Decision No. C17-0556

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF COLORADO

PROCEEDING NO. 16A-0588E

IN THE MATTER OF THE APPLICATION OF PUBLIC SERVICE COMPANY OF COLORADO FOR AN ORDER GRANTING A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY FOR DISTRIBUTION GRID ENHANCEMENTS, INCLUDING ADVANCED METERING AND INTEGRATED VOLT-VAR OPTIMIZATION INFRASTRUCTURE.

DECISION GRANTING JOINT MOTION TO APPROVE UNOPPOSED COMPREHENSIVE SETTLEMENT AGREEMENT; APPROVING SETTLEMENT AGREEMENT WITH CLARIFICATIONS; GRANTING APPLICATION AS MODIFIED BY THE SETTLEMENT AGREEMENT; AND GRANTING A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY

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Colorado PUC E-Filings System

I. BY THE COMMISSION

A. Statement

1. By this Decision, we allow Public Service Company of Colorado (Public Service or Company) to proceed with its proposed improvements to the electric distribution grid. These improvements include the Advanced Grid Intelligence and Security (**AGIS**) initiative, as well as the Advanced Metering Infrastructure (AMI) and the Integrated Volt-VAr Optimization Infrastructure (**IVVO**) which Public Service represents will ultimately improve the reliability of the electric grid and result in savings to customers. While the price tag is high, at least $612 million, the settling parties have persuaded this Commission that the benefits merit this investment. In addition, this Decision puts in place reporting requirements and guard rails that will allow the Commission to monitor progress and results.

2. This Decision grants the Joint Motion to Approve the Unopposed Settlement Agreement (Joint Motion) filed in this proceeding by Public Service on May 8, 2017. The Unopposed Settlement Agreement attached to the Joint Motion as Exhibit A is approved consistent with the clarifications detailed below. Consistent with the discussion below, we grant the application as modified by the Settlement Agreement. Also consistent with the discussion below, we grant a Certificate of Public Convenience and Necessity (**CPCN**) for the implementation of Public Service's proposed AGIS initiative to implement an advanced electric distribution grid.

B. Procedural Background

3. On August 2, 2016, Public Service filed an Application seeking a CPCN for the implementation of three components of its AGIS initiative to implement an advanced electric distribution grid. The Company also filed Direct Testimony in support of the Application.

4. Public Service seeks Commission authorization to install AMI and IVVO programs, and associated components of an advanced communications network (known as the Field Area Network or FAN). The Company states that it filed the Application pursuant to § 40-5-101, C.R.S., and Rules 3002 and 3102 of the Rules Regulating Electric Utilities, 4 *Code of Colorado Regulations* (CCR) 723-3, and Rule 1301 of the Rules of Practice and Procedure, 4 CCR 723-1.

5. Public Service states in its Application that AGIS is a long-term strategic initiative to transform its electrical distribution business; to enhance security, efficiency, and reliability; to safely integrate more distributed resources; and to enable improved customer products and services. AGIS seeks to take advantage of developed and enhanced technology to increase grid reliability, transparency, efficiency, and access. At the time of the filing of the Application, the AMI and IVVO portions of AGIS, combined with their relevant components of the FAN and related Information Technology, were expected to cost approximately $562 million (capital and operations and maintenance, without escalation).

6. In the Application, Public Service proposed to implement AMI and the associated components of the FAN across its full Colorado electric service territory, with deployment occurring between 2018 and 2021. The Company proposed to deploy intelligent field devices to approximately 67 percent of Public Service's customers by implementing IVVO on feeders within the Denver metro area.

7. On September 12, 2016, we set the Application for hearing and established the parties in this Proceeding.[1] The parties to this Proceeding include Public Service, Staff of the

[1] Decision No. C16-0845-I, issued September 12, 2016, Proceeding No. 16A-0588E.

Colorado Public Utilities Commission (Staff), the Colorado Office of Consumer Counsel (OCC), the Colorado Energy Office (CEO), Southwest Energy Efficiency Project (SWEEP), the City of Boulder (Boulder), Mission:data Coalition, Inc. (Mission:data), Energy Freedom Coalition of America (EFCA), Energy Outreach Colorado (EOC), Colorado Energy Consumers (CEC), Western Resource Advocates (WRA), and the Colorado Solar Energy Industries Association (CoSEIA).

8. On October 12, 2016, we adopted the parties' proposed procedural schedule and discovery procedures.[2]

9. On January 25, 2017, the OCC, WRA, Mission:data, SWEEP, EOC, CoSEIA, and Staff filed Answer Testimony.

10. On March 2, 2017, Public Service filed Rebuttal Testimony.

11. On May 8, 2017, Public Service filed the Joint Motion. The Joint Motion states that the Settling Parties include Public Service, Staff, the OCC, CEO, CEC, CoSEIA, EFCA, EOC, Mission:data, SWEEP, and WRA. The Joint Motion further states that Boulder neither supports nor opposes the Settlement and that no party opposes the Joint Motion.

12. The Joint Motion states that the Settlement resolves all issues in this Proceeding. In general, the Settling Parties support the issuance of a CPCN for the AMI, IVVO, and the associated components of the FAN.

13. We conducted a hearing on the Settlement on May 16, 2017. Hearing Exhibits 1 through 33 were offered and admitted into the evidentiary record for this Proceeding.

[2] Decision No. C16-0939-I, issued October 12, 2016, Proceeding No. 16A-0588E.

C. Settlement Agreement

14. The Settling Parties agree that the Commission should find that the Application, as modified by the terms of the Settlement Agreement, is in the public interest.

15. The Settlement Agreement contemplates that full AMI deployment will not begin until calendar year 2020. The Settlement Agreement also proposes that IVVO will be implemented by installing approximately 13,000 advanced meters to function initially as voltage sensing devices. These will be the same types of advanced meters, with the same capabilities, as those the Company will acquire for the AMI implementation.

16. The estimated cost of the AGIS initiative is $612 million (including contingencies). This includes $152.1 million in base costs, plus $41.6 million in contingency for IVVO implementation. It also includes $349.9 million in base costs and $68.8 million in contingency for AMI cost.

17. Although the cost of the AGIS initiative as modified by the Settlement Agreement is greater than the $562 million estimate in the Company's initial Application filing, the Settlement Agreement states that the public interest would be served by containing the overall costs of the projects and by limiting resulting rate impacts on customers. For the purpose of mitigating an initial rate impact, the Settling Parties propose deferred accounting for operations and maintenance expenses (O&Ms) and capital investments beyond the first rate case where those costs could be included in base rates. In accordance with this proposal, two deferred accounting mechanisms would be established for each project (IVVO and AMI): one for deferred capital investment and one for O&M expenditures. In the event the sum of the two capital investment deferrals totals $50 million or more, the Company would begin to assess an interest rate equal to the Company's after-tax weighted average cost of capital. The Settlement

Agreement also includes additional provisions for the subsequent deferral of costs until they are included in base rates in subsequent rate proceedings. The Settling Parties also state that AMI meters will be utilized for more than measurement of a customer's consumption for billing purposes. Therefore, they argue that it is reasonable that some portion of these meter costs not be classified as a specific customer cost for recovery through the fixed monthly Service and Facilities charge.

18. The Settlement Agreement further proposes that Public Service would provide the semi-annual reporting regarding investment and deployment as proposed in its Direct and Rebuttal Testimonies, including but not limited to: total costs per year of the AMI meter installation; final cost per AMI meter, excluding installation and taxes; final cost per AMI meter including installation and taxes; and the total number of AMI meters installed each year.

19. With respect to IVVO implementation, the Settling Parties agree to certain conditional provisions to address the impact of measurable decreased energy consumption attributable to IVVO implementation in the event that: no decoupling mechanism is approved in Proceeding No. 16A-0546E; a decoupling mechanism for less than the entire Residential and Small Commercial Class is approved; or a cap on the decoupling mechanism prevents the mechanism from offsetting the measurable financial impacts attributable to decreased energy consumption resulting from IVVO deployment. The Settlement Agreement sets forth a proposed method for deriving the measurable decreased energy use and a formula for calculating decreased fixed cost contributions from IVVO. The Settling Parties propose that approved amounts calculated pursuant to these methods would be recovered through the Company's Electric Commodity Adjustment.

20. Additionally, the Settling Parties propose that Public Service would select and install meters that incorporate Home Area Network (HAN), which is a software defined radio in the AMI meter, as part of the CPCN. In selecting and installing HAN hardware, the Company would utilize the best commercially available technology that provides a platform that may be updated remotely without hardware replacement. Public Service would present a plan to activate the HAN in a separate application to be filed no later than March 2018, with a goal of implementing the HAN concurrent with the full AMI roll-out beginning in 2020.

21. Finally, the Settlement Agreement proposes that the Company's customer web portal enable all customers to access their energy usage data and to provide that data to third parties using Green Button Connect My Data (CMD). The Company would plan on implementing Green Button CMD unless the Company elects to explain to the Commission why some other national standard should be adopted. Data would be provided to third parties in accordance with Rule 3027, 4 CCR 723-3, the Commission's electric data access and privacy rules.

22. The Settlement Agreement is attached to this Decision as Attachment A.

D. Support for the Settlement Agreement

23. During the Hearing on the Settlement Agreement held on May 16, 2017, Public Service witness Alice Jackson stated that there are four main reasons why the Settlement is in the public interest. First, the Company sees the grid as an enabler long-term with the ability to provide services to the end retail customer, whether it is a residential customer or a commercial customer. It will allow the Company to integrate into the system the new technologies that are developing, such as solar, storage, and electric vehicles, and will provide the transparency, reliability, and enablement that

customers are seeking. This also results in long-term cost control for the customer and on the operational side as well.[3]

24. Second, upgrading the distribution system is a key component for Public Service from an operational perspective. Ms. Jackson stated that the Company today has limited monitoring that does not give the Company visibility in real time. By having the enhanced distribution network and moving through the advanced grid implementation that was presented to the Commission in the CPCN application, transparency on the distribution system will increase significantly, helping Public Service enhance reliability and safety for customers.[4]

25. Third, the delays contemplated by the Settlement help manage the deployment and resulting customer cost impact. The deferred accounting mechanism and the ability for such mechanisms to be utilized further in a future rate case will allow the Company to manage the impacts on customers to help ensure that the AGIS investment is affordable. There are also customer protections for low-income customers, as well as "opt-out" opportunities for those customers that are not interested in having an AMI meter deployed to their home. Ms. Jackson also stated that the advanced grid as set forth in the Settlement Agreement will enhance security and reliability while also safely integrating more distributed energy resources.[5]

26. Finally, Ms. Jackson stated that the grid is the enabler for customers to be able to expand and enhance their interaction with the Company and be able to control their electricity consumption. Long-term benefits from the implementation should result in cost benefits for customers as they will be better able to integrate technology choices as they seek to control their

[3] Reporter's Transcript, pp. 27-28, May 16, 2017 Proceeding No. 16A-0588E.
[4] Reporter's Transcript, pp. 29-31, May 16, 2017 Proceeding No. 16A-0588E.
[5] Reporter's Transcript, p. 31, May 16, 2017 Proceeding No. 16A-0588E.

energy consumption. Control of consumption will ultimately mitigate the amount of additional incremental capacity that will need to be built.[6]

27. During the Hearing on the Settlement Agreement, Staff witness Paul Caldara stated that the current automatic meter reading (AMR) meters are beginning to reach the end of their useful lives. Mr. Caldara adds that while there is perhaps some additional time on some of those meters, the number of meters in the field is large enough that the Company cannot come up with a discrete timeframe for replacement. The combination of the useful life of the AMR meters, along with the demands being put on the distribution system, indicated to Staff that the timing is now to make the investment in AMI, as presented in the application for the CPCN set forth in the Settlement Agreement.[7]

28. OCC witness Cindy Schonhaut also testified at the Hearing on the Settlement that the OCC believes that since the existing fleet of AMR meters is reaching the end of their useful lives, it is prudent to go forward with replacing the existing AMR meters with more advanced meter technology such as AMI. Ms. Schonhaut agreed that the distribution network could use improvement, and when that is considered along with the Settlement Agreement's cost protections, consumer protections, and the extended timeframe, it is clear that the Settlement Agreement should be approved.[8]

29. The CEO witness Chris Worley, representing an organization advocating effective production and efficient consumption of the state's energy resources, testified at the Hearing on the Settlement Agreement that the proposed AGIS investments will further these objectives and is just, reasonable, and in the public interest. Dr. Worley stated that both the IVVO and AMI investments will increase the efficient use of electricity and more effectively utilize the electric grid.[9]

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[6] Reporter's Transcript, p. 32, May 16, 2017 Proceeding No. 16A-0588E.
[7] Reporter's Transcript, pp. 198-199, May 16, 2017 Proceeding No. 16A-0588E.
[8] Reporter's Transcript, pp. 225-226, May 16, 2017 Proceeding No. 16A-0588E.
[9] Reporter's Transcript, p. 241, May 16, 2017 Proceeding No. 16A-0588E.

30. The EOC witness Sanders Arnold, representing low-income customers, testified at the Hearing on the Settlement Agreement that with the implementation of AMI meters, there will be some form of time-of-use rates going forward. Mr. Arnold believes that those rates could ultimately benefit low-income customers. Mr. Sanders also testified in support of the consumer protection provisions of the Settlement Agreement, particularly the Company's commitment to continuing the current customer notification process concerning shut-offs, and continuation of the "hold harmless" provision for low-income customers enrolled in the Time-of-Use rate pilots. In addition, the Settlement Agreement acknowledged that new AMI meters will not be strictly used for calculating consumption. They will also be used to manage the distribution network. Thus, based on the Settlement, some of those charges are paid for by the grid through volumetric charges and not the fixed charges which disproportionality impact low-income customers.[10]

E. Findings and Conclusions

31. We are persuaded by the testimony offered at the hearing that the proposed AGIS investments are in the public interest. Public Service has shown that these investments are necessary to continue to provide safe and reliable electric service to customers into the future. The AGIS investments support fundamental utility functions, and the proposed implementation of the project is reasonable.

32. As was discussed during the hearing, there is no "zero cost option" for maintaining and improving the distribution grid. The AGIS investments offer benefits to the system beyond the simple replacement of aging infrastructure. The terms of the Settlement Agreement adequately address potential rate impacts from these necessary investments using delayed and extended implementation and deferred accounting between base rate proceedings.

[10] Reporter's Transcript, pp. 262-265, May 16, 2017, Proceeding No. 16A-0588E.

33. Because a large percentage of the Company's existing meters are reaching the end of their useful lives, we conclude that it is appropriate to replace this expiring infrastructure with the next technology, *i.e.,* the AMI meters, including the complementary networks and Advanced Distribution Management System upgrades.

34. We also agree with the Settling Parties that, despite the targeted location of the IVVO investments within a portion of Public Service's system, the proposed investment will benefit the entire system from reduced load and energy savings. We also note that the Commission previously concluded that similar technologies meet the legal definition of demand-side management.[11] Accordingly, we conclude that Public Service's investment in IVVO is an acceptable use of ratepayer funds consistent with § 40-2-123(1)(a), C.R.S.

35. We clarify that paragraph II.D.4. of the Settlement Agreement, "Transferring IVVO Costs to Rate Base,"[12] imposes on Public Service the burden of going forward and also requires Public Service, when proposing to include IVVO and associated infrastructure costs in base rates, to present robust testimony with appropriate accompanying exhibits to justify any expenditures: (1) in the base amounts set forth in Table 1of the Settlement Agreement; and (2) any amounts in excess of the base amount. Although the Company will enter into that proceeding with a general rebuttable presumption of prudence regarding its expenditures, the Company has the burden of going forward. Each one of the parties is free to challenge the prudence of the expenditures in order to overcome the rebuttable presumption of prudence.

[11] Decision No. C14-0731, issued July 1, 2014, Proceeding No 13A-0686EG.
[12] Settlement Agreement, p. 14.

36. Similarly, we clarify that paragraph III.E.3. of the Settlement Agreement, "Transferring AMI Costs Into Rate Base,"[13] imposes on the Company the burden of going forward when proposing to include the AMI and associated infrastructure costs in base rates, to present robust testimony with appropriate accompanying exhibits to justify any expenditures: (1) in the base amounts set forth in Table 3 of the Settlement Agreement; and (2) any amounts in excess of the base amount. Although the Company will enter into that proceeding with a general rebuttal presumption of prudence regarding its expenditures, the Company has the burden of going forward and parties are free to challenge the prudence of the expenditures to overcome the rebuttable presumption of prudence.

37. The reporting requirements enhanced by the Settlement Agreement, the recognition that additional metrics may be warranted and the right of stakeholders to request additional metrics via information requests or through litigated proceedings are essential to our decision to approve the AGIS investments.[14] The Commission through its Staff will closely analyze and monitor the semi-annual reporting regarding AMI meter installation, costs, results, and customer education programs to ensure that the project is being properly implemented and that the expected benefits will materialize for ratepayers.

38. We also agree with the Settling Parties that the use of HAN software and Green Button CMB will enhance the customer experience and provide benefits to both the customer

[13] Settlement Agreement, p. 17.
[14] Settlement Agreement, p. 6, section 2(a) and (b).

and the distribution system, as long as cybersecurity standards are met and the education process is comprehensive and easily accessed by interested customers.

39. In sum, we agree with the Settling Parties that the record in this Proceeding supports a finding that approval of the Settlement Agreement is in the public interest. The AGIS investments provide greater customer choice, convenience, and control over energy costs and usage than what exists today. We therefore grant the Application as modified by the Settlement Agreement and grant a CPCN for the AGIS investments.

II. ORDER

A. The Commission Orders That:

1. The Joint Motion to Approve Unopposed Settlement Agreement filed by Public Service Company of Colorado (Public Service) on May 8, 2017, is granted.

2. The Unopposed Settlement Agreement, Attachment A to this Decision, is approved, consistent with the discussion above.

3. The Application for an Order Granting a Certificate of Public Convenience and Necessity for Distribution Grid Enhancements, including Advanced Metering and Integrated Volt-VAr Optimization Infrastructure, filed by Public Service on August 2, 2016, is granted as modified by the Unopposed Settlement Agreement, consistent with the discussion above.

4. A Certificate of Public Convenience and Necessity is granted for the proposed implementation of Advanced Metering Infrastructure, Integrated Volt-VAr Optimization Infrastructure, and the associated components of an advanced communications network, including the Field Area Network and Home Area Network, consistent with the terms of the Unopposed Settlement Agreement.

5. The 20-day period provided for in § 40-6-114(1), C.R.S., in which to file applications for rehearing, reargument, or reconsideration begins on the first day following the effective date of this Decision.

6. This Decision is effective upon its Mailed Date.

B. ADOPTED IN COMMISSIONERS' DELIBERATIONS MEETING June 21, 2017.

(S E A L)

THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF COLORADO

JEFFREY P. ACKERMANN

WENDY M. MOSER

Commissioners

ATTEST: A TRUE COPY

Doug Dean,
Director

COMMISSIONER FRANCES A. KONCILJA
SPECIALLY CONCURRING.

III. COMMISSIONER FRANCES A. KONCILJA SPECIALLY CONCURRING

1. I continue to have concerns regarding the numerous categories of costs that are included in the Electric Commodity Adjustment (**ECA)** and this Settlement Agreement adds yet another item-the impact of decreased energy consumption attributable to Integrated Volt-VAr Optimization Infrastructure (IVVO) implementation. [15]

[15] *See* pp. 9 and 10 of Settlement Agreement.

2. Section IID of the Settlement Agreement provides that if the Commission does not adopt the position of Public Service Company of Colorado (Company) *in toto* *in the* separate "Decoupling Application"—Proceeding No. 16A-0546E, then the Company will seek "cost" recovery for decreased energy consumption as the result of the use of the IVVO.

3. As explained by Company witness, Alice Jackson, there are currently the following costs or avoided costs that are included in the ECA: the costs of natural gas and coal used to generate the electricity, the average incremental cost of renewable energy that is included in power purchase agreements, the costs of hedging programs—programs that are supposed to save ratepayers money but have in the last number of years cost more than acquiring on the short term market. (*See* pages 144 through 150 of the hearing transcript.)

4. Because the Commission in the decoupling proceeding did not adopt the position of the Company *in toto*, there will likely be an additional category added into the ECA—the "cost" to the Company of not selling as much electricity to ratepayers because the IVVO implementation will reduce consumption. The term "Electric Commodity Adjustment" implies that only costs of fuel are included. The ECA, however, also includes calculations of what the utility is not receiving from customers because of reduced consumption. One could argue that including a "cost" of reduced consumption in an ECA is an oxymoron and misleading to ratepayers. Perhaps, the Commission and the utilities should consider a separate rider for these types of items.

5. The ECA is a rider which customers see on their monthly bills—meaning it is a regular "pass through" (for some categories it also includes a return on investment). While no party raised this issue, I believe that the Commission should in the near future, clarify, for customers what is in the ECA, so that customers can understand the components of their bills.

THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF COLORADO

FRANCES A. KONCILJA

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Commissioner