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Going Green

With windmills, low-energy homes, new forms of recycling and fuel-efficient cars, Americans are taking conservation into their own hands.

By Jerry Adler
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One morning last week ... 29 years after president Jimmy Carter declared energy conservation "the moral equivalent of war" ... 37 years after the first reference to the "greenhouse effect" in The New York Times ... one day after oil prices hit a record peak of more than $75 per barrel ... Kelley Howell, a 38-year-old architect, got on her bicycle a little after 5 a.m. and rode 7.9 miles past shopping centers, housing developments and a nature preserve to a bus stop to complete her 24-mile commute to work. Compared with driving in her 2004 Mini Cooper, the 15.8-mile round trip by bicycle conserved approximately three fifths of a gallon of gasoline, subtracting 15 pounds of potential carbon dioxide pollution from the atmosphere (minus the small additional amount she exhaled as a result of her exertion). That's 15 pounds out of 1.7 billion tons of carbon produced annually to fuel all the vehicles in the United States. She concedes that when you look at it that way, it doesn't seem like very much. "But if you're not doing something and the next family isn't doing anything, then who will?"

On that very question the course of civilization may rest. In the face of the coming onslaught of pollutants from a rapidly urbanizing China and India, the task of avoiding ecological disaster may seem hopeless, and some environmental scientists have, quietly, concluded that it is. But Americans are notoriously reluctant to surrender their fates to the impersonal outcomes of an equation. One by one—and together, in state and local governments and even giant corporations—they are attempting to wrest the future from the dotted lines on the graphs that point to catastrophe. The richest country in the world is also the one with the most to lose.

Environmentalism waxes and wanes in importance in American politics, but it appears to be on the upswing now. Membership in the Sierra Club is up by about a third, to 800,000, in four years, and Gallup polling data show that the number of Americans who say they worry about the environment "a great deal" or "a fair amount" increased from 62 to 77 percent between 2004 and 2006. (The 2006 poll was done in March, before the attention-getting release of Al Gore's global-warming film, "An Inconvenient Truth.") Americans have come to this view by many routes, sometimes reluctantly; Carl Pope, executive director of the Sierra Club, thinks unhappiness with the Bush administration's environmental record plays a part, but many of the people NEWSWEEK spoke to for this story are Republicans. "Al Gore can't convince me, but his data can convince me," venture capitalist Ray Lane remarks ruefully. Lane is a general partner in the prominent Silicon Valley firm of Kleiner Perkins Caufield & Byers, which has pledged to invest $100 million in green

technology. He arrived at his position as a "Republican environmentalist" while pondering three trends: global warming, American dependence on foreign oil and the hypermodernization of Asian societies.

Others got to the same place by way of religion, most prominently Richard Cizik, director of governmental relations for the National Association of Evangelicals—but also people like Sally Bingham, an Episcopal priest in San Francisco and a founder of the religious environmental group Interfaith Power and Light. A moderate Republican, she had to defend herself on a talk-radio show from a listener who accused her of buying into the liberal myth of global warming. "I am," she pronounced frostily, "a religious person called to care for creation from this platform." And many followed their own idiosyncratic paths, like Howell, who started researching the connections between food, health and the environment after her mother died of cancer. Soon she and her husband, JD, found themselves caught up in replacing all their light bulbs and toilets with more-efficient versions and weighing their garbage, which by obsessive recycling they have reduced to less than 10 pounds a week.

But probably the most common formative experience is one that Wendy Abrams of Highland Park, Ill., underwent six years ago, as she was reading an article about global climate change over the next century; she looked up from her magazine and saw her four children, who will be alive for most of it. That was the year the hybrid Prius went on sale in the United States, and she bought one as soon as she could. This reflects what Pope describes as a refocusing of environmental concern from issues like safe drinking water, which were local and concrete, to climate change, which is global and abstract. Or so it was, anyway, until it came crashing into New Orleans last summer with the force of a million tons of reprints from The Journal of Climate. Katrina, says Pope, "changed people's perceptions of what was at stake"—even though no one can prove that the hurricane was directly caused by global warming.

All over America, a post-Katrina future is taking shape under the banner of "sustainability." Architects vie to create the most sustainable skyscrapers. The current champion in Manhattan appears to be Norman Foster's futuristic headquarters for the Hearst Corp., lit to its innermost depths by God's own high-efficiency light source, the sun. The building's "destination dispatch" elevators require passengers to enter their floor at a kiosk, where a screen directs them to a cab, grouping them to wring the last watt of efficiency from their 30-second trips. But it is expected to be challenged soon in Manhattan by a new Bank of America tower, designed by Cook & Fox, which takes "sustainability" to a point just short of growing its own food. Every drop of rain that falls on its roof will be captured for use; scraps from the cafeteria will be fermented in the building to produce methane as a supplementary fuel for a generator intended to produce more than half the building's electricity; the waste heat from the generator will both warm the offices and power a refrigeration plant to cool them.

Far away in Traverse City, Mich., a resort town four hours north of Detroit, home builder Lawrence Kinney wrestles with a different problem, people who want 6,000-square-foot vacation houses they will use only a couple of weeks a year. Outraged by the waste, he refuses to build them. His preferred size is about 1,800 square feet, 25

percent smaller than the national average; he has rediscovered the virtues of plaster walls instead of resource-intensive drywall, uses lumber harvested locally by horse-drawn teams and treats his wood with stains made from plants, not petroleum. When Jeff Martin, a program manager for Microsoft, set out to build a sustainable house near Charlotte, N.C., he specified something that *looked* like a house, not "a yurt, or a spaceship, or something made out of recycled cans and tires in the middle of the desert." He turned to Steven Strong, a Massachusetts-based renewable-energy consultant who says he "fell in love" with solar energy when he realized that "you could put a thin sliver of silicon, with no moving parts and no waste, in the sun and generate electricity forever." Strong designed an unobtrusive solar-cell array on the roof of Martin's conventional stucco-and-stone house to provide free electricity, and a sun-powered heater that produces so much hot water Martin can use it to wash his driveway. "We never run out," Martin boasts, "even when my wife's family comes to visit over Christmas."

The sun: sustainable energy that not even in-laws can exhaust! The same sun that for years shone uselessly on the roof of FedEx's immense Oakland airport hub, through which passes most of the company's traffic with China. Since last year, solar panels covering 81,000 square feet have been providing 80 percent of the facility's needs. The sun that also creates the wind that powers the wind turbines that Chicago—which is seeking to be known as the environmental city as well as the windy one—is building atop the Daley Center, a high-rise courthouse. But among cities, few are as sustainable as Austin, Texas, which recycles its trash so assiduously that residents generated only 0.79 tons of garbage per household last year, down from 1.14 tons in 1992. Austin's city-owned electric company estimates that "renewable" power, mostly from west Texas wind farms, will account for 6 percent of its capacity this year, nearly doubling to 11 percent by 2008. Beginning in 2001, customers were allowed to purchase wind power at a price guaranteed for 10 years. But since it was more costly than conventional power, most people who signed up did so out of conviction—until last fall, when rising natural-gas prices meant that conventional customers were paying more, and suddenly the company was overwhelmed with new converts to sustainable power.

Another thing the sun does, of course, is grow plants. Agriculture is being reshaped by the growing demand for corn to produce ethanol—which can be blended with gasoline to stretch supplies, or can power on its own the growing number of "flex-fuel" cars. Four billion gallons will be produced this year, a doubling just since 2003. Dave Nelson of Belmond, Iowa, now devotes as much land to growing corn for fuel as for food—the same variety—and after the starch is extracted for fermentation, the protein left behind gets fed to his pigs, which produce manure to fertilize the fields. "Not a thing is wasted," says Nelson, who is chairman of a farmer's cooperative that runs one ethanol distillery and is building another. The problem, though, is that people and livestock eat corn, too, and some experts see a time, not too far off, when the food and fuel industries will be competing for the same resources. Biotech companies are scrambling to come up with processes for getting ethanol from cellulose—the left-behind stalks and leaves of the corn plant, or other species such as switch grass that can grow on marginal land. One can envision vast farms devoted to growing fuel transforming the Midwest.

Even Wal-Mart wants to help shape a sustainable future, and few companies are in a better position to do so. Just by wrapping four kinds of produce in a polymer derived from corn instead of oil, the company claims it can save the equivalent of 800,000

gallons of gasoline. "Right-sizing" the boxes on just one line of toys—redesigning them to be just large enough for the contents—saves $3.5 million in trucking costs each year, and (by its estimate) 5,000 trees. Overnight, the giant retailer recently became the largest purchaser of organic cotton for clothing, and it will likely have a comparable impact on organic produce as well. This is in line with CEO H. Lee Scott's goal of reducing the company's "carbon footprint" by 20 percent in seven years. If the whole country could do that, it would essentially meet the goals set by the Kyoto treaty on global warming, which the United States, to the dismay of its European allies, refuses to sign.

Wal-Mart's efforts have two big implications. One is cultural; it helps disprove the canard that environmentalists are all Hollywood stars. Admittedly, some of them are, like "Entourage" star Adrian Grenier, whose renovated home in Brooklyn will have wall insulation of recycled denim, or Ed Begley Jr., who likes to arrive at show-business parties aboard his bicycle and markets his own line of nontoxic, noncaustic, biodegradable, vegan, child-safe household cleansers. (Begley concedes that "there are some insincere people in this community" who may have latched onto the environment because Africa was already taken, but, he says, "even if you're only into this cause for a week, at least you're doing something positive for that week.") But it wasn't movie stars who snapped up 190,000 organic-cotton yoga outfits at Sam's Club outlets in 10 weeks earlier this year.

And even as "green" products make inroads among Wal-Mart's budget-conscious masses, they are gathering cachet among an affluent new consumer category which marketers call "LOHAS": Lifestyles of Health and Sustainability. "The people who used to drive the VW bus to the co-op are now driving the Volvo to Whole Foods," exults David Brotherton, a Seattle consultant in corporate responsibility. Brotherton estimates the LOHAS market, for everything from organic cosmetics to eco-resort vacations, at up to $200 billion. This is the market targeted by AOL founder Steve Case, who has poured much of his fortune into a "wellness" company called Revolution (it will own eco-resorts and alternative health-care ventures), and by Cottages and Gardens, a publishing company that is launching an upscale sustainable-lifestyle magazine in September called Verdant (a chic synonym for "green"). Their younger counterparts get their green news from places like Grist.org, whose founder, Chip Giller, sees the site as participating in a "rebranding of the environmental movement" away from preachiness and toward creating jobs, enhancing national security and having fun.

The second effect of Wal-Mart's entry into environmental marketing is to give eco-awareness the imprimatur of the world's most tightfisted company. "If they meet their [20 percent] goal," says Jon Coifman, media director of the Natural Resources Defense Council, "it's going to demonstrate irrefutably that reducing your carbon footprint is not only possible but financially efficient." Andy Ruben, Wal-Mart's vice president for "strategy and sustainability," said the company had assumed that certified organic cotton would cost 20 to 30 percent more than the ordinary kind, grown with pesticides and synthetic fertilizer. But when its representatives actually talked to farmers, they found the organic cost about the same. Within five years the company intends to sell fish only from certified sustainable fisheries in the United States. Wal-Mart, Ruben says, plans on being in business a long time, and it wants fish to sell.

Wal-Mart also has been on the defensive over the way it treats its employees, suppliers and competitors, which may play a role in its desire to be seen as a good corporate citizen. But to give it the benefit of the doubt, it's run by people, and they have children, too. It seems as if American business must be filled with midlevel executives like Ron Cuthbertson, senior vice president of supply chain and inventory management for Circuit City, who dutifully justifies each of the chain's environmental initiatives—substituting reusable bins for cardboard shipping boxes, establishing consumer battery-recycling centers and so on—in bottom-line terms, but then can't help adding: "I personally have a passion for this." It can almost be described as a struggle for the soul of American business, which might help explain why a top corporate executive once showed up in the office of Paul Anderson, chairman of Duke Energy Corp., to perform a mock exorcism. Anderson is an outspoken advocate for controlling greenhouse-gas emissions, and his fellow CEO suggested he must have been possessed by the spirit of an environmentalist. Some other CEOs, Anderson says, will agree with him in private but hide their feelings in public. "Part of it," he muses, "has to do with how close someone is to retirement: they think, *if I can just get through the next few years without addressing this."*

In assessing Anderson's soul, it should be noted that his company is particularly heavily invested in nuclear power, an alternative to fossil-fuel plants that produce no greenhouse gases, so his concern for the Earth happens to coincide with his company's interests. So much the better for him, compared, say, with Ford chairman Bill Ford Jr., a strong environmentalist who almost alone among auto executives concedes that cars contribute to global warming. Yet Ford has struggled to impose his views on the industry, or even the company that bears his name. He turned the historic River Rouge plant into one of the most environmentally sound factories in the world, at a cost of $2 billion. But Ford has had to back away from a promise to improve gas mileage on its SUVs by 25 percent and to increase hybrid production to 250,000 vehicles by the end of the decade. The company, which loses money on hybrids despite their higher sticker price, said it would join the other two U.S. carmakers in making more flex-fuel cars instead. DaimlerChrysler just announced that it will begin importing its Smart microcar from France, a vehicle just nine feet long that gets up to 69 miles per gallon. "Putting a product like Smart in the marketplace," says Reg Modlin, director of environmental and regulatory planning, "shows that we're trying."

Looked at one way, these are thrilling times, the beginning of a technological and social revolution that could vault our society into a post-post-industrial future. "If you mention green tech or biotech in a presentation," says Lane, the venture capitalist, "you'll get your funding before you get to your third slide." On the other hand, we may just be kidding ourselves. Can bicycles and switch grass really offset the effects—in pollution, resource depletion and habitat destruction—of a billion Chinese lining up to buy cars for the first time? Domestic oil production has been declining for years, and the United States now imports 60 percent of the 20 million barrels it uses every day. It's nice that Jane Cremisi, a mortgage consultant in Newton, Mass., washes and reuses her aluminum foil and patronizes ecofriendly hotels like the Lenox, in Boston, which composts its food waste. Or that Melinda MacNaughton, a former dietitian from El Granada, Calif., cleans her house with vinegar and baking soda. But you cannot save the world with anecdotes. Is the relevant statistic that sales of hybrid cars doubled last year to 200,000—or that they were outsold by SUVs by a ratio of 23-1?

Still, when you look at all the United States has accomplished, can the challenge be so far beyond us? Marty Hoffert, emeritus professor of physics at New York University, doesn't think so. "If the United States became a world leader in developing green technology and made it available to other countries, it could make a big difference. For $100 billion a year, which is at least what we're spending on Iraq," it could be done, he says. "People understand the urgency," says Fred Krupp, executive director of Environmental Defense, "and they see the economic opportunities." It will take political will, though, and in that sense every mile Howell rides on her bicycle achieves more than it saves in petroleum; it raises consciousness and awareness. And it will have to enlist people like Steven F. Hayward, resident scholar at the American Enterprise Institute. "There's no problem environmentalists can't turn into an apocalyptic crisis," says Hayward (who agrees that the Earth is warming but thinks civilization is likely to survive it). Yet of all things, this hardheaded acolyte of the free market worries most about species extinction, among the most rarefied of ecological concerns. But, you see, Hayward has a young daughter. And she wants to be a zookeeper when she grows up.

With Jessica Ramirez, Karen Springen, Brad Stone, Karen Breslau, Keith Naughton, Jamie Reno, Ken Shulman, Matthew Philips, Staci Semrad, Margaret Nelson, A. Christian Jean, Andrew Murr and Jac Chebatoris

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