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Can Colleges Create a Climate for Pricing Carbon?

 [huffingtonpost.com/entry/can-colleges-create-a-climate-for-pricing-carbon_us_5911c808e4b056aa2363d8ea](https://www.huffingtonpost.com/entry/can-colleges-create-a-climate-for-pricing-carbon_us_5911c808e4b056aa2363d8ea)

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"As leaders of higher education institutions, we call upon our elected representatives to act collectively on behalf of current and future generations by putting a price on carbon. We work to prepare our students for thriving futures, over which climate change casts a dark shadow of uncertainty. Putting a price on carbon pollution is an indispensable step we can take to effectively combat climate change."

This is the opening of a letter signed by presidents of thirty U.S. colleges and universities, giving their support to the student-driven [#PutAPriceOnIt](#) campaign that is coordinated by [Our Climate](#). Signatories so far include the presidents of Dickinson, Swarthmore, Pitzer, Wesleyan, Vassar, Fordham, Macalester, UC Berkeley and twenty-two others. They are hoping to be joined by 500 of their peers before the year is over.

"We are inviting college and university presidents to join us in calling for carbon pricing as a responsible and bipartisan response to climate change," said Dickinson Interim President Neil Weissman. "By speaking out, our institutions can help create the political will needed for action that addresses our students' future well-being. Speaking out will also stimulate educationally meaningful debate on our campuses." The full text of the letter can be found [HERE](#).

A goal of the initiative is to catalyze dialogue about climate change solutions on college campuses that will add to and amplify national conversations, helping to push through the existing stalemate and realize effective federal and state level action. Sound far-fetched? Pricing carbon is garnering support from corporate leaders and environmentalists, republicans and democrats, Trump voters and Hillary voters, conservatives, progressives and libertarians, students and retirees. With the political contention over climate change, the appeal of carbon pricing across all these constituencies as a possible solution provides an opportunity for action in an otherwise dismal scene.

CEOs of ExxonMobil, BP, Royal Dutch Shell, Shell Canada and Suncor have voiced support for carbon pricing ([Rosenberg](#)). The conservative [Climate Leadership Council](#) and [Niskanen Center](#) have called for a national carbon price, as has the bi-partisan [Citizens' Climate Lobby](#). The [editorial pages](#) of the New York Times, Washington Post, USA Today, Dallas Morning News and Houston Chronicle, among others, have endorsed carbon pricing, while over sixty percent of Trump voters support taxing and/or regulating the pollution that causes global warming ([Trump Voters & Global Warming](#)). Environmental groups have taken a range of positions, some supporting and some opposing, often dependent on the specifics of how a carbon price would be implemented, what would be done with the revenue, and whether the policy is linked to rolling back existing regulations.

Why price carbon?

When we purchase a product, the price we pay reflects the cost of resources used to produce, transport, store and sell the product. Producers, and ultimately all of us as consumers, pay for the labor, materials, energy, infrastructure, financial capital and other resources that are required to

supply us with the product. When markets are working well, producers have powerful incentives to bring to market products that people value at cost-effective prices while using resources efficiently.

But markets are not working well when it comes to the atmosphere. Pollutants are dumped into the atmosphere, a resource shared by all of us, without consideration of the costs this imposes on people. These costs include over 200,000 premature deaths per year in the U.S. from air pollution. It includes increased cases of respiratory and cardiovascular diseases, diminished health, increased health care costs, reduced cognitive performance, lost productivity at work and missed work days and school days. The costs also include the impacts of climate change on Americans and people throughout the world that are caused by emissions of carbon dioxide and other greenhouse gases. The climate change costs are real, substantial and growing.

When coal, oil, natural gas and their byproducts are burned, the atmosphere becomes a dumping ground for carbon pollution without the consent of people who are harmed. The atmosphere, a resource that belongs to all of us, is being used for private gain without paying for the resulting costs that are imposed on others. In the process, basic principles of market systems and market ideology are violated – you pay for what you use and all parties to a transaction must consent. Neither of these principles are present when we pollute the atmosphere with climate changing greenhouse gases. This should and does offend conservatives and progressives alike.

A variety of strategies are available to counter this failure of the market. One strategy is to use the power of the market itself by putting a price on carbon pollution. This can be done as a fee placed on the carbon content of fossil energy levied at mines, refineries, pipelines, electric power plants, distributors and/or borders. The fee works its way through the entire economy, raising the prices of high-carbon energy relative to zero and low carbon energy, and raising the prices of energy intensive goods and services relative to other goods and services.

The price adjustments create incentives for energy producers and users to seek out and transition to clean energy sources with low or zero carbon pollution per unit of energy. It rewards businesses that shift from producing energy intensive goods and services to goods and services that are less energy intensive, re-engineer products and manufacturing processes to use less energy, invest in energy conservation and innovate to do all the above in new, less costly ways. It also rewards households that conserve energy and shift their spending patterns to substitute less energy intensive goods and services for those that are more energy intensive.

Each of these responses creates new opportunities for investment, employment, cost savings and profit, as other more polluting opportunities are circumscribed. The result is that we meet society's needs for energy, material wellbeing, job growth and good incomes while conserving our shared atmospheric resource and putting the brakes on climate change.

An important question is what to do with the revenue collected from a carbon fee. By itself, a carbon fee would be regressive, negatively impacting lower income families. But if paid back to households as an equal dividend per person, lower income households, and even most households, can come out ahead. An analysis by the [U.S. Department of the Treasury](#) estimates that a carbon fee that is rebated back to households can raise the after-tax incomes of 70 percent of households, with the largest benefits as a percentage of income going to the households with the least income.

There are, of course, many other things for which the revenue might be used, which would be the object of much political maneuvering. The substantial carbon fee revenue could be used, for example, to offset other taxes, finance infrastructure investments, subsidize renewable energy and energy conservation, support research and development, or help workers in sectors that lose jobs due to the carbon fee. These and other uses will have their advocates.

Importantly, a carbon fee is not sufficient by itself to 'solve' climate change. Other policies and actions will be needed as well, at local, state, national and international levels. Important among these will be policies and actions in the areas of energy, electric power, transportation, land-use planning, infrastructure, environment, agriculture and research and development. But enacting a carbon fee can lay a critical foundation that sets clear signals and incentives for private sector decisions.

After signing the carbon price letter, what comes next for colleges and universities? The answer to that question is emerging.

Over 600 colleges and universities made commitments to make their campuses carbon neutral. They can and are moving forward with reducing their carbon pollution to meet their commitments. Swarthmore, Yale and others are experimenting with internal carbon prices that are helping to guide decisions on their campuses. Fordham's students are getting out into local schools, educating high school students about climate change and carbon pricing. Dickinson students drafted and presented a resolution to the Borough Council of Carlisle, PA, calling for the U.S. Congress to act on climate change and explore a carbon fee and dividend. The resolution was unanimously approved by the Council. Villanova, Millersville, Swarthmore, Dickinson and other PA schools are organizing a fall conference that will bring 200 students from across Pennsylvania to meet with public officials and share knowledge and perspectives about climate change, carbon pricing and other climate change solutions. What else might colleges and universities do? Those conversations are underway.

Climate change, carbon fees and climate policies provide fertile material for learning, inquiry and debate on college campuses. But can these campus debates amplify a national dialogue and help create a political climate in which action on climate change is conceivable? That depends on the seriousness of purpose with which our students join the conversation and the directions they drive it.

Nitrogen Pollution: An Emerging Focus of Campus Sustainability Efforts

 [huffingtonpost.com/entry/nitrogen-pollution-an-emerging-focus-of-campus-sustainability_us_58f41cd1e4b04cae050dc8ae](https://www.huffpost.com/entry/nitrogen-pollution-an-emerging-focus-of-campus-sustainability_us_58f41cd1e4b04cae050dc8ae)

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Many colleges and universities are working to transition toward sustainability in their academic programs, operations and engagement with communities. A major emphasis of their efforts has been reducing the environmental harms associated with campus operations. Typical initiatives include reducing emissions of climate changing greenhouse gases; reducing consumption of energy, water and other resources; building 'green' buildings; purchasing ecologically and socially preferable food and other products; and reducing waste generation and disposal in landfills.

While many of these initiatives can and do reduce nitrogen pollution, this has not been a significant or deliberate focus of college and university sustainability programs. That may be changing.

The University of Virginia (UVA) set a goal in 2013 to reduce its emissions of reactive nitrogen 25 percent by the year 2025 relative to base year 2009, the first to do so. Another eighteen schools, including Dickinson College where I work, and a research lab have joined UVA in a research network to study their nitrogen pollution and consider similar policies.

Why are these colleges and universities focusing on nitrogen pollution? Nitrogen is an essential nutrient for all living things. But you can have too much of a good thing. Humans have altered the nitrogen cycle at an astounding scale, creating 4 to 5 times as much reactive nitrogen as natural terrestrial processes. The result is excessive accumulation of reactive forms of nitrogen such as nitrate, nitrite, ammonia, ammonium and nitrous oxide, causing detrimental local and global impacts on public health, ecosystem health, air quality, water quality and the climate. For example, dead zones in the Chesapeake Bay, Gulf of Mexico and more than 400 other locations in the world's oceans are caused by excessive nutrients, principally nitrogen, that produce algal blooms, depleting oxygen in the water and diminishing marine life.

Colleges and universities contribute to this nitrogen pollution. They cause reactive nitrogen to be released into the environment, directly and indirectly, by feeding their students and employees, burning fossil fuels to heat and power their facilities, commuting to work, traveling for study abroad, fertilizing campus grounds and conducting research. With roughly 20 million students attending college in the U.S., their collective contribution to nitrogen pollution is significant. As institutions of learning and research, they are also well positioned to explore solutions and model best practices.

So, it makes sense that colleges and universities would take actions to reduce their nitrogen pollution. But an initial hurdle is that you can't readily manage what you don't measure. Measuring a college or university's contribution to nitrogen pollution is complicated by the fact that much of the pollution happens far upstream and downstream of the institution, beyond the direct control of the school. For example, nitrogen is released to the environment at distant farms where animals are raised that become the meat served in a campus dining hall. A downstream example is nitrogen that is released at the sewage treatment plant that serves a campus.

To get over this hurdle, Allison Leach developed the Nitrogen Footprint Tool (NFT) for measuring an institution's contribution to nitrogen pollution as her undergraduate thesis project at UVA. Leach, Professor James Galloway, and others at UVA applied the NFT in 2009-2012 to measure UVA's footprint and to simulate scenarios for reducing nitrogen. This work was instrumental in persuading administrators at the university to set targets for reducing UVA's nitrogen footprint.

Others are getting in on the act. Elizabeth de la Reguera calculated Dickinson College's nitrogen footprint using the NFT for her senior thesis in 2014. Later that year, UVA invited Dickinson and a handful of other institutions to join the newly forming Nitrogen Footprint Tool Network (NFTN). The NFTN, managed by Elizabeth Castner at UVA, seeks to engage higher education institutions in research to understand and measure their nitrogen footprints, analyze nitrogen mitigation options, and act to reduce nitrogen pollution as an integral part of their sustainability programs.

Seven member institutions of the NFTN recently participated in a comparison study, measuring their nitrogen footprints and analyzing nitrogen pollution reduction measures using the NFT. The research has engaged undergraduate and graduate students, faculty members and staff at the participating institutions, which include Brown University, Colorado State University, Dickinson College, Eastern Mennonite University, the Marine Biological Laboratory (MBL), the University of New Hampshire and the University of Virginia. Reguera, now a Research Assistant at MBL and a member of the NFTN, continues her nitrogen research, calculating MBL's footprint and assisting me and two current Dickinson students, Steve Fitzpatrick and Olivia Boggiano-Peterson, in refining calculations of our footprint and simulating the effects of nitrogen mitigation measures.

The results of the network's comparison study were just published in a special issue of *Sustainability: The Journal of Record*, with Leach and Castner serving as guest editors (a link to the journal appears at the end of this article). The calculated footprints range from 7.5 metric tons of nitrogen (MT N) at the Marine Biological Laboratory to 444 MT N at the University of Virginia. The nitrogen footprints correlate strongly with institutional population. But there is wide variation in per capita footprints, ranging from 7 kg N per full-time equivalent person at Eastern Mennonite University to 27 kg N at Dickinson College. Dickinson's high per person footprint, a personal embarrassment, is due in part to over 90 percent of our students living on campus with full meal plans, and summer programs that bring significant numbers of visitors to campus who eat in our dining hall but are not counted in our population of students and employees.

Upstream food production is the largest source of nitrogen pollution for five of the institutions, contributing 50 percent of the footprint on average, followed by utilities, which contribute 33 percent on average. The exceptions are the University of Virginia, where utilities account for 52 percent of its nitrogen footprint due to heavy reliance on coal-fired power, and Colorado State University, which has extensive agricultural research activities that account for 49 percent of its nitrogen footprint when included in the total.

What can institutions do to reduce their nitrogen pollution? Participants in the NFTN comparison study simulated the effects of different nitrogen mitigation measures. At Dickinson, these included reducing total food purchases by improving efficiencies in inventory management, menu planning and purchasing; shifting from foods with high nitrogen footprints to foods with lower footprints

(e.g. substituting poultry for beef, or substituting non-meat sources of protein for meat); shifting to renewable, non-fossil sources of electricity; reducing on-campus fossil fuel consumption; reducing employee commuting; and reducing use of fertilizers for grounds keeping.

Because food accounts for nearly 80 percent of Dickinson's nitrogen footprint, its most effective measures focus on food. The next most effective measure for Dickinson is to carry through with a planned power purchasing agreement for a 3 MW solar installation that will supply 25 percent of the college's electricity beginning next year. Combining several moderately aggressive nitrogen mitigation measures is estimated to reduce Dickinson's footprint by nearly 15 percent. A more aggressive set of measures would reduce its footprint by roughly 25 percent. Both options would deliver financial cost savings for food purchases and electric utilities, but would require voluntary dietary changes that are likely to prove challenging.

Simulations of nitrogen mitigation measures yielded somewhat different results across the seven participating NFTN institutions, reflecting differences in the specific contexts in which they operate. But each found promising opportunities to constrain their nitrogen footprints. Some have already adopted nitrogen pollution reduction goals, and the others are considering their adoption. Thirteen more colleges and universities have joined the NFTN, bringing the total number of members to 20. The new members are in the process of measuring their footprints, analyzing mitigation options and adding to the shared knowledge about institutional nitrogen pollution. Members of the network are also working on a new tool that will allow them to integrate tracking and management of their nitrogen and carbon footprints.

At a time when enforcement of environmental regulations may be weakened due to budgetary cuts and policy changes at federal and state levels, colleges and universities can make an important statement by modeling responsible institutional behaviors through their sustainability programs. This can and should include more visible and forceful efforts to measure and reduce nitrogen pollution.

You can read the NFTN research articles in the special issue of *Sustainability: The Journal of Record* here: <http://online.liebertpub.com/toc/sus/10/2>.

Want to measure your personal nitrogen footprint? You can do that here: <http://www.n-print.org>.

Pruitt Earns A Failing Grade When It Comes To Climate Science

[huffingtonpost.com/entry/pruitt-earns-failing-science-grade_us_58c7c28fe4b03400023f4b02](https://www.huffingtonpost.com/entry/pruitt-earns-failing-science-grade_us_58c7c28fe4b03400023f4b02)

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Bloomberg via Getty Images

EPA Administrator Scott Pruitt said on CNBC:

“I think that measuring with precision human activity on the climate is something very challenging to do, and there’s tremendous disagreement about the degree of impact, so no, I would not agree that it’s a primary contributor to the global warming that we see.”

This is consistent with Pruitt’s previous public statements and writings on climate change. It is also false and misleading.

There is not “tremendous disagreement” among scientists but a strong consensus that humans are the primary cause of recent climate change. The consensus exists because of clear and convincing evidence from empirical observations of temperatures and many different Earth systems, fundamental and tested laws of physics and insights gained from model simulations of how the climate behaves under changed conditions. Nearly 30 years of review of the evidence by a variety of scientific organizations have led the non-partisan U.S. National Academy of Sciences, as well as many other national science academies and scientific associations, to conclude that the climate is changing and humans very likely are the major cause.

The most comprehensive and carefully peer-reviewed assessment of the science of climate change is conducted every five to six years by the Intergovernmental Panel on Climate Change (IPCC). The IPCC's most recent assessment of the physical science of climate change, published in 2013, was written by several hundred scientists from 39 countries, including the U.S., with expertise in climate science and related fields and who work for universities, scientific institutions, private businesses and government science agencies.

The author team examined over 9200 scientific publications to produce a 2000-plus page report on the state of knowledge about climate change. Drafts of the report went through two rounds of formal review in which over 1000 reviewers submitted over 50,000 comments. Fifty review editors oversaw the review process, charged with assuring that issues identified by the reviewers were appropriately resolved for the final report [*Disclosure: I served as a review editor for the IPCC's 2014 companion report on the impacts of climate change*]. The final report was accepted by the roughly 100 national governments that are members of the IPCC, certifying it as presenting a "comprehensive, objective and balanced view" of climate science.

So what does the IPCC report say? First off, it is clear from the report that Pruitt is correct that measuring the human effect on climate change with precision is challenging. Human drivers of climate change include changes in the atmospheric concentrations of a variety of gasses and aerosols emitted by human activities, as well as their indirect effects through changes in clouds and the reflectivity of the Earth's surface. There are also natural drivers that include changes in solar irradiance and aerosols from volcanic activity. Scientists can and have measured the effects of both human and natural drivers of climate change on the Earth's energy budget and the climate. There are uncertainties in the measurements. But, despite the uncertainties, measures are sufficiently accurate to be confident that the human drivers have had a much greater impact on the Earth's energy budget than the natural drivers, at least 10 times greater and possibly more than 45 times greater.

Turning to the climate itself, the IPCC concluded that it is extremely likely (95 to 100% probability) that more than half of the observed increase in global average surface temperature from 1951 to 2010 was caused by humans. The evidence comes from multiple sources.

Pruitt's statements on climate change strongly suggest that he has not examined the scientific evidence with care and an open mind.

The time path of observed changes in global average surface temperature corresponds strongly with the time path of measured changes in the energy budget from the combined effects of human and natural drivers, and is inconsistent with and cannot be explained by changes in natural drivers alone. The geographic distribution of warming (greater at high northern latitudes than in low latitudes, greater over continental interiors than coasts and over oceans) matches the physics of human-caused climate change and not that of natural variability. Observed warming in the Earth's troposphere (lower atmosphere) and cooling of the stratosphere (high atmosphere) matches the physics of greenhouse gas warming and not increases in solar output. Observed changes in ocean heat content, sea level, sea ice, snow cover and atmospheric water vapor also support the conclusion that humans have changed and are changing the climate. Taken together, the multiple lines of evidence have led the IPCC, and nearly all scientists who work in this field, to conclude that most of the observed warming is human caused.

Can you find scientists who disagree with the findings of the IPCC? Yes, you can find some, but they are very much in the minority. A 2009 study found that, of 908 scientists with at least 20 peer-reviewed scientific publications on climate, roughly 90 percent (817 scientists) concur with and 10 percent (93 scientists) dispute the IPCC's conclusion that humans are responsible for most of the climate change observed in the second half of the 20th century. But if you limit your search to the 200 scientists with the most climate science publications, only 5 dispute the conclusion, or 2.5 percent. The other 195, or 97.5 percent, are in agreement with it. If you limit your search further to the 50 most productive scientists with the largest number of climate science publications, only 1 disputes the conclusion while 49 support it.

Pruitt's statements on climate change strongly suggest that he has not examined the scientific evidence with care and an open mind. Given the extensive evidence, the judgments reached on the evidence by numerous credible and scientifically expert bodies, and the widespread consensus shared by scientists with expertise on climate, the burden of proof is on Mr. Pruitt to demonstrate that the risk of human-caused climate change is so remote that actions to reduce emissions of greenhouse gases are unwarranted. If he tries to make such a case, which he must if he proceeds as intended to dismantle the Clean Power Plan and other climate change policies, it is incumbent on him to tell the American people what scientific evidence and reports, and which scientific experts, he is relying on when he offers his lawyerly opinion that humans are not a primary driver of climate change.

Pruitt's lack of science literacy may have been understandable when he was a state attorney general and saw his job as including affixing his name to letters written by oil industry lobbyists. But he is now the Administrator of the U.S. Environmental Protection Agency, an agency with the mission to "protect human health and the environment" while ensuring that "national efforts to reduce environmental risk are based on the best available scientific information." When sworn into office by Justice Samuel Alito Jr., Pruitt took an oath: "I will well and faithfully discharge the duties of the office on which I am about to enter. So help me God." Mr. Pruitt has a lot of science homework to do if he is to make good on his oath and bring his science grade up to a passing level.

Give Mr. Pruitt a call at 202-564-4700, or write him at pruitt.scott@epa.gov, and ask him to faithfully discharge his duties by taking an honest look at the science.

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BEFORE YOU GO

What Should We Be Doing To Actually Increase Our Security?

[huffingtonpost.com/entry/protecting-the-homeland_b_14486300](https://www.huffingtonpost.com/entry/protecting-the-homeland_b_14486300)

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Officers with the U.S. Customs and Border Protection walk past ticket counters during the travel ban at Los Angeles International Airport (LAX) in Los Angeles, California, U.S., January 28, 2017.

REUTERS/Patrick T. Fallon

Mr. Trump's executive order to bar entry into the U.S. by citizens of seven Muslim-majority countries for 90 days and suspend entry of all refugees for 120 days immediately disrupted the lives of numerous people. It also created chaos in airports, prompted protests and offers of legal and other assistance by U.S. citizens, brought criticisms from both Republican and Democratic leaders and aggrieved several U.S. allies. The action signals to the world that the new U.S. administration is unwilling to shoulder its responsibilities for addressing the refugee crisis, is irrationally fearful, and is seemingly not guided by a moral compass. The benefits? Trivially small, if there are any at all. It's plausible that the action will harm rather than improve U.S. security.

That raises a question: what should we be doing to increase our security? While concerns about terrorism are legitimate and counter-terrorism efforts are appropriate, we should put the risk in perspective. The death toll of Americans from acts of terrorism was 2,990 in 2001 and has ranged between 18 and 74 per year since that year ([CNN](#)). While any deaths from terrorism are unacceptable, and the danger of a future mass-casualty event is real, we should not lose sight of other risks to our security. Highlighted below are some risks that warrant attention and resources from federal, state and local government.

Health risks: In 2014, 614,348 people died in the U.S. from heart disease; 591,699 died from cancer; and 147,101 died from chronic lower respiratory diseases ([Centers of Disease Control](#)). A variety of behaviors can reduce or amplify personal risks from these and other maladies, including activity levels, diet and smoking. Investments in public health programs can bring down these risks, as can

investments to make our cities and communities more walkable and bikable. Assuring that everyone who has health insurance under the Affordable Care Act continues to be insured, and expanding coverage to the roughly 20 million Americans who still lack health insurance, would do a tremendous amount to help secure the Homeland.

Air pollution: An estimated 210,000 people die prematurely in the U.S. each year due to breathing dirty air ([Caiazzo et al](#)). Roughly 58,000 of the deaths are attributable to pollution from road transportation, 54,000 to pollution from electric power generation and 43,000 to pollution from industrial emissions. The health of many others is aggravated by the effects of exposure to air pollution on asthma, other respiratory diseases and cardiovascular disease. Cutting regulations by 75 percent, as Trump has promised, would move us in exactly the opposite direction from where we need to be going if applied to environmental rules that control air pollution. In contrast, implementing the Clean Power Plan would avoid an estimated 2,700 to 6,600 premature deaths and 140,000 to 150,000 asthma attacks in children each year ([USEPA](#)). That would be a good start, but even more needs to be done to reduce the number of Americans who die and are made sick each year from exposure to polluted air.

Car crashes: 35,092 people died in car crashes in the U.S. in 2015, up from 32,744 in 2014 ([NHTSA](#)). The percentage increase from 2014 to 2015 was the largest in 50 years and ended a multi-year trend of declining car crash fatalities. Death rates per capita and per vehicle mile traveled are significantly higher in the U.S. than in other developed countries. If we reduced our death rate to the average of other countries through programs that, for example, increase seat belt use, reduce alcohol-impaired driving and reduce speeding, we could save an estimated 18,000 lives per year ([CDC](#)). Thinking longer term, investments in public transit, increasing the densities of urban development and making communities more walkable and bikable can drive car accident deaths even lower.

Gun violence: 33,736 Americans lost their lives in gun violence in 2014, including homicides, suicides and accidental shootings ([CDC](#)). The overwhelming majority of the 10,945 homicides that year were committed by U.S. born citizens - we have more to fear from those born in the U.S. than from immigrants to our country. This extreme carnage can be reduced through sensible measures that keep firearms out of the hands of those who have demonstrated themselves to be unfit for this right, provide for waiting periods and limit certain classes of weapons, magazines and ammunition. We also need to look to root causes and make investments in our urban areas to provide a quality public education, child care support, drug addiction treatment and resources for community development that provides jobs with family supporting wages.

Climate change: We can't be secure within our borders if the planet is unsafe. Action to cut greenhouse gas emissions, make our communities climate resilient and support vulnerable developing countries to do the same are critical to the security of our homeland. It's important to note that some of the same strategies can be employed to yield climate, health, community development and other benefits.

Mr. Trump and Congress should know that the majority of Americans are not afraid to welcome refugees into our communities and do not want to shirk our responsibilities. With careful vetting we can safely resettle refugees among us and assist them in making a home and new life in the U.S. If we are to be serious about improving our security, we should focus our efforts and resources not on

poorly conceived entry and immigration bans, but on providing expanded access to quality health care, promoting healthy behaviors, reducing air pollution, investing in our communities, improving public education, making transportation safer, reducing gun violence and combatting climate change.

5 Things To Do About Climate Change, Just In Time For The New Year

huffingtonpost.com/entry/5-things-to-do-about-clim_b_13876508

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Students participate in the 'Our Generation, Our Choice' protest near the White House in Washington November 9, 2015. The Monday march to highlight race, climate, and immigration issues was timed to mark exactly one year until the 2016 U.S. presidential election, according to protesters. REUTERS/Jonathan Ernst

After I wrote [What a Trump Presidency Means for Fighting Climate Change](#), a colleague suggested that I write an article with "5 concrete examples of on-the-ground things people can do." I've been mulling that over. You can readily find lists online of 5 things, 10 things, 50 and more things to do about climate change. Many excellent suggestions. Nearly all of them call for individual actions. Things that you can do to reduce your personal carbon footprint.

Individual actions are important. We learn through personal experience what works and what doesn't, what's easy and what's hard. We prove change is feasible. We demonstrate our seriousness by walking the talk. We help motivate others to act. We move the needle, even if just a bit, in the direction that we need to move as a society.

But a strategy built solely on individual actions will not prevent the calamitous impacts of climate change that will befall us if atmospheric concentrations of greenhouse gases continue to rise as currently projected. That takes collective action, in both public and private spheres. Actions that fundamentally transform the choices that are available to us, and that promote choices that will build a low-carbon, climate resilient economy that provides for our needs, including the need for a healthy and safe planet with a stable climate.

So my list of actions focuses on what we can do to create momentum for collective action on climate change. For those wanting a list of individual actions to reduce their carbon footprints, links to relevant websites are provided at the end.

1. Join with others. Join national, state and local organizations that are taking action on climate change. Give them your time. Participate in their campaigns. Attend their events. Give them some of your money if you are able. There are lots of organizations doing good work on climate change that need your help. Some that I have collaborated with include Citizens Climate Lobby, the Union of Concerned Scientists, The Nature Conservancy, Natural Resources Defense Council and World Wildlife Fund. But there are many others that deserve your consideration. I particularly like [Citizens Climate Lobby \(CCL\)](#), a non-partisan organization with local chapters that attempts to work both sides of the aisle to advocate for national policies that address climate change. I've spoken at a number of their events and participated in a climate lobby-day that they organized in Harrisburg, PA this past June. In February I'll attend one of their regional conferences with a group of Dickinson College students. (Note to self: it's time to join CCL as a member).

2. Advocate for federal action. Call your U.S. senators and representative. Write them letters. The old fashioned kind, written on paper and mailed with a U.S. postage stamp -- it's worth the extra carbon. Visit them in their home offices, and in their D.C. offices if you travel that way. Do these things repeatedly to drive home the message that action on climate change is a high priority for you. To find out who your U.S. senators and representative are, go [HERE](#); for tips on writing effective letters to legislators, go [HERE](#). Don't forget federal officials at the U.S. Environmental Protection Agency, Department of Energy, Department of Interior, Department of Agriculture and Department of State -- call, write and visit them as well.

What should you tell them? Well, that's up to you. Some suggestions: call for climate change policies that are grounded in peer-reviewed science, continued participation in the Paris Agreement and implementation of the Clean Power Plan, or an alternative new plan with teeth. Ask them to put a price on carbon emissions. Request support for making communities climate resilient. Advocate for federal research and development targeted to climate change solutions, and for programs to support workers and communities that may be negatively affected by a transition away from fossil fuels.

Also keep your eyes open for opportunities to comment on climate-related federal regulations and submit comments. Groups like CCL can keep you abreast of pending federal legislation and regulations. For tips on submitting effective comments on federal regulations, go [HERE](#).

3. Support state and local action. Until recently, much of the action on climate change in the U.S. has been at the state and local level. It's likely that we will revert to that pattern for the next few years. So let your state and local officials know that you want them to take action on climate change. California is leading the pack. If you live in California, tell your elected leaders "thanks" and encourage them to carry on and do even more. If you live elsewhere, tell your elected officials you are worried that your state will miss the wave of innovations and investments that are bringing clean, reliable and low cost energy, jobs and economic growth to California and other states that are embracing the technologies that will define the 21st century. Learn what your state is doing on climate change by checking out C2ES maps of climate programs and policies [HERE](#). The Georgetown Climate Center maintains a map of state and local climate adaptation plans that can be found [HERE](#).

Cities and towns are also in on the action and are important players in tackling climate change. The World Wildlife Fund highlights the efforts of 116 U.S. cities in its recent report [Measuring Up 2015: How Local Leadership Can Accelerate National Climate Goals](#). Is your city or town keeping up? Push your local officials to measure municipal emissions of greenhouse gases and develop a climate action plan that includes abatement of emissions and building resilience.

4. Take action at work. Advocate for climate action where you work, whether you work for a for-profit business, a non-profit organization or a public sector agency. Numerous businesses and organizations are taking action by increasing energy efficiency, switching to non-fossil energy sources and developing and bringing to market products and services that enable others to reduce their carbon footprints. Learn the business case for sustainability and climate action (see examples from [Harvard Business Review](#), the World Bank's [International Finance Corporation](#) and [EY](#)) and start to be an advocate in your workplace for changes that can add to the bottom-line while benefitting the planet. CERES offers a [Roadmap for Sustainability](#) and The Environmental Defense Fund offers [A roadmap to corporate GHG programs](#) that can provide ideas and inspiration.

5. Talk to your friends, family and peers. Climate change action needs grassroots support. That requires talking with those you know about climate change, sharing your thoughts and listening to theirs. Do this with your faith group, book group, softball team, knitting club, poker buddies and fantasy sports league friends. Talk about why climate change is important to you, why you find the evidence compelling, how climate change can impact the things you value, why you are convinced climate action is necessary and what actions are needed. Find where you agree and disagree, work to find common ground and try to find new understanding in areas of disagreement. For resources to help you talk about climate change, try [HERE](#) and [HERE](#).

If you are a teacher, incorporate climate change into your teaching. The Climate Literacy & Energy Awareness Network has excellent curated and peer-reviewed resources for teaching about climate change and energy: [Cleanet.org](#). If you want a basic primer on climate change science, one of my favorites is [Climate Change Causes and Evidence](#) from the U.S. National Academy of Sciences and the Royal Society. Good online resources that rebut misinformation about climate change include [Skeptical Science](#) and [RealClimate.Org](#).

OK, still looking for things you can do to reduce your personal carbon footprint? Here are a few websites to check out. A word of advice. Don't let yourself be overwhelmed by long lists of things you should do. Start by picking one thing, something that is both impactful and readily achieved. Do that. Congratulate yourself, pause to reflect, then move on to tackle one more thing.

Top 50 Things to Do: <http://globalwarming-facts.info/50-tips/?singlepage=1>

USEPA: <https://www.epa.gov/climatechange/what-you-can-do-about-climate-change>

NRDC: <https://www.nrdc.org/stories/how-you-can-stop-global-warming>

NY Times: http://www.nytimes.com/interactive/2015/12/03/upshot/what-you-can-do-about-climate-change.html?_r=0

Previous Huffington Post articles by Neil Leary:

[Businesses, Markets and Innovation Can Beat Climate Change](#), 12/22/16

[Why The U.S. Should Stay In The Paris Climate Agreement](#), 11/21/16

What a Trump Presidency Means for Fighting Climate Change, 11/12/16

Businesses, Markets and Innovation Can Beat Climate Change

 huffingtonpost.com/entry/businesses-markets-and-in_b_13781940

Neil Leary , Contributor Director, Center for Sustainability Education, Dickinson College

Businesses, markets and innovation can reduce emissions of gases that warm the planet. And they can do this while generating profits, creating jobs and growing the economy. In fact, they already are.

Voices that warn acting on climate change will harm business, kill jobs and hurt the economy are, ironically, underestimating the power of private enterprise to focus vast human, material and financial resources on solving challenging problems. Numerous businesses, across a wide range of industries, are finding and exploiting ways to make profits that are literally helping to save the planet. To be sure, the public sector in the U.S. and abroad have critical roles to play too if emission reductions are to go deep enough to limit warming to well below 2 degrees C, as called for in the Paris Agreement. More on that in due course. But first let's focus on the private sector.

Businesses, propelled mostly by market forces, and to a lesser extent by regulation, are innovating to reduce costs, raise productivity and bring new technologies and products to market in ways that have cut U.S. energy use and carbon emissions per dollar GDP (1). They have even reduced the absolute amount of carbon emissions in recent years. While corporate social responsibility values, desires to promote positive brand images and regulatory pressures play roles, the primary motivation is the expectation that these actions benefit the financial bottom line.

One area this is happening is the U.S. electric power sector, which has shifted dramatically over the past decade to become less carbon intensive. Natural gas prices began falling in 2009 as hydraulic fracturing technologies enabled development of vast amounts of gas from shale formations, making it a lower cost fuel than coal for producing electric power (2). It's also less carbon-polluting per unit of energy than coal. Average levelized costs have fallen dramatically for two zero-emission renewable sources of electric power, from 22¢/kWh in 2006 to less than 5¢/kWh in 2015 for solar, and from 5¢/kWh in 2006 to 2.3¢/kWh in 2014 for wind (3). Responding to these cost changes, electric power generation with natural gas and non-hydro renewables rose rapidly as coal fell. Natural gas will surpass coal this year with a 33 percent share in electric power generation, while renewables will provide 14 percent and nuclear, another zero-carbon source, provides 19 percent. New capacity is favoring renewables and natural gas. In 2015, wind and solar accounted for 41 and 26 percent of new electric generation capacity respectively, while natural gas accounted for 30 percent (4). Renewables now stand at 19 percent of US electric generation capacity.

Numerous other changes are afoot that are reigning in carbon. Hybrids, plug-in hybrids and electric vehicles are improving performance, falling in price and increasing in sales. LED lighting is maturing and has captured over 30 percent of the market. A variety of products and production processes are being re-engineered to save costs by being less material and energy intensive. New buildings are increasingly being designed and constructed to meet high energy performance standards such as LEED, Passive House and Living Building Challenge. Companies like Walmart are working to make

their supply chains more efficient and less carbon intensive. More businesses are choosing to locate in high-density urban areas where they can benefit from efficient transportation networks and proximity to customers and employees - enabling them to save time, energy, money and carbon.

Analysts at Goldman Sachs (5) and Bloomberg New Energy Finance (6) project that trends in renewable energy and natural gas will continue to put downward pressure on carbon emissions, even with changes in federal policies and regulations that seem likely in the new Trump administration. Goldman Sachs expects continued expansion of a "low carbon economy" driven by solar PV, onshore wind, LED lighting and electric vehicles.

A variety of innovations are in the works that may help to further decarbonize the U.S. economy. Renee Cho provides a few examples (7). TerraPower is developing a nuclear "traveling wave reactor" that uses depleted uranium to produce power, thereby helping solve nuclear waste disposal problems and potentially lessening nuclear proliferation threats. General Fusion is working to make fusion technology commercially viable for producing power from abundant deuterium and tritium. Aquion Energy is working on saltwater batteries to provide safe and sustainable energy storage, while LightSail Energy is developing a technology that stores energy using compressed air.

A number of initiatives are striving to raise capital for innovative climate solutions or stimulate innovation through competitions. The Breakthrough Energy Coalition is forming a network of private investment to accelerate energy innovation. The Global CO2 Initiative is raising capital to invest in capturing CO2 and using it to make products that include construction materials, fuels, plastics, fertilizers, carbon fibers and nanotubes. Their goal is to capture and use 10 percent of the world's carbon emissions (8). The Carbon XPrize competition is offering \$20 million prize money to challenge teams of innovators to develop technologies for converting captured CO2 into products. Carbon Engineering is working to commercialize a technology that captures CO2 from ambient air, allowing it to be located near producers with demand for carbon and at scales that match their demand.

The above examples give evidence of how businesses are profiting while reducing carbon and other emissions of climate changing gases. All very encouraging. And yet, they add up to far less than what is needed if we are to limit warming to levels that can be managed without suffering highly damaging impacts from climate change. To avoid that unwanted future, US carbon emissions need to fall 80 percent by 2050.

Can that be done? What would it take? The good news is that it is technically feasible and it can be achieved while meeting growing demand for energy services at a manageable cost, perhaps 1 percent of GDP per year. Under some assumptions, fuel cost savings exceed other costs, producing a net gain and not a cost to the economy. These are the findings of a new study by the Risky Business Project (9), as well as an earlier study of the Deep Decarbonization Pathways Project (10). Other studies using different methodologies have reached similar conclusions. Not included in the calculus are the benefits of limiting climate change damages and reducing adverse health impacts from conventional air pollutants, which make deep decarbonization a clear winner.

There are multiple pathways by which a low carbon future can be reached that vary in details about the market penetration of solar, wind, nuclear, carbon capture and other technologies. But three features are common to all. First, shift energy end-use from fossil fuels to electricity wherever possible, including transportation and heating. Second, generate electricity using energy sources

with zero or near-zero carbon emissions. Third, use energy much more efficiently in buildings, transportation and industry. All of this can be done with currently available technologies; no major technological breakthroughs are necessary.

The bad news is that these changes cannot be delivered at the required scale and speed by the market acting alone. Businesses that cut carbon are not rewarded directly for the benefits of avoided climate change and air pollution. They capture only a part of the value their actions create - their reduced resource costs. Consequently, the market does not give them sufficient incentive to move as aggressively as our common welfare calls for. Meanwhile, other businesses that use the atmosphere as an unpaid resource in which to dump their waste gases are essentially being subsidized, gaining an unearned competitive advantage.

Thoughtful, carefully considered public policies can provide the incentives and business environment that would balance the scales and enable businesses to make investments that would transition us to a low carbon economy while providing good jobs and meeting our energy needs. These include putting a price on carbon; making substantial public investments in research & development and energy infrastructure; and creating incentives to promote similar investments by the private sector. Also needed are investments in community development programs targeted to regions where fossil energy sector jobs would be lost. In addition, participation in the Paris Agreement will be crucial for assuring that the playing field is as near level as possible with respect to carbon for businesses in the U.S and elsewhere.

We are at a critical juncture. The scientific evidence is clear to those who care to read it objectively. Bipartisan support needs to be forged now for deep reductions in carbon emissions; delay or partial measures will prove costly and economically destabilizing. Policies that harness the power of the market to incentivize private business and innovation offer the best potential for finding common ground.

Previous Huffington Post articles by [Neil Leary](#):

[Why the U.S. Should Stay in the Paris Climate Agreement](#), 11/20/16

[What a Trump Presidency Means for Fighting Climate Change](#), 11/11/16

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Why The U.S. Should Stay In The Paris Climate Agreement

 [huffingtonpost.com/entry/why-the-us-should-stay-in_b_13114958](https://www.huffpost.com/entry/why-the-us-should-stay-in_b_13114958)

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The big news from the United Nations climate meeting that concluded in Marrakech on November 18 is that more than 190 nations, with or without the U.S., are united in their determination to push forward with the Paris Agreement to cut greenhouse gas emissions and keep climate warming to well below 2 degrees C. The Paris Agreement came into force on November 4th, long before most observers anticipated as more than the required 55 nations accounting for more than 55 percent of global emissions moved quickly to ratify the historic agreement. By the end of the two-week climate conference in Marrakech, the number of ratifying nations stood at 111, with the U.S. included among them.

Whether or not the U.S. will keep to its commitment and remain in the Paris Agreement is a looming question, which I have written about [elsewhere](#). Here I lay out reasons why the incoming administration should reevaluate its position on the Paris Agreement and choose to stay. As the president-elect and relevant members of his transition team have made statements dismissing the mounting evidence of human-caused climate change, I focus, for now, on arguments for advancing U.S. interests that are distinct from the urgent need to slow and ultimately halt human-caused global climate change.

Contrary to candidate-Trump's assertion that the Paris Agreement "gives foreign bureaucrats control over how much energy we use right here in America," the U.S. and every other party to the agreement has complete control over its own energy use - both the quantity and type. Each party set its own targets, and decided for itself how it would reach its self-determined targets. All are expected to make good faith efforts, but there are no legal sanctions for failing to reach stated targets. Instead, the agreement relies on transparent reporting and review of what nations do and the progress they make as the means by which nations encourage and challenge each other to meet and even exceed their commitments. Each of these elements is included in the agreement because the U.S. wanted it and negotiated for it, seeking to avoid problems that plagued the Kyoto Protocol and hoping to curry at least some bi-partisan support at home.

Within this structure, the U.S. has little if anything to lose from staying in the Paris Agreement, and much to gain. But we have a great deal to lose if we walk away.

All other parties to the agreement have affirmed that they will act to fulfill their commitments, which will bring a wave of transformative changes and innovations in energy, transportation, manufacturing and other systems. These transformations will squeeze out inefficiencies in energy and other resource use, lower costs for renewable energies and reduce negative health and environmental impacts of economic activity, all while enabling people to attain higher living standards and supporting job growth. We've already seen and benefitted from [falling costs of renewable energy](#) in recent years. For example, the global average cost per kWh of solar photovoltaic electricity fell 60 percent over the period 2009 through 2015, from over \$0.30/kWh to \$0.12/kWh, with much lower costs of less than \$0.07/kWh in some places. Paris will help drive these costs down farther as the industry and users gain experience and increase scale.

The U.S. can share in these benefits if we participate in the Paris Agreement. But if we sit on the sidelines, these transformations will happen everywhere - except here - as we continue to rely heavily on dirtier and less efficient energy of a past century. US businesses will lag in competitiveness as we miss out on this wave of innovation that will determine which businesses and economies will lead in the 21st century.

U.S. businesses could find themselves at a disadvantage in foreign markets if other countries take actions to balance the scales of trading with businesses based in countries that do not regulate carbon. Representatives of Canada, our largest trading partner, France and Mexico suggested in Marrakech that some nations might respond to a U.S. withdrawal from the Paris Agreement with carbon pollution taxes on American-made goods. Whether or not they would follow through, and how the World Trade Organization might rule on carbon tariffs or other actions taken against countries that do not regulate carbon, are only speculations at present. But this would be a significant misstep for an administration that has promised to increase competitiveness and to grow jobs at home.

It is important to note that many businesses support the Paris Agreement, seeing profitable opportunities. More than 365 businesses signed a letter to president-elect Trump calling for the U.S. to reaffirm its commitment to address climate change and implement the Paris Agreement. Among the signatories are Dupont, General Mills, The Hartford, Hewlett Packard, Hilton, Intel, Kellogg Company, Levi Straus, NIKE, Mars Incorporated, Monsanto and Unilever. Other statements of support for the Paris Agreement have been signed by BNY Mellon, Calpine, Colgate Palmolive, Coca Cola, Johnson & Johnson, Microsoft, Nestle, Pacific Gas & Electric, Rio Tinto, Shell, Sprint and Volvo.

"We want the US economy to be energy efficient and powered by low-carbon energy. Cost-effective and innovative solutions can help us achieve these objectives. Failure to build a low-carbon economy puts American prosperity at risk. But the right action now will create jobs and boost US competitiveness. We pledge to do our part, in our own operations and beyond, to realize the Paris Agreement's commitment of a global economy that limits global temperature rise to well below 2 degrees Celsius." Letter to Trump, Business Backs Low Carbon USA

U.S. withdrawal from the Paris Agreement could cause a diplomatic backlash that would have negative impacts on American foreign policy across a broad range of issues. Todd Stern, former special envoy on climate change, in an interview with Robinson Meyer of The Atlantic said that withdrawing from the treaty "would be a huge mistake, even forgetting about climate change" and that it would have "radiating bad impacts with respect to U.S. standing" on all other international issues.

China made clear at the Marrakech meeting that it is committed to the Paris Agreement and stands behind its pledges to cut carbon emissions per unit of GDP 60 to 65 percent, get 20 percent of its energy from non-fossil sources, and peak its emissions, all by 2030. China has also reaffirmed its intention to set up a fund to finance South-South cooperation on climate change. Stanford professor Michael Wara told Meyer "My impression from afar is that President Xi, and China more generally, see this as a strategic issue that they are investing more heavily in. It's not even a matter of investing in climate. It's that policies they are committing to are consistent with overall economic strategy."

Comments by Chinese delegates suggest that China is ready, perhaps eager, to fill any void in international climate policy that might be left by an absent or inactive U.S. An expanded leadership role for China over the next two years would shape the future international climate policy regime in important ways as parties write the rules for implementing the Paris Agreement. Success of the agreement depends on rigorous and transparent rules for reporting and review of parties' actions and performance. This was a priority of the U.S. in negotiating the Paris Agreement, but it was not a priority for China. That is problematic as China is now the largest source of greenhouse gas emissions, and the quality of China's emission and energy use data may fall short of the needed standard. Will China have a free-hand in writing the Paris Agreement rules, or will the U.S. be present to balance China's influence?

This post is part of a series produced by The Huffington Post, in conjunction with the U.N.'s 22nd Conference of the Parties(COP22) in Morocco (Nov. 7-18), aka the climate-change conference. The series will put a spotlight on climate-change issues and the conference itself. To view the entire series, visit [here](#).

What a Trump Presidency Means for Fighting Climate Change

 [huffingtonpost.com/entry/what-a-trump-presidency-m_b_12914430](https://www.huffpost.com/entry/what-a-trump-presidency-m_b_12914430)

Neil Leary , Contributor Director, Center for Sustainability Education, Dickinson College

Donald Trump's election as the 45th president of the United States threatens to undermine international cooperation on climate change. Over 190 nations are meeting this week in Marrakesh, Morocco, to work out details for implementing the Paris climate agreement, an accord reached in December 2015 that entered into force just five days ago following ratification by the United States, China, India and 100 other nations. Now, with the election of Mr. Trump, delegates at the Marrakesh conference are trying to hold the agreement together and make key decisions about its implementation, knowing that the U.S. commitment may falter.

If the agreement unravels, the consequences will be dire. Particularly as the Paris Agreement is an important trust-building step that is intended to catalyze more aggressive actions that are necessary if we are to have any chance of limiting planetary warming to less than 2°C above the pre-industrial average.

Mr. Trump has asserted that climate change is a hoax, putting him at odds with the scientific findings of the U.S. National Academy of Sciences and the science academies of Canada, China, France, Germany, Japan, Russia, the United Kingdom and other nations. He has promised to renegotiate or even "cancel" the Paris Agreement. He has said he would rescind the Clean Power Plan, a key component of President Obama's strategy for reaching U.S. greenhouse gas reduction targets, and that he would make regulatory changes to promote greater fossil energy production.

If Trump holds to these pronouncements, many nations likely would still move forward with cutting their greenhouse gas emissions to meet commitments under the Paris Agreement. They will do so because it makes economic sense and because it is an environmental, humanitarian and moral necessity. But some may act less aggressively than needed to fulfill their commitments, while a few others may pause their efforts until the U.S. becomes an active partner. Delays and backsliding as the world waits for the U.S. to act responsibly will prove tremendously costly.

But will Trump hold true to his climate change pronouncements? Some are holding out hope that the realities of leading the world's largest economy would prompt reasoned- and evidence-based reflection on climate change risks and policies by the president-elect. But Trump's selection of Myron Ebell, a strident climate skeptic, to lead his environmental transition team is a strong signal that Trump means what he said on the campaign trail about climate and energy policies.

I put my hope and efforts in action at state, local and institutional levels to keep and build momentum toward a clean, low-carbon U.S. energy system that includes robust and growing renewables, technological innovation and job growth. Leadership at the federal level will be needed, but we need to build it from the ground up. We need to commit ourselves to act in whichever sphere that we can have the most impact. Dickinson College, where I work, remains committed to cutting our carbon footprint with the support of its students, faculty, staff, alumni and trustees. Other colleges, businesses, cities and states will do the same.

Neil Leary, an environmental economist, is the director of Dickinson College's Center for Sustainability Education. He has been a participant in the 1995, 2001, 2007 and 2014 science assessments of the Intergovernmental Panel on Climate Change. He teaches courses on climate change and has taken students to UN climate change conferences in Copenhagen, Durban, Lima and Paris to conduct research on international climate policy.

This post is part of a series produced by The Huffington Post, in conjunction with the U.N.'s 22nd Conference of the Parties(COP22) in Morocco (Nov. 7-18), aka the climate-change conference. The series will put a spotlight on climate-change issues and the conference itself. To view the entire series, visit [here](#).