

**BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF COLORADO**

PROCEEDING NO. 24M-0261G

---

IN THE MATTER OF THE COMMISSION'S EXAMINATION OF GAS SYSTEM FORECASTING, MAPPING, AND COST BENEFIT ANALYSIS IN ACCORDANCE WITH DECISION NO. C24-0092 ADDRESSING THE INAUGURAL GAS INFRASTRUCTURE PLAN OF PUBLIC SERVICE COMPANY OF COLORADO.

---

**INTERIM DECISION OF HEARING COMMISSIONER  
MEGAN M. GILMAN  
SCHEDULING WORKSHOPS ON JULY 18 AND  
JULY 29, 2024, AND ISSUING ANTICIPATED  
PROCEEDING WORK PLAN**

---

---

Issued Date: July 3, 2024

**TABLE OF CONTENTS**

I. BY THE COMMISSION	2
A. Statement	2
B. Background	3
1. Gas Forecasting	3
2. System Mapping	4
3. Cost Benefit Analysis (CBA)	5
C. Discussion and Proposed Work Plan	6
1. Gas Load Forecasting	7
2. System Mapping	7
3. Cost Benefit Analysis (CBA)	8
a. Anticipated Proceeding Work Plan	9
D. Findings and Conclusions	12
II. ORDER	13
A. It Is Ordered That:	13

---

**I. BY THE COMMISSION****A. Statement**

1. By Decision No.C24-0376, issued June 4, 2024, the Colorado Public Utilities Commission (“Commission”) initiated this miscellaneous proceeding to examine gas system load forecasting, system mapping, and cost benefit analysis (“CBA”) in accordance with Decision No. C24-0092 (“the Plan Decision”) addressing the inaugural Gas Infrastructure Plan (“GIP”) of Public Service Company of Colorado (“the Company” or “Public Service”). The Decision also referred me, Commissioner Megan Gilman, as Hearing Commissioner for ongoing proceeding management.

2. By this Decision, the Hearing Commissioner sets forth a proceeding work plan including proceeding tasks, objectives, and a proposed workflow of activities. The purpose of this work plan is to increase transparency to individuals and organizations interested in participating in some or all of this Proceeding and to provide guidance to the public, stakeholders, and the Commission regarding how the docket will progress in a timely manner to enable the outcomes to be useful in preparation for the Company’s next GIP.

3. Also by this Decision, the Hearing Commissioner schedules a workshop on July 18, 2024 beginning at 1 p.m. and concluding no later than 5 p.m. This workshop will focus on the potential magnitude and influence of the criteria listed in Rule 4553(b) of the Commission’s Rules Regulating Gas Utilities, 4 *Code of Colorado Regulations* (“CCR”) 723-1, on gas load forecasting. Invited stakeholders expected to participate in a discussion include: the Colorado Energy Office (“CEO”), several municipalities, and Public Service Company representatives.

4. Also by this Decision, the Hearing Commissioner schedules a workshop on July 29, 2024 beginning at 1 p.m. and concluding no later than 5 p.m. This workshop will focus on updates to the Company's plans regarding system mapping and cost benefit analysis of non-pipeline alternatives, including desired areas of improvement based upon the Company's first GIP, as identified by several stakeholders to the initial GIP. Invited stakeholders expected to participate in a discussion include: CEO, additional stakeholders who submitted comments in the Company's initial GIP, and Public Service Company representatives.

## **B. Background**

### **1. Gas Forecasting**

5. Rule 4553(b) of the Commission's Rules Regulating Gas Utilities, 4 CCR 723-1 sets forth the forecast requirement for a gas utility's GIP. The utility is required to present reference, low, and high forecasts of design peak demand, customer count, sales and capacity requirements, gas content including expected mixtures by volume of hydrogen and recovered methane, and system-wide greenhouse gas emissions, consistent with the utility's approved Clean Heat Plan ("CHP"). The utility must also indicate how its forecast incorporates, to the extent practicable, relevant external factors including, but not limited to: the effect of current or enacted state and local building codes; changes in the utility's line extension policies, and the associated impact on gas customer growth; building electrification programs or incentives offered by the local electric utility or local or federal entities that overlap with the utility's gas service territory; and the price elasticity of demand.

6. In the Plan Decision, the Commission acknowledged the reasons put forward by Public Service regarding why the gas system forecast submitted with its initial GIP differed from

the forecast required by the Gas Planning Rules. The Commission further addressed the timing of the Company's next GIP filing in relation to the forecasts presented in support of Public Service's first CHP under review in Proceeding No. 23A-0392EG. The Commission reiterated that it expects to receive a forecast that is fully compliant with the Gas Planning Rules no later than the next GIP. The Commission also required Public Service to include in its next GIP application a forecast that is fully compliant with any guidance provided in Proceeding No. 23A-0392EG regarding the Company's CHP.<sup>1</sup>

7. The Plan Decision concludes that a Commission-led miscellaneous proceeding is necessary to ensure significant progress in the Company's system planning forecasting. The Commission stated its intention to monitor the discussions, proposals, and progress (or lack thereof) related to the Company's forecasting to ensure that Company and stakeholder involvement is tailored to achieve compliance by the filing of the Company's next GIP. The Plan Decision also states that one purpose of this follow-on Proceeding will be to collect information regarding the Company's forecasting methodology and to discuss the parameters, logic, and other relevant facets of a gas system planning tool relevant to Public Service's service territory and customer base.

## **2. System Mapping**

8. The Plan Decision also concluded that guidance on Public Service's system mapping, as required by Rule 4553(a)(V), is necessary prior to the preparation of the Company's next GIP. The Commission agreed with Public Service's proposal for collaboration with interested stakeholders to ensure that expectations align with the practical limitations of Company's system and mapping abilities, as well as with security and safety requirements.

---

<sup>1</sup> See Decision No. C24-0092, in Proceeding No. 23M-0234G, at ¶ 24.

The Commission also anticipated that improved mapping would evolve to be interactive and contain the multiple different data sets that come together to show expected system expenditures and their locations. For example, in addition to the pipe age and material, interactive system maps would identify the location of capacity constraints, customer-owned yard lines, failed meter lots and other upcoming expenditures such that a user can identify areas of the system that require significant capital investments that may be pancaking in certain locations or to serve small groups of customers. The Commission further stated that as mapping abilities evolve, they could be critical to identifying opportunities for non-pipeline alternatives (“NPAs”). The Commission stated that such maps could play a central role in identifying areas of the system in need of significant investment, which is a more strategic way to evaluate cost effective alternatives.<sup>2</sup>

### **3. Cost Benefit Analysis (CBA)**

9. In its inaugural GIP proceeding, pursuant to Rule 4553(c), Public Service presented a CBA for the consideration of alternatives to gas system infrastructure investments. The Plan Decision concludes that Public Service’s first CBA methodology was “a good first step as experience with alternatives analysis grows.” However, the Commission agreed that certain aspects of the CBA should be further developed and refined to be more accurate and useful. To that end, the Commission encouraged Public Service to move forward with stakeholders on the development of a CBA Handbook and directed that the contemplated CBA Handbook be developed through this Proceeding.<sup>3</sup>

---

<sup>2</sup> See Decision No. C24-0092, in Proceeding No. 23M-0234G, at ¶ 24.

<sup>3</sup> See Decision No. C24-0092, in Proceeding No. 23M-0234G, at ¶ 111.

10. The Plan Decision identifies several topics to be addressed in the development of the CBA. For example, the Commission stated that it appears to be appropriate to compare the costs and benefits directly between GIP projects and non-pipeline alternatives (“NPA”), rather than comparison to a “no-action scenario.” The Commission agreed that long-run marginal methane emission rates associated with natural gas leakage should be a part of the CBA and that a CBA should include infrastructure’s negative salvage value with a focus on the actual cost of the infrastructure project expected to be paid by ratepayers. The Commission stated that consideration of incentives from the Inflation Reduction Act and state tax credits should also be accounted for in the CBA. Likewise, regarding electric system infrastructure needs resulting from an NPA, the Commission found that more robust local and system-wide electricity forecasting was required using critical inputs such as the peak loads due to heat pumps or other electrification initiatives. The Commission also anticipated that the CBA would include the evaluation of ways to better involve disproportionately impacted (“DI”) communities, such as analysis of actual costs and benefits to the DI community associated with the NPA analysis or an adder for benefits intended for the community and community members.<sup>4</sup>

### **C. Discussion and Proposed Work Plan**

11. According to the directives set in the Plan Decision, this proceeding will explore three tasks: (1) Gas Load Forecasting; (2) Gas System Mapping; and (3) Cost-Benefit Analysis related to Non-Pipeline Alternatives.

12. Each task will have a discrete set of objectives and tasks and will present opportunities for improvements to gas infrastructure planning and for stakeholder participation. The purpose of this Proceeding is to identify, develop, and express the Commission’s

---

<sup>4</sup> See Decision No. C24-0092, in Proceeding No. 23M-0234G, at ¶¶ 111-116.

expectations regarding the content of these substantive areas, which the Commission identified as needing further development in the Public Service's most recent GIP, in advance of the Company's next GIP filing. The Commission intends this Proceeding to provide operational guidance for Public Service, utilizing a transparent and inclusive process including stakeholder feedback, as it prepares to file its next GIP.

### **1. Gas Load Forecasting**

13. The Commission anticipates this Proceeding will ensure significant progress in the evolution of the Company's gas system load forecasting prior to the filing of the Company's next GIP. It will accomplish this by serving as a venue for discussions, proposals, and progress related to the Company's forecasting. Pursuant to this goal, the objectives of the gas forecasting task in this Proceeding are as follows:

- Explore the magnitude and local aspects of requirements identified in Rule 4553(b);
- Discuss new or alternative load (throughput and demand) forecasting approaches with experts, including how the Company can implement these approaches; and
- Come to common understanding of ways the Company can move to compliance with Rule 4553(b) and timeline and identify if any additional guidance is necessary.

### **2. System Mapping**

14. The Commission has also identified a need to guide and facilitate improvements to the Company's gas system mapping prior to the preparation of the Company's next GIP. Pursuant to this goal, the objectives of the system mapping task in this Proceeding are as follows:

- Comprehend the Company's current system mapping capabilities relative to statutory and regulatory requirements.
- Clearly identify guardrails for public information based on safety and security concerns.
- Identify and prioritize the uses of system mapping and information that is necessary and who will likely need to access it.

- Identify information to be shown on mapping, scale and method for providing mapping, as well as timeline.

15. When focusing on potential mapping needs, it seems reasonable to include consideration of ideas put forth by stakeholders in the initial GIP proceeding to ensure any mapping could be used as an effective tool to identify existing and upcoming system needs and their relationship to one another. Along those lines, I encourage full consideration of CEO's proposal to include census tract level mapping and the potential for hydraulic models and other information, because, as discussed in the Plan Decision, this would aid in the identification of areas of the system in which NPAs should be further evaluated to maintain system affordability.<sup>5</sup> I also seek collaboration on the development of a mapping tool that Public Service and others can use to potentially develop new scenarios or alternatives. Mapping efforts should also work towards showing the location and prevalence of items requiring investment including but not limited to customer-owned yard lines, failed meter lots, inaccessible valves and locations that face multiple safety or capacity related issues. I further encourage participants in this Proceeding to address both short-term and long-term uses of system maps.

### **3. Cost Benefit Analysis (CBA)**

16. Finally, the Commission has identified a need to develop and refine certain aspects of the CBA utilized for NPA analyses. Pursuant to this goal, the objectives of the CBA-related efforts in this Proceeding are as follows:

- Develop a consensus approach, but if not possible, recommendations, on a cost benefit framework and format.
- Clearly identify the costs and benefits that are expected in an NPA CBA, including any information on appropriate assumptions or data sources.
- Identify appropriate data sources and inputs, where possible, to narrow the field of items to be litigated in future GIP proceedings.

---

<sup>5</sup> See Decision No. C24-0092, in Proceeding No. 23M-0234G, at ¶ 148.

- Identify a pathway to avoid the entirety of the CBA from being considered confidential in upcoming GIPs to allow for maximum transparency and involvement from parties and the general public.

**a. Anticipated Proceeding Work Plan**

17. An initial work plan has been developed to aid in transparency and the timely completion of the work being undertaken in this Proceeding. Following the first two workshops, which have been scheduled by this Decision, the target dates and approaches are approximate and subject to change as the Proceeding progresses if the Hearing Commissioner determines that a different approach is more appropriate.

18. The Commission plans to achieve the objectives in the three areas above through the following anticipated workflow:

<b>Activity</b>	<b>Target Date</b>	<b>Description</b>
Workshop: Impacts of Rule 4553(b) on Gas System Planning	July 18, 2024 1p.m. to 5 p.m. Virtually <i>(Scheduled by this Decision)</i>	<b>Forecasting</b>  Discuss the magnitude and influence of the criteria listed in Rule 4553(b) and appropriate sources of data and inputs. This will include conversations with stakeholders, including municipalities, the CEO, and the Company, about building codes, incentives, state policies, and customer economics impacting forecasting.
Workshop: Baselining and Stakeholder Improvements to System Mapping and Cost Benefit Analysis	July 29, 2024 1 p.m. to 5 p.m. Virtually <i>(Scheduled by this Decision)</i>	<b>Mapping</b>  Review of current mapping capabilities and data, as well as any planned improvements in advance of the next GIP to mapping features and availability, including the influence and relationship of mapping required from Proceeding No. 22R-0491GPS in what the Company intends to file in the next GIP. Input from stakeholders from the initial GIP on requested improvements to mapping data and presentation, the usefulness of new features and a discussion on data security and safety considerations.  <b>CBA</b>  Review of current CBA approach and a description of any planned improvements in

		<p>advance of the next GIP. Input from stakeholders from the initial GIP on requested improvements or adjustments to which costs and benefits are included, appropriate data sources for the values used and the calculation and presentation of the information.</p>
<p>Workshop: Outside Experts Providing Feedback and Examples in all Three Areas of Work</p>	<p>Mid-August 2024 <i>(To be scheduled by separate Decision)</i></p>	<p>Invite gas-specific forecasting experts to a) share methodologies and learnings on improved gas system forecasting; b) provide case studies detailing the actions, efforts, and results in other areas focused primarily on forecasting for both gas throughput and gas peak capacity needs; and c) identifying best practices for information sharing to ensure the utilities are working with the best available data.</p> <p>Invite experts on data security to provide impartial information on the benefits, risks and mitigation methods to maximize transparency and planning usefulness, while minimizing risks. Invite experts at gas system mapping to identify appropriate presentations of data.</p> <p>Invite experts on cost benefit analysis approaches, especially as it relates to non-pipeline alternatives to identify areas of consideration and appropriate data sources, as well as to provide available case studies from other jurisdictions.</p>
<p>Synthesis of Load forecasting, system mapping, and CBA framework workshops and additional information request</p>	<p>Late August, 2024 <i>(To be addressed by separate Decision)</i></p>	<p>Upon completion of first round of workshops, request Public Service provide a proposal for each of the following:</p> <p><u>Load Forecasting (Company responses anticipated in late September 2024)</u></p> <p>Proposed coordination, methods, calculations, and data sources for improved load forecasting for both throughput and capacity. This should include a description of the localized granularity of forecasting and how this information will be presented and correlated to specific segments serving different areas of the service territory. This may include characterization of how the Company will account for fluctuations in building code or policy outcomes and should capture outcomes from previous workshops, including</p>

		<p>any areas in which the Company is able to accommodate stakeholder feedback.</p> <p><u>System Mapping (Company responses anticipated in late September 2024)</u></p> <p>Proposed data, scale, confidentiality, access methods and other accommodations for reasonable security protections and uses across proceedings. Ideally, this will include multiple examples of the presentation of data for various audiences, if access to certain data is proposed to be restricted. This should include how mapping could be used in the context of the GIP, including to aid in identifying the most cost effective NPA opportunities.</p> <p><u>CBA (Company responses anticipated in mid-October 2024)</u></p> <p>Proposed CBA Handbook, including a full listing of costs and benefits to be included, examples of sources of data that likely will or may be used to assess the value of each (including over time), method and style of presentation, mathematical method of the calculation and a proposal for how information can be kept in the public realm to allow for maximum use and analysis by stakeholders and communities. Response should include executable version of any calculation methodology being put forth and citation of data sources for input data.</p>
<p>Opportunity for Public &amp; Stakeholder Input</p>	<p>Late October 2024</p>	<p>Feedback from the public and stakeholders on the Company’s proposals related to load forecasting and system mapping and suggestions on necessary improvements.</p>
<p>Opportunity Public &amp; Stakeholder Input</p>	<p>Mid November 2024</p>	<p>Feedback from the public and stakeholders on the Company’s proposal related to a CBA handbook.</p>
<p>Workshop: Finalizing Improvements to Load Forecasting and System Mapping</p>	<p>November 2024</p>	<p>Potential workshop to discuss Company’s proposal and stakeholder feedback to consider if consensus exists on the path forward for all or part of load forecasting and system mapping scope and to ensure any existing areas of disagreement are understood.</p>
<p>Workshop: Finalizing</p>	<p>December 2024</p>	<p>Potential workshop to discuss Company’s proposal and stakeholder feedback to consider if</p>

Improvements to CBA Handbook		consensus exists on the path forward for all or part of CBA handbook and to ensure any existing areas of disagreement are understood.
Anticipated Recommended Decision on Load Forecasting and System Mapping	December 2024	Decision highlighting areas of consensus and recommendations for preparation of the load forecasting and system mapping for the Company's 2025 GIP.
Anticipated Recommended Decision on CBA Handbook	January 2025	Decision highlighting areas of consensus and recommendations for preparation of the CBA Handbook to be used in the Company's 2025 GIP.

**D. Findings and Conclusions**

19. The Commission intends to follow these tasks, objectives, and timelines to the best of its ability, and will communicate changes to these tasks, objectives, and timelines at the earliest opportunity possible via a notice in this Proceeding.

20. Interested stakeholders and members of the public may submit comments regarding the issues contemplated in this Proceeding at any time this Proceeding is open, even if they do not align with timelines set by this or subsequent decisions.

21. The workshops scheduled for the afternoon of July 18, 2024 and July 29, 2024, will be conducted using the web platform Zoom. Invited participants will be provided by email the link, meeting ID code, passcode, and call-in information to join the Zoom session. However, the public may view through the Commission's website, as discussed below.

22. The workshops are each scheduled to commence at 1:00 p.m. and will conclude no later than 5:00 p.m.

23. Consistent with Commission practice, the workshops will be webcast on the Commission's website. Persons wishing to observe may do so by observing the webcast on the

PUC YouTube Channel at: [youtube.com/@COPublicUtilitiesCommission/featured](https://youtube.com/@COPublicUtilitiesCommission/featured) either live during the event or afterwards.

**II. ORDER**

**A. It Is Ordered That:**

1. Consistent with the discussion above, a workshop addressing gas system load forecasting used by Public Service Company of Colorado is scheduled as follows:

DATE: July 18, 2024

TIME: 1:00 pm and concluding no later than 5 p.m.

PLACE: By video conference or telephone using the Zoom web conferencing platform at a link emailed to invited participants in the workshop.

2. Those wishing to observe the July 18, 2024 workshop may do so by observing the Commission's webcast of the workshop on the PUC YouTube Channel at: [youtube.com/@COPublicUtilitiesCommission/featured](https://youtube.com/@COPublicUtilitiesCommission/featured).

3. Consistent with the discussion above, a workshop addressing gas system mapping and cost benefit analysis handbook used by Public Service Company of Colorado is scheduled as follows:

DATE: July 29, 2024  
TIME: 1:00 pm and concluding no later than 5 p.m.  
PLACE: By video conference or telephone using the Zoom web conferencing platform at a link emailed to invited participants in the workshop.

4. Those wishing to observe the July 29, 2024 workshop may do so by observing the Commission's webcast of the workshop on the PUC YouTube Channel at: [youtube.com/@COPublicUtilitiesCommission/featured](https://youtube.com/@COPublicUtilitiesCommission/featured).

5. This Decision is effective upon its Issued Date.

(S E A L)



THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF COLORADO

MEGAN M. GILMAN

\_\_\_\_\_  
Hearing Commissioner

ATTEST: A TRUE COPY

A handwritten signature in cursive script that reads "Rebecca E. White".

Rebecca E. White,  
Director