



Jobs in the Energy Business

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Tags: [alaska](#), [coal](#), [natural gas](#), [new zealand](#), [original](#), [record winter](#), [tibet](#), [wind](#)
[[list all tags](#)]

To steal a phrase “It is the best of times, it is the worst of times,” although the rest of the opening to [A Tale of Two Cities](#) (“It was the epoch of belief, it was the epoch of incredulity, it was the season of Light, it was the season of Darkness, it was the spring of hope, it was the winter of despair,”) may also be appropriate. It is also [interesting](#), and will become more so as the new Administration seeks to find a way forward out of the compounding problems that now face it. The [WSJ](#) has noted the statements by President-elect Obama earlier:

On the campaign trail, Mr. Obama argued that spending \$150 billion over the next decade to boost energy efficiency would help create five million jobs. The jobs would include insulation installers, to make houses more energy-efficient, wind-turbine builders, to displace coal-fired electricity, and construction workers, to build greener buildings and upgrade the electrical grid.

It goes on to note that if renewable energy is only brought on-line to displace conventional coal power, then the net job losses from existing industries may well offset the gains in wind power. That topic brought a discussion in comments a [couple of days ago](#). It is, however, perhaps worth pursuing in a little more detail.

There has been, for example, a [suggestion](#) that employing more folk in the wind industry will reduce employment, due to a drop in demand from the coal and related industries. And with such sentiments it becomes apparent, again, that many folk just don't, as yet, appreciate the coming problems in the magnitude of the shortage of supply of fuel. As Leanan noted, the old Maytag plant in Newton is now [building turbine blades](#), ultimately to employ 500 folk.

Newton boasts two wind energy firms, and Iowa is one of the leading wind producing states in the country. TPI joins wind turbine manufacturing facilities in Cedar Rapids (Clipper Windpower), West Branch (Acciona Energy North America) and Fort Madison (Siemens Power Generation).

Yet in terms of significant impact into the national need it is still going to be quite small, in the near term.

In the recent election Missouri voted and passed their own target for the future:

Shall Missouri law be amended to require investor-owned electric utilities, cooperative utilities, and certain municipal utilities to generate or purchase electricity from renewable energy sources such as solar, wind, biomass and hydropower with the renewable energy sources equaling at least 2% of retail sales by 2011 increasing incrementally to at least 15% by 2021, including at least 2% from solar energy; and restricting to no more than 1% any rate increase to consumers for this renewable energy?

It passed overwhelmingly and brings Missouri into line with [more than half](#) the rest of the states. At present Missouri gets more than 80% of its power from coal, but has seen significant investment in wind over the past [few years](#).

Tom Carnahan, president of Wind Capital Group, leads the charge here developing the state's first wind farms. Wind Capital began erecting Suzlon S88 turbines in Gentry County in June 2006. Today dozens of towers rise from the state's breezy northwestern plains where sleek white blades spin high above grazing cattle and row crops. Four projects totaling about 163 megawatts of capacity are complete. Their high-tech pinwheels generate electricity used by both nearby towns and cities hundreds of miles away. They represent about \$200 million in investment by Wind Capital and financing partner John Deere Wind Energy, but that's just the beginning, according to Carnahan.

Taken with the unique selling of the technology by [Boone Pickens](#) there is already a tremendous impetus behind moves to grow the industry and, in turn, displace, not initially coal, but rather natural gas. (Though the Pickens program itself is in a little bit of a bind because of the [credit crunch](#).) Whether the natural gas will still be around to be displaced remains an unanswered question, since current development of the [Marcellus shale](#) is still getting under way, and the operational lifetime of the wells is still to be determined. Interestingly the estimate for the 12 horizontal wells that Atlas is currently drilling is around \$25 million. They plan on drilling another dozen after these 12 are complete.

Yet wind is already causing some reduction, if only slight on a national scale, in [coal use](#).

Dairyland has since developed an alternative plan that reduces the byproducts by using a different coal blend, said Chuck Sans Crainte, vice president, generation. However, the new, lower-energy coal blend will reduce the electricity output of the Genoa power plant, which will be offset by power purchased from a new wind farm in Iowa, purchased power from a biomass-fueled plant being developed in Cassville and Dairyland's share of power generated by a new power generator near Wausau, he said in a statement.

Wind itself is not without its critics, and sites that [criticize the industry](#) are likely to grow in numbers. Talking to a colleague from Germany recently, he mentioned that concerns there seemed to be on the increase as the industry has grown larger.

Yet, even if the industry is to grow as much as projected over the years, it is unlikely in the short-term to either effect changes in fossil fuel industrial employment or in fossil fuel energy production, by itself. Yet within the next four years, it has probably the most potential for significant impact on both power and employment of the renewable options. Certainly a study of [Australian](#) conditions suggested the potential for the future.

. . .as a result of automation, employment in the coal mining industry fell by 45% between 1987 and 2002. Moreover, as a result of the restructuring of the electricity industry as a whole, employment in the industry plunged by 50% during the 1990s. By serving as a substitute for coal power, the wind power industry, with 50% local content in dollar terms, already creates two to three times the number of direct, local job-years per kWh generated than coal power. . .

Given the investments that are currently being made in the installation of new farms it will be interesting to see how additional Federal investment can significantly impact that growth rate. More to the point may be investments in the grid to take advantage of this potential power source, since the grid will act as the “battery of last resort” when for a variety of reasons the weather won’t co-operate.

Apparently there may or may not be problems with them operating, for example, in [a blizzard](#), which is good, since [New Zealand](#) has joined [Tibet](#) and [Alaska](#), to name but two, in having unexpectedly heavy snows and storms this year. In [Manitoba](#) 10 of the 63 turbines were transiently affected as winds got above 72 km/hr. On the other hand, as more of the nation comes to rely on their power, the grid must be sufficient to supply power when the wind is either too strong or non-existent.

And for much of that power over the next couple of decades, I strongly suspect we will still have to plan on the use of coal for most of the electric power that we need. Though the industry may not use the tens of thousands of men that it did when I started, it is likely to continue to need an increasing number, as the energy problems around the world become more evident. It will remain difficult to overcome the problem of scale, particularly as the liquid fuels supply diminishes, and efforts, and thus employment, to find larger numbers of increasingly smaller production sites increase.

Which leaves me wondering where all the five million new jobs will go - though I also suspect that this may depend on who does the counting.



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