

FILE

**BEFORE THE
PUBLIC UTILITIES COMMISSION OF OHIO**

**In the Matter of the Application
of Columbus Southern Power
Company to Update its
gridSMART Rider**

Case No. 10-164-EL-RDR

9
RECEIVED-DOCKETING DIV
2010 FEB 11 PM 1:43
PUCO

APPLICATION

1. Columbus Southern Power Company (CSP) is an electric light company, as that term is defined in §§4905.03 and 4928.01 (A) (7), Ohio Rev. Code.
2. In CSP's Electric Security Plan (ESP) proceeding (Case No. 08-917-EL-SSO) it proposed gridSMARTsm Phase I, a smart grid deployment proposal within CSP's service territory involving three primary components: Advanced Meter Infrastructure (AMI), Home Area Network (HAN) and Distribution Automation (DA). In the ESP cases, the Commission authorized CSP to establish a gridSMART Rider, subject to annual reconciliation. (ESP Opinion and Order, March 18, 2009, p. 38).
3. The Opinion and Order indicated the Commission's expectation that federal matching funds would be available under the American Recovery and Reinvestment Act of 2009 (ARRA) for Phase I of gridSMART and initially permitted 50% of the expected revenue requirement to be recovered in the initial rate approved for the gridSMART Rider. Thus, while the Commission approved the proposal estimated to be a \$109 million investment, the

This is to certify that the images appearing are an
accurate and complete reproduction of a case file
document delivered in the regular course of business.
Technician SM Date Processed FEB 11 2010

Commission initially approved \$54.5 million for recovery (based on the presumption that federal matching funds could be obtained).

4. In its July 23, 2009 Entry on Rehearing, the Commission clarified its understanding that CSP's gridSMART Rider was designed to only recover CSP's incremental revenue requirement associated with the project for 2009-2011 and would not fully recover the entire cost of Phase I over the course of the ESP. Thus, the Commission indicated that it initially approved \$32 million for recovery during the ESP. (Entry on Rehearing, p. 20). This conservative approach, while making it more affordable for ratepayers during the term of the ESP, also leaves part of CSP's investment plus carrying charges for recovery from ratepayers after the term of the ESP.
5. The Entry on Rehearing also clarified the Commission's intention that "once CSP properly applies for and otherwise meets its obligations to receive federal funds to offset the total costs of gridSMART Phase I, the Commission will review its gridSMART Phase I expenditures and, once the Commission concludes that such expenditures were prudently incurred by CSP, the Commission intends to approve recovery of CSP's gridSMART Phase I costs." (*Id.*)
6. The Entry on Rehearing also reinforced its finding that the Commission concludes that the adopted gridSMART component of CSP's ESP best meets the requirements of SB 221, and meets the Commission's obligation to the citizens of Ohio to encourage the implementation of AMI and ensure the

availability of adequate, reliable, safe, efficient and reasonably priced electric service. (*Id.* at 24.)

7. In accordance with the Commission's orders, CSP pursued ARRA funding and received an initial award notification on November 25, 2009, which is currently being finalized. Under the ARRA grant process, expenditures incurred more than 90 days prior to award notification would not be eligible for matching funding. CSP suspended some of the investments during 2009 while its grant application was being considered by the United States Department of Energy (USDOE). Indeed, CSP came to understand through the grant process that USDOE would require certain enhancements to gridSMART Phase I in order for CSP to successfully obtain the grant. Consequently, CSP enhanced its gridSMART Phase I proposal to include components in addition to the AMI, HAN and DA features previously included. Specifically, the enhanced gridSMART Phase I initiative now includes additional project components for Realtime Pricing, Community Energy Storage, Smart Appliances, Cyber Security Operation Center and Plug-in Electric Vehicles. In addition, in-kind contributions were obtained from non-affiliated corporate partners in support of the enhanced gridSMART Phase I initiative. Also, American Electric Power Service Corporation and AEP Ohio will perform additional work beyond what was originally contemplated in support of the enhanced gridSMART Phase I initiative and the cost of that additional work will not be collected through the gridSMART

Rider. Attachment A details the components and projected costs for the enhanced gridSMART Phase I initiative.

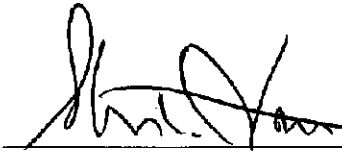
8. Through the additional ARRA funding and in-kind contributions, CSP currently anticipates being able to avoid increasing the expected 2009-2011 revenue requirement relating to the gridSMART Phase I initiative – even while delivering the new project components and associated features of the enhanced gridSMART Phase I initiative. As referenced above, while the Commission approved CSP's entire \$109 million gridSMART Phase I initiative, it initially approved \$32 million for recovery by CSP as the revenue requirement associated with the 2009-2011, the ESP term. CSP expects to maintain approximately the same level of ratepayer funding during the ESP, with the understanding (as contemplated in the ESP Order) that additional investment will need to be recovered from ratepayers as part of CSP's next Standard Service Offer and/or through a general distribution rate increase.
9. The details concerning the original gridSMART Rider revenue requirement projections were presented in the record in CSP's ESP Case, Case No. 08-917-EL-SSO. Specifically, the Direct Testimony of David M. Roush (Companies' Exhibit 1), set forth the revenue requirement calculation for gridSMART Phase 1 in Exhibit DMR-4. As noted in paragraph 7, CSP suspended some investment spending during 2009 pending approval of its grant application by the USDOE. Upon notification of the grant award by USDOE, expenditures resumed with an expectation that investments would be "caught up" in 2010. This investment spending timing change created an over-

recovery of cost collected via the gridSMART Rider in 2009. CSP combined the 2009 over-recovery of cost with the adjusted 2010 revenue requirement projection. Attachment B shows updated revenue requirement calculations for the 2009 reconciliation and the 2010 projection, presented in similar format as Exhibit DMR-4 in the ESP Case.

10. In conformance with the Commission's authorization of such annual filings to reconcile the gridSMART Rider to the annual revenue requirement for actual gridSMART Phase I investment, CSP seeks authority to establish a new rate for its gridSMART Rider of 2.30342%.
11. CSP proposes that its gridSMART Rider become effective with the first billing cycle of July 2010. This effective date coincides with the Fuel Adjustment Clause Rider modification scheduled for the first billing cycle of July 2010. It is important that these dates coincide because the gridSMART Rider is within the rate increase caps authorized by the Commission in CSP's ESP proceeding. Therefore, the implementation of the gridSMART Rider will impact the FAC level and the ESP Phase-in Plan deferrals associated with the FAC.
12. Because the authority to make this filing results from the Commission's orders in CSP's ESP proceeding, and the schedule supporting the request, which is attached to the application, can be verified by the Commission's Staff, CSP does not believe that a hearing in this matter is required or needed. Instead, CSP requests that the Commission establish an opportunity for the filing of comments and reply comments, setting a reasonable schedule which

would permit CSP's new gridSMART Rider to become effective with the first billing cycle of July 2010.

13. CSP's proposed gridSMART Rider is just and reasonable and is authorized as part of its ESP. Therefore, CSP requests that the Commission approve this application.



Respectfully submitted,
Steven T. Nourse, Counsel of Record
Marvin I. Resnik
American Electric Power Corporation
1 Riverside Plaza, 29th Floor
Columbus, Ohio 43215-2373
Telephone: (614) 716-1608
Facsimile: (614) 716-2950
stnourse@aep.com
miresnik@aep.com

Counsel for Columbus Southern Power
Company

Components of the Enhanced gridSMARTsm Demonstration Project

Enhancements were added to the original gridSMART Phase 1 project scope for the DOE gridSMART Demonstration Project. Those enhancements are described below.

Additional reporting and analysis activities are also required with the Department of Energy project. When the costs for the reporting and analysis activities are added together with the costs for the enhancements, the original gridSMART Phase 1 project cost (\$109 million) is escalated by approximately \$41.3 million for a new total of \$150.3 million.

Real Time Pricing (RTP) – Provide real time pricing to up to 1,000 customers in the demonstration project area. These customers would also receive Home Energy Manager (HEM) devices that would control multiple devices in the home including thermostats, appliances, water heaters and photovoltaic panels.

Community Energy Storage (CES) – Install 2 MW of CES on a single circuit served from Morse Station. The 2 MW will consist of 80-25 kw units of lithium-ion battery storage and will provide battery back-up power for about 4-5 hours to the residences served by the CES units. The CES could also be used to provide power during peak demand periods or in capacity constraint situations.

Smart Appliances – Provide 78 smart appliances to 18 homes: 6 new construction, 6 employee homes and 6 existing customer homes. Appliances will include washers, dryers, refrigerators, ranges, dishwashers, water heaters and microwaves. Customers who receive the appliances must enroll in a time differentiated rate (Time of Use, Time of Use with Critical Peak Price or RTP) and the appliances will be controlled by a Home Area Network or HEM.

Cyber Security Operation System (CSOC) – Install a CSOC in AEP's corporate headquarters at 1 Riverside Plaza, Columbus, OH. The CSOC will build on existing core functionality, data sources, best practices and physical environment. CSOC will add collaborative interaction with internal and external data sources including other utilities, agencies and vendors. The CSO will enable 24x7 cyber situational awareness, threat detection, assessment and prevention, decision support, response and recovery.

Plug-In Electric or Plug-In Hybrid Electric Vehicles (PEVs or PHEVs) – Convert 10 vehicles to be PEVs and/or PHEVs. Deploy the vehicles in a concentrated fashion to study effects on the distribution grid. Vehicles will use smart chargers and usage will be monitored and simulated for individual drivers and potentially as fleet vehicles.

Demand Management and Dispatch Technology – Develop and deploy a state-of-the-art demand response application that includes real-time pricing engine and dispatch algorithm. The price engine will determine a suitable real-time price for a given consumer and the dispatch algorithm will determine the dispatch order for distributed energy resources to meet market or ancillary service requirements.

Simulation and Data Management – Collected data will be used with GridLAB-D™ to understand the observed energy benefits and validate the performance of combinations of distribution circuit configuration, gridSMART technologies and consumer engagements. Study area results will be adapted to simulate the AEP Ohio service area.

2009 Columbus Southern Power Company gridsMART Rider True-Up

CSP - gridsMART**2009 Over/(Under) Recovery**

	2009 Estimated Spending	2009 Actual Spending	2009 Actual Carrying Charge*	2009 Actual Revenue Requirement
O&M	\$ 4,587,804	\$ 781,490		\$ 761,490
Capital - 5 Year Life	\$ 855,000	\$ 428,854	\$ 9,223	\$ 9,223
Capital - 7 Year Life	\$ 26,204,563	\$ 23,051,385	\$ 15,014	\$ 15,014
Capital - 15 Year Life	\$ 446,925			
Capital - 30 Year Life	\$ 2,621,700	\$ 1,610,261	\$ 55,283	\$ 55,283
Capital - 35 Year Life	\$ -	\$ 894,841	\$ 9,845	\$ 9,845
Capital - 40 Year Life	\$ -	\$ 8,858		
Total Capital	\$ 29,928,188	\$ 25,960,180	\$ 89,385	\$ 89,365

Total

2009 Actual Revenue Requirement	\$ 870,855
2009 gridsMART Rider Collections	\$ 8,400,840
2009 Over/(Under) Recovery	\$ 7,529,985

CSP - gridsMART**2010 Incremental Investment**

	2010 Estimated Spending	Adjusted 2010 gridsMART Spending	Carrying Charge Rate	2010 gridsMART Revenue Requirement
O&M	\$ 3,024,750	\$ 8,841,064		\$ 8,841,064
Capital - 5 Year Life	\$ -	\$ 228,148	30.58%	\$ 34,884 (a)
Capital - 7 Year Life	\$ 5,680,350	\$ 8,833,545	25.85%	\$ 1,141,736 (a)
Capital - 15 Year Life	\$ 2,234,625	\$ 2,681,550	17.45%	\$ 233,965 (a)
Capital - 30 Year Life	\$ 3,786,900	\$ 4,788,339	14.27%	\$ 342,361 (a)
Capital - 35 Year Life	\$ -	\$ -	13.83%	\$ -
Capital - 40 Year Life	\$ -	\$ -	13.52%	\$ -
Total Capital	\$ 11,701,875	\$ 16,541,530		\$ 8,584,010

2009 Capital Carrying Costs \$ 8,442,395 (b)

Over/(Under) Recovery (From Above) \$ 7,529,985

Total 2010 Revenue Requirement \$ 7,508,420

Base Distribution Revenues \$ 325,881,558

2010 gridsMART Rider 2,303,42%

Current gridsMART Rider 2,55030%

Change in gridsMART Rider -0.24686%

* The actual 2009 carrying charges were based on the actual 2009 monthly long-term debt rate and actual depreciation expense.

(a) Annual carrying charge rate times adjusted 2010 spending times one-half year

(b) Annual carrying charge rate times 2009 actual spending