UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Inquiry Regarding the Commission's Electric Transmission Incentives Policy	Docket No. PL19-3-000

COMMENTS OF MAGNUM CAES, LLC

Magnum CAES, LLC ("MCAES") hereby submits comments in response to the Notice of Inquiry (NOI) issued March 21, 2019 in the captioned docket. In the NOI the Federal Energy Regulatory Commission ("FERC" or "Commission") seeks comments on the scope and implementation of its electric transmission incentives regulations and policy.

More specifically, the Commission seeks comment on the scope and implementation of its electric transmission incentives regulations and policy pursuant to section 1241 of the Energy Policy Act of 2005 (EPAct 2005), codified as section 219 of the Federal Power Act (FPA), which directed the Commission to use transmission incentives to help ensure reliability and reduce the cost of delivered power by reducing transmission congestion.

In 2006, the Commission implemented section 1241 by issuing Order No. 679, which established the Commission's basic approach to transmission

incentives and enumerated a series of potential incentives that the Commission would consider.

The Commission subsequently refined its approach to transmission incentives in a 2012 policy statement (2012 Incentives Policy Statement), which provided guidance on the Commission's interpretation of Order No. 679 and its approach toward granting transmission incentives, but did not alter the Commission's regulations, or Order No. 679's basic approach to granting transmission incentives. The Commission also states that it is generally reevaluating its ROE policy in a separate Notice of Inquiry issued concurrently with this NOI.[1]

I. Identification of Magnum CAES, LLC

MCAES is an energy development portfolio company of Haddington Ventures LLC focused on developing compressed air energy storage ("CAES") at a salt dome near Delta, Utah, which is the only known Gulf Coast-type salt dome in the Western United States.

MCAES has a vital interest in the matters raised in this proceeding and expresses its appreciation for the opportunity to provide input to the NOI. MCAES looks forward to participating further in the development of any future policies arising from this NOI.

The MCAES development site is adjacent to the Intermountain Power Plant ("Intermountain"), a 1900 MW coal-fired generation facility that is in the process of

[1] *Inquiry Regarding the Commission's Policy for Determining Return on Equity*, 166 FERC ¶ 61,207 (2019).

being replaced with natural gas generation. The location of MCAES is unique in that it is at the center of an existing high-voltage transmission network connected to four major Western electric markets. The existing transmission system allows the project to access the Rocky Mountains, Desert Southwest, California, and Nevada.

MCAES is also unique in that the project design allows renewable energy to be stored in an underground salt cavern as compressed air at the same time MCAES is returning electricity to the grid through a high efficiency turbine generator that will be fueled by a combination or natural gas, biofuels and hydrogen. Another distinctive attribute is MCAES' long duration (more than 12 hours) and the ability, when using stored electrolytic hydrogen, to time-shift renewable energy by weeks and even months. This technology and operational flexibility make MCAES an ideal project to firm and shape renewable energy, help mitigate against renewable energy curtailment, enhance and bolster grid reliability, as well as provide an array of valuable ancillary services. Specifically, MCAES can provide grid-level, black start-capability to enhance grid resilience.

Communication regarding these comments of MCAES should be directed to the following individuals:

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II. Comments of MCAES

A. General Comments - Need to Revisit Transmission Incentives

MCAES appreciates the opportunity to comment in response to this NOI, and will frame its comments based on the operating characteristics of CAES in general, and more specifically, on how the unique nature of MCAES' project presents a real-world example of the type of project that Congress envisioned with the passing of EPAct 2005 (and the related codification of section 219 to the FPA), and as did the Commission with the issuance of Order No. 679 – namely, projects that help ensure reliability and reduce the cost of delivered power by reducing transmission congestion, are those that should be afforded financial incentives.

Below, MCAES will respond directly to certain Commission questions and comments raised in the NOI, to further illustrate that MCAES' transmission related investments have presumptive eligibility for financial incentives, both as currently offered, as well as any new incentives should the Commission choose to revise and expand the scope and application of such incentives to include grid scale energy storage projects.

B. Section 219 of the FPA

As noted above, Congress amended the FPA to add a new section 219; section 219(a) "directed FERC to promulgate a rule providing incentive-based rates for electric transmission for the purpose of benefitting consumers through increased reliability and lower costs of power." Section 219(b) included a number of specific directives in the required rulemaking, including that the Commission should promote reliable and economically efficient transmission and generation of electricity by promoting capital

investment in the enlargement, improvement, maintenance, and operation of all facilities for the transmission of electric energy in interstate commerce, *regardless of the ownership of the facilities* (emphasis added).

This section directly pertains to challenges MCAES continues to face in transporting its energy to its customers, as well as moving excess renewable energy to MCAES's physical location to power its compressors. The section provides that the transmission project it would consider for incentives should also support "economically efficient transmission and generation of electricity." MCAES's unique long duration storage project could be directly involved in interstate commerce through power purchase agreements (PPAs) or through the Energy Imbalance Market. In response to the emphasized phrase just above, "regardless of the ownership of the facilities", MCAES notes that this statement does not appear to apply incentives for generation investment, but it does pertain to entities such as publicly owned utilities or wholesale transmission companies, which could increase grid reliability and resilience by connecting with such a unique project as MCAES. MCAES would urge consideration by FERC of the efficiency and reliability features of its project in the award of incentives.

Another specific requirement set forth in section 219(b) is to encourage deployment of transmission technologies and other measures to increase the capacity and efficiency of existing transmission facilities and improve the operation of the facilities. In response, MCAES points out that it could contribute toward not only increasing the capacity and efficiency of existing transmission facilities, but also toward improving the overall operation of those facilities.

C. Order Nos. 679 and 679-A

In these orders, the Commission established a two-step process for qualifying for financial incentives. First, Commission explained that, to receive an incentive, an applicant must satisfy the statutory threshold set forth in section 219(a) by demonstrating that the transmission facilities for which it seeks incentives either ensure reliability, or reduce the cost of delivered power by reducing transmission congestion.

If the applicant satisfies that threshold, it moves to the next step where it must demonstrate that there is a nexus between the incentive sought and the investment being made. This threshold and nexus test would be applied on a case-by-case basis. In its discussion of the nexus test, the Commission explained that the "most compelling" candidates for incentives are "new projects that present special risks or challenges, not routine investments made in the ordinary course of expanding the system to provide safe and reliable transmission service."

In response, MCAES observes that while the threshold and nexus tests may not explicitly, and currently, apply to generation and/or storage resources, this two-step test could be an incentive for transmission investment to enable continued development of CAES, and all of the benefits that CAES would provide to transmission service. Further, if the Commission is considering new ways to incentivize the assurance of reliability or to minimize the cost of delivered power by reducing transmission congestion, perhaps the symbiotic role that MCAES projects can play could lead to a Commission finding that these types of assets could seek incentive funding through successful demonstration via the threshold and nexus tests.

D. 2012 Policy Statement

On November 15, 2012, the Commission issued a policy statement to provide additional guidance regarding its evaluation of applications for transmission incentives under section 219. In particular, the Commission reframed the nexus test for applicants seeking the ROE adder for risks and challenges and eliminated the technology ROE adder, requiring among other things, a demonstration of "risks and challenges". The Commission provided several examples of categories of transmission projects that might satisfy the above-noted "risks and challenges" expectation, including transmission projects that would: (1) relieve chronic or severe grid congestion that has had demonstrated cost impacts to consumers; (2) unlock location-constrained generation resources that previously had limited or no access to the wholesale electricity markets; or apply innovative technologies to facilitate more efficient and reliable usage and operation of existing or new facilities.

In response, MCAES points out that in certain ways it is currently "location constrained" with little to no access to wholesale electricity markets. Accordingly, MCAES believes that incentives to "merchant" transmission would be helpful in allowing MCAES to reach new markets.

E. Incentives Based on Expected Benefits

An alternative approach suggested in the NOI is that the Commission could instead evaluate incentive requests based on the transmission project's potential to achieve benefits related to reliability and reductions in the cost of delivered power by reducing transmission congestion. One such approach set forth by the Commission

would be to examine whether and how FERC might consider benefits relative to costs when evaluating a request for incentives. More specifically, the Commission posits that if it grants incentives based on expected benefits, should the level of the incentive vary based on the level of the expected benefits relative to transmission project costs? If so, how should the Commission determine how to vary incentives based on the size of benefits?

MCAES believes that this approach would be a challenge in general, but more so when there is no RTO or ISO to look at benefits regionally. For this reason, MCAES suggests that the current regional planning be encouraged to look longer-term and more broadly in their efforts, with explicit direction to consider the aggregation of distributed wind and solar resources.

F. Reliability Benefits

In the NOI, the Commission notes that while transmission owners are already required to address many facets of reliability through compliance with the North American Electric Reliability Corporation (NERC) reliability standards and various other planning criteria, the Commission could potentially tailor incentives to promote reliability transmission projects that significantly enhance transmission reliability above and beyond what is required by the NERC reliability standards or other planning criteria. For example, the Commission is asking whether it should incentivize transmission facilities that expand access to essential reliability services, such as frequency support, ramping capability, and voltage support. And, if so, how should the Commission measure whether transmission projects expand access to essential reliability services.

In response to the first question, MCAES agrees that incentives for projects that expand access to essential reliability services should be considered. This is especially true as the nation moves to higher reliance on renewables and distributed resources. Regarding the latter, MCAES would suggest that one possible approach would be to analyze during the planning process what new ancillary and transmission reliability services would be added to that region's access to these services.

G. Flexible Transmission System Operation

As the Commission properly observes, owing to generation mix changes and evolving load patterns, the requirements of the transmission system will also change. And, changes in the characteristics of the transmission system, such as increased line rating precision, greater power flow control, and technologies, including energy storage, may be able to facilitate the transmission system's ability to respond to changing circumstances.

MCAES wholly agrees with this observation, particularly noting that energy storage can play a vital role in facilitating the transmission system to operate economically efficiently and reliably. MCAES's project is ideally suited for such role given its anticipated capacity of 160 MW and duration of 10,000 MWh for one CAES unit. Several more CAES units can be developed at MCAES site.

The Commission also poses the question as to how it should define "flexibility" in this context. In response, MCAES notes that there is much current

debate on how various technologies can provide "flexibility." This often is reduced to how can storage or other technology lend support to system reliability. The discussions then result in what are the true operating capabilities, e.g. cost, ramp rate, duration, recharge time for batteries, etc. And while there might not be a "right answer" to this question, MCAES believes that attention should be paid to these attributes and encourages other commenters to address this matter in response to the NOI.

H. Unlocking Locationally Constrained Resources

The 2012 Incentives Policy Statement provided that "projects that unlock location constrained generation resources that previously had limited or no access to the wholesale electricity markets" may be eligible for incentives, and the NOI asks if the Commission should use incentives to encourage the development of transmission projects that will facilitate the interconnection of large amounts of resources.

MCAES strongly agrees that the Commission should use incentives to encourage development to facilitate interconnections. In the West there is one ISO (CAISO) that has been supportive in the development of energy storage policies as multi-use resources. However, despite efforts by other Western states and FERC regulated entities, there has been no material improvement in MCAES' ability to reach wholesale markets. There is also the situation where a storage/generation project's first point of interconnection is with a non-FERC regulated entity. Incentivizing other transmission entities to develop transmission capacity to these areas would be helpful.

I. Ownership by Non-Public Utilities

Section 219(b)(1) encourages the Commission to facilitate capital investment in transmission infrastructure, regardless of the ownership of those facilities, and the Commission seeks input on whether it should grant incentives to promote joint ownership arrangements with non-public utilities and, if so, how?

MCAES is of the opinion that having the ability to promote joint ownership arrangements would be directly beneficial to MCAES' project. Though MCAES has not approached any non-public utilities with how incentives might apply to joint ownership projects, it is confident the approaches used in successful Public-Private Partnerships could be applied here.

J. Order No. 1000 Transmission Projects

The Commission has considered whether it could reduce transmission developer risk by granting blanket pre-approval (i.e., a rebuttable presumption) of three risk-reducing incentives for transmission projects selected in a regional transmission plan for purposes of cost allocation: CWIP, abandoned plant, and regulatory asset treatment.

MCAES believes this approach to reducing transmission developer risk might encourage more non-Integrated Resource Planning asset analyses (i.e., independent project developments) by incumbent transmission providers.

K. Metrics for Evaluating the Effectiveness of Incentives

The NOI acknowledges that it can sometimes be difficult to identify the extent to which a specific incentive motivates a transmission developer to take a particular

action. And while Form FERC-730, requires transmission incentive recipients to provide limited information, the Commission recognizes that additional transmission incentive-related data, beyond that available under the Commission's existing reporting standards or through other public sources, could help the Commission to better understand the effectiveness of the incentives program. Accordingly, the Commission seeks comment on whether the obligation to file Form FERC-730 should be expanded to all public utility transmission providers?

MCAES believes including all public utility transmission providers would enhance FERC's ability to incentivize projects and further promote a regional view of transmission planning and the associated cost/benefit analysis.

The Commission also asks if for each transmission project, should it require additional data such as the primary driver of each transmission project (e.g., reliability needs) and the risks entailed in its development (e.g., number of permits required, siting challenges)?

MCAES agrees that additional data would be useful. As an example, the developer could specifically list assets, both transmission and generation that could improve reliability and reduce congestion, which would otherwise not be developed.

III. Conclusion

As set forth herein, MCAES has substantial interests in the matters raised by the Commission in the NOI. MCAES respectfully requests that the comments made herein be considered by the Commission in its further deliberations in this proceeding.

Respectfully submitted,

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