The Wicked Problem of Climate Change

with Karl E. Peters, "Living with the Wicked Problem of Climate Change"; Paul H. Carr, "What Is Climate Change Doing to Us and for Us?"; James Clement van Pelt, "Climate Change in Context: Stress, Shock, and the Crucible of Livingkind"; Robert S. Pickart, "Climate Change at High Latitudes: An Illuminating Example"; Emily E. Austin, "Soil Carbon Transformations"; David A. Larrabee, "Climate Change and Conflicting Future Visions"; Panu Pihkala, "Eco-Anxiety, Tragedy, and Hope: Psychological and Spiritual Dimensions of Climate Change"; Carol Wayne White, "Re-Envisioning Hope: Anthropogenic Climate Change, Learned Ignorance, and Religious Naturalism"; Matthew Fox, "Climate Change, Laudato Si', Creation Spirituality, and the Nobility of the Scientist's Vocation"; Christopher Volpe, "Art and Climate Change: Contemporary Artists Respond to Global Crisis"; Jim Rubens, "The Wicked Problem of Our Failing Social Compact"; and Peter L. Kelley, "Crossing the Divide: Lessons from Developing Wind Energy in Post-Fact America."

CROSSING THE DIVIDE: LESSONS FROM DEVELOPING WIND ENERGY IN POST-FACT AMERICA

by Peter L. Kelley

Abstract.   The income and careers that come with building wind turbines have become a lifeline for many factory towns and farming communities. Generating electricity from the wind puts increasingly cheap power on the grid, saving consumers billions a year. And it is one of the biggest, fastest, cheapest ways to reduce carbon pollution, reducing the threat of climate change. Yet as wind farms have rapidly spread to forty-one states, their developers must make their case anew with each community that hosts them. Facts matter, but so do empathy, honoring deep connections to neighbors and landscape, and developing mutual respect. Successful wind farm developers listen first for shared values and speak with inclusive language, to communicate with potential opponents across divides of misunderstanding and motivate local residents to adapt to and benefit from change.

Keywords: acceptance; climate solutions; community engagement; energy; environment; opposition; public participation; technology

Peter L. Kelley recently reopened his public relations firm RenewComm LLC after eight years of service as the Vice-President for Public Affairs for the American Wind Energy Association. He lives in Washington, DC, USA; e-mail: peter@renewcomm.com.

Picture a majestic wind turbine collecting energy out of thin air. Now picture it close enough to see each day as you come and go. As more people have that experience, wind farm developers have rapidly had to become expert at community relations. Speaking with wind skeptics is now a must, to enable all the economic and environmental benefits that go with siting more wind turbines on the American landscape.

Humanity has harnessed the wind for thousands of years, but its use to make large amounts of electricity dates back just a few decades, to the Arab oil embargo of 1973. A national "energy crisis" was declared in America, and a quest began for more energy sources closer to home. Utility-scale wind power was rediscovered. As it scales up across America, the distinctive three-bladed turbines have offered rural communities both opportunity and change.

In many ways, wind is a familiar source of power. Sails were used in 3200 BC to move freight on the Nile. The Persians had wind-powered grain mills by 500–900 AD. The Dutch refined wind-powered water pumps to keep their land dry. When European colonists reached America, they used both water and wind to power the grinding of wheat and corn, and to cut wood at sawmills (Wind Energy Foundation n.d.).

The first commercial windmill in America was manufactured in 1854, to raise well water for farms and ranches on the frontier. Once Thomas Edison demonstrated his light bulb in 1879, electricity-generating wind turbines were not far behind. By 1888, inventor Charles Brush had built one with 144 cedar-wood blades that could generate up to twelve kW at a time for his home in Cleveland (Hirsh and Finn 2002; Third Planet Windpower n.d.; Shahan 2014).

Early turbines mostly powered lights and charged batteries on farms, far from the large coal-fired power plants of the cities. It was not until 1941 that the first utility-scale wind turbine was installed on a Vermont hilltop, with seventy-five-foot blades that fed 1.25 megawatts of power to the local grid (over a hundred times as much as that first model). But low energy prices sidelined the nascent technology.

It took the oil embargo, rising prices, and greater concern over pollution from fossil fuels for America to return to wind power in earnest. In 1974, the U.S. government and private companies began developing commercial wind turbines under a program administered by NASA. Spurred by federal and state incentives, over fifteen thousand turbines (still relatively small in size) were installed during the 1980s in the windy canyons of California (Wind Energy Foundation n.d.).

Rising concern over climate change spurred Europe to develop wind technology further. Meanwhile, Iowa enacted the first state renewable portfolio standard in 1983; as other states followed, utilities and energy

regulators went in search of renewable power sources they could afford, to meet the new standards. The wind industry resumed its rapid growth in America in the early 2000s, as developers used the federal renewable energy production tax credit previously introduced by Senator Chuck Grassley, R-Iowa, to finance turbines that cost $2 million to $3 million or more, and could each power over five hundred homes.

Continued advances in technology have made wind increasingly cost-competitive in 2018 with all other ways to make electricity, enabling the phase-out of the federal tax credits after 2019. The cheapest energy is now obtained when turbines are installed in large groups across windswept areas, on towers of eighty to a hundred meters or higher, plus blades long enough to span a football field and still light enough to turn in the wind.

The Benefits Mount

Billions of dollars in annual savings to US consumers have resulted, along with significant reductions in air pollution (Bloomberg New Energy Finance 2017). Southern Company, historically a leading contributor to utility carbon emissions in the United States, now makes multibillion-dollar investments in wind energy generation after starting to purchase it several years ago. "These agreements are good for our customers for one very basic reason," said John Kelly, head of planning for Southern's Alabama Power subsidiary, at the time: "And that is, they save our customers money" (Kelly 2012).

Utilities and major corporations now use long-term wind contracts to hedge against price spikes for the fuel that other electricity sources require. Grid operators have learned to forecast and integrate wind-generated electricity when it's blowing hard, and to ramp up other sources when the wind slacks off. "Ten years ago, we thought hitting even a 25 percent wind penetration level would be extremely challenging, and any more than that would pose serious threats to reliability," said Bruce Rew, Vice President of Operations for the Southwest Power Pool, the regional grid operator across fourteen states. "Now we have the ability to reliably manage greater than 50 percent wind penetration. It's not even our ceiling" (Southwest Power Pool 2017).

Today wind produces enough emissions-free electricity to power the equivalent of over twenty-five million American homes. It has been calculated that wind power can shave 10 percent off the entire country's carbon footprint from all sources before the middle of the century. By 2050, according to the US Department of Energy, a wind industry with roughly four times the capacity of today's could be the number one source of electricity in America.[1]

Wind energy has already emerged as one of the biggest, fastest, cheapest ways to cut emissions that alter the climate. "Wind is particularly effective at

displacing carbon pollution, as most of the best wind resources are located in regions with the most carbon-intensive electricity mixes," according to Michael Goggin, then Senior Research Director for the American Wind Energy Association (Goggin 2016).

Those regions are also known as rural America, where 99 percent of the country's wind turbines are located. When a wind farm arrives in a small town, it means some local landowners will be receiving checks in the mail for several thousand dollars per turbine per year for the next twenty-five years or more (assuming good wind sites will be repowered when the equipment needs replacement). Leasing to turbines has become a drought-proof cash crop for John Dudley of Comanche, Texas, who raises Hereford cattle on a ranch his family has worked since 1886. Dudley described his decision process:

> The Southwestern United States, Texas in particular, has had a terrible drought for a number of lingering years here. And that's tough for farmers, ranchers. The water resources here in Texas are very, very fragile now. So here we have the opportunity to harvest the wind, which has always blown across the ranch. I interviewed a lot of people about how it would impact our ranching. One person whose opinion I trust a lot is the general manager of a great big ranch, and they have a great big wind farm on that ranch. So I said, "Tell me the good, the bad, and the ugly of the wind farm on the ranch." And he said, "Fine, where do you want to start?" And I said, "Well, let's get the bad and the ugly out of the way." And he said, "That's easy. There is none." He said, "The good is, the cattle, it's a non-issue. The hunting, all that's done is provide lots of new good hunting alleys." It will not change how we operate, it will not change anything about our lives. But it will be an additional income stream that I suspect will be very handy. It'll allow that family to have that ranch for a long time. (American Wind Energy Association 2015)

Communities that host wind farms see an immediate influx of economic activity as workers build new gravel roads to the sites, pour concrete foundations, erect the steel towers, and operate cranes that lift the turbine and blades into place. Spinoff spending on everything from diner meals to truck tires boosts the local economy. The new facilities increase the tax base, helping pay for teacher salaries, road repairs, and medical clinics.

The Blue Creek Wind Farm in Van Wert County, Ohio, employed over five hundred construction workers and spent $25 million in the local economy while it was built. It immediately became the county's largest taxpayer when it was finished in 2012. It now provides $2.7 million a year to local schools and government through a payment-in-lieu-of-taxes agreement, and $2 million a year in lease payments to local landowners who host the turbines, each on hundred-meter towers. Operating and maintaining them keeps fifteen to twenty permanent workers employed (Avangrid Renewables 2016).

"Omigosh, it's been a game changer for us," according to Jeff Snyder, superintendent of Lincolnview Local Schools in Van Wert County. He described the impact:

> [W]e have $400,000 per year for twenty [years]. And here soon we're going to have close to $1.6 million to the good, that our taxpayers, I didn't have to pass one levy, ask them for anything, and we're receiving it. It's allowed us to invest that money into our kids, and with that we have invested into the technology side of things. We [have] K-12 computers for every student in our building . . . . We've also added two new academic programs that we didn't think we'd be able to do, because it costs quite a bit to do them; one is pre-engineering, and one's biomedical. And we have a lot of kids now invested in those areas, that we would have never had the opportunity to do that. I don't know of any better way to spend money than on kids and our future. (American Wind Energy Association 2017)

Some of Lincolnview's graduates enter training to become a wind turbine technician, with a median pay of $52,260 a year, which is right behind solar rooftop installer as one of the two fastest growing job descriptions in America (Bureau of Labor Statistics 2017).

"Wind is a lucrative, sustainable 'crop' for our farmers and entire community," said Susan Munroe, president and CEO of the Van Wert Chamber of Commerce, two years later upon receiving an award for her advocacy for the wind farm. She told her local newspaper that economic benefits have rippled to hotels, restaurants, auto dealers, grocery stores, and other businesses in the rural county, as well as providing much-needed funding for local government services: "We hope to continue to harvest wind to not only build economic success for our county but provide sustainable, renewable energy for our state" (Gebert 2015).

Blue Creek is a good example of the stakes for the climate in switching to clean energy. Relative to Ohio's other sources of electricity, the wind farm's 152 two-megawatt turbines offset 1.6 billion pounds of carbon dioxide emissions a year. That's as much pollution as 114,000 gasoline-powered cars produce, and the equivalent of planting 138,000 acres of trees.

The wind farm generates enough electricity to power 479,000 electric cars as they become widely available, its developer points out. It also saves 408 million gallons a year of fresh water that would otherwise be needed to generate electricity from the steam-driven turbines at fossil fuel and nuclear plants (Avangrid Renewables 2016).

Organized Opposition Arises

Yet opposition has come to Van Wert County, as it has to a number of other counties in the high-wind belt from North Dakota to Texas, and closer to the coasts, around towns and vacation homes.

"If you want to build wind turbines, then don't build them where people live. Find a place to build them that's way more remote than me," said one opponent, Jeremy Kitson of the Ohio anti-wind group Citizens for Clear Skies. Its members blame turbines for headaches, sleep deprivation, and other symptoms for which peer-reviewed health studies have found no connection (Anderson 2016; Hunt 2017). Five years after the Blue Creek wind farm's construction, Kitson told a local reporter, "This is the most divisive issue that I have ever experienced in my entire life and there is no middle ground. There's family members that have ground signed up [for leasing to turbines] and there's family members that don't and those brothers aren't even talking anymore" (Goins 2017).

Although the vast majority of hosts and neighbors of wind farms report positive experiences, media coverage tends to amplify the complaints of a small number. A recent "investigation" by GateHouse Media quoted a sampling of unhappy individuals, in most cases without offering any evidence for their claims; their stories were then syndicated to hundreds of small- and mid-sized newspapers in the chain (DeMelle 2017; LeCoz and Sherman 2017). "In the U.S., twenty million people live in counties with wind turbines," responded Greg Alvarez of the American Wind Energy Association. "Around the world, tens of millions more live near wind turbines without issue. Once wind farms are built, as shown by polls taken recently in states such as Texas and Iowa where wind turbines have been widely adopted, concerns tend to diminish and support for building more of them has increased to 85 percent, 90 percent or even higher" (Alvarez 2017).

Around the country, however, opponents now collect negative stories and share them, and routinely troll the social media accounts of those who support wind energy. Some opponents apparently post comments from when they wake up until they go to bed. Thomas Stacey, a frequent poster, attached an online comment to one news story in Ohio that, "My property is peaceful as it is and I don't want the surroundings I MOVED HERE TO ENJOY to be overshadowed by ENORMOUS MACHINES IN THE SKY overhead." He claimed the technology doesn't work and is too expensive, and that wind power (despite the federal tax credits' impending phase-out after 2019) is an example of "loser industries that think they deserve permanent welfare" (Stacey 2015).

Some opponents are now several years into using grassroots organizing techniques to try to block new wind farms. A confidential plan was leaked in 2012 before a gathering of over thirty wind opponents in Washington, DC. It described a national public relations campaign to be operated by a nationwide coalition of "wind warriors." The goal: to create "what should appear as a 'groundswell' among grassroots," and "identify and connect with like-minded groups such as tax [opponents], Tea Party, true environmentalists, business organizations, property rights advocates, etc."

who would "use controversy to spark ideas." The gathering was led by a senior fellow at the American Tradition Institute, part of a network of free market think tanks connected to fossil fuel industries, whose other activities included filing lawsuits against climate scientists Michael Mann and James Hansen (Goldenberg 2012). The impact has spread.

Janna Swanson of Ayrshire, Iowa, now spends time as a board member for the Coalition for Rural Property Rights and the Preservation of Rural Iowa Alliance. "A growing number of mostly rural citizens are coming together to stop this industrial onslaught on our rural communities," she wrote in a recent op-ed article in the *Des Moines Register*. "We are connected state by state, country by country, across the internet. We make documentaries, write books, write articles, speak with lawmakers, give presentations, maintain websites and have our own supporting experts" (Swanson 2017).

In Ohio, lawmakers froze their state's renewable standard and passed a property line setback requirement so strict it would prevent virtually all future wind farm development in the state. According to a joint investigation by the Weather Channel and Inside Climate News that aired in December 2017, "bogus studies, policy drafts, and political donations have allowed fossil fuel industry groups to turn lawmakers against job-creating renewable energy policies—and neighbor against neighbor" (Weather Films 2017).

The perception of symptoms from wind farms can actually be caused by the spread of misinformation, despite the lack of scientific evidence for such symptoms. It's called the "nocebo effect," the opposite of the better-known placebo effect. The nocebo effect is commonly recognized in clinical medicine, and has been researched by basic scientists and ethicists as well (Häuser et al. 2012). An investigation of how this applies to wind energy resulted in a book, *Wind Turbine Syndrome: A Communicated Disease* (Chapman and Crichton 2017), by Australian professor of public health Simon Chapman and Fiona Crichton, who earned her doctorate in psychological medicine. Comparing communities where active wind opponents circulate misinformation, versus other communities where such opposition is absent, they found around certain wind farms "an illness that is spread by people talking about it." They concluded: "When people are worried about exposure and expect to experience adverse health effects, they are more likely to notice and misinterpret common symptoms, including symptoms that may be caused by anxiety. . . . Field research indicates that the more worried individuals are about the health effects of an environmental exposure, the more likely they are to report symptoms, even when no health risk is posed." In other words, the authors say, "people are worrying themselves sick."

Such perceptions can have real-world impacts. In some communities, including Van Wert County, developers and leading supporters have reported receiving anonymous threats to harm them and their families. As

one wind developer on the receiving end described, "Even as the market for wind improves, it is getting harder and harder to site projects. Local opponents are using disinformation that is readily available on the internet to pressure their local elected to block projects that require local siting permits, and when they fail at that, they take their fights to the state level, where they seek to pass restrictive siting policies" (communication with the author, 2017). This developer's conclusion: organized opposition requires organized promotion of wind energy by its supporters. And they must use well established public participation methods to hear out and address local opinions, so as not to inflame them: "In this era of fake news, we need more than just more studies."

What Works and What Does Not

People want to be listened to without judgment and they want their input to make a difference, according to a survey of thirty years of research into community engagement around North American wind projects, conducted by Joseph Rand and Ben Hoen for Lawrence Berkeley National Laboratory.

Perceived fairness, participation, and trust during the development process have a powerful impact on community acceptance, they found in reviewing the literature. Concerns generally start with the view of the turbines and whether or not they will be heard, and can build from there unless responded to: "Sound and visual impacts of wind facilities are strongly tied to annoyance and opposition, and ignoring these concerns can exacerbate conflict" (Rand and Hoen 2017).

Fear of change is real and must be acknowledged and dealt with. As a participant in many community meetings about proposed wind projects said, "I don't know if it is even accurate to put the fear on the technology. Wind turbines are hardly new in the U.S. and the technology has been around for an even longer period abroad. I think the fear is more from the fact that turbines are development and development is change. People rarely love or welcome change. Especially if said change is as visible as our now 500-foot-tall towers. Any development in rural and remote communities is often a high-impact scenario." He said that, for that reason, "It's crucial to communicate and educate early, and help community members process the impacts associated with new developments" (correspondence with the author, 2017).

Socioeconomic impacts of wind development—starting with actual payments to landowners and the community—are also strongly tied to acceptance. These range from a lease for a turbine site, worth thousands of dollars per turbine per year to a landowner, to business done with the developers, whether local people are hired, additions to the local tax base (or payments in lieu of taxes), and donations to local causes and sports teams.

Environmental concerns matter, but less. And they can even work against wind developers, if residents feel they are being asked to sacrifice for the differing values of others who may live far away.

It's especially unhelpful to stereotype the doubtful as NIMBYs (for "Not In My Back Yard"), or BANANAs ("Build Absolutely Nothing Anywhere Near Anyone"). "Viewing opposition as something to be overcome prevents meaningful understandings and implementation of best practices," Rand and Hoen found in their study. If more developers and policymakers commit to well established public participation methods, they concluded, "conflict and perceived injustices around proposed and existing wind energy facilities might be significantly lessened."

"It's important to remember that this kind of opposition to any kind of infrastructure development is normal," Rand told the *Columbus Dispatch*. While surveys show that a large majority of Americans support wind energy, "people are inherently protective of place, of their landscape," he said. And in media coverage, "Rarely do you see a nuanced perspective that has a fair story from both sides" (Gearinno 2017).

A more helpful framing of local attitudes than NIMBY has been dubbed the PIMBY phenomenon, for "Please in My Back Yard." Joshua Brinkman and Richard Hirsch of Virginia Tech investigated rural communities that welcomed wind power. They found that for many farmers, turbines fit into their desire to have the latest gear, to give them an advantage in the challenging economics of large-scale agriculture—and that ultramodern farming practices form an important part of their self-image, combating urban stereotypes about them. Farmers with income-generating wind turbines on their land view them as "symbols of their technological savvy," like GPS- and laser-guided tractors, yield monitoring systems, and computer applications they use to compete in international commodity markets (Brinkman and Hirsch 2017).

Iowa's latest license plate shows a wind turbine next to a barn, a silo, and the Des Moines city skyline. The Iowa Farm Bureau website calls wind "the newest and most bio-friendly energy crop yet," under the motto, "People. Progress. Pride."

Respect can make the difference between local pride or opposition, according to David M. Hart, director of the Center for Science, Technology, and Innovation Policy at George Mason University. He reviewed the Virginia Tech research for the *Lincoln* [Nebraska] *Journal-Star*:

> PIMBY is not mainly about money. It's also an attitude, a commitment, an identity. It's about a feeling that you're part of something bigger and grander than yourself that you can pass on to your children and grandchildren. It's about defining yourself as forward-looking and modern. It's a complete rejection of Hollywood's Beverly Hillbilly stereotype of rural people. [Study co-author Joshua] Brinkman stressed that what will really make PIMBY work is "respect." Respect for the intelligence of the people who would live

near these facilities. Respect for their values, including their love of the land and the environment. Respect for their traditions and desire to preserve their heritage. On the other hand, if out-of-towners insist that such facilities must be built right here, right now, because that is the only thing that will save the planet, then PIMBY will very quickly metamorphosize into NIMBY. (Hart 2017)

Inclusive language keeps the door open for a continued conversation, while polarizing language and jargon can rapidly make things worse by excluding all those who disagree, possibly including the person you're talking to. Choosing words that work is especially important to those advocating climate solutions because, according to a poll for Pew Charitable Trusts conducted after the recent presidential election, a 47-point gap separates Republicans and Democrats on the need to address climate change. That is a wider divide than on immigration or race relations. The issues on which the poll found the broadest agreement were improving American security and creating jobs. Near-term protection of clean air did well too (Pew Research Center 2017).

Talking about immediate health hazards such as air and water pollution triggers broad bipartisan support for action. Warnings about eventual impacts of global warming may fall on deaf ears, according to former California Governor Arnold Schwarzenegger, who was elected as a Republican. Speaking to advocates of climate action in Bonn, Germany, he told them, "People do not focus as much on two degrees energy increases in temperatures, or increases in sea levels rising," versus more concrete issues like "so many people having problems with cancer, and kids with asthma." Schwarzenegger's advice: "It's time we wake up and talk about what really matters: twenty-five thousand people dying every day because of pollution" (Associated Press 2017).

At another climate event two months earlier in New York, current California Governor Jerry Brown took a different approach when he compared supporters of the current administration to cave-dwellers. He attempted to joke: "You should check out the derivation of 'Trump-ite' and 'troglodyte,' because they both refer to people who dwell in deep, dark caves" (Siders 2017). Such mental classification of another as "not one of us" is termed "othering."[2] As writer James Norris described the concept:

Rather than always remembering that every person is a complex bundle of emotions, ideas, motivations, reflexes, priorities, and many other subtle aspects, it's sometimes easier to dismiss them as being in some way less human, and less worthy of respect and dignity, than we are....."If you're not with us, you're against us" is a simple heuristic people often use to decide whether someone is part of their tribe or not. If you are, then you can be expected to toe the line in certain ways if you don't want to be ejected; if you're not, you can be dismissed and hated as an "other," the enemy....[R]esearch into, for instance, the Benjamin Franklin effect, shows that we have a startling tendency to come to hate people who we

treat badly. . . . If we dehumanize someone, and distance our empathy with them, then we won't have to feel bad about the shabby way we've treated them. Political partisanship is a common area for othering to be found. (Norris 2011)

Fear of the other runs through many of the online comment threads that people who work on public policy shrink from reading. Group cohesion may have been bred into humans in our tribal past to enhance an individual's chances of survival; today it is powerfully expressed in sports, politics, and social media. This tribal identity can far outweigh the facts. In one famous incident, following the assassination of Martin Luther King, schoolteacher Jane Elliott, of Riceville, Iowa, decided to give her third and fourth graders a taste of what it felt like to be discriminated against. She divided the class by eye color, and told one group that they were in fact better than the others. Quickly the "superior" children began improving academically, while bossing the others around; the others began making mistakes and apologizing. When Elliott told her students she'd made a mistake, and actually it was the other group who were superior, the results reversed (Elliott 1968; Bloom 2005).

Other people often seem to think, or not think, in strange ways (a recurring topic at conferences of the Institute on Religion in an Age of Science). According to a 2017 dairy industry survey, 7 percent of Americans believe that chocolate milk comes from brown cows. News coverage cited that as evidence of scientific illiteracy (Dewey 2017). But context is critical, and appreciation of others' differing motivations: that statistic would presumably include anyone whose sense of humor led them to check that answer on the survey. Does that change your reaction?

Lack of understanding is exacerbated by the use of jargon. Insiders find technical language and shorthand useful, including for impressing others with their knowledge and reinforcing their own tribal identity. But unless translated for a wider audience it can leave many people in the dark. Also blamed for sowing misunderstanding is "the big sort," the phenomenon of Americans increasingly moving to communities of people who think like they do, including in virtual communities online. Named in 2004 by journalist Bill Bishop, it became the title of his book documenting how people who live in homogenous communities grow both more extreme and more certain in their beliefs.

Antidotes include humanizing, not dehumanizing; taking time to discover common values, instead of mentally forming counterarguments; and the discipline to keep conversations civil and on track. Bestselling books highlight the spread of such thinking to the business world: *Emotional Intelligence* and *Critical Conversations* are among many on related themes. Mahzarin Banaji and Anthony Greenwald, in their book *Blindspot: Hidden*

Biases of Good People, blame the ego for many of our problems in crossing the divide that separates us from others:

> We live in a sea of opportunity for learning through other people, yet we fail to see the opportunity due to three mental barriers: 1. The belief that you already know; 2. The assumption that you are the smartest, and 3. The need to be right. The very nature of learning means not knowing the answer, realizing others know more and the willingness to be wrong occasionally. Giving up these three barriers—knowing it all, needing to be the smartest person in the room, and proving how right you are—lightens your load and significantly increases your speed. (Banaji and Greenwald 2013)

Randy Olson, a former tenured professor of marine biology, gave up his academic career to become a documentary film producer and author of *Don't Be Such a Scientist: Communicating Substance in an Age of Style.* His advice on trying to communicate information to the general public: Don't be so cerebral, so literal-minded, such a poor storyteller, and ultimately, so unlikable. "Sometimes information alone is not enough. You have to get down out of your head," Olson says. Tap heartfelt sincerity and gut-level humor and intuition, and one is not only more likable but more effective (Olson 2009).

More than many scientists like to admit, people rely on their emotions to make a decision and then search for facts that justify that decision. As Tom Hollihan of the Annenberg School for Communication at the University of Southern California (USC) put it in his interview with Olson, "Some of the most effective theories about communication talk about the arousal and fulfillment of your audience's desires. You want to pique their interest, and then you want to satisfy that interest that you've piqued. And if you fail in either regard, you haven't had an effective message" (Olson 2009).

One can develop greater empathy for other people as they struggle to absorb new information by recognizing the mental biases that we're all gripped by to varying degrees. These biases are many and constantly operating, observed Charlie Munger, Vice Chairman of Berkshire Hathaway, who made a lifelong study of psychology as applied to the business world (Munger 2005). Regarding empathy for one's opponents, he said: 'I never allow myself to have an opinion on anything that I don't know the other side's argument better than they do" (Munger 1994). A famous speech he gave to the USC Business School inspired Shane Parrish of the Farnum Street blog years later to create a list of 113 "mental models," which operate below the surface when people miscommunicate. The list went viral. For instance, Parrish writes:

> Without the right training, most minds take the wrong approach. They prefer to solve problems by asking: Which ideas do I already love and know deeply, and how can I apply them to the situation at hand? Psychologists call this the Availability Heuristic and its power is well-documented. You know the old adage, to the man with only a hammer, everything starts looking a

bit like a nail. Such narrow-minded thinking feels entirely natural to us, but it leads to far too many misjudgments. (Parrish 2017)

Once we set aside preconceived notions and agendas, common values can be found with anyone, since we all have the same basic hierarchy of needs. Opinion research for the conservative and climate-focused ClearPath Foundation found that broadly held values underlie the adoption of clean energy. These values help explain wind power's appeal, and remind us when talking about it to use language that taps into them: values of innovation, economic prosperity, and jobs at home, including made-in-the-USA factory jobs for wind turbine workers, and wind as a new cash crop for family farmers. Values of patriotism, energy independence, and energy security, so that America has more sources of homegrown energy. A hunger for solutions to pollution that will work in our market-based economy, to create the cleaner, healthier air that everyone wants. And of course, the value of a good value: everyone loves a sale, and wind energy got two-thirds cheaper from 2009 to 2016. Kristen Soltis Anderson from the ClearPath research team concluded: "The best messaging on clean energy de-politicizes climate and emphasizes the wide array of benefits that clean energy provides" (Ayers et al. 2015). Wind energy is not just green; it's red-white-and-blue.

EMPATHY ACROSS THE DIVIDE

Minnesota writer Carol Bly, in short stories and essays, dealt with the difficulties that arise when people in small towns disagree with each other, and the importance of empathy. Bly suggested that people on opposite sides of an issue get out of their comfort zone to talk to one another in moderated community panel discussions she dubbed "enemy evenings." In one essay she said nature lovers and those whose identity is bound up with a place must get good at speaking to people on all sides, not just to trees:

> Apparently, young people want to know how to talk to opponents so they would not feel hopeless. We lovers of place want to stop feeling hopeless, too. . . . Perhaps what stands in our way is those very feelings of virtuousness that nature lovers indulge in. . . . If we did two or three days' worth of learning this new field—intentional interviewing—even the crossest of us curmudgeons could relax. . . . For we would know we had done very modern, very exacting, intelligent labor for our planet. (Bly 1977)

Conflict resolution and policy campaigns require speaking respectfully and in person to work. Building goodwill is a never-ending process, especially because online anonymity has fed such a toxic environment. The truth doesn't necessarily prevail in these face-to-face talks, nor should that be the number one goal; in post-fact America, one can't just talk statistics

to people and expect to persuade them. The goal is relationships, which ultimately are all that can cross the divide of disagreement. As a senior energy executive said of her work to increase support for renewables in the new Republican administration and Congress, "It's really easy to hate a concept. It's really hard to hate an individual" (conversation with the author 2017).

It's especially easy to hate a concept conveyed in text, whether that's in an email or on a social media site, according to recent research by a team of business school researchers from the University of Chicago and the University of California. Simply put, in text it's more likely to seem stupid. Speech is superior, they found, not only because it conveys more emotional cues but because "hearing a person explain his or her beliefs makes the person seem more mentally capable—and therefore seem to possess more uniquely human mental traits—than reading the same content." It turns out, "the tendency to denigrate the minds of the opposition may be tempered by giving them, quite literally, a voice" (Schroeder et al. 2017).

But how can one stay empathetic in difficult conversations? By "allowing others the opportunity to fully express themselves, before turning our attention to solutions or requests for relief," according to psychologist Marshall Rosenberg, who launched a movement in deep listening in the 1960s that continued after his death in 2015. In his book, *Nonviolent Communication,* Rosenberg told the story of a city administrator who complained to him, "I'm paid to give facts and solutions, not to sit around doing psychotherapy with everyone who comes into my office." Yet angry citizens reported bringing this administrator their heartfelt concerns and leaving feeling unheard. One of them told Rosenberg, "When you go to his office, he gives you a bunch of facts, but you never know whether he's heard you first. When that happens, you start to distrust his facts."

The training program based on Rosenberg's work suggests that keeping in mind that all of us "are only trying to honor universal values and needs, every minute, every day," to help suspend judgment, manipulation and the language of blame. Before responding to what you just heard, empathically repeat it back and ask if you got it right. Ask, "Is there more?" And in a spirit of genuine curiosity, not to trap the other person. Leave the conversation only as a last resort. Trainees have applied these techniques in family therapy, prisons, schools, social change organizations, even in negotiations with armed gangs, to turn conflicts into dialogues (Rosenberg 2015; Center for Nonviolent Communication n.d.).

Amid the partisan divide of the 2016 elections a new non-profit was formed called Better Angels. It developed a "Red/Blue Workshop" in which seven conservative-leaning participants sit down with seven progressive-leaning participants for moderated exercises and discussions. The goal is

to "clarify disagreements, reduce stereotyped thinking, and begin building the relationships needed to find common ground." Better Angels teaches skills for difficult moments, such as not returning provocative statements in kind; agreeing to disagree; and exiting the conversation in a good-humored way (Better Angels 2017).

Intentionally building relationships across divisions helps create and protect an inclusive society, and can even avoid war, according to Allison K. Ralph, whose 2017 doctoral dissertation at Catholic University looked at how communities define themselves and can sometimes justify violence. "People are afraid of what will happen to us if we cease to be able to talk to each other—will we cease to be able to function, to avoid a civil war, if we end up with not just divisive but divided societies?" she asks. "If we don't want to end up like Bosnia and Croatia in fifteen years, we need to do something about it now." She describes the importance of "food-bank-style relationships" as opposed to top-down governance, and bringing together different religious faiths. "Talk to the church, they know where the people are," she says. "You have to have those relationships in advance of the crisis." As does a developer, entering a new community.

In this hypercharged political environment, people reaching across the lines of divisions and even hatred have made headlines: blues musician Daryl Davis, who finds shared ground with Ku Klux Klan leaders (Simon and Sidner 2017); African American journalist Rachel Kaadzi Ghansah, who got an interview with the father of church shooter Dylann Roof (Shapiro 2017); a planner of the alt-right march in Charlottesville who sat down at a Dairy Queen with Muslim community leaders (Samuels 2017). While these are admittedly extreme examples, they offer inspiration for anyone caught up in a pitched battle in which it seems the sides will never even listen to each other, much less agree.

Everyone responds to sources of hope. Frances Moore Lappé, who introduced the idea of eating lower on the food chain in the 1970s, later wrote a book about how to overcome cynicism. In *Eco-Mind: Changing the Way We Think, to Create the World We Want* (Lappé 2011), she calls cynicism about other people a "thought-trap." Human adaptability and ingenuity, she says, are actually what can get us out of our ecological fix.

A variety of value-based programs focus on reasons why conservatives and evangelicals care for the environment. One is the "Creation Care" initiative of the Evangelical Environmental Network, which runs a "Pro-Life Clean Energy Campaign." Its previous campaign on energy efficiency was entitled, "What Would Jesus Drive?" The Christian Coalition has determined that clean energy is a family values issue. It happened after its leader's daughter was told to avoid eating fish because otherwise her unborn child could be threatened by mercury pollution from coal-burning power plants. A spinoff organization, Young Conservatives for Energy Reform,

regularly brings hundreds of young people to Washington, DC to lobby for clean energy, including more use of wind turbines. Their enthusiasm opens doors all over Capitol Hill.

The wind industry's gathering point for supporters from outside the industry is at www.PowerofWind.org. Over four hundred thousand people have signed up, but since email inboxes are increasingly clogged and response rates hover below 1 percent, the network has turned to texts, group phone calls, and in-person living room meetings in hot spots for wind development.

Their coach is Sam Daley-Harris, previously a hunger activist who started a citizen lobbying group called Results USA. He advises people to practice before they meet with elected representatives with whom they disagree: "Speaking your truth doesn't always have to be done in anger, which almost always alienates," he says. "We're betting the farm on relationships" (Daley-Harris 2013).

On a recent monthly training call with wind power supporters, Daley-Harris encouraged them to start out by thanking the elected official with whom they are meeting, even if it's simply for deciding to enter public service: "Like you, I go to work every day to try to create opportunities for my community to thrive and prosper." Then he said:

> Engage them in a common inquiry: how can we most effectively deal with our issue in the ways that are most uplifting? Take the most generous approach possible: appreciate, respect. Yet still be honest and firm. You have to decide whether your goal is to be right about your opinion of them, or to be effective. Remember we'll never get clean energy with Republicans only or Democrats only—it has to be bipartisan. It can't be lip service. It has to come from a genuine place. There's a communication gap that has to be overcome. (Daley-Harris 2013)

The Power of Wind calls have also featured Susan Monroe of the Van Wert, Ohio Chamber of Commerce, telling about wind's success story in her county. She met recently with one of the leaders of the opposition in her state, State Representative Bill Seitz, R-Cincinnati. He has practically singlehandedly zoned future wind development out of Ohio by getting an onerous setback provision passed in the legislature. He claimed to her that among wind supporters, "No one has come in and met with me on this" (interview with the author, 2017).

Meeting early and regularly with stakeholders is one of the best practices for community engagement in a guide that the wind industry developed through the Canadian Wind Energy Association. It recommends "demystifying fears about the unknown," because, "[q]uestions that go unanswered can quickly turn from natural human curiosity to negativity and opposition."

If strong emotions surface, the guide says, "The most important thing to remember is that you must at all times show respect for a person's concerns. Stop trying to communicate facts and/or opinions. Listen carefully to the person and allow him or her to continue. Eliminate barriers and establish equality. Step out from behind the podium and close the gap between the two of you—the closer the better."

In case of an organized protest, "The most senior ranking person at your meeting should politely come outside your meeting room to greet the protesters. Remain calm, polite, respectful, and open to discussion. Offer to bring refreshments outside for the protesters. Ask to receive their written materials or verbal expression of their concerns so you can record them and review the main points with them to understand their views. Encourage them to come inside to learn about your project. Offer the opportunity to meet face to face at a future date to follow up" (Canadian Wind Energy Association 2017).

Reversing negative attitudes is not easy, but it can be done—sometimes literally across a kitchen table. Chris Barker, a farmer himself, works as a site manager for leading wind power contractor Blattner Energy of Avon, Minnesota. At one wind farm under construction in rural Texas, he was called in to address gaps in communication with the local landowners. "We just went around and met everybody and drove them around and took time to go to their houses and talk to them. And stepped in and gave them somebody to voice their opinions to," as Barker told it, wearing his hard hat. At one house he found himself being cussed out by a farmer who said a road had been cut across his land without permission. "So I go over there to meet with the guy, and he's just screaming the whole time. I mean he calls me everything but a man," Barker recalled. "I wanted so bad just to duck and run, or tell him what I think. But I had to kind of suck it up. And we got through it."

Listening further, he found the man was correct: a critical document had gone unsigned under a previous developer. Barker agreed to make it right, which also saved the project from having to move its collection system by a mile. "And when we left, he's telling us all about his kids and inviting us over for supper to watch his son play college ball." The electrical superintendent on the job, David Farley, concluded: "The lesson learned here is to be approachable. To be genuine. To be honest. To be concerned. And to follow through" (presentation to the American Wind Energy Association, November 9, 2017).

When people who disagree meet in person, it can feel like the stakes are high. But no alternative works as well. Because we know it can be fatal otherwise, we're able to steer our car down a highway at high speed without veering sharply off-course. So too with our conversations, especially across divides of misunderstanding. By releasing the importance we attach to our opinions and first paying attention to what others are saying and feeling,

we can take the next step of getting into communication with those we disagree with. And then, use language and foster habits that build rather than damage mutual respect.

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NOTES

1. Electric power generation is responsible for 30 percent of the United States' carbon footprint from all sources (U.S. Environmental Protection Agency 2016). Wind can generate over a third of America's electricity by mid-century, according to the U.S. Department of Energy's 2015 *Wind Vision* report. Wind will be able to save over a third of the electric sector's carbon footprint well before that, however—and thus 10 percent of the entire country's carbon footprint from all sources—since wind energy tends to substitute for the most pollution-intensive fuel sources both because of geography and because it has almost no marginal cost.

2. "Othering" has been of interest to a wide variety of authors, researchers, and recently an entire institute and academic journal. James Norris (2012) for a time devoted a blog to the topic. A more academic treatment that traces the concept's history to Simone de Beauvoir in 1949 may be found in Lajos Brons (2015). The reference to Ben Franklin is to a story told about Franklin's cultivation of an early opponent, lest he become an enemy who would try to sabotage Franklin's political career. Franklin decided to ask the man to loan him a valuable book, thus creating a lifelong friendly acquaintance.

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