

Decision No. C23-0265-I

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF COLORADO

PROCEEDING NO. 22A-0382ST

IN THE MATTER OF THE APPLICATION OF PUBLIC SERVICE COMPANY OF COLORADO FOR APPROVAL OF ITS STEAM REGULATORY AND RESOURCE PLAN.

**INTERIM COMMISSION DECISION APPROVING
ADDITIONAL TECHNOLOGY STUDIES, REQUIRING
SUPPLEMENTAL DIRECT TESTIMONY,
AND HOLDING PROCEEDING IN ABEYANCE.**

Mailed Date: April 25, 2023

Adopted Date: April 19, 2023

I. BY THE COMMISSION

A. Statement

1. On September 1, 2022, Public Service Company of Colorado (Public Service or Company) filed an Application for approval of its Regulatory and Resource Plan concerning the investments in and operations of its district steam system through 2030.

2. On March 29, 2023, in accordance with previous Commission decisions, Public Service filed its second “Additional Technologies Report” (Second Report). In the Second Report, the Company asks the Commission to approve a course of action that entails the completion of further studies addressing certain additional technologies and the holding of this Proceeding in abeyance pending the submission of the completed studies.

3. Through this Decision, the Commission approves the scopes, budgets and schedules for the two proposed studies that will investigate the technical feasibility and financial

viability of 1) distributed air- and ground-source heat pumps and 2) conversion of the district steam system into a system that would circulate ambient temperature fluid that would serve as both a source and sink for thermal energy (via distributed heat pumps) to existing steam customers and potentially new customers. We further hold this Proceeding in abeyance pending the completion of the studies and the filing of Supplemental Direct Testimony, consistent with the discussion below.

B. Discussion

4. By Decision No. C22-0633-I, the Commission required Public Service to work with the intervening parties¹ to attempt to achieve a consensus approach to developing information that will enable the Commission to determine whether air-source heat pumps, district geo-exchange, or other geothermal technologies are viable alternatives for the steam system's customers. The Commission directed the Company either to present a proposal for the study of the "Additional Technologies" in the context of its district steam system or to explain why it believes the Additional Technologies are not viable candidates for its customers at this time.

5. On December 5, 2022, Public Service filed its first "Additional Technologies Report," in which it described constructive discussions with the parties on a variety of relevant topics, such as the strategy and scope for additional studies, potential third-party funding sources for additional studies, criteria to consider whether alternative technologies are viable candidates for further study, and conceptual long-term visions for the steam system. The report stated that the parties believed a flexible process was necessary to ensure that issues could be thoughtfully vetted and addressed in a consensus-based fashion to attempt to avoid unnecessary disagreements. The

¹ The intervening parties include: Staff of the Public Utilities Commission, the Colorado Energy Office (CEO), Colorado Energy Consumers, and the City and County of Denver.

first Additional Technologies Report also stated the Company's intent to file a second report within 90 days, providing information on finalized scopes of work, cost, and timelines for formal studies of the viability of the additional technologies.

6. By Decision C22-0841-I, the Commission approved the additional 90-day period the Company requested to finalize the scopes, budgets, and timelines for the studies. The Commission also stated its intent to determine whether to close this proceeding or to hold it in abeyance following the Company's submission of the final project scopes, budgets and timelines.

7. On March 29, 2023, Public Service timely filed the Second Report stating that:²

The Company and parties to this proceeding have continued to engage in discussions on how to address the potential for distributed heat pumps and ambient temperature district system technologies to reduce the carbon dioxide emissions associated with heating and cooling buildings, which could advance both the State's and the City of Denver's decarbonization goals. They have also considered the existence of state and federal funding sources targeted explicitly to the evaluation, design, and construction of geo-exchange systems. In addition, the Company and parties have worked to identify contractors to conduct additional studies, refined scopes of work, and developed timelines for the studies.

8. The Second Report notes that the Company has shared the scopes of work for the studies with the parties and that the parties have reviewed them and support the Company moving forward. The Company proposes two projects with separate contractors. One project will investigate the feasibility and economic attractiveness of customer conversions to air- or ground-source heat pumps. This project has an estimated duration of 18 weeks and a budget of \$168,945. The second project, which would evaluate the feasibility and economics of a district ambient temperature fluid circulation system has an estimated duration of 15 weeks and budget of \$166,720.

² March 29 Additional Technologies Report, p. 2.

9. In the Second Report, Public Service notes that the parties considered whether it would be appropriate to delay the district geo-exchange study until funding from the CEO's Geothermal Energy Grant Program becomes available. A solicitation for funding proposals from this program will open in mid-2023. The Company states that given the timing of the Company's need to commence the studies and the uncertainty of the Company's ability to receive any grant funding, as well as the delays necessary to the studies to await grant funding, it recommends moving forward with the studies without grant funding. Public Service states that the parties are in agreement on this approach.

10. The Second Report stresses the importance of not delaying the start of the studies. Public Service claims that the public interest is best served by completing the studies and considering their results as soon as is reasonably possible. The Company contends that the studies will serve as foundational information to advise the future of the district steam system and may also provide valuable information to the Commission and stakeholders in other Commission proceedings.

11. Regarding whether to close this Proceeding or to hold it in abeyance pending completion of the two studies, Public Service states that it and the intervening parties recommend holding it in abeyance so that the Company can file reports on the studies on a four-month period. Once the studies are complete, the Company states that it will consider whether or not to file additional testimony in this Proceeding. Public Service states that the Company and the intervening parties envision a one-year maximum timeline associated with completing the studies, completing any necessary Company testimony and the filing of updated status reports.

C. Findings and Conclusions

12. The Commission finds good cause to approve Public Service moving forward with the two studies detailed in the Second Report and its attachments. We agree with the parties that the two studies will likely provide substantial, useful information on the technical and financial viability of the additional technology options. Although the ambient temperature district system study would seem to be a likely candidate for funding under CEO's Geothermal Energy Grant Program, we agree with the Company and the intervening parties that obtaining that funding would inject unacceptable further delay into the proceeding, as the application process will not open for several months, additional months would likely be needed for CEO to award grants, and there is no guarantee of success.

13. This Proceeding will be held in abeyance pending the completion of the studies and the Company's submission of Supplemental Direct Testimony within the timeframe contemplated in the Second Report. The Supplemental Direct Testimony shall discuss the findings of the studies and their significance in the context of 1) the existing steam system and 2) the previously completed studies of the technical and financial viability of current steam customers migrating to on-site gas-fired and electric boilers. In particular, the Supplemental Direct Testimony shall provide comparisons of the lifecycle costs (from both the customer and system perspectives) and payback periods for each of the five technology options (on-site electric boilers, on-site gas boilers, on-site air-source heat pumps, on-site ground-source heat pumps, and an ambient temperature district system with associated on-site heat pumps). The required testimony on potential heat pump adoption should incorporate the impacts of both federal and state subsidies and tax credits for each technology as appropriate.

14. The Supplemental Direct Testimony shall also provide an update to the Company's strategic vision for the future of the steam system in light of the findings from the Additional Technologies studies. To the degree that the Company's strategic vision for the system anticipates conversion to an ambient temperature district system, the Supplemental Direct Testimony shall include discussion of the potential for strategic growth of the system.

II. ORDER

A. It Is Ordered That:

1. Public Service Company of Colorado (Public Service) shall proceed with the course of action proposed in its Additional Technologies Report filed on March 29, 2023, including the completion of the two additional technology studies, consistent with the discussion above.

2. Public Service shall file the additional technologies studies in this Proceeding with Supplemental Direct Testimony, consistent with the discussion above.

3. This Proceeding shall be held in abeyance pending the filing of the additional technology studies and the submission of the Supplemental Direct Testimony.

4. This Decision is effective on its Mailed Date.

**B. ADOPTED IN COMMISSIONERS' WEEKLY MEETING
April 19, 2023**

(S E A L)



ATTEST: A TRUE COPY

A handwritten signature in cursive script, appearing to read "G. Harris Adams".

G. Harris Adams,
Interim Director

THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF COLORADO

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MEGAN M. GILMAN

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Commissioners