

GREASY RIDER



**Two dudes,
one fry-oil-powered car,
and a cross-country search
for a greener future**

GREG MELVILLE

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Mark Ambassadors, and Iggy began insisting I call him Your Eminence).

Upon returning home, I kept mostly mum on Al Gore. Since Vermonters worship him more than Michael Moore—and nearly as much as God herself—I knew my friends wouldn't want to hear anything negative. But one Thursday afternoon a short time after, I couldn't help giving the rundown of events to a buddy—whose politics run just this side of Che Guevara—while we watched his son and my daughter swarm around a ball with a group of other three- and four-year-olds at kiddie soccer practice. He listened quietly until I finished.

"I don't care," he finally said.

"Say again?"

"Well, I don't trust politicians. That being said, Al Gore has done a lot for the environment. He's gotten a lot more carbon dioxide out of the atmosphere than he's put into it."

"So you're willing to look the other way," I said.

"Yes, I'm willing to look the other way."

"Even though he might be considered a hypocrite."

"Yes."

"This still doesn't solve my problem of finding the ultimate green home."

"No it doesn't."

Another soccer dad who had been listening to the conversation joined us. "You know, I know a family who live in just what you're looking for," he said. I doubted it.

"I'm not talking about a hippie cabin in the woods where they burn cow chips for heat," I told him.

"No cow chips. They got a wind turbine for energy, and they live like civilized people. It's the real deal."

"Please tell me they're in Colorado. Or maybe Holland," I said, not wanting to hear I could have completed the errand without missing a single dinner at home.

"Nope, the house is about about twenty miles from here. Just built."

House envy, revisited

David Pill and his family live on forty-four broad acres less than a half hour from downtown Burlington in the heart of Vermont dairy country. Their home—a boxy, modern take on a traditional farmhouse—is surrounded by green pastures carpeting a narrow valley in the foothills of the Green Mountains. A few houses can be seen in the distance from theirs, close enough to offer at least a morsel of contact with humanity but far enough that the Pills could prance around the yard naked without anyone being the wiser. About a hundred yards behind the house stands a wind turbine atop a ten-story-tall tower, which, on the day I visited, was spinning so fast in the gentle breeze that its three white blades looked like little more than a blur.

I was jealous of Pill before I even knocked on the freshly painted front door. The surrounding scenery alone made me want to move in with him. (Forget that guy outside Chicago.) Most impressively of all, his magnificent two-thousand-square-foot home was one of the first in the country ever to receive platinum certification for Leadership in Energy and Environmental Design (LEED). This is the ultimate environmental seal of approval from the U.S. Green Building Council. To earn it, a new structure must receive nearly perfect scores in five categories:

sustainable site development (meaning, someone can't cut down a bunch of trees or level a mountaintop to build it); water savings; energy efficiency; materials selection (or, using materials that are locally produced if possible, nonsynthetic, and never, ever taken from, say, a rain forest); and indoor environmental quality (in other words, clean indoor air, comfortable heating and cooling, and lots of natural light).

Pill, a tall man with chocolate hair, blue eyes, and a square jaw, is an architect who runs his own firm from an office in the nearby town. We stood on the broad porch and he described how he came to move there with his landscape architect wife and their young son and daughter.

They had been living in the Boston suburbs but craved the slower-paced existence that rural Vermont offered, he said. They spent several months looking for the right property—near quality schools—where they could build a green home. To meet LEED standards, the Pills needed to find land that wouldn't require much clearing or create much waste if an existing house or structure was torn down. Then they discovered this parcel in Charlotte, so exposed to steady prevailing breezes that the farm next door is called Windy Acres. At the time, a prefabricated indoor horse riding arena, which could easily be dismantled and recycled, stood in the middle. Upon passing papers, the Pills quickly drafted construction plans, placing the house on the footprint of the horse building—with a wind tower erected beside it for power.

"We spoke to all the neighbors before even seeking a permit for the wind turbine," he said. "There wasn't one person against it. They thought it was so great."

"So I assume you designed the house yourself?" I asked.

"I did."

"That's very Mike Brady of you," I said, unable to resist adding pop culture into the conversation. Sometimes I forget that not all people were reared on cheesy 1970s TV the way I was.

"What?" he asked.

"Mike Brady. Of *The Brady Bunch*. He designed his house for his family, too."

Pill gave me a blank look. "Oh."

I changed the subject to construction. Pill didn't serve as general contractor—a Vermont green builder did—but as architect and owner he oversaw everything, from big-picture work like tweaking actual design elements down to the minutiae of helping choose the actual building materials (a not-so-easy task when trying to conform to LEED standards). Nearly every plank, pane of glass, plumbing fixture, piece of siding—everything—was chosen with keeping a small carbon footprint in mind. For instance, the countertops and downstairs floors are an ornate, decorative concrete poured by a nearby supplier. The hardwood upstairs floors are maple milled by a Vermont lumber supplier. The porch decking is cumaru, an immensely durable South American hardwood harvested in a sustainable forest. The roof is galvanized aluminum.

For the sake of balance, it should be noted that the twenty-two-foot-long rotor blades of the Bergey Excel wind turbine behind the house are made from fiber-reinforced plastic, coated by polyurethane paint. Not exactly the most earth-friendly materials. But the turbine produces nearly as much energy in a year as the Pills consume, including for heat. After state and federal renewable energy rebates, the turbine cost the family about \$27,500 to install. That works out to about \$150 a month

payment, including interest, on a thirty-year loan at 5 percent. Right now my average monthly utility payments are \$300, and they're constantly on the rise—so the disparity between me and the Pills will only multiply over time.

Honey, I shrunk the American dream!

The turbine and the house are actually both connected to the local power lines. When the turbine produces more electricity than the Pills are using, the electric meter essentially spins backward as they sell the excess to the local power company. On the rare occasion when the wind dies, the electric meter spins forward as they buy their power from the grid.

"To use less electricity than the turbine generates, do you have to take any extreme energy-saving measures, or can you live a normal American power-hogging life?" I asked. He responded with the same stare as when I made the Brady reference. I elaborated. "Like, do the kids have a limit on how long they can use the PlayStation to save power?"

"They don't have anything like that," he said.

"What about a giant-screen plasma TV? Can you still have one of those?"

"We don't. We don't really watch TV."

"But you could have one if you wanted to." I needed to know. I'd rather go without indoor plumbing than a home theater in my dream green house.

"Even if we produced twice as much energy as we do now, I'd still want to conserve, because we're sending green energy to other people on the grid," he replied.

I did the calculation, and much to my relief I found that he

could install that theoretical plasma screen TV if he wanted. After all, I visited him on a relatively calm day, and the turbine was generating 3 kilowatts of power (it can produce a maximum of 10 kilowatts). In the United States, energy use is measured in kilowatt-hours. (So if the power company is sending one kilowatt of electricity into my house for an entire day, I've consumed 24 kilowatt-hours. The average American home consumes 11,000 kilowatt-hours of power in a year.) To find out how much demand a wind turbine producing a constant 3 kilowatts—like the Pill family's was on that day—would meet during the course of a year, simply multiply the 3 by 24 (for the hours in a day) and then by 365 (for the days in a year). That equals 26,280 kilowatt-hours. Bingo!

Except for the lack of a home theater, the interior of the Pill residence seemed surprisingly normal. Stepping through the front door, I expected to see something out of a science-fiction movie, like the place where Woody Allen stayed in *Sleeper*. Instead, it seemed like a typical upscale American home. The appliances were no different from those in any other high-end kitchen, the furnishings were surprisingly conventional, and I didn't even notice the compact fluorescent bulbs screwed into the sockets throughout the house until David pointed them out.

The noticeable difference to the interior is the amount of natural light that enters through its south-facing triple-paned windows. There's almost no need to flip a light switch in most rooms during the day. When the sun is high in summer, small overhangs above the windows bar the rays from beaming full-bore into the house during the hottest hours, but in winter when the sun is lower on the horizon, light shines straight

through, generating enough passive solar heat that the family can turn the thermostat all the way down on even some of the coldest days.

This was it! I had found the ultimate green house. All that remained was one last crass, uncomfortable question: how much did it cost to build?

About \$150 per square foot, Pill answered. That put the total cost somewhere around \$360,000. "Ouch," I said. "Does that mean that green homes are out of reach for the common person?"

"No. Trade-offs are made in building any home. Some people might decide to put in granite countertops, which can drive costs up, while others will trade that off and use less-expensive pieces to keep costs lower."

"But sacrifices in luxury do have to be made if you're building a custom two-hundred-thousand-dollar green home, versus buying a two-hundred-thousand-dollar home in a new, regular housing development. To have those triple-pane south-facing windows for passive solar heat, you might have to give up something like that Jacuzzi bathtub that someone in a two-hundred-thousand-dollar nongreen home gets."

"Right."

"Or if you still want a Jacuzzi and the triple-pane passive solar heating, you might have to build a smaller house."

"Yes."

I thought about it. *Trade-offs have to be made.* I always envisioned my dream house as being pretty big. Not the scope of Al Gore's mansion but probably around what the Pills have. Now my dream home would definitely have to be sustainable—to eliminate my utility bills and lessen my carbon footprint much

in the way the Mercedes did—yet I didn't want to sacrifice luxury (see TV, plasma screen, above). So the trade-off would be size. This means I'll likely need to build a house roughly the same size as my energy-hogging fifteen-hundred-square-foot one. Is opting against supersizing such a bad thing? After all, fifteen hundred square feet was the American norm only a generation ago.

I thanked Pill and drove home on hilly back roads, basking in the passive solar heat that came through the windshield. I called Iggy.

"Your Eminence," I said. "I've got some good news and some bad news."

"Let's hear it."

"The good news is that the errand is complete. The bad news is that my dream home has just shrunk by almost a thousand square feet."

More Gore

Not long after I visited Pill's house, Gore announced his home's retrofit was complete. The mansion had earned gold certification under LEED standards because of its many energy-efficient upgrades, which reduced his natural gas consumption 93 percent and electricity use by more than 10 percent. Without being knocked down and replaced, it couldn't have received higher marks, someone from the U.S. Green Building Council told the press. Being the petty person that I am, the news disappointed me at first. *If I had waited a while, I could've found the great green home in Belle Meade after all.* But then I thought about the size of the Gore place compared with Pill's. Energy efficiency is only

one element to an environmentally friendly home. The other is size. Living in a ten-thousand-square-foot home is far from a sustainable model for everyone to follow. "Don't do it," the architecture professor told me. Relieved, I realized my drive to the dairy country of Vermont was necessary to complete my errand, after all, regardless of the news. So sorry, Al.

Chicago, Illinois, to Worthington, Minnesota

We're smoking now

On the third morning of the cross-country road trip, Iggy and I got into the Mercedes by 7:45 a.m., our heads dripping from the rain that drenched us on the twenty-foot walk from Jonathan's building to our parking spot in his gated lot near Chicago's Wrigley Field. The fifteen-block drive from there to I-90 took a painful half hour, and the highway offered no relief from stop-and-go traffic.

"Chicago people have to learn to drive in the rain!" I said. "If this traffic doesn't move soon, I'll SCREEEA AAMM!"

Iggy snorted. "You're gonna pop a blood vessel. What, you in a rush to get somewhere?"

"No, I just hate being STUCK HEEERE!" Were those chest pains I was feeling? Or was it indigestion? Was my left arm hurting?

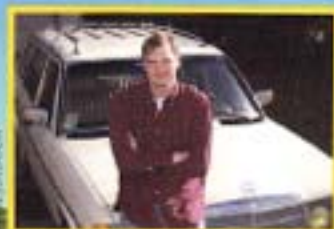
Road rage is as American as baseball, the Rubik's Cube, and Botox treatments. The seed, it could be argued, was planted by H. Nelson Jackson himself, before the first forests were cleared and swamplands filled to pave the nation's great highways. He transformed the concept of car travel from a novelty into a viable mode of travel. In Vermont I don't experience road rage. Rush hour is long if it lasts twenty minutes, and the nearby

Imagine driving coast-to-coast without stopping at a single gas pump.

Journalist Greg Melville was determined to do it. His college buddy joins him to ride shotgun, and these green-thinking guys—who're in love with the idea of free fuel—set out on an enlightening road trip. Their quest: to be the first to drive cross-country in a french-fry car. Will they make it from Vermont to California in a beat-up 1985 Mercedes diesel station wagon powered on vegetable oil collected from restaurant grease Dumpsters? And can they survive 192 consecutive hours together?

Traveling over 3,900-miles, they visit the solar-powered Google headquarters; the National Ethanol Council; the wind turbines of Minnesota; the National Renewable Energy Lab; an "eco-friendly" Wal-Mart; and the world's largest geothermal heating system.

Part adventure and part investigation into what we're doing (or not doing) to preserve the planet, *Greasy Rider* is upbeat, funny, and full of surprising revelations about sustainable measures within our reach.



GREG MELVILLE is a freelance journalist who's written for such publications as *Men's Journal*, *Outside*, the *Wall Street Journal*, and *National Geographic Adventure*.



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