

FERC Policies

AMERICAN CLEAN SKIES FOUNDATION SUGGESTS FERC'S RULEMAKING ON DEMAND RESPONSE PROGRAMS IN WHOLESALE ELECTRICITY MARKETS IS INCOMPLETE WITHOUT REVIEWING IMPACT OF EXTERNALITIES ON PRICES AND FUEL CHOICES

American Clean Skies Foundation (ACSF) has filed comments at FERC suggesting the Commission had overlooked some impacts of a proposed rulemaking (RM17-10) promoting energy conservation through demand response programs. ACSF supports FERC's effort but points out that FERC does not appear to have considered how demand response may affect the fuel mix. The most efficient and cleanest sources of power – renewables and natural gas, for instance – “are precisely the ones that could be displaced by increased demand response.” Demand response initiatives could risk countering important policy goals of FERC, other federal agencies such as the Environmental Protection Agency (EPA), and Congress. Accordingly, ACSF asked FERC to conduct a follow-on investigation of “how market prices can fully reflect efficiency, health and environmental concerns.”

This proposed rule on Demand Response Compensation In Organized Wholesale Energy was issued by the Commission on 3/10/10. The NOPR proposes that Independent System Operators (ISOs) and Regional Transmission Organizations (RTOs) whose tariffs accommodate demand response programs would pay the wholesale market price at all hours for power generation and the reduced electricity consumption bid by demand response providers.

The ACSF group maintains that demand response reductions in electricity markets are likely disproportionately to affect intermittent and complementary quick-start sources of electric power, such as natural gas, which burn cleaner and have lower environmental costs. So the environmental costs associated with fuel inputs should be factored into wholesale electricity prices and the Commission should determine how best to accomplish this.

To ensure that the proposed rule does not have a counterproductive effect on new market entrants, “especially renewable energy providers and other cleaner generation sources,” if the new rule is adopted the Commission should simultaneously issue a Notice of Inquiry (NOI) to review the current effects of pricing rules for organized wholesale electricity markets on market access by low and zero carbon generators, advises the ACSF.

If the price of electricity resources in wholesale markets does not include relevant externalities (e.g., global warming pollution, smog abatement), demand response resources may be substituted for fuel sources in the dispatch curve that are not the most efficient, cleanest and have the lowest generators of carbon. Accordingly, absent any analysis regarding the effect of the proposed rule on the mix of electricity resources, or the agency's goals of integrating variable energy resources (wind, solar), ACSF submits that “this docket is incomplete.” At minimum and coincident with any mandate for market pricing of demand resources, a broad NOI should determine (1) what additional measures will ensure that demand response resources do not undermine system reliability and the nation's health and environmental goals; and (2) how best to incorporate relevant health and environmental factors in the price of all electricity resources provided to organized wholesale energy markets.

The Foundation in particular insists FERC must consider the integration of Variable Energy Resources (VERs) and the quick-start generation sources that complement VERs. Promoting reasonable market prices for demand response without full consideration of all of its effects on the demand curve could “blunt at least some such intended benefits,” and put the Commission's demand response initiative “out of synch” with other energy-related environmental policies promoted by the Congress and this Administration. It is especially important to review the likely consequences of the new rule on the competitive mix of generation resources in wholesale markets and the environment.

In addition, ACSF is concerned that the current docket “appears to represent a piecemeal response to the problem of mispriced demand response and generation (*i.e.*, non-demand) resources in wholesale electricity markets.” Some resources, such as demand-response bids, are not priced in a just and reasonable manner because individual ISOs and RTOs have discounted their value vis-à-vis generation resources. Other resources, such as fossil-fuel generators, are typically mispriced because wholesale prices radically understate the full associated environmental and health costs.

So long as the Commission addresses the problem of mispriced electricity resources “in *ad hoc* or piecemeal fashion, it will risk acting in an arbitrary and capricious way that undercuts its core statutory obligations.”

The ACSF premises its recommendations with reference to the normal dispatch behavior of the electric market. Electricity is bought and sold in the U.S. is primarily based on the variable cost of the fuel used for generation. Coal and natural gas produced 69% of electricity here in 2008 and around the same percentage during the previous ten years. Coal usually enjoyed a low variable cost per unit of electricity created and therefore served as a primary base load source of electric power. Thus, electricity markets dispatch coal-fired generation first, while other sources of electricity, including natural gas, are dispatched only when demand increased during intermediate and peak electricity use times.

As Calpine Energy Services LP said in response to the Commission’s VER NOI¹, “incentives for backing down conventional generation to create room for the output from VERs during low load periods should be carefully crafted to ensure continued reliability.” Calpine added, “[T]here is a significant difference in the potential impact to reliability when a base load generating resource backs down or cycles off versus a flexible resource,” *i.e.*, natural gas. This is because “[b]ase load resources can be particularly difficult to ramp back up once they have backed down; . . . In contrast, while flexible resources also face increased risk from ramping up and down . . . they would have less impact on reliability as a result of any failures in returning to service.”

According to the Foundation, VERs and nuclear energy emit no carbon or other criteria pollutants. A modern natural gas-fired power plant emits 85% less nitrogen oxide, as well as 97% less sulfur dioxide, at least 50% less carbon dioxide, and 100% less mercury than a comparable modern pulverized coal-fired plant. The health and other environmental effects of the various fuel sources recently was quantified by the National Research Council (NRC) under the auspices of the National Academy of Sciences, Institute of Medicine, and National Academy of Engineering. In *Hidden Costs of Energy: Unpriced Consequences of Energy Production and Use* (2009), NRC determined that “damages (unrelated to climate change) in 2005” from burning coal to produce electricity equals 3.2¢ for each kilowatt hour (kWh). Moreover, “[m]ore than 90% of monetized damages are associated with premature human mortality,” said NRC. By contrast, damages due to gas-fired electric power in 2005 were calculated to be 0.16¢ per kWh, “an order of magnitude lower than damages from coal-fired electricity generation.”

The ACSF further argues that discouraging cleaner sources of electricity runs counter to the Clean Air Act (CAA) and recent initiatives by the current Administration to promote the goals of Congress when it enacted the CAA. The EPA also announced its intention to reduce urban ozone levels by setting tougher National Ambient Air Quality Standards (NAAQS) for emission of pollutants regulated under the CAA (1/19/10). Such a new ozone standard would have the effect of reducing the oxides of nitrogen (NOx) that can be emitted by generators of electricity and other sources. As noted, coal-fired plants emit far more NOx than gas-fired ones. Also, in December 2009, EPA announced its finding pursuant to the CAA that six greenhouse gases, including carbon dioxide, in combination endanger the public health and public welfare. Again, the ACSF repeats, gas-fired plants emit 50% less carbon dioxide than coal-fired ones.



¹ Notice of Inquiry on Integration of Variable Energy Resources RM10-11, filed 4/12/10.