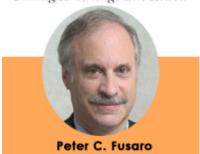


Putting Knowledge Into Action



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Why Has Environmental Market Development Been So Slow?

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My last **Issue***Alert* article focused on the framework needed to create the Green Financial Markets. What troubles me today is how slow this process has been, given the urgency of the situation. It can be argued that the public policy process is always slow and riskaverse, but I am actually looking back at 19 years of incremental change at best. I was recently interviewed by the Congressional Research Service regarding which agencies should regulate cap and trade. I argued that it should not fall under FERC jurisdiction because FERC has no experience in environmental financial markets. The following day I was interviewed by the *Wall Street Journal* on carbon market developments in the United States and abroad. This is their first coverage by the journal of this sector as a commodity.

The realization? This is a slow process of change, antithetical to the reality that climate change is accelerating. We are continuing to dither while the planet burns. What is wrong with this picture?

Government thinks there is a need for perfection in markets. This is a very bad idea. Government cannot create and manage markets. In effect, they cannot pick technology winners and losers either. The problem is one of status quo versus dynamic change. The problem is that change is pervasive in an era of Internet time, not a slow incremental process of bits of change, which is basically bureaucratic time. Bureaucracies moderate change and are not agents of change.

Risk-aversion is a characteristic of government at all levels in the United States. I recently attended a Smart Grid seminar in midtown Manhattan where we had two very prominent public service commissioners talking about not wanting to be "pushed" by the Obama Administration and they were very willing to "wait and see" how the California

experiment on Smart Grid progresses. This is a pathetic response to today's troubling times. New York State has deployed only 6,000 smart meters while they are talking about 43 million meters in California and western states. What is going on here? Inertia in an age of change is not a business or policy strategy.

Changing the Bureaucratic Mindset is Our Greatest Challenge

It brings me to the realization that *change will be slow* in the development of regulatory policy and, more importantly, regulatory responses to greenhouse gas reduction, renewable energy deployment and energy efficiency. We are talking decades here in terms of market and financial impacts. Energy projects typically take four to seven years, (sometimes ten), years to deploy. The lack of a quick-fix aggravates the political establishment and deprives them of an immediate photo opportunity.

The need is so great that it boggles the mind. Thirty years of underinvestment in U.S. infrastructure has created pent-up demand but that demand for deployment of new cleaner technology will not be deployed without the policy framework in place! We are facing a decades-long runway to reduce greenhouse gas emissions and deploy more efficiency and renewables. This long-range policy planning also runs contrary to election cycles the need to constantly raise capital for re-election.

Regulatory reform must be undertaken. That means tariff reform for the Smart Grid. Regulators are too frightened of changing the rules of the game of the industries that they regulate. This has led to paralysis, fear, and little change. Today, the only reality of Smart Grid is Boulder, Colorado which is an affluent community of knowledge workers.

Looking Through the Cloudy Tea Leaves

What else is new? The age of carbon reductions is about to begin. Prepare for the disruptions that are going to hit the energy industry and most U.S. industries. The first is more consolidation, particularly of coal burning utilities by utilities operating cleaner fleets of generation capacity such as nuclear power and gas. It means more deployment of natural gas as a transitional cleaner fuel than coal and oil. Natural gas has become an abundant domestic resource recently due to new technology. In fact, we may be swimming in gas supplies that were unthinkable three years ago, which lessens the need for imported LNG. For power generation, that means more combined cycle turbines again. Yes, we did this before in late 1990s and overbuilt, but now there is need to replace aging, inefficient and carbon producing coal-fired capacity with the lesser carbon emissions of natural gas.

Renewable deployment will continue through the next several decades, as we await breakthroughs in batteries and energy storage or transition to the hydrogen economy. But in the short term, from now until 2030, its fossil energy in all its forms—oil, gas, coal, biofuels, and biomass—that will dominate fuels for transportation and power generation.

The irony of all this is that the environmental financial markets will adapt quickly to all these changes once the rule of law is implemented. Today, there are 38 compliance environmental financial markets in the United States. While their value is small today

(less than \$15 billion) once the markets figure out how to comply with the law and create investment opportunities, market transformation will accelerate. Only a fool does not comply with regulatory mandates, and U.S. companies are not foolish just fuelish.

Peter Fusaro teaches a course on "Introduction to Carbon Trading & Finance" in New York on June 2nd. If interested in more information, please go to www.pgsenergy.com.

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