

Putting Knowledge Into Action



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Renewables Redux

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The U.S. renewable industries have been predicated on subsidies. It seems now is the time to turn the renewable market loose from its dependence on subsidies and make the sector financially competitive. What I mean by that is that higher energy prices provide the price floor for the deployment of renewable technology, and the icing on the cake will be the generation of both renewable energy credits and carbon credits for renewable energy production.

While the German renewable energy model had 20 year feed-in tariffs and built a solar and wind industry plus an energy services industry from scratch from 1990 to the present, that time was almost twenty years ago. Much of that subsidization should no longer be needed for the U.S. renewable industry to flourish.

First of all, we now have a significantly higher price floor. \$100 oil will do that but natural gas and coal are also now expensive. That has had a knock on the effect of higher electricity prices. If these prices collapse, it won't be mean price reversion to \$20 per barrel for oil but reversion to a higher mean. The most bearish forecast that I have seen is one for \$45 oil. Much alternative energy and cleantech investment works at \$30 per barrel and almost all at \$40 per barrel. So let's take subsidies off the table. We now have higher sustained prices. We have better technology, so-called next generation solar, wind, geothermal and biomass, coming to market. We even have unprecedented renewed interest in tidal power.

We also have the harbinger of carbon credit reductions as well as renewable energy credits entering the market. If these twin credit streams can't incent the industry, we also have reductions for NOX (more stringent in 2009) and acid rain reductions. There are environmental financial markets that can drive these new investments. You can call it another form of subsidization but it is not a tax handout.

The time is finally right to push a renewables agenda as part of a portfolio without major subsidies to drive it. Oil companies need to diversify their risk into clean energy and electricity companies are incented to reduce their carbon footprint. This is just good business.

Technology Triumphs

Moreover, investors are continuing to pump money into the cleantech (which passed \$5.18 billion for 2007 according to the Cleantech Group LLC) and clean energy sector. Those investments on new technology will bear fruit sooner rather than later. Subsidies are nice but markets are better to create the value needed. Unfortunately, an inordinate amount of effort has been spent lobbying Congress for renewable energy subsidies, and those subsidies keep expiring since they run on election cycles of two to four years. What will create a more robust long-term market is actually climate change legislation. That will drive renewables faster.

The federal government needs to take a page out of the California greenhouse playbook. That looks like what the next president will do. Set the bar high at 25% greenhouse gas emissions reductions by 2020 and 80% by 2050. Setting the bar high will unleash engineering and technology solutions that can not be predicted. These require more substantial cuts in greenhouse gas reductions that can not be met by energy efficiency or nuclear power alone. Renewables have this opening. Accept the fact that subsidies are not coming all the time and the political reality is that the string is still long to earmark those subsidies to the agricultural rather than the energy sector. It's the energy sector that has been underfunding its future. U.S. private research and development are only \$4 billion. That makes the opportunity greater for innovation and a drive to how we use energy more efficiently.

The impact on renewable energy is that its growth will continue to ratchet up. The world's largest oil and power consumer is now poised to enter the market in a major way after many years of treading water.

The Triple Bottom Line

Using energy more environmentally benignly is standing at the doorway for renewables. Better technologies in the offing can come to market due to higher prices coupled with a need to reduce the carbon footprint of many sectors of the economy. The point is that with economy wide climate change legislation coming, the opportunities for renewable energy rise exponentially. In fact, they break out from the energy industry and have applications in buildings and transport that need to reduce their carbon intensity. That makes renewable, energy efficiency, cleantech break through into Fortune 1000 companies and beyond. Why are subsidies needed when the buyers will be lining up?

Next generation technologies in solar, wind, biomass, geothermal and hydropower offer even greater benefits. The name of the game now changes to both cost reductions and scaling. That means that concentrated solar power, nano photovoltaic, small-scale wind as well as other renewable technologies have both the United States and global markets in which to be deployed. In the 1980s, we saw a rise and fall in energy prices that decimated the renewable energy industry in the United States, but now we have higher sustained

energy prices, better technologies coming to market and a rising environmental imperative on climate change that has also changed the economics of renewables. The time for dependency on subsidies is past as it depends on political whims and deploys capital to uneconomic sectors. The game changer now is innovation coupled with reducing the carbon footprint. These metrics will make renewable energy stand on its own two feet!

Peter Fusaro is holding carbon trading and finance seminars in New York (www.pgseenergy.com) and his annual Wall Street Green Trading Summit (www.wsgts.com) in New York on April 2 and 3.



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