal spending and regulation to decarbonize the economy while guaranteeing health care, affordable housing, higher education, job training, family-sustaining wages, and retirement security for all. The costs required to achieve that end point are unsustainably large, vastly exceed benefits, and are not scientifically justified.

Congress should:

- Reject the Green New Deal and similar central-planning schemes.

The GND would impose unsustainable costs on the U.S. energy sector, inflate energy prices, depress gross domestic product (GDP) growth, and impoverish American households.

A March 2019 study by American Enterprise Institute economist Benjamin Zycher estimates that "meeting 100 percent of the power demand in the United States through clean, renewable, and zero-emission energy sources" would cost $490.5

billion per year, or $3,845 per household. Factoring in the budget cost of the social spending programs required to sustain the pro-GND coalition in Congress and the deadweight loss of the associated tax hikes, Zycher estimates the total annual cost of the GND would be nearly $9 trillion.

That estimate is conservative, Zycher explains, because the $9 trillion figure "excludes the costs of the massive shift away from fossil fuels in the transportation sector, the total cost of the GND's high-speed rail component, the cost of retrofitting every building in the country for 'efficiency,' and most of the economic costs of the environmental effects of the GND."

In July 2019, Heritage Foundation analysts Kevin Dayaratna and Nicolas Loris used a clone of the U.S. Energy Information Administration's National Energy Model to estimate the costs of achieving the GND goal of net-zero emissions by 2050. Dayaratna and Loris ran the model with an economy-wide, revenue-neutral carbon tax increasing at 2.5 percent annually combined with regulations and mandates targeting the manufacturing and energy sectors.

The model reveals that carbon taxes have sharply diminishing returns. A $35 carbon tax reduces carbon dioxide (CO_2) emissions by 44 percent below 2010 levels by 2050, but a $100 tax reduces emissions by only 53 percent. Even when the carbon tax exceeds $300 per ton, emissions do not decrease by more than 58 percent below 2010 levels.

Run with a $300 carbon tax and the industrial mandates, the Heritage model projects the following impacts by 2040:

- A decline of 1.2 million jobs in annual average employment levels, with a peak decline of 5.3 million fewer jobs in the fourth year of the GND program
- A reduction of $165,000 in the cumulative income of a family of four
- A reduction of $15 trillion in cumulative GDP
- An increase of 30 percent in household expenditures for electricity

Those estimates are also conservative. As noted, costs are estimated only up to the point where taxes and mandates cut emissions by 58 percent. The analysis also does not estimate the direct taxpayer costs of GND spending programs or the costs of maximizing the energy efficiency of all buildings.

A February 2020 Competitive Enterprise Institute study by Daniel Turner and Kent Lassman fills some of the gaps in previous analyses. Zycher estimated the costs of replacing fossil and nuclear generation with wind and solar power. Turner and Lassman estimate the costs of deploying additional renewable capacity to meet GND-induced increases in electric demand, such as rapid electrification of the U.S. transport sector. They also estimate costs of electrifying the shipping and logistics industry, replacing combustion-powered vehicles with electric vehicles, and retrofitting all buildings. Combining that information with previous studies, they estimate the total cost of GND energy policies for households in Alaska, Colorado, Florida, Iowa, Michigan, New Hampshire, New Mexico, North Carolina, Ohio, Pennsylvania, and Wisconsin.

They find that in 10 of those states, the average household cost of GND energy policies is $74,287 in the first year of implementation, $47,755 annually over the next four years, and $40,706 annually thereafter. Annual GND costs in Alaska are about $10,000 higher because of its cold climate, remoteness, and sparse population.

The authors caution that "the GND would likely drive the American economy into a steep economic depression, while putting off-limits affordable energy necessary for basic social institutions like hospitals, schools, clean water and sanitation, cargo shipments, and the production and transport of the majority of America's food supply."

The Green New Deal is also based on flawed scientific assumptions. Many GND advocates claim the world has about a decade to avert planetary ruin—an assessment attributed to the United Nations Intergovernmental Panel on Climate Change (IPCC). An October 2018 IPCC report found that global emissions must fall to 40 to 60 percent below 2010 levels by 2030 if policy makers are to hold global warming below 1.5 degrees Celsius (°C).

However, the IPCC neither states nor implies that 1.5°C is a tipping point beyond which catastrophe ensues. On the contrary, the IPCC states: "Under the no-policy baseline scenario, temperature rises by 3.66°C by 2100, resulting in a global gross domestic product (GDP) loss of 2.6%" (*Special Report on 1.5°C of Global Warming*, Chapter 3, p. 256). Although undesirable, a reduction in global GDP of 2.6 percent 80 years from now is not a catastrophe.

Indeed, as Danish analyst Bjorn Lomborg points out, of the IPCC's five main economic development scenarios, the fossil energy–intensive scenario achieves the fastest economic growth and greatest degree of income equality. In that scenario, global per capita income in 2100 reaches an astonishing $140,000 annually—more than 10 times the current level. That is after accounting for climate change damages. Thus, according to the IPCC, unchecked climate change negatively affects global GDP, but untrammeled fossil-fueled growth would offset the losses many times over.

According to standard modeling by the U.S. Environmental Protection Agency (EPA), full decarbonization of the U.S. economy by 2050 would avert only 0.173°C of warming by 2100. Recent empirical research indicates that the actual mitigation could be only 0.08°C—an undetectably small quantity. Either way, the GND would have no discernible impact on weather patterns, crop yields, polar bear populations, or any other environmental condition that people care about. In short, the GND would impose massive costs for few if any detectable climate benefits. It is a bad deal.

Experts: Marlo Lewis, Kent Lassman, Myron Ebell

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OPPOSE CARBON TAXES

Neither chamber of Congress has ever passed a carbon tax, and for good reason. A carbon tax is a market-rigging policy, not a free-market one. A carbon tax by design raises the cost of energy. Making energy less affordable diminishes economic growth, household income, and consumer purchasing power.

Many current proposals would rebate a portion of the revenues to American households, but given Washington's spending ambitions, no enacted carbon tax would be "revenue neutral," as it would not reduce other taxes by an amount equal to expected revenues. Even if it were revenue neutral, the tax would still be economically harmful. Carbon pricing would also expand federal regulation because of its inevitable pairing with a system of border taxes.

Finally, costs would far exceed benefits because even the most aggressive politically feasible tax would have no discernible impact on climate change risks.

Congress should:

- Reject legislative proposals to establish a carbon tax.

A carbon tax is not a free-market policy. Rather, it imposes prices, rather than mandates, to reduce emissions. Cap-and-trade programs and renewable energy quotas are just implicit carbon taxes. All such policies pick energy market winners and losers. As President Obama put it, the point of pricing carbon is to "finally make renewable energy the profitable kind of energy in America."

Any enacted carbon tax will not be revenue neutral. Most carbon tax bills include "fee and dividend" programs that rebate a portion of revenues to American households. However, given Washington's spending ambitions, no enacted carbon tax would ever reduce other taxes by an amount equal to expected revenues. Inevitably, substantial revenues would be used to fund "investments" in infrastructure, "green jobs," or other political priorities. Besides, returning revenues to households would not incentivize work or investment. Instead, it would empower government to play Santa Claus with new pots of tax dollars. A fee-and-dividend program is just a "share the wealth" scheme in green garb.

Even if the carbon tax were revenue neutral, it would still be economically damaging. The smaller the base on which a tax of a given size is levied, the more harmful the impacts on investment, employment, and consumer prices. For example, imposing a $100 billion tax on citrus producers would destroy many more businesses and jobs and would more adversely affect consumer welfare than would a $100 billion hike in federal income taxes.

The base for a carbon tax—a set of specific commodities and companies—is narrower than the base for income taxes. Thus, a fee-and-dividend program would still hamper economic growth. In a recent study, Capital Alpha Partners examines a carbon tax that starts at either $40 or $49 per ton and increases by 2 percent annually. The study finds that a carbon tax returning all revenues via lump-sum rebates to households results in "lost GDP equal to between $3.76 trillion and $5.92 trillion over the 22-year forecast period."

A grand bargain in which conservatives and progressives agree to tax carbon and deregulate energy at the same time is a fairy tale. Several recent carbon tax bills advocate suspending greenhouse gas (GHG) regulations under Clean Air Act sections 202, 211, 213, and 231. Those provisions deal solely with motor vehicle engines and fuels. Thus, the EPA would remain free to revive the so-called Clean Power Plan, or even to establish national ambient air quality standards for greenhouse gases.

In addition, the bills require the EPA to impose regulations in 2030 if the agency believes the suspended provisions would have achieved greater emission reductions than the carbon tax. Tellingly, the bills direct the agency to "grant a waiver under CAA section 209(b)." That is the provision under which the Obama-era EPA granted California permission to establish GHG emission standards for new motor vehicles. The Trump administration's Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule rescinded that waiver. The carbon tax bills would reinstate it. Thus, the bills do not even temporarily suspend regulation of motor vehicle GHG emissions but rather transfer that power to the California Air Resources Board. Unsurprisingly, none of the bills preempt any state-level climate policies.

Worse, enacting a carbon tax would saddle U.S. businesses with a massive new regime of intrusive regulation. To prevent carbon taxes from creating "unfair" trade advantages for foreign producers, most proposals impose "border taxes"—carbon

tariffs—on goods imported from countries lacking equivalent climate policies. That would increase costs for American businesses and consumers.

Moreover, estimating carbon price equivalencies among heterogenous policies and enforcement regimes would be a daunting, subjective, and contentious process. Many jurisdictions' climate policies do not rely chiefly on carbon taxes. Finally, variations in regional, local, and even company-specific production processes may yield different carbon intensities unrelated to differences in national policies.

The difficulties in estimating carbon intensities are compounded by international supply chains. A product imported into the U.S. may incorporate inputs and value additions from firms in several countries operating under diverse climate policies. And supply chains can change rapidly, as often happened during the COVID-19 pandemic. Thus, as American Enterprise Institute economist Benjamin Zycher observes, something like a greatly expanded—or new—Internal Revenue Service would be needed to develop, administer, and audit compliance with new rules for estimating and reporting carbon intensities, and to prosecute companies suspected of border tax evasion or underpayment.

All the economic and regulatory pain would produce no detectable effects on weather patterns, crop yields, or any other environmental condition that people care about. Even a carbon tax that eliminates all U.S. CO_2 emissions would avert only 0.137°C of global warming by 2100, according to standard EPA climate modeling. Any politically feasible carbon tax would achieve significantly less, especially over the next 30 years.

Chief Justice John Marshall famously observed, "The power to tax involves the power to destroy." That is especially true of carbon taxes, which in most proposals increase, year after year, through 2030 or even 2050. Unlike income or payroll taxes, a carbon tax is designed to tax away the base on which it is levied.

Any such premeditated assault on industries providing affordable, reliable energy to the American people is what the Competitive Enterprise Institute calls a "never needed" policy. Enacting a carbon tax now, as America struggles to reopen for business, would be exceedingly unwise.

Experts: Marlo Lewis, Myron Ebell

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END FEDERAL ENERGY TAX CREDITS

Renewable energy tax credits enrich special interests at taxpayers' expense, divert capital from self-sustaining energy projects to politically mandated projects, and divert resources and talent from innovation to cronyism and lobbying.

Congress should:

- End federal energy tax credits.

Wind and solar power are no longer "infant" industries and their advocates repeatedly claim renewable generation is fully competitive with fossil-fuel energy generation. Yet they continually lobby to extend the renewable energy production tax credit (PTC) and investment tax credit (ITC), warning of job losses, business failures, and stalled investment unless the credits are renewed. The messages conflict but serve the same purpose: keep the gravy train running.

The PTC is a tax credit for electricity generated by wind, geothermal, and other renewable technologies. Owners of "qualified facilities" receive credits for every kilowatt-hour (kWh) produced over a 10-year period. Thus, even if the PTC is not renewed in 2020 or reinstated in 2021, most current beneficiaries will continue to receive credits for years to come.

The 1992 Energy Policy Act set the maximum value of the PTC at 1.5 cents per kWh, adjusted for inflation. The current inflation-adjusted maximum is 2.5 cents per kWh. However, Congress has often modified the maximum for facilities starting construction in specific years. For example, the Taxpayer Certainty and Disaster Relief Act of 2019 set the credit for 2020 at 60 percent of the maximum rate—an increase from the 2019 rate of 40 percent. The ITC reduces a producer's tax liability by a percentage of the cost of acquiring or constructing the facility. Currently, solar energy has a permanent ITC rate of 10 percent, although a property starting construction in 2019, 2020, and 2021 receives credits of 30 percent, 26 percent, and 22 percent, respectively.

The PTC was first enacted in 1992 and was scheduled to expire on July 1, 1999. Since 1999, Congress extended the PTC five times and retroactively reinstated it seven times. Similarly, the ITC was first enacted in 1978 and was scheduled to expire on

December 31, 1982. Between 1980 and 1992, Congress renewed the ITC seven times, making the 10 percent solar ITC permanent via the 1992 Energy Policy Act. Congress increased the value of the credit and the list of qualified facilities five times via the 2005 Energy Policy Act and subsequent legislation.

Today, the PTC transfers money from future taxpayers to a relatively small number of beneficiaries. For example, the annual number of PTC claimants during 2008–2015 ranged from 180 in 2012 to 265 in 2015. The U.S. Treasury estimates the wind PTC will cost $4.3 billion in 2021 and $33.8 billion in forgone federal revenue during 2021–2029. Combined with the ITC for solar and offshore wind, the credits will cost $9.1 billion in 2021 and $66.7 billion during 2021–2029.

The alleged "climate crisis" is the principal rationale for subsidizing renewable electricity investment. However, even complete decarbonization of the U.S. economy would avert only 0.137°C of global warming by 2100, according to standard EPA modeling. The mitigation achievable by the PTC and ITC, if any, is literally undetectable.

Some proponents claim that the tax credits benefit consumers, arguing as follows. Twenty-nine states have enacted renewable portfolio standards (RPS). RPS programs require utilities to ensure that specific percentages of electricity sold in retail markets come from renewable sources. Absent the PTC and ITC, utilities would incur higher RPS compliance costs and charge customers higher rates.

That is correct as a snapshot analysis, but it ignores the tax credits' long-term political impact, which is to prop up—and thus expand—RPS programs. The PTC and ITC shift part of the current cost of RPS programs from current in-state ratepayers to future federal taxpayers. In other words, the credits hide from ratepayers the full cost of renewable energy mandates. If the PTC and ITC never existed, states would likely have fewer or less aggressive RPS programs. Indeed, renewable electricity investment typically craters when the tax credits lapse. Ending the PTC and ITC will improve the prospects for rollback or even repeal of costly renewable electricity quotas.

Deregulation would benefit consumers because RPS programs increase electricity rates. A May 2019 University of Chicago study found that "RPS programs significantly increase retail electricity prices, with prices rising by 11 percent seven years after the

policy became law and 17 percent twelve years afterwards. The cumulative effect seven years after the passage of the legislation initiating an RPS, consumers in the 29 states studied had paid $125.2 billion more for electricity than they would have in the absence of the policy."

Oregon, Texas, and Washington have aggressive RPS programs *and* low electricity prices. However, that is because those states have abundant affordable power from sources other than wind and solar—natural gas in Texas and hydropower in Oregon and Washington. Other states with aggressive RPS programs—California, Connecticut, Massachusetts, New Hampshire, New York, and Vermont—have electricity rates substantially higher than the national average. All states without RPS programs have rates below the national average.

The PTC and ITC subsidize special interests at the expense of taxpayers. They also prop up RPS programs that subsidize the same favored few at the expense of consumers. Congress should let the PTC and ITC expire—permanently.

Experts: Marlo Lewis, Ben Lieberman, Myron Ebell

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END FEDERAL EFFICIENCY STANDARDS FOR CONSUMER PRODUCTS

It is almost a truism: the private sector is more efficient than government, and consumers know their own interests better than does any central planner. Nonetheless, the federal government has gotten into the business of setting efficiency standards for a variety of energy-using consumer goods—from cars and refrigerators to light bulbs—that make those products more expensive and less reliable. It is time to pull the plug on those decades-old mandates and give consumers more choice in the products they buy and the way they use energy.

Congress should:

- Sunset all federal energy efficiency standards for consumer products.

Consider corporate average fuel economy (CAFE) standards for cars and trucks. Congress created CAFE in 1975 in response to the oil embargo by the Organization of Petroleum Exporting Countries and fears of rising dependence on foreign oil. That was an ill-advised solution to a problem that has been solved by the shale revolution and America's ascendance as the world's leading hydrocarbon energy producer. Although the decline in fuel prices since 2015 has decreased the consumer value of fuel-saving technologies, CAFE forces consumers to continually pay more for those technologies.

Worse, the National Academy of Sciences and others have documented that CAFE caused tens of thousands of occupant deaths in previous decades and continues to constrain improvements in vehicle safety. CAFE puts pressure on automakers to reduce average vehicle weight. Lighter vehicles get more miles per gallon but also have less mass to absorb collision forces.

The Obama administration exacerbated CAFE's inherent problems. Defying the Energy and Policy Act's preemption of state laws or regulations "related to" fuel economy, the Obama EPA elevated a state agency famous for its regulatory zeal—the California Air Resources Board (CARB)—from stakeholder to decision maker. Both the Obama administration and CARB aspired to be world "climate leaders," and they elevated climate change concerns as a factor determining the stringency of fuel economy standards. That meant regulators paid even less attention to the adverse impacts of fuel economy standards on auto safety and new car prices.

The standards were scheduled to increase in stringency by 5 percent annually during the 2021–2025 model years. The Obama-era EPA conceded that the standards could increase sticker prices by nearly $3,000 during 2016–2025, while some outside experts estimated larger price increases. CAFE continues to cause occupant deaths not only by limiting vehicle mass, but also by diverting research and development from safety to fuel efficiency enhancements.

Any consumer who wants to buy a highly efficient or alternatively fueled vehicle is free to do so, with or without CAFE. The program's biggest "achievement" now is to restrict the number of new vehicles offered for sale that middle-income households can afford.

Fortunately, the Trump administration recognized CAFE's growing problems. The EPA and National Highway Traffic Safety Administration's Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule reduces the stringency of model year 2021–2026 CAFE standards. It also rescinds California's power to regulate fuel economy. Even better would be sunsetting the program entirely.

Consumers face similar problems with a range of home appliances, which are subject to other dubious standards—part of the same obsolete 1975 law that gave us CAFE. Since then, just about everything that plugs in or fires up around the house has been subjected to federal efficiency standards, in some cases up to five rounds of successively tighter mandates. Even the Department of Energy, which sets the standards, admits that in some cases the resulting increase in the price of appliances may exceed the projected energy savings. Appliance quality suffers as well, through reduced reliability and inferior performance. Perhaps worst of all are the dishwasher standards that have greatly extended the time it takes to do a load. There is nothing efficient about wasting people's time.

There is no reason for the federal government to dictate consumer choices for cars or any other products. The buyers of those products are perfectly capable of balancing energy use—for which federally required labels provide all the needed information—against purchase price and other attributes. Federal energy efficiency mandates should be repealed.

Experts: Sam Kazman, Ben Lieberman, Marlo Lewis, Devin Watkins

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PROHIBIT USE OF THE SOCIAL COST OF CARBON TO JUSTIFY REGULATION OR INFLUENCE PROJECT REVIEWS UNDER THE NATIONAL ENVIRONMENTAL POLICY ACT

The social cost of carbon (SCC)—the cumulative damage over centuries supposedly caused by an incremental ton of carbon dioxide emitted in a specific year—is not an objective magnitude like the boiling point of water at sea level. Rather, carbon's social cost is a range of estimates generated by computer programs that combine speculative climatology with speculative economics, known as "integrated assessment models" (IAMs). The estimates are too subjective to justify regulations.

Moreover, the hypothetical climate impacts of even the largest infrastructure project are too small ever to be detected or verified. Thus, SCC estimation should not inform agency reviews of infrastructure projects under the National Environmental Policy Act (NEPA).

Congress should:

- Prohibit agencies from using social-cost-of-carbon analysis to justify regulatory decisions or to influence project reviews under the National Environmental Policy Act.

By fiddling with non-validated climate parameters, made-up damage functions, and below-market discount rates, SCC modelers can make "climate action" look like a bargain at any price and make fossil fuels look unaffordable no matter how cheap. In addition, by multiplying the presumed SCC by some estimate of an infrastructure project's direct and indirect CO_2 emissions over the next 280 years, opponents can plausibly claim that the project's social costs, although unverifiable, outweigh its manifest economic benefits.

Because many IAM inputs and assumptions are speculative, SCC modelers can "obtain almost any result one desires," cautions MIT professor Robert Pindyck. What climate campaigners and their agency allies typically desire is to sustain the "worse than we thought" narrative. Unsurprisingly, the central SCC estimates in the Obama administration's 2013 SCC technical support document (TSD) were about 60 percent

higher than those in the administration's 2010 TSD. That is tantamount to saying that in four short years, cumulative climate change damages between 2000 and 2003 increased by 60 percent.

Both TSDs inflated SCC estimates by using below-market discount rates to calculate the present value of future climate damages. In addition, both inflated the perceived benefit–cost ratios of administration climate policies by comparing U.S. compliance costs with the supposed global benefits of greenhouse gas emission reductions rather than with the putative (and smaller) domestic benefits.

In 2017, the Office of Management and Budget put a stop to those accounting gimmicks, but other major biases remain uncorrected. Federal agencies still rely on an obsolete climate sensitivity study (Roe and Baker 2007) that likely overestimates how much warming results from a doubling of atmospheric CO_2 concentrations.

Worse, two of the three IAMs used by federal agencies—known as DICE (Dynamic Integrated Climate-Economy model) and PAGE (Policy Analysis of the Greenhouse Effect)—ignore the abundantly documented agricultural and ecological benefits of CO2 emissions. Those models are structurally biased. The other model—known as FUND (Climate Framework for Uncertainty, Negotiation and Distribution) —does estimate CO2 fertilization benefits but on the basis of studies conducted in the 1990s.

More important, even if such biases are removed, SCC analysis would still be too conjectural to serve as a basis for regulatory justification or NEPA project reviews, for the following reasons:

- IAMs estimate cumulative damages over long stretches of time—typically from the year of an emission's release until 2300. No one can forecast the baseline emission trajectory of the global economy over the next 280 years.
- Scientists do not know the relative strength of the positive and negative feedbacks that amplify or constrain the climate's response to rising CO_2 concentrations, which means there is still no "consensus" about the key variable: climate sensitivity.
- IAMs make non-validated assumptions about how rising temperatures will affect weather patterns, ice-sheet dynamics, and other natural phenomena and how such

physical changes will affect agriculture, other climate-sensitive industries, and consumption absent adaptive responses.

- Nothing is harder to forecast than long-term technological change. Yet IAM "damage functions"—projections of how climate change will affect the GDP and the public health—depend on assumptions about how adaptive technologies develop as the world warms.

In 2020, researchers updated the FUND model with recent empirical findings about CO_2 fertilization and climate sensitivity. They found that the SCC is likely to be negative through the mid-21st century. A negative cost is another way of saying a net benefit.

Experts: Marlo Lewis, Patrick Michaels, Myron Ebell

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RECLAIM CONGRESS' AUTHORITY TO DETERMINE CLIMATE POLICY

In *Massachusetts v. EPA* (2007), the U.S. Supreme Court ruled that the 1970 Clean Air Act (CAA)—enacted years before Congress' first climate change hearing—gives the Environmental Protection Agency "unambiguous" authority to regulate greenhouse gases. Under the Obama administration, the EPA interpreted that decision as a license to steamroll congressional opposition to its climate policies. The most egregious example was the so-called Clean Power Plan, which impermissibly imposed emission "performance" standards on existing (already built) coal and gas power plants that no new facility could meet.

Congress should:

- Amend the Clean Air Act to clarify that it never delegated to the Environmental Protection Agency the authority to make climate policy.

In *Massachusetts v. EPA*, the Supreme Court ruled that the EPA must regulate greenhouse gas emissions from new motor vehicles under section 202 of the Clean Air Act if the agency determines that such emissions may be reasonably anticipated to endanger the public health or welfare. The Court reasoned that greenhouse gases fit the Act's "capacious definition" of "air pollutant" and that regulating GHG emissions from new motor vehicles would not lead to "extreme measures."

However, neither the EPA nor the petitioners informed the Court what would happen once the agency established GHG emission standards for new motor vehicles. Under the EPA's longstanding interpretation, regulating any air pollutant under any part of the CAA automatically triggers regulation of "major" stationary sources under the Act's preconstruction and operating permit programs.

The Court unwittingly set the stage for an era of extreme measures. Carbon dioxide is emitted in much larger quantities and by vastly more sources than the air pollutants the Clean Air Act was designed to regulate. Consequently, the EPA and its state counterparts faced the absurd prospect of each year applying the Act's preconstruction permits program to some 80,000 previously unregulated nonindustrial sources and the Title V operating permits program to 6.1 million such sources. Agency workloads

would expand far beyond administrative capabilities, sabotaging both environmental enforcement and economic development.

To avoid administrative chaos, the EPA adopted a rule to "tailor" (amend) the Act's clear numerical definition of "major" stationary sources so that only the largest GHG emitters would be subject to the permitting programs. In *Utility Air Regulatory Group v. EPA* (2014), the Supreme Court overturned the EPA's so-called Tailoring Rule for the simple reason that agencies have no power to amend statutes. But to prevent *Massachusetts v. EPA* from spawning an administrative debacle, the Court had to engage in tailoring of its own.

Without any textual support, and ignoring the fact that none of the hundreds of climate bills introduced since the 101st Congress had even proposed to apply CAA permits to greenhouse gases, the Court ruled that the EPA may include greenhouse gases in the permitting programs for sources that are otherwise subject to such regulation but not for small sources that are currently exempt.

As noted, in *Massachusetts v. EPA*, the Court claimed that the 1970 CAA authorizes the EPA to regulate greenhouse gases. However, the terms "carbon dioxide," "greenhouse gas," and "global warming" appear nowhere in the Act. The 1990 CAA mentions "carbon dioxide" and "global warming" appear only once, and only in nonregulatory provisions that admonish the EPA not to infer authority for "pollution control requirements" or "additional regulation" under the CAA.

The Court construed section 302(g) of the CAA to define "air pollutant" as any substance emitted into the ambient air. Since automobiles emit $CO_{2,}$ the Court concluded that the EPA may regulate CO2 as an air pollutant. However, CAA section 302(g) does not assert that anything emitted is per se an air pollutant. The provision is only two sentences long.

Rather than try to give effect to every word, the Court ignored a key term in the first sentence and the entire second sentence.

The first sentence defines air pollutant as any "air pollution agent" emitted into the ambient air. An air pollution "agent" is something that causes or contributes to air pollution. It is far from obvious that CO2 fits the bill. Unlike other pollutants

regulated under the CAA, reducing CO_2 concentrations does not make the air cleaner, more healthful to breathe, or less harmful to plant life. Indeed, a CO_2-free atmosphere would be fatal to food crops, trees, and green plants generally.

According to the second sentence, precursors of substances already classified as air pollutants are also air pollutants. That sentence would not be necessary if, as the Court opined, anything emitted is automatically an air pollutant, because precursors only form other pollutants after being emitted.

The strike-throughs in the following paragraph show the text ignored by the Court when it decided that CAA section 302(g) authorizes the EPA to embark on a vast new regulatory agenda undreamed of by Congress in 1970 and deliberately rejected by Congress in 1990:

> The term "air pollutant" means any ~~air pollution agent or combination of such agents, including any physical, chemical, biological, radioactive (including source material, special nuclear material, and byproduct material)~~ substance or matter which is emitted into or otherwise enters the ambient air. ~~Such term includes any precursors to the formation of any air pollutant, to the extent the Administrator has identified such precursor or precursors for the particular purpose for which the term "air pollutant" is used.~~

Definitional disputation aside, the Court ignored the big picture. The CAA contains numerous detailed provisions both authorizing and constraining the EPA's power to regulate specific types of pollutants. That structure is a hallmark of the CAA and indispensable for understanding congressional intent. The potential economic and political impacts of GHG regulation far exceed those of any pollution controls expressly required or authorized by the Act. The idea that Congress signed off on a national decarbonization agenda when it defined "air pollutant" in 1970 is preposterous.

Massachusetts v. EPA continues to undermine the separation of powers. Congress has often considered and rejected GHG cap-and-trade legislation, and a bill authorizing the EPA to restructure state electric power sectors would be dead on arrival. Yet the EPA's so-called Clean Power Plan pressured states to adopt cap-and-trade programs to restructure their power sectors.

The Clean Power Plan had egregious legal flaws beyond the Court's errors in *Massachusetts v. EPA*, and the EPA repealed and replaced it in 2019. Nonetheless, *Massachusetts v. EPA* is a standing pretext for executive usurpations of legislative power. Congress should curb the EPA's ability to overreach by clarifying that it has no power under the CAA to determine national climate policy.

Experts: Marlo Lewis, Myron Ebell

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REJECT THE KIGALI AMENDMENT TO THE MONTREAL PROTOCOL OR ITS LEGISLATIVE EQUIVALENT

Beginning in the 1970s, concerns that refrigerants used in most air conditioners and refrigerators were leaking into the air and depleting Earth's ozone layer led to the negotiation and signing of the Montreal Protocol, a 1987 United Nations treaty that phases out the use of those chemicals. Since then, a number of ozone-safe substitutes have been developed and are now used in most residential and vehicle air conditioners and residential and commercial refrigerators.

However, governments and environmental advocacy groups are now targeting those substitutes for phaseout because of their alleged contribution to global warming. In 2016, in Kigali, Rwanda, the parties to the Montreal Protocol agreed to an amendment to the treaty, known as the Kigali Amendment, that restricts production of those second-generation refrigerants. U.S. ratification of the Kigali Amendment requires a two-thirds vote in the Senate. Bills introduced in both the House and Senate would also seek to restrict those refrigerants.

Congress should:

- Oppose the Kigali Amendment or similar legislative measures that would drive up the cost of air conditioning and refrigeration.

The Kigali Amendment, or its legislative equivalent, would raise the cost of air conditioning and refrigeration across the board. Some manufacturers of Kigali-compliant refrigerants and equipment stand to benefit from the amendment. They have joined forces with environmental activists to lobby for the Kigali Amendment's ratification and have made a number of far-fetched claims that such government interference in air conditioning and refrigeration will actually create jobs and bring down costs. In truth, such measures are very likely to kill jobs, particularly for the millions of businesses that rely on that equipment—such as grocery stores and restaurants—and will have to shoulder the increased expense. Home and vehicle air conditioning will also be adversely affected.

Those measures would be particularly damaging as America recovers from the COVID-19 pandemic. Air conditioning can help protect against the indoor spread of that or any future virus, especially if redesigned to increase rates of ventilation and

filtration. But the Kigali Amendment would require costly changes to air-conditioning systems that do nothing to improve virus protection.

Expert: Ben Lieberman

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SUNSET THE RENEWABLE FUEL STANDARD

In 2005, Congress created the Renewable Fuel Standard (RFS) and expanded it in 2007. The impact of the COVID-19 crisis is just the latest surprise. Proponents of the RFS promised it would help enhance energy security, boost the economy, and bring environmental benefits, but the program has failed to deliver on any of those promises.

Congress should:

- Set an end date for the Renewable Fuel Standard.

The RFS requires corn ethanol and other biofuels to be added to the nation's gasoline and diesel supply. It contains emergency waiver provisions to avoid severe economic hardship. Five governors have asked the Environmental Protection Agency for waivers because of the coronavirus-induced drop in fuel demand and prices. Granting the waivers would be a good start toward reining in this counterproductive program and may help boost economic recovery. Even better, Congress should sunset the program, especially since it could get worse after 2022, when the EPA will have wide latitude to make it more stringent.

Most of the surprises since the program was last revised in 2007 have undercut the already problematic rationale for mandating the use of biofuels. At the time, demand for gasoline was rising, while domestic oil output was falling and import dependence was growing. Stretching the fuel supply with—presumably—domestic biofuels seemed like a good idea to many in Congress. But soon after 2007, those trends unexpectedly reversed. Gasoline demand started falling as the shale revolution led to a rebirth of American oil production and a sharp decline in imports.

At the same time the energy independence rationale for the RFS was eroding, the economic rationale was not doing much better. The costs of compliance never came down enough for the RFS to become economical, especially in the high volumes mandated. That is especially true of the biodiesel portion of the RFS. In addition, the promised big breakthroughs in "next generation" cellulosic biofuels never materialized.

With or without the RFS, a good deal of ethanol would still be added to the gasoline supply because of its benefit in raising octane levels, as even refiners critical of the

program admit. But it is the last billion or so gallons of the de facto annual mandate of 15 billion gallons that cause problems, by potentially increasing the percentage in gasoline to levels that may cause engine damage.

Another major change since 2007 is the program's declining standing with environmentalists. Several green groups that originally supported or at least acquiesced to the RFS have since soured on the program. For example, the Sierra Club won a lawsuit last year forcing the EPA to review the RFS' environmental impacts. That review may include research findings that corn ethanol has led to higher GHG emissions than would result from an equivalent volume of petroleum-derived gasoline. Beyond comparative emissions, environmental activists also see the RFS and its overwhelming focus on liquid fuels as being out of step with their preference for electrification of the transportation sector.

Now, as a result of the nationwide lockdowns and substantial reductions in gasoline demand, the governors of Louisiana, Oklahoma, Texas, Utah, and Wyoming have asked the EPA to waive the program's requirements. The problem is not adverse consumer impacts—gasoline is cheaper today than it has been in years—but the ability of refiners to remain in operation. Many are struggling with sharply reduced demand and low prices. Thus, the high cost of complying with the RFS may be enough to force some to shut down. Shuttered refineries will cost jobs and hamper post-coronavirus economic recovery.

The Trump administration tried, in vain, to find the middle ground between the agricultural interests that benefit from the RFS and refiners who are critical of it. It granted ethanol producers a regulatory change that allowed the use of 15 percent ethanol to gasoline rather than just 10 percent, while giving more small refineries exemptions from the program. Neither side was happy and both have sued. The recent decision on small-refinery exemptions also factors into the governors' waiver requests, as it greatly increased compliance costs for refiners by prompting a jump in the price of renewable identification numbers, or RINs, the compliance credits refiners must either generate or buy.

Granting waiver requests would provide some near-term relief, but a legislative sunset of the program is what is really needed. After 2022, the EPA will have greater latitude in setting the mandated volumes of biofuels under the RFS, and could decide to

make the program even more stringent and costly. Congress should take away that possibility by replacing those provisions with a clear end date for the RFS.

Experts: Ben Lieberman, Marlo Lewis, Mario Loyola

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STREAMLINE THE FEDERAL PERMITTING PROCESS FOR INFRASTRUCTURE PROJECTS

Many infrastructure projects like new highways and pipelines get bogged down by federal red tape and delays. The National Environmental Policy Act (NEPA) alone imposes permitting requirements that take major projects an average of 4.5 years to get initial approval, often followed up by litigation by environmental advocacy groups and thus even more delays.

Things have gotten worse over the past decade as climate change activists have employed such tactics to delay or stop the extraction, transport, and use of coal, oil, and natural gas. Along with NEPA, statutes like the Clean Water Act have been misused to stop fossil-fuel-related projects, such as natural gas pipelines and coal export terminals—even when no legitimate water quality concerns exist.

Those projects are important for America to stay competitive globally while providing consumers with the infrastructure and affordable energy they need. In addition, the high-paying jobs they create would help the national economy recover from the coronavirus pandemic. But in many instances, the delays are so extensive that project developers are forced to give up.

The Trump administration focused on project permit streamlining. Executive orders advanced useful reforms like One Federal Decision, which improves interagency coordination and speeds up the approval process. It also enacted a number of regulatory reforms to NEPA and the Clean Water Act, especially on the misuse of those statutes to block fossil-fuel-related projects.

Congress should:

- Codify in legislation the Trump administration's executive orders and regulations that streamline the federal permitting process for major projects.

Executive orders can be ignored or overridden by future administrations, and regulatory reforms have been challenged in federal court. For those reasons, Congress should consider codification of the most important reforms to the permitting process,

particularly those that prevent unnecessary delays related to improving domestic energy supplies and infrastructure.

Experts: Ben Lieberman, Marlo Lewis, Mario Loyola, Myron Ebell

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ADDRESS UNACCOUNTABLE ENVIRONMENTAL RESEARCH PROGRAMS

A number of "nonregulatory" environmental research programs have both regulatory and market impacts. Those programs enable the Environmental Protection Agency to act with little accountability, and even run afoul of basic principles of scientific integrity. Two such problematic programs include the EPA's Integrated Risk Information System (IRIS) and its Safer Choice program.

Congress should:

- Move responsibilities of the Integrated Risk Information System to program offices that implement environmental laws, such as the chemicals office that implements the Toxic Substances Control Act (TSCA), and require those offices to rely on the best available science for developing chemical assessments.
- Eliminate the EPA's hazard-based Safer Choice program and use the funds to reduce federal spending.

IRIS is a nonregulatory research program that assesses chemical toxicity that EPA program offices use to develop regulations under federal laws, such as the Safe Drinking Water Act, Clean Air Act, Superfund, and other laws. However, IRIS operates outside the regulatory framework, so limited systems exist to ensure the scientific integrity of its assessments. Many of its findings have tended toward excessive caution based on questionable and incomplete science. That approach has helped advance counterproductive regulations that impose needless regulatory burdens. For example, IRIS' assessment of ethylene oxide (EtO), a chemical used to sterilize medical equipment, led to unwarranted health scares that led to the shutdown of several medical sterilization plants, which has contributed to medical supply shortages during the COVID-19 crisis.

The Government Accountability Office raised concerns about IRIS' procedures more than a decade ago. Since then, IRIS reform has continued to be the subject of GAO reports, an Inspector General report, and congressional hearings. A 2011 National Academy of Sciences report on IRIS' formaldehyde assessment criticized the agency for "recurring methodologic problems," including repeated failures to provide "clarity and transparency of the methods." The report included suggestions on how IRIS could improve its science.

The Trump administration proposed significant budget cuts for the EPA's Office of Research and Development. Yet Congress has continued to fund IRIS, while the agency has shifted some of the IRIS funding and responsibilities toward implementation of the Toxic Substances Control Act.

The Improving Science in Chemical Assessments Act (H.R. 89) would move most IRIS functions to the program offices, including the office implementing TSCA. In June 2019, the bill's sponsor, Rep. Andy Biggs (R–AZ) offered an amendment to the omnibus appropriations bill for 2020 that would have preempted the EPA's spending any funds on IRIS, but it failed.

Rep. Bigg's proposal to demand that chemical assessments be conducted under congressionally mandated guidelines outlined in federal statutes, particularly the reformed Toxic Substances Control Act, makes sense. The reformed TSCA law, which passed with broad bipartisan support in 2016, requires the EPA to rely on the "best available science," rather than on outdated approaches that misrepresent actual risks. Accordingly, there are good reasons to believe that TSCA's approach would prove superior to that of IRIS. All IRIS program functions could easily be transferred to the TSCA program.

Another program operating outside the regulatory process with little accountability is the EPA's Safer Choice program, formerly called Design for the Environment. The program calls on companies to eliminate certain chemicals from their products voluntarily, largely based on hazard classifications rather than actual risk assessments. Yet hazard alone is inadequate for making decisions about chemicals, because it fails to consider actual risks related to real-life exposures or to weigh benefits against the risks. Congress should eliminate Safer Choice, since it falls outside the scope of the EPA's mandate to implement laws passed by Congress.

Expert: Angela Logomasini

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IMPROVE THE QUALITY OF GOVERNMENT-FUNDED RESEARCH

We would all like to believe that researchers' motives are unbiased and pure, but in reality, incentives and personal opinions can have a huge impact on study design and results. When researcher bias is joined with political agendas, it can incentivize researchers to pursue political objectives rather than provide valid information. Unfortunately, politically active researchers are also adept at lobbying for government funding.

Congress should:

- Mandate that research funded by federal agencies meet basic transparency guidelines and enable others to access and replicate underlying data to see if results can be reproduced.
- Mandate that government-funded studies comply with good laboratory practices (GLPs) whenever applicable.
- Cut funding for programs that have a long history of pushing junk science and political activism rather than independent research.

If government is going to fund chemical safety research, the research should meet some basic standards to improve the quality of results. Increased transparency would greatly help improve the science. Positive associations can occur by mere chance, which makes it important that data be available so others can try to validate findings by reproducing the results. The Trump administration's transparency rule was finalized on January 5, 2021, and then vacated by a federal judge on February 1, 2021, indicating that it lacked legal basis. Congress could give transparency requirements the legal basis necessary and set stronger provisions to ensure transparent science while protecting the privacy of study participants.

In addition, government grants should require private research recipients to employ good laboratory practices, or GLPs, when applicable. GLPs have become an internationally recognized method of ensuring data quality control. As a result, it is common worldwide for industry to apply GLPs when conducting research for submission to regulatory bodies. GLPs were originally established by the Food and Drug Administration (FDA) in 1978 to address fraudulently produced results submitted by industry to government agencies for drug approvals. In 1992, the Organization for Economic Cooperation and Development issued its own GLP

guidelines and other world bodies and government agencies, including the U.S. EPA, followed suit. The World Health Organization's *Handbook: Good Laboratory Practice* (2009) explains that GLPs help ensure "the quality, reliability and integrity of studies, the reporting of verifiable conclusions and the traceability of data."

Congress should also defund questionable research funded by the National Institute of Environmental Health Sciences (NIEHS). Housed at the National Institutes of Health, the NIEHS has funded some egregious instances of government-funded activist science. Consider the NIEHS research program related to the chemical bisphenol A (BPA), which is used to make hard clear plastics and the resins that line metal food containers. Environmental activist campaigns against BPA have been fueled by taxpayer-funded research of questionable value, producing dozens of studies that report weak associations between BPA and adverse health effects.

The FDA and numerous government agencies around the world have not found these studies compelling or conclusive, and instead have relied on weighing the evidence and on higher-quality studies to determine that BPA is safe at current exposure levels. Yet activists use those government-funded studies to push bans and regulations on BPA. Such bans could undermine food safety because BPA lines metal containers to help prevent the development of deadly pathogens, such as E. coli.

Similarly, Congress should eliminate funding for the NIESH's grant programs, which fund a network of university-based children's environmental health centers. For more than a decade, it has doled out millions of dollars to fund junk science and political activism at those centers under the guise of "children's environmental health." Rather than produce unbiased research, many simply peddle junk science to promote environmental activism.

Since 1997, the U.S. EPA and the NIESH each provided half of the federal funds for those centers, but the EPA announced in May 2019 that it would cut its half of the funding. Congress should cut the other half that comes from the NIESH. Taxpayers should not be forced to fund agenda-driven science. If the government is going to fund health-related research, it should focus on such things as finding cures and treatments for cancers, heart disease, and other serious illnesses.

Expert: Angela Logomasini

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ELIMINATE U.S. FUNDING FOR THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

Congress should direct the National Institutes of Health to stop sending U.S. grants to the World Health Organization's International Agency for Research on Cancer (IARC). Those grants waste taxpayer dollars that could be better spent on taxpayer relief or on efforts to meet the many serious public health concerns facing our nation today.

IARC is supposed to be a scientific program that classifies chemicals according to carcinogenic risks, but its process has proved highly flawed and susceptible to political, rather than merely scientific, concerns. IARC's faulty conclusions can create serious problems, including bans on useful products, market deselection of such products, and public confusion about cancer risks.

Congress should:

- Eliminate all U.S. funding of the International Agency for Research on Cancer.
- Cut funds to the National Institutes of Health that support IARC research.
- Prohibit any grants or other funding to IARC from any U.S. governmental entity.

Launched in 1965, IARC receives funding from member states and has a two-year budget. During 2018–2019, IARC reported a budget of €44.1 million ($51.94 million), of which the United States was assessed to pay more than €3.3 million ($3.89 million). For 2020–2021, the projected numbers are similar, with the United States again providing €3.3 million, the highest amount assessed for all nations listed on the IARC website, other than Japan, which was assessed the same amount. U.S. funding comes in the form of grants issued by the National Institute of Environmental Health Sciences, which is part of the U.S. National Institutes of Health.

IARC focuses on assessing cancer risks associated with environmental risks, which include any nongenetic causes of cancer. IARC indicates in its mission statement that its classifications are supposed to inform lawmakers and regulators to help them promote policies that will reduce cancer risks. But IARC's classification is faulty for one fundamental reason: IARC does not actually assess risk. IARC focuses on determining whether a chemical or activity poses a "hazard," which is just the first step in risk assessment. A hazard assessment simply considers whether a substance might pose a risk

at some exposure level and under some circumstances. The next steps consider dose and exposure, and whether actual human exposures are significant enough to matter.

Classifying chemicals based on hazard alone makes no sense because everything in life poses a hazard. Even water can make your brain swell and kill you if you drink excessive amounts. But we do not classify water as "dangerous" because most people do not guzzle gallons at a time.

IARC's hazard-based approach makes its classifications meaningless and nonsensical. Consider that IARC lists smoking tobacco and plutonium in the same carcinogenic category with wood dust, house paint, salty fish (Chinese style), and processed meat. Yet you cannot seriously compare the theoretical risks associated with eating bologna sandwiches and the actual risks associated with smoking cigarettes, which produces nearly half a million fatalities annually in the United States.

IARC's faulty process is compounded by the fact that its decisions appear to be tainted by anti-chemical agendas and conflicts of interest. IARC's decision in 2015 to classify the weed killer glyphosate as "probably carcinogenic" offers a clear example. Anti-pesticide activists have targeted glyphosate, the active ingredient of Monstanto's Roundup brand, for elimination, claiming it causes cancer. Yet the science does not warrant such concerns, and IARC's conclusion is at odds with all other major scientific reviews, including reviews done by the U.S. Environmental Protection Agency (2017 draft risk assessment), the European Food Safety Authority (2015), Health Canada (2017), the U.N. Food and Agriculture Organization (2016), and others.

Absent a scientific basis, IARC's decision appears to have been influenced by anti-pesticide activism. For example, the IARC panel enlisted Christopher Portier of the Environmental Defense Fund to serve as an "adviser," which itself seems inappropriate. Portier also appears to have serious financial conflicts of interest. Within days of the classification, Portier became a highly paid witness and consultant to trial lawyers who were planning to use the IARC classification as a basis for suing Monsanto. Since then, nearly 100,000 lawsuits have been filed against Bayer AG, which purchased Monsanto in 2018.

While maintaining that its products are safe, Bayer AG has agreed to pay more than $10 billion to settle more than 100,000 lawsuits. Unfortunately, not only may

more lawsuits arise in the future, Bayer now has that much less to invest in new life-enhancing products to help farmers produce a stable food supply and increase employment within their industry.

It is clear that IARC's process is so fundamentally flawed that its monographs program is doing far more harm than good. The potential that politics may have tainted the IARC process provides even greater reason to eliminate its U.S. funding.

Expert: Angela Logomasini

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ALLOW FREE MARKETS IN WASTE DISPOSAL FROM RECYCLING TO LANDFILLING AND INCINERATION

For the past several decades, policy makers have been trying to manage one contrived trash disposal "crisis" after another, to no avail. During the 1990s, it was a "landfill crisis"—based on the claim that the United States would run out of landfill space, which never happened. After that, we had the "e-waste crisis." Now policy makers, environmental activists, and other supposed "stakeholders" want to address the "plastics crisis" and the related "recycling crisis." Their proposals include government subsidies and plastics bans, which will not solve anything.

Market pricing and open competition—between recycling, incineration, and landfilling—would produce the best and most environmentally and economically efficient mix of disposal solutions. With well-functioning waste disposal markets, consumers should be free to choose single-use plastics or reusable products, which can then be disposed of properly with minimal environmental impact.

Congress should:

- Recognize that waste disposal is a local concern and avoid legislation that would meddle within local economies.
- Halt all federal subsidies and programs that attempt to manage waste disposal markets.
- Pass resolutions urging states and localities to reverse bans and allow free markets for waste disposal to operate.

Interest in federal action to address the so-called recycling crisis has grown since China announced it would reduce imports of U.S. recyclables starting in early 2018. With a reduced export market, states and localities across the nation have collected plastics and other recyclables for which they have no markets. Supposedly, federal recycling subsidies and resolutions to promote plastics recycling will help create markets for these recyclable plastics.

One underlying assumption behind those policies is that plastics recycling will prevent single-use plastics from entering the environment and the oceans, and therefore reduce public pressure for plastics bans. The desire to reduce the impetus for plastics bans is positive because bans often prove counterproductive. Yet government

policies to promote recycling will do more harm than good, while market-driven proper disposal offers a better solution.

China's authoritarian regime has helped make its waste disposal system unresponsive to public needs and dysfunctional; however, its policy to limit recyclables makes some sense. As the *Financial Times* reported on October 25, 2018, China's standard for imported recyclables set "such a high bar for the cleanliness of the materials that can be imported that most people in the industry refer to it as a 'ban.'" Recyclables that are dirty and contaminated with food waste and other substances are not only dangerous to sort and clean, but are often not recyclable and must go to a landfill anyway. In China, those landfills may include open dumps from which waste can migrate into the ocean, which poses a serious pollution problem. In fact, most consumer plastics waste in the ocean appears to come from China and other developing nations. In comparison, the U.S. contribution is relatively minor thanks to good waste disposal practices. Waste disposal in U.S. sanitary landfills is carried out according to practices designed to yield minimal environmental impacts. Although many states have exported waste to China supposedly for recycling, it is unclear how much of it has been recycled rather than dumped.

Nonetheless, rather than allow markets to operate, U.S. policy makers' responses to the Chinese government's decision has involved more meddling via spending and regulations. In November 2019, the Environmental Protection Agency published its *National Framework for Advancing the U.S. Recycling System*, a report on how the agency is working with various stakeholders to "identify specific actions to take in addressing the challenges and opportunities facing the U.S. recycling system." According to the report's conclusions, recycling education and government grants will help create recycling markets even when they are economically unsustainable.

Members of Congress have also stepped up with misguided bills and resolutions on recycling. For example, last year the Senate passed Senate Resolution 422 to recognize November 15, 2019, as America Recycles Day, with the hope that increased awareness and education will create markets. Later that month, Sen. Rob Portman (R-OH) introduced the Recycling Enhancements to Collection and Yield through Consumer Learning and Education Act of 2019 (RECYCLE) Act (S. 2941). It would authorize spending $75 million over five years for the EPA to provide states with community recycling grants and for the agency to develop "model recycling program toolkits"

for states and procurement policies to buy products made with recyclable materials. Rep. Dean Phillips (D-MN) introduced the House companion version, H.R. 5906, in February 2020.

Many states and localities have recycling programs in place, mandated in many cases, and some have aggressively pushed plastics bans and taxes on single-use plastics, particularly single-use plastic grocery bags. However, many such bans were reversed temporarily during the COVID-19 crisis because of concerns that reusable grocery bags could carry the coronavirus. The possibility that COVID-19 could be transmitted via grocery bags seemed plausible at the time, but the extent of the risk is unclear. However, it is clear that reusable bags do harbor dangerous bacteria and have transmitted disease—as documented in a case of a bag that transmitted norovirus among players on a soccer team—so there are risks if the bags are not washed after every use.

Neither recycling and subsidies nor bans will solve anything because this "crisis," like many others, has been created by failed government intrusion into the waste disposal marketplace. For decades, the federal government has encouraged states and local governments to develop five- to 30-year plans for solid waste management. Those state and local waste management plans attempt to estimate how much waste a city might produce over decades, as well as the kinds of wastes (paper, plastic, glass, etc.) and the percentages of each. Then, officials make decisions on how much they will recycle, landfill, or burn in a waste-to-energy plant. Those plans fail because public officials simply do not have enough information about future waste streams, nor can they envision future disposal technologies. They eventually make poor decisions, invest in the wrong technologies, and choose inefficient disposal options that end up costing taxpayers dearly.

In addition, some recyclable waste is recycled in ways that are more environmentally damaging than landfilling. Although market-driven recycling does save resources, government subsidies or forced recycling can use more energy and water and can emit more pollution than other disposal options. And because such programs can become an expensive drain on government coffers, many cities, in a vicious cycle, stop them only to restart them a few years later because of political pressure.

It is high time for policy makers to stop pretending that government planning for waste disposal could ever be more efficient than market pricing and open

competition. Political management generates "crises" that lead public officials to waste local tax dollars on unworkable programs, while doling out millions of federal dollars to "educate" people on how to comply with those wasteful programs. Markets, on the other hand, respond to changing conditions, solve problems, and drive disposal to the most economic and environmentally sound options.

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DEPLOY RATIONAL SCIENCE-BASED POLICIES FOR MEDICAL PLANT STERILIZATION

Several medical supply sterilization plants have shut down recently because of unwarranted fearmongering about ethylene oxide, or EtO, a gas used to sterilize medical equipment and which has no viable alternative. EtO became an issue after the U.S. Environmental Protection Agency's Integrated Risk Information System published a faulty analysis that vastly overstated the risks associated with EtO. Another EPA office, the National Air Toxics Assessment (NATA), used the faulty data to produce models wrongly indicating that there were significant risks in communities that include facilities that use EtO to sterilize medical supplies. The misleading NATA report led several states and localities to shut down some medical equipment sterilization plants, which contributed to supply shortages during the COVID-19 crisis.

Some of those plants have reopened to help generate supplies necessary to fight the coronavirus, but Congress should ensure that those facilities remain open well into the future and that the policies and programs that created the unwarranted health scare are reversed.

Congress should:

- Defund the EPA's Integrated Risk Information System program and shift its risk assessment functions to the Office of Pollution Prevention and Toxics (see earlier section titled "Address Unaccountable Environmental Research Programs").
- Require the EPA to rescind its IRIS assessment and conduct a new one within the Office of Chemical Safety and Pollution Prevention, the agency that implements the Toxic Substances Control Act.
- Defund the EPA's National Air Toxics Assessment, which has a history of spreading misinformation about air quality risks and promoting counterproductive policies.
- Preempt state efforts to shut down medical sterilization facilities that already meet agency emission standards.

Ethylene oxide is a clear gas produced naturally inside the human body. It is also naturally produced and released into the air by combustion, vegetation, manure, volcanic eruptions, waterlogged soil, and other sources. It has many valuable

commercial applications, such as in the manufacture of shampoo, cleaners, antifreeze, and more.

Less than 1 percent of commercially produced EtO is used to sterilize more than 20 billion medical products—more than half of all sterile medical products in the United States. The U.S. Food and Drug Administration notes that "ethylene oxide may be the only method that effectively sterilizes and does not damage the device." As then-acting FDA Commissioner of Food and Drugs Norman E. Sharpless explained in October 2019, "this method is critical to our health care system and to the continued availability of safe, effective, and high-quality medical devices."

EtO has been safely used for decades, and the tiny traces released from medical sterilization plants were long understood to be inconsequential to human health. But, as noted, the perception of the risk changed after the EPA's Integrated Risk Information System released its flawed assessment of EtO risks. In 2016, IRIS released a controversial "reference concentration"—an agency-determined safe level for people who continuously inhale the gas—for EtO at 0.1 parts per trillion, or 0.0000001 parts per million. By comparison, the Occupational Safety and Health Administration's safety standard is one part per *million* for workers exposed five days a week, eight hours a day, for decades.

According to toxicologist Gail Charnley, IRIS' reference dose is nearly 20,000 times lower than the amount produced naturally in the human body, 5,000 times lower than levels normally found in suburban air, and more than "5 million times more stringent than the scientific judgments underlying all other regulatory limits on ethylene oxide in the United States and worldwide."

Nonetheless, in a 2018 report on air quality, the EPA's National Air Toxics Assessment ran some models to estimate where air concentrations of the chemical might exceed IRIS' 2016 reference concentration. The NATA report set off a panic in communities located near medical equipment sterilization plants, which led states and localities to close some plants. Since then, the EPA has collected data on the levels found outside those facilities. Despite much hype, the levels are not alarming. Charnley explains: "The most important truth being, there is no cancer threat from the tiny amounts of ethylene oxide released from these sterilization plants."

Faced with the COVID-19 emergency, the FDA asked those companies to reopen plants to help deal with severe medical supply shortages—and threatened legal action against one local government to make it happen. Unfortunately, those facilities' operations could be undermined in the future because of continued efforts to misinform the public about the risks.

If COVID-19 teaches us anything, it is that we need to remain prepared for emergencies. Shutting down critical operations such as medical supply sterilization plants, without justification, is dangerous.

Expert: Angela Logomasini

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