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## **Zero Carbon & the Great Extinction**

By Christopher Bernard

It was Sam who got me thinking, one day, after I read a book about how mankind was causing the greatest extinction of species on earth in 65 million years. Sam's my dog, a black Labrador with deep, sad eyes. It was what I saw in those eyes that changed my mind – actually, it changed my whole life. My name is Johnny José Brennan, and I live in Davenport, Iowa, not far from the Mississippi River.

I read the book over one of my few weekends away from the office. As I read, I often shook my head in alarm and amazement. I'd followed reports on global warming and humanity's other devastating effects on other living creatures over the years, and fully accepted these were serious issues, but I'd had no idea about this; I'd believed it

was mostly a question of rising oceans and more violent hurricanes and unstable weather that would have an effect a couple of generations down the road. But this was a different order of magnitude altogether.

I vaguely remembered my Uncle Jésus (on my Mexican mother's side) railing against what he called "ecocide" when I was little, and something he had called, with a melodramatic flourish, "the coming holocaust of the species." My dad, an Irishman with family still in Donegal, had claimed global warming was all made up by liberals, that environmentalism was just a way for Big Science to get grants from Washington and take more of people's rights away; he and his brother-in-law had had many a memorable shout-'n'-out (angry shouts followed by even angrier, if possible, slamming of doors) while I was growing up, so I dismissed both of them, my father's conspiracy theories and my crazy uncle's rants about "species collapse." But now I wasn't so sure.

At first I didn't want to think about it, and tried to forget the book as soon as I finished it.

But it kept coming back to me, like a bad dinner. I found myself thinking about it whenever I was relaxing or trying to get to sleep. A week later, I went back and reread the book cover to cover, marking the margins with exclamation points and question marks. Then I researched the book's findings on the internet.

My research matched the book's claims, and then some. The golden frog had in fact recently disappeared from the wilds of Panama and several more species of amphibians had disappeared just over the last few years. Many coral reefs around the world were in steep decline. Monarch butterflies were beginning to disappear on their long fly route between Mexico and Canada. Fish stocks were in danger of collapsing. Oceans were growing more acidic, glaciers were retreating at a historically unheard of pace. Methane plumes were rising from the tundra. The Arctic icecap was on the verge of disappearing in the summer. Animals like my dog Sam, like Cleopatra and Whisper, my parents' ageing felines, and much of the wildlife I had grown up with just outside Cleveland—from birds, to trees, to grasses, to wild brush, to insects—might be in jeopardy by the end of this century. The larger mammals might eventually be wiped out, just as the brontosaurus, the mammoth, *T. tex*, the saber-toothed tiger, the mastodon, the great auk had been.

And all for a single reason. Us. People. And not just powerful, rich, selfish, greedy people – no: it was because of people like me, whose way of life – simple, even modest as it was – was already beginning to kill thousands of creatures that would not have a chance to have progeny, to have a future.

At one point I thought, “So what? Species go extinct all the time. We’re just helping clean up evolution. If a species can’t survive, maybe it shouldn’t. It’s like capitalism.”

Then I remembered what I had read in the book: “ordinary” extinctions (that is, before us) took place very slowly over time – maybe one major mammal species had gone extinct on average every 700 years, maybe one amphibian every 1,000. What we were doing wasn’t natural selection; it was a holocaust.

Then there was the possibility that, by tearing apart the web of life that supported human life, we might be leading ourselves to extinction as well. My complacency vanished like the fog over the Mississippi on a summer day.

The reasons for what was happening were both simple and overwhelmingly complicated. I’d read some of this a hundred times before, though it had never really registered. But the book added more that I hadn’t before even heard about: People were moving species around the planet at a rate never seen before. People were forcing species out of their evolutionary niches till they had no place else to go. People had targeted some species, like the great auk – and the bison, nearly – to extinction for sport. People had changed as much as fifty percent of the earth’s land surface, through everything from farming and pasturing to cities and highways to river dams to landfills and the littering of oceans, to introducing thousands of new chemicals to soil and water tables, to mining and oil drilling and gas fracking, and everywhere humans invaded, most of the other species had to get out. Or they died out.

Above all, we were burning too many hydrocarbons – from coal to oil to natural gas – unleashing enormous amounts of gases into the world’s atmosphere that trapped heat, causing the atmosphere, and therefore the world as a whole, to become too hot to support its current inhabitants, including, perhaps, people. Nothing new there. It was something that everyone knew and yet nobody really believed.

To top it off, there was ocean acidification, which was another result of having high amounts of CO<sub>2</sub> in the atmosphere. The oceans were being turned into a cross between a desert, a dump and a bottle of coke.

Human civilization, *my* civilization, had become almost entirely dependent on the energy derived from hydrocarbons, from transportation on the ground, in the air and across the oceans to the electricity that lit and warmed and drove everything from heaters to refrigerators, from air conditioning to fans to lighting, from televisions to telephones to computers at home and at work. There were so-called alternative energy sources, but none of them seemed remotely sufficient to substitute for hydrocarbons. And some of them had even worse and more dangerous waste products, such as nuclear power.

So the problem was enormous. Most people were just not willing to face its full implications (and who could blame them?). Many wouldn't even admit there was a serious problem. Or they might admit it, but still they didn't believe it, because if they did, they would move heaven and earth to stop it. But even those who admitted it did little more than complain, about the corporations, the politicians, the oil companies, the president, the rich. They did nothing about it. And so there seemed to be no way out. The more I learned, the more hopeless any action seemed to be. So, being the average fellow I always thought of myself as being, I tried to stop thinking about it. I put my research away and spent more time on video games.

One day during a freak warm spell between the polar vortexes that were freezing much of the country, I was sitting on the front stoop after walking Sam. I was thinking about nothing in particular as I looked my big, black dog in the eye. Sam sat down on the sidewalk and looked back at him, placidly and confidently. Sam wagged his tail a couple of times and seemed to stare right through me with that far away, soft-focus way he had, and panted, his tongue hanging out trustingly.

In Sam's eyes I could first see a reflection of my own ugly mug and the sky above my head. Then my mind went off into a daydream, and suddenly in Sam's eyes I saw a world from which forests, fields, meadows, trees, birds, flowers, grass, had been removed as if a carpet had been ripped from a floor; much of the world had become sand, dust and rock, with a sea emptied of life and a sky burned by a ferocious sun. This vision of total

desolation vanished as quickly as it had appeared, leaving behind Sam's trusting, open-faced stare.

But now his expression, always slightly quizzical as if trying to make sense of his owner's often senseless behavior, seemed to say, "Why are you destroying our world?"

"No," I said suddenly out loud (I remember actually saying this). I held Sam's head between my two hands and looked directly at him. "I can't do it, I can't do this anymore, Sam. I'm not sure what to believe here, I'm not sure what is good or even right. But I know one thing. I know what bad is. And this is definitely *bad*. *Mucho malo!* It's beyond *bad*. It's beyond *wrong* ... Can I believe what the climatologists are telling me? But can I afford *not* to believe it? So what does that mean, Sam? What would you do?" I stared solemnly at Sam, who gave my chin a lick. "Kiss your stupid, daydreaming, talking-to-himself pet human – thanks a lot! Seriously, Sam: what should I do? Well?" I looked deep into Sam's eyes. "What can I do? I can't control the world. Right? I can't control what other people do. Right? I don't have the power, I don't have the money, I don't have the talent. Heck, I can't even control what you do, you big, silly mutt! I can only control, and sometimes just barely, what I do." I paused and looked away, and repeated, more softly, "I can only control *what I do* ... "

I stayed there, staring pensively into space, till the cold got to me, then I pulled Sam with me back inside our apartment building.

Later, in the darkness of early morning, I woke with a start: an idea in my sleep had struck me like a slap of cold water. I now knew the two essential things I had been asking himself last evening: exactly what it was I was no longer going to do, and, perhaps less exactly, what it was I *was* going to do. I couldn't by myself bring the species back to where they might belong, or unhumanize the surface of the earth, or bring back the great auk. And I couldn't get the world off hydrocarbons, which was the biggest single threat. But maybe, just maybe, I could take myself off them. Or at the very least reduce my usage, take it down, take it down as far as it could go. I did not want to leave behind a world that had destroyed, or was destroying, the things in it I had always loved. It would make me feel like a murderer. Worse than that: I would be a kind of murderer—an accomplice, an enabler—if I didn't change the way I lived.

My mother, a Mexicana from Chiapas, had wanted me to be Catholic, but my father, whose Donegal family had come over after the Great Famine, was ferociously secular and nixed church attendance; I himself started going to church in my late teens out of curiosity, to see what all the excitement was about. And to try to answer some basic questions I had, questions that were closely related: What could I believe, if anything? If I couldn't believe *anything*, as some of my more liberal friends pretended to do, how would I be able to live at all? (Some of my radical liberal friends tried to make a joke of their despair, but their game of life-in-death seemed a dead end; worse, it was part of the problem.)

So: what should I do with my life, now that I was about to be launched into adulthood and a perpetually globalizing economy? And where in heck was the world going? Because the world seemed to hurtling toward something deeply scary and very strange.

The university where I went didn't help answer my questions: when not ignoring or gently ridiculing the "big questions," all my teachers seemed really to be interested in was budgeting their departments and keeping students there as long as they could milk them for grants. So I decided to give the churches a try: they seemed at least to be asking the same questions I was, and not pretending the questions didn't exist or weren't worth their time. But I was underwhelmed by what I found: Christians talked a good deal in church about loving each other and doing the right thing, and then, when they left church, went on back to doing whatever they wanted, making "I believe in Jesus" their excuse. I liked the elaborate Catholic ceremonies and the intellectually complex theology, but the hopeless moral conservatism (Anti-gays? No women as priests? No contraception? Who were they kidding?), to say nothing of the sexual scandals in the priesthood, made me profoundly mistrustful; what other skeletons were about to come out of that closet? I liked what I heard coming from Pope Francis, but it was hardly enough.

Then one Sunday I found himself at the opposite end of the Christian spectrum, in what looked like an evangelical revivalist meeting headed by a Billy Graham lookalike. It was creepy, and I decided I'd had enough of organized religion. Religion was a nice idea, but did it actually improve anybody? Then I read some Christopher Hitchens and Richard Dawkins, but the "new atheists" were even more obnoxious than the "religies." If there is

anything worse than religious fanaticism, it's secular fanaticism – and these people were trying to prove a negative, no less, which even I knew was logically impossible. These people called themselves “rational”? After the last hundred years had shown what unfettered secularism could do, from Lenin to Hitler to Mao to Pol Pot (and let's not forget the Great Depression and now the climate crisis and the Great Extinction, all thanks to industry, science, technology and capitalism), how could they possibly look themselves in the mirror every morning? There seemed to me to be only one answer to that one, but I will keep it to myself; it's just too ugly.

No one seemed able to offer an answer to my three questions—What can be I believe? What should I do with my life? Where was I, and the world, going?— in a way that made sense.

There was one thing, however. I felt sure about: one of the principal things I wanted was to be good, and in order for that to happen, I had to do good – for the world to be a better place, and definitely not a worse one, for having had me, Johnny José Brennan, in it. I didn't need wealth or power or fame (though I wouldn't shoo them off if they came my way); I wanted *goodness*. This seemed a simple enough goal. The trick was that I would need to know what exactly *was* good.

The world was filled with people who thought they knew; for them it was obvious. However, whenever I put these “obviously good things” to the question, I discovered things that could not be called “good” under any circumstances. The middle-class families I had grown up with, and indeed in, and who ran the schools, the businesses, the government, provided answers that were hopelessly inadequate to my questions, or they had given up asking and advised a kind of sensualism and skepticism about any answers that went beyond the most craven materialism; in other words, they had given up and in a rather cowardly way advised everyone else to give up too. This position was not one I was prepared to accept. Then there were the public philosophies: The free-marketers denied the devastation their economics brought to society, the poor and the environment and the spiritual despair under the vast wealth and power it created, the bad taste in the mouth its prosperity left; like an addiction that compelled you to take more and more of what only left you feeling more and more dissatisfied and anxious, even desperate. The liberals denied the weakening of social ties and personal sense of

responsibility caused by their politics, and the hopeless, self-refuting logic of their general position, the blatant contradiction of their intolerant call to be tolerant of all – except their critics, the patronizing condescension behind that supposed “tolerance” (which was often a species of barely concealed contempt) and their undermining skepticism that destroyed every belief and ended in a self-justifying nihilism. They were also self-deluded, refusing to recognize that their individualism in the social sphere was the mirror image of the individualism of the free-marketers and capitalists they pretended to oppose. The religious were often fanatics or willfully ignorant, the secularists hollow, narcissistic and randomly destructive. Buddhists, “spiritualists” and New Agers often seemed acquiescent, passive and smug. Humanists refused to recognize that Hitler, Stalin, Mao and serial murderers were no less human than Mother Teresa, Gandhi, Albert Schweitzer and Mozart: the history of the last two hundred years had made humanism a dead issue, if not a cruel farce. And on it went.

I couldn't even begin to figure this out at the time, so I stuck my questions in the back of my mind and hoped for the best: half-way usable answers might come to me someday, if I was just patient. Then I learned about the Great Extinction, and the questions fell away as the answer rose inside me like a shout.

I'd had been offered a job in Davenport in 2009 and, given the collapsing economy at the time, said yes even before they'd finished making their offer. I hadn't regretted my decision – Davenport isn't exactly the most exciting town I've ever known, but I felt comfortable there gaining professional experience until I felt ready to tackle something more high-powered in a major urban center – Chicago, New York, San Francisco. It was 2013 and I had started getting itchy. Maybe this was the year to start looking, now that I would soon have the necessary five years under my belt, to prove my stability and motivation.

I'd met Kathy, a petite Iowan brunette grown on corn and Midwest ambition under her deceptively placid exterior, at a gym downtown; I had liked her looks (her eyes could almost be Mexican, though she claimed only English and German in her background) and her quiet but no-nonsense wit; I think she liked my polite manners, big shoulders, good prospects and bad jokes; we had been together since 2012 and I had told



her of my plans to “go north” in a few years. She had her own career to plan for, and it seemed to be understood that if I left she might not be able to follow me. This bothered me at times, but it was to be expected these days. (“Feminism”: another “god” or in this case “goddess that had failed”?) I liked her independence but it came at a price. I was also honest enough to admit that I liked my own independence too, very much indeed. Autonomy and commitment can make a hot date, but marriage? I don’t know, yet.

I’d gotten a dog. My family had always had pets: I’d had gerbils when I was a kid, and we always had at least two cats, usually runaways we’d picked up till they ran away again, plus a long-lived German shepherd named Rufus I walked twice a day from the time I was six: walking the friendly, enormous canine three times my own size up and down the road at the edge of the Cleveland suburb, along a line of farm fields and woods that began across the way. It was partly because of those walks that I came to know and became fond of wildlife, the furtive, beautiful wild birds, the oaks and spruce and wild bushes, the snapdragons, dandelions, crocuses, daisies, bluebells, the squirrels and foxes and country mice and moles, the bumble bees, daddy-long legs, ants, caterpillars, lady bugs, even the worms, that I saw and visited regularly on my walks with Rufus in the early mornings and under often spectacular sunsets.

I bought the black Labrador puppy named Sam the same year I met Kathy, and I walked him twice a day to the nearby park, the black, furry beast slobbering and smiling beside me with his sad, huge eyes and intense loyalty and affection for the young man I suspect he was certain was just as loyal to him – after all, wasn’t I a dog too? Too bad I had lost most of my fur, except for a little shaggy bit on the top of my head, in a fight, must’ve been, and had been scared up on my hind legs pretty much permanently – I was a good doggie, nevertheless, or at least I tried my best, and above all I was Sam’s.

The first thing I thought of after making my decision to reduce my carbon usage was using a bicycle to get to work; I could save the car for the weekends; that might reduce my hydrocarbons by ten percent. This worked fine for a while, after the three January blizzards. But then the polar vortex descended yet again. And when my bicycle jammed for a third time in an immense snowdrift, this time just off West 53rd Street,

three miles from work, I decided this was one reduction I would have to save for the summers.

The next thing I did, with more immediate success, was to change all the light bulbs in my apartment to low-energy bulbs (those infamous CFLs) and keep my lights off whenever I didn't need them. This meant keeping most of the apartment dark most of the time (the apartment had no direct sunlight), which creeped Kathy out the first time she saw it, until I explained what I was trying to do. I had described to her my experience of reading the book about the Great Extinction; her response had been that talking about it made her feel very uncomfortable, but she understood my concern and supported me in my efforts. She made a game of the darkened apartment, pretending she was an exotic-erotic female ghost come to steal my soul after seducing my body. "This is a ghost I could very well get used to, *chica-mi-vida*," I had said with a grin in my best Irish Pancho Villa voice.

I also kept the temperature during the day to the low 60s, which meant I had to wear sweaters at home, and it was even colder at night. Kathy did not like this at all, despite the excuse it gave for cuddling.

"From now on we're meeting at my place," she said after the second weekend shivering through hours of half-frozen darkness. "Not this ice cave."

Saving my corner of the planet might prove more troublesome than I had first imagined; I was getting a glimpse of the politics.

If I couldn't use my bike until April (wait, it rained most Aprils; make that May), I still could reduce the gas I used during the week by taking the local bus to work. This was awkward to get to (the nearest stop was five blocks away, though the bus stopped across the street from my office), and the timing was tricky: the bus rarely kept its schedule, and if I missed the right one ... well, regular lateness would not exactly help my performance review at work.

I could also use the bus to get to Kathy's on the weekend. If we wanted to go out, we could use her car. I was not entirely happy about my logic here, but I also knew that completely forswearing cars at this point was not an option.

So: by my calculation, within a month of my decision, I had reduced my regular hydrocarbon usage by almost 15 percent (yes!). That meant I was still creating some 0.9

cubic metric tons of CO<sub>2</sub> per week, of course, not including all of the hydrocarbons I burned, or had burned, by proxy, whenever I bought or used something that had been made or transported using oil, gas or electricity. And that was almost everything. (Ouch!)

Sam didn't seem to mind. I hardly noticed the darkness in the apartment, or the chill that never went away. If anything, I seemed happier to see me when I came home at the end of each day.

Kathy, on the other hand, was becoming irritable.

"This is becoming a bit of an obsession, you know," she said. "You're not going to stop global warming all by yourself."

"I know," I said. "But I can't do what everyone else is doing."

"What's that?" she asked.

"Nothing."

"I voted for Obama!" she said defensively.

"So did I," I said. "That's the problem."

"What do you mean?"

"He can't really do anything about it. Even with the Keystone farce. The energy companies are in control of, well, energy. And they only do what the consumer tells them to do. If we stop buying their energy, they'll stop making it. They're just doing what we tell them to do by buying what they sell. We stop buying, they stop selling."

"You think people will stop buying?"

"Yes. If they stop using."

"That'll never happen."

"It'll have to. People don't use tallow candles or whale oil anymore either. Or only in weirder head shops! They stopped."

"But we're addicted. It's worse than cigarettes. It's worse than heroin. People won't stop till it kills them."

"Maybe so. But I want to see if I can stop, not if the world can stop. I can't change the world. I can only change me."

Kathy stared a long time at him, then curled up next to Sam.

“Your owner is an idealistic nut,” she said to the great, sad-eyed, black-furred pooch and kissed him on the snout. He immediately licked her face. “See, Sam agrees with me.”

“Sam agrees with anybody who kisses him on the snout. Anyway, it’s not idealism, it’s common sense. If you were standing in the road and saw a ten-ton truck coming at you 90 miles an hour, what would you do?”

“What do you mean, what would I do? I’d jump the hell out of the way.”

“But that’s what’s happening to us. The problem is it’s coming in slow motion, and we can only react to it in slow motion: anything we do now will take a hella long time to have any effect. We don’t have much time to jump.”

I had noticed that many electrical appliances stayed on even when I turned them off; they invariably had a red light on, or some sort of LED; the only way to turn them really off was to plug each one into a surge protector with an on-and-off switch, and turn that off when I wanted to switch off a device. It worked: the red lights and LEDs went dead.

Before going to bed I’d turn everything off. I even reduced the heater thermostat to zero, and piled blankets on my bed; I wanted to see what it would be like to sleep in a completely unheated apartment. The dark apartment went dead silent, and I lay there, my arm around a natural, sustainable heat source, Sam (who liked to sleep on the bed with me when I wasn’t occupied with Kathy), thinking how pleasant it was to know that, at least right now, I wasn’t burning any energy at all—not a gallon, not a cubic yard, not a spoonful. Then I heard a hum switch on. Oh no! I’d forgotten the refrigerator. Of course! And I wasn’t about to unplug that – not yet, anyway. Oh well, it had been a nice dream. Would I ever have a moment when I was not burning, had not just burned, or was not just about to burn, carbon?

May finally came and I was able to bike to work regularly except when it rained, when I used the bus. I tried to telecommute, but my boss didn’t believe in it. Well, I thought, you can’t win ’em all.

One of the subtler problems was deciding what to eat: my first thought was to eat only locally grown produce, then I read somewhere that, since produce from farther away was grown in bulk, transporting it actually burned less carbon than transporting locally grown produce, which was transported in much smaller quantities. Nevertheless, on balance, I decided to buy local; hoping that some local producers used hybrids or would do so in the not distant future; heck, they might even use electric cars – though they would still be using electricity, a lot of which came from coal plants. Either way, it was at best a temporary solution; the only real one would be to grow at least some of my produce at home. I decided consulted my landlord, who okayed a small truck garden in the backyard.

“We’re on our way,” I told Kathy.

“No eggplant!” she said warningly. (She hates eggplant.)

“Oka-ay,” I moaned. (I love it. A relationship is a long sacrifice.)

A similar problem affected what I wore: most of my clothing came from Asia, and in fact for many things I had no option to buy even nationally let alone locally made goods. And I was not about to start sewing – I had to draw the line somewhere. What I could do was buy as few clothes as possible, and buy to last. This was easy for me as I had never been any kind of fashionista.

Kathy was getting restless with me.

“You’re becoming a monk,” she complained.

“I promise la señor-*i*-ta not tha-at, gor blimey!” I growled as I pulled her to the couch.

In June I planted cabbages, lettuce, zucchini and tomatoes; enough, all told, for a few dozen meals by the end of the fall.

But I had a larger food issue to confront: meat. World-wide meat production creates more greenhouse gases than the entire global transportation system, which meant one thing: I had to drastically cut down my carnivore habits. Best of all would be to stop eating meat completely, but, as I had told Kathy, I am not a monk, and I do not intend to become a saint either. The aim was serious reduction, not zero. At least not then. So I limited my meat consumption to weekends, with a double helping on Sundays (small vices were the reward for great virtue, I decided).

By midsummer I calculated I had reduced my carbon burn by at least twenty-five percent, especially when I cut back on air conditioning (not easy to do in the humid Iowa summers): I put it on only before going to bed, kept it at a relatively high 65 degrees, and ran it only four hours after going to bed at night.

Long-range travel was a challenge: there were no good alternatives to flight, especially due to the lack of high-speed trains in the U.S. (let alone Iowa). The only choice was to travel as little as possible. My family was in Ohio, and I took only a single short vacation a year, so I would fly to family reunions and vacation locally. Kathy told him, in that case I would be taking my vacations alone; she had no intention of limiting her vacations to an area bound by Michigan, Texas, Utah and Pennsylvania, thank you very much. Here I would have to compromise, and did, suggesting they vacation in nations with carbon-reduced infrastructures such as Denmark, or Germany, or Spain, thus reducing the rise in my carbon use by flying to those countries in the first place. Kathy agreed, if reluctantly: “But only if we go to places *I* want, like Nepal or Turkey, every other year.”

Yet, with all of the reductions I had put in place, I found himself feeling that I could do still more, and the idea came to me of living as close to a zero carbon life as possible. Now, of course, this was strictly speaking *not* possible, as carbon is an essential element of all life. But let “carbon” be shorthand for “hydrocarbons gotten from fossil fuels” and I might just conceivably be able to reach that goal, or come close.

To do all of this, I would have to own my home, so in the fall, I looked for a house on the foreclosure market. There was a messy fixer-upper on the outskirts of the city, going for a measly \$50,000, which I snapped up. Kathy, at the idea of my owning a real house, perked up, making domestic noises whenever I saw her. Even my environmental idealism didn’t put her off. I told her my long-term goal of going “zero carbon” and how I planned to get there, and she laughed, though whether it was at me or with me, I couldn’t really decide, and didn’t really care, as long as she didn’t actively thwart my plans.

In late September Sam and I moved into the little split-level with a front and backyard with an apple tree and enough room for two small gardens; I had just enough time for my first project: solar panels for the roof, which were installed by the end of

October. Winter was coming, so the panels might not be useful for a few months, but I had already developed a low-energy lifestyle and felt no great sense of deprivation. Sam loved the big backyard, which was much nicer than the apartment's; this was a move by the master that made sense. I also bought Energy Star appliances and electronics (fridge, washer, dryer, printer, TV, receiver, even a new water heater) and a water-conserving showerhead and toilets.

I love books, music, baseball and movies, and I'm an avid DVD fan. Now that many online movie providers were streaming video, I had less use for mailed DVDs. In fact, by reading all of my books, listening to music, and watching movies and sports online, over a year I could eliminate a large amount of my previous carbon use. But there was a huge catch: I would be bargaining away my privacy big time. Big Brother was watching everything I did online (including ebook readers), and I was not naïve enough to believe "innocence" was any protection in a world that seemed to have long gone crazy over the delusions of wealth and power that had accumulated in amounts beyond anything a human being could actually use. So, as a compromise, I restricted my books, movies and music to what I could get at my local library and, when necessary, interlibrary loan, as well as to visits to movie theaters, many of which were projecting digitally anyway. I only read news and watched sports, and did unavoidable email, online. This also saved him money.

It was a long hard winter, the Year of the Long Blizzard – even worse than the year before, the polar vortex swept down continuously from the Arctic from December through March, warning humanity (Canadians and Americans in particular) that by messing with the temperature of the planet, they were endangering a lot more than they realized. Sam and I (and Kathy, who practically had moved in on the weekends) shivered from the poor insulation (another project for next year) but got through it better than we had predicted to each other. It even strengthened the bond between Kathy's and me (nothing could have strengthened Sam's and my bond, which was already made of titanium); Kathy even became an enthusiast. "Global warming or not, we've got to do something about this. And why not where we live?"

Kathy had found a website out of Berkeley (naturally, I thought, with a grin) that calculated the average CO<sub>2</sub> emissions per household for every Zip code in the United

States. Their Zip code gave up an average of 51.2 metric tons of CO<sub>2</sub> per household to the atmosphere each year. The website also broke down the emissions by category: Transportation and Housing took up almost 65% of the total, Food almost 15%, Goods and Services almost 10% each.

The Berkleyites also provided a helpful calculator so we could calculate roughly my own emissions measured against the local average. By the end of my recent commitments I discovered I had reduced my total emissions by 50% of the national average of 49 tons; that is, to about 24 tons per year. This came as a huge relief until I measured our use against the world average, which was 10 tons. Ten tons per household across the world still meant about 17.5 billion metric tons of CO<sub>2</sub> put into the atmosphere each year – still too high. We had a way to go.

By the spring, we had made our next plans.

These included:

1. Doubling the house's insulation, weather-stripping and caulking, and installing Energy Star windows (This was news to me too.)
2. Installing a programmable thermostat
3. Putting in a solar hot water heater for the summer months
4. Adding a water filter system so I didn't have to buy bottled water for exercising
5. Adding solar panels to the house's southern exposure and the backyard's southern fences
6. Junking my desktop computer (It had sentimental value, but did I really need it with a laptop, a notebook and a smartphone?)
7. Growing vegetables and herbs in the front and back yards
8. Removing the telephone landlines and making their cell phones their sole telephones.
9. Reducing my junk mail (my Xmas catalogues had grown out of sight the last two years) by contacting a nonprofit service that would do that.
10. Buying a bicycle for Kathy.



From spring onward, we went down the list, completing most by the end of summer; the only big hitch was adding solar panels to the fence, the neighbors objecting on aesthetic grounds.

Our monthly utilities bill plummeted; in September, when they turned off the air conditioning for the year, they were able to supply electricity to the grid and received an energy credit for October.

“It may not bee,” I said to my lady, “what wee in the bog call zero carbon exactlyee, but what a deal it bee, muchacha!”

At the end of the year, I took an online carbon footprint test, and discovered that with this new energy lifestyle, I’d reduced my overall carbon consumption to roughly one-third that of the average American. This rather shook me, because I realized that if all Americans did the same, or something similar to what I’d done, global warming would become a far less overwhelming problem that it had seemed up to now; in fact we might be on our way to a solution, and possibly a permanent one, that could be transportable to other developed countries and to the world. And not only that: I was saving money.

It was not idealism. It was common sense.

“Zero carbon,” I turned to Kathy. I had been daydreaming as we sat together on the sofa after dinner over Guatemalan coffee, with Pandora on in the background, playing a medley of cool jazz. “It’s possible.”

“But zero carbon means no burning,” said Kathy. “And no breathing.”

“Not really. We just have to offset our carbon emissions through something that converts CO<sub>2</sub> to oxygen and carbon. Like I can plant more trees.”

“Or grass.”

“Or pot.”

“Or rose bushes. Azaleas. Geraniums. I always liked geraniums.”

“Or pot.”

“You have a one-track mind. Anyway, isn’t pot still illegal in Iowa?”

“I love Iowa, but ... I guess it’ll have to be geraniums. And then we can offset.”

“How, big man?”

“By buying offsets for projects that reduce carbon. They’re doing reforestation and preservation in Mississippi and Brazil, and windmill and methane projects in India and New Hampshire, and energy efficiency stuff in New Zealand, and ...”

“Okay, I get it. So, you mean, it’s actually possible for somebody living in America today to go carbon neutral, and not live in a cave on nuts, tree bark and spring water?”

“Yes, Kathy.” And I sang, in an undertone, to a commercial jingle tune: “You can go, I can go, you and I can go, we *all* can go – ze-ro carbon!”

She snuggled up to him. “You can’t sing. But I like the sound of that ‘we,’ keemo sabe.”

I stopped, because the idea had just *really* hit me. It wasn’t an absolute fantasy. I – we: Kathy and Sam and I – could do go zero carbon. And if we could do it, maybe other people could, too.

Maybe it wasn’t so crazy after all.

I’d have to get the word out. I’d have to let people know that it was up to *us* to do something. We cannot wait for the energy industry. We cannot wait for the government, which is too much in the hands of the energy industry. The energy industry will do what we tell it to do. And how can we tell them? By not using their product. We’re the bosses, I realized. We’re the CEOs. They will do anything to please us. All we need to do is turn off the lights. They’ll get the message.

It was time to set to work.

**Sources:** *The Sixth Extinction: An Unnatural History*, by Elizabeth Kolbert, Henry Holt, 2014.

CoolClimate Network: <http://coolclimate.berkeley.edu/>

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