

## **The Great Transmission Heist**

The latest scheme to subsidize solar and wind power to the detriment of rate payers.

*Credit:* Wall Street Journal, [wsj.com](http://wsj.com) 7 November 2010

How would you like to pay higher utility bills to finance expensive electricity from solar and wind power, which you would never use?

That's the issue now before the Federal Energy Regulatory Commission (FERC), and it deserves more public and political scrutiny before it becomes a reality.

FERC has a draft rule that could effectively socialize the costs of paying for multi-billion dollar transmission lines to connect remote wind and solar projects to the nation's electric power grid. If FERC rules in favor of Big Wind and Big Solar, the new policy would add billions of dollars onto the utility bills of residents of at least a dozen states—including California, Michigan, Oregon and New York—that will receive little or no benefit from the new power lines.

Transmission lines connect coal, natural gas and nuclear plants to the electric grid so that power can be delivered to homes and businesses. The costs of building this infrastructure, hooking up to the national electric grid and transporting electricity to the end users has traditionally been paid by the industries and passed on to rate payers. This long-standing user-pays policy would be replaced with a policy of everyone pays under FERC's plan.

As FERC chairman Jon Wellinghoff has put it: "This is a country where transmission lines have traditionally been built by the incumbents who serve that area; the question is whether we should continue that policy in the future." He told Congress that we should steer away from pricing that would "calculate the precise monetary benefits expected to accrue from a new transmission facility." But that's exactly what investors try to do in assessing the economic viability of any new project.

The big winners from socializing transmission costs would be wind and solar projects that tend to be in remote areas, like the desert or offshore. In many cases, thousands of miles of new transmission lines would have to be built to get the power to the end user. Google recently announced it will be a major investor in a \$5 billion wind farm off the coasts of New Jersey, Delaware and Virginia that will require hundreds of miles of underwater transmission lines. No one is saying who will pay for those transmission costs, but it's a safe guess the investors are betting that FERC will decide to socialize them.

Very big dollars are at stake in this fight. By some estimates the cost of building out new transmission lines to accommodate renewable energy and other new electric power sources could exceed \$160 billion. Wind and solar proponents insist that

renewable energy standards can only be reached if transmission costs are shared by everybody. This sounds like an admission that these energy sources are inefficient sources of power that can't compete in the marketplace without subsidies. The policy the renewables are pushing would be analogous to taxpayers underwriting the cost of tankers and truckers that transport oil to service stations.

Senators Harry Reid of Nevada and Jeff Bingaman of New Mexico, both of whom have big wind and solar projects in their states, pushed a Senate energy bill this summer that would have socialized these transmission costs. That bill has stalled, so FERC—supported by the White House and Democratic leaders—may move on its own.

Fortunately, the "loser" states are finally catching on to how much this cost-shifting would add to their utility bills. Last year Governors Jan Brewer of Arizona, Jim Gibbons of Nevada, Christine Gregoire of Washington, Ted Kulongoski of Oregon and Arnold Schwarzenegger of California opposed the plan as "inappropriate to assess the cost of transmission build-out to customers that cannot make use of the facilities, or who elect not to because they can access more cost effective options that do not rely on large, new transmission investments to meet environmental goals."

Eleven eastern governors have raised similar objections, arguing that this policy would "undermine the significant renewable energy potential along the East Coast by subsidizing distant terrestrial wind resources which would stifle economic recovery in the east by destabilizing competitive electricity market structures and increasing energy prices in regulated markets." Massachusetts Secretary of Energy and Environmental Affairs Ian Bowles, hardly a Milton Friedman apostle, describes cost-sharing as "a radical Soviet-style approach to transmission planning."

*One of the biggest losers would be Michigan. One economic analysis sponsored by Michigan utilities found that, despite some initial gains for certain wind projects in the northern part of the state, under a proposed regional payment scheme, "Michigan will be sending hundreds of millions of dollars annually outside the state to fund transmission projects which not only provide little value to the State, but will actually harm our ability to develop our own renewable energy market." Michigan rate payers would have to subsidize 20% of the cost of some \$16 billion of transmission projects outside the state. Talk about outsourcing.*

This is all the more maddening given that renewable energy projects already receive tens of billions of dollars of loans, grants, tax credits, earmarks, renewable energy mandates, stimulus money, and on and on. According to a 2007 U.S. Department of Energy study, wind and solar already receive subsidies that are more than 20 times greater per kilowatt of electricity than conventional power sources. But as with ethanol, even these subsidies are never enough.

Senator Bob Corker of Tennessee has sponsored legislative language that would instruct FERC to allocate transmission line costs in a way that is "reasonably proportionate to measurable economic and reliability benefits." In other words, no charging rate payers in New Jersey for the costs of a wind farm in Texas based on vague benefits of reduced planetary carbon emissions.

The courts have also generally ruled that pricing for electric projects must be commensurate with benefits derived by rate payers. If Congress or FERC mandate a cost-spreading scheme for transmission projects, then the highest subsidies will go to the least efficient projects. That wastes money and energy, which doesn't sound too green to us.

## **Wind Power Won't Cool Down the Planet**

**Often enough it leads to higher carbon emissions.**

**WSJ, August 23, 2010, by Robert Bryce**

The wind industry has achieved remarkable growth largely due to the claim that it will provide major reductions in carbon dioxide emissions. There's just one problem: It's not true. A slew of recent studies show that wind-generated electricity likely won't result in any reduction in carbon emissions—or that they'll be so small as to be almost meaningless.

This issue is especially important now that states are mandating that utilities produce arbitrary amounts of their electricity from renewable sources. By 2020, for example, California will require utilities to obtain 33% of their electricity from renewables. About 30 states, including Connecticut, Minnesota and Hawaii, are requiring major increases in the production of renewable electricity over the coming years.

Wind—not solar or geothermal sources—must provide most of this electricity. It's the only renewable source that can rapidly scale up to meet the requirements of the mandates. This means billions more in taxpayer subsidies for the wind industry and higher electricity costs for consumers.

None of it will lead to major cuts in carbon emissions, for two reasons. First, wind blows only intermittently and variably. Second, wind-generated electricity largely displaces power produced by natural gas-fired generators, rather than that from plants burning more carbon-intensive coal.

Because wind blows intermittently, electric utilities must either keep their conventional power plants running all the time to make sure the lights don't go dark, or continually ramp up and down the output from conventional coal- or gas-fired generators (called "cycling"). But coal-fired and gas-fired generators are designed to run continuously, and if they don't, fuel consumption and emissions

generally increase. A car analogy helps explain: An automobile that operates at a constant speed—say, 55 miles per hour—will have better fuel efficiency, and emit less pollution per mile traveled, than one that is stuck in stop-and-go traffic.

Recent research strongly suggests how this problem defeats the alleged carbon-reducing virtues of wind power. In April, Bentek Energy, a Colorado-based energy analytics firm, looked at power plant records in Colorado and Texas. (It was commissioned by the Independent Petroleum Association of the Mountain States.) Bentek concluded that despite huge investments, wind-generated electricity "has had minimal, if any, impact on carbon dioxide" emissions. Bentek found that thanks to the cycling of Colorado's coal-fired plants in 2009, at least 94,000 more pounds of carbon dioxide were generated because of the repeated cycling. In Texas, Bentek estimated that the cycling of power plants due to increased use of wind energy resulted in a slight savings of carbon dioxide (about 600 tons) in 2008 and a slight increase (of about 1,000 tons) in 2009.

The U.S. Energy Information Administration (EIA) has estimated the potential savings from a nationwide 25% renewable electricity standard, a goal included in the Waxman-Markey energy bill that narrowly passed the House last year. Best-case scenario: about 306 million tons less CO<sub>2</sub> by 2030. Given that the agency expects annual U.S. carbon emissions to be about 6.2 billion tons in 2030, that expected reduction will only equal about 4.9% of emissions nationwide. That's not much when you consider that the Obama administration wants to cut CO<sub>2</sub> emissions 80% by 2050.

Earlier this year, another arm of the Department of Energy, the National Renewable Energy Laboratory, released a report whose conclusions were remarkably similar to those of the EIA. This report focused on integrating wind energy into the electric grid in the Eastern U.S., which has about two-thirds of the country's electric load. If wind energy were to meet 20% of electric needs in this region by 2024, according to the report, the likely reduction in carbon emissions would be less than 200 million tons per year. All the scenarios it considered will cost at least \$140 billion to implement. And the issue of cycling conventional power plants is only mentioned in passing.

Coal emits about twice as much CO<sub>2</sub> during combustion as natural gas. But wind generation mostly displaces natural gas, because natural gas-fired generators are often the most costly form of conventional electricity production. Yet if regulators are truly concerned about reducing carbon emissions and air pollution, they should be encouraging gas-fired generation at the expense of coal. And they should be doing so because U.S. natural gas resources are now likely large enough to meet all of America's natural gas needs for a century.

Meanwhile, the wind industry is pocketing subsidies that dwarf those garnered by the oil and gas sector. The federal government provides a production tax credit of

\$0.022 for each kilowatt-hour of electricity produced by wind. That amounts to \$6.44 per million BTU of energy produced. In 2008, however, the EIA reported subsidies to oil and gas totaled \$1.9 billion per year, or about \$0.03 per million BTU of energy produced. Wind subsidies are more than 200 times as great as those given to oil and gas on the basis of per-unit-of-energy produced.

The build-out of the national transmission corridor implicit in S. 1462 is estimated to cost at least \$160 billion, the majority of which would be paid for by East Coast states, costing our ratepayers hundreds of dollars per year. In its current form, this legislation would harm regional efforts to promote local renewable energy generation, require our ratepayers to bear an unfair economic burden, unnecessarily usurp states' current authority on resource planning and transmission line certification and siting, and hamper efforts to create clean energy jobs in our states.

## **Montana Public Radio Commentary**

Tom Power - October 11, 2010

### Montana's "Dependence" on Coal Mining, Electric Generation, and Oil Refining

Last week Montana Senator Max Baucus appeared to side with Republicans and a handful of coal-state Democrats in opposition to the US Environmental Protection Agency using the authority that the US Supreme Court has said EPA has to regulate greenhouse gas emissions under the Clean Air Act. Baucus was quoted as saying that the regulation of greenhouse gases was too important and complicated to trust to just a federal agency. Instead, that regulation should remain the business of the US Congress where different regional and industrial interests can be balanced. Congress, of course, has not been able to muster the votes to pass any climate protection legislation, and with Republican's expected to be significantly more powerful in Congress after the mid-term elections, there is little chance a greenhouse gas emission control bill will be produced by Congress any time soon. No EPA greenhouse gas regulation may effectively mean no greenhouse gas regulation at all for the indefinite future.

Because Baucus is a member of the Senate Committee on the Environment and Public Works, his apparent opposition to allowing EPA to adopt regulations controlling greenhouse gas emissions was big news in Washington DC. One of the Capitol's influential daily newsletters, Environment and Energy, explained Baucus' waffling on the regulation of greenhouse gases by saying: "Baucus is wary of efforts to limit carbon emissions, as coal mining, coal-fired electricity and oil refineries dominate his state."

It is true that Montana has lots of coal and continues to produce significant amounts of petroleum and natural gas. It is also true that a half-dozen large coal mines are operating in the state, shipping that coal to coal-fired generators across the nation. That coal mining also supports six coal-fired generators here in Montana including Colstrip's four generators. We also have oil refineries in Billings, Great Falls, and Laurel. We have high voltage transmission lines delivering the electricity

we generate to the West Coast, a petroleum products pipeline stretching across much of the state connecting some of our refineries with the states to the west and a variety of natural gas pipelines crisscrossing the state. Clearly energy production, transformation, and transmission are a significant part of Montana's economy. But are we "dominated" by these energy industries? That description, of course, is not just a shorthand way for Washington DC insiders to try to make sense out of why our representatives vote the way they do. It is also a description that increases the political power of those very fossil fuel sectors in Montana, giving them more leverage to either block or change any proposed greenhouse gas regulations or legislation. That, actually, is what Baucus meant by saying that regulation of greenhouse gases should be done in Congress where heavy emitters of greenhouse gases can better get their economic interests taken into account. For that reason, it is important to investigate the extent to which Montana is actually economically "dependent" on coal mines, coal-fired electric generators, and oil refineries.

The answer to that is that we have "little" and "shrinking" economic dependence on those energy industries. The Montana Coal Council tells us that in 2009 about 1,150 people were employed in coal mining in Montana. That sounds like a lot of jobs, but there were about 625,000 jobs in Montana in 2009. The coal mining jobs represented about one out of every 500 jobs, less than two-tenths of one percent of all jobs.

In petroleum refining, we have about 1,100 jobs, about the same as in coal mining. If we look at electric generation, the 2002 and 2007 Economic Census indicate that the employment in electric generation was about 450, but about 150 of those jobs were associated with hydroelectric generation, leaving about 300 workers engaged in fossil fuel-based generation. Clearly that is even a smaller sliver of the total Montana economy, one out of every 2,000 jobs. If we add all of the coal mining, coal-fired electric generation, and petroleum refining jobs together, there are about 2,600 jobs associated with these energy sectors. That is, these sectors provide one out of every 250 Montana jobs or about four-tenths of one percent of total jobs. To call this a "dominant" position in the Montana economy is more than a stretch, it is at the very limits of hyperbole. One can, of course, start using multipliers to inflate this number. But any reasonable multiplier would leave us accounting for less than two percent of the Montana's jobs. It might be better to be worrying more about the other 98 percent of jobs if we are really concerned about the future of the Montana economy.

Just as important, we could ask how many of the new jobs that have been created in Montana over the last 25 years were created in these energy sectors. Over the last quarter century, Montana added almost 220,000 jobs, over a 50 percent increase. During that time, employment in coal mining declined by over 300. Employment in coal-fired generation also appears to have declined as automation reduced the necessary work force. On the other hand employment at our oil refineries expanded by 200. So overall, these three energy sectors lost a couple of hundred jobs while the over all economy was expanding dramatically. Just in health care, for instance, almost 30,000 new jobs were created, more than doubling that workforce.

It is important that we focus clearly on the economy we actually have and the sources of economic vitality that have actually been supporting the expansion of employment opportunities. Our continued fascination with the view through the economic rear-view mirror leads only to confusion

and bad public economic policy that allows a tiny sliver of economic participants to distort public policy to protect their private interests at the expense of the rest of the population and the economy.