

December 3, 2012

Air and Radiation Docket and Information Center
United States Environmental Protection Agency (EPA)
Attn: Docket ID No. EPA-HQ-OAR-2008-0708
Mailcode: 6102T
1200 Pennsylvania Ave, NW
Washington, DC 20460

Re: Supplemental Comments of Environmental Defense Fund on Docket ID No. EPA-HQ-OAR-2008-0708, “National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines; New Source Performance Standards for Stationary Internal Combustion Engines”

Environmental Defense Fund (EDF) respectfully requests that the Environmental Protection Agency (EPA) consider the following supplemental comments on the Agency’s June 7, 2012 proposal to amend the National Emission Standards for Hazardous Air Pollutants (NESHAP) for stationary reciprocating internal combustion engines (RICE) (Proposed Rule).¹ These supplemental comments pertain to a crucial provision of the Proposed Rule that would allow certain “emergency” stationary RICE — which account for 80% of the 900,000 diesel RICE now deployed around the country² — to operate for extended periods each year as part of emergency and non-emergency demand response programs, without installing the vital pollution controls the NESHAP requires for non-emergency stationary RICE.³

As explained below, the Proposed Rule’s analysis of demand response issues did not take into account an important recent decision of the Federal Energy Regulatory Commission (FERC) that will have a transformative impact on the market for demand response: Order No. 745.⁴ Issued in March 2011, Order No. 745 sets a uniform methodology for compensating demand response resources that participate in any of the nation’s organized wholesale energy markets. Order No. 745 is intended to remove significant market barriers to the deployment of demand

¹ National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines; New Source Performance Standards for Stationary Internal Combustion Engines, 77 Fed. Reg. 33,812 (June 7, 2012) (“Proposed Rule”).

² Emission Standards for Stationary Diesel Engines, 73 Fed. Reg. 4,136, 4,141 (Jan. 24, 2008).

³ See Proposed Rule at 33,819-20. Specifically, the Proposed Rule would (a) permit new and existing emergency stationary RICE to participate in emergency demand response programs for up to 100 hours per year, and (b) allow existing emergency stationary RICE at area sources to provide non-emergency demand response services for up to 50 hours per year until the year 2017. The Proposed Rule would also make identical amendments to the NESHAP for emergency stationary RICE larger than 500 horsepower and installed prior to June 12, 2006, and to the New Source Performance Standards (NSPS) for stationary compression ignition (CI) and spark ignition (SI) engines (40 CFR Part 60, Subparts IIII and JJJJ). *Id.*

⁴ Demand Response Compensation in Organized Wholesale Energy Markets, 76 Fed. Reg. 16,658 (Mar. 24, 2011), FERC Stats. & Regs. ¶ 31,322 (“Order No. 745”).

response — affecting most of the nation’s largest electricity markets in California, New York, New England, the industrial Midwest and mid-Atlantic states, and the Southwest.⁵ In so doing, Order No. 745 will eliminate policies in some markets that suppressed the prices paid to demand response resources, or limited the participation of demand response altogether. Put simply, Order No. 745 is a “game-changing” policy that will significantly increase the utilization of existing demand response resources and stimulate the deployment of new such resources — including demand response provided by stationary RICE units.

As EPA moves to finalize the Proposed Rule, it is critical that the Agency thoughtfully take account of Order No. 745 to ensure that our nation’s environmental and energy policies work hand in hand to foster clean demand response. To be clear, EDF has consistently advocated for policies that promote the deployment of clean and cost-effective demand response. Indeed, EDF strongly supported Order No. 745 both in comments filed before FERC and in an *amicus curiae* brief recently filed in pending legal challenges to Order No. 745.⁶ Our support for demand response is premised on its many potential benefits: reducing harmful emissions of greenhouse gases and conventional pollutants; facilitating the integration of clean renewable resources on the grid; and avoiding the need for costly generation and transmission infrastructure. Sound emission standards are essential, however, to ensure that demand response programs do not lead instead to increased utilization of uncontrolled stationary RICE emitting high levels of air toxics, particulates, and other pollutants — pollutants whose impacts are only heightened by the frequent “clustering” of these units near schools and residential neighborhoods.⁷ For this reason, EDF and seven other organizations have filed extensive joint comments in this docket⁸ urging EPA *not* to finalize the proposed exceptions for emergency stationary RICE engaged in demand response. The issuance of Order No. 745 only underscores the need for well-coordinated policies that promote all of the environmental and public health benefits demand response is capable of providing.

Below, these comments provide a detailed explanation of the origins and structure of Order No. 745, as well as a discussion of the Order’s potential impacts on the market for demand response and the stationary RICE sector.

⁵ The organized wholesale markets covered by Order No. 745 include those administered by the California Independent System Operator (CAISO), the New York Independent System Operator (NYISO), ISO-New England (ISO-NE), the Midwest Independent System Operator (Midwest ISO), PJM Interconnection (PJM), and the Southwest Power Pool (SPP). Order No. 745 at P 14.

⁶ Joint Comments of Public Interest Organizations on Notice of Proposed Rulemaking, Docket No. RM10-17-000 (May 13, 2010); Corrected Brief of *Amici Curiae* Environmental Defense Fund, Citizens Utility Board, and Natural Resources Defense Council in Support of Respondent Federal Energy Regulatory Commission, Electric Power Supply Association, *et al.* v. Federal Energy Regulatory Commission, Nos. 11-1486, *et al.* (D.C. Cir. Sept. 14, 2012).

⁷ See Nancy E. Ryan, Kate M. Larsen, & Peter C. Black, *Smaller, Dirtier, Closer: Diesel Backup Generators in California* vii (EDF, 2002) (finding the “risk zone” around a diesel generator operated for just 100 hours per year can extend for 63 to 118 acres, or 10 to 20 average city blocks).

⁸ Comments of Citizens for Pennsylvania’s Future (PennFuture), Clean Air Council, Environmental Defense Fund, Group Against Smog and Pollution, Natural Resources Defense Council, PACE Law and Policy Center, Piedmont Environmental Council, and Sierra Club, Document ID No. EPA-HQ-OAR-2008-0708-1090 (filed August 9, 2012).

A. Genesis and Structure of Order No. 745

Order No. 745 is FERC's most recent and dramatic policy intervention to promote a level playing field for demand response resources in the markets subject to its jurisdiction. In setting forth the basis for Order No. 745, FERC affirmed that demand response plays an integral role in promoting competitive wholesale markets, balancing supply and demand, and ensuring just and reasonable rates for wholesale electricity.⁹ Moreover, FERC specifically found that demand response can "mitigate generator market power . . . [and] support system reliability."¹⁰ FERC also noted that several of its prior orders, specifically Order Nos. 890 and 719, had targeted barriers to demand response by requiring comparable treatment for demand response and generation in transmission planning and in the provision of ancillary services, and by directing operators of organized wholesale markets to accept bids from demand response resources.¹¹

Despite these reforms, FERC observed in proposing Order No. 745 that demand response plays only a minor role in the wholesale markets,¹² and that the structure and level of compensation for demand response varied considerably among markets.¹³ In the notice proposing Order 745, FERC expressed concerns that these "existing, inadequate compensation structures have hindered the development and use of demand response" and that "current compensation levels appear to have become unjust and unreasonable."¹⁴ Inadequacy of compensation, FERC reasoned, "may . . . be leading to under-investment in demand response resources, resulting in higher, and unjust and unreasonable, prices in the organized electricity markets."¹⁵ Accordingly, FERC determined that a uniform compensation policy for demand response would "ensure the competitiveness of organized wholesale energy markets and remove barriers to the participation of demand response resources, thus ensuring just and reasonable wholesale rates."¹⁶ FERC grounded its authority to issue such a uniform compensation policy in section 206 of the Federal Power Act (FPA),¹⁷ as well as a national policy, declared by Congress in the Energy Policy Act of 2005, that "unnecessary barriers to demand response participation in energy and other markets shall be eliminated."¹⁸

Effective April 25, 2011, Order No. 745 applies to demand response resources that participate in organized wholesale energy markets administered by a Regional Transmission

⁹ See Order 745 at PP 9-10.

¹⁰ *Id.* at P 10.

¹¹ *Id.* at PP 11-12.

¹² Demand Response Compensation in Organized Wholesale Energy Markets, 75 Fed. Reg. 15,362 (Mar. 29, 2010), FERC Stats. & Regs. ¶ 32,656 at P 9 ("Proposed Order").

¹³ For example, FERC noted in the Proposed Order that PJM paid demand response resources at a discount from LMP; that ISO-NE and NYISO imposed high minimum bid prices on demand response resources; that Midwest ISO required demand response resources to purchase energy in the day-ahead market as a prerequisite for bidding into the real-time market; and that SPP had no demand response program at all. *Id.* at P 8.

¹⁴ *Id.* at P 13.

¹⁵ *Id.*

¹⁶ Order No. 745 at Summary.

¹⁷ Section 206 authorizes FERC to establish "just and reasonable" rates for interstate transmission and wholesale sales of electricity upon making a finding that "any rule, regulation, practice, or contract affecting [a wholesale] rate, charge, or classification is unjust, unreasonable, unduly discriminatory or preferential." 16 U.S.C. § 824e(a).

¹⁸ See Energy Policy Act of 2005, Public Law 109-58, § 1252(f), 119 Stat. 594, 965 (2005) ("It is the policy of the United States that . . . unnecessary barriers to demand response participation in energy, capacity, and ancillary service markets shall be eliminated.").

Organization (RTO) or Independent System Operator (ISO).¹⁹ Under Order No. 745, qualifying demand response resources that participate in real-time or day-ahead energy markets must be compensated at the locational marginal price (LMP) —the same market-clearing energy price offered to generators — in the region where those resources are dispatched.²⁰ To qualify for compensation at the LMP, a demand response resource must satisfy two conditions set forth in Order No. 745. First, the demand response resource must be capable of balancing supply and demand as an alternative to a generation resource. Second, the dispatch of the demand response resource must be cost-effective for consumers in the relevant market, using a net benefits test described in the rule.²¹ The net benefits test requires each RTO and ISO to determine threshold price levels at which the reductions in LMP that result from demand response exceed the costs of compensating demand response resources.

In Order No. 745 and in a subsequent order denying rehearing (Order No. 745-A), FERC made clear that it expects mandatory compensation of demand response at the LMP to level the playing field between demand response and generation in wholesale energy markets, and thereby stimulate additional investment in demand response resources.²² FERC explained that demand response resources provide the same service to wholesale energy markets as generating resources, and that Order No. 745 would ensure those resources are compensated identically regardless of the marginal costs (and energy savings) that individual demand response providers might face. Furthermore, FERC argued that compensating demand response resources at the LMP would effectively address a variety of barriers to demand response participation, such as the disconnect between wholesale and retail prices and a lack of investment in enabling technologies.²³ In light of these numerous barriers, FERC found that “Paying LMP . . . will encourage more demand-side participation” and “cause wholesale and retail prices to converge on a price level reflecting demand’s ability to respond to the marginal cost of energy.”²⁴

To implement Order No. 745, FERC directed each RTO and ISO to submit compliance filings and amended tariff language providing for compensation of demand response resources at the LMP, implementation of the net benefits test, and allocation of the costs of dispatching demand response.²⁵ Order No. 745 did not alter RTO and ISO rules governing emergency demand response programs, nor does it regulate compensation of demand response in wholesale markets for capacity and ancillary services.²⁶

¹⁹ As noted *infra*, the rule “does not apply to compensation for demand response under programs that RTOs and ISOs administer for reliability or emergency conditions . . . [or] to compensation in ancillary services markets.” Order No. 745 at P 2 n.4.

²⁰ *Id.* at P 2.

²¹ *Id.* at PP 3-4.

²² See Order No. 745 at P 18, 59; Demand Response Compensation in Organized Wholesale Markets, Order No. 745-A, Order on Rehearing and Clarification, 137 FERC ¶ 61,215 at P 61 (Dec. 15, 2011) (“Order No. 745-A”).

²³ Order No. 745 at PP 57-59.

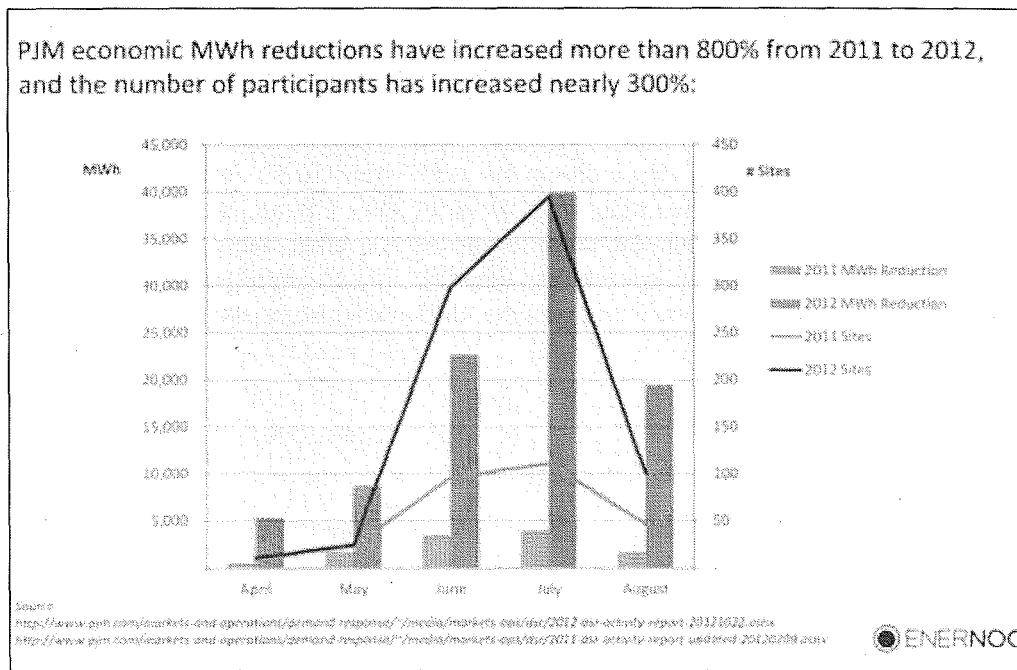
²⁴ Order No. 745-A at P 61.

²⁵ *Id.* at P 6.

²⁶ Order No. 745 at P 2 n.4.

B. Present and Likely Impacts of Order No. 745

Although Order No. 745 has only recently been implemented in most of the organized markets, there is already concrete evidence from PJM that Order No. 745 is having its intended impact on the participation of demand response resources. Prior to the issuance of Order No. 745, PJM compensated demand response resources that bid into the energy market at a level equivalent to the LMP *minus* the value of retail electricity purchases avoided by the demand response provider.²⁷ In December 2011, FERC approved PJM's compliance filing implementing LMP-based pricing for demand response resources in the day-ahead and real-time markets.²⁸ According to a recent presentation by EnerNOC, this change in PJM's tariff was followed by a dramatic 300% increase in the number of demand response participants from 2011 to 2012 — and a nine-fold increase in the quantity of demand reductions bid into the energy market (see Figure below).²⁹ Payments to demand response providers in the PJM energy market also increased five-fold from 2011 to 2012.



Despite these dramatic impacts, the Proposed Rule neither mentions Order No. 745 nor accounts for its effects on the market for demand response. To the contrary, the Proposed Rule assumes that emergency stationary RICE units will not increase their participation in demand response programs from historic levels, even with the proposed increase in the number of hours such units could operate through demand response programs.³⁰

²⁷ Order No. 745 at P 14.

²⁸ *PJM Interconnection, L.L.C.*, 137 FERC ¶ 61,216 (Dec. 15, 2011).

²⁹ Katherine Tweed, *Order 745 Raises Payments – and Questions – for Demand Response*, GreenTechGrid, Oct. 26, 2012, available at <http://www.greentechmedia.com/articles/read/order-745-raises-payments-and-questions-for-demand-response>.

³⁰ Proposed Rule at 33,819.

This assumption, which EDF critiqued in previous comments submitted to this docket,³¹ should be re-examined in the wake of Order No. 745. As explained above and as the initial results from PJM demonstrate, Order No. 745 is a central policy development that provides significant new incentives for both intensified utilization of existing demand response resources and the deployment of new such resources – including stationary RICE units. In light of the new landscape facing demand response resources, it is incumbent on EPA to craft emission standards that protect public health by ensuring these new demand response policies under the Federal Power Act and EPA 2005 are aligned with the nation's clean air policies under the Clean Air Act. Under the current Proposed Rule, EDF is concerned that Order No. 745 could instead contribute to an increase in deleterious emissions from uncontrolled stationary RICE units excluded from fundamental emission standards under the proposed exceptions for both emergency and non-emergency demand response.

C. Conclusion

For the reasons outlined above, we urge EPA to ensure the emissions protections under the Final Rule fully account for and reflect the central energy policy changes provided under Order No. 745 and its effects on the expansive utilization of demand response resources, including the health-harming pollution from inadequately controlled diesel engines. As background, we have also attached to these comments the Respondent's Brief that FERC recently filed in pending challenges to Order No. 745 in the D.C. Circuit, and the *amicus* brief filed by EDF and other organizations in the same litigation. Together, these briefs offer useful information regarding the purpose and content of Order No. 745, its anticipated impact on the markets, and its potential public health, environmental and economic benefits.

Respectfully submitted,

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³¹ EDF Comments at 17-18.