BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO

In the Matter of the Application of Ohio Power Company to Initiate Phase 2 of its gridSMART Project and to Establish the gridSMART Phase 2 Rider.	:	Case No. 13-1939-EL-RDR

COMMENTS

SUBMITTED ON BEHALF OF THE STAFF OF
THE PUBLIC UTILITIES COMMISSION OF OHIO

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INTRODUCTION

On September 13, 2013, Ohio Power Company ("AEP Ohio" or the "Company") filed an application to expand its gridSMART project and to establish the gridSMART Phase 2 Rider to recover project investment costs beyond Phase 1. This submission is being made to present comments to the Company's application on behalf of the Commission Staff.

BACKGROUND

Phase 2 of AEP Ohio's gridSMART project was contemplated by the Commission in its Opinion and Order in Case No. 11-346-EL-SSO, *et al.*, which approved the Company's request to initiate Phase 2 of the program and directed the Company to "file its proposed extension of the gridSMART project, gridSMART Phase 2, as part of a new gridSMART application, including sufficient detail on the equipment and technology proposed for the Commission to evaluate the demonstrated success, cost-effectiveness, customer acceptance and feasibility of the proposed technology."[1]

Also relevant to the instant proceeding is the Commission's direction in Case No. 10-501-EL-FOR, *et al.* that AEP Ohio expend $20 million on the Turning Point project or other similar project that benefits ratepayers by the end of 2013, or to submit a proposal for an alternate use of the funds, subject to Staff approval, such as offsetting major storm damage costs that are deferred under the Company's storm damage recovery mechanism. The $20 million obligation originally emanates from Commission orders in Case No. 10-1261-EL-UNC, the significantly excessive earnings test ("SEET") proceeding. AEP Ohio intends to satisfy its obligation by investing $20 million in Volt/Var Optimization ("VVO") technology as part of the gridSMART Phase 2 project.

DISCUSSION

The Commission reaffirmed its commitment to smart grid investments and to AEP Ohio's gridSMART project, specifically, in Case No. 11-346-EL-SSO, *et al.* when it declared that "the Commission is unwavering in its conviction as to the benefits of gridSMART."[2] Staff reiterates its support of smart grid investments, such as those proposed, subject to the following conditions. The business case must show a net benefit;

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1 *In the Matter of the Application of Columbus Southern Power Company and Ohio Power Company for Authority to Establish a Standard Service Offer Pursuant to 4928.143, Ohio Rev. Code, in the Form of an Electric Security Plan*, Case No. 11-346-EL-SSO, *et al*. (Opinion and Order at 62) (Aug 8, 2012) ("*11-346 Opinion*").

2 *Id*.

operational savings that are achieved as a direct result of gridSMART investments should be recognized as an offset to the costs recovered from customers; and, the proposed project must offer a value proposition to customers. In return, the Company will be authorized to earn a fair return on its investments.

Staff does have a number of concerns about the Company's application as filed. The Application provides a generalized approach and plan for moving forward. It is, however, less than definitively detailed and lacks essential elements and information that would enable Staff to support moving forward at this time. Staff identifies below a non-exhaustive list of areas that either need more detail and support, or present obstacles to Staff's full support of the application. As well, the application includes some materials that Staff believes give rise to substantive issues. The following issues of importance to Staff must be addressed to facilitate a more thorough examination of the Phase 2 proposal. Although Staff identifies a number concerns below, Staff does not necessarily offer guidance on the best possible resolution at this time.

A. Specific Deficiencies and Concerns with the Application

1. Treatment of Operational Savings

The application presents no plan for netting operational benefits against costs in rates. Staff believes that cost savings that can be reasonably quantified and that accrue directly to the distribution utility should be recognized as an offset to the costs of the project. This structure is an integral component of the value proposition to ratepayers. Ideally, the Company would provide within its business case, at the onset of the project, the level of operational benefits that will be achieved (and recognized in rates) annually. Not only does this provide an assurance that benefits will flow through to customers, but it also establishes an incentive to the Company to maximize the return on its investments. Any cost savings that are achieved above and beyond the projected level would be retained by the Company.

2. Recovery Mechanism

The Company proposes that the Commission approve a gridSMART Phase 2 Rider, and approve it for purposes of putting a rate into effect on January 1, 2014. The proposed cost recovery is budget based, but the budget is not grounded in any firm plan or cost/benefit analysis, as further detailed below. By requesting that the Phase 2 Rider be effective on January 1, 2014, the Company has ignored the Commission's guidance that Phase 2 Rider recovery should "occur only after the equipment is installed, tested, and is in-service."[3] Thus, even if there were a fully developed and detailed deployment plan from which a full budget could reasonably be derived, that approach contradicts the Commission order.

3. Business Plan

The business plan summarizes the Company's analysis at a high level. It provides insufficient documentation of calculation details and assumptions with regard to the benefits represented, including formulas, methodologies, and work papers. It is important to

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[3] *11-346 Opinion* at 63.

see when the Company estimates certain benefits will be available. This is especially true in light of the Commission's instruction that the Phase 2 application include "sufficient detail on the equipment and technology proposed for the Commission to evaluate the demonstrated success, cost-effectiveness, customer acceptance and feasibility of the proposed technology."[4]

4. Time Differentiated Rates

The Company's application does not present specific proposals that would empower customers to take advantage of the capabilities of advanced meters in order to manage their electricity costs. Advanced meters facilitate time differentiated rates that reflect wholesale energy prices and other programs that empower customers to save money on their bills. While Staff generally agrees that the retail market should eventually provide this option, there appears to be little interest by competitive retail electric suppliers in providing such rates in the near term. Until these rate offerings are available in the competitive marketplace, Staff recommends that utilities with advanced metering capabilities offer at least one such rate to SSO customers. Unless rates that send signals about the underlying wholesale costs are available, Staff is concerned that customers will have no opportunity to respond to better price signals and capture savings for themselves and systemic efficiencies that benefit everyone. Staff also observes that Phase 1 of the Company's gridSMART project included a number of innovative initiatives that empow-

4 *11-346 Opinion* at 62.

ered customers to save money and consume energy wisely. It would be wasteful to not leverage that knowledge as part of Phase 2 of the gridSMART project.

5. Accounting Issues

There is no clear basis for a 7 year accounting life for meter equipment. Staff understands that the current AMI meter vendor for Phase 1 supports a 15 year life expectancy at a 5% failure rate.[5] Staff recommends that the accounting life correspond with the expected equipment life, unless the Company can demonstrate a reason for a shorter accounting life.

The Company proposes to recover stranded costs of approximately $72 million over a five year period for the removal of the existing electro-mechanical meters. However, the costs of these meters are currently being recovered in base rates as filed and approved in Case No. 11-351-EL-AIR and Case No. 11-352-EL-AIR. The Company needs to explain how its proposed recovery of stranded costs does not result in double recovery of its investment in meters, and how an accelerated recovery period of five years may be justified.

6. VOLT/VAR Optimization

Although VVO investments can be installed without the presence of smart grid technologies, VVO and gridSMART, particularly advanced metering infrastructure, are complementary technologies that allow each other to function in an optimized manner.

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5 Response to Staff DR-6-002.

Staff does observe, however, that the extent of VVO deployment in the Company's application is not based upon technical or economic feasibility, and has not been shown to extend to all circuits that would be economically feasible. Staff understands that the proposed budget of $20 million has been offered because of the requirement set forth in 10-0501-EL-FOR, *et al*. Staff has no objection to the proposition that the $20 million for VVO could directly benefit customers; however, the Company's plan should be to install all the VVO that is cost effective. Staff believes that it would be appropriate to recover VVO investments over the $20 million threshold in the proposed rider.

The Company represents that the budget for VVO deployment could expand to $40 million "if [the expanded scope of deployment is] appropriate for energy efficiency." Staff takes from the discussion in the application that "appropriate for energy efficiency" means that a) avoided energy and demand would count against the benchmarks established in Senate Bill 221, b) lost revenues associated with implementation would be recoverable from all ratepayers, and c) there is some level of shared savings associated with the avoided demand and energy. If the Company means something else, it should clarify.

Staff has no objection to counting avoided demand and energy against the benchmarks, but we do have an issue with the Company's shared savings and lost distribution revenues proposals. The Commission has not approved any energy efficiency portfolio plan that includes an electric distribution utility's investment in T&D as a part of a shared savings calculation. As proposed, the Company seeks to earn a fair return on the investment through the rider. Shared savings on top of a fair return seems excessive, especially for an investment on the Company side of the meter. Similarly, with the Company's proposal for recovery of lost distribution revenue, it is not readily apparent why lost distribution revenue should be recoverable on distribution system performance enhancements, and the Company has not provided a sufficient rationale to explain why such recovery would be appropriate.

It is unclear in the application whether the Company would seek recovery of the proposed $20 million investment in VVO technology. Staff observes that the Company's obligation to expend $20 million by the end of 2013 originally emanates from the significantly excessive earnings test in Case No. 10-1261-EL-UNC, by way of the forecasting proceeding in Case No. 10-0501-EL-FOR, *et al*., and therefore believes these funds should not be recoverable, as they represent disgorged earnings that the Commission ordered be returned to benefit ratepayers. The Company should clarify its intent with regard to recovery. If the intent is to expend $20 million on VVO and recover that investment from ratepayers, Staff would prefer to see the funds set forth in Case No. 10-501-EL-FOR, *et al*. used in a manner that does not create an additional burden on ratepayers. One such option is to offset existing deferred costs, which is an alternative use of the funds as articulated by the Commission in that proceeding.[6]

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[6] *In the Matter of the 2010 Long Term Forecast Report of the Ohio Power Company and Related Matters*, Case No. 10-501-EL-FOR, *et al*. (Opinion and Order at 28) (Jan. 9, 2013).

7. Distribution Automation/Circuit Reconfiguration

In its application, AEP says it has targeted approximately 450 circuits as being DACR candidates, but proposes to deploy DACR on only 250 of these circuits during gridSMART Phase 2. By the end of Phase 2, AEP will have deployed DACR on 320 circuits (70 circuits in Phase 1 plus 250 in Phase 2). This total, however, would only comprise 20 percent of AEP's 1,600 circuits, and AEP offered no explanation why this percentage of circuits is a reasonable goal for Phase 2.

AEP has identified its criteria for selecting circuits for DACR, applied those criteria to select a preliminary list of circuits, and used that list as a basis for projecting improved reliability performance. However, the Company has made no commitment to actually deploy DACR on those particular circuits. Because AEP has not made such a commitment, it is impossible for Staff to know where DACR would be implemented across AEP's service territory or to rely on AEP's projected improvement in reliability performance.

Another related Staff concern is the application's omission of any DACR deployment plan. In order to properly evaluate AEP's DACR proposal, Staff needs to know how the circuits are prioritized, how many would be deployed each year, and the planned start and end dates for the Phase 2 DACR deployment.

8. Cybersecurity

The application lacks sufficient consideration of cybersecurity, barely mentioning cybersecurity considerations other than the Cyber Security Operations Center ("CSOC") and AEP Ohio's intent to continue to safeguard customer privacy. The application does not address what the Company has learned about cybersecurity from Phase 1 or how such learning will be used to leverage the deployment proposed in the instant application. The Company needs to demonstrate how its planned gridSMART program expansion addresses cybersecurity considerations, specifically, given the evolving nature of the threats and the magnitude of the potential damage they could cause.

9. Back Office Systems

The ability to handle and use much larger volumes of meter and sensor data is critical to the success of all aspects of gridSMART deployment. The application includes no discussion of meter data management system ("MDMS") improvements, billing engines, or other back office systems that are necessary to manage the new data. It is not clear whether such systems have been considered as part of the proposed deployment, or whether they simply have not yet been addressed. In either case, further discourse on whether these systems are part of the plan and budget, and how such systems will be deployed in order to manage data and turn it into useful and actionable operations and benefits.

CONCLUSION

While supportive of smart grid investments that improve reliability and empower customers, Staff is unable to reach a definitive conclusion as to whether it can support the Company's proposal based on the application as filed, due to the specific deficiencies and concerns noted above. Further clarity is required on these issues prior to the initiation of Phase 2 of the gridSMART project.

Respectfully submitted,

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PROOF OF SERVICE

I hereby certify that a copy of the foregoing Comments was served via electronic mail upon the following parties of record this 1st day of November, 2013.

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