

**THE PEOPLE OF THE STATE OF ILLINOIS’
ROUND ONE COMMENT FOR THERMAL ENERGY NETWORK FORUM**

The People of the State of Illinois, through KWAME RAOUL, Attorney General of the State of Illinois (the “People” or “AG”), hereby submit their comment for round one in connection with a stakeholder workshop process convened by the Staff of the Illinois Commerce Commission (“Staff”) regarding thermal energy networks (or “TEN”). Initiated by Staff in response to possible enactment of Senate Bill 1699, Staff indicated that for round one, it is seeking comment “on the appropriate ownership, market, and rate structures for thermal energy networks and whether the provision of thermal energy services by thermal energy providers is in the public interest.”¹ The People’s silence on any particular issue or question, either in this round of comments or in subsequent rounds, is not to be interpreted to indicate their agreement or disagreement on that issue or question.

I. INTRODUCTION

Although Senate Bill 1699 is not law until and unless the Governor signs it, the People nevertheless understand it to govern this workshop process and its objectives. In relevant part, this workshop process is to provide an “open, inclusive, and cooperative forum” regarding the “potential” of thermal energy networks to decarbonize buildings “in a manner that is *affordable* and *accessible*.” S.B. 1699 at 391 (emphases added).² Likewise, the legislation directs the Illinois Commerce Commission (the “Commission” or “ICC”) that “a regulatory structure for utility thermal energy networks” must “scale with *affordable* and *accessible* building electrification, *protect utility customers*, and promote the successful planning and delivery of thermal energy

¹ See “Thermal Energy Network Forum,” available at <https://www.icc.illinois.gov/informal-processes/Thermal-Network-Energy-Providers>.

² Available at <https://www.ilga.gov/legislation/103/SB/PDF/10300SB1699lv.pdf>.

networks.” *Id.* at 392 (emphases added). To comply with the purpose and intent of this legislation, a review of the potential of thermal energy networks must include a thorough and critical assessment of all consumer costs and benefits.

While the People appreciate the environmental benefits afforded by TEN, the cost to build out such networks is—as acknowledged by presenters—expensive and capital-intensive. Because the existing gas pipes cannot be repurposed, deployment of a TEN will require the installation of completely new pipes.³ It will also require drilling hundreds of feet into the ground, which will necessarily implicate numerous parcels of property, permitting, and other community oriented, administrative, and regulatory challenges. None of these challenges are insurmountable, but they must be carefully considered in terms of transactional costs, especially in light of rising utility bills⁴ as the State implements the Climate and Equitable Jobs Act (“CEJA”, Public Act 102-0662).

The People are encouraged by the potential of TEN to play a role in that transition. However, as the People comment below, questions about ownership, markets, and rate structure are inherently difficult to answer at this preliminary stage. That said, this workshop process is an important first-step for stakeholders, Staff, the ICC, and policymakers to start to gauge the costs and benefits of TEN, and its potential to be a material energy efficiency tool. The People offer their comment herein with the aim of focusing discussion on customer costs.

II. COMMENT

- *Different ownership models must be thoroughly vetted.* This should include the identification and consideration of existing and potential utility and private-sector,

³ “Utility Pilot Project Data,” presentation by Isabel Varela, Workshop #1 Recording (Nov. 15, 2023). Available at <https://www.icc.illinois.gov/informal-processes/Thermal-Network-Energy-Providers>.

⁴ Many of CEJA’s goals are funded by consumers through surcharges on utility bills, such as the growth in the Renewable Portfolio Standard, the nuclear subsidies, increased energy efficiency spending, and the transition charge pursuant to the Energy Transition Act. 20 ILCS 730/5-1 *et seq.*

competitive business models, and of the ways each such model enables (and disables) the achievement of affordable and accessible economies of scale for thermal energy networks.

- Utility ownership would impact the competitiveness of existing business models and may stifle and/or weaken existing market discipline and emerging market advancements. Such consequences, unintended or otherwise, should be identified, evaluated, and modeled to ensure next steps and related policies thoughtfully promote the market to incentivize consumer affordability and accessibility.
- Ownership is a “big question” for the Sustainable Square Mile initiative in Chicago’s West Woodlawn community; “based on the community foundation study” and “the community voice process thus far,” the gas utilities are the “last person” the community wants owning the TEN.⁵
- A June 2021 report from the New York State Energy Research and Development Authority (“NYSERDA”) identified eleven conceptual business models along a “continuum” that attempted to account for increasing legal, regulatory, and transactional complexities.⁶ The table below shows the eleven business models from the NYSERDA report, along with its determinations of whether that model provided positive (green) or negative (red) attributes for scalability (technical economies), property, regulatory, and administration issues.⁷

⁵ “Chicago Sustainable Geothermal,” presentation by Andrew Barbeau, Workshop #2 Recording (Nov. 29, 2023). Available at <https://www.icc.illinois.gov/informal-processes/Thermal-Network-Energy-Providers>.

⁶ “Overcoming Legal and Regulatory Barriers to District Geothermal in New York State,” NYSERDA, Final Report at 34–41 (June 2021).

Available at https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwjbl8vk-P-CAxWLv4kEHVnvCgEQFnoECBsQAQ&url=https%3A%2F%2Fwww.nyserdanyny.gov%2F-%2Fmedia%2FProject%2FNyserda%2FFiles%2FPublications%2FResearch%2FClean-Power-Innovation%2F21-22-Overcoming-legal-and-Regulatory-Barriers-to-District-Geothermal-in-NY.pdf&usg=AOvVaw1qb_TM026FfmnOVW9OYT_m&opi=89978449

⁷ *Id.* at 40–41.

	Technical Economies	Property	Regulatory	Admin
Single Property—Single Owner	Red	Green	Green	Green
Single Property—Single Owner—Multiple Users	Green	Green	Yellow	Green
Single Property—BOOT	Green	Green	Yellow	Green
Single Property—Common Developer—Subdivide	Green	Green	Yellow	Green
Single Property—Multiple Users/Owners	Green	Yellow	Yellow	Green
Multiple Properties—Multiple Owners—Common	Green	Yellow	Yellow	Green
Multiple Properties—Different Owners—No Regulation	Green	Red	Red	Red
Multiple Properties—Different Owners—Market Pricing	Green	Red	Yellow	Yellow
Multiple Properties—Different Owners—Regulated Utility	Green	Red	Yellow	Yellow
Multiple Properties—Different Owners—Municipal Utility	Green	Red	Yellow	Yellow
Multiple Properties—Different Owners—Fully Integrated	Green	Red	Yellow	Yellow

- Consistent with Senate Bill 1699, the NYSERDA report stated that it is “essential” for policymakers to take account of “consumer affordability and environmental consideration,” and “reduc[e] the cost of utility geothermal by promoting competitive, transparent, and economically efficient markets ... before any other policy intervention is considered in respect to utility geothermal.”⁸
- Proposed thermal energy legislation in Vermont seeks to expand the entities that its commission can authorize to operate geothermal networks beyond just existing utilities, and to enable those entities to recover their costs through rates paid by customers.⁹

➤ ***Maximize cost-benefits for consumers by leveraging market data from public, private developers.*** Senate Bill 1699 states that the process of determining potential development of TEN needs to protect utility customers. Achieving this intent requires transparent disclosure of the costs of these initiatives. Only through this disclosure and analysis can stakeholders fully consider the cost-benefit impacts of TEN. Such information is critical

⁸ *Id.* at 50.

⁹ Vermont House Bill 242 (Feb. 14, 2023) (“[P]ermitting, construction, and operation are not limited, legally or by regulatory burden, to existing utilities”). Available at <https://legislature.vermont.gov/Documents/2024/Docs/BILLS/H-0242/H-0242%20As%20Introduced.pdf>.

given affordability issues that remain an exigent concern among Illinois residents and policymakers. Collections reports filed by the state’s large utilities show a significant number of customers remain consistently unable to pay their bills. For example, between August 2022 and August 2023, data show approximately one in four residential customers of Peoples Gas, one in five of Nicor, and one in six of Commonwealth Edison, are assessed late payment charges.¹⁰ Given these circumstances, alternative funding mechanisms that will avoid imposition of more costs onto consumers to fund TEN initiatives such as demonstration projects should be thoroughly explored, and at all times preferred over utility ratepayer funding.

- Data will be collected and made available from Eversource’s pilot program in Framingham, Massachusetts.¹¹ The People understand that this will include information on how much energy customers are saving compared to their previous heating/cooling systems, and calculations on emission reductions.
 - It is worth noting that Eversource, National Grid, and Con Edison are combination utilities whereas two of the three large natural gas utilities serving Illinois customers are gas-only utilities. This may pose reporting and data sharing issues between gas-only utilities and Commonwealth Edison, as well as conflicts of interest.

¹⁰ CEJA codified twenty-two (22) metrics, including most of the sixteen (16) metrics required in the June 18, 2020 Stipulation. Section 8-201.10 require each “public utility [to] report to the Commission by the 15th day of each month” the metrics “for the immediately preceding month[.]” 220 ILCS 5/8-201.10(b). The utility compliance reports must be “ma[d]e publicly available in executable, electronic spreadsheet format,” and be provided “by zip code.” *Id.* See <https://www.icc.illinois.gov/industry-reports/credit-collections-and-arrearages-reports/monthly-dashboard>.

¹¹ See fn. 3, *supra*.

- The Eversource pilot program is reported to cost \$14.7 million.¹² Eversource indicated it is paying all setup costs (“free”) for those customers who voluntarily agreed to be part of the system and that customers will pay a monthly flat-fee, which will be reevaluated as data is gathered; further, a single-home installation for geothermal heat can cost \$50,000.¹³ Gathering all cost information is critical for stakeholders to better understand scalability, the cost to individual consumers who would like to use TEN, determine what rate structures are most feasible, and calculate direct and indirect cost impacts on utility customers.
- While the Eversource pilot program is the first gas utility to run a TEN, community scale thermal systems, while rare, have been deployed by other developers. Whisper Valley, Texas was identified as an existing TEN that was generally unharmed during extraordinarily frigid temperatures in February 2021.¹⁴ Notably, this TEN community appears to have been built as part of new development.¹⁵ Other existing TEN in use include Colorado Mesa University located in Grand Junction, CO and Olivette in Asheville, NC.¹⁶ Engagement with these and other third-party TEN companies could enhance stakeholder perspectives and opportunities for data sharing. Whisper Valley and Olivette suggest, for example, that undertaking TEN with new development projects may be preferable as these

¹² Peters, Adele, “In this Massachusetts neighborhood, nearly every home is switching to geothermal energy,” Fast Company (June 13, 2023). Available at <https://www.fastcompany.com/90907992/in-this-massachusetts-neighborhood-nearly-every-home-is-switching-to-geothermal-energy>.

¹³ “Utility Networked Geothermal Pilot in MA,” presentation by Nikki Bruno, Workshop #2 Recording (Nov. 29, 2023). Available at <https://www.icc.illinois.gov/informal-processes/Thermal-Network-Energy-Providers>.

¹⁴ “Thermal Energy Networks - National Landscape,” presentation by Ania Camargo, Workshop #1 Recording (Nov. 15, 2023). Available at <https://www.icc.illinois.gov/informal-processes/Thermal-Network-Energy-Providers>.

¹⁵ See <https://www.whispervalleyaustin.com/>.

¹⁶ See Geo-Grid System at <https://www.coloradomesa.edu/sustainability/initiatives/geo-grid.html>; see Olivette at <https://www.olivettenc.com/2019/05/geothermal-heating-and-cooling/>.

would not include the high costs that result from retiring and replacing existing natural gas networks and heating systems, and with retrofitting existing homes and buildings.

- The geothermal energy (or ground-source heat pump) market is currently subsidized through various tax benefits and grants at the federal, state/utility, and local levels. For example, the Inflation Reduction Act increased the geothermal federal tax credit for residential installations from 26% to 30% until 2032.¹⁷ At the utility level, Ameren Illinois and Commonwealth Edison also offer heating and cooling rebates for ground-source heat pumps of \$500 per ton (up to \$25,000), and \$1,500 per ton (up to \$9,000).¹⁸ While financial incentives can promote the deployment of TEN or other geothermal heat and cooling projects, the total cost of implementation is a key factor in assessing the most appropriate way to develop a market for TEN.

➤ ***Rate structures should promote competitive, transparent, and efficient markets.*** Given that TEN communities are rare and few, if any, pilots are off-the-ground, data appear to be either unavailable or incomplete. However, the NYSERDA report did set forth several principles that New York’s commission adopted when considering demonstration projects. Those principles include (1) “[s]eparation of utilities from generation assets, with partnerships between a utility and third-party service provider;” (2) “[p]roviding economic value for customers, the utility, and third-party service provider(s);” (3) “[a] competitive market in which a utility only acts as the service provider in exceptional circumstances,

¹⁷ “Geothermal in the Midwest,” Illinois Geothermal Coalition, at Section 4. Available at <https://geothermal.illinois.edu/wiki/> (last visited December 6, 2023).

¹⁸ *Id.*

such as when a market remains unwilling to provide services on commercially acceptable terms, or to enable low- and middle-income customers to receive the benefits of DERs;” (4) “[i]f demonstration projects are initially uneconomic, rules should promote the development of competitive markets;” and (5) “[d]emonstrations should inform pricing and rate design modifications.”¹⁹

Consistent with Senate Bill 1699’s objective to protect utility ratepayers and promote affordability and accessibility, the NYSERDA report concluded that rate design approaches should ensure that consumers remain free to choose to install their own household system because this “imposes market discipline on utility geothermal providers,” and that any subsidization of utility geothermal consumers should “only be justified after costs are reduced to the point these systems are economic, taking externalities into account, and then adopted on a targeted basis.”²⁰

III. CONCLUSION

Questions about ownership, markets, and rate structure, are big questions that carry with them major implications for existing markets and consumers. As such, it is important that decisions be made regarding these questions only after thorough consideration of issues and questions, and engagement with all stakeholders, including but not limited to state and local agencies (e.g., Illinois Department of Public Health, Illinois Environmental Protection Agency, Department of Commerce and Economic Opportunity), municipal utilities (e.g., Metropolitan Water Reclamation District, municipal water and energy systems), and third party developers that principally contemplates a data-driven approach that takes full account of costs and benefits. This

¹⁹ See fn. 5, *supra*, at 50–51.

²⁰ *Id.* at 51.

is essential to ensuring consumer affordability and accessibility stay at the forefront of developing any potential TEN initiative.

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Respectfully Submitted,

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