

## CLIENT ALERT

### Compensation and Technology-Neutral Market Rules for Storage

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Indianapolis Power & Light Company (IPL), the developer of the first grid-scale energy storage resource in the Midcontinent Independent System Operator (MISO) footprint, has [filed a complaint](#) with the Federal Energy Regulatory Commission (FERC) asserting that MISO's market rules fail to compensate IPL for providing important reliability services, and that MISO's operating protocols would significantly degrade the useful life of IPL's storage resource.

IPL's complaint evidences the challenges created by market rules and operating protocols designed with traditional resources in mind, and the failure of market operators to update their market rules and operating protocols to accommodate new technologies. Although FERC has been promoting the need for changes in market rules and compensation methodologies to ensure that storage resources can participate and be rewarded for superior performance, it can take years for market operators to develop and implement new rules. IPL's frustration with MISO's slowness to move forward on market rule changes resulted in the complaint, asking FERC to direct MISO to expeditiously implement changes needed to allow IPL's storage resource to efficiently participate in MISO's markets and to be properly compensated for the services it provides.

The focus of IPL's complaint is the process MISO uses to ensure that its transmission system operates at the required electrical frequencies. Historically, transmission operators have relied on their ability to dispatch traditional generation resources to provide a single service labeled Regulation and Frequency Response Service, which is used to maintain frequency at required levels and also to ensure that the output of generation resources always matches the demand for electricity. IPL asks FERC to require MISO to unbundle (1) primary frequency response (PFR) service, i.e., a resource standing by to provide autonomous, pre-programmed changes in output to rapidly arrest large changes in frequency until dispatched resources can take over, and (2) regulation service, i.e., resources that can be dispatched to manage frequency and balancing.

While a few market operators have adopted pricing rules that reward resources, such as storage, that demonstrate superior performance in providing bundled regulation and frequency response services, IPL asserts that it is not currently compensated for the PFR service it provides, and asks FERC to require MISO to compensate PFR as a separate service using performance-based pricing. IPL argues that this would be consistent with recent FERC orders in which FERC recognized that there are different services embedded within the current Regulation and Frequency Response service. IPL points to [Order No. 755](#) in which FERC required regional transmission organizations to compensate frequency regulation service (which involves a dispatch signal) based on performance. FERC's decision was based, in part, on the fact that certain technologies can respond faster to system conditions and should therefore be compensated more than slower ramping resources. IPL also points to [Order No. 819](#) in which FERC provided a clear definition of PFR and found that PFR providers could provide the service at market-based rates.

In addition, IPL asks for a significant change in the treatment of energy absorbed from the system by the storage resource. Typically, a storage resource is paid the market clearing price when injecting energy into the grid and pays the market clearing price when absorbing energy. IPL argues that, when providing PFR service, the storage resource should be paid the market clearing price both on megawatts injected onto the grid to respond to underfrequency deviations, and on megawatts absorbed

by the resource to respond to overfrequency deviations. The PFR seller, however, would be required to pay for energy withdrawals needed for charging the storage resource.

IPL also asserts that MISO's operating protocols for regulation service assume that flywheel technologies (which use electric energy input that is stored in the form of kinetic energy) are the only type of storage resource participating in the market. IPL says that, if it operated its storage resource in accordance with these operating protocols, the resource's useful life would be reduced from 10 years to 3 years. IPL asks FERC to require MISO to revise its operating protocols to be technology neutral so that innovative technologies can effectively participate in the market.

In sum, IPL's complaint provides FERC with an opportunity to push MISO to overhaul its operating protocols, market rules, and business practices to accommodate different technologies such as storage, and to provide compensation for the full range of services that such technologies can provide.

Comments on IPL's complaint must be filed with FERC no later than November 10, 2016.

For more information, please contact the professional(s) listed below, or your regular Crowell & Moring contact.

**Larry F. Eisenstat**

Partner – Washington, D.C.  
Phone: +1 202.624.2600  
Email: [leisenstat@crowell.com](mailto:leisenstat@crowell.com)

**Deborah A. Carpentier**

Senior Counsel – Washington, D.C.  
Phone: +1 202.624.2857  
Email: [dcarpentier@crowell.com](mailto:dcarpentier@crowell.com)

**Patricia M. Alexander**

Senior Policy Advisor – Washington, D.C.  
Phone: +1 202.624.2788  
Email: [palexander@crowell.com](mailto:palexander@crowell.com)