Energy *and* Environment

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A Pro-Growth Agenda for the 116th Congress

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Energy and Environment

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Energy is the lifeblood of the economy. Thanks to affordable energy, the average person today lives longer and healthier, travels farther and faster in greater comfort and safety, and has greater access to information than did the privileged elites of former times. Carbon fuels—coal, oil, and natural gas—provide 80 percent of U.S. energy and 87 percent of global energy. They are the world's dominant energy sources because, in most markets, they beat the alternatives in both cost and performance.

Critics claim that carbon fuels have hidden costs that make them unsustainable. In the 1970s and 1980s, experts often depicted carbon-based fuels as both intractably polluting and rapidly depleting. Technological advances—spurred by sensible regulation and the market-driven imperative to minimize waste and improve efficiency—put the lie to those gloomy prophecies, as energy supplies increased while the air and water got much cleaner.

Today, critics claim that unchecked carbon energy use will cause catastrophic climate change. However, the climate models producing scary impact assessments project about twice as much global warming as has actually occurred. More important, the climate change mitigation policies those critics advocate pose serious risks to American prosperity, competitiveness, and living standards.

The wealth creation and technological progress made possible by affordable carbon-based energy make societies more resilient, as they protect people from extreme

weather, power health-improving innovation, and increase life expectancy. Since the 1920s, global deaths and death rates from extreme weather have decreased by 93 percent and 98 percent, respectively.

The war on affordable energy also raises serious humanitarian concerns. Energy costs already impose real burdens on low-income households, including reduced expenditures for food, medicine, and education and late credit card payments. "Consensus" climatology implies that the Paris climate treaty's objective of limiting average global temperatures to 2°C above preindustrial levels cannot be accomplished without massive cuts in developing countries' current consumption of carbon-based fuels. Putting the developing world on an energy diet is bound to be a cure worse than the supposed disease.

Increasing the affordability of both U.S. and global energy is an important economic and humanitarian objective. Policy makers heeding the time-honored healer's maxim, "First, do no harm," should reject policies to tax and regulate away mankind's access to affordable energy.

REPEAL THE EPA'S CLEAN POWER PLAN

The so-called Clean Power Plan (CPP) promulgated by the Environmental Protection Agency during the Obama administration is an unlawful power grab that will (a) increase consumer electricity prices, (b) reduce U.S. job growth and gross domestic product, and (c) have no discernible effects on global warming or sea-level rise.

Congress should:

- Enact legislation approving the Clean Power Plan Repeal Rule's legal rationale, including the rule's interpretation of "stationary source," "best system of emission reduction," and "emission performance standard."

The CPP is unlawful in several ways, but the central flaw is the rule's novel concept of "stationary source." Section 111 of the Clean Air Act (CAA) defines *stationary source* as "any building, structure, facility, or installation which emits or may emit any air pollutant." Accordingly, every previous rule issued under Section 111 based emission performance standards on a "best system of emission reduction" (BSER), consisting of specific technologies applicable to and at the source.

The Obama administration refused to base CPP performance standards on such "inside the fence" measures because affordable technologies to reduce carbon dioxide emissions from existing power plants do not exist. The closest facsimile would be equipment upgrades that improve operational efficiency. However, increasing the efficiency of fossil-fuel power plants could make them more competitive, thwarting President Obama's political goal to "finally make renewable energy the profitable kind of energy in America."

The EPA came up with a plan to establish performance standards that no existing—already built—power plant can afford to meet through actions taken inside the fence. To comply, owners and operators must purchase power from, invest in, or cede market share to lower- and zero-emission facilities elsewhere on the grid. Such "generation shifting" is the CPP's principal BSER.

To make it appear legal, the CPP reimagines "source" to include power plant owners and operators in their capacity as marketplace actors. More fundamentally, the CPP imagines the entire U.S. electricity system to be a single source—a vast machine in

which individual power plants are mere cogs. All of that clashes with the statute's plain words. Generation shifting is an unlawful BSER because owners and operators are not sources, and neither are economic sectors.

Moreover, producing less power or investing in renewables does not improve the environmental performance of a coal or gas power plant. CPP performance standards are, in reality, unlawful nonperformance mandates.

Adding insult to injury, the CPP puts immense pressure on states to implement the rule via emission cap-and-trade programs—the same unpopular climate policy Congress has repeatedly rejected.

The CPP purports to deliver up to $20 billion in climate benefits in 2030. In reality, the CPP will avert 0.018°C of global warming by 2100—less than the margin of error for measuring annual changes in global temperature—according to the agency's own climate policy calculator. The amount of warming averted in 2030 would be even more minuscule and undetectable.

The CPP estimates that utility companies will spend $5.1 billion to $8.4 billion in 2030 to comply with its so-called performance standards. The total economic cost could be much higher. By 2030, the CPP would reduce average annual employment by nearly 300,000 jobs, reduce cumulative gross domestic product growth by $2.5 trillion (inflation adjusted), and reduce cumulative household purchasing power by $7,000 per person, according to an estimate by the Heritage Foundation.

The EPA is in the process of repealing the CPP—a policy certain to be challenged in court. Congress could avert years of litigation by approving the Clean Power Plan Repeal Rule's legal rationale.

Experts: Myron Ebell, Marlo Lewis

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END FEDERAL EFFICIENCY STANDARDS FOR CONSUMER PRODUCTS

It is hard to dispute that the private sector is more efficient than the government and that consumers know their own interests better than does any central planner. Nonetheless, the federal government has gotten in the business of setting energy efficiency standards for a variety of energy-using consumer goods, from cars to refrigerators to light bulbs. It is time to pull the plug on those decades-old Washington efficiency 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 OPEC oil embargo and fears of rising dependence on foreign oil. That was an ill-advised solution to a problem that is fast disappearing with America's fracking revolution. The result has been to force Americans into more efficient but also costlier vehicles. Worse yet, the National Academy of Sciences and others have documented that CAFE has compromised vehicle safety.

After three decades, it would have been tough to make the CAFE program any worse, but the Obama administration managed to do so by essentially hijacking the program for use as a vehicle for climate policy. Whereas once one federal agency ran the program, the Department of Transportation's National Highway Traffic Safety Administration (NHTSA), we now have NHTSA working with the Environmental Protection Agency and the State of California to set fuel economy and overlapping greenhouse gas emissions standards.

Those standards are scheduled to get more stringent each year through 2025. The EPA even concedes that sticker prices could rise nearly $3,000 by then, while outside estimates claim much larger effects. And the standards continue to lead to additional highway fatalities due to its downsizing effect on cars.

Any consumer who wants to buy a highly efficient or alternatively fueled vehicle is free to do so, with or without CAFE. This program only serves to foist this choice on everyone.

Fortunately, the Trump administration has recognized the growing problems with the program and has sought to make it far less stringent. Even better would be sunsetting the program entirely.

Consumers face similar problems with a range of home appliances, which are subject to equally problematic 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, has had to admit that in several cases they may boost the purchase price of appliances by more than is likely to be earned back in the form of energy savings. Appliance quality suffers as well, through reduced reliability, fewer features, and compromised performance. Perhaps worst of all are the dishwasher standards that have greatly extended the time it takes to do a load; apparently efficiency with regard to people's time is not a consideration.

There is no reason for the feds to dictate consumer choices for cars or any other products. The buyers of these products are perfectly capable of balancing energy use (for which federally required labels provide all the needed information) against purchase price and other attributes. Although repeal of this program would be best, at the very least it should be reformed so that marginal efficiency gains are not achieved at the cost of reduced product quality, and so that the rise in purchase price does not make the standards a money loser for consumers.

Experts: Sam Kazman, Ben Lieberman, Marlo Lewis, Myron Ebell

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FREEZE AND SUNSET THE RENEWABLE FUEL STANDARD

The Renewable Fuel Standard (RFS)—created by the 2005 Energy Policy Act and expanded by the 2007 Energy Independence and Security Act—requires refiners to blend increasing quantities of biofuel into the nation's motor fuel supply over a 17-year period (2006–2022). As RFS statutory targets diverge from marketplace realities, each year's obligations are actually set by Environmental Protection Agency officials in a setting rife with interest-group lobbying. Lawmakers should strive to restore predictability and choice to U.S. motor fuel markets.

Congress should:

- Freeze the renewable fuel standard's blending targets below the "blend wall"—the quantity of ethanol that can be sold domestically given the incompatibility of mid- and high-ethanol blends with the vast majority of vehicles and infrastructure, combined with anemic consumer demand for such blends because of their inferior fuel economy.
- Sunset the RFS after 2022 so that competition and consumer preference, not central planning and political pressure, determine which fuels succeed or fail in the U.S. marketplace.

The RFS is a textbook study in the law of unintended consequences. The program was supposed to benefit consumers. Instead, the RFS artificially bids up the price of corn, soy, and other crops, increasing food and feed costs. In addition, the vast majority of biofuel is ethanol, which contains one-third less energy by volume than gasoline. Consequently, the RFS forces motorists to spend more for fuel and to fill up more frequently.

The RFS was supposed to benefit the environment. Instead, the program:

- Increases agricultural runoff, a major contributor to aquatic dead zones;
- Converts millions of acres of wildlife habitat in grasslands and wetlands into energy crop plantations;
- Increases net emissions of air pollutants, such as fine particulate matter (PM2.5) and nitrogen oxides (NOx); and
- Produces more greenhouse gas emissions than the gasoline it replaces, according to some analyses.

Moreover, compared with the fracking revolution, the RFS has done little to reduce American dependence on foreign oil.

The RFS is incompatible with the constitutional principle of equality under the law. It enriches some corn and soy farmers at the expense of poultry, hog, beef, and dairy farmers. The RFS literally compels one set of companies to purchase, process, and create a market for other companies' products. To see the anomaly, suppose that instead of enacting renewable volume obligations for refiners, Congress enacted input volume obligations, compelling corn farmers to purchase annually increasing quantities of specific types of seeds, fertilizers, and farm machinery. The howls from RFS supporters would be loud and furious, and justifiably so.

Experts: Marlo Lewis, Ben Lieberman, Myron Ebell

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OPPOSE CARBON TAXES

A carbon tax is a market-rigging policy, not a free market one. It would not be revenue neutral and it would not displace greenhouse gas regulations. Even if the tax were revenue neutral, it would be economically harmful, driving capital out of industries that provide 80 percent of all the energy that Americans consume. Moreover, even the most aggressive feasible carbon tax would have negligible climate effects.

Congress should:

- Reject legislative proposals to establish a carbon tax.

The function of a carbon tax is identical to that of cap and trade: to 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."

As climate policy, carbon taxes are costly symbolism. The Heritage Foundation, using a clone of the Energy Information Administration's National Energy Modeling System, estimated that a carbon tax starting out at $25 per ton in 2012 and rising 5 percent annually (after adjusting for inflation) would cut the income of a family of four by $1,900 in 2016, raise the family's annual household energy costs by $500, increase gasoline prices by 10 percent, and lead to an aggregate loss of more than 1 million jobs by 2016 alone. Yet even a carbon tax that eliminates all U.S. carbon dioxide emissions would avert less than 0.14°C of global warming by 2100, according to the Model for the Assessment of Greenhouse Gas Induced Climate Change (known by its acronym MAGICC), developed by the Environmental Protection Agency during the Obama administration.

A carbon tax would most likely not be revenue neutral but would be used to increase spending rather than cut other taxes dollar-for-dollar. But even if it could be revenue neutral, such a carbon tax would still make the tax system less efficient. The smaller the base on which a tax of a given size is levied, the more it adversely affects employment and distorts investment. The base of a carbon tax—a set of particular commodities or industries—is narrower than the base for retail sales, income, and labor taxes.

A carbon tax would not displace greenhouse gas regulations. The administrative state enriches and empowers too many bureaucrats, activist groups, and corporate rent

seekers for the global warming movement to seriously consider trading it all away for a carbon tax. It speaks volumes that nearly all carbon tax bills introduced to date have been designed to reinforce rather than replace greenhouse gas regulations. The one partial exception, the Market Choice Act (H.R. 6463, 115th Congress), sponsored by Rep. Carlos Curbelo (R-Fla.), would only suspend Clean Air Act regulation of greenhouse gases through 2033 and only if the carbon tax achieves equivalent emissions reductions in 2024 and 2028. Moreover, the bill would not preempt any state climate policies.

Politics, not the unknowable social cost of carbon, would determine carbon tax rates. In debates over carbon tax rates, revenue-hungry agencies and anti-fossil-fuel politicians would patronize the social cost of carbon modelers whose computers crank out the biggest, scariest numbers.

The power to tax is the power to destroy. Congress should not give the federal government another weapon for bankrupting industries that provide affordable, reliable energy to the people and economy of the United States.

Experts: Myron Ebell, Christopher Horner, Marlo Lewis

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PROHIBIT USE OF THE SOCIAL COST OF CARBON TO JUSTIFY REGULATION

The social cost of carbon (SCC)—the cumulative damage supposedly caused by an incremental ton of carbon dioxide emitted in a given year—is an unknown quantity. It is not an objective magnitude but a range of guesstimates produced by "integrated assessment models" (IAMs)—computer models that combine speculative climatology with speculative economics. By fiddling with nonvalidated climate parameters, made-up damage functions, and discount rates, SCC analysts can get pretty much any result they desire. By turning the knobs, social cost modelers can make the benefits of "climate action" look large compared with the costs of compliance and make fossil fuels look unaffordable no matter how cheap.

Congress should:

- Prohibit agencies from using social-cost-of-carbon analysis to justify regulatory decisions and defund SCC modeling programs.

The social cost of carbon is not discernible in economic, meteorological, or public health trends. For example, try spotting the greenhouse "fingerprint" in the following data:

- Weather-related damages as a share of global GDP have declined by one-third since 1990.
- Globally, there has been no trend in the frequency and strength of land-falling hurricanes since 1970.
- Global deaths and death rates related to extreme weather have declined by 93 percent and 98 percent, respectively, since the 1920s.

The Obama administration inflated SCC estimates by using below-market discount rates to calculate the present value of future climate damages. In addition, it inflated the perceived benefit–cost ratios of its 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.

The Office of Management and Budget has put a stop to those accounting gimmicks; however, other obvious biases remain uncorrected. Federal agencies still rely on an obsolete climate sensitivity study (Row-Baker 2007) that likely overestimates how

much warming results from a doubling of atmospheric carbon dioxide concentrations. Worse, two of the three IAMs used by federal agencies ignore the abundantly documented agricultural and ecological benefits of carbon dioxide emissions.

More important, even if such biases are removed, SCC analysis will still be too conjectural to serve as a basis for regulatory justification 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; only in relation to an assumed baseline can the incremental effects of the next ton of carbon dioxide possibly be estimated.
- Scientists do not know the relative strength of the positive and negative feedbacks that amplify or constrain the climate's response to rising carbon dioxide concentrations, which means that there is still no "consensus" about the key variable: climate sensitivity.
- IAMs also make nonvalidated 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.
- 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. Nothing is harder to forecast than long-term technological change.

In *Center for Biological Diversity v. National Highway Traffic Safety Administration* (2007), the Ninth Circuit Court of Appeals argued that although IAMs yield only a range of SCC values, "the value of carbon emissions reduction is certainly not zero." In fact, under some reasonable assumptions, SCC values are negative, which implies that carbon dioxide emissions produce net benefits.

Experts: Marlo Lewis, 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 U.S. Environmental Protection Agency "unambiguous" authority to regulate greenhouse gases (GHGs). Under the Obama administration, the EPA interpreted that decision as a license to steamroll congressional opposition to its climate policies.

Congress should:

- Amend the Clean Air Act to clarify that it never delegated to the EPA 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 endanger the public health or welfare. The Court reasoned that greenhouse gases fit the Act's "capacious definition" of an 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 had 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 each year of having to apply 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 to exempt all but the largest greenhouse gas emitters from 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, 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 would otherwise be exempt.

Massachusetts v. EPA continues to undermine the separation of powers. Congress often has 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 would force most states to adopt cap-and-trade programs to restructure their power sectors.

The Clean Power Plan has egregious legal flaws beyond the Court's errors in *Massachusetts v. EPA*, and the agency is currently in the process of repealing it. Nonetheless, as long as Congress treats *Massachusetts v. EPA* as settled law, future executives will be tempted to usurp legislative power. Congress should curb the EPA's ability to overreach by clarifying that it has no power under the CAA to make climate policy.

Experts: Myron Ebell, Christopher Horner, Marlo Lewis

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REJECT THE KIGALI AMENDMENT TO THE MONTREAL PROTOCOL

Beginning in the 1970s, concerns that the refrigerants used in most air conditioners and refrigerators were leaking into the air and depleting the 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 role as contributors 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, which restricts production of those second-generation refrigerants. U.S. ratification of the Kigali Amendment requires a two-thirds Senate vote.

Congress should:

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

The Kigali Amendment 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 markets will actually create jobs. In truth, the Kigali Amendment is very likely to be a net jobs killer, particularly for the millions of small businesses that rely on this equipment and will have to shoulder the increased expense.

The Trump administration should not submit this ill-advised United Nations measure to the Senate, but if it does, the Senate should vote it down. Any bills from the House or Senate to legislatively achieve the same ends should be opposed as well.

Experts: Ben Lieberman, Myron Ebell

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ADDRESS UNACCOUNTABLE ENVIRONMENTAL RESEARCH PROGRAMS

A number of non-regulatory environmental research programs have both regulatory and market effects. Those programs enable the U.S. 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, 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. EPA program offices use it to develop regulations under federal laws, such as the Safe Drinking Water Act, Clean Air Act, Superfund, and others. Yet operating outside the regulatory framework, there are limited systems to ensure the scientific integrity of IRIS assessments. Many of its findings have tended toward excessive caution and are based on questionable and incomplete science. That approach has helped advance counterproductive regulations that impose needless regulatory burdens.

The Government Accountability Office raised concerns about IRIS' productivity and 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 (NAS) report on IRIS' formaldehyde assessment criticized the agency for "recurring methodologic problems," including repeated failures to provide "clarity and transparency of the methods," among other problems. The NAS report included suggestions on how IRIS could improve its science.

In early 2018, the Trump administration proposed significant budget cuts for the EPA's Office of Research and Development (ORD), where IRIS is housed, and the Senate omnibus spending bill proposed eliminating ORD. In an effort to revive the program, EPA staff arranged for a National Academy of Sciences workshop, during

which they briefed an NAS committee on reform efforts. EPA staffers asked the working group to consider whether that agency was on the right track with reform. The NAS report explains that the committee "was not asked to evaluate the overall value of the IRIS program" and "was not tasked with conducting a comprehensive review of the IRIS program." Given its limited charge, the NAS committee provided little information. Its follow-up report—mostly a republication of EPA presentations—noted that the EPA has made some procedural improvements. That does not mean that IRIS has been fixed because the NAS did not really address the quality of IRIS's science.

After the EPA received what amounts to a rubber stamp from the NAS, the omnibus compromise bill continued funding for ORD and IRIS at 2017 levels. Fortunately, some members of Congress understand that the IRIS process remains seriously flawed because it operates outside the law. Rep. Andy Biggs (R-Ariz.) recently introduced the Improving Science in Chemical Assessments Act (H.R. 6468 115th Congress), which would move most IRIS functions to the program offices. The EPA's Office of Research and Development would continue to maintain a database using the assessments from the program offices. That approach makes more sense because those offices must operate under the scientific standards set within the laws they implement. In addition, H.R. 6468 requires such assessments to use best available practices and deploy practices that promise to greatly improve the quality of the resulting science.

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 on 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 weigh benefits against risks. Yet Safer Choice is encouraging companies to deselect valuable products based on hazard alone. Congress should eliminate Safer Choice altogether because it falls outside the scope of the EPA's mandate to implement laws passed by Congress.

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IMPROVE THE QUALITY OF GOVERNMENT-FUNDED RESEARCH

We all would like to believe that researchers' motives are unbiased and pure, but in reality, incentives and personal opinions can have a huge effect on study design and results. When researcher bias is joined with political agendas, it can become driven to achieve political objectives rather than to provide valid information. Unfortunately, politically active researchers are also adept at lobbying for government-funded-activist research, and resulting activist research can have adverse public policy effects.

Congress should:

- Mandate that research funded by federal agencies meet basic transparency guidelines, modeled after the U.S. Environmental Protection Agency's proposed transparency rule, to 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.

Some of the worst examples of government-funded activist science are found at the National Institutes of Environmental Health Sciences (NIEHS), housed within the National Institutes of Health (NIH). 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 those studies compelling or conclusive. Instead, they have relied on weighing of the evidence and higher quality studies to determine that BPA is safe at current exposure levels. Yet activists use these government-funded studies to push for bans and regulations on BPA. Such bans could undermine food safety because BPA lines metal containers to prevent the development of deadly pathogens, such as *E. coli.*

If government is going to fund chemical safety research, the studies should meet some basic standards to improve the quality of results. Increased transparency would greatly help improve the science. The proposed transparency rule currently under

consideration at the U.S. Environmental Protection Agency could be used as a model for other agencies. Although the EPA's rule would apply only to science underlying major regulations, Congress could demand that transparency requirements be extended to cover government-funded research. Positive associations can occur by mere chance, which makes it important that data be available so that others can try to validate findings by reproducing the results.

In addition, government grants should require that private research recipients follow good laboratory practices when applicable. GLPs were originally established by the FDA in 1978 to address fraudulently produced results submitted by industry to government agencies for drug approvals. 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. Thus, 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. The World Health Organization's *Handbook: Good Laboratory Practices* (2009) explains that GLPs help ensure "the quality, reliability and integrity of studies, the reporting of verifiable conclusions, and the traceability of data." Government-funded research should meet the same sound science standards.

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

Government regulations—at the federal, state, and local levels—can be influenced by scientific bodies from around the world that assess the risks of chemicals. In particular, the International Agency for Research on Cancer (IARC) classifies chemicals based on cancer-causing potential, but its faulty standards produce misleading results. Unfortunately, its findings have effects on public policy, promoting regulations that do more harm than good.

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, the International Agency for Research on Cancer is a self-governing division of the World Health Organization. According to its website, the group is funded by member states and has a two-year budget of €43.4 million ($50.4 million), of which the United States was assessed to pay nearly €3.2 million (nearly $4 million) for 2016–2017. Its mission is to "promote international collaboration in cancer research." 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 promote policies that will reduce cancer risks.

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 even begin to 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 seem to be tainted by anti-chemical ideologies 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 Monsanto's Roundup brand, for elimination, claiming that 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 seems 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 seems 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 use the IARC classification as a basis for suing Monsanto.

IARC's process is fundamentally flawed. The potential that politics may have tainted the IARC process provides even greater reason to eliminate all its U.S. funding.

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