



Denver Post/Cindy Enright

## **The Future on Your Street**

An excerpt from *Finding Real Wealth: A Portfolio of 17 Assets More Powerful than Affluenza*,  
by David Wann (St. Martin's Press, 2007)  
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Suburbia, 2012 -- The microwave beeps non-stop as Eric and Margo Petrovich set the table for dinner. They're listening to a feature story on National Public Radio about the rising costs of energy, water, and food, a topic much in the news these days. The year 2012 has been a wakeup call for the fifty-something couple whose four-bedroom Colorado home is becoming less affordable every month. They've talked about moving to a smaller, more efficient house -- closer to their jobs, stores, parks, and theaters -- with good solar orientation and insulation. But they really hate to give up their big suburban back yard, and what would they do with all the antiques they refinished themselves?

"... It's true that roughly half of the world's oil reserves are still in the ground," an expert explains on the radio, "but the fact is that it's more expensive to get these low-grade, remotely-located supplies. More importantly, we need more oil than we can get, since world oil production has reached its peak and will soon begin to decline. *Global demand now exceeds supply, it's that simple*; we want more than we can have. As prices rise for food, fuel, medicine, and consumer products, we are finally seeing how dependent we are on fossil fuels in agriculture, transportation, food processing, and the chemical industry... That's why oil at \$120 a barrel is having such a ripple effect on our daily lives..."

"Why didn't we see this coming?" Margo comments as they sit down. "Why didn't we insist on more efficient vehicles and appliances back in the '70s? ...New sources of energy and new ways to make chemicals from plants and waste?"

"Well, at least we're learning to use renewable energy," says Eric. "Did you know that wind energy now supplies electricity for 75 million of the world's households? That's about one-thirtieth of the electricity we need, and growing fast..."

They both want to feel secure and upbeat about the future, but instead they feel a little overwhelmed by the lifestyle changes that face them. Since 2006, the cost of gasoline has risen 300 percent and natural gas has increased six-fold as Canadian supplies became less dependable. Steadily expanding demand for large homes, hot tubs, computers, HDTVs, and an infinite fleet of must-have appliances has been matched by a persistent thirst for fuel. Record-setting weather extremes haven't helped, either. While there are now many models of hybrids and flexible fuel vehicles on the market, most of America's 230 million vehicles are still gas guzzlers, and it takes 10 or 15 years to replace that many vehicles. In 2012, Americans drive 25 trillion miles a year (the

equivalent of a billion times around the earth), and some households are paying \$200 or more a week just for gasoline. Eric and Margo's household, which accounts for 31,000 of those miles, is one of them.

The typical front lawn is not quite as shamrock-green as it used to be, as the price of water continues to rise, and Eric's and Margo's big back yard is becoming an expensive luxury. Last year they spent more than \$700 to water, fertilize, and mow it, and they are now considering taking some of the lawn out and planting a few fruit trees in one corner of the yard; and a bed of strawberries in the other. Like the rest of us, they're feeling the pinch of rising food prices, and they're reading up on techniques like "biointensive" gardening that supplies cartloads of food from small, well-tended spaces. Says Eric, "I didn't realize there were so many hidden costs in things like packaging and processed food." With all the recent media exposure, he's learned that nitrogen fertilizer is made from natural gas; that conventional pesticides are made from oil; and that producing a single hamburger patty uses enough energy to drive 20 miles. The water expended to produce that burger could supply half a year's worth of hot showers.

"Instead of Wheaties or Heart Smart, we may as well call cereal Petro Flakes," jokes Eric, "because the grinding, milling, wetting, drying, and baking of a breakfast cereal requires about four calories of energy for every calorie of food energy it produces. A two-pound bag of breakfast cereal burns the energy of a half-gallon of gasoline to manufacture." As you can see, Eric is beginning to dimly understand how much energy is contained in standard, energy-hungry products like aluminum, plastic, cement, computers, drinking water, and cars. For example, that the manufacture of an average desktop computer uses more than 10 times its weight in fossil fuels and materials.

Even energy itself "costs" more energy the deeper and more remotely we drill and mine. The oil industry once produced about 100 barrels of oil for each barrel of oil spent to bring the oil to market, while in today's economy each barrel returns less than ten. Many people are reassured because of the abundance of coal, biomass, tar sands, and hydrogen, overlooking the fact that it takes a lot of energy to convert these materials into transportation fuel.

These days, Eric and Margo hear unfamiliar words like benzene, anhydrous ammonia, and polyvinyl chloride more than they really want to. These are all petrochemicals used to produce familiar products like plastic, shirts, cleaners, adhesives, surgical gloves, safety glass, watchbands, building insulation, electrical insulation, packaging, lubrication, and pipes for plumbing. And every day the couple hears news stories about energy supply glitches that shut down factories, cause airline delays, or cause power outages in hospitals. "When a back-up generator failed in a St. Louis hospital," writes a New York Times reporter, "donor organs were lost, operations were terminated or completed under flashlights. Temperatures in the hospital hovered near a hundred degrees..."

The Colorado couple is learning that a scarcity of resources means more than rising prices. When there isn't enough energy to go around, choices need to be made

about *who will get the energy* – commuters, farmers, food processors, residents of trophy homes, surgeons, snow plowers, or vacationers? Answer: whoever pays the highest price. They're also realizing how energy-hungry their own habits are. For example, many of their friends live across the city, and it costs two gallons of gas to go see them. Keeping up with the latest media gadgets requires "buying" all the energy that goes into the manufacture, distribution and packaging of each new toy. Every long-distance vacation they take is filled with energy, and so are the clothes, furniture, and appliances their current lifestyle seems to require.

### Peak Civilization

Earth scientists can't definitively explain where all the oil we've been consuming came from, but their best guess is that most was formed when the algae and plankton that flourished in warm, ancient seas settled in thick deposits on ocean floors, some of which later became dry land. We have a better handle on where it ended up: in the fuels whose emissions are toxic in any form; and in products like crayons, ink, bubble gum, dishwashing liquids, deodorant, eyeglasses, tires, ammonia, plastic bags, allergy pills, asphalt, shirts and heart valves. As recently as 1950, three-fourths of all the consumer goods we use were made from natural materials like wood, rubber, and cotton. But in today's market, it's just the opposite: three-fourths of our consumer goods are made from fossil fuels.

An eye-opening article on the Energy Bulletin website called, "The Long Fingers of Petroleum" pictures a Boston lawyer standing in his driveway, next to his Porsche 911 Turbo. As each petroleum-related aspect of his life is considered, we imagine a world without oil, and remove the item from the scene:

John is wearing a nice suit and tie. Unfortunately, the suit is wool and polyester, the buttons are plastic as well as the zipper in the pants. Remove 25% of the material from his suit, all elastic and plastic stays, the buttons and the zipper. Why? Polyester, dacron, rayon, orlon – are all petroleum based, human-made fibers. All plastic is petroleum based, as is elastic. Better get rid of the waistband on his under shorts too while we are at it. Abruptly, our friend John is rather chilly, as what is left of his suit, pants, shirt and under shorts have fallen around his ankles. (1)

John's glasses have polycarbonate lenses, and the frames are also plastic. He stands bewildered, as credit cards, shoe-heels, watchband, driver's license, and the bills in his wallet (printed with petroleum-based ink) all disappear. Then he realizes that his car is useless, without gasoline, transmission fluid, gear oil, brake fluid, grease, automotive paint, tires, steering wheel, and all the plastic-insulated wires disappear. Now, naked, broke, partially blind, and extremely embarrassed, he turns to go inside to see what's left of his house!

John's predicament helps us realize what "peak oil" really means: that the emperor has no clothes. Along with peak oil we may soon hear phrases like "peak grain production" and "peak water consumption," because we are reaching supply limits for these basic resources as well. A recent U.S. Department of Agriculture bulletin announced, "World grain supplies are expected to be much tighter in 2006/07, boosting global grain prices. Rising consumption is expected to outstrip production for the second straight year, which would push world grain ending stocks to their lowest levels in more than 25 years." Put simply, there are too many mouths to feed, and too many of those mouths are eating energy-intensive food (grain-fed meat; heavily packaged, processed, and transported) Grain-based ethanol will also be in the competition. Especially troubling is China's rising appetite for grain. As that country's standard of living continues to rise, their diet contains a larger percentage of grain-fed, energy-intensive livestock products such as pork, poultry, eggs, beef and milk. The recent opening of a handful of drive-through McDonald's restaurants in China (among 800 mostly sit-down locations, total) is significant; the Chinese automobile market is expanding as fast as its taste for Big Macs.