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118

172

DR. GAYLE BUCHANAN: Renewable energy and the free market

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I read with interest your Jan. 11 editorial on letting the free market dictate the success of green technologies like compact fluorescent light bulbs. As more people become aware of the tremendous importance of energy efficiency and the new technologies that make this possible, I expect we'll be seeing similar debates between legislation and free-market competition crop up across the country.

As the undersecretary of agriculture for research, education and economics, I have been following debates like these closely. While Fresno residents may associate the U.S. Department of Agriculture more closely with farming programs or the Fresno Water Management Research Laboratory, we also play a large role in developing the United States' renewable energy capabilities.

USDA conducts dozens of research projects designed to improve renewable fuel production, from evaluating the fuel efficiency of ethanol derived from switchgrass to creating fuel from animal waste.

The federal government is uniquely positioned to conduct both basic and applied research in renewable energy. Moreover, we are singularly capable of coordinating our research with ongoing international efforts to advance renewable energy.

Let's be frank: Renewable energy technologies -- as they stand today -- are not yet strong competitors in the energy market. While I believe that free markets are the best means of encouraging innovation, determining merit and meeting customer demand, the simple truth is that the market doesn't take into account benefits that are, as of yet, intangible.

Energy independence, rural economy revitalization and a cleaner environment -- these are just a few of the benefits of renewable energy to which we cannot assign a dollar value.

Our efforts to promote renewable energy have not been in vain. Over the past 20 years, thanks to a strong research partnership between government and the private sector, the costs of wind and solar power have been slashed by 80% and 90% respectively. Corn ethanol is nearing cost competitiveness without subsidies. Cellulosic ethanol is also beginning to move toward the market, and a wide range of new feedstocks are being investigated. Other renewable energy technologies -- including geothermal, solar thermal and biomass -- are advancing rapidly as well.

In fact, deployment of truly competitive renewable energy technologies on a large scale may be nearer than many people realize.

Consider the following statistics: The U.S. has tripled ethanol production in this decade; in fact, we are now the world leader in biofuels. Installed wind capacity has more than quadrupled since 2000. And thanks to a history of innovative energy policies, as well as strong leadership from Gov. Arnold Schwarzenegger, California now produces around 11% of its electricity from renewable sources like solar, wind and biomass.

Cost is still main obstacle

Despite these advances, cost remains the greatest barrier to the wholesale adoption of renewables. The dramatic growth rates we're seeing are still largely dependent on government tax incentives and mandates.

That is why the research effort remains crucial. The goal of government support is not to create an industry dependent on taxpayer subsidies; to the contrary, our goal is to further slash the costs of renewable energy to the point that it becomes independently and sustainably competitive in the marketplace.

None of this will happen without a concerted effort. The Department of Energy predicts that total U.S. energy use will increase by more than 30% by 2030. That means that our renewable fuel production will have to increase by at least 30% just to maintain its current share of the market.

With the newly signed energy bill, President Bush has directed that fuel producers use at least 36 billion gallons of biofuel in 2022. That's five times the amount we're using today, and we won't get to that level without technological breakthroughs in cellulosic ethanol production. Nor will we reach California's target of having 33% of energy provided by renewables by 2020 -- that is, unless we ramp up our research efforts.

That's why USDA has partnered with the State Department and other government agencies to host a ministerial-level conference on renewable energy from March 4-6 in Washington, D.C. At the Washington International Renewable Energy Conference (WIREC 2008), Cabinet-level government ministers from more than 70 nations will join several thousand private sector participants to explore ways to accelerate the large-scale adoption of renewable energy.

WIREC 2008 will allow scientists to meet with policy makers and industry leaders to address how best to direct our research to increase our production of renewable fuels. International experts will address what avenues of inquiry have the most promising short-term potential, as well as where we should be directing our studies down the road.

I, for one, am fully confident that the resources the government is investing in renewable energy today will be paid back with dividends in the years ahead. The time will come when renewable energy will have to compete in the energy market without government assistance. But that time has not yet come. We can hasten its arrival, but to do so, we must continue to support this fledgling industry until it gets its legs under it and can run with the big boys.

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