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**VIA FERC ELECTRONIC FILING SYSTEM**

Federal Energy Regulatory Commission  
Attn: eFiling Department  
888 First Street, NE Washington, DC 20426

Dear Sir or Madame:

On behalf of the Microgrid Resources Coalition, enclosed please find comments in response to FERC's Notice of Proposed Rulemaking on Fast-Start Pricing in Markets Operated by Regional Transmission Organizations and Independent System Operators filed December 30, 2016 in FERC Docket No. RM17-3-000, submitted pursuant to Rules 214 and 211 of the Rules of Practice and Procedure of the Federal Energy Regulatory Commission.

Thank you for your attention to this matter.

Very truly yours,



Christopher B. Berendt

CBB

**Microgrid Resources Coalition  
Comment on Notice of Proposed Rulemaking**

**[Docket No. RM17–3–000]**

**Fast-Start Pricing in Markets Operated by Regional Transmission  
Organizations and Independent System Operators**

Pursuant to Rules 214 and 211 of the Rules of Practice and Procedure of the Federal Energy Regulatory Commission (“FERC” or “Commission”)<sup>1</sup>, the Microgrid Resources Coalition (“MRC”) hereby moves to intervene and submits its comments in connection with the Commission’s Notice of Proposed Rulemaking, Docket No. RM17–3–000, Fast-Start Pricing in Markets Operated by Regional Transmission Organizations and Independent System Operators, dated December 30, 2016 (“NOPR”). The MRC is a consortium of leading microgrid owners, operators, developers, suppliers, and investors formed to advance microgrids through advocacy for laws, regulations and tariffs that support their access to markets, compensate them for their services, and provide a level playing field for their deployment and operations.<sup>2</sup> In pursuing this objective, the MRC does not favor particular technologies deployed in microgrids or ownership structures for the assets that form a microgrid.

The MRC defines a microgrid as “a local electric system or combined electric and thermal system that: (1) includes retail load and the ability to provide energy and energy management services needed to meet a significant proportion of the included load on a non-

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<sup>1</sup> 18 C.F.R. § 385.211, 214.

<sup>2</sup> The MRC is actively engaged in advancing the understanding and implementation of microgrids across the country. MRC members hold significant energy assets connected to the electric grids, provide energy generation and supply services, and are exploring microgrid construction and ownership in different locations throughout the country. The MRC is affiliated with The International District Energy Association and MRC members include: Anbaric Transmission, ICETEC Energy Services, Concord Engineering Group Inc., the Massachusetts Institute of Technology, NRG Energy, Inc., Princeton University, Thermo Systems, University of Texas at Austin and the University of Missouri.

emergency basis; (2) is capable of operating either in parallel or in isolation from the electrical grid; and (3) when operating in parallel, can provide some combination of energy, capacity, ancillary or related services to the grid.” A microgrid can be as simple as a cogeneration facility behind a single meter with an isolation breaker, but sophisticated microgrids often serve larger facilities or campuses and will increasingly serve multiple customers. The included loads often have diverse needs and controls and are served by a variety of generating and storage resources. The same advanced control functionality that permits them to manage behind the meter also allows them to provide increasingly sophisticated services to the larger grid. The grid has only begun to take effective advantage of the capabilities of microgrids.

In this NOPR, the Commission proposes reforms to its rules and regulations to set market requirements for RTOs and ISOs when pricing fast-start resources in order to set prices that more transparently reflect the marginal cost of serving load.<sup>3</sup> The MRC shares the Commission’s concerns that the varying participation models among RTO/ISOs limit market opportunities for new resources and technologies, and is encouraged by the principles that the Commission articulates.<sup>4</sup> We strongly support the Commission’s efforts to address these emerging issues. Our comments are specific to the proposed fast-start resource definition.

Overall, the MRC strongly supports the Commission’s proposed definition. In particular, we agree with the Commission’s statement that “a variety of technologies beyond conventional generation can and should be eligible for dispatch under fast-start pricing”<sup>5</sup> and recognition of

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<sup>3</sup> Fast-Start Pricing in Markets Operated by Regional Transmission Organizations and Independent System Operators, 81 Fed. Reg. 96391 (proposed Dec 30, 2016)(to be codified at 18 CFR 35) (“NOPR”).

<sup>4</sup> See Microgrid Resources Coalition Comments on FERC’s Notice of Proposed Rulemaking on Electric Storage Participation in Markets Operated by Regional Transmission Organizations and Independent System Operators (FERC Docket Nos. RM-16-23-000; AD 16-20-000), filed January 30, 2017.

<sup>5</sup> NOPR at 96398. The MRC also agrees with EPSA and Entergy’s comments advocating for a technology-neutral inclusion of resources that can respond within thirty minutes. NOPR at 96395.

growing marginal resource diversity, including distribution-level resources.<sup>6</sup> Our agreement extends to the Commission’s finding that it is “appropriate to include both dispatchable fast-start resources and block-load fast-resources in the definition of a fast-start resource.”<sup>7</sup> Further, we applaud the principle and structure of using “performance requirements...to define fast-start resources, rather than specific technological characteristics.”<sup>8</sup>

Microgrids are flexible and dispatchable resources. They can aggregate a wide variety of advanced load and generation technologies into a unified, high-performing resource.<sup>9</sup> With the Commission’s inclusion of new resources that utilize different technology and techniques when compared to conventional generation, the MRC believes it is important to ensure the first element of the proposed fast-start resource definition fully reflects such inclusion.

The first element requires that a fast-start resource must be “able to start-up within ten minutes or less.”<sup>10</sup> For block-loaded conventional generation resources, this language is adequate as the generator is physically “starting-up.” However, for dispatchable microgrids, including those that can respond as either traditional energy or demand response resources, it is not. Microgrids can portion their capabilities and provide products and services simultaneously to their native load and ISO/RTO. Thus, while microgrids have no problems responding to the dispatch signal within ten minutes or less<sup>11</sup> they might not be physically “starting-up” due to

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<sup>6</sup> NOPR at 96398. We agree it is appropriate to note MISO and ISO-NE allow demand response from distribution level resources to set fast start pricing.

<sup>7</sup> NOPR at 96398. The MRC notes that microgrids are some of the most flexible and dispatchable resources available.

<sup>8</sup> *Id.*

<sup>9</sup> See Microgrid Resources Coalition Comments on FERC’s Notice of Proposed Rulemaking on Electric Storage Participation in Markets Operated by Regional Transmission Organizations and Independent System Operators (FERC Docket Nos. RM-16-23-000; AD 16-20-000), filed January 30, 2017. The MRC notes that resource definitions bound to specific technology characteristics rather than performance could unnecessarily restrict the diversity of technologies used in microgrids and their performance as resources.

<sup>10</sup> NOPR at 96398.

<sup>11</sup> For example, one of the Princeton microgrid’s generators is an aero-derivative turbine capable of a +/- 1.5 MW response in seconds to both Reg. A and Reg. D signals in PJM. Additionally, the turbine can ramp 7 to 15 MWs in

native load service. More often, microgrids will respond to the dispatch signal and prepare to operate in accordance with their offer by shifting their internal load, storage and generation profiles. While such a shift may include ramping reserved generator capacity associated with the offer, microgrids and other advanced distributed energy resources will not always be physically “starting up” in response to the dispatch signal.<sup>12</sup> Therefore, the MRC recommends the Commission amend the first-element of the proposed fast-start resource definition to include the addition in italics: “(1) are able to start up *or be ready to operate, as committed and dispatched*, within ten minutes or less.”

We encourage an approach in which all resources are valued and compensated appropriately based on their performance. The MRC thanks the Commission for considering these comments in response to the NOPR.

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one minute. Further, the Princeton microgrid is capable of shedding substantial electrical and thermal load and ramping multiple generators in well under ten minutes.

<sup>12</sup> In this regard, the MRC notes that Start-Up and No-Load costs may be low for microgrids.