

Date of Hearing: July 1, 2024

ASSEMBLY COMMITTEE ON UTILITIES AND ENERGY

Cottie Petrie-Norris, Chair

SB 1301 (Stern) – As Amended April 18, 2024

SENATE VOTE: 39-0

SUBJECT: Natural gas: hydraulic models and hydraulic feasibility analyses

SUMMARY: Requires natural gas utilities to make available to the California Public Utilities Commission (CPUC) all data required by the CPUC to develop hydraulic models and hydraulic feasibility analyses.

EXISTING LAW:

- 1) Requires every public utility to furnish and maintain such adequate, efficient, just, and reasonable service, instrumentalities, equipment, and facilities, ...as are necessary to promote the safety, health, comfort, and convenience of its patrons, employees, and the public. (Public Utilities Code § 451)
- 2) Authorizes the CPUC to supervise and regulate every public utility in the state and do all things, whether specifically designated in this part or in addition thereto, which are necessary and convenient in the exercise of such power and jurisdiction. (Public Utilities Code § 701)
- 3) Authorizes the CPUC after hearing to ascertain and fix just and reasonable standards, classifications, regulations, practices, measurements, or services to be furnished, imposed, observed and followed by all electrical, gas, and water corporations. (Public Utilities Code § 770)

FISCAL EFFECT: Unknown. This measure has not received a fiscal committee hearing, due to a determination by the Senate Committee on Appropriations, pursuant to Senate Rule 28.8, that the cost of implementing this bill is not significant.

BACKGROUND:

Hydraulics – A hydraulic model is a mathematical model of a pipeline system with fluid flowing throughout, such as water moving through drain pipes. The pipe network is modeled while controlling for physical attributes, such as pressure and gravity, typically under orderly conditions.¹ Hydraulic modeling is a common tool in water and wastewater engineering, as well as natural gas system planning and analysis. As with all models, the accuracy and robustness of the model is dependent on the massive amounts of data inputs needed to effectively analyze the system. “Hydraulic feasibility” is an output in some hydraulic modeling, where the system is evaluated on whether it is feasible to isolate and cease operation on a given segment of pipeline

¹ Disorderly, or turbulent systems, is quite another story. As famous physicist Werner Heisenberg is attributed – likely, an apocryphal quote – “*when I meet God, I’m going to ask him two questions: why relativity? And why turbulence? I really believe he’ll have an answer for the first.*”

while maintaining the usual flow of gas in surrounding pipelines to surrounding customers.² According to the CPUC, a pipeline decommissioning project is “hydraulically infeasible” if it would result in a loss of existing gas flow to customers who are not planning to be part of the decommissioning project; the loss of their flow is simply a consequence of the physics on the pipe when another segment is retired.

CPUC General Order (GO)-177 – On December 8, 2022, the CPUC issued a decision updating natural gas infrastructure reporting requirements.³ The decision updated GO-177, and required every gas corporation to file a Report of Planned Gas Investments by March 1 of each year for any project expected to either 1) exceed \$50 million or 2) meet certain, specified criteria. In addition, the updated General Order requires natural gas corporations to first submit an application for a certificate of public convenience and necessity (CPCN) before beginning any gas project that: (a) is located within 1,000 feet of a sensitive receptor; or (b) operation of the completed project by the gas corporation requires a permit from the relevant local air quality district. GO-177 defines sensitive receptors to include living quarters/private homes, schools, daycare centers, hospitals, nursing homes, and other locations. In the case of projects that require a permit from the local air district, the permit must be for: (a) an increase in levels of a toxic air contaminant; or (b) an increase in levels of a criteria air pollutant, if the area is listed as a serious, severe, or extreme non-attainment area for that pollutant by the U.S. Environmental Protection Agency. GO-177 also provides exemptions from the CPCN requirement for projects that meet specified criteria, including emergency repairs, in-service dates before January 1, 2024, or projects required by a state emergency order, including CPUC orders.

COMMENTS:

- 1) *Author’s Statement.* According to the author, “California heavily relies on importing about 90% of its fossil gas supply, managed through an extensive network of underground pipelines and storage facilities. Oversight of this system lies with the California Public Utilities Commission (CPUC), which determines pipeline replacements and alternative solutions in the best interest of customers. Transitioning away from fossil fuels demands meticulous near and long-term planning, including comprehensive data collection and analysis. However, the efficacy of analysis hinges on the quality of collected data. Gaps or reluctance from utilities to share information hinder complete and accurate analysis, modeling, and planning efforts. My bill, SB 1301, serves as a crucial safeguard by mandating fossil gas utilities to provide CPUC with necessary hydraulic models and hydraulic feasibility analyses facilitating California’s transition to a clean energy economy.”
- 2) *Where’s the Data?* The author and supporters motivate this bill by citing instances where natural gas corporations’ GO-177 reports lack detail. Moreover, the author notes the scale of the anticipated natural gas transition in the state – driven by statewide decarbonization policy – necessitates a broader, collective understanding of how gas infrastructure will be managed. They cite a 2024 California Energy Commission, CPUC, and California Air Resources Board Joint Agency staff whitepaper on the future of the pipeline system as

² Footnote 19, pg. 7, CPUC, *Gas Distribution Infrastructure Decommissioning Framework in Support of Climate Goals*, December 21, 2022. <https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/energy-division/documents/natural-gas/long-term-gas-planning-oir/framework-staff-proposal.pdf>

³ D. 22-12-021, *Decision Adopting Gas Infrastructure General Order*, R. 20-01-007, December 8, 2022.

noting, “Because gas infrastructure and gas-consuming equipment have decades-long lifespans, a comprehensive transition off fossil gas requires a combination of near-term and long-term strategies.”⁴

The paper goes on to note that, “in order to provide both reliability and reasonable rates and bills, it will be critical that utilities maintain the right balance of investment in gas infrastructure. If too much infrastructure is maintained at too high a cost, and those costs must be spread across a declining customer base, gas transportation rates could increase to unsustainable levels. On the other hand, too little investment in gas infrastructure could contribute to gas commodity price spikes that are passed through directly to gas ratepayers and could also impact electric rates and bills. An underinvested system could also lead to negative safety impacts. Long-term planning, along with State regulation and appropriate incentives, will be needed to guide utilities toward the correct balance.”⁵

Maintaining this balance will be delicate, and rely on robust data analytics to accurately forecast system impacts throughout the transition. Without accurate data and modeling, customer costs and harm may be exacerbated. Supporters of this bill note that not all utility data have been shared in ways to inform long-term decarbonization efforts in a safe, equitable, and managed fashion. This bill seeks to remedy this supposed lack of data by clarifying natural gas corporations must make all data available to the CPUC so that the CPUC can accurately model the system. While the CPUC has existing broad authority to compel the natural gas utilities they regulate to provide any necessary data, an explicit requirement as provided in this bill may aid in insuring such data are shared.

REGISTERED SUPPORT / OPPOSITION:

Support

Building Decarbonization Coalition
Climate Action California
Natural Resources Defense Council
The Climate Reality Project: Silicon Valley

Support If Amended

Environmental Defense Fund

Opposition

None on file.

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⁴ Pg. 6, Joint Agency Staff Gas Transition White Paper, R. 20-01-007; February 22, 2024

⁵ Pg. 6; <https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M525/K660/525660391.PDF>