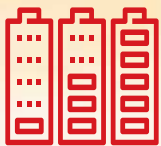


# ENERGY 2019

**Bipartisan Thought Leadership**  
**On How To Power America – And The World**



# ENERGY 2019

## Bipartisan Thought Leadership

### On How To Power America – And The World

#### Table of Contents

**Embrace the ‘New American Energy Era’** ..... 3  
*Energy Secretary Rick Perry*

**Energy security is national security** ..... 4  
*Interior Secretary David L. Bernhardt*

**U.S. uniquely situated to meet rising demand for affordable, reliable, cleaner energy** ..... 5  
*Environmental Protection Agency Administrator Andrew Wheeler*

**Business travel essential to a growing economy** .....6  
*Scott Solombrino*

**Flying green, flying proud** ..... 7  
*Nancy Young*

**America’s energy future is global** ..... 8  
*Sen. Lisa Murkowski*

**U.S. should lead in development, deployment of emission-reducing CCUS technologies** ..... 9  
*Sen. Joe Manchin*

**Climate solutions should (and can) save our planet and our jobs** ..... 10  
*By Newton B. Jones*

**New Manhattan Project for Clean Energy: ‘American innovation is the answer’** ..... 12  
*Sen. Lamar Alexander*

**U.S. should lead the ‘clean energy revolution’ — and learn from state innovations** ..... 13  
*Sen. Tina Smith*

**Keep energy flowing with safe, new pipeline infrastructure** ..... 14  
*Sen. James Inhofe*

**Sensible solutions to protect our environment and grow the economy** ..... 15  
*Sen. Rob Portman*

**Before bold action on climate change, we need a bold public discussion** ..... 16  
*Frank Lasée*

**Offshore wind energy: ‘Resilient, sustainable, economically sound’** ..... 18  
*Rep. Salud Carbajal*

**A trailblazing moment for the energy industry** ..... 19  
*Tim Charters and Aaron C. Smith*

**U.S. innovation, free market key to clean, affordable energy** ..... 20  
*House Minority Whip Steve Scalise, Rep. Jeff Duncan and Rep. Markwayne Mullin*

**Time to face reality — Green New Deal is a nightmare** ..... 21  
*Rep. Sam Graves*

**Ethanol in fuel hurts us all. Here is why.** ..... 22  
*Jerry Jung*

**We need to reauthorize the nation’s pipeline safety law** ..... 24  
*Rep. Fred Upton*

**Energy dominance and environmental protection go hand in hand** ..... 25  
*Rep. Paul Gosar, D.D.S.*

**North Dakota’s Bakken oil revolution easing global geopolitical tensions** ..... 26  
*Rep. Kelly Armstrong*

**Renewable energy will only be possible with massive increases in the supply of critical minerals** ..... 27  
*Stephen Moore and Ann Bridges*



SPECIAL SECTIONS

Tony Hill  
 DIRECTOR OF ADVERTISING  
 & INTEGRATED SALES

Advertising Department:  
 202-636-3027

Larry T. Beasley  
 CEO

Christopher Dolan  
 PRESIDENT &  
 EXECUTIVE EDITOR

Thomas P. McDevitt  
 CHAIRMAN

Joseph E. Teipe, Jr.  
 EXECUTIVE VICE  
 PRESIDENT

David Dadisman  
 GENERAL MANAGER

Patrick Crofoot  
 GRAPHICS SUPERVISOR

Special Sections are multipage tabloid products that run in The Washington Times daily newspaper and are posted online and in PDF form on its website. Sponsors and advertisers collaborate with The Times’ advertising and marketing departments to highlight a variety of issues and events. Unless otherwise identified, Special Sections are prepared separately and without involvement from the Times’ newsroom and editorial staff.

# Embrace the ‘New American Energy Era’



## By Energy Secretary Rick Perry

**A**s Secretary of Energy, I lead a Department that has developed some of the world’s most astonishing and significant innovations.

From ushering in the LED lighting revolution to facilitating a new era of oil and gas abundance, the people who work at DOE and our National Laboratories have helped transform today’s energy landscape.

And tomorrow can deliver even greater achievement. Their work on Artificial Intelligence has the potential to touch every corner of life, including every area of energy, from improving energy efficiency to bolstering grid security.

Their work will build on America’s astounding energy success story. Thanks to innovation, we are producing a wider range of fuels more abundantly and affordably while using them more cleanly and efficiently than ever.

And today, the Trump Administration is deploying every one of our energy sources as part of a balanced energy strategy, bringing us to the dawn of what I call the New American Energy Era.

America is now the world’s second biggest generator of wind and solar power — and its number one oil and natural gas producer.

We export our liquefied natural gas (LNG) to 36 countries spanning five continents. We also expect to become a net energy exporter next year and for decades to come.

Thanks to innovation, we have more than enough energy to share with the world, and with it comes freedom of choice for energy consumers everywhere, including places where it has never previously existed.

For those countries, choice means this: If they were bound to just one nation for their energy needs, they are bound no more. If they were restricted to just one energy source for those needs, they are restricted no more. If

they were compelled to depend on just one energy route for those needs, they are compelled no more.

The implications are monumental.

By exporting our energy bounty, particularly our natural gas, we are freeing friends and allies, especially in Europe, from decades of dependence on unfriendly nations that have long wielded their energy supply as a political weapon.

And we are poised to share not just our abundant energy but the same innovative technology that unleashed it in the first place. We are ready to provide other countries the means to create their own energy revolutions. That includes some of the world’s poorest nations where hundreds of millions of people live without any electricity.

We can best help these nations break out of energy poverty by doing for them what we are doing for ourselves. The United States can offer them the fuels and technologies we have and allow them to decide which

combination works best to provide the necessary power to drive their development. We reject the notion of

**U.S. is poised to share not just our abundant energy but the innovative technology that unleashed it**

a tradeoff between robust economic and energy development and environmental progress. We believe that, even for fuels that produce emissions, the answer is not to drive out the fuels by regulation but to drive down the emissions through innovation.

And by any measure, our approach is succeeding.

In the same way we made unprecedented progress in energy production, we are making our energy cleaner.

We are doing it through

innovation, much of it in our National Laboratories.

In recent decades, our labs have developed technologies to achieve spectacular reductions in emissions from coal-fired generation. And through the technology of carbon capture, utilization and storage (CCUS), we are on a path to further reductions.

And the irony is that through innovation, the U.S. — the world’s leading oil and gas producer — also leads every signatory to the Paris climate accord, as well as every other nation, in reducing energy-related carbon emissions.

In this New American Energy Era we have entered, spurred by innovation and armed with every fuel at our disposal, we will pursue and achieve our shared goal of advancing prosperity and security while protecting the environment for this generation and generations to come.

*Rick Perry is the U.S. Secretary of Energy.*



ILLUSTRATION BY GREG GROESCH

# Energy security is national security



**By Interior Secretary David L. Bernhardt**

**J**ust as energy independence is fundamental to our nation's security, reducing our dependence upon foreign countries for critical minerals is vital to our nation's long-term interests. Prior to the Trump Administration, the policies coming out of Washington were marginalizing the energy, manufacturing and mining industries and, as a result, ultimately diminishing our country's security. Those days are over.

In 2017, President Trump issued Executive Order 13817, A Federal Strategy to Ensure Secure and Reliable Supplies of Critical Minerals, with the goals of better protecting our economy from marketplace disruptions and becoming less dependent upon unreliable foreign sources. Under this Order, the Department of the Interior identified 35 "critical minerals" — such as cobalt, graphite, lithium, manganese and rare earth elements — which are used in cell phones, batteries, computers, automobiles, airplanes, solar panels, ships and military equipment. The U.S. is more than 50 percent import-reliant on 31 of the 35 designated minerals and does not have any domestic production for 14 of these critical minerals, making us completely reliant on imports for the latter.

Critical minerals are used in military technologies and across our economy. A single set of military tactical equipment contains at least 23 of those 31 minerals; these are used to make night vision goggles, communications gear, GPSs and M4 carbines. Over half of all components of a typical cell phone or other high-tech consumer device are made from mined or semi-processed minerals used for electronics, speakers, displays, batteries and other products. Manufacturing demand is increasing for critical minerals, including rare earth elements, used for numerous advanced technology products that fuel economic growth. We all depend on critical minerals, and America

shouldn't depend upon foreign countries for what can be sourced at home — both on and offshore.

The President's Order called on Federal agencies to develop a plan to reduce our country's reliance on foreign sources

and supply chains. The Trump Administration announced a Federal Strategy earlier this year listing 61 agency-level recommendations to be executed over the next five years. This strategy guides our efforts at the Department of the

Interior, where we are actively working on locating domestic supplies of these minerals, facilitating their study and production, and expediting the permit processes for these minerals projects. The U.S. Geological Survey (USGS), the Bureau of Land Management (BLM) and the Bureau of Ocean Energy Management (BOEM) are all collaborating with the Departments of Commerce, Energy, Defense, State, Agriculture, the U.S. Trade Representative, the White House Office of Science and Technology Policy and other federal partners.

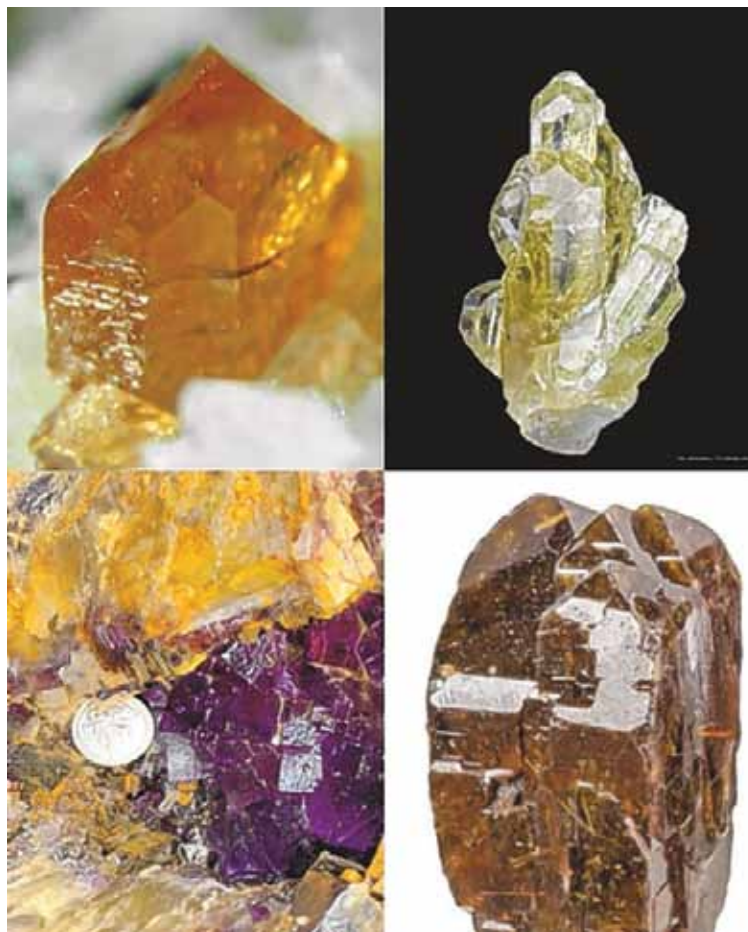
Because less than 18 percent of the U.S. land mass is geologically mapped at a scale suited to characterizing mineral deposits, the USGS will develop new geophysical, geological and topographical maps. The USGS will also provide existing data to BLM and other partners for permitting and resource management decisions.

BLM administers over 245 million surface acres of public land in 12 Western states and Alaska as well as 700 million acres of subsurface mineral estate. Critical minerals are found on some of this acreage. Under its "multiple-use" mandate, BLM will work with local communities, project developers, and public and private stakeholders to promote environmentally responsible mineral development on Federal and Indian lands.

Although offshore, underwater mining is an unexplored frontier in mineral production — we do know that minerals are found off the Pacific, Atlantic and Alaskan coasts. BOEM leads the way with pursuing research and development capabilities, and they will be collaborating with the Department of Energy to identify mineral reserves offshore.

The Department of the Interior is providing the necessary science, mapping and information to help ensure secure and reliable supplies of critical minerals so products we use every day can be "Made in America." Responsibly developing America's critical mineral resources will allow us to reduce our foreign dependence, increase our global competitiveness, make our country more secure and promote American prosperity.

*David L. Bernhardt is the 53rd Secretary of the Interior. He leads an agency with more than 70,000 employees who are stewards for 20 percent of the nation's lands, including national parks, monuments, wildlife refuges and other public lands. The department oversees the responsible development of conventional and renewable energy supplies on public lands and waters, is the largest supplier and manager of water in the 17 Western states, and upholds trust responsibilities to the 573 federally recognized American Indian tribes and Alaska Natives.*



Department of the Interior image of some of the rare minerals found in the United States.

## 35 'critical minerals'

**On May 1, 2018, the Interior Department released a list of 35 mineral commodities deemed critical to U.S. economic and national security interests. Below are their names and aspects of usage.**

Aluminum (almost all economic sectors).	Manganese (steel).
Antimony (batteries, flame retardants).	Niobium (steel alloys).
Arsenic (lumber, pesticides, semi-conductors).	Platinum group metals (catalytic agents).
Barite (cement, petroleum).	Potash (fertilizer).
Beryllium (aerospace, defense).	Rare earth elements group (batteries, electronics).
Bismuth (medical, atomic research).	Rhenium (lead-free gasoline, superalloys).
Cesium (research, development).	Rubidium (electronics).
Chromium (stainless steel, other alloys).	Scandium (alloys, fuel cells).
Cobalt (rechargeable batteries, superalloys).	Strontium (pyrotechnics, ceramic magnets).
Fluorspar (aluminum, gasoline, uranium fuel).	Tantalum (electronic components).
Gallium (integrated circuits, LEDs).	Tellurium (steel, solar cells).
Germanium (fiber optics, night vision tools).	Tin (protective coatings, steel alloys).
Graphite (lubricants, batteries, fuel cells).	Titanium (white pigment or metal alloys).
Hafnium (nuclear control rods, high-temperature ceramics).	Tungsten (wear-resistant metals).
Helium (MRIs, research).	Uranium (nuclear fuel).
Indium (LCD screens).	Vanadium (titanium alloys).
Lithium (batteries).	Zirconium (ceramics).
Magnesium (steel, ceramics).	

Source: <https://www.usgs.gov/news/interior-releases-2018-s-final-list-35-minerals-deemed-critical-us-national-security-and>

# U.S. uniquely situated to meet rising demand for affordable, reliable, cleaner energy



**By EPA Administrator Andrew Wheeler**

In 2018, global energy demand grew at its fastest pace in nearly a decade — roughly two times as fast as the average growth rate since 2010.

The challenge facing the world today is to meet this growing demand in an affordable, reliable and cleaner fashion. There is one nation uniquely situated to do all three: the United States.

Our technology and our environmental laws are among the strongest and most advanced in the world. That is why from 2007 through May of this year (the most recent data available), average monthly U.S. energy-related carbon dioxide (CO<sub>2</sub>) emissions decreased by nearly 13 percent (a reduction of over seven-and-a-half billion metric tons over that time) — even as United States energy production increased. Global energy-related CO<sub>2</sub> emissions, in comparison, increased roughly 15 percent.

And there's more: Since 1990, total methane emissions from natural gas systems have fallen 18 percent while production has increased 55 percent. From 1990 to 2018, annual emissions of sulfur dioxide from coal-fired power plants fell by over 90 percent while emissions of nitrogen oxides fell by over 80 percent. And in the past decade alone, mercury emissions from power plants have decreased by nearly 90 percent.

The United States is now the number one oil and gas producer in the world. Yet, our air continues to get cleaner. From 1970 to 2018, the combined emissions of the six criteria pollutants dropped 74 percent (and emissions of all criteria pollutants continued to decline from 2016 to 2018). According to World Health Organization data, the United States has some of the lowest fine particulate matter levels in the world, more than five times below the global average,

seven times below Chinese levels, and well below France, Germany, Mexico and Russia.

When it comes to supplying affordable and reliable energy in a manner that protects human health and the environment, the United States is the standard-bearer.

Those who oppose U.S. energy production, particularly fossil fuel production, are actually taking one of the most environmentally preferable energy sources off the table for the rest of the world.

We can't deny that fossil fuels will continue to be an integral part of the world's energy needs. Fossil fuels met nearly 70 percent of the global increase in energy demand; renewables were about 25 percent.

accelerate the construction of pipelines and other important energy infrastructure projects. Section 401 of the Clean Water Act gives states a say in federally approved projects that would impact state water resources. Many states implement Section 401 faithfully. However, some do not. Some use it to kill projects altogether — and sometimes for reasons totally unrelated to water quality. New York Governor Andrew Cuomo used it to veto an important natural gas pipeline, for example. We issued a proposal to prevent state leaders from misusing their Section 401 authority to block critically important infrastructure.

We're also lifting duplicative and unnecessary regulatory burdens off the backs of America's energy producers through our recent methane rule. The

Coal use is rising worldwide, driven in large part by India, China and other Asian nations. Rather than punishing the United States' production of coal, the ACE rule levels the playing field and encourages the development of cleaner technologies across the sector. These technologies can then be exported to other countries to improve the worldwide environment.

The world is using more energy. And someone is going to supply it. It could be China; it could be Russia; or it could be the United States — the cleaner, more reliable source.

If we truly care about improving lives and improving environmental outcomes, we should be strengthening domestic production and exporting American energy and cleaner technologies far and



ILLUSTRATION BY GREG GROESCH

Rather than turning our back on our own resources and yielding the marketplace to China or Russia, we should want cleaner, more reliable American coal, oil and natural gas to power more homes and businesses throughout the world.

This is precisely what President Trump and his Administration are focused on.

The Environmental Protection Agency recently took action to

previous administration imposed methane regulations that we believe are duplicative, unnecessary and not appropriate under the Clean Air Act.

Finally, our Affordable Clean Energy (ACE) rule puts an end to the job-killing Clean Power Plan. We are regulating CO<sub>2</sub> emissions from the electric power sector in a manner that upholds the law and the relevant Supreme Court decisions and does not stifle innovation.

wide. That is what President Trump is doing. Under his watch, the United States became a net exporter of natural gas for the first time in nearly 60 years.

This progress will continue, and the world will be better for it.

.....  
*Andrew R. Wheeler is the 15th Administrator for the Environmental Protection Agency.*

# Business travel essential to a growing economy



By Scott Solombrino

**T**he amount of money that business travel contributes to the U.S. economy is staggering.

According to Global Business Travel Association's (GBTA) research, U.S. businesses spent a total of \$424 billion to send travelers out on the road for 514.4 million domestic business trips and are responsible for about 3 percent (\$547 billion) of U.S. GDP.

Air travel is a major part of business travel and corporate spend. GBTA research shows 515 million domestic business trips are taken in a year. Nearly 30 percent involve air travel — meaning business travelers take to the skies over 144 million trips a year.

Business travel and air travel are vital for the U.S. and world economy. But climate activists and some “green” politicians have targeted commercial

air travel to make it out to be the biggest offenders of the environment when that's just not correct. Airlines are responsible for 2 percent of global greenhouse gas emissions.

Make no mistake: The travel industry is concerned with the environment and is taking responsible actions to address climate concerns on a global level. Carbon Offsetting and Reduction Scheme for International Aviation, or “CORSIA,” calls for carbon-neutral growth in international commercial aviation beginning in 2021. Over 75 percent of international aviation emissions growth after 2020 will be offset elsewhere through the U.N.-backed CORSIA. To date, 78 countries have signed up as part of an initial voluntary phase starting in 2021, with others joining in 2027. CORSIA will provide billions in funding for CO2 abatement efforts all over the world.

However, some environmental activists don't support these global initiatives and are instead trying to shame people from flying (#flightshame). Politicians are looking to impose various taxes on air travel to make it more expensive in hopes of depressing air travel. Reducing flights will make a small impact on the environment but a large negative impact on the global economies.

Business travel is an economic driver that is essential to a healthy and growing economy because it allows businesspeople to connect with one another, to meet face to face, make deals and conduct commerce that grow and create jobs throughout the world. GBTA research backs this by finding



**Air travel is a major part of business travel and corporate spend. GBTA research shows 515 million domestic business trips are taken in a year.**

for every 1 percent change in business travel spending, the U.S. economy gains or loses 74,000 jobs, \$5.5 billion in GDP, \$3.3 billion in wages and \$1.3 billion in taxes.

The business travel industry, like most other industries, is concerned about its effects on the environment. Working to address a global problem must be done from a global perspective.

Imposing a random patchwork of

taxes will only create confusion and higher prices without addressing the environmental concerns. Working together, as we are, with initiatives mentioned above as well as others, will be how we positively impact environmental change for the benefit of all.

.....  
*Scott Solombrino is Chief Operating Officer and Executive Director of the Global Business Travel Association.*





# Flying green, flying proud



By Nancy Young

**A**mericans are flying more than ever before, with a record number of people projected to travel with U.S. airlines this year. Many of those passengers know that our fares have never been lower. But what they probably don't know is that our planes have never been greener.

The U.S. airlines are committed to controlling our carbon footprint, and we're doing it by buying more fuel-efficient planes and flying them in more efficient ways, by developing and using sustainable alternative jet fuels, and by

contributing to carbon-offsetting programs that remove CO<sub>2</sub> from the air.

Environmental extremists in Europe are trying to “flight shame” air travelers everywhere into flying less, but their misguided message flies in the face of the facts. And the fact is that worldwide commercial aviation is responsible for just 2 percent of global greenhouse gas emissions. That's right: 2 percent. And while our carbon emissions are minimal, our contribution to the global economy is tremendous: U.S. passenger and cargo airlines drive more than 10 million U.S. jobs and \$1.5 trillion in annual U.S. economic activity, directly employing more than 700,000 workers across the globe. Every day, our planes carry some 2.4 million passengers and 58,000 tons of cargo across the country and to 80 other countries. We safely connect friends and family members and enable business meetings and overnight deliveries of everything from fresh-cut flowers to medical supplies.

Even as our airlines fly more people and packages to more destinations every year, we are growing greener every day. In fact, U.S. airlines carried 42 percent more passengers and cargo in 2018 than we did in 2000 with just a 3 percent increase in total CO<sub>2</sub> emissions. That's a remarkable record of sustainability and we're

not stopping there. The “flight shamers” won't tell you this, but the airline industry is the only one in the world to voluntarily commit to an agreement to reduce and offset carbon emissions. That agreement, the Carbon Offsetting and Reduction Scheme for International Aviation or “CORSIA,” calls for carbon-neutral growth in international commercial aviation beginning in 2021. And what's more, the world's airlines, including ours, have a set a goal of

**Many U.S. airline passengers know that our fares have never been lower. But what they probably don't know is that our planes have never been greener.**

reducing net CO<sub>2</sub> emissions by 50 percent in 2050 as compared with 2005 levels. That's right: 50 percent.

The U.S. airlines are fighting climate change, driving advances in airframe and aircraft engine technology, sustainable aviation fuels, aviation infrastructure and operations to ensure we meet our emissions targets. That's not just good for the earth — it's good for business, too. Extreme weather caused by

climate change can ground planes and play havoc with our flight schedules, so the fewer severe storms there are, the better it is for us and the passengers and cargo we carry. And jet fuel is our largest and most volatile cost by far, so the more fuel-efficient our fleets are, the better it is for both the air and our bottom line.

Here's another fact you won't hear from the “flight shamers”: Between 1978 and 2018, the U.S. airlines improved our fuel efficiency by more than 130 percent, saving nearly 5 billion metric tons of CO<sub>2</sub>. That's like taking 26 million cars off the road every year. And speaking of cars, while U.S. carriers account for less than 2 percent of the nation's greenhouse gas emissions, passenger vehicles account for more than 17 percent.

Simply put, the airline industry is the backbone of the global economy and a leader in the fight against climate change. That's not a record to be ashamed of — it's one to be proud of. So the next time you board one of our fuel-efficient planes, sit back, enjoy the flight, and fly with the pride that comes from knowing that you're traveling with a green industry that's only getting greener.

*Nancy Young is Vice President, Environmental Affairs for Airlines for America.*

# America's energy future is global



By Sen. Lisa Murkowski

America's energy dominance is now unquestionable. No other nation produces, consumes and exports as much energy of as many different types, delivered as efficiently and cleanly to as many people, across as large an area, as we do. This incredible reality stands defiantly against the pessimistic predictions of yesteryear — that desperation and constraint, not abundance and flexibility, would characterize our future.

This position of strength is good for jobs, trade, growth and our broader economy. In every sense imaginable, American energy is a boon for the American people.

But we cannot rest on our laurels. Other nations compete with us on a daily basis — as they should — and we need to equip ourselves for that competition.

The fundamental fact is that the developing world will account for the lion's share of future energy demand. This projection is shared by virtually every expert witness who has testified before the Senate Energy and Natural Resources Committee over the past decade.

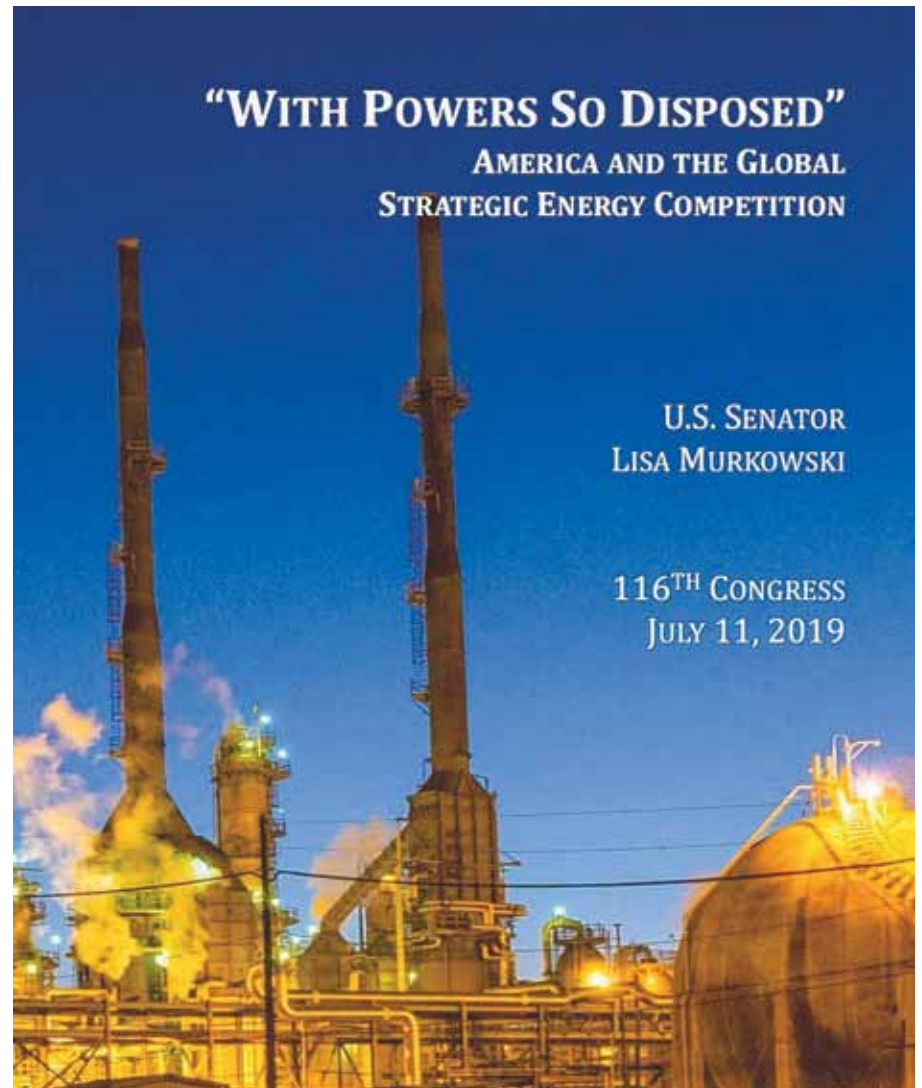
Without question, our energy future is global. We must be able to export our raw commodities to Asia, our technologies to Africa and our expertise to South America. From the Cape of Good Hope to Tierra del Fuego, people and markets around the world must be able to buy energy of all kinds from industrious American workers.

Unfortunately, despite progress in this administration, the federal government has been too slow to adjust to this new world. Our striking lack of robust tools for economic statecraft impairs our ability to reach commercial deals and build critical infrastructure on a strategic basis.

**In every sense imaginable, American energy is a boon for the American people. But we cannot rest on our laurels. Other nations compete with us on a daily basis — as they should — and we need to equip ourselves for that competition.**

Nuclear energy, for example, is one of the few technologies that can provide zero-emission on-demand heat and electricity. It has drawn strong support from the likes of Bill Gates and the International Energy Agency and is widely regarded as key to addressing climate change.

Yet, while experts reiterate the virtues of nuclear to reduce greenhouse gases, the industry in America is poised to rapidly decline over the next decade. Eight reactors have closed since 2013 and only two new reactors are under construction. Something



In July, Senate Energy and Natural Resources Committee Chairman Lisa Murkowski released a white paper, "With Powers So Disposed," detailing the reality of global energy competition. <https://www.energy.senate.gov/public/>

needs to change to reverse this trend.

Thankfully, there is a new generation of advanced reactors under development in the U.S. — reactors that are smaller, safer, operate more flexibly, have higher efficiency, produce less or no waste, and have additional operational benefits over the existing fleet.

Congress is taking steps to accelerate the development of advanced reactors, but demonstrating the technology at home as an energy and climate solution is not sufficient to enable competitive global nuclear exports — and not for a lack of interest.

Many developing nations, such as Turkey, Jordan, Egypt, Tunisia and Algeria, are opting for nuclear power to plug the gap between rising energy demands and supply. For now, their business is not with the United States but rather with state-owned companies in Russia and China that offer financing and fuel services.

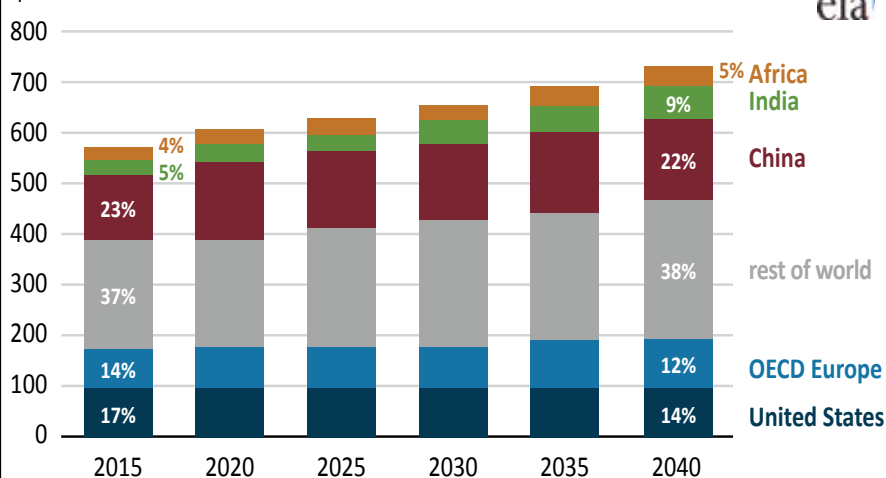
Russia also offers generous scholarships for students in developing countries to learn nuclear engineering in

Russia. For countries that are ready to buy reactors today, like Egypt and Turkey, they offer "Build-Own-Operate" contracts where they run the facility and even remove nuclear waste offsite. China offers its own benefits packages to countries looking to go nuclear, such as 90 percent loan financing and plant operation.

In July, I unveiled a new Strategic Energy Initiative (SEI) to confront this competitive reality. Our tools, such as the Development Finance Corporation and the Export-Import Bank, must be strengthened and empowered, and our broader toolkit must focus on strategic energy projects, particularly in the natural gas and nuclear fields.

Our energy future is bright, but only if we recognize the world we are in. Prosperity, after all, is not a birthright. We as Americans know that it is earned. . . .  
Sen. Lisa Murkowski, Alaska Republican, is Chairman of the Senate Energy and Natural Resources Committee.

World total primary energy consumption (2015-2040)  
quadrillion British thermal units



Source: U.S. Energy Information Administration



# U.S. should lead in development, deployment of emission-reducing CCUS technologies



By Sen. Joe Manchin

I became Ranking Member of the Senate Energy and Natural Resources Committee after serving on the committee for the past eight years. Over the last eight months, we have held 26 full committee hearings and heard from a wide array of subject matter experts including the former Secretary of Energy Ernest Moniz, West Virginia business owners and Dr. Brian Anderson, the director of the National Energy and Technology Laboratory. Each hearing offered a unique perspective on the energy challenges facing our country both today and in the years to come.

**Carbon capture, utilization and sequestration (CCUS) may be the most critical technology that we can invest in to address the climate crisis.**

The energy experts who have come before our Committee have been clear — fossil fuels are projected to be part of the global generation mix at least through 2040, and the United States needs to lead in technological innovations designed to reduce carbon emissions.

At a hearing earlier this year, Dr. Fatih Birol of the International Energy Agency testified that carbon capture, utilization and sequestration (CCUS) may be the most critical technology that we can invest in to address the climate crisis.

There is growing bipartisan agreement in Congress about the role CCUS can play in lowering global carbon emissions. At a time when our political parties struggle to agree on anything, this is something worth striving for.

But agreeing is not enough. We need to put our money where our mouth is and enact policies that move us forward on the commercialization of these technologies sooner rather than later.

That is why I introduced the Enhancing Fossil Fuel Energy Carbon Technology (EFFECT) Act in April with my friend, Chairman Lisa Murkowski, and a bipartisan group of senators. It is a comprehensive bill that is aimed at enhancing research and development — and just as importantly, demonstration and deployment — for each aspect of CCUS. That includes coal and natural gas technologies, utilization, storage, and even atmospheric CO<sub>2</sub> removal. In May, we held a hearing to examine the legislation and in July it was reported out of the Committee.

Specifically, the EFFECT Act would establish four new Department of Energy research and development programs for carbon capture, utilization, storage and removal.

- The Coal and Natural Gas Technology Program would authorize four sub-programs to develop transformational technologies to improve
- the efficiency, effectiveness, cost and environmental performance of coal and natural gas use.
- The Carbon Storage Validation and Testing Program would conduct research, development and demonstration for carbon storage, including assessing U.S. geological storage formation capacity, developing monitoring tools, researching and potential impacts of a leak, and supporting business model assessments to examine the economic viability of technologies and systems developed under the program.
- The Carbon Utilization Program would identify and assess novel uses for carbon, carbon capture technologies for industrial systems and alternative uses for coal. It would also direct the DOE to work with the National Academies of Science, Engineering and Medicine on a study to assess barriers and opportunities relating to commercializing carbon dioxide.
- The Carbon Removal Program would research technologies and strategies to remove atmospheric

carbon dioxide on a large scale, including direct air capture and storage, bioenergy with CCS, afforestation, etc. It would also authorize grants for Direct Air Capture Test Centers and establish an air capture technology competition with a \$15 million prize.

The United States should be leading the world in innovative energy technologies that both increase efficiency and reduce the cost of capturing carbon while also being at the forefront of new ways to put captured carbon dioxide good use. Legislation like the EFFECT Act brings us closer to that goal. As Ranking Member of the Senate Energy and Natural Resources Committee, I will continue to seek input from our country's leading researchers and small business owners alike and I will continue working with my colleagues of both parties to ensure the EFFECT Act becomes law.

.....  
*Sen. Joe Manchin III, West Virginia Democrat, is Ranking Member of the Senate Committee on Energy and Natural Resources.*



# Climate solutions should (and can) save our planet and our jobs



By Newton B. Jones

**T**he urgency to mitigate climate change has pushed many to propose radical alterations to how humans exist on the planet. Some see the rapid abandonment of fossil fuels as essential to climate goals. This opinion certainly is at the core of the Green New Deal proposed by Rep. Alexandria Ocasio-Cortez (D-NY) and Sen. Ed Markey (D-MA) earlier this year — and supported by some Democratic presidential candidates.

In addition to the fact that they would indeed fail to achieve any significant impact on global climate change, such proposals do not adequately take into account the millions of jobs that would be lost in the resulting economic upheaval. It is a lose-lose proposition.

Consider: The Green New Deal requires an end to fossil fuel use and a shift to 100 percent renewables in just 10 years.

Think about what this would mean.

No more natural gas, oil or coal. No cars, trucks, SUVs or farm equipment that run on gasoline or diesel. No diesel-powered trains or ships. No aircraft that use jet fuel. No gasoline motors for fishing or leisure boats. No gas stoves, hot water heaters or furnaces. No products derived from or that use petroleum: asphalt for roads, coke for steel-making, hundreds of pharmaceutical products, kerosene for portable heaters, propane for backyard barbecues or home heating, or hundreds of other products.

Imagine the impact on the U.S. economy and society. Closing all coal mines, oil fields and refineries. Shutting down or retooling factories. Scrapping planes, ships, locomotives, and semis and other vehicles running on fossil fuels. And shuttering U.S. power plants fueled by natural gas, coal and oil (currently 63 percent of all power generation).

Such an upheaval would throw

millions out of work or push them into retraining for “green” jobs envisioned by the proposal. Those theoretical green jobs likely would not exist in sufficient quantity or offer wages and benefits comparable to what displaced workers were earning.

Using data from the U.S. Bureau of Labor Statistics, we estimate that up to 9.2 million direct and indirect jobs in just 14 energy-intensive industries would be severely at risk under the Green New Deal.

## **A rational, practical approach is needed**

Rather than adopting a reckless, knee-jerk policy that destroys U.S. industries and kills jobs, we should seek a rational, practical approach to climate change that embraces a portfolio of solutions. Renewable energy, nuclear energy, reforestation and afforestation, energy-efficient buildings, agricultural modifications, lifestyle changes, and carbon capture, use and storage (CCUS) all should be part of that approach.

## **When environmental radicals insist on a myopic focus on renewables as the only solution to climate change — ignoring CCUS as the bridge to a cleaner energy future — their only achievement is further delaying any solution.**

CCUS technologies have been largely ignored, but they are vital for several reasons. First, they offer the potential to slash carbon emissions in industries dependent on fossil fuels, especially power generation and oil refining. Second, these technologies offer the only way to decarbonize high-emitting industrial processes like cement making and aluminum smelting.

These industries offer some of the best-paid blue-collar jobs in North America, and many communities depend on industry employers for the tax base they provide. CCUS technologies can help ensure that these industries remain viable — with a much lower carbon footprint — until major new technologies, perhaps hydrogen-based energy, become commercially available.

CCUS addresses the real culprit behind climate change: greenhouse gases — not fossil fuels. Fossil fuels are only

one of many emission sources. Moreover, when environmental radicals insist on a myopic focus on renewables as the only solution to climate change — ignoring CCUS as the bridge to a cleaner energy future — their only achievement is further delaying any solution.

## **CCUS is good for the environment — and jobs and the economy**

Widespread adoption of CCUS would be a powerful job creator. Installing carbon capture, use and storage systems is labor intensive and requires hundreds or thousands of skilled trades on each major project. Those are excellent job opportunities not only for those who construct the facilities but also for those who operate and maintain them and for those who manufacture the components.

CCUS projects are also capital intensive. But according to the International Panel on Climate Change (IPCC), meeting climate warming targets without carbon capture would be prohibitively expensive. And renewables cannot do it alone. Despite years of subsidies and favorable policy support, wind and solar accounted for less than 9 percent of utility-scale electricity generation in 2018 according to U.S. Energy Information Administration figures.

The cost of CCUS technologies has already come down as systems are proven, improved and reach commercial scale. Canada is already seeing cost-reduction and increased CO<sub>2</sub> capture on one of its coal-fired energy stations where the technology went online in 2014.

Government policies and incentives can expedite industry CCUS investments, as Canada has proven.

In the United States, the federal government has expanded a tax credit known as 45Q that holds great promise. When fully in place, 45Q will provide a \$50 tax credit per ton of CO<sub>2</sub> captured and stored and \$35 per ton for CO<sub>2</sub> captured and used (for example, in enhanced oil recovery).

Meanwhile, California has modified its low carbon fuel standard to allow tax credits for CCUS, which can run as high as \$200 per ton of carbon captured.

Such policies are critical to promote more rapid deployment of CCUS in the United States.

## **Bridge to a cleaner energy future**

Climate change mitigation becomes more urgent every day. But killing jobs and destroying industries is not the answer.

CCUS technologies can help preserve good jobs and create new ones. And those technologies can do so while reducing carbon emissions from essential industries that ensure our economic health and global competitiveness.

Carbon capture, use and storage can be our bridge to a cleaner energy.

(See [www.CleanerFutureCCUS.org](http://www.CleanerFutureCCUS.org) for more information on carbon capture, use and storage.)

Newton B. Jones is International President of the International Brotherhood of Boilermakers, Iron Ship Builders, Blacksmiths, Forgers and Helpers, AFL-CIO, CLC. The union, headquartered in Kansas City, Kansas, represents North American workers engaged in field construction and maintenance, shipbuilding, cement making, railroads, manufacturing, mining and other industries.



# THE BOILERMAKERS ADVANTAGE: FORWARD THINKING TOGETHER

Just what is a Boilermaker? We're the skilled craftsmen and women trained and committed to stand apart as the best. We work with our hands and our brains to solve the hardest problems. To step up when others step back.

That's why we're committed to supporting carbon capture, use and storage as the right solution to mitigate climate change while providing reliable energy production through a realistic mix of renewables and clean fossil fuels. All while preserving our workforce and economic growth.

Find out more. Watch our short film, "CCS: Bridge to a Cleaner Energy Future" at [www.CleanerFutureCCS.org](http://www.CleanerFutureCCS.org)

We're forward thinking...together.  
We're the International Brotherhood of Boilermakers.

## LET'S GET TO WORK TOGETHER.

# BOILERMAKERS

[www.boilermakers.org](http://www.boilermakers.org)

# New Manhattan Project for Clean Energy: 'American innovation is the answer'



By Sen. Lamar Alexander

believe climate change is real.

I believe that human emissions of greenhouse gases are a major cause of climate change.

So, as one Republican, I propose this response: The United States should launch a New Manhattan Project for Clean Energy, a five-year project with Ten Grand Challenges that will use American research and technology to put our country and the world firmly on a path toward cleaner, cheaper energy.

Meeting these Grand Challenges would create breakthroughs in advanced nuclear reactors, natural gas, carbon capture, better batteries, greener buildings, electric vehicles, cheaper solar, fusion and advanced computing. To help achieve these Ten Grand Challenges, the federal government should double its funding for energy research and keep the United States number one in the world in advanced computing.

There is a reason advanced nuclear reactors are at the top of my list of priorities.

Nuclear power is our best source of carbon-free power, and we are running a risk of losing it just at a time when most Americans are increasingly worried about climate change. While nuclear power provides about 60 percent of our nation's carbon-free electricity, solar power provides just 5 percent, and wind power provides just under 18 percent, despite billions of dollars in subsidies.

With nuclear power available, depending on wind and solar power makes about as much sense as going to war in sailboats. Nuclear power must be part of our energy future if we want clean, cheap and reliable energy that can create good jobs and keep America competitive in a global economy. Simply put, nuclear power is much more

reliable than solar or wind power. It is available when the sun doesn't shine and the wind doesn't blow.

Unfortunately, we do not need to speculate about what happens when a major industrialized country eliminates nuclear power. Before 2011, Germany obtained one quarter of its electricity from nuclear energy. Today, after mandating that it replace its nuclear power with wind and solar power, that number is down to 12 percent. Now Germany has among the highest household electricity rates in the European Union and has had to build new coal plants to meet their energy demands, increasing their emissions.

That is where we are headed in the next 10 years if we do not do something. The stakes are high.

The strategy I propose, however, takes advantage of the United States' secret weapon: our extraordinary capacity for science and energy research, especially at our 17 national laboratories. Congress has recognized the importance of this research by providing record-level funding for the Office of Science the past four years. Unlike the "Green New Deal" — which is basically an assault on cars, cows and combustion — meeting the Ten Grand Challenges will curb carbon emissions, strengthen our economy and raise our family incomes.

This strategy also recognizes that, when it comes to climate change, China, India and other developing countries are the problem; American innovation is the answer.

According to the Global Carbon Project, over the last 13 years, the United States has reduced emissions of greenhouse gases more than any major country. But over the last five years, China's carbon emissions have risen.

A University of California, Berkeley physicist put it this way: Our mothers told us as children to clean our plates because children in India were starving. Cleaning our plates was a good thing to do, but it didn't do much for starving

Indian children. In the same way, reducing carbon emissions in the United States may be good to do, but it doesn't do much to address climate change, because most of the increase in greenhouse gases is in developing countries.

If we want to do something about climate change, we should use American research and technology to provide the rest of the world with the tools to create

this New Manhattan Project will be to minimize the disruption of our lives and economies caused by climate change — both in our country and in the rest of the world — by creating large amounts of clean, inexpensive energy.

This bold agenda — which will hopefully have bipartisan support — can over the next five years place us firmly on a path toward dealing with climate change,

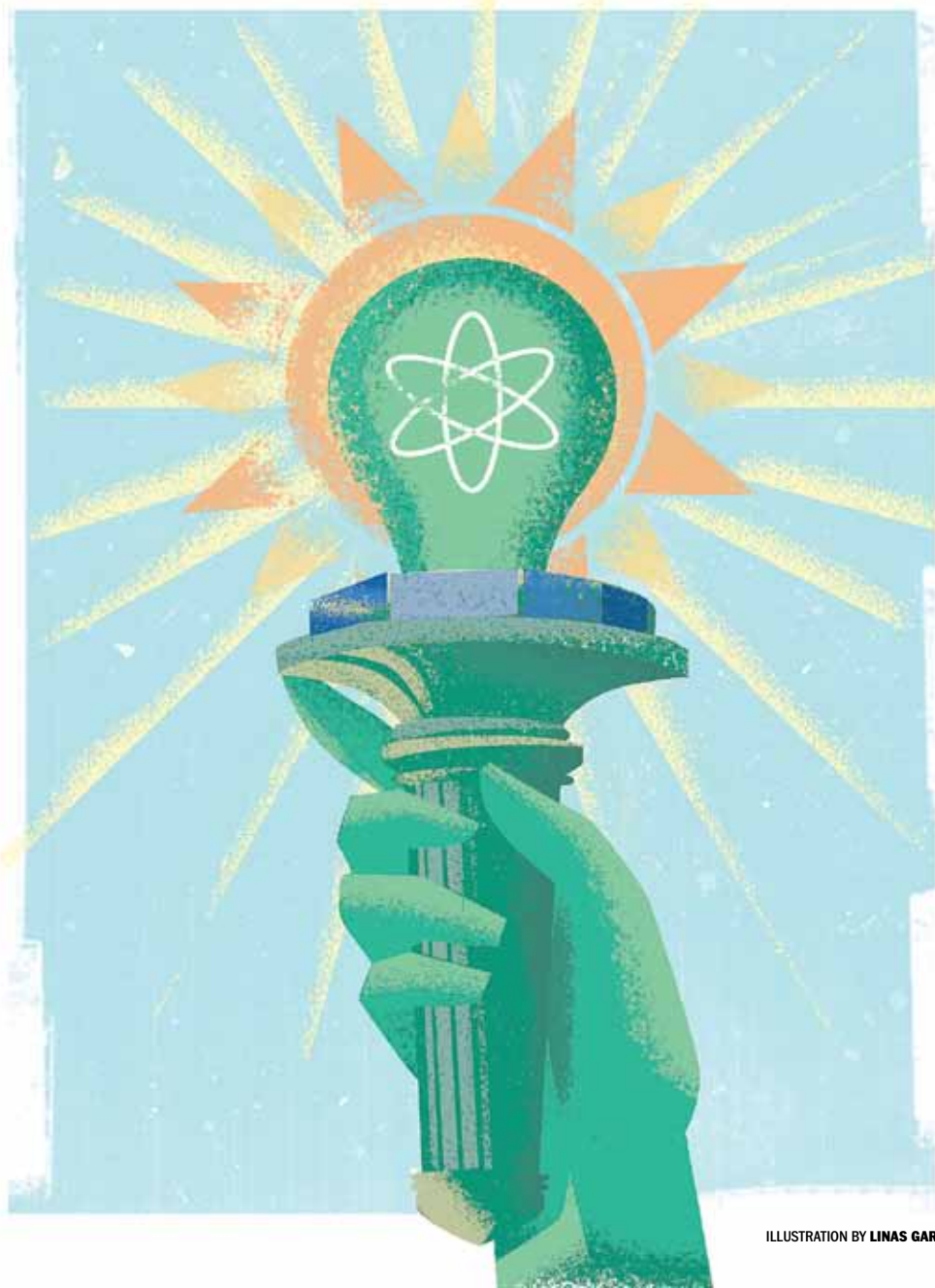


ILLUSTRATION BY LINAS GARSYS

low-cost energy that emits fewer greenhouse gases.

The purpose of the original Manhattan project during World War II was to find a way to split the atom and build a bomb before Germany could. The New York Times described this as the "most concentrated intellectual effort in history."

Instead of ending a war, the goal of

and at the same time, produce large amounts of reliable, clean energy that lifts family incomes in our country and around the world.

.....  
*Sen. Lamar Alexander, Tennessee Republican, is Chairman of the Senate Appropriations Subcommittee on Energy and Water Development.*

# U.S. should lead the ‘clean energy revolution’ — and learn from state innovations



By Sen. Tina Smith

In my state, you don't have to tell our farmers about climate change — they look out at rain-soaked fields and see the changing weather patterns. The rising frequency of “intense” rainstorms in Minnesota is also overwhelming infrastructure in riverfront communities.

Climate change is real. It is caused by humans, and it's damaging to our health, our families and our environment. If we don't take aggressive action to reduce greenhouse gas emissions, it will get worse. We know this because

that's what science tells us. We need to get beyond science denial so that we can move on to the important question: What are we going to do about it?

Inaction is not acceptable. A recent report concluded that, under “business as usual” policies, climate change will likely reduce annual U.S. per capita GDP 4 percent by 2050 and more than 10 percent by 2100. In Minnesota, as is the case almost everywhere else, the brunt of the climate change burden will be borne by low-income communities.

Globally, we need to get to net-zero greenhouse gas emissions during the second half of this century. Luckily, the technologies necessary to meet those goals are emerging rapidly. In many cases, particularly in the electric and transportation sectors, they are already cost-competitive or even the lowest cost option. The costs of renewable energy, batteries, carbon capture and storage, and other low-carbon technologies are dropping rapidly. Countries that choose to lead this clean revolution will gain at

the expense of those who lag behind.

Our country can lead or we can follow. I, for one, want us to lead. As senator for Minnesota, I reach across the aisle at every opportunity to advance legislation supporting the clean energy revolution. Last year, I worked with a bipartisan group of colleagues to develop and fund the energy programs in the new farm bill. Wind, solar and biomass energy sources offer important ways to diversify our rural economies.

Currently, two types of climate legislation draw bipartisan support: bills that support research and development or those that provide tax incentives to companies and utilities that adopt clean energy solutions. I'm focused on both, including legislation to increase research on energy storage and wind power, and legislation to provide incentives to retrofit fossil fuel plants with carbon capture and storage technology. The idea is to provide a “push” for new innovation.

As with most topics, Washington

should learn from what states are doing. One conclusion is clear: The states making the most rapid progress are relying on “pulls,” not just “pushes.” What does that mean? States have a long track record of encouraging innovation in the renewable energy and energy efficiency sectors by setting targets that pull the market to broad deployment of low-carbon technologies. These targets provide a value signal that encourages innovation. Once these signals are sent, it's best for government to get out of the way and let markets find the most efficient way to meet the targets — provided that guardrails are in place to make sure that no community experiences a worsening environment as the overall picture improves.

Currently, one third of Americans get their electricity from states or utilities that are already on a clear path to 80 percent to 100 percent emission reductions. In addition, a majority of states have adopted measures that drive continuous energy efficiency improvements. The latter should be a “no brainer” — the cheapest and cleanest energy is the energy that you don't ever need to buy.

Congress should adopt solutions with a track record of both effectiveness and political viability. Following these examples, I have revived two “pull” ideas that have bipartisan history in the Senate.

My Clean Energy Standard Act of 2019 would set a national, technology-neutral target of net-zero greenhouse gas emissions in the electric sector by mid-century. My plan is endorsed by environmental groups, utilities and unions — the broad-based support necessary for any solution to pass and be implemented. Former Department of Energy Secretary Ernie Moniz has spoken in favor of my plan. More recently, I introduced the American Energy Efficiency Act of 2019, which builds on efforts already adopted in 26 states. No Republican senators have joined either effort yet, but I continue to reach across the aisle in search of support.

For the United States to lead the world in climate and energy solutions, Congress and the President must step up. Thus far, we have failed to pass solutions that grapple with the scale and urgency of the challenge. We know what science tells us. Let's get this done.

*Sen. Tina Smith, Minnesota Democrat, serves on the Senate Committee on Banking, Housing and Urban Affairs; Senate Committee on Health, Education, Labor and Pensions; Senate Committee on Agriculture, Nutrition and Forestry; and Senate Committee on Indian Affairs.*

**Countries that choose to lead this clean revolution will gain at the expense of those who lag behind. Our country can lead or we can follow. I, for one, want us to lead.**



# Keep energy flowing with safe, new pipeline infrastructure



By Sen. James Inhofe

**W**e are clearly in the heyday of oil and gas production in the United States. After years and years of fighting the liberal war on fossil fuels, we can say that, with President Donald Trump, it is a new day in America and the future is bright. Crude oil exports are up over 550 percent and liquefied natural gas exports are up over 100 percent since 2016 — breaking output records and leading to unprecedented economic growth and low energy costs for consumers across America.

But this resurgence, and the low energy costs that come with it, might not be sustainable because of our nation's aging pipeline infrastructure.

Over half of the U.S. pipeline system is nearly 50 years old, meaning that if we don't invest in updating it soon, we could face regional bottlenecks and

supply disruptions because of leaks and maintenance issues — increasing costs for everyone. We also know that we need more infrastructure to keep up with demand.

The shortage isn't because companies don't want to build. Tax reform was a historic opportunity to allow energy pipeline companies the opportunity to invest their hard-earned money into their business and infrastructure. A 2018 report makes clear that hundreds of billions of private sector dollars are ready and willing to come off the sidelines and be invested in building new energy infrastructure.

---

**Tax reform was a historic opportunity to allow energy pipeline companies the opportunity to invest their hard-earned money into their business and infrastructure. A 2018 report makes clear that hundreds of billions of private sector dollars are ready and willing to come off the sidelines and be invested in building new energy infrastructure.**

---

So why are we falling behind? Liberal environmental activists hamstringing new projects to keep them from getting built and have engaged in vandalism and sabotage of existing pipelines — putting lives at risk and emboldened from a lack of consequences.

That has never been clearer than in the Northeastern corridor of the United States where lack of pipeline infrastructure leads to significant shortages and high energy costs — especially during the winter months. The result? Boston imports about 20 percent of its natural

gas from abroad, including Russia, to heat American homes.

Without even getting into the security implications of lining Putin's coffers by purchasing Russian LNG, the reason for the purchases are simple: We don't build enough pipelines in America. While they are the safest and most economical way to transport energy, environmental groups have blocked their construction, especially in underserved areas.

I applaud President Trump for taking action to address the delays to pipeline permitting by executive order — clarifying the scope of state reviews under environmental regulations. The

— liberal environmental protesters who target energy companies in an effort to prevent the use of our domestic resources. We need to include a civil penalties provision to hold individuals or groups accountable for tampering with or vandalizing critical infrastructure — actions that create serious safety risks for everyone, and President Trump agrees. We also need to make sure it includes enacts the reforms the president is pushing to stop activist state governments from abusing the water quality certification process to block projects they simply don't like.

In Oklahoma, home of the "Pipeline Crossroads of the World," the state enacted legislation to hold bad actors accountable for actively or attempting to disrupt pipeline operations. Other states, like North Dakota and Louisiana, have done so, too. Unfortunately, that accountability stops at the state line. A federal provision is necessary to protect our nation's energy infrastructure system.

Pipelines are the safest, environmentally cleanest and most cost-effective means to transport our nation's energy resources to domestic and international markets — and they are built and maintained by the private sector. Congress can continue to empower and support this investment by enacting legislation that would do so. Ensuring we hold those actively trying to disrupt the construction and operation of these pipelines is a necessary part of this bill.

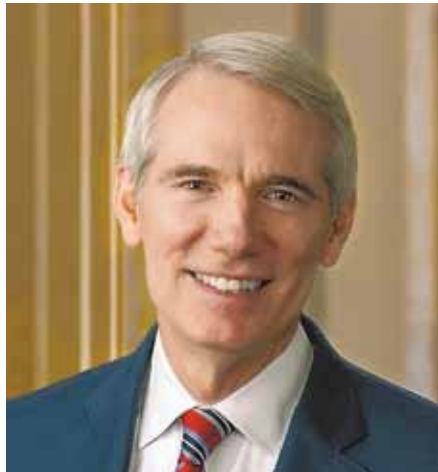
.....  
*Sen. James Inhofe, Oklahoma Republican, is Chairman of the Senate Armed Services Committee and serves on the Senate Environment and Public Works Committee and Senate Small Business Committee.*

Senate is also taking action. The Senate Commerce Committee recently passed bipartisan legislation that will reauthorize our nation's pipeline safety programs for four more years and promote reliable energy infrastructure across the country. It's a comprehensive bill — and it will also promote training for state and local pipeline safety officials and enhance the use of innovative pipeline safety technologies.

But, this bill doesn't address one of the greatest challenges we have to building and maintaining pipelines



# Sensible solutions to protect our environment and grow the economy



By Sen. Rob Portman

Even in these partisan times, and even on topics like the environment and energy that are so caught up in politics, there are some promising areas where progress can be made. One is energy efficiency. Done right, more efficient use of energy reduces greenhouse gas emissions, grows the economy and reduces costs for taxpayers. It makes sense.

That's why, since 2011, I've worked with Sen. Jeanne Shaheen to promote bipartisan energy efficiency legislation that will do just that. Such legislation passed the Senate a few years ago but was mostly stopped in the House. What did get through is already making a difference, including provisions that are resulting in more energy efficiency in 4.5 million square feet in leased building space through our Tenant Star program at EPA and an estimated \$29 million per year in energy savings from water heaters, which reduce energy consumption during peak hours and lower household energy costs.

There is room to do so much more. That's why, in July, Sen. Shaheen and I introduced the Energy Savings and Industrial Competitiveness Act (ESIC). It improves energy efficiency in residential and commercial buildings, the federal government and the manufacturing sector.

With buildings accounting for 40 percent of our nation's energy use and the federal government being the single largest consumer of energy in the country — and countless inefficiencies in both sectors — there is great potential to cut down on energy consumption and save taxpayers money.

Just one provision of ESIC will reduce energy consumption in federal government buildings by 2.5 percent per year compared to 2018 consumption levels. Elsewhere, improving building codes

through incentives will save consumers nearly \$13 billion per year in energy costs and reduce emissions by the equivalent of taking 11 million cars off the road by 2040. Another bipartisan ESIC reform to the federal mortgage underwriting process will encourage energy efficiency and reduce emissions by the equivalent of 1.5 million cars by 2040.

For our factories, ESIC provisions promoting energy efficient technology will both lower emissions and make our businesses and economy more efficient, more productive and more competitive. This will create more jobs and lead to

would allow businesses to use private activity bonds (PABs) issued by local or state governments to finance a carbon capture project. PABs have been used for decades to finance pollution control equipment at U.S. power and industrial facilities — capturing carbon dioxide is a logical next step. Business groups, energy groups and environmental groups all support this bipartisan measure. It is a great example of how a policy change can result in both more jobs and a significant reduction in carbon emissions.

The bipartisan Tropical Forests Conservation Act, which I authored 21 years

past two decades, including more than 1.1 million acres in Brazil when they had foreign debt owed to us. This progress was made at minimal cost to taxpayers and without losing a single job. Such forest burning destroys important biodiversity, and protecting our forests is a leading way to reduce greenhouse gas emissions worldwide through sequestration. Now, we must look at different ways to use market forces to incentivize countries like Brazil that no longer have foreign debt with us.

If we step back from politics, we can figure out ways to improve the environment while creating more economic opportunities. The bipartisan legislative initiatives outlined above with Sens. Shaheen, Bennett and Udall are good examples. These bills harness the power of America's markets to spur innovation in the fields of energy efficiency and carbon capture, and I look forward to getting them across the finish line. We owe it to our children, our grandchildren and all Americans to come together to keep our environment clean and our economy strong.

**Our bill, the Carbon Capture Improvement Act, would allow businesses to use private activity bonds (PABs) issued by local or state governments to finance a carbon capture project. PABs have been used for decades to finance pollution control equipment at U.S. power and industrial facilities — capturing carbon dioxide is a logical next step. Business groups, energy groups and environmental groups all support this bipartisan measure.**



more U.S. innovation and R&D in energy efficient technology.

In addition to ESIC, I'm working with Sen. Michael Bennet to pass effective carbon capture legislation. Carbon capture is a common-sense solution that will allow America to use its natural resources while protecting the environment at the same time. Our bill, the Carbon Capture Improvement Act,

ago and reauthorized with Sen. Tom Udall last year, is designed to provide resources to protect and preserve forests that are being threatened around the world. It uses market forces to incentivize countries to protect their forests in exchange for reductions in the debt they owe the U.S. These debt-for-nature swaps have protected more than 67 million acres of tropical forests over the

.....  
*Sen. Rob Portman, Ohio Republican, is Chairman of the Senate Finance Committee Subcommittee on Social Security, Pensions, and Family Policy and Chairman of the Senate Committee on Homeland Security and Governmental Affairs Permanent Subcommittee on Investigations. He also serves on the Senate Foreign Relations Committee.*

# Before bold action on climate change, we need a bold public discussion



By Frank Lasée

Scientific advancement benefits from more information, discussion and debate rather than less. With that in mind, The Heartland Institute is hosting public forums on climate change, beginning with livestreamed sessions Sept. 23, 2019, in New York City. Heartland has invited prominent man-made climate crisis advocates Kevin Trenberth, Michael Mann, Donald Wuebbles, Katharine Hayhoe, Brenda Ekwurzel and Alexandria Ocasio-Cortez to participate in the New York event.

Heartland will send invitations to Gavin Schmidt, Al Gore, Bill Nye, Bill McKibben and Susan Solomon — also prominent advocates of a man-caused climate crisis — to speak in a public forum in Colorado Springs on Oct. 29, 2019.

We are pleased to invite the above-mentioned public figures to join us at these informational forums. For too

long, there hasn't been any interactive discussions and cooperative sharing of information between the two camps of scientists — those who are raising the alarm of an imminent man-made climate crisis and those who aren't alarmed because they believe our climate naturally changes over time, with or without man's input, or who believe that the warming that is likely to occur in the coming century will not be detrimental to human health or well-being.

Worse, the lack of cooperative dialogue has devolved into outright hostility and ostracism between the two camps. Rather than form cliques that bad-mouth or shun each other, scientists seeking more understanding of climate change issues should work respectfully with each other to find common ground and solutions, if solutions are indeed necessary. We believe public discussions can serve to end the personal hostility that has for too long characterized this debate, facilitate cooperation among scientists with competing theories and educate the public on the most important climate change issues.

The general public is split on whether Earth's recent modest warming is the precursor of an imminent crisis. Polls indicate a small majority would like to see policymakers keep climate change issues on their radar, but few favor spending a lot of their money on climate change or consider climate change a high-priority voting issue. Nevertheless, more scientific information will lead to better public understanding, as well as better scientific understanding, of climate change issues.

Scientists who are skeptical of the declared climate crisis point out the

following facts:

- The ongoing, modest warming that has lifted us out of the Little Ice Age began well over 100 years ago — long before there were coal-fired power plants and SUVs.
- People are benefiting from the Earth's recent gentle warming, including record-setting crop yields and an increase in global vegetation. Remember the 1970s when it was the scientific consensus that we needed to take action against global cooling and the coming ice age?
- Global temperatures during recent decades have risen at a much slower pace than United Nations' predictions.
- Objective weather data show little, if any, intensifying of extreme weather events. Weather events like tornadoes and hurricanes are clearly becoming less frequent and less severe.
- There has been reduction in cold-induced premature deaths in recent years, thanks to global warming — and cold-induced deaths are 20 times more likely than heat-related deaths.

Heartland hopes our invited guests who believe in an imminent climate crisis will share their perspectives on the above points and bring facts that will make their points clearly and convincingly. This will make these discussions valuable — all scientific perspectives and facts can be presented and assessed. Science and public knowledge will be the ultimate winners.

The Sept. 23 forum in the Big Apple will coincide with the U.N. Climate Change Summit in the same city. The Oct. 29 Colorado Springs event will precede an important meeting of state

legislators and other important influencers at the State Policy Network's annual meeting. Visit [heartland.org](http://heartland.org) for more information about these events as the dates approach.

If the dates Heartland has chosen do not work in the schedules of the invited, we are willing to schedule additional future dates that work for Kevin Trenberth, Michael Mann, Don Wuebbles, Katharine Hayhoe, Brenda Ekwurzel, Alexandria Ocasio-Cortez, Gavin

**Polls indicate a small majority would like to see policymakers keep climate change issues on their radar, but few favor spending a lot of their money on climate change or consider climate change a high-priority voting issue.**

Schmidt, Al Gore, Bill Nye, Bill McKibben and Susan Solomon. We are doing this because we believe and expect that the contributions of these invited guests will supplement those of scientists who are skeptical of a man-made climate crisis and will provide the most complete possible picture of climate science information for the American people and global policymakers.

.....  
*Frank Lasée ([flasee@heartland.org](mailto:flasee@heartland.org)) is president of The Heartland Institute, a national free-market think tank based in Arlington Heights, Illinois.*





# Are Temps or Temperaments Rising?

Tune in to watch leading world experts as they heat up the stage, telling us their view on what's *really* happening to our planet – and what we should do about it.

On September 23 in New York City – on the same day and in the same city the United Nations will convene its Climate Summit before its General Assembly session – The Heartland Institute will host a debate on what is happening to our climate and what we can do about it. The debate will be moderated by John Stossel.



JOHN STOSSEL  
MODERATOR

We've cordially invited some of the country's most prominent advocates for taking immediate action on climate change. If it is necessary to radically change the way Americans live, work, eat, travel, and build, then it's time they make the case to the American people.

Heartland will bring a team of scientists to represent the "climate realist" side, because, after all, doesn't the wholesale reordering of our society demand at least a little bit of public debate?

## INVITED TO DEBATE



REP. ALEXANDRIA  
OCASIO-CORTEZ



BRENDA EKWURZEL



KATHERINE HAYHOE



MICHAEL MANN



KEVIN TRENBERTH



DON WUEBBLES

**Watch the live-stream so you can make up your mind for yourself.**  
**September 23**  
**7 p.m. to 9 p.m. ET**  
**at [Heartland.org](http://Heartland.org)**



The Heartland Institute discovers, develops, and promotes free-market solutions to social and economic problems. Visit [heartland.org](http://heartland.org)

# Offshore wind energy: 'Resilient, sustainable, economically sound'



By Rep. Salud Carbajal

**A**s extreme temperatures become more common, as air pollution rises and as global energy demands increase, the facts remain clear: Our climate is changing and, without bold action on energy, our future is uncertain.

Under previous administrations, we made great strides to reduce carbon emissions, but in the past two years, we've lost much of that progress. Many steps must be taken to turn things around, and one thing we must do is look carefully at our energy sources. We need sources that are resilient, sustainable and economically sound — offshore wind checks all those boxes.

Wind is a renewable resource that yields high amounts of energy, and offshore wind is readily available in coastal communities like mine in Santa Barbara and San Luis Obispo. According to the Department of Energy's (DOE) Office of Energy Efficiency and Renewable Energy (EERE), the total wind power capacity in the United States increases on average 30 percent per year, making wind our most abundant source of renewable energy. EERE suggested offshore wind alone can generate over 2,000 gigawatts of energy in state and federal waters along the coasts and Great Lakes. That is two times the combined capacity of all U.S. electric power plants, without the harmful emissions.

Wind technology is more than just a sustainable source of renewable energy — it creates jobs and stimulates our economy, adding nearly \$20 billion to our economy annually, according to the DOE Wind Energy Technologies Office. The wind sector employed over 100,000 people in 2016, and it is poised to provide more than 600,000 Americans with jobs in manufacturing, installation, maintenance and support services

by 2050. The Bureau of Labor Statistics notes that wind turbine technician is one of the fastest-growing jobs in the U.S., at a rate of 96 percent.

In San Luis Obispo, part of the district I represent in Congress, the upcoming closure of Diablo Canyon Nuclear Power Plant will significantly impact our economy and workforce. Because the plant can no longer compete in California's energy market, 1,500 local jobs will be lost and the state will need to replace nearly 10 percent of its energy production. Across the nation, other states face similar circumstances. This presents a great opportunity for offshore wind as a renewable energy source to re-establish those jobs and fulfill energy needs in my home district and in places across our nation. We will always need energy workers. The smart thing — and the right thing — to do is help people transition into new, sustainable jobs that will last. Offshore wind makes that possible.

Over the years, we have seen steady development in renewable energy technology and battery storage, making options like offshore wind more viable. Since 2009, the cost of wind has decreased by 69 percent. These falling costs mean wind energy is competitive with,

and oftentimes more affordable than, fossil fuel energy. Adding wind to our energy profile makes economic sense.

In Congress, I continue to advocate for offshore wind energy as a member of the House Armed Services Committee. I successfully included an amendment to the Fiscal Year 2020 National Defense Authorization Act to help facilitate the exploration of offshore wind. I've been communicating with the Department of Defense (DOD) to discuss leveraging renewable energy for national security, and I introduced the Energy Opportunity Zones Act (H.R. 5441) last Congress to advance renewable energy, incentivize job creation and protect our environment.

The push for offshore wind keeps gaining traction: Just last month, I met with Assistant Secretary of Defense for Sustainment Robert McMahon to

discuss the promise of wind power. We committed to working toward a solution that supports both our nation's energy needs and our defense needs. In continued conversations with the Navy, DOD leaders like Secretary McMahon, the Bureau of Ocean Management (BOEM), energy producers, transitioning power plant workers, and other regional stakeholders, I have clearly seen that we have the skills, knowledge and resources to lead on offshore wind energy. It's time to step up and do so.

Harnessing the potential of offshore wind is a strategic decision that will benefit our nation for generations to come. For our economy, for jobs and workers, and for our future, offshore wind is the smart choice. It allows us to commit to clean, renewable energy, strengthen our economy and remain a global leader. The winds of change are upon us and, when we choose to act, that change will be powerful.

---

**We need energy sources that are resilient, sustainable and economically sound — offshore wind checks all those boxes.**

.....  
*Rep. Salud Carbajal, a California Democrat, is Vice Chairman of the House Committee on Transportation and Infrastructure, and serves on the House Armed Services Committee, and House Agriculture Committee.*





# A trailblazing moment for the energy industry

By Tim Charters and Aaron C. Smith

In just over two-and-a-half years, we have seen a boon in American energy production. On the one hand, that should not be much of a surprise. As Republican nominee, Donald Trump promised as much. But on the other hand, the rise in American-generated power has not been as much from oil and gas as Trump supporters, and even some opponents, would expect.

No, part of this energy production growth has come from a very surprising source, one Mr. Trump didn't spend much time talking about, but can now rightfully take credit for: Offshore wind energy.

It seems somewhat counterintuitive — even with an “all of the above” energy approach, offshore wind has typically been an afterthought. While the Bush administration started the ball rolling, and President Obama slowly started moving forward, it is the Trump administration that has pushed the boundaries.

Offshore wind has become a significant priority with a longer list of offshore projects from this administration than one might expect. Last December, an Interior Department auction of three offshore lease blocks brought in a record-shattering \$405.1 million, yielding roughly \$1,000 per acre for the federal government.

And it's creating jobs. For example:

The Empire Wind project south of Long Island will power over 500,000 homes and create 800 jobs.

The Sunrise Wind project, which was recently awarded a power purchase agreement in New York, will power over 500,000 homes and create over 1,600 jobs.

The Skipjack Wind Farm off the coast

**Most importantly, offshore wind jobs are being created across the country. Whether it's from utilizing wind-turbine technicians from Colorado, shipbuilders from Louisiana or electricians from New Jersey, the offshore wind-supply chain stretches across the United States.**

of Maryland will power 35,000 homes and create 1,400 jobs.

Revolution Wind off the Rhode Island Coast will power 270,000 homes and create 850 jobs.

This does not include projects such as the Coastal Virginia Offshore Wind project and the South Fork Wind Farm off the New York coast, which do not have firm job estimates yet. Nor does it include the Vineyard Wind project south of Martha's Vineyard, which is still awaiting final approval from the Department of the Interior, and would create 800 megawatts of power and 3,600 jobs.

Most importantly, offshore wind jobs are being created across the country. Whether it's from utilizing wind-turbine technicians from Colorado, shipbuilders from Louisiana or electricians from New

Jersey, the offshore wind-supply chain stretches across the United States. With more than 18.6 gigawatts of offshore wind projected by 2030, offshore represents a new \$70 billion industry, creating jobs and capital expenditure benefits for American businesses.

Offshore projects are never easy. In addition to the Washington red tape,

which the Trump administration is cutting, offshore wind projects entail difficult engineering and construction challenges, and require due diligence within the local community. Local engagement means meaningful dialogue with the fishing community, who are concerned about the impacts of any such operation, creating mitigation funds, reducing, when necessary, the turbine footprint and carefully calibrating the distance between turbines to allow trawlers easy passage so that offshore wind and fisheries can thrive alongside each other.

Notably, the Vineyard Wind project would be the first ever to complete permitting through the One Federal Decision process, a showcase of President Trump's initiatives to reduce regulatory burdens for business and encourage

investment in our nation's infrastructure. Vineyard Wind, once it gains final federal approval, will spur a private sector-driven energy revolution that provides clean, affordable energy and creates even more high-paying, long-term jobs.

As a vanguard for a new offshore energy industry, Mr. Trump can encourage similar projects that would provide clean, affordable and reliable energy — moving the country closer to energy independence and less dependent on many Americans' current reality of Russian gas brought to the United States. Recent storms and blackouts, and warnings of more blackouts to come, show that increasing the reliability of America's electricity grid is essential.

The rise of offshore wind is a trailblazing moment for the energy industry and for America. Creating clean, affordable and reliable wind energy off our coasts, while creating jobs in the process is a win-win, and the Trump administration deserves far more credit than it has been receiving. We have a chance to build great new offshore projects for America, and the Trump administration is leading the way.

*Tim Charters is the vice president for government and political affairs at the National Ocean Industries Association. Aaron C. Smith is the president and CEO of the Offshore Marine Service Association. This article first ran online in The Washington Times Commentary section on Aug. 7, 2019.*

# U.S. innovation, free market key to clean, affordable energy

**By House Minority Whip Steve Scalise, Rep. Jeff Duncan and Rep. Markwayne Mullin**

In the past three years of pro-growth Republican policies under President Trump's leadership, we have reversed much of the economic damage done by the Obama administration and unleashed the incredible potential of American energy resources. By exploring all forms of energy — from oil and gas to coal, nuclear and other renewable energy — and by instituting responsible regulatory reform, America has become a leading energy producer and is fast becoming the global leader in energy exports.

The U.S. has made tremendous progress since President Trump took office, and we can't afford to turn back now. As leaders of the House Energy Action Team (HEAT), we are working to promote this success and shine a light on the destructive changes Democrats would have us make under their radical energy proposals that call for a complete socialist remake of the country's economy and an end to America's traditional and reliable energy sources. Across the country, conservative energy policies are creating jobs and driving down costs for hard-working families. Through American innovation and free market competition, not phony Paris treaties, U.S. energy emissions have fallen to 1990 levels and CO2 emissions are expected to decline again in 2019.

We have seen these benefits firsthand in our districts.

In Louisiana, technological innovations like deepwater drilling and hydraulic fracturing are allowing us to safely tap previously inaccessible oil and gas reserves. This increased production has allowed the U.S. to compete with foreign adversaries and strengthen partnerships with our allies who no longer have to depend on countries like Russia and Iran for energy. With our LNG export facilities and as home to the nation's only offshore oil port, South Louisiana is at the forefront of the country's burgeoning export activity. Our export capabilities now allow us to provide more cost-effective and cleaner energy to the rest of the world.

Some 52.9 percent of South Carolina's electricity is generated from nuclear power, and it accounts for 95.5 percent of the state's emission-free electricity. Nuclear power is reliable, critical to U.S. national security and geopolitical interests, and has significant economic benefits. We as a nation should be advocating for policies that



ILLUSTRATION BY LINAS GARSYS

incentivize private investment in the industry and for policies conducive to establishing a permanent geologic repository like Yucca Mountain. Given that nuclear energy generates 56 percent of America's carbon-free electricity in the U.S., it is overwhelmingly the largest

source of the nation's clean energy and must be part of our energy matrix.

Oklahoma has historically been known as an oil state. But Oklahoma is also a leader in renewable energy. We are now the second in wind generation. We are focused on an all-of-the-above

energy strategy because we understand that they can complement each other. When the wind isn't blowing in Oklahoma, we rely on natural gas to power our electricity. Using all of our energy resources means lower costs for families and lower emissions. Because Oklahoma has adopted this strategy, we are home to some of the most affordable power in the nation.

In all of our districts, we have seen that by bringing sanity to regulations, and allowing the free market to work, energy companies are modernizing energy generation processes, reducing emissions and creating new jobs. Liberals in Washington, however, prefer radical, government-first plans like the Green New Deal, which would destroy our national economy and send prices of everyday goods soaring for families and small businesses all across our country.

In just a few weeks, the United Nations is set to convene, once again, to dictate to the world a set of costly, job-killing regulations as part of that body's effort to legislate a global temperature change. As we already know from the Paris Accord, in practice, these schemes simply transfer millions of good-paying jobs from America to bad actors, like China, who have little obligation to reduce their continually growing carbon emissions. This is the wrong direction.

The American economy is booming in large part because of Republicans' pro-growth approach to energy development. As leaders of HEAT, we will continue to lead on policies that will continue this growth and prioritize a safe, clean environment.

*House Minority Whip Steve Scalise, Louisiana Republican; Rep. Jeff Duncan, South Carolina Republican; and Rep. Markwayne Mullin, Oklahoma Republican, are co-chairs of House Energy Action Team (HEAT).*

# Time to face reality — Green New Deal is a nightmare



By Rep. Sam Graves

**H**ave you ever read a news story and asked yourself, “Is this for real?” I had that experience when I recently read that a major proponent of the Green New Deal said she woke up in the middle of the night with anxiety about climate change. She believes taxpayers need to just “bite the bullet” and go along with the plan.

The Green New Deal, I remind you, theorizes that we could save the planet if we, in part, replaced or upgraded every building in the United States and got rid of airplanes and gas-powered vehicles.

One study suggests that this “Deal” would cost \$93 trillion over the next 10 years. At that price, this certainly isn’t a deal, it’s a disaster.

This would cost the average American household \$600,000, not to mention the millions of jobs that would be lost. While the Deal’s proponents tout the new jobs this plan would create, in reality, the creation of green jobs in recent years has been shown to be underwhelming when compared to the rosy promises used to sell such plans. Even California stopped trying to tally the number of green jobs created.

The thing that keeps me up at night is imagining this Green New Deal nightmare becoming reality. This proposal is like the maniac in a bad horror movie who, beyond any logic, just keeps coming back.

As a sixth-generation farmer, I firmly believe we should be mindful of our impact on the environment, because the land is how we make our living. I am not arguing against improved energy efficiency and cleaner burning fuels, but proposals to protect the environment need to be grounded in reality and mindful of the costs on hardworking Americans.

The Green New Deal is unquestionably one of the most onerous, unrealistic



proposals I have ever seen. How many Americans can afford to “bite the bullet” if it’s going to cost them \$600,000?

I have deep concerns that the Green New Deal would unnecessarily hijack and politicize any constructive conversations Congress and the country can have about important issues, like infrastructure or cleaner energy production, where there is plenty of room for realistic action. Our approach to infrastructure and other issues require long-term, workable solutions — an impossibility with heavy-handed proposals like the Green New Deal that rely on big government mandates.

It is beyond me why politicians on

the far-left feel like they need to dictate, tax and penalize in order to force their socialist agenda when, in fact, we already see the private sector responding to consumer-driven market demands for cleaner energy and cleaner technology. We continue to witness car, truck, train and aircraft engines becoming cleaner, more fuel-efficient and more dependent on alternative fuels. More and more Americans want these things, and that popular demand provides a powerful, built-in, market-based incentive for manufacturers and companies to offer them.

This may be news to the mainstream media, but an approach that recognizes

reality can actually work. In recent years, under Republican Congresses, we passed bipartisan infrastructure legislation that addresses environmental issues. In 2018, for example, the FAA Reauthorization Act established an FAA-industry partnership for developing low-energy and low-emission technologies, and the Disaster Recovery Reform Act focused on making our communities more resilient to natural disasters. Since 2014, three Water Resources Development Acts have addressed ecosystem restoration, flood risk reduction and storm risk mitigation projects. Bipartisan proposals in Congress now would provide for government-industry partnerships and encourage innovation.

When it comes to infrastructure, the environment and other issues, Congress must continue to offer bipartisan, consensus-based solutions that ensure that states, local governments and private industries have the tools and flexibility to address their specific needs and, above all, keep innovating.

Sweeping and prohibitively costly government mandates that ignore the unique needs of our communities, and how the economy works — proposals like the Green New Deal — have no place in the national discussion about how we are going to move forward.

Anyone who thinks otherwise needs to wake up and face reality.

.....  
*Rep. Sam Graves, Missouri Republican, is Ranking Member of the House Committee on Transportation and Infrastructure.*

# Ethanol in fuel hurts us all. Here is why.



By Jerry Jung

**T**wo years ago, the Washington Times published an opinion article that I wrote about rethinking ethanol mandates. Under provisions of the Renewable Fuel Standard (RFS) enacted in conjunction with the Energy Policy Act of 2005, refiners are required to blend ethanol into gasoline. If their product does not contain 10 percent ethanol, they must purchase credits to offset the shortfall. The RFS also addresses “renewable” fuels other than ethanol, such as biodiesel made from soybeans. This legislation was promoted by both President George W. Bush and House Speaker Nancy Pelosi.

The politics behind the legislation are quite rational, yet the outcome from both an economic and environmental perspective is utterly idiotic. There is a litany of reasons why the policy is counterproductive, but the most basic reason is that more fossil fuel energy is consumed in the production of corn and soy biofuels than is produced. Ethanol plants utilize energy equivalent to about 28 percent of their output, but much more energy is consumed in the process of growing corn and soybeans to be made into fuel.

Production of fertilizer and other agricultural chemicals consume prodigious amounts of energy. According to statistics provided by the International Energy Agency and Stanford University, worldwide fertilizer production utilizes the energy equivalent of over 1 billion barrels of oil each year. Farm tractors consume diesel fuel, as do the trucks moving corn, soy and ethanol. (Ethanol cannot generally be transported in pipelines.)

Given the fact that biofuels waste energy, there is no substance to arguments that biofuels provide energy security. Nor can a logical argument be made that they are any more renewable than the fossil fuels required for their production. The only remaining rationale for biofuels then would center on

purported economic benefits — specifically propping up the farm economy. According to the USDA Economic Research Service, more than half of farm families have negative farm income and therefore require other jobs. Rural communities continue to lose population. Net farm income has stagnated and continues an inflation-adjusted downward trend — despite, and perhaps because of, biofuels.

How could our country’s political obsession with biofuels actually hurt U.S. farmers? There are roughly 70 million acres dedicated to growing corn and soybeans for fuel in the U.S.

food riots in poor countries. However, tropical countries led by Brazil soon cleared enough forest to make up for the shortage.

In Brazil, it is possible to grow two crops of corn or soybeans per year. How can our farmers compete? Brazil now exports more soybeans, corn and beef than the U.S.

Citing the China trade dispute, the administration promised an additional \$15 billion in support for farmers. This amount is in addition to crop revenue insurance subsidies of \$6 billion, a \$1/gallon excise tax credit to biodiesel blenders, and billions more in costs

concept of avoided cost.) Regulatory incentives associated with the RFS also increase the cost of corn and soybean feedstock, inflating the price of feedstock for meat and poultry.

Agricultural exports play a key role in trade negotiations with China. Early in the trade spat, the optimism of ethanol producers was high that China would enforce a 10 percent domestic ethanol mandate and provide an outlet for their ethanol. This dispute has disrupted multiple industries, including the technology sector, but it has its basis in an agricultural sector that cannot compete with Brazil. It was our preoccupation with biofuels that opened the door to food exports by other countries. Farmers are squeezed between a few vertically integrated suppliers and global commodity prices influenced by an artificial bubble of overcapacity.

Since U.S. farmers suffer from increased competition from abroad, who benefits? Politically influential biofuel producers and agricultural input producers (such as chemical companies and seed producers) do. In essence, farmers have been relegated to laundering government subsidies for these entities. The economic fortunes of farmers are tied to commodity prices that, in turn, are heavily influenced by the EPA-sponsored RIN market for biofuel shortfalls. The RIN market is very volatile as evidenced by the precipitous drop in prices triggered when the EPA granted waivers to small refiners. If there are enough RINs to meet regulatory requirements, they are theoretically worth nothing. If there are not enough, they are theoretically priceless. (Economists would characterize the demand for RINs as perfectly price inelastic.)

If the goal is to provide a living wage for farmers, a better approach would be to direct the billions of dollars spent propping up biofuels toward the Conservation Reserve Program. The CRP provides payments to farmers for planting cover crops that provide habitat for wildlife as well as restoring water quality and replenishing aquifers. From an economic perspective, the supply and demand curves for conservation lands provide a much more stable platform for food prices. If the price of cash crops rises too high, then farmers put more acreage into crops, bringing prices back down. If farmers are unable to turn a profit because of low prices, then they can fall back on CRP payments. It makes more sense to limit capacity in this fashion than it does to resort to subsidies and government mandates for surplus crops.

.....  
*Jerry Jung is a retired businessman and conservationist.*



Aerial photo showed heavy equipment working at palm oil plantation owned by PT Papua Alam Lestari.



PHOTO COURTESY OF JERRY JUNG.

U.S. biofuel policy has driven destruction of the Amazon.

According to the National Wildlife Federation, about 7 million of these acres were converted from natural habitat. That leaves over 60 million acres that were converted from food production to grow soy for biodiesel and corn for ethanol. When U.S. farmers take 60 million acres out of food production, something has to give. Initially, commodity prices shot upward accompanied by

associated with the “RIN” credits that biodiesel blenders and refiners with ethanol shortfalls pass along to motorists. A dollar-per-gallon RIN price translates into “stealth taxes” of \$15 billion for gasoline and \$2.6 billion for diesel. That’s because refiners pay penalties not only for shortfalls but also that much more for the biofuels that they do buy. (This is due to the economic

# ETHANOL Hurts Us All



**ETHANOL HURTS** the environment



**ETHANOL HURTS** dairy farmers



**ETHANOL HURTS** food prices



**ETHANOL HURTS** small business



**ETHANOL HURTS** motorcyclists



**ETHANOL HURTS** water quality



**ETHANOL HURTS** egg farmers



**ETHANOL HURTS** the marine industry



[RethinkEthanol.com](http://RethinkEthanol.com)



**By Rep. Fred Upton**

**B**efore I was elected to Congress in 1986, I worked for President Reagan and learned the importance of finding bipartisan solutions to the challenges facing the nation. President Reagan worked across the aisle with the Democrats who held the House throughout his entire presidency. He always fought for what was right — regardless the party. And when the people of southwest Michigan sent me to Congress, I vowed to practice the lessons I learned from our 40th President on every single issue that crossed my desk.

One issue that's deeply personal to me is pipeline safety. It's personal to anyone who has had to deal with a pipeline accident in their home state. In July 2010, a pipeline burst and spilled into the Kalamazoo River in southwest Michigan. It was one of the largest inland oil spills in American history, costing a billion dollars to clean up.

Following that incident, we took

action and passed the 2012 pipeline safety bill, a result of a bipartisan commitment to ensuring our energy is transported safely and our environment is kept protected. We cut down on the incident reporting time and upped the financial penalties for violations.

In 2016, we came together again to pass another bipartisan pipeline safety bill. I am proud of the work we accomplished with that bill, particularly the language that I was able to include to require mandatory annual inspections for certain pipeline crossings, such as Enbridge's Line 5, which crosses the Straits of Mackinac in Michigan at a depth of more than 250 feet below the surface of the water.

**Protecting our pipelines, ensuring the safe delivery of our energy resources, and making sure we do right by our environment are too important to let political rhetoric and minor disagreements get in the way of a final product.**

The 2016 bill is set to expire at the end of this month, and it's critically important we once again come together to pass a bipartisan bill that will pass both the House and Senate and that President Trump will sign. We have no other choice — we have a responsibility to ensure our nation's energy is transported safely.

Each year, more than 2.6 million miles of pipelines deliver trillions of cubic feet of natural gas and hundreds of billions of ton of liquid petroleum products across the nation, powering our homes, our schools and our businesses. Our pipeline network literally fuels our economy. And it's true that pipelines are simply the most efficient and safest way to transport this energy. But another accident could devastate our environment and threaten the economic well-being of American families. We just cannot take this chance, which makes reauthorizing pipeline safety one of the top issues facing this Congress.

My priorities for a new pipeline safety bill are straightforward.

First, we must ensure that the Pipeline and Hazardous Materials Safety Administration (PHMSA) and the states have the resources they need to perform their pipeline safety responsibilities.

Second, we need PHMSA to complete the overdue hazardous liquid and gas pipeline rulemakings.

Third, we need to ensure that PHMSA, state regulators and pipeline operators are incorporating lessons-learned from prior accidents, integrating new technologies and continuing to improve safety.

Finally, as we have done for the past two reauthorizations, we need to work in a bipartisan manner on this issue. Protecting our pipelines, ensuring the safe delivery of our energy resources, and making sure we do right by our environment are too important to let political rhetoric and minor disagreements get in the way of a final product.

Throughout my career, I have stayed true to the lessons I learned from President Reagan. I've worked with folks on both sides of the aisle to get solutions to huge challenges, including pipeline safety. I am proud of the work we have done in the past on this issue — it's one of the bright spots of bipartisanship in Congress when working on an issue of national importance. But we can do better, and I am looking forward to continuing to work with my colleagues to once again get this done this Congress.

*Rep. Fred Upton, Michigan Republican, is the Ranking Member on the Energy Subcommittee and served as chairman of the House Energy and Commerce Committee from 2011 to 2017.*



# Energy dominance and environmental protection go hand in hand



By Rep. Paul Gosar, D.D.S.

**A**s the Chairman of the Congressional Western Caucus and the Ranking Member of the House Committee on Natural Resources Subcommittee on Energy and Mineral Resources, I have a unique insight into many of America's energy issues.

Since 1993, the bipartisan Western Caucus has been on the front lines of tackling some of the biggest energy issues facing America.

The Western Caucus led the fight against the fundamentally flawed Green New Deal, a socialist manifesto masquerading as a pro-environment proposal seeking to fundamentally

transform America.

Besides leading the charge against the Green New Deal, the Caucus and I have also been fighting some of the atrocious bills and ideas being proposed by House Democrats, including spearheading the opposition to Nancy Pelosi's Paris Climate Agreement bill that would prevent President Trump from withdrawing from this unlawful accord.

When Chairman Raul Grijalva pushed through Rep. Jared Huffman's bill repealing the Arctic National Wildlife Refuge oil and gas program, we stepped up to the plate to fight it tooth and nail. The local tribe of Kaktovik even derided Mr. Huffman as they have

uranium essential to our national security and defense apparatus, it is also integral to our energy security.

Working in tandem with the Trump administration, we have rolled back Obama-era job-killing regulations and continue to work tirelessly to unleash American energy dominance.

Despite all the work we have accomplished, extremists are continuing to undermine these important projects at hearings by inserting political riders into appropriations bills to defund many of these important initiatives.

Fortunately, the Western Caucus has a different vision for America. A vision that doesn't pick winners and losers and includes a true all-of-the-above

and protecting our environment are not mutually exclusive goals.

We are experiencing an energy renaissance in this America. It's a story of freedom, prosperity and opportunity. For the first time in 65 years, the United States is a net exporter of energy. We are no longer dependent on volatile foreign sources produced in Russia and Saudi Arabia, and American homes and vehicles are being powered by American energy.

Recent innovation and technology improvements associated with fracking and horizontal drilling have allowed shale resources previously deemed uneconomical to be developed and are the main reason the U.S. was the world leader in carbon emissions reductions in 2015, 2016 and 2017.

It is such an honor to lead the Western Caucus and represent the people of Arizona's 4th Congressional District. We will continue to fight day in and day out for American energy dominance, and we will protect our environment along the way.

*Rep. Paul Gosar, D.D.S., Arizona Republican, is the Ranking Member on the House Committee on Natural Resources Subcommittee on Energy and Mineral Resources and serves on the House Committee on Oversight and Reform. He is also Chairman of the Congressional Western Caucus.*

**We are experiencing an energy renaissance in this America. It's a story of freedom, prosperity and opportunity. For the first time in 65 years, the United States is a net exporter of energy. We are no longer dependent on volatile foreign sources produced in Russia and Saudi Arabia, and American homes and vehicles are being powered by American energy.**

fought for decades to open responsible production in ANWR.

The Western Caucus has sounded the alarm on the importance of including uranium on the United States' list of critical minerals. Not only is

energy strategy that embraces wind, solar, nuclear, hydropower, coal, oil and natural gas.

Our vision encourages innovation and less burdensome mandates. We know responsible energy production



Morenci Mine in Arizona.

# North Dakota's Bakken oil revolution easing global geopolitical tensions



By Rep. Kelly Armstrong

**N**orth Dakota has long played a vital role in America's national security. We are proud to be home to two legs of our country's nuclear weapons triad. The Minot Air Force Base is home to both the B-52 long-range strategic bomber and the Minuteman III intercontinental ballistic missile (alas, there is no home for a nuclear submarine in landlocked North Dakota).

But national security is not solely based upon military might. Over the past decade, North Dakota has undergone an economic and industrial revolution that has secured another strategic security advantage for our country. The Bakken oil field, stretching across western North Dakota, has paved the way towards American energy independence. This newfound energy security is a geopolitical advantage that is reaping benefits for our country and the entire world.

Not long ago, the actions taken by Iran in the Strait of Hormuz would have roiled global oil markets and caused significant price increases. In the past, these events would have triggered ripples in our economy all the way from Wall Street to Main Street. Markets would have (over)reacted and

gas prices would have spiked. And those are just the most visible results of energy market upheaval. Commerce and industry that rely on petroleum products would see skyrocketing costs, resulting in price increases on goods ranging from airline tickets to asphalt.

But as we have seen in recent months, that is no longer the case. Thanks in large part to North Dakota's shale oil revolution, made possible by astounding advances in technology — most notably, hydraulic fracturing — world oil prices have remained remarkably stable. Oil is trading at essentially the same price as it was on Jan. 1, 2019. Technologies developed in North Dakota are now being perfected and deployed in shale formations across the country, insulating the U.S. and our allies from the economic volatility that traditionally follows these types of incidents in the Middle East.

The benefits of energy security manifest in several meaningful ways.

First, the Iranian regime, or any other hostile actor, sees diminished political advantage from their dangerous actions. These events, while gravely serious, no longer cause havoc in world energy markets. This puts America and our allies in a stronger position when dealing with hostile aggression. Our leaders can make decisions without facing pressure associated with rising gas prices and other economic concerns. While Iranian actions are “provocative and hostile,” as President Trump has stated, the effects of their actions are limited. Our response can be calculated towards our long-term strategic goals rather than our short-term political needs.

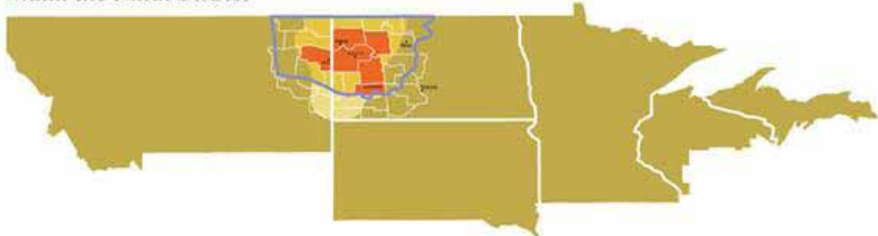
Second, the American people and the entire world reap the benefits of a stable oil market. Prices move more predictably and are driven by supply and demand instead of hostile actions intended to disrupt the market. Consumers and businesses can more adequately plan everything from a summer road trip to a major capital investment.



PHOTO CREDIT: JOANNA THAMKE, USGS

Oil well being drilled into the Bakken Formation in North Dakota in 2015.

Location of the oil patch within the Ninth District



The Bakken Formation, which contains oil-bearing shale more than a mile underground, stretches from North Dakota and Montana into Canada. Illustration courtesy of Federal Reserve Bank of Minneapolis ([minneapolisfed.org](http://minneapolisfed.org)).

Third, there are the jobs. North Dakota's 1.4 million barrels-per-day oil industry is larger than some OPEC countries and has created over 35,000 high-paying careers at an average salary of more than \$98,000. What does that mean for North Dakota? I will let one of my constituents answer.

“Jobs that offered long-term career advancement that would appeal to young adults entering the work force didn't exist in North Dakota. As a result, our rural communities were shrinking, and we were losing our small-town culture and way of life so many had enjoyed for generations before. The oil and gas industry has completely changed this outlook.”

This young man earned a petroleum engineering degree from the University of North Dakota. He now works in

the energy industry in our hometown and is the embodiment of what energy development has meant for small-town America.

Simply put, the United States is stronger and our enemies are weaker because of our energy security. America's oil production has strengthened our country and our communities. North Dakota is proud to have played its part in our country's path toward energy independence.

*Kelly Armstrong is in his first term representing North Dakota in the U.S. House of Representatives, where he serves on the House Select Committee on the Climate Crisis, as well as the Judiciary and Oversight committees. He's a former state senator, executive for his family's oil and gas business, and defense attorney.*

# Renewable energy will only be possible with massive increases in the supply of critical minerals

## *Without mining there is no 'Green Revolution'*

By Stephen Moore and Ann Bridges

The recent threats by Beijing to cut off American access to critical mineral imports has many Americans wondering why our politicians have allowed the United States to become so overly-dependent on China for these valued resources in the first place.

Today, the United States is 90 percent dependent on China and Russia for many vital “rare earth minerals.”

The main reason for our over-reliance on nations like China for these minerals is not that we are running out of these resources here at home. The U.S. Mining Association estimates that we have at least \$5 trillion of recoverable mineral resources.

The U.S. Geological Survey reports that we still have up to 86 percent or

more of key mineral resources like copper and zinc remaining in the ground, waiting to be mined. These resources aren't on environmentally sensitive lands, like national parks, but on the millions of acres of federal, state and private lands.

The mining isn't happening because of extremely prohibitive environmental rules and a permitting process that can take 5-10 years to open a new mine. Green groups simply resist almost all new drilling.

What they may not realize is that the de facto mining prohibitions jeopardize the “Green Energy Revolution” that liberals so desperately are seeking.

How is this for rich irony: To make renewable energy at all technologically plausible, will require massive increases in the supply of rare earth and critical minerals. Without these valuable

metals, there will not be more efficient 21st century batteries for electric cars, or modern solar panels. Kiss the Green New Deal and Rep. Alexandria Ocasio-Cortez and Sen. Bernie Sanders' utopian vision of 100 percent renewable energy goodbye.

Yet for decades now, environmentalists have erected every possible barrier to mining here in America for critical minerals — which we have in great abundance.

Search far and wide through the grandiose Green New Deal plans and you will not find any call for additional domestic mining for battery-operated electric vehicles and electrified mass transportation systems, nor the underlying energy infrastructure.

Thanks to the extreme environmentalists we import from unfriendly and repressive governments the critical

minerals needed to produce rechargeable batteries (lithium and cobalt), wind-turbine motors (dysprosium), thin films for solar power (tellurium) and miniature sensors that manage the performance of electric vehicles (yttrium).

Another irony in the left's anti-mining crusade is that these same groups have long boasted that by eliminating our need for fossil fuels, America won't rely on cartels like OPEC that have in the past held our nation hostage to wild price swings and embargoes. Greens also complain that fossil-fuel dependence requires a multi-billion dollar military presence in the Middle East and around the world to ensure supply. Now we can substitute OPEC with China and Russia.

Here is one simple but telling example of the shortsightedness of the “no mining” position of the environmentalists. Current electric vehicles can use up to 10 times more copper than fossil-fuel vehicles. Then, additional copper-wire networks will be needed to attach convenient battery chargers throughout public spaces and along roads and highways. Do we really want this entire transportation infrastructure to be dependent on China and Russia?

Of course, it is not just green energy development that will be imperiled by our mining restrictions folly. Innovation and research on new lightweight metals and alloys, such as those used in life-saving medical devices and tiny cameras in smartphones, could also become stalled if foreign prices rise prohibitively.

Also, because our mining laws (the one's that don't outright prohibit mining) protect the environment far more than those in nations like China and Africa, by importing these minerals, we are contributing to global environmental degradation.

So there you have it. The “keep-it-in-the-ground movement” demanded by environmentalists against use of almost all of America's bountiful energy and mineral resources is blocking a green future and a safer planet. Do they know this? Do they care?

.....  
*Stephen Moore, a columnist for The Washington Times, is a senior fellow at Heritage Foundation and an economic consultant at Freedom Works. Ann Bridges is co-author of “Groundbreaking!: America's New Quest for Mineral Independence.” This article first appeared in The Washington Times Commentary section on June 16, 2019.*

**The U.S. Geological Survey reports that we still have up to 86 percent or more of key mineral resources like copper and zinc remaining in the ground, waiting to be mined. These resources aren't on environmentally sensitive lands, like national parks, but on the millions of acres of federal, state and private lands.**

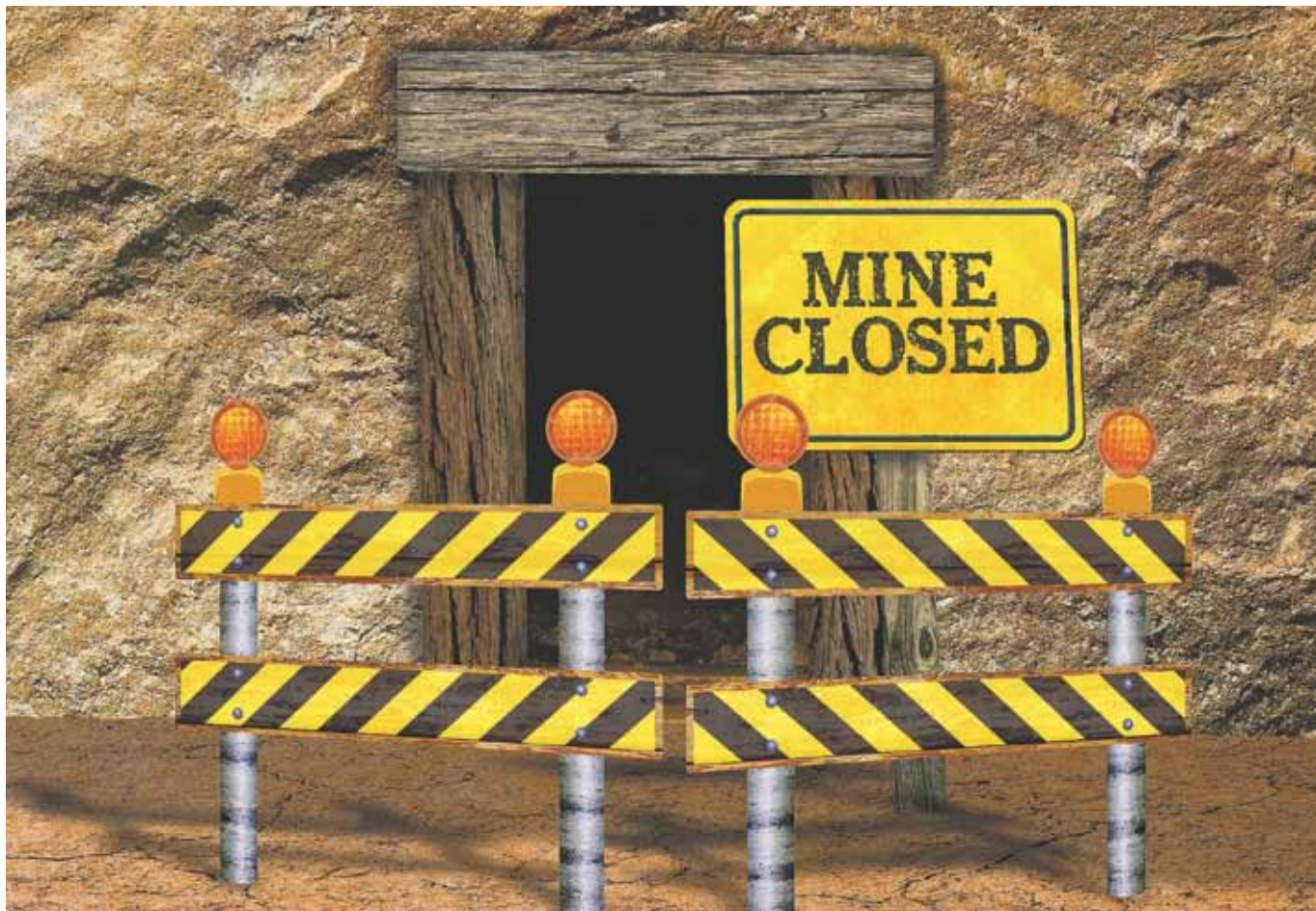


ILLUSTRATION BY GREG GROESCH



**U.S. airlines contribute just**

**2%**

**of the nation's CO<sub>2</sub> emissions.**

U.S. airlines help drive more than **10 million U.S. jobs** and **\$1.5 trillion in annual U.S. economic activity**. Every day, we transport more than **2.4 million passengers** and **58,000 tons of cargo**. And we're doing our part to fight climate change by developing sustainable alternative fuels, investing in fuel-efficient aircraft and more.

U.S. airlines are a clean, green economic engine.

**To learn more about the airline industry's environmental record, visit [airlinesflygreen.com](http://airlinesflygreen.com).**



**Airlines for America®**

*We Connect the World*