



NY GEOTHERMAL ENERGY ORGANIZATION

Secretary Burgess
NYS Public Service Commission
Three Empire State Plaza
Albany, NY 12223-1350

January 23, 2018

Re: NY-GEO comments on the Joint Proposal in 17-E-0238/17-G-0239

Dear Secretary Burgess:

Please file the Attached set of comments regarding the Joint Proposal in cases 17-E-0238/17-G/0239 to which NY-GEO is a signatory

Sincerely,

Bill Nowak

Bill Nowak
Executive Director, NY-GEO
518-3136-GEO
nygeoinfo@gmail.com

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

NY-GEO salutes National Grid for including an Electric Heat Initiative in its initial rate filing in case 17-E-0238/17-G-0239. We express our appreciation to Department of Public Service Commission staff and the other parties in this case for including the Electric Heat Initiative, as well as an Electric Transportation Initiative, in section 13.9 of the negotiated Joint Proposal.

We are further encouraged by section 13.10, which provides a process to develop an alternative rate structure that may rectify the current scheme under which heat pump customers pay excessive volumetric delivery charges.

For these reasons we have agreed to sign the Joint Proposal

That being said, NY-GEO believes it is important that this settlement proposal be seen as a floor and not as a ceiling as New York State begins working through the process of recognizing the important benefits of beneficial electrification in protecting New Yorkers as rate payers and as citizens in need of a clean environment and a stable climate.

New York's regulatory scheme has been one of silos where energy program funding generated by electric customers can be spent narrowly only on reducing electric usage and gas customer generated funding can be spent only on reducing gas usage, but not replacing it. Moving from fossil fuel heating to renewable heating and cooling does not fit in either silo and has been largely unsupported.

Although deficient, the silo scheme may have worked before there was a need to replace fossil fuel heating with renewable heating to meet New York's climate goals. Approximately 1/3 of the fossil fuel greenhouse gases (GHG) in New York come from heating buildings and the State has no chance of meeting its goal of a 40% reduction of GHG emissions without a rapid transition from fossil fuel heating to renewable heating.

The silo system also may have been acceptable before the growing realization that heat pumps, and geothermal heat pumps (GHP) in particular, can provide substantial grid value to rate payers in the form of:

- lower energy bills
- reduced peak consumption of both electricity and gas
- significant gains in energy efficiency
- opening the heating sector to distributed energy penetration, and
- tapping the solar heat in the earth as a storage medium, allowing the transformation of the heating sector to renewables without the intermittency and storage issues endemic to renewables in the electric sector.

New York has taken the first step in embracing fuel switching technologies in the structure of the Clean Energy Fund, but in the meantime legacy programs, which contain significant funding pools, remain inaccessible to renewable heating and block monetization of the benefits listed above.

Energy Efficiency Transition Implementation Plans (ETIPs) are an example of a rich pool of funds that remains inaccessible to GHPs even though they may be the most potent measure for energy efficiency available to building owners in New York today. This is so because GHPs eliminate on-site fossil fuel use while making use of a significantly smaller amount of electrical energy to run the pumps and fans of a geothermal system.

NY-GEO has actively pursued discussing these benefits with the energy leadership of New York State and has found that monetizing these benefits under the Reforming the Energy Vision (REV) initiative has generally been seen as a desirable outcome.

We have had representation in the REV Value of Distributed Energy Resources (VDER) process and have been left with a confusing situation. Rapid change is needed NOW if NY is to meet its REV goals for reduction of carbon, peak demand, customer bills, etc. However, the VDER process is focused on solar and not likely to address renewable heating in the near future. At the same time, rate cases which will shape energy practice for the next few years, are ongoing.

We had, perhaps naively, thought that the time was ripe for monetizing these benefits within ongoing rate cases. We believe that GHP has a potent role in helping utilities meet their Earning Adjustment Mechanism (EAM) goals related to energy intensity, energy efficiency, peak demand, carbon, distributed energy and storage.

The funding streams available to these goals are far richer than the stream that had been proposed for the Electric Heat Initiative, and as first time participants in a complex rate negotiating process, NY-GEO negotiated poorly on the Electric Heat Initiative. We had our eyes on the larger picture of ways to let the company access funding GHPs as a potent means of reaching EAM goals.

NY-GEO eventually came to understand that accessing that funding was not possible within the scope of the negotiations given the current regulatory framework and the mindset of the parties negotiating the settlement. We remain committed to working with New York's energy leadership to find the proper mechanism for opening access. In the meantime we erred in allowing the funding stream for beneficial electrification to be reduced instead of pushing to have it increased to an adequate level.

We are left with an agreement that provides inadequate funding for beneficial electrification measures in the Niagara Mohawk service area. In the absence of a NY State glide path for GHG reduction in the heating sector, NY-GEO has turned to calculations by complex systems analyst and architect Jerry Acton, showing a need to convert an average of 177,000 buildings per year from fossil fuel heating to heat pumps in order to meet New York's 40% by 2030 goal for GHG

reduction. The settlement shares \$2 million per year between GHP and air source heat pumps as well as electric vehicles. After subtracting program expenses, the funds left for incentives, while an important start and precedent, will not come close to getting us on an adequate glide path.

We ask that, as soon as possible, the Commission take steps to begin monetizing for building owners the benefits that heat pump installations bring to the grid and to other rate payers. It is not fair that building owners bear the full up-front cost of a measure that benefits other rate payers by *reducing* peak demand, energy intensity and carbon emissions and *increasing* energy efficiency and distributed energy penetration – benefits that have the impact of lowering rates and protecting our common environment, and that are meant to be addressed through EAMs under REV.

This may mean setting up a new, more urgent path within VDER or a separate proceeding. NY-GEO would welcome either.

Regarding Section 13.10:

The main barrier to GHP adoption is upfront costs. GHP is **not expensive** relative to other heating technologies over the long life of a GHP system. But it is a technology that is **unaffordable** to many building owners because so much of the costs are up front. For that reason NY-GEO prefers that most of the benefits that GHP brings be monetized in the form of rebates and other up front incentives, as anticipated in the Electric Heat Incentive program.

However, there is one benefit that, in our opinion, is best monetized through rate design. That is the excessive volumetric delivery charges paid by heat pump owners when they increase electricity use without adding to utility delivery costs.

As noted above, the joint proposal leaves open the possibility of adequately addressing this concern. This can happen through the Alternative Rate Structure process outlined in section 13.10. We look forward to working with the Company and the Commission to develop an appropriate rate that gets heat pump customers closer to a Rate Impact Measure (RIM) of 1, meaning they would no longer be subsidizing other residential electric customers

Finally, regarding gas expansion, we urge the Commission to consider 4 steps:

1. Develop a Benefit Cost Analysis that adequately evaluates all of the benefits and costs involved with gas expansion in light of the need to transition to renewable heating and cooling.
2. Begin a process to understand what managed gas industry decapitalization will mean for utility customers in New York. It is important to understand the weight of stranded assets before they are paid for with ratepayer money.
3. Reconsider New York's treatment of methane GHG emissions. Methane is a far more potent greenhouse gas in a 20 year time frame than carbon dioxide (CO₂). NY-GEO believes it is incorrect to be using methane's 100 year CO₂ equivalency in Benefit/Cost

Analyses as opposed to using a shorter term equivalency as New York is targeting a 40% GHG reduction in a 12 year time frame (to 2030) and 80% in a 32 year time frame (to 2050). We also urge New York to take a second look at the leakage rate used to calculate methane's GHG contribution, using the latest science.

4. Lastly, if after these steps, the Commission finds it desirable to encourage oil and propane customers to switch to Ngas heating, NY-GEO proposes that the current paradigm of "gas expansion" be switched to one of "oil and propane relief". Under this paradigm, resources would be available in equal measure for customers to switch from oil or propane to gas or to heat pumps, at their choice. Customer education and marketing would provide a balanced appraisal and NiMo spending to help the customer would be equal, regardless of the customer choice.