

Mr. Rogers and Darth Vader

The captains of industry, perhaps more than anyone else, have the ability to solve the global warming problem, so they deserve attention. But different strategies are needed for a Mr. Rogers or a Darth Vader. Some may argue that Mr. Rogers, \$28M/year chairman of Duke Energy, is just another executive focused on short-term profits, with any concern for his children and grandchildren directed toward their portfolios rather than the world they will inherit.

I have a different impression. Mr. Rogers attended a talk on climate change that I gave in North Carolina. That doesn't prove much. And the words in Duke newspaper ads ["Cliffside (coal-fired power plant) – Good for the Environment and North Carolina"] have the same ring as those of celebs and other well-to-dos who purchase "carbon offsets" to "balance" their carbon emissions. Mr. Rogers, in using the rationale that new coal plants are more efficient than old ones, is misguided, but he does not deserve the enmity that Darth Vader has earned.

[The problem, in the thinking of both celebs and Mr. Rogers, is failure to recognize that burning fossil fuels adds CO₂ to the air that we cannot practically get back. A large fraction of the elevated CO₂ will remain for many centuries. Potential offset by growing trees is limited and that drawdown potential will be needed to reduce airborne CO₂ back beneath the dangerous level, to avert centuries-long overshoot of the dangerous CO₂ level (http://www.columbia.edu/~jeh1/2008/TargetCO2_20080317.pdf). We simply cannot put the CO₂ from most of the remaining fossil fuels into the air. Most of the remaining coal must be left in the ground or used with CO₂ capture and storage. It does not help to burn the coal more efficiently or more slowly; because of the long lifetime of the airborne CO₂.]

Last week I sent the following letter to Mr. Rogers:

March 25, 2008

To: Mr. James E. Rogers, Chairman, President and Chief Executive Officer, Duke Energy

From: Jim Hansen, Columbia University Earth Institute

Subject: A Plea for Cooperation and Leadership

Dear Mr. Rogers,

I was glad to see you attend my talk on climate change in Charlotte last November. I write to inform you of progress in understanding of human-made climate change and the challenge it poses for those, such as yourself, who are charged with providing the public with essential energy. I know you aim to do that in a way that protects the long-term interests of people and nature, so I end with a proposal for cooperation in defining potential alternative actions.

Mr. Rogers, the challenge is greater than we thought just a few years ago. The attached paper, "Target Atmospheric CO₂: Where Should Humanity Aim?," for example, makes clear that we have already passed the limit for CO₂ that we can allow to exist over the long-term. Mother Nature, as a friend of mine has noted, is wagging her finger at us: "Now you have gone too far!"

Consequences of ignoring this admonishment would be severe. The Earth is nearing climate "tipping points" with potential effects, many irreversible, including extermination of countless species, ice sheet disintegration and sea-level rise, and intensified regional climate extremes. A world filled with desperate

climate refugees, we are warned by retired US generals and admirals, would be not only tragic, but dangerous for everyone.

One implication for electricity generation is crystal clear from basic fossil fuel facts (enclosure). Coal is the source of 50% of fossil fuel CO₂ in the air today, and, because of vast coal reserves, coal is the dominant issue for the long run. It is not rocket science. To maintain a safe planet, coal can be used in coming decades only if CO₂ is captured and sequestered. Coal-fired power plants built now without CO₂ sequestration will soon have to be shut down. They are a terrible, foreseeable waste of money. It would be a tragic mistake for Duke to proceed with plans for new coal-fired power plants in Cliffside, North Carolina, and Edwardsport, Indiana.

Your public statements recognize the climate problem and indicate a desire to do what is right for the environment, the young generation, and your rate-payers. However, your suggestion that new, more efficient coal-fired power plants, which do not capture CO₂, can be part of a solution ignores the basic facts and urgency of terminating coal emissions. Dirty, inefficient coal plants must be replaced to avoid climate disasters, but only by choosing options from energy efficiency, renewable energies, nuclear power, and coal plants that capture all emissions, including CO₂.

Near-term demands for energy can be satisfied via a real emphasis on energy efficiency and renewable energies. Neither carbon sequestration nor nuclear power can help in the near-term, and they both have serious issues even over the longer term. But Massachusetts and California have demonstrated the tremendous potential of efficiency aided by appropriate incentives.

Plans for over 50 coal-fired power plants nationwide have been dropped in recent months due to rising construction and coal prices, unpredictable carbon costs, and concerns about climate change. Near-term energy needs can be met with massive but feasible conservation and efficiency programs, cogeneration, solar, wind, and biomass generation. Diversifying generation has other benefits -- creating jobs, conserving water, and minimizing the possibility of terrorist acts against the grid, about which former CIA Director James Woolsey recently warned the National Governors' Association.

Recently I testified as climate expert in suits filed by the automobile manufacturers against vehicle greenhouse gas regulations in California and Vermont. The manufacturers lost both cases, and they are going to be scrambling to improve vehicle efficiency. As you know, another suit has been filed, on behalf of the Inuit of Kivalina, against EXXON/Mobile, Duke Energy, and others who bear special responsibility for the emissions that drive climate change.

It appears that energy industry leaders may be choosing a path analogous to that taken by Big Tobacco when it first became clear that smoking caused serious health problems. Tobacco companies manufactured and magnified public doubt about scientific evidence; they masqueraded PR as news and expert opinion; they emphasized maintaining "balance" in a "controversy", and they supported doctors and scientists who disputed the evidence, thus proclaiming concern about discovering the truth while actually suppressing it.

Big Tobacco's playbook proved a great "success". Tobacco profits were so great that court settlements could be paid with hardly a blip on stock values. Can it be any wonder that Big Coal and Big Oil have stolen Big Tobacco's playbook?

Mr. Rogers, as a leader in the Electric Power industry, your decisions will affect not only energy bills faced by your customers, but the future planet that your children and grandchildren inherit. If you insist that new coal plants are essential for near-term power needs, you may submit your company and your customers to grave financial risk, and leave a legacy that you will regret.

Scientific evidence of human-made climate change has crystallized, and it has become clear that continued emissions carry great danger. These facts fundamentally change liabilities. And liabilities will be increased by any “success” of industry efforts to confuse the public about the reality and likely consequences of human-caused climate change and to promote false “solutions” such as new “cleaner” coal plants.

Surely the number of people pressing these legal cases will grow, and they will be inexorable in pursuing justice. And assuredly, in the long run, the energy companies will lose the legal battles. Unfortunately, although the public will ultimately hold polluters accountable, it will not necessarily be soon enough or have enough impact to prevent environmental and human disasters. It may drag out as in the tobacco case, but with much more serious consequences.

Mr. Rogers, this is a path that, for the sake of our children and grandchildren, we cannot follow. Enlightened leadership is desperately needed in planning our energy future. As a captain of industry, you can help inspire this country and the world to take the bold actions that are essential if we are to retain a hospitable climate and a prosperous future. I am reaching out to you, Mr. Rogers, because you are uniquely positioned to influence others in your industry, and because your statements suggest that you comprehend the gravity of the problems we face.

I suggest that, to assist your considerations, we have a one-day discussion with top experts in the country in energy efficiency, renewable energies, clean coal with carbon capture, and nuclear power. The aim would be a realistic assessment of potential and timelines, with quantitative assessment of climate implications and identification of practical constraints. I can arrange a meeting here, at Columbia University, and would seek your advice on participants. Because these matters are urgent, I propose that we meet within the next 2-3 months. Would you please call me at 212-678-5500 at your convenience to discuss your availability for a meeting?

Sincerely,

James Hansen

cc: Duke Energy Board of Directors
Governor Michael Easley
Governor Mitch Daniels

The latter part of my letter emphasizes the stick that the public interest has, one of the few strategies that may affect Darth Vader. One of the dirty tricks of Darth Vader is an ad placed in the lower right hand corner of the New York Times op-ed page. A recent one, “the fuels of the future”, states, as a fact, backed by the authoritative International Energy Agency and the U.S. Energy Information Agency, that renewable energies such as wind, solar power and biofuels, will satisfy only 2 percent of global energy needs in 2030. One wonders how they can be so definitive when, as one example, a fraction of Nevada deserts is sufficient to provide all U.S. electrical power via existing solar thermal technology.

No doubt the people in IEA and EIA are good honest people, but they operate within guidelines of their masters, and their government masters are well-oiled. Interbreeding of the fossil fuel industry and government is pervasive [the principal activity of one well-oiled senator has become periodic fulminations about the greatest hoax (global warming) ever perpetrated on

the American public, via an active public affairs office that is probably funded with your tax dollars]. The ExxonMobil ad (“Energy 2030: part 4) goes on to imply that by 2030 we will be heavily exploiting “frontier” fossil fuels (they mention shale oil and heavy oil). One wonders if they really believe the inflated reserve estimates for remaining conventional fossil fuels, or if they find the inflated estimates a convenient fiction that helps ensure that the public will not recognize the need to move soon to the energy world beyond fossil fuels.

The ExxonMobil ad is instructive because it shows that, although the voice behind the black hood has changed, a Neanderthal voice replaced by a more mellifluous one, actual policies and strategies have not changed one iota. Their intent is for the public to remain as their slavish addicts, hooked on fossil fuels. They are not investing their huge resources into becoming a (clean) energy company (can you imagine, if they would, that we would be unable to exploit Nevada sun by 2030?).

Our Founding Fathers were remarkable in foreseeing the need to protect ourselves against some of the less attractive traits of human nature. Among the checks and balances, the third branch of government, the judiciary, is furthest removed from the influence of the special interests. Darth Vader may laugh off the arrow from the Inuit of Kivalina, aimed at them and others in the fossil fuel industry, but the Inuit suit is only the beginning of a growing fusillade.

As a conservative, I tend to agree with Europeans in their distaste for punitive damages in civil suits. But as companies continue to ignore reality, and to intentionally deceive the public, large punitive damages seem appropriate. Justice is important and it may have a good effect. Settlements against cigarette companies, for causing cancer and misleading the public, were inadequate, hardly affecting their stock prices. Similarities in the fossil fuel case are striking – did you catch the sheepish admission of contrarian Fred Singer when asked whether he was ever paid by fossil fuel industry? It went something like this: well, I did once receive a check in the mail for \$10,000 from ExxonMobil that I didn’t quite understand. I wonder if he cashed it?

There are a large number of defendants in the Kivalina case. The hope is that the captains of industry will include some who are more of the ilk that I am crediting Mr. Rogers. Others have argued that I am giving too much credit, but I think our best hope is to find some captains who are able to understand the requirement for a real change of direction, and we should encourage that. The captains are some of the most capable people that we have, and we need their abilities – not many of us want to go back to the boondocks. The tipping point will occur when enough of the captains peel off, onto another course. I know, it is claimed that many already are, but look at the numbers (emissions, for example) – the change so far is minuscule. The government needs to contribute by providing incentives, so we can’t give up on the elected branches of government – and there is an election on the horizon.

In the meantime, back on the ranch, the most useful thing that most of the public can do to save the planet is to take actions to block construction of new coal-fired power plants. It is also important to be sure that fossil fuel mining is prevented in national parks, off-shore regions under state influence, any place where the public has influence and can help assure that fossil fuels are left in the ground.

You also might buy a single share of stock in the evil empire and make some noise at a stockholders meeting. Who knows, if Darth Vader is continually whacked on the side of his helmet with a two-by-four, hard enough, he may eventually realize that there are other forms of energy besides fossil fuels.

Jim