

BEFORE THE PUBLIC UTILITIES COMMISSION OF COLORADO

PROCEEDING NO. 25A-0220G

IN THE MATTER OF THE APPLICATION OF PUBLIC SERVICE COMPANY OF
COLORADO FOR APPROVAL OF ITS 2025-2030 GAS INFRASTRUCTURE
PLAN, CERTIFICATES OF PUBLIC CONVENIENCE AND NECESSITY FOR
FACILITIES, AND NPA COST RECOVERY STRUCTURE

HEARING EXHIBIT 705

ANSWER TESTIMONY AND ATTACHMENTS OF

CONOR LYMAN

ON BEHALF OF NATURAL RESOURCES DEFENSE COUNCIL,

REWIRING AMERICA, SIERRA CLUB,

SOUTHWEST ENERGY EFFICIENCY PROJECT AND

WESTERN RESOURCE ADVOCATES

NOTICE OF CONFIDENTIALITY:

A PORTION OF THIS DOCUMENT HAS BEEN FILED UNDER SEAL

- **Pages 12, 15, 16**

November 3, 2025

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1 **Q. Please state your name and business address.**

2 A. My name is Conor Lyman, and my business address is 51 Lockeland Avenue,
3 Arlington, MA 02476.

4 **Q. By whom are you employed and in what position?**

5 A. I am a Senior Research Scientist for Groundwork Data.

6 **Q. On whose behalf are you testifying in this proceeding?**

7 A. I am testifying on behalf of Natural Resources Defense Council, Rewiring
8 America, Sierra Club, Southwest Energy Efficiency Project, and Western Resource
9 Advocates—collectively, the “Conservation Advocates.”

10 **Q. What is your preferred form of address?**

11 A. I use he/him pronouns and am comfortable being addressed as Mr. Lyman.

12 **Q. Please give a brief description of your professional experience and**
13 **education.**

14 A. In my capacity at Groundwork Data, I am responsible for developing analytical
15 tools and models to investigate the future of our energy distribution systems. A key
16 focus of this is the development of the Pipe Segment Analysis tool that aggregates
17 assumptions and datasets related to capital and operational costs, energy consumption,
18 emission rates, and demographic factors, to name a few variables, with the aim of
19 better understanding how investments in energy infrastructure will impact customers,
20 utility managers, policy stakeholders, and the environment. Additionally, I am a
21 contributor to Groundwork Data’s reports investigating gas utility finances and the
22 connection between pipe investment and customer rates.

1 I have seven years of experience developing analytical models and tools for
2 energy systems. Further details on my qualifications and experience are attached as
3 Attachment CL-1.

4 **Q. Have you previously testified before this Commission?**

5 A. No.

6 **Q. Have you testified before any utility commissions in other states?**

7 A. Yes, I testified before the Public Service Commission of the District of Columbia
8 in Formal Case No. 1179, which was a proceeding regarding Washington Gas Light
9 Company's Strategically Targeted Pipe Replacement Program.

10 **I. Introduction**

11 **Q. What is the purpose of your Answer Testimony?**

12 A. The purpose of my Answer Testimony is to present Attachment CL-2, the Data
13 Checklist (the "Checklist"), a comprehensive accounting of the data required for
14 stakeholders to evaluate Non-Pipeline Alternative (NPA) projects for the gas
15 distribution system. The Checklist was developed based on industry experience
16 evaluating NPA projects and a review of the Gas Infrastructure Plan (GIP) that Public
17 Service Company of Colorado ("PSCo" or "the Company") submitted in this proceeding.
18 The data described in the Checklist is generalized, such that it may apply to multiple
19 jurisdictions or service territories. However, Attachment CL-2 also contains
20 information on how the data provided by PSCo in the GIP does, and does not, align with
21 the Checklist. At the end of my Answer Testimony, I recommend that the Colorado
22 Public Utilities Commission consider the Data Checklist and data sharing

requirements from other jurisdictions when developing a rulemaking related to NPA evaluation for System Safety and Integrity Projects.¹

II. The Purpose of NPA Analyses and Stakeholder Input

Q. Please describe the purpose of non-pipeline alternative analyses.

A. NPAs are “investments or activities that defer, reduce, or avoid the need to build or upgrade gas delivery system infrastructure.”² In the Commission’s own words, “[a]lternatives analysis in gas infrastructure planning is meant to reduce capital spending on infrastructure where the benefit of an NPA outweighs the cost of an infrastructure project.”³

Q. What role do external stakeholders—such as the intervenors in this proceeding—have in evaluating NPAs?

A. NPA analysis is a new and emerging field for gas utilities that will affect customer affordability, climate goals, public health and safety, and the business models of utilities, among other areas. Stakeholder intervention is a tool used by multiple jurisdictions to improve the outcomes of the NPA evaluation process.

A prime example is Massachusetts, which convened an NPA Working Group following the Massachusetts Department of Public Utilities’ (DPU) Order 20-80-B.⁴ The

¹ See Proceeding No. 23M-0234G, Decision No. C24-0233 at 4–5 ¶ 10 (Apr. 15, 2024).

² Ron Nelson et al., Strategen, *Non-Pipeline Alternatives to Natural Gas Utility Infrastructure: An Examination of Existing Regulatory Approaches* 5 (2023), <https://eta-publications.lbl.gov/sites/default/files/non-pipeline-alternatives-to-natural-gas-utility-infrastructure-1-final.pdf>.

³ Proceeding No. 23M-0234G, Decision No. C24-0233 at 5 ¶ 10.

⁴ Mass. Dep’t of Pub. Utils., Order 20-80-B (Dec. 6, 2023), <https://fileservice.eea.comacloud.net/V3.1.0/FileService.Api/file//iadhhaj?Kc28B1RUJcyf7TDOLTzteGFJ0ioKRMXdZYr4j7j/42qk9v9pxUxyG6LkaCeWBSjqbmMLNqhcSkxPf0qUr1gASPKrYE1qeivebf677PtCVStUdHoHpEGELGLGjR+ZpYgt>.

Working Group published a preliminary NPA Framework in January 2025 and is composed of representatives from various advocacy organizations, business interests, local governments, utilities, and labor unions.⁵

Additionally, external stakeholders have demonstrated in prior proceedings the value of NPAs and the analytical case for further consideration and acceleration of such options in a variety of jurisdictions. These include illustrative studies on the value of NPAs for specific pipe segments in Rhode Island and Washington, D.C., as well as a study of the system-wide cost impacts of customer defections if NPAs are not deployed in New York.⁶ Beyond formal proceedings, E3 and Gridworks collaborated with PG&E to show the power of robust NPA evaluation in a project funded by the California Energy Commission.⁷

⁵ See, e.g., NPA Framework (Jan. 15, 2025), <https://img1.wsimg.com/blobby/go/abf00124-5f5f-4755-92c3-e723c88d649d/downloads/c1ccf822-0412-405f-baf5-96afdea3992f/January%2015%202025%20NPA%20Framework.pdf?ver=1743422390855>; Memorandum from NPA Framework Stakeholder Facilitators, Apex Analytics (Oct. 9, 2024), <https://img1.wsimg.com/blobby/go/abf00124-5f5f-4755-92c3-e723c88d649d/downloads/b5f5fcfb-aca4-4253-8fc8-d77957976971/20-80%20NPA%20Working%20Group%20Member%20Selection%20Annou.pdf?ver=1743422390713>.

⁶ See, e.g., R.I. Pub. Utils. Comm'n, Docket No. 23-49-NG, Michael Walsh & Dorie Seavey Testimony (Feb. 9, 2024); https://ripuc.ri.gov/sites/g/files/xkgbur841/files/2024-02/2349-CLF-Testimony-Walsh-Seavey_2-9-24.pdf; Dist. of Columbia Pub. Serv. Comm'n, Formal Case No. 1179, Conor Lyman Direct Testimony (Dec. 10, 2024), <https://edocket.dcpssc.org/apis/api/Filing/download?attachId=215422&guidFileName=99b568f0-09f7-4fb2-82d7-59ee51bf211e.pdf>; N.Y. Dep't of Pub. Serv., Matter No. 24-00835, Natural Res. Def. Council Initial Comments (Sept. 18, 2024), <https://documents.dps.ny.gov/public/MatterManagement/CaseMaster.aspx?MatterSeq=73326&MNO=24-G-0248>.

⁷ Dan Aas et. al., Cal. Energy Comm'n, *An Analytical Framework for Targeted Electrification and Strategic Gas Decommissioning: Identifying Potential Pilot Sites in Northern California's East Bay Region* (2024), <https://www.energy.ca.gov/sites/default/files/2024-06/CEC-500-2024-073.pdf>.

1 **Q. How are NPAs considered in the current GIP?**

2 A. Pursuant to Commission Rule 4553(c)(I)(P), the Company is required “for a
3 quantity of new business and capacity expansion projects . . . [to] present an analysis of
4 alternatives, including non-pipeline alternatives, costs for those alternatives, and
5 criteria used to rank or eliminate such alternatives.”⁸ Of particular interest is how this
6 requirement manifests in the current GIP as an evaluation of NPAs for four Capacity
7 Expansion projects.⁹

8 For Capacity Expansion projects, the Company evaluates NPAs using its *Non-*
9 *Pipeline Alternatives Methodology for Capacity Expansion Projects*.¹⁰ Under this
10 methodology, if a project passes a number of feasibility tests, it is then evaluated via a
11 cost-benefit analysis (CBA). The CBA attempts to evaluate and compare alternatives to
12 pipe replacement by calculating the net-present value of various costs and benefits. The
13 details of the CBA are outlined in Hearing Exhibit 101, Attachment JJP-1, Appendix
14 15. Individual CBAs are provided as Hearing Exhibit 101, Attachment JJP-1,
15 Appendices 4.1 to 4.5. The confidential versions of these appendices provide unlocked
16 Excel workbooks with all formulas intact, which enables a thorough outside
17 investigation of the calculations used by PSCo to determine if an NPA is, or is not,
18 viable. Of the three Capacity Expansion projects for which the Company performed a
19 CBA analysis, the Company determined none of the projects were cost effective.¹¹

⁸ 4 Colo. Code Regs. § 723-4:4553(c)(I)(P).

⁹ Hrg. Ex. 101, Attach. JJP-1, App. 4.

¹⁰ Hrg. Ex. 101, Attach. JJP-1, App. 12.

¹¹ Hrg. Ex. 101, Attach. JJP-1, App. 4 at 22, 45, 90.

III. A Data Checklist for NPA Evaluation.

Q. Please describe the Data Checklist you have attached to this testimony.

A. The Data Checklist, Attachment CL-2, is a comprehensive accounting of the data required for stakeholders to evaluate NPA projects for the gas distribution system. The Checklist was developed based on industry experience evaluating NPA projects. While the Checklist is applicable in many jurisdictions, it contains supplemental information tailored to the specific conditions of PSCo, based on a review of the GIP and the Company's responses to discovery. The data identified in the Checklist may be owned and controlled by the utility, may be owned and controlled by another entity, or may be publicly available from other sources. With regards to utility-controlled data, the Checklist is meant to serve as a guide for a future rulemaking concerning data sharing between utilities and external stakeholders and intervenors, which can enable these parties to (1) thoroughly review proposed NPA projects, and (2) identify areas of the system that may be conducive to NPA projects.

As highlighted in Witness Velez's and Witness Brown's testimonies, System Safety and Integrity Projects (SSIP) and, specifically, Distribution Integrity Management Projects (DIMP) present a large area of opportunity for future NPA deployment. The Data Checklist is thus best suited for evaluating SSIP projects, but it may also be suitable for other project types.

The Data Checklist is organized, for each data need, into General Data Requirements and PSCo-Specific Notes related to the current availability of that data. These are described, respectively, in Tables CL-1 and CL-2.

Table CL-1. Organization of General Data Requirements

Data	A high-level identification of the data need.
Units	The expected units of the data, if applicable.
Description	A description of the data, highlighting the various features of the data and any factors that should be considered when sharing that data.
General System Data	An indication of whether the data should be available for the entire system, where a “system” is a utility’s service territory or other area (e.g. for measure cost data, the “system” would be the appliance market in the given state, county, or other region).
Project-Specific Data	An indication of whether the data is specific to a given pipe replacement project proposed by the utility.
Modeled Data	An indication of whether the data is the result of a modeling exercise. In such cases, any and all underlying inputs, methodology, and assumptions should be provided and clearly articulated.
Justification	An explanation of why this data should be shared and how it may be used by stakeholders to evaluate NPAs.

Table CL-2. Organization of PSCo-Specific Notes

Is the Data Already Provided in the GIP?	A description of where, if applicable, the data is provided in the GIP by PSCo.
Location in Filing	Lists where in PSCo’s filing(s) the data can be found.
How Data is Currently Used in NPA Analysis by PSCo	Describes how the data is utilized by PSCo to analyze NPA’s in the GIP, based on the Company’s testimony and discovery responses.
Additional	Additional notes relevant to the data and PSCo.

Q. How does the Data Checklist align with the current NPA framework(s) used in the GIP?

A. Rule 4553(c)(I)(P) states that for new business and capacity expansion projects, “the utility shall present an analysis of alternatives, including non-pipeline alternatives, costs for those alternatives, and criteria used to rank or eliminate such

alternatives.”¹² In response, the Company developed an *NPA Methodology for Capacity Expansion Projects*, which it applied to capacity expansion projects in the GIP.¹³

The Data Checklist draws from the data requirements and data available in the GIP and its appendices, specifically Appendices 3, 4, 4.1C - 4.5C, 6, 7, 8, 11, 12, 15, 16, and 18C. To serve future NPA evaluations—including NPA evaluations for projects other than Capacity Expansion—the Checklist seeks to expand on the data presented under the current NPA Methodology.

Q. How might the Data Checklist evolve with changing NPA frameworks?

A. The Data Checklist seeks to strike a balance between existing NPA frameworks, future frameworks, and changes to existing frameworks. In the current GIP, the Company only provided a framework to evaluate NPAs for Capacity Expansion projects.¹⁴ This framework may evolve over time from NPA development learnings and stakeholder input, such as recommendations provided in Witness Velez’s and Witness Brown’s testimonies. Additionally, in future GIPs the Company may propose a framework that evaluates different types of projects, such as System Safety and Integrity Projects.

Outside of the GIP process, advancements in integrated energy planning (IEP) will likely influence the Checklist. Proceedings in multiple states are evaluating the future of IEP in recognition of the fact that past planning paradigms—where gas and

¹² 4 Colo. Code Regs. § 723-4:4553(c)(I)(P).

¹³ Hrg. Ex. 101, Attach. JJP-1, App. 12.

¹⁴ *Id.*

electric system planning were independent from one another—no longer apply.

Examples include an IEP process recently approved by the Massachusetts DPU.¹⁵

Q. Please describe how this data checklist may inform anticipated future rulemakings concerning NPA evaluation for System Safety and Integrity Projects.

A. In Decision No. C24-0233, the Commission stated:

We believe, as potentially true for all project types, alternatives to system safety and integrity projects could offer the potential for meaningful cost savings and other benefits. Customers should not miss out on cost savings available from implementation of an NPA simply because the project it replaces is a safety project. We intend to revisit this issue in a future rulemaking proceeding, which we anticipate initiating in 2025.¹⁶

In the current GIP, the Company only presented NPA analyses for Capacity Expansion and New Business projects. The Company conducted cost-benefit analyses for three of the four Capacity Expansion projects. Following the cost-benefit analyses, the Company determined that none of the NPAs were cost effective.¹⁷

Generally, projects related to capacity expansion serve a large number of customers per unit length of pipe, because many downstream customers are dependent on that pipe for safe and reliable service. Conversely, many pipe projects that fall under SSI (such as the Distribution Integrity Management Program, or DIMP) have a lower ratio of customers served per length of pipe, which may improve the economics of

¹⁵ Mass. Dep't of Pub. Utils, Order 24-10/11/12 (Aug. 29, 2024), <https://fileservice.eea.comacloud.net/V3.1.0/FileService.Api/file//igggdddj?dFRGoJKkAr u50g4f2swgdmFJ0ioKRMXdZYr4j7j/42qk9v9pxUxyG6LkaCeWBSjqbmMINqhcSkxPf0qUr1gASPKrYE1qeivebf677PtCVStUdHoHpEGELGLGjR+ZpYgt>.

¹⁶ Proceeding No. 23M-0234G, Decision No. C24-0233 at 4–5 ¶ 8.

¹⁷ Hrg. Ex. 101, Attach. JJP-1, App. 4 at 22, 45, and 90.

1 electrification as an alternative to pipe replacement. Indeed, the analysis presented in
2 Witness Velez's Answer Testimony shows significant cost savings from the deployment
3 of NPAs as an alternative to service line replacements. Further, DIMP Projects are
4 worth increased scrutiny because spending on DIMP Projects *not* included in the
5 Planned Projects is expected to exceed estimated total GIP expenditures for all SSI
6 Projects. This is based on a comparison of total DIMP spending in Tables 13 and 14 in
7 the GIP; \$452.7 million for DIMP not part of the Planned Projects (Table 14) versus
8 \$407.5 million for DIMP Planned Projects (Table 13).¹⁸

9 Consider a comparison of customers per unit length for Capacity Expansion
10 Projects included in Appendix 3 (not counting the Speer Interconnects Project, due to
11 its complexity) and the same metric for DIMP Projects included in Appendix 4. While
12 Capacity Expansion Planned Projects average roughly 2 customers per foot of pipe,
13 DIMP Planned Projects average only 1 customer per foot.¹⁹ Similarly, if we look at the
14 number of service renewals per foot of main from Year 2 included in Appendix 18C, we
15 find an average of [REDACTED] renewals per foot.²⁰ While service renewals may not be
16 the same as impacted customers, there is likely opportunity for NPA success on pipe
17 segments with fewer customers.

¹⁸ Hrg. Ex. 101, Attach. JJP-1, Rev. 2 at 56–57.

¹⁹ These calculations are calculated by dividing the total firm customer count by the total feet of main replaced as reported for Capacity Expansion projects (except Speer Canal Interconnects) and DIMP System Safety and Integrity projects in Hearing Exhibit 101, Attachment JJP-1, Appendices 3 and 4, respectively.

²⁰ This calculation only includes those bundles in Appendix 18C that include service renewals.

1 Indeed, the fact that service renewals are not the same as impacted customers is
2 precisely why enhanced data availability is critical for identifying NPA opportunities
3 and assessing viability. The data that is currently available does not allow stakeholders
4 to properly identify pipe segments where NPAs should be considered. An improvement
5 to Appendix 18C would be to include impacted customers by customer type for each
6 pipe segment, like the tables of customers served provided in the Project Packets. This
7 data would account for the different NPA costs for residential vs commercial customers
8 and would more accurately account for multi-unit buildings which may have a single
9 service supplying multiple customers. Alternatively, systemwide data on customer
10 distribution and consumption could be provided such that stakeholders can determine
11 the customers impacted by each pipe replacement. The Data Checklist discusses the
12 usefulness of this kind of data and identifies how the current environment of data
13 availability does, and does not, serve this purpose.

14 **Q. Please describe the current data availability.**

15 A. The GIP, its associated appendices, and responses to discovery requests contain
16 lots of useful information related to NPA evaluation. To an extent, data found in filings
17 such as the CBA models (Appendices 4.1C to 4.5C) and methodologies such as those
18 described in the NPA Methodology (Appendix 12) and CBA Handbook (Appendix 15)
19 allow stakeholders to understand and evaluate NPA proposals and analyses put forth
20 by PSCo. This is especially true for Capacity Expansion projects, for which PSCo is
21 required to evaluate NPAs and subsequently provided CBA models for three of the four
22 projects in their GIP filing.

1 The CBA models contain many inputs, such as the cost of various NPA
2 measures, multiple electric capacity upgrade cost rates, gas customer rates, and
3 assumed emissions rates. These models are most useful in their “native” format, as
4 unlocked Excel spreadsheets with all formulas intact, which is provided via the
5 Confidential CBA models. This allows stakeholders to investigate the calculations
6 performed and provide recommendations for improvement.

7 However, even with all the data provided in the CBA models, questions remain
8 surrounding the input data PSCo uses and the assumptions underlying that data. For
9 example, in response to multiple discovery requests asking explicitly for input data
10 used to calculate the risk score of pipes using J-DIMP, the Company referred to its
11 description of data inputs found at Hearing Exhibit 101, Attachment JJP-1.²¹ A
12 description of the input data is not the same as providing that input data.

13 A review of the Confidential CBA models shows that some input values, such as
14 net revenue impact, are calculated via hard-coded numbers that are not explained. In
15 discovery, the Conservation Advocates asked the Company to “describe the
16 methodology by which” a number of input values were determined, including electric
17 net revenue impact.²² The Company’s response for each input value was: “Please see
18 Hearing Exhibit 101, Attachment JJP-1, Appendix 15.”²³ Upon review, Appendix 15
19 states for electric net revenue impact that the electricity rate is “the company’s most
20 recent residential winter electric rate, net of the Extraordinary Gas Cost Recovery

²¹ Public Service responses to discovery requests CA 4-4 and CA 4-32, provided as Attachments CL-3 and CL-4.

²² Public Service response to discovery request CA 4-29, provided as Attachment CL-5.

²³ *Id.*

1 Rider (“EGCRR”) as of the CBA run date,” and “[t]he forecasted electric commodity cost
2 utilized in the CBA analysis is included in the forecasted electricity rate.”²⁴ However, a
3 review of the input cell for electric net revenue impact in Hearing Exhibit 101,
4 Attachment JJP-1, Appendix 4.4C, to take an example, shows that the cell is hard-
5 coded to [REDACTED]
6 These hard-coded numbers should be explicitly defined and linked to source material in
7 the CBA model for improved stakeholder understanding.

8 Finally, both throughout its filings and in response to many discovery requests,
9 the Company repeatedly references values in the Company’s approved DSM/BE Plan.²⁵
10 While this information on source material is helpful, it is not comprehensive enough to
11 easily find and evaluate the data that the Company is referencing. More specific
12 references and exact values should be provided.

13 **Q. How does the current data availability enable or restrict NPA**
14 **evaluation by third party stakeholders?**

15 A. As mentioned, the CBA models in Appendices 4.1C to 4.5C currently provide the
16 most information and functionality for stakeholders to evaluate NPAs proposed by
17 PSCo. Furthermore, the GIP filings and responses to discovery requests provide a
18 measure of information on the sources and assumptions that underlie the data inputs.
19 With this information, stakeholders are able to run the same CBA models used by the
20 Company and to adjust the input values to investigate additional scenarios or
21 sensitivities.

²⁴ Hrg. Ex. 101, Attach. JJP-1, App. 15, Rev. 1 at 17.

²⁵ See, e.g., Hrg. Ex. 101, Attach. JJP-1, App. 15, Rev. 1 at 14.

1 Also mentioned, the input values to the CBA models are somewhat explained,
2 but questions remain that would benefit from improved data sharing and methodology
3 descriptions. It is important to scrutinize these inputs and assumptions because they
4 directly impact the outputs of the CBA model and the determination of whether an
5 NPA is appropriate for a given pipe replacement project.

6 There are areas where data sharing can be improved for stakeholders to evaluate
7 proposed NPAs. In addition to evaluating proposed NPAs, stakeholder engagement is
8 valuable for identifying potential areas for NPA deployment across the Company's
9 entire service area. Because the Company only provides the most robust data for GIP
10 Planned Projects, the data availability is insufficient for this type of system-wide
11 analysis.

12 A system-wide analysis requires much of the data outlined in the Checklist,
13 including characteristics of each pipe segment in the system and data related to the
14 customers directly served and downstream of that pipe. The data shared as part of this
15 GIP only allows for an illustrative exploration of NPA potential in PSCo's service
16 territory.

17 In practice, the Confidential and Highly Confidential maps shared by the utility
18 should provide all or most of this information in a usable, geospatial format. However,
19 the maps appear to present the bare minimum information required by the GIP Rules.
20 With regards to the pipe network for DIMP projects, the Confidential map only shows
21 [REDACTED] The Highly Confidential map additionally includes some
22 additional data, which is not always available.

1 Additional data could be added to the map by stakeholders, but it would be
2 approximate based on other data provided in the GIP. For example, the average
3 number of customers served by each pipe could be approximated based on the customer
4 count forecasts by county provided in Hearing Exhibit 101, Attachment JJP-1,
5 Appendix 8, but it would be difficult to geospatially assign that data to pipes in the
6 system. Customer density likely differs greatly throughout, so it would be a very rough
7 approximation that would not be accurate enough for robust NPA evaluation. Even if a
8 stakeholder did develop approximate geospatial layers on customer counts, they could
9 not readily use it with the Confidential and Highly Confidential maps because the
10 mapping system does not allow for data download or upload. The best approach would
11 be a data sharing paradigm that includes customers served by each main and service
12 included as a geospatial layer in an integrated planning tool.

13 **Q. How may the Data Checklist expand on current NPA evaluations in**
14 **Colorado?**

15 A. Under the current GIP, stakeholders and the Commission are left to react to
16 NPAs proposed and put forth by the utility. As mentioned, there are large areas of
17 spending that may benefit from a review for NPA viability. A proactive review of the
18 gas system for NPAs would identify potential NPA locations before critical action is
19 required on a segment of pipe, which would provide greater lead time and likely
20 increase the success rate of NPA deployment.

21 Other jurisdictions have highlighted the need for a proactive review of the gas
22 system, otherwise referred to as integrated energy planning. California, in particular, is
23 a leader in this type of thinking. A recent project funded by the California Energy

1 Commission looked at the viability of NPAs in the East Bay region and highlighted the
2 need to allow for NPA deployment lead time. The study recommended a phased
3 electrification plan over 10 years and noted the inherent data tensions: granular pipe
4 data is only available for planned replacement projects, which are typically planned on
5 a 3- to 4-year cycle, rather than a 10-year cycle.²⁶

6 Some of the data required to enable longer-term NPA planning is available in
7 the current GIP, particularly the 10-year outlook on pipe replacement provided in
8 Appendix 18C. Enhanced data sharing that builds on this table could identify NPA
9 locations with sufficient lead time for success. This data would best serve NPA
10 identification and evaluation if it was provided in a searchable GIS format that could be
11 related to other geospatial data layers.

12 **Q. What data sharing requirements exist in other jurisdictions?**

13 A. Multiple states are currently evaluating the future of their gas systems and
14 establishing data reporting and sharing requirements as part of that evaluation.
15 California has particularly strong data sharing requirements, including Rulemakings
16 20-01-007 and 24-09-012. Rulemaking 20-01-007 established rules for data tables
17 utilities must share, which include multiple gas system factors at the census tract
18 level.²⁷ Following California's Senate Bill 1221, orders in Rulemaking 24-09-012

²⁶ Dan Aas et. al., Cal. Energy Comm'n, *An Analytical Framework for Targeted Electrification and Strategic Gas Decommissioning: Identifying Potential Pilot Sites in Northern California's East Bay Region* (2024), <https://www.energy.ca.gov/sites/default/files/2024-06/CEC-500-2024-073.pdf>.

²⁷ Cal. Pub. Utils. Comm'n, Rulemaking 20-01-007, Revised Administrative Law Judges' Ruling Seeking Data from California's Gas Utilities (Mar. 1, 2022), <https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M455/K736/455736679.PDF>.

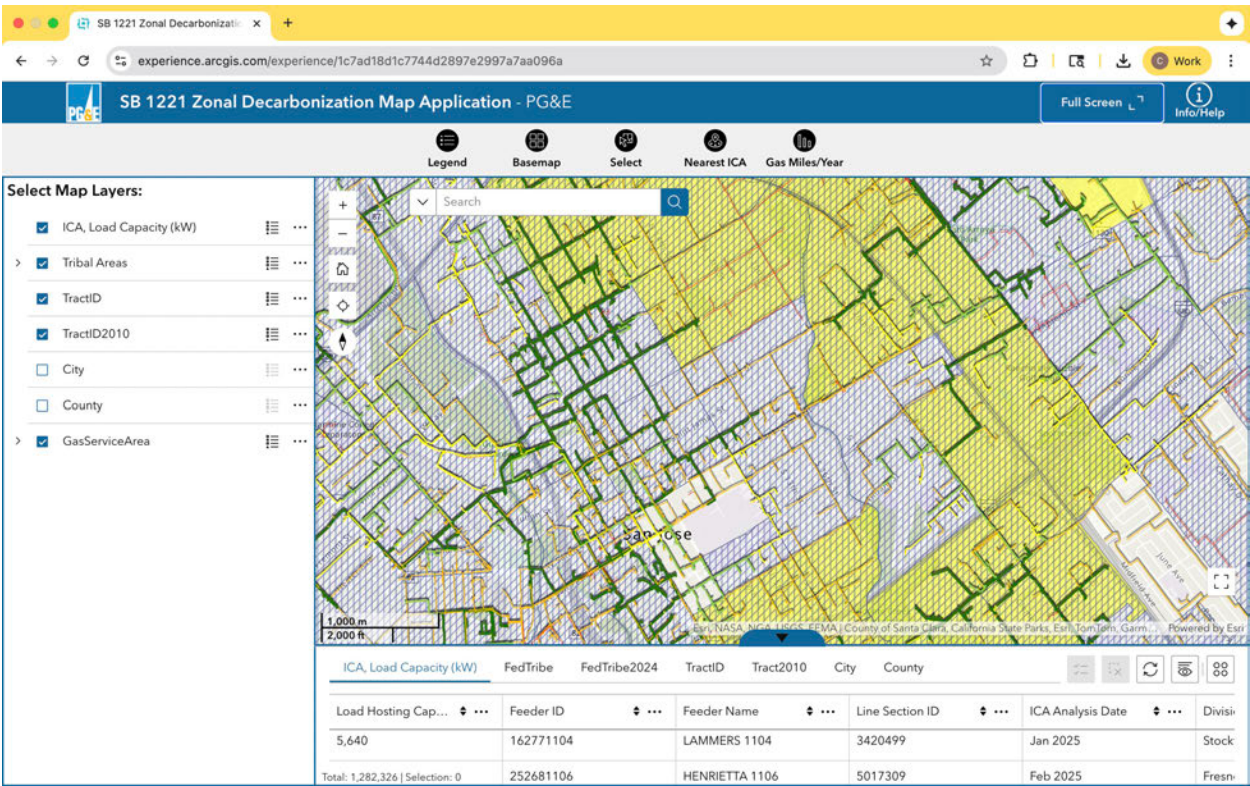
1 expanded on the data tables and included requirements for utilities to submit public
2 maps that visualized this information.²⁸ Maps and associated user guides can be found
3 on the California Public Utilities Commission's website.²⁹ The compliance filings can
4 also be found submitted as part of the rulemaking, such as a filing from PG&E.³⁰ The
5 data tables and maps submitted by the utilities include information such as pipe
6 mileage by diameter, pressure, and material; peak gas consumption; electric feeder
7 capacity; pipe risk scores and leak probability for mains and services; and foreseeable
8 pipe replacement by mileage for the next ten years.

²⁸ Cal. Pub. Utils. Comm'n, Rulemaking 24-09-012, Administrative Law Judges' Ruling Seeking Data from Gas Utilities (Nov. 22, 2024), <https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M547/K155/547155976.PDF>; Cal. Pub. Utils. Comm'n, Rulemaking 24-09-012, Assigned Commissioner's Ruling Issuing Senate Bill 1221 Mapping Directions to Utilities (Apr. 18, 2025), <https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M564/K184/564184170.PDF>.

²⁹ Cal. Pub. Utils. Comm'n, SB 1221 Implementation, <https://www.cpuc.ca.gov/industries-and-topics/natural-gas/sb-1221-implementation> (last visited Oct. 29, 2025).

³⁰ Cal. Pub. Utils. Comm'n, Rulemaking No. 24-09-012, Compliance Filing of Pacific Gas and Electric Company (U 39 G) Pursuant to Assigned Commissioner's April 18, 2025, Ruling Issuing Senate Bill 1221 Mapping Directions To Utilities (July 1, 2025), <https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M571/K951/571951536.PDF>.

Figure CL-1. Screenshot of the public map submitted by PG&E.



In Illinois, the Illinois Commerce Commission required Peoples Gas, which operates in Chicago, to submit quarterly reports related to its pipe replacement program.³¹ These reports include summary statistics on miles and materials of replaced pipe and pipe they plan to replace, including costs and rough timetables. Information on the number of associated services is also provided, and in many instances the data is categorized geographically by neighborhoods in Chicago. While most of the data provided by Peoples is historical and could be improved, it nonetheless provides a streamlined overview of pipe replacement activities.

³¹ Ill. Com. Comm'n, Docket No.16-0376, Order (Jan. 10, 2018), <https://www.icc.illinois.gov/docket/P2016-0376/documents/262806/files/462056.pdf>.

1 Finally, two proposals in New York are worth considering. In a proposal for a
2 geospatial tool for future gas system planning, Synapse Energy Economics
3 recommended a number of pipeline characteristics that should be shared and the
4 various evaluation categories supported by that data.³² For example, Synapse
5 highlights that data on pipe age allows for NPA evaluation from the perspectives of
6 safety, avoided gas system costs, and environmental and other policy goals.
7 Additionally, in a joint whitepaper between National Grid (which operates in
8 Massachusetts, in addition to New York) and RMI, the authors stated: “Regulatory
9 guidance is necessary to . . . create data-sharing protocols across utilities with
10 overlapping territory and with interested municipalities.”³³ The authors also
11 recommend that regulators should support utilities in the development of “integrated
12 system mapping tools to facilitate cross-utility coordinated planning and cooperation
13 with interested municipalities.”³⁴

14 **Q. Is there anything else you would like to add?**

15 A. Yes, I would like to address data approximations in the face of unavailable data.
16 In the CBA Handbook, the Company explains that end-of-life equipment replacement
17 costs are included, but not quantified, in the cost-benefit analysis for NPAs. PSCo
18 states specifically that “there is not a valid quantification method for estimating the

³² Alice Napoleon, et. al., *The Geospatial Tool Gas Utilities Need for Future Planning* (May 30, 2025),
<https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId=%7B70A93097-0000-C0B8-A5B0-0A1D8F4FB525%7D>.

³³ Abigail Lalakea Alter et al., RMI & Nat’l Grid, *Non-Pipeline Alternatives: Emerging Opportunities in Planning for U.S. Gas System Decarbonization* 24 (2024),
https://www.nationalgridus.com/media/pdfs/other/CM9904-RMI_NG-May-2024.pdf.

³⁴ *Id.*

1 future replacement cost of existing equipment.”³⁵ The Company was further asked
2 about this reasoning in discovery and it responded: “The Company believes that there is
3 not a valid quantification method for estimating future equipment replacement costs
4 due to the absence of premise-level data regarding equipment age. As a result, any
5 attempt to determine the associated benefit would be inherently speculative.”³⁶

6 While premise-level data may not exist, this does not mean that data cannot be
7 inferred or approximated to develop a more thorough cost-benefit analysis. Not
8 quantifying such costs and benefits may ignore impactful criteria from the decision-
9 making process. Specifically, avoided replacement costs have been quantified in other
10 studies for this very reason. In an NPA analysis of the East Bay region of California, E3
11 and Gridworks approximated the age of existing customer equipment and stated that
12 “[a]voided end-of-life equipment replacement costs are a major benefit category,” and
13 they “assumed that electrification is occurring halfway through the existing
14 equipment’s useful life.”³⁷

15 **IV. Conclusion**

16 **Q. Please summarize the Data Checklist (Attachment CL-2).**

17 A. The Data Checklist provides a comprehensive review of the data required to
18 evaluate NPA proposals and to review the gas system to identify and evaluate other
19 potential sites for NPAs. Much of this data is provided in some capacity in the current

³⁵ Hrg. Ex. 101, Attach. JJP-1, App. 15, Rev. 1 at 18.

³⁶ Public Service response to discovery request CA 6-3, provided as Attachment CL-6.

³⁷ Aryeh Gold-Parker et. al., *Benefit-Cost Analysis of Targeted Electrification and Gas Decommissioning in California* 73 (2023), https://www.ethree.com/wp-content/uploads/2023/12/E3_Benefit-Cost-Analysis-of-Targeted-Electrification-and-Gas-Decommissioning-in-California.pdf.

GIP, but it requires refinement or additional details to be fully useful. While there may be concerns with sharing some of this data, existing data sharing frameworks are in place and can be expanded upon to protect this information and keep it within the proper channels.

Q. Please summarize your recommendations.

A. My recommendations are as follows:

- **The Commission should adopt enhanced data sharing requirements.** These requirements should be inspired by the Data Checklist and its review of current data conditions in Colorado. Further inspiration should also be taken from data sharing requirements in other states, such as those in California and Illinois mentioned in my Answer Testimony. Data sharing requirements should be thoughtfully developed to satisfy two purposes: the review of proposed NPA projects and the review of the entire system to identify potential NPA projects with longer lead times.
- **The Commission's data sharing requirements should aim to standardize data and expand data access in a manner that upholds data security.** In its proposal for a geospatial planning tool and enhanced data access, Synapse highlighted the importance of data standardization and data security. Multiple discovery requests were submitted in this proceeding to verify the units used by PSCo in its reporting; clear data requirements that specify units, such as those defined in California's rulemaking 20-01-007, would improve communication. With regard to data security, Synapse notes that Commissions should take an active role in overseeing the terms of any non-disclosure agreements to ensure NDAs "neither compromise utility data security nor be onerous to counterparties."³⁸

³⁸ Alice Napoleon, et. al., *The Geospatial Tool Gas Utilities Need for Future Planning* at 23.

- 1 • **The Commission should mandate that PSCo provide more explicit**
2 **references for its input data.** As mentioned in my testimony, PSCo repeatedly
3 references (both in testimony and in discovery responses) the descriptions of
4 input data provided in the GIP and its appendices. PSCo also repeatedly
5 references data from its currently approved DSM and BE plan. While these
6 references are helpful first steps, they are not explicit enough for stakeholders to
7 review effectively. In some instances, this leads to model data used by PSCo that
8 cannot be easily verified nor found in source material. PSCo should be required
9 to provide explicit references to input data.
- 10 • **The Commission should accelerate its rulemaking for NPA evaluation of**
11 **System Safety and Integrity Projects.** The Commission previously indicated
12 that it intends to open a rulemaking proceeding this year related to NPA
13 evaluation of System Safety and Integrity Projects. As highlighted here and in
14 other testimony, System Safety and Integrity Projects, and, in particular,
15 replacement projects related to the distribution system, likely will have more
16 favorable NPA cost-benefit outcomes relative to the larger Capacity Expansion
17 projects currently evaluated by PSCo. The Commission should accelerate this
18 rulemaking to, as stated by the Commission, “offer [to customers] the potential
19 for meaningful cost savings and other benefits.”³⁹

20 **Q. Does this conclude your Answer Testimony?**

21 **A. Yes.**

³⁹ Proceeding No. 23M-0234G, Decision No. C24-0233 at 5 ¶ 8.

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF COLORADO

PROCEEDING NO. 25A-0220G

IN THE MATTER OF THE APPLICATION OF PUBLIC SERVICE COMPANY OF
COLORADO FOR APPROVAL OF ITS 2025-2030 GAS INFRASTRUCTURE PLAN,
CERTIFICATES OF PUBLIC CONVENIENCE AND NECESSITY FOR FACILITIES, AND
NPA COST RECOVERY STRUCTURE

AFFIDAVIT OF CONOR LYMAN

COMES NOW Conor Lyman, of proper age and duly sworn, and states that the
attached Testimony in the above-captioned matter was prepared by him or under his
supervision and control and that it is true and correct to the best of his knowledge and
belief, and would be the same if given orally under oath.

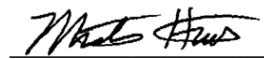
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Signature

11/3/2025

Date



Signature of Counsel