

The Chronicle

by Alice Loyd

CLIMATE

Scientists gathering at the American Geophysical Union (AGU) conference in San Francisco on December 13, 2016, expressed concern about what one speaker called the “Trumpocene.”

More than 20,000 researchers from the Earth, atmospheric and space science communities attended the annual meeting, and in references subtle and overt, speakers referred to the unsettled atmosphere in which they now work. Interior Secretary Sally Jewell gave a keynote lecture encouraging government scientists to “fight disinformation” and “speak out” if they feel scientific integrity is being undermined in the new administration. washingtonpost.com

Governor Jerry Brown of California said his state would fight President-elect Donald Trump on climate change if the new administration tries to abandon policies that combat global warming. His quotable retort was that California could go as far as launching “its own damn satellite.”

time.com

A big fear is that government funding such as through NASA’s Earth Science program will be cut, as has been suggested by Trump adviser Bob Walker, who said NASA’s Earth science division is set to be stripped of funding in favor of exploration of deep space, with the president-elect having set a goal during the campaign to explore the entire solar system by the end of the century. theguardian.com Scientists at the conference also expressed concern about protecting research from political interference. The Climate Science Legal Defense Fund organized a symposium on legal issues facing scientists, and handed out pamphlets entitled “Handling Political Harassment and Legal Intimidation: A Pocket Guide for Scientists.” The pamphlet advises on “what to do if you’re the target of an open records lawsuit (a strategy commonly used by opponents of climate research), who to contact if you’re a government researcher who thinks that your work is being suppressed, and how to react if you get hate mail or death threats.” newyorker.com On December 16 prominent climate researcher Michael Mann (best known to the public for depicting rising climate temperatures in tandem with CO₂ in a chart that resembled a hockey stick) stated in a letter: “We also fear an era of McCarthyist attacks on our work and our integrity. It’s easy to envision, because we’ve seen it all before. We know we could be hauled into Congress to face hostile questioning from climate change deniers. We know we could be publicly vilified by politicians. We know we could be at the receiving end of federal subpoenas demanding our personal emails. We know we could see our research grants audited or revoked.” washingtonpost.com

The primary concern of those who attended the meeting and who have spoken out, however, is Trump’s position on climate change. Through such vehicles as “An Open Letter from Scientists to President-Elect Trump on Climate Change,” organized by the Union of Concerned Scientists, science professionals have come forward to warn the president-elect about the dangers of his nonchalance about global warming. By mid-December more than 2,300 scientists with PhDs in relevant disciplines, including 22 Nobel Prize winners, had added their signatures. The letter

asks the new administration to (1) make America a clean energy leader, (2) reduce carbon pollution and America's dependence on fossil fuels, (3) enhance America's climate preparedness and resilience, (4) publicly acknowledge that climate change is a real, human-caused, and urgent threat, (5) protect scientific integrity in policymaking, and (6) uphold America's commitment to the Paris Climate Agreement. huffingtonpost.com and scientificamerican.com On December 13, across the street from the conference, ClimateTruth.org and The Natural History Museum held a rally to support scientists "in the face of threats from the incoming administration and Congress." Several hundred people participated. eos.org

Hoping to safeguard their data from political interference, scientists report they have begun copying it from government servers onto independent servers. "Something that seemed a little paranoid to me before, all of a sudden seems potentially realistic," said Nick Santos, an environmental researcher at the University of California at Davis. "Doing this can only be a good thing. Hopefully they leave everything in place. But if not, we're planning for that." Meetings at the University of Pennsylvania have focused on how to download as much federal data as possible in the coming weeks, and a "[guerrilla archiving](#)" event is occurring in Toronto, where experts will copy irreplaceable public data. washingtonpost.com

The Trump transition team has asked for the names of all Department of Energy employees and contractors who attended climate change policy conferences in recent years. The request, reported on December 9, 2016, was included in a list of seventy-four questions sent to the department. One employee, reflecting the alarm generated by the request and speaking on condition of anonymity, said, "This feels like the first draft of an eventual political enemies list." theweek.com The department released a statement saying the questionnaire had "unsettled" many in its workforce, and that it would "be forthcoming with all [publicly] available information" but would withhold "any individual names." npr.org

In an effort to lock in environmental protections before he leaves office, President Obama has permanently banned new oil and gas drilling in most US-owned waters in the Arctic and Atlantic oceans. He used a 1953 law that allows presidents to block the sale of new offshore drilling and mining rights and makes it difficult for their successors to reverse the decision—though his ban is unprecedented in scale and could be challenged by Trump in court. thehill.com. The 1953 law followed action in 1948 by President Harry Truman, when he proclaimed that the federal government—"aware of the long-range world-wide need for new sources of petroleum and other minerals"—would try to encourage the development of those resources by controlling and administering the seabed. The Supreme Court had set the stage for Truman's proclamation in 1947 when it ruled the federal government, and not coastal states, owned the seabed. Congress ratified Truman's proclamation, and years later, in 1953, it adopted the Continental Outer Shelf Lands Act in order to clarify the terms and restore some rights to the states. It defined the outer continental shelf as the area that begins three miles from shore and extends to the 200-mile international-waters boundary. A twin statute, the Submerged Lands Act, gave states the right to offer oil leases for land within three miles of their coastlines.

In addition to giving the president the power to dictate how new leases will be offered, the 1953 law's second provision states, "The President of the United States may, from time to time, withdraw from disposition any of the unleased lands of the outer Continental Shelf." To most water-law experts, it seems Congress has given any president the ability to permanently retire undersea lands from its continental-shelf portfolio, but the text has never been tested in court, and it has rarely been invoked by presidents. President Eisenhower permanently blocked drilling in a 75-square-mile area of seabed off the Florida Keys, and while his order still stands, it has never been challenged in court. Presidents George H. W. Bush and Clinton have used the same provision to temporarily pause all new federal offshore drilling leases in certain areas for ten years. Most experts seem to think President Obama's order, given the unilateral power delegated by this particular area of law, could only be overturned by an act of Congress.

www.theatlantic.com

As head of Exxon Mobil Corporation, Rex Tillerson, the Trump administration's designated Secretary of State, has shown a strong commitment to drilling in the Arctic. In April 2013 ExxonMobil and Russia's Rosneft announced an offshore exploration partnership to develop Russia's vast energy reserves in the Arctic. Igor Sechin, serving at the time as Russian Deputy Prime Minister, told reporters, "Experts say that this project, in terms of its ambitions, exceeds sending man into outer space or flying to the moon." reuters.com "We are very anxious to get back to work there," Tillerson told industry analysts in March 2016 when asked if Exxon would be interested in restarting its venture with Rosneft in Russia. He noted that it would take time to resume operations in the Arctic, because "we had to dismantle all of the capability and the infrastructure" due to sanctions. He said he's glad Russia has "done things to help us hang on to the rights we have" in the wake of the sanctions. money.cnn.com In April of 2014, in response to the annexation of Crimea by the Russian Federation, the United States imposed a ban on business transactions within its territory on seven Russian officials, including Igor Sechin, who by then was executive chairman of Rosneft. wikipedia.org For more information about the relationship between Exxon and Rosneft in the Arctic, see nytimes.com.

ENERGY

Microsoft co-founder Bill Gates is heading a \$1 billion venture fund that will invest in clean energy technology to combat climate change. Some of the world's wealthiest business leaders are joining him to fund Breakthrough Energy Ventures (BEV), including Amazon founder and CEO Jeff Bezos, Virgin Group founder Richard Branson, LinkedIn co-founder Reid Hoffman, and Alibaba executive chairman Jack Ma. The combined net worth of the fund's directors is roughly \$170 billion. The fund, announced in December 2016, intends "to build companies that will help deliver the next generation of reliable, affordable, and emissions-free energy to the world." BEV's launch follows the 2015 creation of the Breakthrough Energy Coalition, which focused on "zero-emission energy innovation." The new fund, a concrete next step in this coalition's mission to tackle climate change, will focus its investments on projects relating to clean energy issues such as carbon emission reduction and energy generation and storage.

huffingtonpost.com

The United Kingdom has fallen on an international league table of the best countries to invest in renewable energy. Following the Brexit vote, Theresa May's decision to scrap the Energy and Climate Change Department, and approval of a new nuclear power station at Hinkley Point, Britain fell to fourteenth place in the [Renewable Energy Country Attractiveness Index](#) by Analysts EY, part of financial giant Ernst & Young Global. In the latest issue of the rankings, published in October 2016, the league table was led by the United States, followed by China in second, then India, Chile, Germany, Mexico, France, Brazil, South Africa, and Canada. Analysts EY suggested a Republican victory in the US election could change the attractiveness of the United States to investors. "Donald Trump has a poor record on climate change, which he has frequently dismissed as a 'hoax', and threatens to pick apart the Paris climate accord should he be elected," the report said. Prior to Brexit, the UK had regularly been in the top ten. independent.co.uk

America's first offshore wind farm sprang to life in December 2016. The Block Island Wind Farm, developed by Deepwater Wind and strongly promoted by the state's political leadership, is now bringing electricity to Block Island, Rhode Island, a vacation destination with few year-round residents. The wind farm is small—five turbines capable of powering about 17,000 homes, but it still reduces carbon dioxide emissions by about 40,000 tons per year. Earlier this year the Obama administration announced a lease for a wind farm off the coast of Long Island, NY, and the Department of Energy has said that if wind farms were built in all of the suitable areas, including in the Great Lakes, they could provide up to twice as much electricity as the country now uses. Donald Trump has expressed skepticism of wind power, saying in an interview with *The New York Times*, "the wind is a very deceiving thing." nytimes.com

Norway's state-owned Statoil oil and gas company, with a record-smashing bid of \$42.47 million in the 33rd round, won the right to develop an offshore wind farm in US waters in mid-December 2016, "practically within hours of selling off its tar sands oil assets in Canada." The new wind area is near New York City off the coast of New York State. It is part of a US Department of the Interior program that has now leased eleven offshore areas for development through its Bureau of Ocean Energy Management. The relatively shallow waters of the Continental Shelf along much of the 3,000-mile-long coast, combined with the coast's high population from Boston to Miami, make the Atlantic coast almost ideal for renewable energy development. cleantechnica.com

The Department of the Interior has finalized a rule to make the coal industry cleaner. In December 2016, in its final hours under the Obama administration, the coal rule that has been under consideration since 2009 was finalized. Coal-mining companies will now be required "to avoid mining practices that permanently pollute streams, destroy drinking water sources ... and threaten forests," requirements that "will make life better for a countless number of Americans who live near places where coal is being mined," said Joseph Pizarchik, director of the Office of Surface Mining Reclamation and Enforcement. Hal Quinn, president of the National Mining Association, said the rule locks away "important US domestic coal reserves, while putting tens of thousands of Americans out of work [and] raising energy costs for millions of Americans." Coal workers are already losing their jobs—and coal companies are failing—because power

plants are switching to a cheaper fuel, natural gas. Trump has promised to bring back coal and Congress will likely overturn this new ruling in support of that promise, but coal does not have a bright future, with or without the rule, with or without Trump's support. [washingtonpost.com](http://www.washingtonpost.com)

The value of investment funds committed to selling off fossil fuel assets has jumped to \$5.2 trillion, doubling in just over a year. A December 2016 report entitled "The Global Fossil Fuel Divestment and Clean Energy Investment Movement" found that 688 institutions in 76 countries who represent more than \$5 trillion of assets have committed to divest. arabellaadvisors.com

INEQUALITY

As of Friday, December 23, 2016, there is no National Entry-Exit Registration System (NSEERS) in the United States. President Obama had suspended the program in 2011 after years of complaints by civil rights groups that the program targeted Muslims and wasn't effective in preventing terrorism. It had never been fully dismantled, however, and was still available to the Trump administration to revive—until now. Now President Obama and the Department of Homeland Security have abolished that program entirely, and if Trump wants to register Muslims, he will have to find another way to do it. Trump will have to propose a new set of regulations to register and track people from particular countries during their time in the country, and it will have to argue, as the Bush administration did, that it isn't using Muslim-majority countries as a proxy to "invidiously discriminate" against Muslims—something it might have a hard time doing. [vox.com](http://www.vox.com)

Tech companies are committing not to help Trump build a Muslim registry. In November 2016 [The Intercept](http://www.theintercept.com) initiated a campaign to obtain that commitment and asked nine major technology companies to sign on. When Twitter was the only responder, CREDO, Muslim Advocates, Color Of Change, MPower Change, Courage Campaign, Democracy for America, and more than a dozen other progressive and civil rights groups asked their 35 million members to petition the other eight companies. As a result of this public pressure, Google, Facebook, Apple, IBM, and Microsoft have all now publicly stated they will not collaborate with Trump's ambition, and pressure is mounting on Oracle and Amazon to do the same. Booz Allen Hamilton, SRA International, and CGI are the remaining three of the original nine. [credoaction.com](http://www.credoaction.com)

Finland is going to pay some of its unemployed citizens a basic monthly income amounting to US\$587. Olli Kangas of the Finnish government agency KELA, which is responsible for the country's social benefits, said the scheme's idea was to abolish the "disincentive problem" among the unemployed. The program will be a two-year trial with 2,000 randomly picked citizens receiving unemployment benefits which began on January 1, 2017. A jobless person may currently refuse a low-income or short-term job in the fear of having his financial benefits reduced drastically under Finland's generous and complex social security system. Under the new program they would continue to receive the payment even after receiving a job. "Will this lead them to boldly experiment with different kinds of jobs?" Kangas asked rhetorically. "Or, as some critics claim, make them lazier with the knowledge of getting a basic income without

doing anything?" Finland's unemployment rate was 8.1% in November, with 213,000 people jobless. theguardian.com