Testimony for LIPA Commission Public Hearing

My name is Billii Roberti, and I live in Huntington Station. I am a homeowner who has solar PV and a geothermal heat pump system from a deep energy retrofit we did in 2010. I learned a lot and as a result, I started Green Choices Consulting.

I am a member of the Town of Huntington Advisory Committee on Energy Efficiency, Renewables and Sustainability. I am a founding member of the New York Geothermal Energy Organization (NY-GEO), the geothermal heat pump (GHP) trade association and earned an International Ground Source Heat Pump Association Accredited Installer certificate. I belong to the statewide Renewable Heat Now campaign, a statewide coalition of over 20 grassroots organizations working for the adoption of heat pumps. All of these positions have broadened and deepened my expertise.

I also belong to the Reimagine LIPA campaign. I believe LIPA, as a nonprofit public electric utility, must be restructured to be locally controlled and to fully operate its grid. It needs to improve consumer participation and invest its revenues in upgrading the grid to make it more reliable, resilient, and renewable.

Our world is changing in response to the climate crisis, and LIPA must transform too. It needs a new paradigm that abandons the business-as-usual policy. New York State is aiming to electrify everything by 2050 and Long Island must too. As our electric system needs to evolve, so must LIPA.

Renewable Heat Now and NY-GEO are planning for this transition. To follow this path, LIPA needs quality research to plan for this all-electric future. Reimagine LIPA proposes the establishment of an Energy Observatory, an independent institution to do unbiased research that guides LIPA’s decision process, monitors it, and engages ratepayers and communities to support their needs.

Electricity consumption on LI has gone down due to energy efficiency measures, but it will gradually rise due to electrification, which poses challenges as well as provides benefits. Heating, cooking and hot water appliances will run on electricity. But heating will not be done with electric resistance coils. Instead, heat pumps, which are 2-5 times more efficient, will provide both heating and cooling.

As more customers switch to heat pumps, revenue will rise as more heating dollars are diverted to LIPA and away from fuel companies. Is anyone looking at evolving patterns of usage due to electrification and its likely effect on both LIPA’s increasing revenues and power needs? The Observatory is the perfect group to do this by testing various adoption scenarios to determine future needs.

Heat pumps offer many benefits to LIPA and *all* its ratepayers, and yet they are not promoted or incentivized enough. Heat pumps add load in winter when there is plenty and cut it in summer when consumption is high. Balancing out demand across the year will make LIPA operations more efficient and improve its load factor, which reduces both strain on the grid and the need for *new generation capacity*.

A major adoption of GHPs would lessen LIPA’s projected capacity needs that were recently estimated by the NY Independent System Operator (NYISO). Each 1% improvement in system efficiency (i.e., annual power plant capacity utilization) would yield between $221-330 million in annual savings across the state. This lowers the supply and delivery investment needs. Statewide grid efficiency in 2015 was 51%; LIPA’s was 44% due to our higher summer peak demand.

With this increased savings and revenue, LIPA could invest in owning renewable electricity generation and avoid buying through the NYISO.

The new Utility Thermal Energy Network and Jobs Act passed by the state legislature this year removes the legal barriers to utilities like LIPA developing them. A TEN is a district-wide geothermal loop system that draws excess heat from buildings such as data centers and grocery stores, which consume a lot of electricity to cool computers and food and directs it where it is needed.

For customers, joining a TEN cuts the upfront cost of a GHP in half by avoiding the cost of a loop system. This makes GHPs more appealing, further fueling the conversion, and exponentially growing LIPA revenues.

TENs can also provide a new and exciting revenue stream if LIPA owns them and charges a small fee to be connected to the network. Like solar and wind energy, TENs have no fuel costs. LIPA could also bury electric lines while installing these loops.

In summary, heat pump owners are the pioneers who are showing LIPA what the future consumption of electricity will be on Long Island as we move into an all-electric world. The future will be radically different from the present, please plan for it. This is our future, and it is starting now.