Oxymoronic Windpower

PART I

WIND HOWLERS

Definitions:

Howler: A ridiculous idea or proposition, one that elicits howling laughter; also, a type of magic spell from the Harry Potter series.

Bellyfeel: A blind, enthusiastic acceptance of an idea, taken from George Orwell's *Nineteen Eighty-Four*, where any good Oceanian internalizes Party doctrine such that it becomes gut instinct—a feeling in the belly.

Blackwhite: In Orwell's Nineteen Eighty-Four, a word that has two contradictory meanings, used to convey how people have been propagandized to believe that black is white while never realizing that the reverse might be true. It is the ultimate achievement of newspeak that requires a continuous alteration of the past made possible by a system of controlled thought.

Every major claim made by those who would profit, either financially or ideologically, from wind technology is replete with Owellian doublespeak. Despite the promise of many jobs in the USA, for example, wind provides almost no permanent employment while most wind manufacturing will migrate to China, as much of it has already. Despite the bellyfeel assertion that wind is an environmental savior, it is in fact an environmental wrecking ball. Contrary to the proposition wind can back down the coal industry, in most areas of the country it may actually increase coal consumption. However, nothing about wind is more Orwellian than the term *windpower*. Despite its pervasive use and casual acceptance, windpower as a contemporary expression of reality is quite at odds with itself, particularly in technologically advanced societies. It's a howler.

Widespread misunderstanding about the difference between *energy* and *power* has given cover to charlatans like wind salesman who pretend their wares provide something they do not. We are all familiar with blackwhite PR jargon that characterizes wind projects as mills, farms, and parks, despite the looming industrial presence of 450-foot tall turbines propelling rotors at tip speeds of nearly 200-mph for many miles along terrain or seabed. But for sheer oxymoronic audacity, nothing beats the trickeration of the term windpower, since the technology is the very antithesis of modern power performance. In fact, wind provides no modern power. Rather, it throws out spasmodic, highly skittering energy that cannot by itself be converted to modern power.

The basic nature of energy is still not well-understood. We know it exists in both potential and kinetic states. We also know that energy can neither be created nor destroyed, that it is omnipresent, and that it can be changed into many forms. Energy is also intimately related to heat, which in turn is best understood as energy in motion; its behavior is therefore described by the laws of *thermo* dynamics. Whatever energy turns out to be intrinsically, however, will not diminish our operational definition of it: energy is "fuel" enabling work to be accomplished.

The Power of Machines

All physical systems are essentially machines that convert the energy in fuels to *power*, the rate at which work gets done. Power is, like interest, work done at a pace in time. All organic systems, from aardvarks to zinnias, from eyeballs to heart valves, must do work—eat, move, hide—to survive and perpetuate. *Machines are a means of processing energy to produce power, enabling work over time*. Indeed, as the philosopher Daniel Dennett explained in his book, *Darwin's Dangerous Idea*, all organisms, including ourselves, are at root machines that convert energy to power, starting from single cell creatures, with mitochondria making ATP from chemicals in their environment, to entities that have evolved, and continue to evolve, into ever more highly complex integrated and convergent machines. Their basic function is to consume just enough energy (fuel) to maintain their power requirements. Nature is continuously at work keeping this process as efficient as possible. For much of the earth's history, organisms drew down precisely the energy required for functional power—and no more.

Those organisms that could do more work faster, in the process increasing their power, typically gained a survival advantage. For humans, a man and woman paired together could do more work than could be accomplished by one man working alone. A man, a woman, and a club could do even more. A man, a woman, a club, and a spear could do even more. With the passage of a few million years, humans could reliably feed and shelter hundreds of thousands of their kind, and still find time to build the great pyramids. As Stanley Kubrick showed so masterfully in his film, *2001*, our spears have morphed into rockets on the moon. Our machines, filled with increasingly energy-dense fuels, have given us the ability to do more work faster and faster, begetting an appetitive feedback loop where more power unleashes more time to produce more power.

Why is this important?

Imagine how life was lived only nine generations ago, with the modern machines of 1811. For most people, the most effective machine for transportation was two legs walking, fueled by chemicals in the air and water, supplemented by more chemicals in meat and grain. They could, with a lot of exertion, cover 30 miles in a day. A few could afford to maintain horses, which if placed in teams could carry

a coach (which provided some cover from the elements) maybe 60 miles in a day, requiring a lot of oats. Some could get on a boat with sails and harness the hit or miss, tail-wagging-the-dog power of a machine fueled by wind energy, in the process moving across water with some protection from the elements while saving a lot of energy and risk over and above what was required to swim. Surely an improvement. But because of the limitations imposed by energy-diffuse fuels and comparatively cumbersome machines, people still typically lived close to where they worked. Those that ventured much beyond expended a great deal of their lives in such an effort, limiting the amount of time they had to do something else.

Contrast that situation with the modern world. An accountant may commute twice daily more than a hundred miles from her home in climate controlled comfort in a machine—built out of hundreds of other convergent machine systems (transmission, steering, braking, internal combustion, lighting, etc) and fueled by energy dense gasoline—and still have time for a game of racquetball, a late dinner, time on the computer, a shower and a chapter of reading before tucking in to sleep. *This is modern power: the ability to predictably and in a controlled fashion shorten the distance in time necessary to perform work.* Such power allows people to move from pillar to post on their own schedules. They are no longer dependent upon lumbering, often unreliable machines using energy-thin fuels that typically make people wait upon them. This ability to command power, turning it on and off, up and back, is the hallmark of modern life, a precondition for coordinated economic and social convergence. Machines that are unreliable and uncontrollable, either because of their design or because of the nature of their fuel (energy supply), typically adorn our recreational pursuits, our museums, or, increasingly, our junk piles. They are considered archaic.

Modern power is a time machine, not for moving back and forward in time, but rather expanding the time in which we can do other things. As the scale of power production gets larger, costs become less expensive, making the power more generally available. Modern power has lifted billions of people out of the grind of poverty, improving both quantity and quality of life.

Nowhere is modern power performance more evident than in today's home, where a battery of machines, each with complementary functions, make not only for convenience but also open up much more time to do other things. Refrigerators work as desired 24/7 for 30 years; ovens and ranges work when asked for 20 years. As do vacuum cleaners, water heaters, furnaces, air conditioners, and a variety of other machines, fueled mainly by electricity.

Modern Power at Its Best

Electricity is a form of power itself produced by an ensemble of complementary machines that dispatch or retract precise amounts of supply to match demand perfectly at all times, maintaining a steady, predictable level of

production throughout their operating time except when they are called upon to ramp up or back in response to demand changes. Like household appliances, each kind of generator has a role to play, some working around the clock, others only upon command. There is much behind-the-scenes tumult involved as many types of conventional generators—coal, nuclear, natural gas, hydro—converge at just the right time so that people and industries can be served without fuss or bother at the flip of a switch. By building systems of supply and transmission at large scale, contemporary society keeps costs affordable to all, allowing even the most economically impoverished to make use of their time-saving appliances.

Although all machines convert energy to power, they don't do so equally. Not all machines convert energy to *modern* power, which is controllable, predictable, schedulable. Electricity production is modern power at its best—highly reliable, secure, affordable. Not just power production but rather, as energy expert Tom Tanton has said, the quality of the power production, taking into account the frequency, voltage, and harmonics that must be precisely congruent to achieve the reciprocal convergence essential for proactive modern power performance.

Wind machines, even massively tall and wide contemporary turbines, are wholly inimical to modern power quality. They are rarely reliable, by nature randomly intermittent, and, since their power is a function of the cube of the wind speed along a very narrow speed range, they are always variable. No one can know what they will yield at any future interval. They almost never produce their full capacity. In fact, they average over the course of a year about 25% of their full capacity. More than 60% of the time, they produce less than that. About 10-15% of the time, they produce nothing, often at peak demand times. They typically generate most at times of least demand. Whatever they do produce is changing one minute to the next—in the process destabilizing the necessary match between supply and demand, for blackouts occur when there is too little supply while appliances and transmission systems can be damaged if the supply is excessive. Unlike machines that produce modern power, wind is neither dispatchable nor controllable, except when shut down completely.

To see the difference between archaic and modern power more clearly, imagine that gasoline pumps were wind "powered." Your tank might eventually be filled, but when? How long would it take? How long would the line of cars waiting their turn at the pump be? Would time seem to drag for those drivers, reducing time to do other things? Now imagine government had mandated that gliders, powered only by fuel from the wind, handle, say, 20% of all air passenger transport. How long would a glider's flight from New York to Los Angeles likely take? And at what cost, since any glider would first have to be towed with conventionally powered aircraft to get into the air, and then picked up where it eventually fluttered to the ground because of insufficient fuel, and then trucked to an air field where it could be towed back into the air, etc, etc-—until it reached its destination. THIS IS NO EXAGGERATION. The diffuse nature of wind's fuel

requires continuous supplementation by reliable machines fueled by more energy-dense fuels, as well as virtually dedicated new transmission lines and voltage regulation systems.
It’s the kind and scope of activity that must happen to make wind create modern power.

Backup: A Fly in the Soup

The notion that wind volatility is something in need of "backup" is a minor wind howler. Backup literally means a reserve or substitute for the real thing, often in the form of an understudy or a computer file. Or it can mean support for a much larger object or activity. (Lets avoid here the notion of backup as a clogged drain.) In the first case, the backup is sufficiently like the original (what is backed up) that performance should not be markedly corrupted. A second-string quarterback should in virtually all-important respects be able to do what the first-string quarterback does. Ditto for an understudy forced into mainline service because of illness to the diva. In the second case, a backup buttress to an architectural feature plays a small role in the scheme of things, nice for security to be sure, but nonetheless, it is a minor part of the whole. Although it is a proactive measure in terms of ultimate security, it is mainly reactive in function.

The nature of wind variability, which routinely changes its output 5% or more at every five-minute interval and occasionally widely alters what it delivers in a very short time, means that wind is a wayward fish to conventional generation's bicycle; it is a completely different creature both in degree and kind. Given that wind generates an average of only a fourth of its full capacity annually, nearly 75% of that capacity must therefore consist of conventional generation—in order to keep supply matched to demand. Given that 10-15% of the time it produces nothing, then 100% of its full capacity must be taken over by conventional machines. The truth is that wind can only be a minor ingredient in a much larger fuel mix—but much like a fly in soup, which provides, like wind, problematic nutritional value. You could eat it. But why would you want to?

Given the erratic, skittering nature of its delivery, wind cannot merely be "backed up" by a slightly corrupted version of itself. Quite the contrary. It is as if wind is the whacky substitute requiring the first team, the diva, to make it functional. In the best Orwellian newspeak fashion, it is the backup that does virtually all the important work—but in a much more inefficient fashion. How would the world's best actor squelch, live onstage, a drunken understudy who continually spoke lines from another play?

Words are important if they are to impart accurate meaning. To say that wind requires backup is to pervert both language and meaning, despite its bellyfeel quality. Although language is slippery, it should not be that quicksilver. Wind machines must always be ENTANGLED with proactive but inefficiently operating conventional machines through the entire extent of any wind machine's full

capacity.

PART II

WINDSPEAK

Windspeak: Language used by those who profit financially, politically, or ideologically from wind technology that disguises, distorts, or reverses the meanings of words in order to promote the technology. Oxymorons, which combine incongruous or contradictory terms, abound in windspeak—viz, windpower, wind capacity, responsible windpower (double oxymoron), windfarms, windparks, wind jobs, wind reliability workshops, and wind as alternate energy. Generally any claim made for the technology in windspeak produces the virtually opposite effect in reality.

VIP

With the right story and no accountability, Madison Avenue can sell fantasy wholesale. Rock Hudson's ad executive did just this 50 years ago in the charming send-up to our commercial culture, *Lover Come Back*, when he successfully marketed a non-existent product, VIP. Nothing illustrates this idea better than the *au courant* fantasia about wind technology, where public relations legerdemain has deployed the power of windspeak to give wind a complete makeover, transforming a klutzy pretender into a seemingly benevolent superhero unbound by the laws of physics and even its own history. This is due in no small part because of the way wind has been entwined in stories deeply embedded within our cultural consciousness.

Giving the Middle Ages a contemporary look, J.K. Rowling borrowed much from fictional works by J.R.R.Tolkien, a medieval history and literature scholar who thought Shakespeare too modern and vulgar. Her Harry Potter books invite comparison to the current wind propaganda narrative. Like these stories, wind is presented as a coming of age chronicle, complete with the use of magical powers and the idea of transforming ancient technologies into modern elixirs. Although wind in its latest incarnation has been at the public trough for nearly 40 years, windspeak portrays its hero as an infant wizard preparing to save the world; it simply needs more time at Hogwarts-like institutions such as Stanford and MIT.

What is even more striking is how wind has franchised itself, much like the Harry Potter phenomenon, through self promotion, using product placement and embedded, leveraged marketing techniques a la GE/NBC/CNBC. A quick Internet search revealed the following items, under "Wind Marketing:" mugs, t-

shirts, boxer shorts, thongs, back packs, lunch boxes, posters, tote bags, hats, aprons, yoga mats, license plate frames, wall clocks, keepsake boxes, greeting cards, buttons, decals, gym bags, desktop wind turbine, Lego's wind turbines, a Lionel wind turbine cargo car and O gauge wind turbines. And, from our good friends at Greenpeace, there's the Wind Farm Game. In fact, for nearly every product used to leverage the Potter Syndrome, there is a counterpart for wind.

In addition to associations with Harry Potter, one of the most successful contemporary coming of age wind memes is the recasting of the David versus Goliath story, variations of which provide the media with cozy melodramatic boilerplate. In this account, the little shepherd boy of wind is pitted against the philistine forces of coal, natural gas and oil, which so many now believe are assaulting Nature's God. Like King David himself, wind technology, given enough faith and support, will eventually emerge victorious, backing down the many evils of fossil fuel use, such as the rapine mining practices and chemical side affects now degrading Gaia. With Manichean panache, millions believe wind will lead the hosts of renewable energy as they battle a vulgar evil empire narcotized and exploited by multinational corporations in thrall to fossil fuels. Wind will literally light the postmodern world with premodern power.

WINDSPEAK'S MOST GRANDIOSE HOWLER

The American Wind Energy Association (AWEA) carefully cultivates the idea that wind is a mortal enemy of fossil fuels. Those skeptical about the technology are vilified as fossil fuel industry lobbyists spreading lies " to avoid losing marketshare to wind energy." AWEA compares them to the groups and pundits from the tobacco industry that once told Congress there was no causal link between cigarettes and cancer. However, this is windspeak's most grandiose howler, a triumph of PR over reason and empiricism made possible because the plots of fiction, especially fairy tales, are not accountable to reality.

In reality, people and corporations heavily involved with coal, natural gas, and oil are also deeply involved with wind. In the 1990s, Enron's Ken Lay, helped by then Texas governor George W. Bush (today a leading wind booster), resurrected wind technology from the tomb that steam power had consigned it centuries ago. Giant energy corporations swaddled in coal and oil production, such as Florida Power & Light (NextEra), ExxonMobile, General Electric, BP, Exelon, Duke Energy, AES, Chevron, Shell, Weyerhaeuser, and Siemens, are all intensely invested in wind. Goldman Sachs is becoming "a leading US wind energy developer and generator," investing "up to $1 billion in renewable energy projects." As Rod Adams pointed out last year, there is a growing alliance among wind, natural gas, the nation's largest banks, and politicians.

They all claim that their interest in wind is part of "diversifying" their power portfolios, adding new technologies that will improve quality of service—and help build a Smarter Planet through Ecomagination. But is this more windspeak?

Since reliable, affordable, secure electricity production has historically required the use of many kinds of generators, each designed to perform different but complementary roles, much like instruments in an orchestra, it is not unreasonable for companies in the power business to diversify their power portfolios. Thus, investment in an ensemble of nuclear and large coal plants to provide for baseload power, along with bringing on board smaller coal and natural gas plants to engage mid and peak load, makes a great deal of sense, providing for better quality and control while achieving economies of scale.

Traditional diversified power portfolios, however, insisted upon a key common denominator: their generating machines, virtually all fueled by coal, natural gas, nuclear, and/or hydro, had high unit availability and capacity value. That is, they all could be relied upon to perform when needed precisely as required.

How does adding wind—a source of energy that cannot of itself be converted to modern power, is rarely predictable, never reliable, always changing, is inimical to demand cycles, and, most importantly, produces no capacity value—make any sense at all? Particularly when placing such a volatile brew in an ensemble that insists upon reliable, controllable, dispatchable modes of operation. As a functional means of diversifying a modern power portfolio, wind is a howler.

PROTECTING FOSSIL FUEL MARKETSHARE

So what is really going on? Why are so many multinational corporations suffused in fossil fuels propping up a technology that promises to reduce their use, in the process also slashing their fossil fuel marketshare, as AWEA says it must? Why is it that so many of their executives join with Michael Eckhart, President of the American Council on Renewable Energy, when he calls for expensive rule changes on power grids that would favor unreliable, weather-dependent, tail-wagging-the-dog technologies like wind as a partner for natural gas. Does ExxonMobile, with “fully 50% of its annual energy production in the form of natural gas,” believe wind will reduce its natural gas marketshare?

Let’s examine the evidence.

1. Despite more than 100,000 huge wind turbines in operation around the world, with about 35,000 in North America, no coal plants have been closed because of wind technology. In fact, many more coal plants are in the offing, both in the US and throughout the world. Moreover, a Colorado energetics company, Bentek, recently published a study about wind in Texas and Colorado showing, in its study areas, that wind volatility caused coal plants to perform more inefficiently, “often resulting in greater SO2, NOx, and CO2 emissions than would have occurred if less wind energy were generated and coal generation was not cycled.” Further examination

of fuel use for electricity in both states during the time of inquiry suggested that wind caused no reduction in coal consumption.

2. Unpredictable, undispatchable, volatile wind can provide for neither baseload nor peak load situations. It can only be an occasional supplement that itself requires much supplementation. Consequently, as Australian engineer Peter Lang once wrote, since "wind cannot contribute to the capital investment in generating plants… [it] simply is an additional capital investment."

3. Wind technology does NOT represent alternate energy. Since wind cannot provide controllable power and has no capacity value, it cannot be an alternative for machines that do provide controllable power and high capacity value. Wind therefore is incapable of entering into a zero-sum relationship with fossil-fired capacity—that is, more wind, less coal. All other conditions being equal (demand, supply, weather, etc), more wind generally means more coal.

4. None of the considerable public subsidies for wind, indeed, not even state renewable portfolio standard (RPS) laws, are indexed to measured reductions in carbon dioxide emissions and fossil fuel consumption. Consequently, there is no transparency or accountability for how wind technology will achieve the goals set forth by those policy initiatives. This means that corporations with a lot of fossil-fired marketshare to protect have no obligation to replace it with wind. And they don't. Because they can't. Freedom from responsibility is a child's fairy tale dream come true.

5. The work of a number of independent engineers—Hawkins, Lang, Oswald, Le Pair and De Groot—suggests that even the most effective fossil fuel pairing with wind, natural gas, will very marginally reduce overall natural gas consumption beyond what would occur using only natural gas generators, without any wind whatsoever.

6. Because oil provides barely 1% of the nation's electricity, wind represents no threat to oil's marketshare.

Even companies like Bechtel are jumping on the wind wagon, taking out full-page ads in North American Windpower. Reality indicates that these corporate behemoths are keenly aware that wind protects their fossil fuel marketshare. But it does so much more, as Goldman Sachs and other Wall Street traders well know, for they've used wind's David v Goliath jingle to extract exorbitant rents from Congress and most state legislatures. Like most children, they prefer the lowest hanging fruit.

AN EXERCISE IN GREEN: FOLLOW THE MONEY

Consider how low the lame duck Congress hung the fruit to create incentives for investing in wind, though, as Glenn Schleede has pointed out, the wind industry had already received a good portion of the approximately $100 billion (in 2011 dollars) the federal government has mostly squandered on research and development for "promising" energy technologies over the past 40 years:

1. Wind developers now can choose between renewable energy investment and production tax credits. In lieu of a tax credit, the federal treasury can grant a direct cash payment equal to 30% of capital costs. All developers, including those for wind projects, along with any equity partners, can now take a 100% depreciation bonus on new equipment through the end of 2011, depreciating the entire cost of the project, less half of the investment credit cash grant, in the year it was placed in service.

   To see how this spins out, imagine a wind "park" with a capital cost of $1 billion. Taxpayers would cut a check for the first $300 million. The developer can then deduct $850 million in the first year of operation, which, at current corporate tax rates, would generate income (that is, taxes not paid) worth another $330 million. It doesn't end there, for taxpayers would also subsidize the costs associated with any guaranteed government loans for the project. In the hands of a good tax accountant, interests rates, as they have been in the bond market, could be flipped, generating even more income.

2. Or wind developers can elect to receive production tax credits worth 2.2 cents for each kWh produced during the first ten years of a wind plant's operation, in the process deducting the total amount from their corporate tax obligations. This PTC deduction, which is pegged at 40% of the wholesale price of electricity (~5 cents per kWh), will occur simply because a wind rotor turns, not because of any reductions in fossil fuel consumption or carbon emissions. Moreover, if developers choose this option, they may also be eligible for additional income tax credits equal to 10% of the capital costs.

With this kind of "incentive," it should surprise no one that GE, with heavy investment in wind equipment and production, paid no federal income taxes in 2009, despite having annual revenues in the billions.

These are just the major front-end Congressional subsidies. At the back end, particularly because of state RPS laws, are the generally uncompetitive prices wind developers would charge utilities for their production. For example, last November Massachusetts regulators approved a power purchase agreement between the National Grid and the proposed offshore Cape Wind plant at a *beginning* price of 18.7 cents per kWh, starting in 2013. This means that Cape Wind would sell its sputtering energy to the grid at 18.7 cents, which would then be increased 4% because of the grid's cut, making the *wholesale* price of Cape

Wind's energy 19.4 cents. This would be the price charged throughout the service area. Meanwhile, as Lisa Linowes has pointed out, "the grid will sell Cape Wind's energy in the real-time market at the going rate…. [But] … ratepayers will pay the difference between the real-time wholesale price of, say, 5 cents and 19.4 cents."

New Englanders would therefore pay, for each kWh of wind energy produced, nearly four times the going wholesale rate—and about twice the retail rate (~ 10 cents per kWh). And this is just the beginning, since the power purchase price would continue to escalate for many years to come.

There are also many lateral subsidies necessary to enable wind projects, not least the socialized costs of building virtually dedicated transmission lines for wind across thousands of miles. Added to this would be a series of grid upgrades, including much new voltage regulation systems. If the country's installed wind capacity increases substantially, the aggregate cost of this enabling equipment is likely to be in the trillions of dollars. The Texas wind situation should prove instructive, particularly in light of a recent decision by the Federal Energy Regulatory Commission allowing builders of proposed transmission lines that carry wind energy east from Iowa to pass costs along to customers in other states.

No discussion of wind revenue sources would be complete without mentioning renewable energy credits/certificates (RECs). These contemporary analogs of religious indulgences allow multinational companies with a diversified power portfolio to purchase and trade them within the organization, using the proceeds to invest in wind technology, among others, and, at the same time, generate more revenue from funds that otherwise would be spent cleaning up their dirtiest burning coal plants.

Politicians of every ideological stripe—liberal and conservative, libertarian and socialist—continue to speak in windese. Note especially how New Jersey's Republican governor windspeaks in syncopation with his Democrat counterpart in Maryland. By supporting such nonsense, they give the appearance of challenging the status quo, placating a number impassioned but highly ignorant constituencies—mainline environmental groups, many religious organizations, the national Chamber of Commerce, mainline media—while in reality they are strongly reinforcing the status quo, since wind works to increase fossil fuel marketshare, not reduce it.

LET'S GET REAL

The subprime mortgage derivative scams were based upon arcane Wall Street market knowledge and an uninformed sense of underlying assets—and therefore might have been excusable because so few were knowledgeable about the practice. Today, even fewer know much about the workings of electricity

production and those who do are profiting by keeping information about wind performance "assets" hidden from public scrutiny. Given the distress caused by subprime mortgage schemes, why not a call to arms about the potential fallout that will flow from subprime wind energy, since this has already happened in Spain?

The arcania of electricity production and the proprietary confidentiality of wind performance notwithstanding, there is still plenty of information available about wind's meretricious nature—for those who would look. But no one evidently thinks to demand historic data—in energy produced, fossil fuel conserved, and impact on electricity prices—that has long been in the public domain. In a recent preliminary study about state RPS laws, a group of economists I encountered were content to do long term out year projection analyses using the most questionable assumptions while comparing apples to orangutans. They never even considered looking at past and present data in Europe, California, and Texas, where renewable use already exceeds what a national RPS would require. That data is incredibly damning—and does not require featherbedding with speculative future projections.

There are thousands of broken and abandoned wind turbines in California, which not that long ago were considered modern and cutting edge. Why isn't the closure of a solar plant in Massachusetts, after only two years of operation and $58 million of state government support, a front-page story? It is dumbfounding that otherwise bright people seem to have no clue about how to conduct genuine inquiry using tangible data—when that inquiry is about renewables. Has windspeak tied our collective tongues? Have we become so delusional about renewables that we accept deranged inquiry as normal?

WHERE HAVE YOU GONE IKE EISENHOWER: THE NATION TURNS ITS LONELY EYES TO YOU

This litany of wind howlers is a tale about the wholesale dumbing down—the juvenilization— of our culture at virtually every level: mainstream media, including the blogosphere; energy economists; the regulatory environment; the political scene at many local, virtually every state, indeed, the entire national governmental strata; and, not least, the multinational corporate sector, not forgetting international environmental organizations. In the final analysis, windspeak is little more than childish prattle, much like the justifications roguish children use to justify vicious behavior in an unsupervised romper room—often the smartest kids in that room.

As the old song lyric goes, "*Fairy tales can come true, it can happen to you—if you're young at heart."* Or have the innocent gullibility of a four year old.

Where is the adult supervision? Where is the statesmanship that insists upon putting childish ways behind?

As a partial answer, consider this passage from Dwight D. Eisenhower's Farewell address 50 years ago, which now seems even more clairvoyant than his warning about the military/industrial complex:

> *Today, the solitary inventor, tinkering in his shop, has been overshadowed by task forces of scientists in laboratories and testing fields. In the same fashion, the free university, historically the fountainhead of free ideas and scientific discovery, has experienced a revolution in the conduct of research. Partly because of the huge costs involved, a government contract becomes virtually a substitute for intellectual curiosity. For every old blackboard there are now hundreds of new electronic computers. The prospect of domination of the nation's scholars by Federal employment, project allocations, and the power of money is ever present — and is gravely to be regarded.*
>
> *"Yet, in holding scientific research and discovery in respect, as we should, we must also be alert to the equal and opposite danger that public policy could itself become the captive of a scientific-technological elite.*
>
> *"It is the task of statesmanship to mold, to balance, and to integrate these and other forces, new and old, within the principles of our democratic system — ever aiming toward the supreme goals of our free society."*

The juggernaut for the dumb and dim of wind—a defective technology resurrected to sell tax shelters, made in China and assembled by temporary teams of international workers, justified by American and European "scientists," engineers, gadgeteers, and an assortment of political wonks from both Republicans and Democrats spawned via federal grants to major universities (Stanford/MIT)—is the very apotheosis of Ike's concern. And it's all done, much like the derivative's trading schemes in housing and banking, to sell subprime energy–at the public's expense.

Instead of the statesmanship Ike had called for to quell such dystopean energy policy, we get VIPed by windspeak.

Jon Boone
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