New York Geothermal Energy Organization

September 22, 2025

Senator Liz Krueger
Senator Pete Harckham
New York State Senate
Legislative Office Building
Albany, NY 12247

Re: Legislative & Policy Recommendation for Ground Source Geothermal Systems

Executive Summary

Ground source geothermal systems (GSHPs and thermal energy networks) represent one of the most reliable, cost-effective, and equitable strategies to decarbonize New York's building sector. Both the New York State Climate Action Council's Final Scoping Plan (2022) and the Draft New York State Energy Plan (2025) – Buildings Chapter identify geothermal as a cornerstone of the state's climate and energy future. Despite this recognition, deployment remains limited due to high upfront costs, outdated regulations, and uneven access for low- and moderate-income (LMI) households. Legislative action is necessary to unlock geothermal's potential, scale deployment, and ensure benefits are shared across all communities.

Background

The buildings sector accounts for ~31% of statewide greenhouse gas emissions (2022), largely from fossil fuel combustion for heating and hot water. The Climate Leadership and Community Protection Act (CLCPA) mandates an 85% emissions reduction by 2050, requiring rapid adoption of zero-emission heating technologies. The Scoping Plan (2022) projects that by 2030, 1–2 million homes must adopt efficient heat pumps, and by 2050, 85% of building space must be electrified. The Draft State Energy Plan (2025) emphasizes geothermal's role in providing resilient, low-carbon heating for residential and commercial buildings, thermal energy networks, and demand management.

The Role of Geothermal Heating and Cooling

Geothermal Heating and Cooling offers unique benefits that are recognized by the 2022 Scoping plan and the 2025 Draft State Energy Plan:

- Affordability: New York residents installing geothermal now will see smaller electricity bills. When New York's grid switches to a "winter-peaking" one, Geothermal will keep winter heating costs way down.
- Efficiency: 3–5x more efficient than conventional fossil heating.
- Reliability: Provides stable heating and cooling regardless of outdoor temperature.

About NY-GEO: The New York Geothermal Energy Organization (NY-GEO) is a non-profit trade organization representing geothermal heat pump (GHP) installers, manufacturers, distributors, drillers, consultants, and industry stakeholders from throughout New York State and beyond.

- Scalability: Serves individual homes or entire neighborhoods through community scale geothermal including thermal energy networks (TENs).
- Durability: Underground loops last 50+ years, offering long-term value.
- Equity: Can reduce long-term energy bills for LMI households and improve housing quality.
- Grid Benefits: 60 to 80% of the energy supplied by geothermal heat pumps is renewable energy supplied by the earth, even on the coldest and hottest days. This means building electrification needs to be based on geothermal to minimize the need for an expensive buildout of the electrical grid.

Both 2022 and 2025 state plans highlight geothermal's potential for job creation, particularly in transitioning union gas utility workers into TEN development and maintenance.

Current Policy Landscape

NYSERDA's 2021 District Geothermal Study outlines how to overcome legal and regulatory barriers to district geothermal systems, which serve multiple buildings from a shared loop. The plan recommends clarifying ownership models, utility roles, and financing mechanisms to scale deployment. (https://www.nyserda.ny.gov/-/media/Project/Nyserda/Files/Publications/Research/Clean-Power-Innovation/21-22-Overcoming-legal-and-Regulatory-Barriers-to-District-Geothermal-in-NY.pdf)

- State Geothermal Income Tax Credit: 25% of system costs, capped at $5,000 (expanded in 2025 to $10,000 and made refundable).
- Federal Inflation Reduction Act (IRA): 30% commercial tax credit for geothermal through 2032, plus a 10% bonus for projects meeting labor or domestic content standards was maintained in the 2025 spending package that repealed most of the IRA.
- Thermal Energy Networks Act (2022): Authorizes utilities to pilot geothermal-based district systems.
- Regulatory Barriers: The Department of Environmental Conservation (DEC) currently regulates geothermal wells deeper than 500 feet under oil and gas drilling rules, adding unnecessary costs and delays.

These efforts touch on the state's ability to move forward on its journey of decarbonization through long-term planning, however these opportunities require an immediate call to action:

- Climate Goals: Scaling geothermal is essential to meet CLCPA mandates and reduce reliance on fossil fuels.
- Equity: Directing 35–40% of benefits to disadvantaged communities ensures affordability and energy justice.
- Workforce: Gas utility workers possess transferable skills for geothermal drilling and thermal network installation.

- Economic Growth: Building out geothermal supply chains in New York can create tens of thousands of union jobs.

NY-GEO would like to thank the Legislature for the significant steps it has taken to spur climate action and to provide a more level playing field for geothermal as one of New York's key climate solutions. The Legislature has shown wisdom in passing the following bills and budget measures:

1. The Climate Leadership and Community Protection Act in 2019, sets aggressive and legally binding goals for greenhouse gas reduction in New York.
2. The state 25% residential geothermal tax credit capped at $5,000 in 2022.
3. The Utility Thermal Energy Network and Jobs Act in 2022.
4. The All-Electric Building Act for new buildings in 2023.
5. S.6604/A.6949 to allow and regulate geothermal boreholes deeper than 500 feet in 2023.
6. The repeal of the 100-foot rule to provide a more level playing field for heating technologies in 2025.
7. The increase of the cap on the geothermal tax credit to $10,000 and making it refundable in 2025.

Legislative Recommendations

To accelerate ground source geothermal adoption in New York State, several legislative actions are currently needed or actively being pursued. These would build on recent wins like the borehole regulation reform and expanded tax credits and push geothermal into the mainstream of clean energy policy.

1. Scale Thermal Energy Networks
    - Require utilities to integrate geothermal heating and cooling TENs into long-term energy planning.
    - Establish a state bonding authority to fund community-scale geothermal infrastructure for both TENs and individual ground loops.
    - Urge Governor Kathy Hochul sign into law a repeal of the 100-foot rule (passed both houses of the legislature - Senate Bill S.8417 / Assembly Bill A.8888) aligning the NY HEAT ACT and removing a structural subsidy for new natural gas hookups.
2. Create a Geothermal Renewable Credit (GREC) Market
    - NYSERDA & PSC New York should monetize the environmental benefits of using geothermal energy for heating and cooling via Geothermal Renewable Energy Credits (GRECs) under the NYSERDA Tier 1 REC program.
    - By adding geothermal energy systems to the Tier 1 REC program, and carving out a percentage of the Renewable Portfolio, owners of geothermal energy systems will earn

Renewable Energy Credits (RECs), further reducing their electricity bills while helping fellow ratepayers avoid paying for unnecessary fossil fuel infrastructure investments.

- This model has seen success in Maryland, where deep energy efficiency progress has been made through the adoption of renewable energy credits, and where the geothermal industry has begun to expand too. The framework would be modeled after Maryland's Renewable Portfolio Standard which encourages adoption of geothermal technologies by allowing system owners to earn Renewable Energy Credits (RECs) for the thermal energy their systems produce.
- When factoring GRECs into the return on investment (just like NYSERDA's Tier I RECs), geothermal systems become more competitive with traditional HVAC systems. This can help to attract investors and justify higher capital expenditures for deeper retrofits. GRECs will help to recognize geothermal as part of the clean energy transition, encouraging broader adoption and support.

3. Sales Tax Exemption

- In 2015, the Legislature passed a bipartisan Sales Tax Exemption bill (S4279/A5508) for geothermal equipment modeled on the existing exemption for solar equipment. Governor Cuomo vetoed this bill because it was passed outside of the budget. NY-GEO asks that this measure be passed as part of the upcoming budget.

4. Invest in Workforce Development

- Fund union-led training programs to transition gas utility workers into geothermal installation and maintenance similar to what the New York Power Authority is doing under its Clean Energy Workforce Training program.
- Create a dedicated Office of Just Transition for geothermal and clean energy jobs similar to the Governor's Office of Semiconductor Expansion, Management, and Integration (GO-SEMI).

5. Rights of Way

- Particularly in urban areas, there is often inadequate space to drill geothermal boreholes. Legislation to give geothermal drilling equal access to public rights-of-way would expand the opportunity to install the more efficient and grid beneficial technology as we electrify the building sector.

6. Bonus Depreciation

- Recent federal legislation makes 3rd Party ownership of geothermal systems possible. This would eliminate the upfront cost barrier that is holding back the geothermal market. New York's rules for Bonus Depreciation are different than the federal rule and bringing them into sync could be a crucial step allowing 3rd party ownership to take off in NY.

Policy Recommendations

We also want to take this opportunity to make your offices aware of policy recommendations that do not require legislative action, but that would benefit the geothermal industry and New York's efforts to meet its climate reduction goals. We welcome your leadership and partnership in these areas.

1. Target Equity and Affordability at NYSERDA

    - Guarantee that 35–40% of state geothermal investments flow to disadvantaged communities.
    - Expand Green Jobs-Green NY to provide free or discounted energy assessments, greater incentives for geothermal heating and cooling, and no-cost financing for LMI households.

2. Enable Utility Rate Structure Revisions Through the DPS

    - Develop rate structures that are based on cost and causation principles which recognize the infrastructure offsets that GSHP's create. For instance, consider deploying a Global Adjustment (GA) charge that is inversely related to the wholesale electricity price—when market prices drop, GA rises to cover fixed costs. This encourages smart energy management, can be based on the top 5 peak hours of the year and can be paired with thermal storage. It is designed to shift heating & cooling loads to off-peak, helping the grid and making geothermal systems financially attractive. Such rate incentives will help to expand geothermal systems where needed such as constrained electric networks.
    - Revise the Public Service Law to allow a well thought out process for non-pipe alternatives where funding that would have gone into a line extension or replacement can be used to help fund the electrification of affected homes.

Conclusion

Ground source geothermal represents a once-in-a-generation opportunity to cut emissions, lower energy bills, and create high-quality union jobs while meeting CLCPA goals in a way that supports the electric grid. Legislative leadership is critical to remove regulatory barriers, expand financial support, and align geothermal deployment with equity and workforce priorities. By acting now, New York can lead the nation in geothermal deployment and deliver a cleaner, fairer energy future that meets its decarbonization goals.

About NY-GEO

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