

UNITED STATES OF AMERICA  
BEFORE THE  
FEDERAL ENERGY REGULATORY COMMISSION

Integration of Variable Energy  
Resources

Docket No. RM10-11-000

Comments of the  
Electricity Consumers Resource Council  
(ELCON)

The Electricity Consumers Resource Council (ELCON) appreciates the opportunity to submit comments to the Commission on the integration of variable energy resources (VERs) with the interconnected electric grid. The Commission seeks comment on the extent to which barriers may exist that impede the reliable and efficient integration of VERs, and whether reforms are needed to eliminate those barriers. This inquiry is timely because the planned penetration level of VERs such as wind farms has ceased being a novelty and relatively minor element of utilities' resource mix and on some systems may soon reach aggregate name-plate ratings comparable to traditional supply-side resources.

ELCON is the national association representing large industrial consumers of electricity. ELCON member companies produce a wide range of products from virtually every segment of the manufacturing community. ELCON members operate hundreds of major facilities and are consumers of electricity in the footprints of all ISOs and RTOs and in regions of the country not served by an ISO or RTO. As such, ELCON members are significantly impacted by new cost burdens created by ill-conceived regulatory policies that prevent least-cost solutions to resource planning and grid operations.

## Summary of ELCON's Recommendations

ELCON's recommendations to the Commission are in the form of three overarching regulatory principles: (1) source neutrality, (2) price signals, and (3) cost causation -

- Source Neutrality - Federal regulatory policies regarding resource planning should exercise the principle of source neutrality, which implies that *ALL* economically viable resources (supply-side and demand-side) are considered on a nondiscriminatory basis. Only this will ensure that jurisdictional rates are just and reasonable. Impediments to open access transmission service for all resources need to be eliminated to facilitate the efficient, least-cost development of infrastructure and ensure that the reliability of the grid is adequately maintained—consistent with environmental law. To this end, FERC should not only address issues regarding VERs and traditional supply-side resources, but it must also address undue discrimination as it affects other resources such as demand response and combined heat and power (CHP). ELCON will be submitting comments to this effect in FERC's recently opened docket on demand response compensation, No. RM10-17.
- Price Signals -All resources should be compensated based on the value the resource brings to utility planning and operations. No technology should be shielded from price signals with respect to locational decisions (*e.g.*, siting and congestion relief) or the timing of its energy injection. The intermittency, location constraints and limited dispatchability of certain VERs are costs of doing business of those technologies, and not an unfair burden that needs preferential treatment in regulatory policies or rates. This does not mean that tariffs and business practices cannot or should not be reformed to better enable cost effective deployment of resources with these characteristics. Such reforms may be necessary to more efficiently align price signals with the full range of available technologies - not just generation.

- Cost Causation - Federal regulatory policies should ensure that rate structures developed to integrate VERs are based on cost causation principles, i.e., VERs should be assigned all costs that the technology imposes on the system. There must be a direct link in rates between the actions that cause costs to be incurred and the incentives provided by the allocation of such costs.

In summary, ELCON urges FERC to require the implementation of the three overarching regulatory principles outlined above as it evaluates the integration of VERs with the interconnected electric grid. As it conducts such an evaluation, FERC should recognize that discriminatory practices are not unique to wind and solar. Limiting the scope of this inquiry to just wind and solar would thus be discriminatory.

## **ELCON Comments and Recommendations**

### **A. Source Neutrality**

FERC should not attempt to only fix discriminatory practices applicable to VERs, it should apply the principle of "source neutrality" that creates a level playing field for all alternative resources, including demand response and CHP. Without the adoption of a resource planning paradigm based on source neutrality, almost any non-traditional resource may fall prey to undue discrimination with respect to transmission of electric energy and sales of electric energy for resale in interstate markets. Traditional utility resource planning is designed to accommodate traditional supply-side resources – and little else. Many non-traditional resources – such as CHP, waste-to-energy technologies, demand response, and distributed generation – have encountered various regulatory barriers that interfere with cost-effective adoption of the technologies. Efforts by states (in the form of integrated resource planning or IRP) or by FERC (creation of ISOs and RTOs) have not satisfactorily removed these barriers.

Commissioner Spitzer's testimony at the March 23, 2010 oversight hearing before the House Energy and Environment Subcommittee acknowledges the need for this broad, level playing field:

The Commission must continue in its role as an independent wholesale energy regulator by developing rules and policies that allow all types of resources and infrastructure to compete fairly. Just as we should not adopt rules or policies that ignore the laws of supply and demand, we should not adopt rules or policies that ignore any type of energy resource or infrastructure. Likewise, our rules and policies should not favor one type of resource or infrastructure over another. If we are to achieve the two primary goals of the Strategic Plan laid out by Chairman Wellinghoff, then the Commission's role should be to establish rules and policies that ensure all types of resources, whether they are natural gas, oil, hydro, nuclear, wind, solar or demand resources, have a full and fair opportunity to compete for the ultimate benefit of consumers. Testimony at 4-5.

In this inquiry, the Commission seeks to explore whether existing rules, regulations, tariffs, or industry practices within FERC's jurisdiction may hinder the reliable and efficient integration of VERs, resulting in rates that are unjust and unreasonable and/or terms of service that unduly discriminate against certain types of resources. Precipitating factors for this inquiry are the location constraints and intermittency of wind and solar energy facilities. But these characteristics are not unique to wind and solar, it's merely that as the new energy resource *du jour*, VERs now join a list of other existing non-traditional resources that face barriers to entry into the market by transmission operators. For instance, due to their operational dependence to the steam host, owners and operators of behind-the-meter CHP facilities (such as industrial cogeneration units) are in much the same situation as VERs with regard to their siting and dispatchability limitations, but they do have value to bring to the market. As such, they have fought utility interests for decades to gain entry into those markets on a fair and non-discriminatory basis, only to face the same barriers being investigated in this proceeding.

In comments to the Commission in Docket Nos. RM07-19-000 & AD07-7-000 ("Wholesale Competition in Regions with Organized Electric Markets"), ELCON and

other industrial trade groups introduced the concept of “source neutrality” in the context of RTO procurement rules for ancillary services. There, ELCON was concerned that the Commission’s proposed “comparability” standard might be interpreted to force demand response (DR) bids to be comparable to generator bids, *i.e.*, industrial providers of demand response in A/S markets must package their product to resemble generation,<sup>1</sup> even though the DR capabilities of many industrial loads can often provide grid operators with greater value compared to the typical generator. For example, demand responsive load can provide regulation service of “significantly greater value than that provided by conventional generation.”<sup>2</sup> Demand responsive load can also “be fully implemented much faster than ramping up of spinning reserves from thermal generation.”<sup>3</sup>

However, often these values are not included in the A/S markets, and the improved market and operational efficiencies are thus not realized, if grid operators’ expectations are limited to generation-like resources. This is inefficient. Resource planning, business practices and OATT terms and conditions, and reliability standards need to be rewritten to ensure source neutrality and not favor any particular type or class of technologies. Impediments to open access transmission service for all resources need to be eliminated to facilitate the efficient, least-cost development of infrastructure and ensure that the reliability of the grid is adequately maintained—consistent with environmental law. This is the only long-term solution for preventing rates that are

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<sup>1</sup> See DeWayne Todd, Alcoa Power Generating Inc., Summary Remarks at FERC Technical Conference on Demand Response in Organized Markets (May 21, 2008), Docket No. AD08-8-000: “Midwest ISO has tried to take market systems that were designed for collecting generation offers and dispatching the system, and trying to force fit demand response resources into this mold, rather than designing or modifying its systems to recognize the distinct characteristics of demand resources. The result more often than not looks a lot like trying to pound a square peg into a round hole. It also creates an environment that is not very friendly for loads that may have an interest in pursuing demand response opportunities. The result has been a general absence of entities volunteering to be demand providers... .”

<sup>2</sup> D. Todd, M. Caufield, B. Helms, M. Starke, B. Kirby, and J. Kueck. *Providing Reliability Services through Demand Response: A Preliminary Evaluation of the Demand Response Capability of Alcoa Inc.*, Oak Ridge National Laboratory, ORNL/TM-2008/233, January 2009, at 13.

<sup>3</sup> Joe Eto, Principal Investigator. *Demand Response Spinning Reserve Demonstration*, Lawrence Berkeley National Laboratory, LBNL-62761, May 2007, at 58.

unjust and unreasonable and/or terms of service that unduly discriminate against certain types of resources.

Encouragingly, the Commission recently applied the principle of source neutrality in a March 18, 2010 order responding to a petition by two New York utilities who sought termination of the obligation to enter into new power purchase obligations or contracts to purchase electric energy and capacity from PURPA QFs with a net capacity in excess of 20 MW. In its order, the Commission found that a QF had rebutted the presumption that it had nondiscriminatory access in NYISO's market.<sup>4</sup> The QF—a 40-MW cogeneration facility owned and operated by Cornell University—argued that its “highly variable” operational characteristics prevented it from participating in the ISO markets. Furthermore, certain intermittent resources such as wind and solar facilities were exempted from penalties for under-generation and compensated for over-generation, while these concessions were not available to the Cornell QF, exposing it to penalties for its under-generation compared to its bids in the day-ahead market and not compensating it for over-generation. Accordingly, the Commission properly denied the utilities' request to terminate their mandatory purchase obligations respecting the Cornell QF. The Commission should apply this same principle in the current, more generic proceeding.

## **B. Price Signals**

No resource technology should be shielded from price signals with respect to locational decisions (e.g., siting and congestion relief) or the timing of its energy injection. VERs use a free fuel that also does not emit any recognized air pollutants or greenhouse gases. The tradeoffs are its extreme intermittency, location constraints and limited dispatchability. These features pose considerable risk to the operation of the grid. Consequently, the negative tradeoffs should be imposed on the owners and operators of VERs as their costs of doing business; they are not an unfair burden that

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<sup>4</sup> Order Granting in Part and Denying in Part the Application to Terminate Purchase Obligation, Docket No. QM10-3-000 (“New York State Electric & Gas Corporation and Rochester Gas and Electric Corporation”), issued March 18, 2010.

needs preferential treatment in regulatory policies or rates. Requiring VERs to respond to price signals will yield efficiency gains. While location constraints are what they are, the better (lower cost) locations should be developed before other higher cost locations. VERs also must face the full economic consequences of integration so as to incent further technological improvements. This does not mean that tariffs and business practices cannot or should not be reformed to better enable cost effective deployment of resources with these characteristics. Such reforms may be necessary to more efficiently align price signals with the full range of available technologies – not just generation.

### C. Cost Causation

Federal regulatory policies should ensure that rate structures developed to integrate VERs are based on cost causation principles, *i.e.*, VERs should be assigned all costs that the technology imposes on the system. Commissioner Spitzer, in a statement posted at FERC’s web site on the same day as the NOI, made the following clarification regarding the NOI:

The NOI does not seek to change rules for certain types of resources to incent certain types of energy resources or create preferences as between types of resources. Indeed, the ultimate goal of the NOI is the Commission’s standard obligation: to ensure that rates are just and reasonable and to deter undue discrimination. Therefore, the NOI asks whether any of the rule or practice changes that may facilitate the integration of renewables should also apply to conventional resources to ensure that rates are just and reasonable and that we deter undue discrimination.

ELCON strongly shares Commission Spitzer’s view. There must be a direct link in rates between the actions that cause costs to be incurred and the incentives provided by the allocation of such costs.

A subject issue raised by the NOI deals with “small host balancing authorities,” or what once were called “control areas.” It is generally recognized that in addition to significant expansion of the transmission infrastructure, VERs can benefit from larger balancing authorities (in the form of ISOs or RTOs) and “that operations in each area ...

conform to the same market structure.”<sup>5</sup> The NOI seeks comment on balancing authority consolidation, including a proposal to establish a “VER balancing authority” (essentially a large area virtual balancing authority primarily designed to accommodate VERs across a broad geographic area) (at paragraphs 32 and 33).

End-use consumers generally have a jaded view regarding control area consolidation. Recent efforts to do so have been extremely expensive and lack any obvious or convincing net benefits. ELCON cautions the Commission against any such policy to encourage control area or balancing authority consolidation if the intent is to socialize the costs across all consumers. This would be a clear example of a *preference* that Commissioner Spitzer warned against.

In the past, FERC has taken a strong position in defense of cost causation:

Fundamental principles of rate design and, particularly, principles of good market design for efficient, organized markets for the sale and purchase of electric energy at wholesale, require that allocation of costs follow causation of such costs as closely as possible. This alignment of cost allocation with cost causation promotes economically efficient production, consumption and investment decisions by sending clear price signals.<sup>6</sup>

A long line of court decisions directs continued adherence to the cost causation principle. As the D.C. Circuit has explained, although “just and reasonable” provides a “spartan” statutory standard, “FERC and the courts have added flesh to these bare statutory bones, establishing what has become known . . . as the ‘cost-causation’ principle.” *K N Energy, Inc. v. FERC*, 968 F.2d 1295, 1300 (D.C. Cir. 1992). The cost-causation principle is the “touchstone in any legal analysis of FERC-approved rate

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<sup>5</sup> National Renewable Energy Laboratory, *Eastern Wind Integration and Transmission Study*, NREL/SR-550-47078, January 2010 (“Report”). This report can be read to advocate a national grid structure that used to be called the *Standard Market Design*, in which are regions of the lower 48 states are served by RTOs and a common market structure. The report notes: “Interconnection-wide costs for integrating large amounts of wind generation *are manageable* with large regional operating pools and *significant* market, tariff, and operational changes.” [Emphasis added] Report at 27.

<sup>6</sup> Ameren Services Company, “Complainants’ Brief of Ameren Services Company and Northern Indiana Public Service Company,” Docket Nos. EL07-86-000 *et al.*, Federal Energy Regulatory Commission, September 22, 2008, at 2. See, e.g., *California Power Exchange Corp.*, 106 FERC ¶ 61,196, P 17 (2004), (the “well-established principle of cost causation requires that costs should be allocated, where possible, to customers based on customer benefits and cost incurrence”).

schemes,” and it requires “that all approved rates reflect to some degree the costs actually caused by the customer who must pay them.” *Id.*; see also *Village of Bethany v. FERC*, 276 F.3d 934, 937 (7th Cir. 2002) (“The overriding policy concern in a ratemaking proceeding is to establish rates that require each customer to bear a fair and proportional share of . . . costs.”).

Reiterating the point made by the Seventh Circuit, the D.C. Circuit has stated that compliance with the cost-causation principle must be evaluated “by comparing the costs assessed against a party to the burdens imposed or benefits drawn by that party.” *Midwest ISO Transmission Owners*, 373 F.3d 1361, 1368-69 (D.C. Cir. 2004). The court in *Midwest ISO* described FERC’s cost-causation principle as “requir[ing] that all approved rates reflect to some degree the costs actually caused by the customers who must pay them.... Not surprisingly, we evaluate compliance with this unremarkable principle by comparing the costs assessed against a party to the burdens imposed or the benefits drawn by that party.” *Id.* (Citations omitted); see also, *United Distribution Cos. v. FERC*, 88 F.3d 1105, 1188-89 (D.C. Cir. 1996) (“[c]ost causation correlates costs with those customers for whom a service is rendered or a cost is incurred”); and *Cities of Riverside and Colton, California v. FERC*, 765 F.2d 1434, 1439 (9th Cir. 1985).

Public policy considerations also argue in favor of cost causation because those who are allocated costs based on actual, demonstrable benefits they need are less likely to object than those who are allocated costs based on an assumption that they will receive some general, unquantifiable benefit. Cost causation is, therefore, more likely to reduce controversy and assure that the necessary infrastructure is built where the costs truly are justified. Socialization of costs simply increases the coalition of interests that will oppose potentially beneficial system upgrades.

### **Conclusion**

In summary, ELCON urges FERC to require the implementation of the three overarching regulatory principles outlined above as it evaluates the integration of VERs with the interconnected electric grid. As it conducts such an evaluation, FERC should

recognize that discriminatory practices are not unique to wind and solar. Limiting the scope of this inquiry to just wind and solar would thus be discriminatory.

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Dated: April 12, 2010

CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing document upon each person designated on the official service list compiled by the Secretary of this proceeding.

Dated at Washington, D.C.:            April 12, 2010

/s/ W. RICHARD BIDSTRUP  
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