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Small N.H. city takes on global warming challenge

Officials in Keene, NH are finding it more difficult than expected to get people to change their behavior to help the environment. Despite a local "no-idling" ordinance, many of the cars lined up outside Keene High School on a recent school day were running despite several signs asking them to turn off their cars while waiting. (Dina Rudick/Globe Staff)

By Beth Daley
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KEENE, N.H. - Who hasn't done what Lea Carpenter did one frigid afternoon earlier this month?

She pulled her white SUV in front of Keene High School to pick up her 10th-grade son. While waiting, she kept the vehicle running - just feet from a sign urging drivers not to idle outside the school, part of the city's seven-year effort to reduce global warming pollution.

"I did hear about the idling campaign," said Carpenter with a sheepish smile, promptly turning the motor off after the sign was pointed out to her. "But when I'm freezing, I keep the car on until I warm up."

Knowing what would help save the environment doesn't mean people do it.

Environmental awareness exploded in the last year as scientists issued a series of dire reports about manmade global warming. Yet even when people adopt eco-friendly habits - whether driving less or composting more - research shows they don't sustain them for long.

One scientific review of 54 studies, which tested strategies for sparking green habits, concluded that only in rare instances did participants adhere to new behaviors longer than a few weeks.

Keene, too, has come to realize that a publicity campaign is not enough to get its residents to conserve energy. Inconvenience, upfront costs, and even the cold have thwarted efforts.

Now, this lively, tiny city ringed by low hills is turning to behavioral science for solutions. First, a city task force is tackling the barriers to environmentally sensitive behavior - for example, a booth was set up downtown recently to sell energy-efficient light bulbs at a sharp discount. Then, to sustain new habits, they will employ a powerful emotional tool: Social pressure.

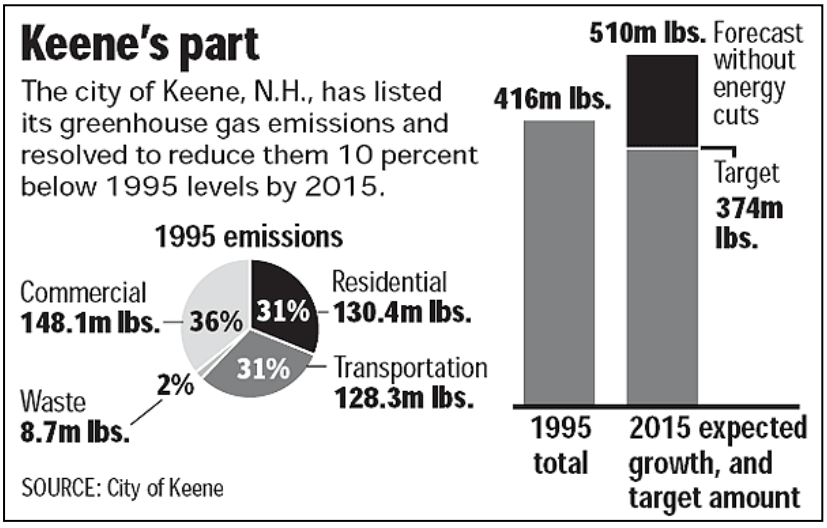
The idea is to seed the city with visible green role models and have them reach out to friends, neighbors, and co-workers - essentially using the same type of peer pressure that makes teens want to wear Ugg boots and North Face jackets.

"We want to get people to do the right thing because it's cool to do it," said Mikaela Engert, Keene's city planner. "We're trying to make [environmentalism] part of the fabric of the city."

Changing cultural habits

Earlier this year, the United Nation's Intergovernmental Panel on Climate Change, the leading scientific authority on global warming, said the climate change's worst consequences could be averted if nations level emissions in the next decade and then slash them between 50 and 85 percent by 2050. And then 190 nations attended the United Nations Climate Change Conference in Bali the last two weeks to launch negotiations on new international agreements to reduce greenhouse gas emissions.

But climate specialists say reductions will also depend on what happens on the community level through the dozens of choices people and businesses make every day, from eschewing bottled water to organizing carpools for employees. While individual actions cannot accomplish as much as nations or states, environmental groups say the emission reductions from people's choices add up and could help build a groundswell of political support for meaningful federal regulations to reduce greenhouse gases from power plants, cars, and factories.



Anyone who has tried to start exercising regularly knows how challenging it can be to adopt new habits. Energy-conserving behavior is even harder to sustain, sociologists say, because people may believe their actions will have a negligible effect on a global problem, and instead of one change, people are being asked to make dozens - from line-drying laundry to taking shorter showers.

Moreover, society gets most of the benefits, not individuals; the financial gains from energy efficiency aren't typically large enough to motivate people.

In 2000, Keene became one of the first communities in New England to pledge to combat climate change, eventually agreeing to reduce greenhouse gas emissions by 10 percent below 1995 levels by 2015. Without the effort, emissions were projected to rise 26 percent over that time because of economic and population growth.

As other communities begin to do their part to slow the world's warming, Keene's unfolding story - high on hope and short on money - offers a glimpse into the extraordinary challenge of changing a culture.

Depending on individuals

Shortly after Michael E. J. Blastos became Keene's mayor in 2000, the city planning director briefed him in his third-floor office about the threat of climate change. It was an epiphany, Blastos recalled this month.

"I wanted to do something about it," the 75-year-old mayor said. "Before that, I wasn't carrying a cross for global warming . . . but I saw my kids' future in it."

In the previous several years, the city had made halting progress in promoting recycling, composting, and use of cleaner fuels for government vehicles, but the mayor's endorsement provided the political capital needed for more aggressive municipal action.

Today, the city's 78-vehicle fleet is powered by biodiesel fuel to reduce tailpipe emissions of carbon dioxide, the primary heat-trapping gas. Traffic lights use high-efficiency bulbs, and the Department of Public Works building is heated by geothermal energy.

In warm weather, two police officers park their cruisers and ride bikes whenever possible. A strict recycling program has begun in City Hall. The reduction of greenhouse gases from idling vehicles' tailpipes was one of the reasons for building two new roundabouts downtown this year instead of installing stoplights.

300 million Americans could each help reduce CO_2 emissions by:

	CO_2 reduction per person each year
CAR IDLING	
Reducing idling by 10 minutes a day	**586 pounds**
SHOWERS	
Cutting shower time by 3 minutes each day	**715 pounds**
TV and 2 LIGHTS	
Turning off an hour earlier each day	**134 pounds**
COMPUTER, MONITOR, PRINTER	
Turning off at day's end	**754 pounds**
DRIVING	
Traveling 10 fewer miles each week	**475 pounds**

SOURCES: SmartPower; Environmental Defense — DAVID BUTLER/GLOBE STAFF

But city services generate less than 1 percent of all greenhouse gas emissions in Keene, and city officials have known from the start that they won't meet their 10 percent goal without getting many of the 23,000 residents and hundreds of businesses on board.

"We did this on the municipal level first because we wanted to set an example," said Blastos. "But it's getting people motivated that will make the difference."

Keene might not be considered an ideal place to foster grassroots environmentalism. Antioch University New England - known for its emphasis on environmental studies - and Keene State College are there, but a conservative, independent Yankee backbone runs through the community.

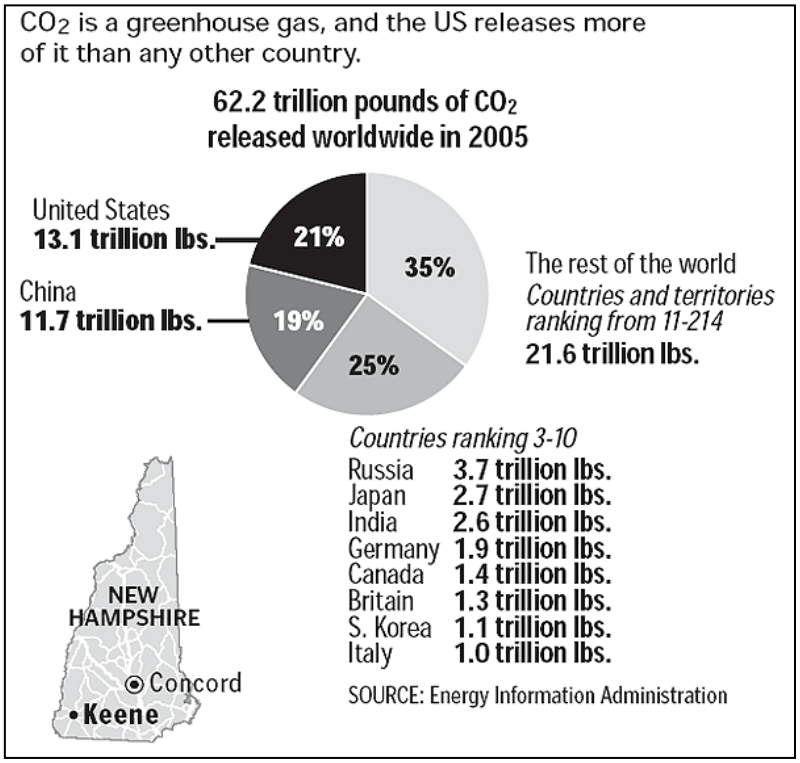
City officials concede that, until recently, their efforts to expand conservation to the community were unsuccessful mostly because they were funded on a shoestring, poorly planned, and lacked follow-through. A recycling effort in an apartment complex that showed early promise ended after the city employee who started it moved out of the building.

And while virtually all drivers cooperated with the anti-idling campaign at the high school when it began two years ago, participation has waned. Lea Carpenter's SUV was one of five waiting vehicles, out of 11 in line, that were idling despite the red-and-white signs.

"There was lots of education going on," said Christa Koehler, a community program manager with the New Hampshire-based environmental nonprofit Clean Air-Cool Planet that has been working with Keene. "But we needed a new model for approaching the public."

Keeping up with neighbors

Almost three decades of research backs her up, showing that pure information campaigns "have virtually no likelihood of changing behavior," said Doug McKenzie-Mohr, a Canadian environmental psychologist who works with communities to instill lasting behavioral change.



Instead, research has shown that behavioral change can be marketed to the public much the way companies sell products to consumers. Companies do extensive market research to understand consumers' needs, desires, and motivations and then design products and campaigns around them. Once a critical mass of consumers has bought the product, it becomes the rage - think iPod.

This same tactic has been used to get people to adopt healthy behavior. For example, after surveys showed that young people were embarrassed to buy condoms, public health officials began giving them away for free in bars and on college campuses. To suggest that condom use was the norm, they began advertisements featuring gorgeous women and men refusing to engage in unprotected sex.

But it's only now that this concept, called social marketing, is being widely embraced by environmentalists to encourage people to reduce energy usage and thereby cut greenhouse gas emissions.

Research shows that it works. In one Toronto suburb, public officials surveyed residents about lawn watering and found that people used excessive amounts of water because they feared their lawns

would turn brown. Using tools developed by McKenzie-Mohr, city officials sent students out to educate residents that overwatering could cause as much damage as underwatering. Homeowners were handed a rain gauge and a reminder to place on their outside faucet, and were asked to sign a written commitment to reduce watering. Eighty-two percent agreed, and water consumption declined 32 percent compared with a neighborhood nearby that students did not visit.

In another experiment showing the power of social pressure, P. Wesley Schultz, a psychology professor at California State University-San Marcos, studied what kind of sign left in a hotel room would make guests reuse towels. The most effective? A note that said the majority of guests chooses to reuse at least one towel each day.

"Norms are a powerful tool for conservation," he said. "No one wants to be the sucker, conserving and using less when their neighbors aren't," he said.

Social marketing advocates say their methods can be preferable to legislating change. Laws can be effective, but many are politically unacceptable because people see them as infringing on free choice. Economic incentives or disincentives can work - a tax on plastic bags in Ireland has reduced use by 90 percent - but if they are abolished, people's behavior often reverts, and it is impossible to create enough incentives to cover every desirable behavior change.

Getting businesses to act

Keene's leaders didn't just stumble on the concept of social marketing. Koehler, of Clean Air-Cool Planet, helped introduce the idea several years ago, but it took until now to get enough momentum to try these strategies on a community-wide basis.

This October, the city's climate protection committee tried this new approach to get more homeowners to buy compact fluorescent bulbs.

After talking to residents, organizers realized that many weren't buying the energy efficient, long-lasting bulbs because of their higher initial cost and uncertainty over how much their energy bills would be reduced. Or shoppers just didn't think of the bulbs when at the grocery store.

So, armed with bulbs subsidized by two businesses, the group set up tables downtown on a windy Wednesday. They explained to passersby that the bulbs would last more than seven times as long as regular bulbs and save people money over time. They sold the bulbs for 50 cents each - far lower than the roughly $2.50 cost in stores and just a little more than ordinary incandescent bulbs.

The committee sold 1,041 bulbs, more than twice its goal.

"It's about giving people access, . . . getting them familiar with something new," said James Duffy, a city councilor and chair of the climate protection committee.

While Duffy's group does not know whether residents are switching other bulbs, his committee is taking other steps to create lasting change in Keene.

Two weeks ago, the committee announced that it had enlisted four businesses to commit to an energy audit and to lower emissions by 10 percent as soon as possible, although no target date was set. Those businesses agreed to reach out to other businesses, which will be asked to make the same commitment and reach out to others, and so on.

To create social pressure, the businesses will place decals in their windows announcing their participation and receive public recognition when they achieve their goal.

City officials and volunteers are realistic. They know they can't change the behavior of all residents. But they say that if they can get enough people to adopt new habits - and have those people in turn influence others - Keene just might make its goal.

"We are saying one tiny community in southwest New Hampshire can make a difference," said John A. MacLean, Keene's city manager.

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