Written Testimony for LIPA Commission Public Hearing

My name is Billii Roberti, and I live in Huntington Station. I am a homeowner who has a solar PV and geothermal heat pump system as part of a whole house deep energy retrofit we did in 2010. In the two years prior to implementing this green renovation, my husband and I immersed ourselves in research and planning. I became well-versed in building envelopes, rooftop solar and the features and benefits of heat pumps.

When I shared my experience with others, I discovered most people do not know how to go green. They are also unaware of what is ahead with climate change adaptations and state climate legislation. As a result, I started my own energy efficiency and renewable energy company, Green Choices Consulting, which advises Long Islanders on green energy retrofits.

In 2011 I joined the Town of Huntington Advisory Committee on Energy Efficiency, Renewables and Sustainability and later became a founding member of the New York Geothermal Energy Organization, the geothermal heat pump (GHP) trade association. Later I earned an International Ground Source Heat Pump Association Accredited Installer certificate.

I joined the new Mothers Out Front Long Island Team in 2017 and then the statewide Leadership Team. As the Mothers Out Front representative to the 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.

Along with other discontented LIPA customers, I joined the Reimagine LIPA campaign. It is a group of grassroots organizations that believe we must fully commit to a new paradigm of energy management in the LIPA service area. LIPA ratepayers deserve better than the service we have been receiving.

The PSEG/LIPA partnership is dysfunctional because the public-private model is unsuitable for an electric utility. The PSEG LI emergency management was pitiful. This is the second utility to run our electric system and fail to deal adequately with a natural disaster. The problem is having a middleman. LIPA needs to run the grid itself.

I am also on the PSEG customer outreach panel and its focus seems more on PSEG's public perception. It has no interest in what customers need or want.

Everyone seems to be focused on saving money, but **increasing revenues** is also important. As New York State begins to electrify everything, our electric system and LIPA need a new paradigm to transform and see itself differently.

I believe LIPA, as a nonprofit electric utility, must be locally controlled and fully operate its grid. This means private utility contractors such as PSEG-LI are eliminated. But this is not enough. LIPA must be restructured with an elected governing board directly accountable to the communities it serves. This will ensure LIPA responds to consumer needs and invests its revenues locally by upgrading the grid to make it more reliable, renewable, and resilient. This is especially true as we become entirely reliant on our electric grid.

LIPA was originally intended to be a fully public utility as per the Long Island Power Act of 1985 that created it. It never was. So, I was delighted with the 2022 passage of the New York State Legislative Commission on the Future of LIPA bill.

The directive for the Future of LIPA Commission is clear, "...to investigate and evaluate the establishment of a public power model for the operation of LIPA, whereby the authority would directly operate the utility as a true public power authority..."

The Future of LIPA website says, "The Legislative commission...was established in 2022 to develop and present...a true public power model...This means LIPA would directly provide electric service to the more than three million residents and thousands of businesses in its service area without contracting out that responsibility to an investor-owned, for-profit utility."

I have been following developments in *Newsday* and was present at the inauguratory Advisory Committee meeting. But recently, I have become confused by hearing the term "all options considered" bandied about.

Are we going to waste more time—especially when the Commission is behind schedule—considering the privatization option or whether to continue this failed public-private "partnership"? These two options were analyzed in 2005, 2011, and 2013 and in the 2021 Phase II Options Analysis for the Management of LIPA Assets, which has shown it will cost us too much more money.

This is because a private company will have to refinance the $10 billion LIPA debt at a higher interest rate. In addition, a private company must make a profit for its stockholders and pay income taxes and cannot qualify for FEMA disaster reimbursement. All of these costs would be passed on to the ratepayer.

Of course, PSEG promotes continuing the public-private model from which it benefits, but not the ratepayer. It has all the disadvantages of privatization, but with an extra layer between the ratepayer and LIPA. This model has failed repeatedly because it is not suited to operating any electric utility.

We are in the midst of a climate crisis. Our world is changing in response to it, 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.

Did you know there are thousands of geothermal heat pump owners on Long Island and a growing number of air source heat pump owners as well? We are the pioneers who have abandoned fossil fuel heating to lower our heating bills, decrease our greenhouse gas emissions, and reduce our carbon footprint.

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. GHPs level out demand the best. 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***,* meaning *it would need fewer new power plants*. LIPA would need less capacity than previously required for that one or two peak consumption days of summer.

A major adoption of GHPs would lessen LIPA's projected capacity needs that were recently estimated by the NY Independent System Operator (NYISO). In 2015, the Department of Public Service (DPS) estimated that each 1% improvement in system efficiency (i.e., annual power plant capacity utilization) would yield between $221-330 million in annual savings to ratepayers across the state. This is due to lower need for supply and delivery investments. Based on this, Greg Hale, former Senior Energy Advisor to Governor Cuomo, estimated electric utilities could save $2 billion a year by increasing statewide power plant capacity from 51% to 59%. A DPS manager told me that same year that the LIPA grid was 44% efficient due to our high summer peak demand.

With this increased savings and revenue LIPA could invest in hardening the grid by burying power lines and/or reducing electric rates. Since heat pump owners rely on electricity for heating in winter, we need a really reliable electric system, with no brownouts and rare power outages.

To plan for eventual mass electrification, LIPA needs quality, unbiased research to plan for an all-electric future. The Reimagine LIPA proposals include the establishment of an Energy Observatory, an independent institution to monitor and advise LIPA, do independent research, engage ratepayers, and communities to support their needs.

Electric rates will need to be closely examined to discover what each charge covers for the PSEG bill has many hidden charges. People need to know how much they are paying each month on the Shoreham debt, infrastructure maintenance, grid upgrades to accommodate more renewables, their own consumption, and other LIPA costs. Is the debt level of $10 billion the norm for an electric utility?

The current delivery charges are higher for those who heat with electricity since it contains volumetric rates. Do you realize this subsidizes those who heat with fuels? The cost of delivering electricity to me and my neighbors is the same, but since I consume more, I pay more. LIPA must beware of unintended consequences.

LIPA's revenue will rise as more heating dollars flow its way because customers are switching to heat pumps. With this increased revenue, it could also invest in owning renewable electricity generation and avoid buying through the NYISO.

Is anyone investigating the benefits to LIPA of the new Utility Thermal Energy Network and Jobs Act passed by the state legislature this year? It removes the legal barriers to utilities like LIPA developing, building, acquiring, and supplying thermal energy.

A thermal energy network (TEN) is a district-wide underground loop system used with geothermal heat pumps to provide heating and cooling to buildings. Installed below the frostline, the TEN consists of water-filled pipes that share the heating and cooling resources of a community. It is pooled among a diverse building stock, including homes, commercial buildings, and industry to balance out heating and cooling needs across the system.

TENs actually move energy, drawing heat from buildings with an excess, such as data centers and grocery stores—that right now consume a lot of electricity to cool computers and food—and direct that heat elsewhere where it is needed, such as homes. In the summer, when the heat is not needed it can be stored in the ground for later use or sent to heat sinks for dispersal.

A TEN is the ultimate in the efficient use of thermal energy because it simply circulates the heat. Even the water in the pipes stays there; there is no consumption.

For customers, joining a TEN cuts the upfront cost of a GHP in half by avoiding the cost of a loop system that they would otherwise have to pay to install themselves. 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 builds and 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 fact, in November, Eversource, the major electric and gas utility in Massachusetts, broke ground on the first networked geothermal installation by a utility.

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.