America First Energy Conference

November 9, 2017

J.W. Marriott Hotel Houston, Texas

CONFERENCE PROGRAM





THE WHITE HOUSE WASHINGTON

An America First Energy Plan

Energy is an essential part of American life and a staple of the world economy. The Trump Administration is committed to energy policies that lower costs for hardworking Americans and maximize the use of American resources, freeing us from dependence on foreign oil.

For too long, we've been held back by burdensome regulations on our energy industry. President Donald Trump is committed to eliminating harmful and unnecessary policies such as the Climate Action Plan and the Waters of the U.S. rule. Lifting these restrictions will greatly help American workers, increasing wages by more than \$30 billion over the next seven years.

Sound energy policy begins with the recognition that we have vast untapped domestic energy reserves right here in America. The Trump Administration will embrace the shale oil and gas revolution to bring jobs and prosperity to millions of Americans. We must take advantage of the estimated \$50 trillion in untapped shale, oil, and natural gas reserves, especially those on federal lands that the American people own. We will use the revenues from energy production to rebuild our roads, schools, bridges, and public infrastructure. Less expensive energy will also be a big boost to American agriculture.

The Trump Administration is committed to clean coal technology and to reviving America's coal industry, which has been hurting for too long.

In addition to being good for our economy, boosting domestic energy production is in America's national security interest. President Trump is committed to achieving energy independence from the OPEC cartel and any nations hostile to our interests. At the same time, we will work with our Gulf allies to develop a positive energy relationship as part of our anti-terrorism strategy.

Lastly, our need for energy must go hand-in-hand with responsible stewardship of the environment. Protecting clean air and clean water, conserving our natural habitats, and preserving our natural reserves and resources will remain a high priority. President Trump will refocus the Environmental Protection Agency on its essential mission of protecting our air and water.

A brighter future depends on energy policies that stimulate our economy, ensure our security, and protect our health. Under the Trump Administration's energy policies, that future can become a reality.

Text taken from whitehouse.gov. See how much of Heartland's suggested climate and energy agenda the Trump Administration has adopted on the back cover.

Welcome to the America First Energy Conference!

The Heartland Institute has hosted 12 International Conferences on Climate Change, but this is our first conference dedicated almost entirely to energy policy. It surely won't be the last.

I am thrilled to now serve as president of Heartland after leading the "Tea Party Revolution" in Congress from 2010 until this past January, and before that serving 14 years as a Kansas state senator. What you will see, hear, and learn at this conference will give you a taste of why I'm so excited to join the Heartland team.

Donald J. Trump shocked the world when he won the presidency. And when he promised on the campaign trail to "make America great again," he meant it. In no area of policy is that more true than with Trump's followthrough on the America First Energy Plan.

Almost exactly one year since Trump's election victory, he has already turned back much of Barack Obama's eight years of anti-energy policies. The United States is out of the radical Paris climate agreement. The misnomer "social cost of carbon" is extinct. The Environmental Protection Agency's Clean Power Plan is dead. And the scheme of "sue-and-settle" to dictate policy at EPA is gone. Obama's war on fossil fuels, particularly his pledge to bankrupt the coal industry, is over. None of that would have happened had Hillary Clinton won.

We are here today in Houston, America's energy hub, to discuss this remarkable moment in history. Heartland has gathered some of our nation's best energy policy experts to explain what President Trump has already been able to accomplish and, more importantly, what comes next.

A message you will hear often is the critical importance of not letting this opportunity slip away. For too long, America's future has been controlled by radicals who don't want to see us grow and prosper. Today, we are fortunate to have a president in charge who puts America first — and that is why we call this the America First Energy Conference.

We can put America first. We can take the lead in powering the world and growing our economy. We can continue guiding the protection of Earth's air, land, and water. And as Heartland's new president, I'm confident what we learn here will energize all of us to advance sensible, pro-growth energy policies for a prosperous America.

Sincerel

Tim Huelskamp

President The Heartland Institute

http://americafirstenergy.org/

Table of Contents

2An America First Energy Plan
3
5
9Speaker Biographies
Back coverAn Action Plan for President Trump



BREAKFAST PLENARY KEYNOTE

Opening remarks by Heartland Institute President Tim Huelskamp, followed by a keynote address by Joe Leimkuhler, vice president of drilling at LLOG Exploration, on "Global Energy Dominance: Is it Possible?" Breakfast starts at 7:30 a.m. Program begins at 7:55 a.m.

 ROOM
 TIME

 Liberty 4-6
 7:30 a.m. - 8:45 a.m.

SPEAKERS

Tim Huelskamp, Ph.D. Joe Leimkuhler

CLIMATE SCIENCE

Why doesn't the America First Energy Plan mention global warming or carbon dioxide? Two leading climate scientists explain how the latest climate science and data show human activity, specifically the burning of fossil fuels, is not causing a climate crisis.

 ROOM
 TIME

 Liberty 4-6
 9:00 a.m. - 10:00 a.m.

SPEAKERS

H. Sterling Burnett, Ph.D. (moderator) David Legates, Ph.D. Anthony Lupo, Ph.D.

ENERGY AND PROSPERITY

"Energy is an essential part of American life and a staple of the world economy." Three panelists explain why affordable energy and economic prosperity are inexorably linked. Fossil fuels have made today's prosperity, indeed modernity itself, possible.

 ROOM
 TIME

 Liberty 1-3
 9:00 a.m. - 10:00 a.m.

SPEAKERS

John Nothdurft (moderator) Paul Dreissen Roger Bezdek, Ph.D. Nick Loris

ENERGY AND NATIONAL SECURITY

"Boosting domestic energy production is in America's national security interest." What are the national security implications of achieving global energy dominance? This panel addresses this question and explains why a reliable and inexpensive supply of energy is an important key to enhancing U.S. military power.

 ROOM
 TIME

 Liberty 4-6
 10:10 a.m. - 11:10 a.m.

SPEAKERS

Aaron Stover (moderator) Admiral Thomas B. Hayward Hal Doiron, Ph.D. Richard W. Westerdale II, P.E.

PROTECTING THE ENVIRONMENT

"Our need for energy must go hand-in-hand with responsible stewardship of the environment." The use of fossil fuels and protecting the environment are not concepts that conflict with each other. This panel explores how fossil fuels create prosperity, thereby ensuring a cleaner environment.

 ROOM
 TIME

 Liberty 1-3
 10:10 a.m. - 11:10 a.m.

SPEAKERS

Isaac Orr (moderator) Todd Myers H. Sterling Burnett, Ph.D. Jay Lehr, Ph.D.

THE SHALE OIL AND GAS REVOLUTION

"The Trump Administration will embrace the shale oil and gas revolution to bring jobs and prosperity to millions of Americans." How much oil and gas lie beneath our feet? Can it be produced safely? What will it mean to consumers and the economy? This panel examines these energy questions and more.

ROOM	TIME	SPEAKERS
Liberty 4-6	11:20 a.m 12:20 p.m.	Bette Grande (moderator)
		Isaac Orr
		Mark Krumenacher
		Joe Leimkuhler

PEACE DIVIDEND: BENEFITS OF ENDING THE WAR ON FOSSIL FUELS

On November 1, 2016, candidate Trump said he would save taxpayers \$100 billion over eight years by cutting all federal climate change spending. Was he right? What would be the "peace dividend" produced by ending President Barack Obama's war on fossil fuels?

 ROOM
 TIME

 Liberty 1-3
 11:20 a.m. - 12:20 p.m.

SPEAKERS

H. Sterling Burnett, Ph.D. (moderator) Kevin Dayaratna, Ph.D. Ross McKitrick, Ph.D. Paul Driessen

LUNCH PLENARY KEYNOTES

Louisiana Attorney General Jeff Landry discusses how to keep the oil and gas industry thriving in his home state. Alan Chamberlain, Ph.D., president of Cedar Strat and former geologist for Exxon, Marathon, Gulf, and Placid, talks about energy exploration in the Great Basin.

 ROOM
 TIME

 Liberty 4-6
 12:50 p.m. - 2:10 p.m.

SPEAKERS

Tim Huelskamp, Ph.D. Jeff Landry Alan Chamberlain, Ph.D.

THE FUTURE OF COAL

"The Trump Administration is committed to clean coal technology, and to reviving America's coal industry." Heath Lovell, vice president of public affairs of Alliance Resource Partners, L.P., and Bud Weinstein, associate director of the Maguire Energy Institute at Southern Methodist University, discuss the future of the coal industry. The panel's moderator is Heartland Senior Fellow Fred Palmer, former vice president of government relations for Peabody Energy.

<mark>ROOM</mark> Liberty 4-6

TIME 2:40 p.m. – 3:40 p.m.

SPEAKERS

Fred Palmer (moderator) Bernard L. "Bud" Weinstein, Ph.D. Heath Lovell TBA

ENERGY, CLIMATE, AND HUMAN HEALTH

"President Trump will refocus the EPA on its essential mission of protecting our air and water." Does increased production and use of fossil fuels pose a danger to human health? This panel explores the latest data on particulate matter and other criteria pollutants, as well as their effect on public health and safety.

 ROOM
 TIME

 Liberty 1-3
 2:40 p.m. - 3:40 p.m.

SPEAKERS

Steve Milloy (moderator) James E. Enstrom, Ph.D., M.P.H. John Dale Dunn, M.D., J.D. Robert Phalen, Ph.D.

THE COST OF EXCESSIVE REGULATION

"For too long, we've been held back by burdensome regulations on our energy industry." The federal government and states have piled innumerable regulations on the energy industry during the past two decades, often imposing huge costs while producing negligible benefits. These panelists believe the Trump Administration is right to roll back these damaging mandates.

 ROOM
 TIME

 Liberty 4-6
 3:50 p.m. - 4:50 p.m.

SPEAKERS

John Nothdurft (moderator) Richard Trzupek Peter Hartley, Ph.D. Isaac Orr

THE ENDANGERMENT FINDING

"The Trump Administration is committed to energy policies that lower costs for hardworking Americans and maximize the use of American resources." Can the president keep this promise without rescinding EPA's endangerment finding? What steps must be taken to accomplish this? This panel answers these important questions.

 ROOM
 TIME

 Liberty 1-3
 3:50 p.m. - 4:50 p.m.

SPEAKERS

Steve Milloy (moderator) David Schnare, Ph.D., J.D. Richard Belzer, Ph.D. Harry MacDougald, J.D.

ENERGY AND AGRICULTURE

"Less expensive energy will be a big boost to American agriculture, as well." This panel examines how restrictions on fossil fuels harm farmers and ranchers in the United States. The panel experts also discuss surprising data that show the enormous economic benefits produced by the "aerial fertilization" of crops by carbon dioxide.

 ROOM
 TIME

 Liberty 4-6
 5:00 p.m. - 6:00 p.m.

SPEAKERS

Bette Grande (moderator) Craig Idso, Ph.D. Michelle Smith

REFORMING EPA

"Protecting clean air and clean water, conserving our natural habitats, and preserving our natural reserves and resources will remain a high priority." Has EPA drifted away from its core responsibilities? How can the Trump Administration return EPA to its primary mission and root out the agency's environmental extremists?

 ROOM
 TIME

 Liberty 1-3
 5:00 p.m. - 6:00 p.m.

SPEAKERS

H. Sterling Burnett, Ph.D. (moderator) Steve Milloy David Stevenson Myron Ebell

DINNER PLENARY KEYNOTE

Heartland Institute President Tim Huelskamp introduces David Bernhardt, deputy secretary of the U.S. Department of the Interior, who in this keynote address discusses the future of energy and environmental policy. Heartland CEO Joseph Bast delivers the dinner's closing remarks.

 ROOM
 TIME

 Liberty 4-6
 6:30 p.m. - 8:15 p.m.

SPEAKERS

Tim Huelskamp, Ph.D. David Bernhardt Joseph Bast

JOSEPH BAST



Joseph Bast is CEO of The Heartland Institute, a 33-yearold national nonprofit research center located in Arlington Heights, Illinois.

According to a recent telephone survey, among state elected officials. The Heartland Institute is one of the nation's best-known and most highly regarded "think tanks." Bast is the author or editor of 21 books, including Eco-Sanity: A Common-Sense Guide to Environmentalism (1994), Education & Capitalism (2003), Climate Change Reconsidered (2009), Rewards (2014), Why Scientists Disagree About Global Warming (2015), and Patriot's Toolbox (fourth ed. 2017). Bast is publisher of three monthly newspapers - School Reform News, Environment & Climate News, and Budget & Tax News - that are sent to every national and state elected official and thousands of civic and business leaders.

RICHARD BELZER, PH.D.



Richard Burton Belzer, Ph.D., has been an independent consultant in regulatory economics, risk, and information quality since 2001. From 1988 to 1998, he was a staff

economist at the Office of Information and Regulatory Affairs in the U.S. Office of Management and Budget. In that position, Belzer was responsible for reviewing draft regulations and Regulatory Impact Analyses prepared by EPA, FDA, and various components of the Departments of Agriculture, Commerce, Energy, the Interior, and Labor. From 1998 to 2001, Belzer was visiting professor of public policy at Washington University and director of the regulatory studies program at the university's Weidenbaum Center. He earned his master's degree in agricultural economics from the University of California-Davis in 1980, his master's in public policy from the Harvard Kennedy School in 1982, and his Ph.D. in public policy from Harvard University in 1989.

DAVID BERNHARDT



David Bernhardt serves as deputy secretary of the U.S. Department of the Interior, the second-highest-ranking official at the department, which has more than 70,000

employees and an annual budget of approximately \$12 billion. The deputy secretary is the agency's chief operating officer and is responsible for fulfilling important statutory responsibilities. Bernhardt is an avid hunter and angler and recently served on the Board of Game and Inland Fisheries for the Commonwealth of Virginia. He has in-depth experience in legal matters concerning active regulations and rulemaking and years of experience in both the government and private sectors. His wide range of expertise includes the Endangered Species Act, mining royalties, and Indian affairs.

ROGER BEZDEK, PH.D.



Roger Bezdek, Ph.D., is an internationally recognized energy analyst and president of MISI - a Washington, DC-based economic, energy,

and environmental research firm. He has more than 30 years of experience in the energy, utility, environmental, and regulatory areas in private industry, academia, and the federal government. He previously served as senior advisor in the Office of the Secretary of the Treasury, research director at the Department of Energy, delegate to the European Community and to NATO, and a participant in the U.S. State Department AMPART program. He holds a Ph.D. in economics from the University of Illinois at Urbana-Champaign and is the author of six books and more than 300 publications in scientific and technical journals. Bezdek is also the Washington, DC editor of World Oil magazine.

H. STERLING BURNETT, PH.D.



H. Sterling Burnett, Ph.D., is a Heartland research fellow on environmental policy and managing editor of *Environment & Climate News.*

Prior to joining The Heartland Institute in 2014, he worked at the National Center for Policy Analysis for 18 years, ending his tenure there as senior fellow for environmental policy. He has held various positions in professional and public policy organizations, including serving as a member of the Environment and Natural Resources Task Force in the Texas Comptroller's e-Texas commission.

ALAN CHAMBERLAIN, PH.D



Alan Chamberlain, Ph.D., has attended five North American universities, where he has earned five degrees, including a Ph.D. in geology. Chamberlain has worked for the Exxon,

Gulf (now Chevron), Marathon, and Placid oil companies. In 1984, with funding from several large energy companies, Chamberlain initiated the first Great Basin geological survey. He has been directing the survey ever since as president and chief geologist of the Cedar Strat Corporation.

KEVIN DAYARATNA, PH.D.



Kevin D. Dayaratna, Ph.D., is a senior statistician and research programmer at The Heritage Foundation's Center for Data Analysis. An applied statistician, he has researched

and published on the use of highpowered statistical models in public policy, medical outcomes, business, economics, and professional sports.

HAL DOIRON, PH.D.



Hal Doiron, Ph.D., is the retired vice president for engineering of InDyne, Inc. As a young physicist, he joined NASA-Houston in 1963 and developed the Apollo Lunar

Module landing dynamics software used to guide landing gear design for toppling stability and energy absorption performance. He performed docking dynamics studies for the Skylab Program and led the Space Shuttle team that successfully eliminated unstable vibration coupling of the shuttle structural dynamics and rocket engine thrust oscillations. After his 16-year NASA career, Doiron spent nine years at Reed Tool Co. developing advanced energy exploration drilling technology as manager of technical services, manager of systems engineering, and director of the Diamond Products Division. Now retired. Doiron serves as a consultant to NASA and commercial rocket developers.

PAUL DRIESSEN



Paul Driessen is a senior fellow for the Committee for a Constructive Tomorrow and Center for the Defense of Free Enterprise – nonprofit

public policy institutes that focus on energy, the environment, economic development, and international affairs. He is the author of *Eco-Imperialism: Green Power, Black Death.* Over the past 25 years, Driessen has worked for the U.S. Senate, Department of the Interior, and an energy trade association, and he has spoken and written frequently on energy and environmental policy, climate change, corporate social responsibility, and other topics.

JOHN DALE DUNN, M.D., J.D.



John Dale Dunn, M.D., M.D., has been a physician for 42 years and is board certified in emergency medicine and legal medicine. Dunn has been an inactive attorney for

35 years and is licensed to practice law in Louisiana, Nebraska, and Texas. Dunn has conducted research on environmental science and policy issues for 25 years, and over the past 11 years, he has served on the civilian faculty for the Emergency Medicine Residency Program at the Carl R. Darnall Army Medical Center at Fort Hood, Texas. Dunn is currently the medical director of multiple ambulance services in Central Texas and the medical officer in Brown County, Texas. Areas of professional and scholarly interest include the human health effects of a warming climate, air and water pollution, toxicology, epidemiology, legal scientific evidentiary issues, ethics, and research methodology.

MYRON EBELL



Myron Ebell is director of the Competitive Enterprise Institute's Center for Energy and Environment, one of the most effective advocates for free-market

environmentalism. He also chairs the Cooler Heads Coalition, an ad hoc coalition of more than two dozen nonprofit groups, including The Heartland Institute. The Cooler Heads Coalition spearheaded the successful decade-long fight to defeat cap-andtrade legislation and, more recently, led the effort to convince President Donald Trump to withdraw from the Paris climate agreement. Ebell led the Trump presidential transition's agency action team for the Environmental Protection Agency. Joseph Bast, CEO of The Heartland Institute, presented Ebell with the Speaks Truth to Power Award at the 12th International Conference on Climate Change in March 2017.

JAMES E. ENSTROM, PH.D., M.P.H.



James E. Enstrom, Ph.D., M.P.H. is president of the Scientific Integrity Institute in Los Angeles and a retired research professor at the

University of California at Los Angeles School of Public Health. Enstrom obtained his Ph.D. in elementary particle physics at Stanford University from Nobel laureate Melvin Schwartz. He earned his M.P.H. in epidemiology at UCLA, where he has conducted peer-reviewed epidemiologic research since 1973. His recent finding that fine particulate matter does not cause premature deaths in the United States, particularly in California, undermines the primary public health justification for the Clean Power Plan and other U.S. Environmental Protection Agency regulations. Enstrom has produced strong evidence indicating influential members of the University of California faculty and the National Academy of Sciences have contributed to the politicization of science and suppression of scientific dissent in the United States.

BETTE GRANDE



Bette Grande is a research fellow for energy and pension issues at The Heartland Institute. From 1996 to 2014, she represented the 41st District in the North Dakota

House of Representatives, where she served as chairman of the Employee Benefits Programs Committee and a member of the House Appropriations Committee and the Education and Environment Division. Grande has also served as chair of the energy division of the American Legislative Exchange Council's Energy, Environment, and Agriculture Task Force, as a committee member of the Council of State Governments, and a member of the National Conference of State Legislatures. Grande was born and raised in Williston, North Dakota, and her family operates a multiple-generation family business in the Williston Basin. which is located in the heart of the Bakken formation.

PETER HARTLEY, PH.D.



Peter Hartley, Ph.D., is the George and Cynthia Mitchell professor of economics and a Rice scholar in energy studies at the James A. Baker III

Institute for Public Policy at Rice University. He is also the BHP Billiton chair at the Business School at the University of Western Australia. Hartley is past president of the International Association for Energy Economics and served as president of the U.S. Association for Energy Economics in 2012. He obtained his Ph.D. in economics from the University of Chicago in 1980 and has been at Rice University since 1986. Hartley has worked on energy economics issues for more than 35 years, and over the past 15 years, he has focused solely on energy economics and policy.

ADMIRAL THOMAS HAYWARD



In 1982, Admiral Thomas B. Hayward retired from the U.S. Navy as chief of naval operations and member of the Joint Chiefs of Staff. His

39-year military career included extensive combat in Korea and Vietnam as a carrier aviator. He has been awarded the Distinguished Flying Cross and 13 Air Medals. In the early 1950s, Hayward was a Navy test pilot, and during the Vietnam War, he served as the commanding officer of the aircraft carrier U.S.S. America, and later as commander of the U.S. Seventh Fleet and commander in chief of the U.S. Pacific Fleet. Hayward's involvement with global warming issues has evolved over the past decade, from believing ethanol is a sensible idea to coming to recognize serious distortions were being promulgated by environmentalists - to the detriment of national priorities. Hayward has since been active in challenging the Department of Defense's climate change policies and expenditures.

TIM HUELSKAMP, PH.D.



Tim Huelskamp, Ph.D., is president of The Heartland Institute. From 2011 to 2017, Huelskamp served three terms in Congress, representing the 1st District in Kansas.

While in Washington, DC, he advocated on behalf of conservative, free-market solutions in a wide range of policy arenas. On the Veterans Affairs Committee, he was a leader in exposing the corruption and failures at the VA and pushing through a historic health care choice option for veterans. From 1997 to 2011, Huelskamp served as a state senator representing the 38th District of Kansas. Prior to serving in Congress, Huelskamp was a fifth-generation family farmer in Kansas, where he farmed with his family for more than 30 years. He earned his Ph.D. in political science from American University in Washington, DC.

CRAIG IDSO, PH.D.



Craig D. Idso, Ph.D., is founder and former president of the Center for the Study of Carbon Dioxide and Global Change and currently serves as chairman of its Board of

Directors. Idso's current research focus is on carbon sequestration, but he remains actively involved in several other aspects of global and environmental change, including climatology and meteorology, along with their impacts on agriculture. Idso has published scientific articles on issues related to data quality, growing seasons, the seasonal cycle of atmospheric carbon dioxide, world food supplies, coral reefs, and urban carbon-dioxide concentrations. Idso has lectured in meteorology at Arizona State University and in physical geography at Mesa and Chandler-Gilbert Community Colleges.

MARK KRUMENACHER



Mark Krumenacher is a senior principal, senior vice president, and member of the Board of Directors for GZA GeoEnvironmental, Inc. He has worked for GZA for the

past 30 years on environmental, geologic, hydrogeologic, and engineering projects throughout North America. He is a professional geologist with licensure nationally and in several states and is a certified hazardous materials manager. Krumenacher has managed geologic, hydrogeologic, and engineering studies and performed remedial investigations, environmental assessments, and pre-acquisition environmental due diligence. He was elected to the Board of Directors of the Wisconsin Industrial Sand Association in 2017.

JIM LAKELY



Jim Lakely is director of communications at The Heartland Institute. Prior to joining Heartland in 2008, Lakely spent 16 years in daily-deadline journalism. He

covered Capitol Hill and was a member of the White House Press Corps while working for The Washington Times during the George W. Bush Administration. Lakely has appeared on C-SPAN, Fox News Channel, MSNBC, CNN, and many national and local television and radio news programs. He's been an editorial writer and columnist for the Tribune-Review in Pittsburgh, Pennsylvania; The Free Lance-Star in Fredericksburg, Virginia; and The Press-Enterprise in Riverside, California. He often serves as master of ceremonies at The Heartland Institute's public events. Lakely's writing has appeared in the *Chicago* Sun-Times, New York Post, San Francisco Chronicle, and in many other publications around the world.

JEFF LANDRY, J.D.



Jeff Landry, J.D., is attorney general of Louisiana, a former member of the U.S. House of Representatives, and a veteran of Operation Desert

Storm. As one of Louisiana's congressmen, Landry earned a reputation for being a ferocious advocate of the Constitution; a leader on national energy policy, with an emphasis on increased domestic oil and gas production; an activist for conservative family values; and a promoter of reducing wasteful government spending. Landry left his military service with the rank of sergeant. He received the Army Achievement Medal, the Army Commendation Medal, a National Defense Ribbon, an Overseas Training Ribbon, and the Louisiana War Cross during his 11 years of service as a member of the Louisiana National Guard. He earned a B.S. in environmental and sustainable resources from the University of Southwestern Louisiana.

DAVID LEGATES, PH.D.



David Legates, Ph.D., is professor of climatology in the Department of Geography at the University of Delaware and an adjunct professor at the university's

Physical Ocean Science and Engineering Program and in the Department of Applied Economics. Legates has argued for the necessity of technological progress in precipitation measurement used for validating climate change scenarios and for validation of existing data used for that purpose. Legates has earned certified consulting meteorologist status from the American Meteorological Society, and he has published more than 125 articles in refereed journals, conference proceedings, and monograph series. In 2015, at the 10th International Conference on Climate Change, Legates was presented with the Courage in Defense of Science Award.

JAY LEHR, PH.D.



Jay Lehr, Ph.D., is science director at The Heartland Institute. He is an internationally renowned speaker, scientist, and author. He has testified before Congress on

dozens of occasions on environmental issues and has consulted with nearly every agency of the national government, as well as many foreign countries. Lehr is a leading authority on groundwater hydrology. After graduating from Princeton University at the age of 20 with a degree in geological engineering, he went on to receive the nation's first Ph.D. in groundwater hydrology from the University of Arizona. He later became executive director of the National Association of Groundwater Scientists and Engineers. Lehr is the author of more than 1,000 magazine and journal articles and 36 books.

JOE LEIMKUHLER



Joe Leimkuhler is vice president of drilling for LLOG Exploration in Covington, Louisiana. He is responsible for all drilling and completion

operations and well engineering for LLOG. Prior to joining LLOG, Leimkuhler served as the offshore well delivery manager for Shell International E&P Company and was responsible for the company's Gulf of Mexico well operations on semi-submersibles and drillships. Leimkuhler graduated from the University of Montana in 1981 with B.S. degrees in geology and forestry. In 1987, he graduated from the University of Wyoming with an M.S. in petroleum engineering. He currently serves on the National Board of Directors for the American Association of Drilling Engineers (AADE), and he served as national president of AADE from 2007 to 2009.

NICOLAS LORIS



Nicolas Loris is an economist whose research focuses on energy, environmental, and regulatory issues. He is currently the Herbert and

Joyce Morgan Fellow at The Heritage Foundation and a research fellow in Heritage's Roe Institute for Economic Policy Studies. Loris studies and writes about energy supplies, energy prices, and other economic effects of environmental policies and regulations, including climate change legislation, energy efficiency mandates, and energy subsidies. He also covers coal, oil, natural gas, nuclear gas, and renewable energy policy, and he articulates the benefits of free-market environmentalism. Loris has testified before House and Senate committees and has been published and quoted in major newspapers, such as The Wall Street Journal and The New York Times. His radio and television appearances include CNN, Fox News Channel, MSNBC, and National Public Radio.

HEATH LOVELL



Heath Lovell is vice president of public affairs for Alliance Coal, a role he has held since June 2017. Prior to being named vice president of

public affairs, Lovell served as vice president of operations covering Illinois, Indiana, and parts of western Kentucky. Lovell also worked as general manager of River View Coal and general manager of Webster County Coal. Lovell was responsible for the development of River View Coal in 2009 and its nine units of operations and initial capital investment of \$270 million. Prior to joining Alliance, he served as vice president and partner of Dodge Hill Mining. Lovell has more than 20 years of experience in the mining industry. He earned an M.B.A. and a bachelor's degree in electrical engineering from the University of Kentucky.

ANTHONY LUPO, PH.D.



Anthony R. Lupo, Ph.D., is an associate professor of atmospheric sciences in the Soil, Environmental, and Atmospheric Sciences

Department at the University of Missouri at Columbia and chairman and director of graduate studies for the department. He has conducted research in the areas of large-scale atmospheric dynamics, climate dynamics, and climate change, and he has several peer-reviewed publications in each of those areas. He was awarded a Fulbright Scholarship during the summer of 2004, when he traveled to Russia to study climate change at the Russian Academy of Sciences in Moscow. Lupo has also served as an expert reviewer and/or contributing author to the Intergovernmental Panel on Climate Change's Assessment Reports.

HARRY MACDOUGALD, J.D.



Harry W. MacDougald, J.D., is an attorney with Caldwell, Propst, and DeLoach in Atlanta, Georgia. He graduated from Brown University and the University of Georgia

School of Law. He has been a litigator in Atlanta, Georgia since 1985, with trial and appellate experience in state and federal courts. He has been involved in approximately 40 reported decisions across a broad range of legal issues. In 2009, he was part of the Climate Science legal team fielded by the Southeastern Legal Foundation. Along with the Competitive Enterprise Institute, the Climate Science team challenged in court the science of the Environmental Protection Agency's "endangerment finding." He is the primary author of several science-based briefs or portions of briefs submitted throughout that litigation, as well as science-based amicus briefs in A.E.P. v. Connecticut and West Virginia v. EPA, an important Clean Power Plan case.

ROSS MCKITRICK, PH.D.



Ross McKitrick, Ph.D., is a professor of economics at the University of Guelph, where he specializes in environmental economics. He has published dozens of

peer-reviewed journal articles on a wide range of topics, including economic growth and air pollution trends, climate policy options, the measurement of temperature and climate change, and statistical methods in paleoclimatology. In 2003, his (co-authored) book Taken by Storm: The Troubled Science, Policy and Politics of Global Warming won the Donner Prize for the best book on Canadian public policy. McKitrick has been cited in media around the world as an expert on climate change and the Kyoto Protocol and has given professional policy briefings to the Canadian Parliamentary Finance and Environment Committees and to staff at the U.S. Congress and Senate.

STEVE MILLOY, M.H.S., J.D.



Steve Milloy, M.H.S., J.D., is a recognized leader in the fight against "junk science," a term he has been credited with popularizing. Milloy is founder and publisher of JunkScience.

com and from 2000 to 2009 wrote the popular "Junk Science" column for FoxNews.com. He is an expert on energy, environmental, and public health issues and a public affairs consultant, author, TV/radio commentator, and public speaker. Milloy was trained in natural sciences, biostatistics, law, and securities regulation. Milloy's latest book is *Scare Pollution: Why and How to Fix the EPA*. In 2016 and 2017, Milloy served on the Trump Administration's Environmental Protection Agency transition team.

TODD MYERS



Todd Myers is environmental director at the Washington Policy Center, a marketoriented think tank in Seattle. Myers has more than a

decade's worth of public relations experience, during which he has planned and implemented public relations strategies for professional sports franchises, produced award-winning public events, managed successful statewide political campaigns, built strong grassroots coalitions, and created innovative internet marketing solutions. A former computer programmer, Myers has a B.A. in politics from Whitman College and an M.A. in Russian and international studies from the Jackson School of International Studies at the University of Washington.

JOHN NOTHDURFT



John Nothdurft is director of government relations at The Heartland Institute. He joined the staff of The Heartland Institute in May 2008 as a

legislative specialist on budget and tax policy, and he is a member of the American Legislative Exchange Council's Tax and Fiscal Policy Task Force. Nothdurft has testified before multiple state legislatures on a wide range of issues, and his work has been published in numerous publications, including the Chicago Sun-Times, Chicago Tribune, Detroit News, Investor's Business Daily, and *Milwaukee Journal Sentinel*. Prior to joining Heartland, Nothdurft was national press coordinator for Americans for Fair Taxation, one of the largest grassroots tax-reform organizations in the country.

ISAAC ORR



Isaac Orr is a research fellow for energy and environment policy at The Heartland Institute. Orr is a speaker, researcher, and writer specializing in hydraulic

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FRED PALMER



Fred Palmer is a senior fellow for energy and climate at The Heartland Institute. He served from 2001 to 2015 as Peabody Energy's senior vice president of government

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ROBERT PHALEN, PH.D.



Robert F. Phalen, Ph.D., is a professor of medicine in the Center for Occupational and Environmental Health at the University of California at

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DAVID SCHNARE, PH.D., J.D.



David Schnare, Ph.D., J.D., is director of the Free-Market Environmental Law Clinic and the Center for Environmental Stewardship at the Thomas

Jefferson Institute for Public Policy. He's also general counsel for the Energy & Environment Legal Institute. Schnare is recently retired after serving for 33 years as a public servant, including working as a senior attorney and scientist with the U.S. Environmental Protection Agency's Office of Enforcement. He has also worked for the Senate Appropriates Committee, as the nation's senior regulatory economist at the U.S. Office of Advocacy for Small Business, and as a trial attorney with the U.S. Department of Justice and the Office of the Virginia Attorney General. He earned his Ph.D. in environmental management from North Carolina University in 1979 and his law degree from the George Mason University School of Law in 1999.

MICHELLE SMITH



Michelle Smith has more than 35 years of professional experience in the oil and gas industry. She has worked with the Quiat Companies since

1991, where her work has focused on acquisitions, divestitures, and coordinating successful drilling joint ventures. As vice president of land, she is instrumental in managing the nationwide assets of Quiat's oil and gas limited liability companies. Smith is a past president of the Colorado Chapter of the National Association of Royalties Owners, a board member of Vital for Colorado, a member of the American Association of Petroleum Landmen and the Denver Association of Petroleum Landmen, and a policy advisor for The Heartland Institute. She is a graduate of Cypress College and was named by the Denver Business Journal to its "Top Women in Energy" list in 2015.

DAVID STEVENSON



David Stevenson has spent the past seven years as director of the Center for Energy Competitiveness at the Caesar Rodney Institute

in Wilmington, Delaware. Stevenson has published more than 100 analytic studies, including major studies on the Regional Greenhouse Gas Initiative, the Environmental Protection Agency's Clean Power Plan, electric grid reliability. the public policy drivers of energy costs, and climate change. He regularly appears in newspapers, radio, and television, and he is a frequent background resource to journalists. Stevenson has been a leader on energy and environmental policy at State Policy Network, and he served on President Donald Trump's Environmental Protection Agency Transition Team. Stevenson is a veteran executive of the Dupont Company, where he led seven successful business expansions and start-ups.

AARON STOVER



Aaron Stover is a senior staff member and policy analyst for The Heartland Institute. He previously worked on transatlantic policy projects focused on Central and

Eastern Europe for the Atlantic Council, the Center for European Policy Analysis, and the U.S.-E.U.-Slovakia Action Commission at the Center for Strategic and International Studies. Stover also managed development research and marketing for international trade and regulatory policy projects at the U.S. Chamber of Commerce and held IT and accounting positions in the private sector. He earned an M.A. cum laude in European studies from the Elliott School of International Affairs at George Washington University and a B.A. in government and French from the University of Texas at Austin. Stover also studied political science at the University of Paris at Nanterre.

RICHARD TRZUPEK



Richard J. Trzupek is a chemist who has been employed as an environmental consultant for more than 25 years. He

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BUD WEINSTEIN, PH.D.



Bernard L. Weinstein, Ph.D., is associate director of the Maguire Energy Institute and an adjunct professor of business economics in the

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RICHARD WESTERDALE II, P.E.



Richard W. Westerdale II, P.E., is a senior advisor at the Department of State. Westerdale advises senior principals, including Secretary of State Rex Tillerson, on the nexus of

energy with U.S. national security and international energy policy priorities. His focus is on international energy affairs and their effect on U.S. business interests, including governance, increasing access to conventional energy resources, and use of alternative and renewables technologies. He represents the State Department in a variety of seniorlevel engagements, including bilateral and multilateral fora, and he carries out official visits to advance international engagement and establish agreements governing many energy-related initiatives. He previously served as a senior advisor for the Department of State at the U.S. Embassy in Baghdad, Iraq. Before coming to Washington, DC, Westerdale provided expert commercial and technical advice, guidance, and leadership in the oil and gas sector.

Recommendations from The Heartland Institute Action Plan for President Trump

ENERGY & ENVIRONMENT Adopting a Pro-Environment, Pro-Energy, Pro-Jobs agenda would produce millions of jobs and billions of dollars in income while more effectively protecting the natural environment than is currently being accomplished by a massive federal bureaucracy and intrusive regulations. Specifically,

 CREATE a President's Council on Climate Change charged with cutting through the politics and bias that infected climate science and policymaking during the Obama Administration and advising the President on what policies to repeal and what policies to pursue.

WITHDRAW from the Framework Convention on Climate Change and the more recent Paris Accord and end funding for the United Nations' biased climate change programs, in particular the Intergovernmental Panel on Climate Change (IPCC) and Green Climate Fund.

- 3. APPROVE Keystone XL and other pipelines blocked by President Obama.
- REPLACE EPA with a Committee of the Whole of the 50 state environmental protection agencies. Those agencies already have primary responsibility for implementing environmental laws.
- WITHDRAW and suspend implementation of the Endangerment Finding for Greenhouse Gases and the Clean Power Plan.

WITHDRAW implementation of the Waters of the U.S. rule.

ROLL BACK unnecessary regulations on hydraulic fracturing and oil and gas exploration offshore and on federal lands. ROLL BACK recent EPA regulations on ozone, small particles, and other air pollutants that are based on discredited epidemiology and toxicology.

- **9. END** the climate profiteering in America's energy sector by ceasing billions of dollars a year in direct and indirect subsidies to wind and solar companies. Require them instead to compete with fossil fuels on a level playing field.
- 10. DRAMATICALLY REDUCE government funding of climate change research pending the findings of the new President's Council on Climate Change. When funding for such research resumes, require that equal amounts go to studying natural and manmade climate change.

11. DRAMATICALLY REDUCE government



- END the use of "secret science" by EPA and other regulatory agencies, conflicts of interest on scientific review boards, and reliance on epidemiological studies and climate models that are known to be flawed and unscientific.
- **13. ROLL BACK** Corporate Average Fuel Economy (CAFE) standards, which result in the deaths of thousands of car and truck passengers every year, needlessly increase the price of new cars, and favor foreign car manufacturers.

For more information, contact The Heartland Institute at 312/377-4000 or by email at think@heartland.org, or visit our website at heartland.org.