Energy

Most of the real cost of coal is hidden in the future.

Fracking is a flash in the pan. The rate of production decline in a fracked well is much steeper than initially expected. It's not like a pool of oil or a pocket of gas. It's just a bunch of rock that soaked up some oil or gas. The long term pollution costs of fracking make it a very dirty fuel.

Tar sands are one of the filthiest, most financially and ecologically inefficient fuel sources we've ever used.

Contemporary commercial nuclear power violates two of the basic rules of gambling. Don't bet to bad odds, and don't bet more than you can afford to lose. The total cost of the impact on the community and the "clean up" of Fukushima will be several trillion dollars. Every dime of those trillions of dollars will be spent on energy, resources, and pollution. In the end what they call "cleaning up" will be nothing more than burying it. You can learn all the basics of the nuclear industry's plans for disposing of their derelict facilities just by watching a cat take a crap. Considering state of the art technology for decommissioning a nuclear plant, it's likely that many of them will end up spilling their guts as they become old and derelict. In its present state, nuclear energy is an extremely expensive, inefficient, and poisonous fuel.

Technology is almost ready to harvest another round of energy from spent fuel rods. This holds great promise to salvage the nuclear industry and makes the construction of any more first cycle nuclear power plants obsolete and reckless.

Wind power is proving itself all around the world. The technology has come of age. They're relatively clean, as long as they don't use carbon fiber composites. Carbon fiber composites are a toxic ticking time bomb.

Of all the alternative energy sources, photovoltaics are amongst the least long term efficient. They're fossil fuel dependent, they don't last very long, and are toxic to produce and recycle.

Concentrated solar thermal systems are more expensive up front, but their durability makes them very long term efficient. With maintenance and protection from sand storms, they could last for thousands of years. The parabolic trough and hot oil or salt tube systems can potentially run twenty-four seven and don't kill birds. For the moment we have more and more desert to put them in as climate change creates ever more desert.

The brackish water and plentiful sunshine of most of the world's oil fields have immense potential for growing algae. Many oil fields are in the desert and the wells often have to deal with brackish water and low grade natural gas. Algae can live in brackish water, and can eat low grade natural gas and convert it to oil. Since oil from algae can be used as is in oil fired power plants and existing oil refineries, most of the infrastructure is already in place. It's carbon neutral and can, to a large degree, maintain itself. Most importantly, it can be used in the oil dependent infrastructure that hauls all of our freight. The technology is still evolving, but it looks good so far.

Water turbines in the deep ocean currents and tidal flows show promise. It's a very stable power source.

By far, the most efficient uses of solar energy are on-site passive heating and lighting systems. They're a bit fossil fuel dependent as glass is made with fossil fuel, but their efficiency far outweighs the cost.

The largest consumers of energy, resources, and pollution are fashion, ego, convenience, and play. Around a quarter of the total cost of driving is fashion, another quarter is about comfort and convenience, and another quarter is about the ego associated with power and speed. Most of the production of the clothing industry is due to fashion and ego. Two thirds of the makeup women wear really makes them look like tacky plastic. Only four countries in the world use more electricity than the cloud. 99% of it is sitting idle waiting to be used, and most of its use is frivolous chit chat. At this stage in the life of this civilization, we can ill afford these frivolous distractions.

This brings us back to the big lie at the heart of our energy addiction. "The energy we need". It's central to the energy industry's sales pitch and it's a lie we've accepted to hide our addiction. Very little of the energy and resources we consume and the pollution we produce have anything to do with survival. What we "need" it for is frivolous play. Most of the energy and resources we consume and the pollution we create have nothing to do with real need.

When you're jonesin for a fix, nothing works like a fix. You "need" a fix. In individual addictions to substances like cocaine, meth, opioids, and the hundreds of other drugs that the pharmaceutical industry pushes, the fun side is immediate and the unhealthy and dangerous side effects are delayed, so it's community awareness that keeps the addiction confined to a small proportion of the population. The addiction - prohibition industry does everything it can to hide the bad side in order to safeguard their jobs and maximize profits. In the case of this civilization's deadly addiction to the massive consumption of capitalism, the addiction is very strong, the dangerous and deadly side effects are just beginning to manifest, very few people are aware of the causes and effects involved, and we have no precedent with which to see what lies ahead. A lot of jobs and an immense amount of profit depend on the exploitation of our deadly addiction to the mindless consumption of capitalism. Capitalism sucks.