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MEMORANDUM | Summary of FERC Order No. 745

This memorandum discusses the implications of FERC Order No. 745 on the integration of demand-response (DR) resources into organized wholesale energy markets.[1]

I. Summary

Order No. 745 addresses compensation for DR in RTO and ISO wholesale energy markets. In order to operate effectively, an energy market must successfully balance energy supply and energy demand. Generally, the Order states that when DR can provide a balance of supply and demand as an alternative to generation, and dispatching DR is cost-effective (determined by the *net benefits test* described below), DR will be compensated at the locational marginal price (LMP).[2] This approach to compensating DR resources aims to improve the functioning and competitiveness of energy markets by: (1) ensuring competitiveness of DR resources in wholesale energy markets, as more DR competition will cause generators to lower bids because of the increased risk they will not be dispatched if their bid prices are too high; (2) removing barriers for DR participation in energy markets pursuant to national policy;[3] (3) producing wholesale energy rates that are just and reasonable; and (4) supporting system reliability and addressing resource adequacy by providing quick response resources to balance the electricity grid.

The Order states that compensation for DR resources at the LMP is only appropriate when:

1. The DR response resource is able to displace a generation resource which assists the ISO/RTO in balancing supply and demand; and
2. Payment of LMP for the DR resource service is cost-effective, as determined by the net benefits test.

II. Net Benefits Test

The net benefits test ensures that the dispatch of DR resources is cost-effective. Dispatching DR resources reduces the overall LMP because it displaces the need of alternative generation resources to meet demand. Therefore, dispatching DR is cost-effective when the "overall benefit of the reduced LMP that results from dispatching demand response resources exceeds the cost of dispatching and paying LMP to [DR] resources."[4]

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[1] Demand Response Compensation in Organized Wholesale Energy Markets, 134 FERC ¶ 61,187, Docket No. RM10-17-000 (Mar. 15, 2011) (Order No. 745).
[2] Locational Marginal Price (LMP): reflects the marginal value of the last unit of resources needed to balance supply and demand in a particular geographic locations; the LMP is used as the market price to compensate generators.
[3] EPACT 2005 called for U.S. policy to remove "unnecessary barriers to demand response participation in energy, capacity, and ancillary service markets…." *See* Energy Policy Act of 2005, Pub. L. No. 109-58 § 1252(f)(2005).
[4] Order No. 745, at p. 4.

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The justification for compensation of DR resources at the LMP is that DR resources which "clear in the day-ahead and real-time energy markets should receive the same market-clearing LMP as compensation in the organized wholesale energy markets when those resources meet the conditions established" in the Order as a cost-effective alternative to the next highest-bid generation resource when balancing the energy market.[5]

III. Requirements Imposed by Order No. 745

Each ISO/RTO is required to implement the net benefits test. However, because the modification of dispatch algorithms may be difficult in the near future, the Commission is requiring each ISO/RTO to perform (1) the net benefits test to determine a monthly basis under which conditions are cost-effective to pay full LMP to DR resources based on historical data from the previous year's supply curve; and (2) a study of the feasibility of developing a mechanism to determine the cost-effective dispatch of DR resources. Each ISO/RTO must file its analysis, along with accompanying tariff revisions, with the FERC by July 22, 2011. Filing should include historical data, analytical methods, and the actual supply curves used to determine monthly threshold prices for the last twelve months. Once approved by the FERC, the ISO/RTO must publish this information on their website.

Each ISO/RTO must also undertake a study to examine the requirements for, and impacts of, implementing a dynamic approach to determine when paying DR resources the LMP is a net benefit to customers. This analysis must be filed with the FERC by September 21, 2012.

The Order directly impacts large entities, including CAISO, NYISO, PJM, SPP, MISO, and ISO-NE.

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[5] *Id.* at 43.