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EPA Power Sector Rule Increases the Cost of Gasoline Production and Decreases the Diversity of US Energy Production – Version 2.0

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On February 23, 2012, the President travelled to Miami to address high gasoline prices and related energy policy concerns. As one senior Administration official noted regarding the purpose of the speech, "The president clearly understands the impact that high gas prices have on middle class families, but unlike some, he isn't interested in engaging in false debates and phony promises." The actual solution "requires an all-of-the-above approach that leverages technologies." See <http://tinyurl.com/749zbxh>.

Unfortunately, the US Environmental Protection Agency's (EPA) recent finalization of the new Clean Air Act rule on electric power plants, known as Utility MACT, runs counter to the message being delivered today in Miami.

First, far from an all-of-the-above strategy endorsed by the Administration, the power sector rule attempts to marginalize coal-fired power. Currently, coal is used to meet 21 percent of America's total energy demand and generate almost half of all its electricity. The US has enough recoverable coal reserves to last at least another 250 years, constituting almost 30 percent of the world's supply. See Energy Information Administration, International Energy Outlook 2009, Table 9, <http://tinyurl.com/76lx58d> and Institute for Energy Research at <http://tinyurl.com/7fztwnw>.

And yet, it is difficult to read the EPA's new rules in other way than as an attempt to back coal out of the equation. Despite a lack of Clean Air Act authority for doing so, EPA Administrator Jackson has referred to the power sector rule as a mechanism to "level the playing field" to the

disadvantage of coal. See “Lisa Jackson's Freudian Slip: An unintentionally revealing interview from the EPA chief,” Wall Street Journal, Nov. 23, 2011. Closures at coal-fired power plants attributable to the EPA rules have already exceeded the Agency’s estimates and are expected to get far worse. The Utility MACT rule alone, according to union organizations representing over 3.2 million workers, would jeopardize 251,000 jobs. See UJAE reference at <http://tinyurl.com/6mtlx86>.

Electric Affordability and Reliability and the Cost of Refining Gasoline

But there is another important way in which the power sector rule departs from the President’s message in Miami: it increases the cost of producing gasoline. Almost half of a refinery’s operating costs (43 percent) is for energy and few refineries have the capacity to co-generate appreciable amounts of electricity on their own. See National Energy Education Development project at <http://tinyurl.com/7cz75ya>. Put another way, as US Department of Energy vehicle expert Jake Ward recently calculated, some six kilowatt hours of electricity is needed to refine each gallon of gasoline. See his letter at <http://tinyurl.com/2g5gwgn>.

Actual outages – even of limited duration - are particularly hard on refining. Based on experience during the California electricity crisis, it became clear that as the risk of outages proceeds, so too does the risk of even more prolonged gasoline shortages. The US Energy Information Administration found that, “Returning to full production can take up to several days. Consequently, the period of reduced production will be longer than the period of the electrical outage.” EIA also noted that up to 27 percent of California refining capacity could be “expected to be forced to shut down completely” even during rotating power shortages. See <http://tinyurl.com/6sjcgo9>. Given that the power sector rules can be expected to shorten electricity supply and increase electric rates, it is an absolute certainty that its current implementation schedule will increase the cost of delivering gasoline to already-strapped American consumers.

Electric Vehicles?

On March 7, while speaking in North Carolina, President Obama termed gasoline a “fuel of the past” and has urged that electric vehicles (EVs) be made as “affordable and convenient” as gasoline-powered vehicles by 2020. A new billion-dollar incentive program is designed to create incentives for local communities to site and build more electric vehicle charging stations. He also advocated substantial tax credits for electric vehicles. However, studies have shown that “even without EVs, the U.S. will need to add generation capacity to replace failing facilities and meet demand increases due to a growing population and a world that is becoming more dependent on electronics by the day.” See Center for Entrepreneurship & Technology – UC Berkeley, August 31, 2009 at http://cet.berkeley.edu/dl/Utilities_Final_8-31-09.pdf The fact of the matter is that when EPA undermines the reliability of the grid and the affordability of electric power with its power-sector rules, it undermines the ability of EVs to make a difference in addressing the fuel mix of the United States. Researchers at the University of Chicago and at the Argonne National Lab have found as follows:

“There’s no question that a large-scale movement to hybrid and electric vehicles is a great way to wean ourselves off oil, and onto cleaner modes of transport. And most, if not all, major auto manufacturers are engaged in this new market. However, in the process, all these electric and hybrid cars may dramatically increase our reliance on another fuel source — a stable electric grid. And the power grid, as it exists today, may not quite be ready to handle this new surge in load. In a new analysis out of the University of Chicago and Argonne National Laboratory, Les Poch and Matt Mahalik of Argonne’s Center for Energy, Environmental, and Economic Systems Analysis (CEEESA) says if demand for plug-ins skyrockets, a flood of new electric cars could strain America’s power networks to the limit. ‘Depending on what Americans do with their new cars, energy suppliers could be overwhelmed—or they could stand to gain a lot,’ Poch says. Mahalik adds that ‘until now, the pattern of power use in the U.S. has been relatively stable and predictable for the past 30 years,’ says Mahalik. ‘The last major bump was probably the widespread adoption of air conditioning.’ Electric vehicles stand poised to throw off that stable pattern. At this point, the researchers say, ‘No one knows how quickly electric cars will catch on, in what areas they’ll be most popular, or when everyone will choose to plug in their cars.’”

See Joe McKendrick, Will there be enough electricity for all those new electric cars? Smart Planet, April 14, 2010, at <http://www.smartplanet.com/blog/business-brains/will-there-be-enough-electricity-for-all-those-new-electric-cars/6230>

So, the combined effect of expensive new rules on the power-sector may undermine the very transition to electric vehicles that President Obama has touted as his long-term solution to gasoline price increases and energy security.

If the Administration wants to put energy policy and gasoline supply on a firmer footing, it must revisit the Utility MACT rule as soon as possible.

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