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The Wall Street Journal has launched The Experts, an exclusive group of industry and thought leaders who engage in in-depth online discussions of topics raised in Journal Reports. WPC Environmental director Todd Myers has been designated a WSJ Expert for Energy and the Environment. You can read some of his recent contributions here.

What's the best way forward on nuclear power?

Think small on nuclear power

After Fukushima, and with the uncertainty about nuclear waste now that Yucca Mountain appears to be on hold, and with the legal and permitting challenges faced by new plants, it will be difficult to build new reactors. This is unfortunate and will make it difficult for the U.S. to meet our energy demands. It also puts a major carbon-free energy source out of bounds. As a result, the most likely approach is small-scale nuclear like that being proposed by TerraPower. The company, supported by Bill Gates and former Microsoft Chief Technology Officer Nathan Myhrvold, is developing a small nuclear reactor powered by existing waste. This type of approach is more likely to overcome the numerous public and legal hurdles that currently exist. It is unclear what this will do to the price of nuclear energy, but small reactors hold promise because, according to the Energy Information Administration, traditional nuclear power is expected to continue to be half as expensive as solar energy. Even if costs rise due to loss of economies of scale, it should continue to be less expensive.



What renewable energy source, if any, has the most promise for becoming a major energy source?

Whatever the Market Decides

Let's imagine we are in the year 2025 and tidal power accounts for 10% of electric generation. That would be a dramatic increase. By that time, however, giving homeowners more control over their energy using the Smart Grid could reduce demand by a similar amount. If a penny saved is a penny earned, why would we focus more on "renewable" tidal power than technologies yielding the same carbon emissions reduction and energy savings?

Given a choice between algae-based biofuel or expanding high-speed Internet access to encourage telecommuting and reduced fuel use, which should we choose? Does it matter that one is a "renewable" energy source and the other isn't? This is the beauty of the free market. As long as there are costs to energy use and the impacts of energy use, the free market treats all approaches equally, without politics, as long as they effectively save resources. Given a choice between solving our energy and environmental demands by narrowing our focus to a few choices or expanding our vision to include any approach that conserves energy, we will be more successful by embracing all potential options.

This is the danger of politically chosen technologies. The perspective of policy makers is limited and it can never match the combined creativity of the many investors and inventors looking for the

What steps can — and should — local, state and federal governments take to encourage energy conservation?

Don't Spend a Dollar to Save a Dime

There are two assumptions made by advocates of government "conservation" requirements.

First, they assume conservation would not exist without political mandates. In the words of George Bernard Shaw, "People who say it cannot be done should not interrupt those who are doing it." Families and businesses are consistently looking for ways to keep money in their pocket. They know best how to economize and conserve in their own lives. For this reason, as I pointed out previously, our economy has become more efficient even when energy prices have been low. Second, there is an assumption that every dollar spent on energy conservation is spent wisely. In fact, many conservation efforts spend a dollar to save a dime. For example, it might make sense to promote energy conservation in Germany, where electricity costs more than 30 cents per kilowatt hour, but no sense in Washington state, where we pay seven cents per kilowatt hour and energy is almost carbon-free. Treating these two situations equivalently would be foolish.

Further, many efforts at energy conservation cost more than they save. As I outline in my book "Eco-Fads," green building standards like LEED often cost more to implement than they save in energy. My research in New Mexico, Colorado, Washington state and North Carolina demonstrates that schools using

next opportunity to profit from their risktaking in the marketplace. For decades, we've been promised that solar energy would be price competitive. Just a few years ago, Congress expected cellulosic ethanol to blossom as an energy source. Neither occurred. Numerous other technologies have been touted and then have floundered. That is the nature of innovation. We are wiser to reduce the costs of taking risks in the process of discovering new technologies than to guess what technologies will emerge. until people begin to change their behavior in ways politicians want. That, however, is no different than simply regulating behavior. It doesn't respect individual dignity or liberty and is likely to do more harm than it avoids. An appropriate price would mean people take responsibility for the impacts they cause but can choose how to avoid those costs in a way that works best for them.

these systems rarely earn back their initial investment. Every dollar wasted on ineffective or second-best approaches to carbon reduction or energy efficiency is not just a waste of money, it's a waste of energy.

Advocates of government intervention justify it because utilities are regulated monopolies rather than competitive businesses. Part of that regulation, they argue, is mandating conservation. This is true to an extent, but many who advocate such regulations also oppose creating competition as exists in places like Texas and Pennsylvania. That would be a better approach for consumers and more effective. •