1 LONG ISLAND POWER AUTHORITY 2 -----X INTEGRATED RESOURCE PLAN (IRP) PUBLIC HEARING VIA ZOOM February 13, 2024 10:00 a.m. -----X 11 BEFORE: THOMAS LOCASCIO, LIPA Director of External Affairs MGR Reporting, Inc.

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1 2-13-24 - LIPA IRP Public Hearing 2 MR. LOCASCIO: Good morning, 3 everyone, and welcome to the second public session on LIPA's Integrated Resource Plan, 4 snow storm edition. 5 I'm Tom Locascio, LIPA's Director 6 7 of External Affairs, and on behalf of the Long Island Power Authority we want to extend a 8 9 warm welcome to all of you as we gather for a 10 discussion on our path forward in energy 11 management and sustainability. 12 Your presence here underscores the 13 importance of community engagement in shaping 14 the future of energy on Long Island and in the 15 Rockaways. 16 Today we're here to discuss LIPA's 17 Integrated Resource Plan, or IRP, a 18 comprehensive strategy that charts our course 19 towards a sustainable, reliable and resilient 20 energy future. The IRP is our blueprint for 21 22 meeting the growing energy needs of our region while prioritizing clean energy initiatives, 23 reducing carbon emissions and enhancing our 24 25 grid's resilience against the challenges of MGR Reporting, Inc. 1-844-MGR-RPTG

1 2-13-24 - LIPA IRP Public Hearing 2 tomorrow. 3 I want to acknowledge the team from PSEG Long Island who are on the Zoom, 4 panelists, who led the technical analysis of 5 6 the document that we produced. It reflects 7 our joint dedication to not just meeting but exceeding New York's ambitious clean energy 8 9 goals. As I mentioned, today is the 10 11 second public comment session to provide for 12 your insights, concerns and suggestions. Your 13 feedback is invaluable as it will help refine our strategies and ensure that the IRP aligns 14 with the needs and aspirations of the 15 communities that we serve. 16 17 Following today's hearing, we have 18 one additional hearing taking place later this 19 week in Far Rockaway and that's going to take place Thursday evening at 6:00 p.m. 20 To kick off today's session, I'm 21 22 pleased to introduce Gary Stephenson, LIPA's 23 Senior Vice President of Power Supply, who will provide a presentation of the IRP. 24 25 Following the presentation we'll open the MGR Reporting, Inc. 1-844-MGR-RPTG

1 2-13-24 - LIPA IRP Public Hearing floor for public comments and questions. 2 3 So at this point I'm going to turn it over to Gary to present on the IRP. 4 5 Gary. 6 MR. STEPHENSON: Thank you, Tom. 7 Good morning, everyone. Maybe a good place to start here 8 9 is to go through the agenda, we have quite a flew slides we'd like to get through and one 10 11 of my goals is to make sure we're perfectly 12 clear. And if something isn't clear on the back end, we've got opportunities for 13 questions and public comments, so very much 14 looking forward to some feedback here. 15 16 One of the things I wanted to start off by saying is the IRP I think of the 17 18 IRP as kind of putting together a three-legged 19 stool, which is you need sort of three legs to make sure you've got a good, stable stool, and 20 21 for us that's making sure we have affordable 22 electricity and energy for our customers. The 23 second leg of the stool is making sure that's reliable. And then the third leg of the stool 24 25 is making sure it's clean and sustainable. So MGR Reporting, Inc.

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1 2-13-24 - LIPA IRP Public Hearing 2 that's our job here. A lot of work has gone into making sure we have a stable three-legged 3 4 stool. 5 So let's go to the next page, 6 please. 7 So again, thank you for your 8 input, your attendance here. Again we 9 encourage your feedback, we're part of a 10 conversation so very much looking forward to 11 incorporating your comments and discussing those with our board. 12 13 Tom mentioned this, but the team 14 here at Long Island Power, of course, Tom Falcone is our CEO, I'm the Senior VP of Power 15 16 Supply, and I'm joined by Tom Simpson, he's 17 our Director of Power Supply Planning. The PSEG Long Island team here is here, Yuri 18 19 Fishman, who is the Director of Power 20 Resources and Contract Management and Lucyna 21 Khazanovich is Director of Strategy and 22 Planning. 23 I want to say thank you to both, they provided a lot of the analytical 24 25 horsepower that went behind this very complex MGR Reporting, Inc. 1-844-MGR-RPTG

1 2-13-24 - LIPA IRP Public Hearing 2 and thorough analysis. So a little bit of background here 3 We've got about 1.2 million 4 about LIPA. 5 We, of course, serve Long Island customers. and the Rockaway Peninsula, just about 20 6 7 million megawatt hours of energy requirements every year. We got -- you can see the 8 9 generated capacity there, about five and a 10 half gigawatts, 500 megawatts, all translates 11 to an operating budget of \$2.3 million a year, 12 capital budget of \$900 million. 13 We -- importantly, we provide 14 oversight to PSEG Long Island, we've got a long-term contract with those management 15 16 services and the services provided under the PSEG Long Island brand name. 17 18 So it bears repeating that -- just 19 mentioned that we live on an island, which is 20 very important when it comes to electrical 21 service. Our territory spans Nassau and 22 Suffolk counties and the Rockaway Peninsula. 23 And in addition to the on-island generation that we have, we have very important links to 24 25 other networks, most important being the link MGR Reporting, Inc. 1-844-MGR-RPTG

1 2-13-24 - LIPA IRP Public Hearing 2 to the rest of New York ISO, which controls 3 the grid in New York State, across New York State. And then the links back to PJM, which 4 5 is the Mid Atlantic and then up to New England 6 through the New England markets. 7 And we're going to talk a lot about wind in this presentation. You'll see 8 9 some of that wind coming onshore and we're 10 going to sort of discuss the implications of that as we move forward. 11 12 So it bears repeating here what is 13 The way I think about it is sort of an IRP. 14 our plan for making sure that we've got a balance between the supply side and the demand 15 16 side, and that we've got the transmission investments that are required to make sure we 17 18 can provide that clean, reliable, 19 cost-effective service. 20 The last IRP we did was back in 21 2017, that was a very important IRP for what 22 it decided not to do, which was to invest in 23 more fossil fire generation on the island. We instead concentrated on our clean energy 24 25 future and that turned out to be a really MGR Reporting, Inc. 1-844-MGR-RPTG

1 2-13-24 - LIPA IRP Public Hearing 2 strong, wise decision that is paying dividends 3 today. So as we move forward with this 4 5 new IRP we're looking at customer usage trends 6 and probably first and foremost changing 7 technology. There's a lot of new things on 8 the horizon for us as a utility. And so just a little bit of 9 10 background here in terms of where you can find 11 more information. We've organized findings of the IRP around themes in the forms of answers 12 13 to frequently asked questions just to help you 14 sort of navigate the analysis. 15 So we've put out what was called 16 the IRP summary guide and that can be viewed 17 online on our website. We've also got 18 physical copies, if you like hard, tactile 19 pieces of paper, we've got those physical 20 copies available at the public comment 21 sessions which you can have. You can scan 22 that QR code to get the link to the summary 23 guide. And then in terms of public 24 25 outreach, we put out a four-part video series MGR Reporting, Inc.

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1 2-13-24 - LIPA IRP Public Hearing 2 that you can view. My screen went black, 3 unfortunately, let me see here. Let me switch to my laptop. 4 5 Can you guys still hear me? 6 MR. LOCASCIO: We can and see you 7 as well. MR. STEPHENSON: 8 Okay. So 9 four-part video series here, that you can 10 view, that's posted on LinkedIn and other 11 venues, so you can take a look at that, that's 12 got good information on it and it's also on our website. So please view those. 13 14 And then just to reiterate, we've 15 had a lot of partners here; PSEG Long Island 16 provided the analytical work to do the IRP. We also had the help of multiple partners, 17 18 Brattle, Stony Brook University, others that 19 provided a lot of contributions, so we want to thank them. 20 21 All right. And then it just bears 22 repeating, New York's Climate Act, we've got 23 some very big goals here in the future. Which the first is by 2035, let's say, by 2040, 24 25 we've got to get to a zero carbon grid. And MGR Reporting, Inc. 1-844-MGR-RPTG

1 2-13-24 - LIPA IRP Public Hearing 2 then by 2050 kind of economy-wide carbon 3 reduction. So a tremendous amount of work that has to be done over the next couple 4 decades. 5 Some of the scenarios that were 6 7 modeled in the IRP, you can see. We've got a base case, which assumes kind of what the last 8 9 chart showed in terms of carbon reductions. 10 We also looked at other scenarios that included accelerated decarbonization, expanded 11 12 transmission interties from Long Island to 13 other regions. Expanded demand-side measures 14 and other advanced technologies. 15 All the scenarios led to sort of 16 systems and outcomes that were reliable, clean, affordable. 17 18 So just in terms of where we are 19 today, what this slide shows is kind of our 20 pie chart of energy supply. And what you can 21 see here in 2022, about 43 percent of our 22 energy comes from fossil baseload units; up 23 14 percent from nuclear, five percent from solar, about a third from imports. So that 24 25 kind of goes back to what I was saying earlier MGR Reporting, Inc.

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1 2-13-24 - LIPA IRP Public Hearing 2 about us being an island so we import a lot of 3 our energy from PJM and New England. That chart is going to change 4 5 quite dramatically on the next slide. I quess the other thing I should say before you switch 6 7 is that we really rely on that thing on the bottom right, which fossil peakers. Right now 8 9 it's a key thing for reliability. Although they don't run much, they are a very important 10 piece of the pie in terms of making sure we've 11 12 got a reliable grid. On days we hit our 13 summer peaks, it's very common that those 14 fossil peakers are running just to keep the 15 lights on. So what are the key findings of 16 The first is by 2030, and this is 17 the IRP? kind of the big sort of big moment or really 18 19 important statistic, by 2030 what we're anticipating is that the addition of solar and 20 21 off-shore wind will drive our carbon footprint 22 down by over 70 percent from 2010 levels. So 23 pretty dramatic drop in carbon output from our fleet from 2010 levels, 70 percent reduction. 24 25 And the chart on the right which MGR Reporting, Inc. 1-844-MGR-RPTG

1 2-13-24 - LIPA IRP Public Hearing 2 shows in the first sort of grouping there is the amount of solar. You can see that in 3 terms of size and also in service state. I'11 4 5 sort of point your attention to behind the 6 meter solar, that's a very important element 7 of our portfolio, 1200 megawatts of behind the meter rooftop solar; very important as we move 8 9 forward.

Offshore wind, you can see the 10 11 three projects that will be landed on Long 12 Island. The first South Fork Wind is nearing completion of construction, that should happen 13 14 here in the next few weeks. And then Sunrise and Excelsior also have contracts to supply 15 16 with in-service states in early -- late 2020s and early 2030s. 17

18 The second or the third piece 19 there is the energy storage, batteries 20 primarily. You can see that we have a couple 21 of batteries right now at East Hampton and 22 Montauk and then we're running an RFP for 23 additional battery storage on the island. Also very important as more wind comes online 24 25 to ensure we don't get curtailment, we need to MGR Reporting, Inc.

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1 2-13-24 - LIPA IRP Public Hearing 2 get more battery storage to kind of get 3 coupled with that to make it as economic and 4 reliable as possible.

5 So by 2030, as I said, the 6 declining carbon footprint. And what you can 7 see here is sort of the change. So on the left is the 2022 pie chart, which I mentioned 8 9 on the last slide. And the big change over 10 that eight years is the big green part here, 11 that's wind. So we expect almost 49 percent 12 of our energy needs will be supplied by 13 off-shore wind. We still have nuclear slice, 14 seven percent solar, and we can see a dramatic reduction in the amount of fossil baseload and 15 16 imports that are required.

17 I'll also just point out that the 18 fossil peakers are still there in 2030, very 19 important from a reliability perspective that 20 they are in the little pie, even though they 21 don't contribute much in terms of energy, they 22 have outsized importance from a reliability 23 perspective.

24 So the next slide kind of shows 25 year by year what happens in terms of carbon MGR Reporting, Inc. 1-844-MGR-RPTG

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 emission reductions and you can see we go from
 2010 12.3 million tons of CO2, dropping down
 to 3.5 by 2030, that's the over 70 percent
 reduction. I think that's all I wanted to say
 in this slide so you can go to the next.
 And here a little more about wind

8 which has been very much in the news lately, 9 of course, with a lot of wind developers sort 10 of struggling with the new sort of industry, 11 new supply chain struggles, all kinds of 12 hurdles that I think are normal for a new 13 industry.

14 So without getting into too much detail about which ones -- which projects will 15 16 succeed in the future, I think it's safe to say that there's a tremendous wind resource 17 18 out there in the ocean, it's a great place to 19 site it. And if it's -- these particular projects doesn't complete it, I'm pretty 20 confident that others will. But you can see 21 22 it's pretty large so we've got the State, its 23 goal, so 9,000 megawatts by 2035 and some of forecasts show up to 18,000 which would be a 24 25 tremendous amount of energy coming from

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1 2-13-24 - LIPA IRP Public Hearing off-shore wind. 2 3 And let's see, what do I want to say? We can skip this slide, we hit most of 4 5 this. 6 This is an important one, which 7 talks about, okay, we're going to build plenty of new off-shore wind. Very important that we 8 9 build transmission systems that can both 10 import and then all that new energy off-shore 11 wind, energy on to the island and then get it 12 to the rest of New York State, this is a 13 statewide goal around decarbonization. So 14 it's important we build out the transmission system so we can move that power to the north 15 16 and points into the rest of the state. 17 So right now the big project that 18 is underway is the Propel New York Project, 19 and that's a multibillion dollar investment in the State of New York in terms of 20 21 decarbonizing the grid. So we think that's a 22 very positive project and we're hopeful it 23 gets concluded on time. It's again a linchpin in terms of decarbonizing the State. 24 25 Right now our studies indicate MGR Reporting, Inc. 1-844-MGR-RPTG

1 2-13-24 - LIPA IRP Public Hearing 2 that that project will get us at least through 3 this 2030 period and beyond and then as we add even more off-shore wind, it's possible that 4 5 even more transmission will be required. So on this slide what we talk 6 7 about here is that we've got a lot of flexibility as a utility. We primarily have 8 9 -- our portfolio is primarily made up of power 10 purchase agreements, contracts with the 11 operators and owners of those power plants. 12 The most notable is our agreement with 13 National Grid, they operate all the legacy 14 LILCO power plants on the island. And what that allow us to do as a utility is sort of 15 16 modulate how we ramp down the fossil fuel 17 units on the system. 18 So as time goes on and we see how 19 much wind gets built and whether it gets built on the schedule that was articulated on the 20 21 last page, we can begin to ramp out of these 22 fossil fuel contracts pretty easily. 23 So again that's going to be done in the context of making sure we did the most 24 25 reliable thing, do things that keep rates MGR Reporting, Inc. 1-844-MGR-RPTG

1 2-13-24 - LIPA IRP Public Hearing affordable and then always in mind that we're 2 3 trying to get toward that overall 100 percent decarbonization goal by the time that the 4 5 CLCPA targets dictate. 6 So right now the thinking is that 7 LIPA will be able to retire up to 800 megawatts of existing Long Island power 8 9 plants by 2030. And as I said, the biggest 10 contract we've got is with National Grid, that's for about half of our supply, 35 -- or 11 12 more than half, 3,550 megawatts of generation. 13 And right now we haven't identified specific 14 units for retirement but as we move through time here and things become clearer both on 15 the transmission side in terms of wind, the 16 17 transmission will be completely built out and 18 then the off-shore wind and as that gets built 19 out and battery storage gets implemented, we'll be able to identify specific units. 20 We think most likely will be some of the steam 21 22 units mostly because those are the oldest, 23 some of those were built in the early 60s, mid 60s and they are towards the end of their 24 25 natural age of their power plant and they tend MGR Reporting, Inc.

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1 2-13-24 - LIPA IRP Public Hearing 2 to be the least efficient of our fossil fleet. 3 You can see just looking at the graph here, this shows what's called capacity 4 5 factor, which is the amount of time the power plants run versus kind of their theoretical 6 7 maximum amount of production. And you can see that capacity factor dropping pretty 8 9 dramatically over the years here, those 10 plants, all three, were of the big fossil steam units, were built to run baseload. 11 Thev 12 were built to run at capacity factors above 13 50 percent. And what we're seeing in the 14 future looks like for the most part they'll be running in the very low, below 20 percent 15 16 range. 17 So as that begins to sort of play out, those decisions around retirements for 18 19 particular units will become clear and we'll 20 take that step when we get there. 21 So this one, another important 22 slide, what it shows is our load and customer 23 demand in terms of energy, total megawatt hours or kilowatt hours over time. And what's 24 25 important here is that the period between 2024 MGR Reporting, Inc. 1-844-MGR-RPTG

1 2-13-24 - LIPA IRP Public Hearing and 2030 essentially shows that we are 2 3 relatively flat in terms of energy growth and that is a good thing and it depends on being 4 5 driven by a couple items. 6 One is customer energy efficiency, we have a very effective program for making 7 sure we have the most efficient system as 8 9 possible and customers are getting access to 10 various devices and various systems that allow 11 the most efficient use of energy. 12 And then the other piece is that we see increasing amounts of behind the meter 13 14 I mentioned on one of the earlier solar. charts we're expecting somewhere around 15 16 1200 megawatts behind the meter solar. And 17 that acts as a negative load and that keeps 18 the growth of the energy piece of the pie at 19 least down relatively flat through 2030. 20 Now what happens after 2030 is we 21 start to see the impacts of two things. One 22 is increased electrification of the transportation sector, we're starting to see 23 more and more EVs of course, electric 24 25 vehicles, and so that will begin to add to the MGR Reporting, Inc. 1-844-MGR-RPTG

1 2-13-24 - LIPA IRP Public Hearing overall energy consumption on the island. 2 3 And then the other piece is the growth from what's called beneficial 4 5 electrification, primarily heat pumps. I've got a couple slides later on that talk about 6 7 what a great thing those are, heat pumps, are for customers in terms of saving money and 8 9 being more efficient, it's effectively taking 10 energy, especially heating energy out of the fossil fuel sector and moving it over to the 11 12 electricity sector. So the idea is we clean 13 up the electric grid and then we move on and 14 try to pull in some of the heating load which is currently served by fossil fuels. 15 16 So we should see some pretty significant ramp ups especially in the winter 17 18 months as more and more heat pumps come 19 online. 20 And I think I hit most of this so 21 I'm not going to spend much time. Probably 22 the key thing here is that complete 23 decarbonization to get there, we're really going have to focus as a state on the 24 25 transportation sector because that's close to MGR Reporting, Inc. 1-844-MGR-RPTG

1 2-13-24 - LIPA IRP Public Hearing 2 a third of our carbon emissions are from the 3 transportation sector. So electrifying that is going to be a big challenge but also pay 4 big dividends in terms of carbon reductions. 5 6 I mentioned heat pumps, I'll give 7 a little pitch here for how what a great thing these devices are. You know the island is, I 8 9 wouldn't say unique, but it's one of the 10 defining characteristics from an energy perspective is it uses a lot of oil to heat 11 12 during the winter and so the economics of 13 switching out oil heating to heat pump are 14 pretty compelling, especially when you couple it with the rebates that are available from 15 16 LIPA and the federal government in terms of incentives you can see there in some cases the 17 18 pay back is almost immediate in terms of heat 19 pumps for customers.

20 So one of the big opportunities 21 for the island is as older boiler systems 22 start to breakdown and require upgrades or 23 investments, flipping over to heat pump would 24 make a lot of sense. So big task for us as we 25 move forward is to make sure that we're

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1 2-13-24 - LIPA IRP Public Hearing 2 communicating that with customers and we're 3 getting good uptick with our contractor network in that regard. 4 5 This talks about our time of day 6 rates. And this is, I would say, a lot of 7 words here but I would say the time of day rates are extremely important for us moving 8 9 forward because as we begin to have an 10 increase in penetration of renewables we're 11 going to need to engage customers in a 12 different way and make sure that they are 13 shifting their energy use outside of the peak 14 hours to the off-peak hours and especially as we start to see that electric demand start to 15 16 increase making sure that customers, for 17 example, don't charge their EVs at 5:00 p.m., 18 that's just a very -- that's a key thing to 19 maintain reliability and affordability. 20 So what we are doing here with the 21 time of day rates is providing that incentive 22 so that people begin to think about, okay, 23 maybe can I turn my EV on in term of charging after the peak is over, maybe I can do all of 24 25 my kind of washing and drying, kind of thing, MGR Reporting, Inc. 1-844-MGR-RPTG

1 2-13-24 - LIPA IRP Public Hearing 2 after peak hours. 3 So that's a big event for us going into 2025 rolling out that time of day rate. 4 5 And then what this shows is a 6 different take on -- pointing out the graph 7 here, a different take on things the previous chart showed energy consumption, this actually 8 9 shows our peaks both the summer peak and the 10 winter peak. And sort of a good news story 11 here, I think it's a very good news story 12 which is Long Island traditionally has been a summer peak utility. As we start to see more 13 and more heat pump penetration on the island 14 we will start to see more of a winter peak, 15 16 that's the green chart here. 17 Now the good news is that the 18 system was built, both the power supply system 19 and the T & D system on the island, was built to ensure that we could get through a summer 20 21 peak, so we've got a lot of capacity there to 22 grow the winter side of things. 23 So what you see here is through 24 the planning period really the winter peak 25 doesn't even get to the point of the summer MGR Reporting, Inc. 1-844-MGR-RPTG

1 2-13-24 - LIPA IRP Public Hearing 2 peak, but I guess the way I would think about 3 this is we're using the system more efficiently overtime as that winter peak 4 5 grows. So again a plug for more and more conversion of fossil fuel heating over to 6 7 electric heating in the form of heat pumps. That's the driver there so that's something we 8 9 can accommodate and we very much want to 10 incent. 11 And then I think I'll probably 12 move on to the interest of time here, I'll 13 just skip this one for a moment. 14 And then talk about this last 15 chart. And this gets to the point of 16 reliability. I mentioned those fossil peaking units previously, so eventually we're going to 17 18 reach a point where we're going to make a 19 decision about those fossil units that provide 20 that peaking service that, reliability 21 benefit. And this is an area of a lot of R & 22 D right now, a lot of time and effort, not 23 just in New York but across the entire United States, across the world. How do you build 24 25 systems that can replace fully dispatchable MGR Reporting, Inc.

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2 fossil units? What's the technology there
3 that can do that in a way that doesn't emit
4 carbon?

5 So people have talked about things 6 like hydrogen, small modular nuclear reactors, 7 maybe very long duration battery systems. The challenge we face with the offshore wind will 8 9 be even though it's got tremendous really good capacity factors, so running a lot, producing 10 11 a lot of carbon free energy, we get wind 12 lulls. It won't be unusual to have periods in the middle of the summer where we don't get 13 much production from the off-shore wind, so 14 we'll need to replace that with something that 15 16 we can dispatch. So doing that in a way that's emissions free it's a big challenge for 17 18 the industry.

And so as we move through time, we will be very careful monitoring this. This will be the key in terms of our ability, not just as one utility but as an industry, to get to completely decarbonized grid, is this development of these units that are coined DEFRs, Dispatchable Emission Free Resources.

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1 2-13-24 - LIPA IRP Public Hearing 2 I think by the next IRP process 3 it's going to be very important over the next five years that we get a lot more clarity 4 5 around what those DEFRs will consists of, what they'll cost and how they'll be dispatched. 6 7 And then I haven't talked a lot about the cost side of things. Again 8 9 three-legged stool so affordable, sustainable and reliable. This talks about affordability 10 11 and the chart just shows the 50 percent or so 12 of our power supply costs, so if you think about your bill as a customer, it's roughly 13 half of it's the power supply charge and the 14 other half is transmission and distribution 15 16 costs, kind of the wires charge. And what this shows is that at 17 18 least based off our forecasting, we don't see 19 a tremendous increase in supply cost going 20 forward. You can see there just a pretty 21 nominal increase over time as the fossil units 22 ramp down, sort of darker areas there, and the 23 renewable resources in the green come in. So that's a good thing, it gives 24 us some room to really grow the system to make 25 MGR Reporting, Inc.

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1 2-13-24 - LIPA IRP Public Hearing 2 sure that we maintain reliability and we do it 3 in a way that's affordable for our customers. Okay, so next steps. 4 Right now 5 we're in the process of doing some followup studies so identifying any reliability 6 7 deficiencies that are expected with any of the retirements that we talked about. Reviewing 8 9 our storage needs, we need, as I said, we need 10 to couple that with the wind coming online to make sure we don't have a situation where the 11 12 wind gets curtailed. So being able to store that energy is very important. 13 14 And then establishing a new multiyear energy efficiency program. 15 So we 16 have got a lot of work ahead of us, this isn't the end this is sort of beginning and we're 17 18 looking forward to it. 19 Is that my last chart? Okay. So 20 opportunities for public participation, you 21 can see there. This is one of them and so 22 we're looking forward to your comments. We do 23 have an upcoming session on Thursday at the Rockaways which hopefully will be in person, 24 25 and you can of course submit all of your MGR Reporting, Inc. 1-844-MGR-RPTG

1 2-13-24 - LIPA IRP Public Hearing written comments to that IRP@LIpower.org. 2 3 And so now I think we're going to turn it over to public comments and I think 4 Tom is going to... 5 6 MR. LOCASCIO: Thank you, Gary. 7 And thank you for the thorough presentation. So we are at the public comment 8 9 portion of today's meeting. We have a good 10 number of people on Zoom as attendees. What I 11 would ask at this point if you are planning to 12 make comments to please raise your hand virtually now and we will bring people in in 13 14 the order they raise their hand. 15 First up we have Ryan Stanton. 16 Ryan we're going to bring you into the panel 17 right now. Thank you for taking the time to 18 be here. 19 MR. STANTON: Very thorough 20 presentation. Privileged to have the 21 opportunity to represent the Long Island 22 Federation of Labor. I wanted to offer a few 23 comments on behalf of the 250,000 union members and their families in Nassau and 24 Suffolk counties. 25

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1 2-13-24 - LIPA IRP Public Hearing We ultimately support the adoption 2 3 of the Long Island Power Authority's IRP. As you all know, we periodically engage in this 4 5 process. We were fortunate enough to testify 6 a number of years ago back in 2017, and since 7 that time New York State has adopted the CLCPA, the Climate Leadership and Community 8 9 Protection Act. 10 So the significant changes from 11 the last IRP to now, the union movement has 12 and will continue to play an active role in 13 advancing the CLCPA, much of which is 14 reflected in today's presentation. And our movement is made of up working people and by 15 16 virtue of living on Long Island, we're on the front lines of climate change and dealing with 17 18 the impacts.

As New York State and LIPA make decisions on resources and how to secure them, we ask that you consider the needs of working people, they're simultaneously during the crises of climate change and affordability. Therefore I'd like to draw attention to several key points that were made and are laid MGR Reporting, Inc.

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1 2-13-24 - LIPA IRP Public Hearing out in the IRP. 2 3 Integrating into the grid substantial new renewable generation and 4 battery storage; 5 Investing significantly in the 6 transmission grid serving Long Island and the 7 Rockaways; 8 9 A phasing out of fossil fuel 10 generation over time; 11 And using clean electricity to 12 decarbonize heating and transportation 13 specifically with support for disadvantages 14 communities. There's four bullet points that I 15 16 pulled directly from the IRP. 17 So we support the integration of 18 substantial new generation -- renewable 19 generation and storage. They were mentioned, and I'll focus specifically on the Long Island 20 21 interconnection wind projects; South Fork 22 Wind, Sunrise and Excelsior. They have potential to be significant drivers of Long 23 Island's economy. 24 If we're to be successful in 25 MGR Reporting, Inc. 1-844-MGR-RPTG

1 2-13-24 - LIPA IRP Public Hearing 2 achieving the milestones outlined in the IRP 3 and CLCPA, these projects must be completed and operational, they must create good union 4 5 jobs along the way. 6 And then ultimately in order to 7 realize the full potential offered by these projects, there must be significant 8 9 investments in the transmission grid. As was 10 referenced, the Propel New York Project 11 creates a bidirectional grid, provides 12 efficiency, redundancy and reliability to New 13 Yorkers across all regions. 14 So we ultimately get to see the 15 benefits of these investments upstate and 16 downstate. The renewable portfolio really 17 does a great service to the ratepayers through 18 that investment, allows us to realize the full 19 potential. It's just a common sense 20 investment that helps taxpayers, ratepayers 21 across all of New York State. 22 And as we rebuild our economy to 23 be more climate safe more inclusive, to address historic inequities, we must employ 24 25 and "all of the above" energy approach. So MGR Reporting, Inc. 1-844-MGR-RPTG

1 2-13-24 - LIPA IRP Public Hearing while we forge a path to decarbonization, 2 3 fossil fuel plants, as was mentioned during the presentation, they currently provide a 4 5 reliable base load generation, and I know the folks at LIPA really, truly, fully appreciate 6 7 how important that is. So I just have an obligation to 8 9 highlight and reiterate the importance of 10 that. It's imperative that we have enough 11 alternative energy readily available and affordable and before phasing out those fossil 12 fuel plants. And so that's probably something 13 14 that gets lost in the public discourse today and really needs to be -- it can't be 15 16 overstated. 17 And so I want to commend LIPA and 18 PSEG for their commitment to this process and 19 putting forward the IRP. It's well timed, The 20 Infrastructure Investment Jobs Act, Inflation 21 Reduction Act, CHIPS and Science Act and New 22 York State CLCPA ultimately all coincide with 23 one another, represent a tremendous opportunity to secure billions of dollars in 24

25 investment in New York State. Those dollars

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1 2-13-24 - LIPA IRP Public Hearing can and must be used to rebuild our energy 2 3 grid and our economy at large so that it's climate safe, inclusive of working people and 4 has a significant impact on climate change. 5 So just in closing, I'd like to 6 7 thank LIPA, thank PSEG for laying out a roadmap to securing a clean energy future that 8 9 in implemented in a way that considers working 10 people and has the promise of a brighter more 11 sustainable future. Thank you. 12 MR. LOCASCIO: Thank you, Ryan. We're going to move you back to the attendee 13 14 list. Next up we have Ryan Madden. 15 And 16 then for planning purposes, we have Billi Roberti after Ryan and Andrew Manitt after 17 18 Billi. 19 Those are all the hands we have raised at this point, if you are on Zoom and 20 21 you do have an interest in speaking, I would 22 ask you to please raise your hand now so we 23 have you in the queue. 24 Ryan Madden, the floor is yours. 25 MR. MADDEN: Thank you. I seem to MGR Reporting, Inc. 1-844-MGR-RPTG

1 2-13-24 - LIPA IRP Public Hearing 2 have the distinguished honor of following Ryan 3 Stanton in public hearing processes over the last few months. So thank you Ryan and the 4 5 Long Island Fed for their comments. 6 My name is Ryan Madden, I'm the 7 client and energy campaigns director at the Long Island Progressive Coalition. We have a 8 9 long history of building New York's clean 10 energy future from passing Green Jobs Green New York to the Climate Leadership and 11 12 Community Protection Act. We also helped 13 develop the LIPA public power act to end the 14 private management of LIPA in favor of a publicly-managed utility. 15 16 We first like to thank LIPA for its statewide leadership in the renewable 17 18 transition, despite the limitations imposed by 19 the current management structure. We are excited about the opportunity to better meet 20 21 the mandates of the CLCPA with a fully public 22 We also like to communicate LIPA. 23 appreciation for the documents and videos to explain the IRP to the public. 24 25 Our comments are informed by our MGR Reporting, Inc.

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1 2-13-24 - LIPA IRP Public Hearing 2 commitment to a just transition to a hundred 3 percent renewable energy for the region. The belief that sustained community engagement is 4 5 necessary to achieve that and that LIPA has 6 the potential to do more to ensure an 7 equitable future. Thus informed our understanding of a third party provider model 8 9 has been a failure, reflected in aspects of 10 PSEG process to develop this IRP, we'll be submitting written comments with further 11 12 details. 13 On community engagement, it's 14 concerning that only a handful of experts and consultants were solicited to contribute to 15 16 the IRP. No other stakeholders were seemingly 17 involved, despite the implication for 18 disadvantage communities, towns and villages, 19 nonprofits, community organizations, utility workers, low-income ratepayers, indigenous 20 21 nations and more. While reference was made to the 22 23 priority of integrating the needs of disadvantage communities, which we applaud, 24 25 we're left wondering how that can happen MGR Reporting, Inc.

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1 2-13-24 - LIPA IRP Public Hearing without making full consistent and sustained 2 3 engagement, especially in vital planning processes. It is this reason that LIPC 4 5 developed a proposal for the community stakeholder board included in LIPA Public 6 7 Power Act. This lack of prioritization for 8

9 multi-stakeholder engagement is reflected 10 through the sections on the future of solar. 11 It does not integrate the recommendations of 12 the Long Island Solar Roadmap. This untapped 13 potential that making valuable contributions 14 to meeting and exceeding LIPA's CLCPA goals, 15 as well as provide excess energy to the grid.

16 Finally, in order for time of day 17 rates to be implemented effectively, for more 18 demand response programs to come into 19 practice, for more resilience planning to take 20 place and for more utility programs to be 21 utilized, more ratepayer and community 22 engagement needs to happen. There's no 23 recognition of the need for this to be a vital part of meeting the state goals of th IRP. 24 25 On building renewables in the IRA.

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1 2-13-24 - LIPA IRP Public Hearing The IRP states that LIPA plans to meet the 2 3 state's energy goals at the lowest possible cost for its customers by using all the tools 4 5 available to derive the best outcomes, but does not seriously explore it's ability to 6 7 build its own renewables, especially utilizing benefits under the Inflation Reduction Act. 8 9 There's a reference to LIPA developing its own 10 projects around the repurposing of existing fossil fuel sites, but the implications are 11 12 not clear. 13 The viability and publicly-owned 14 renewables by LIPA from offshore wind to midsize solar, to thermal energy networks to 15 16 battery storage must be thoroughly examined. 17 When it comes to offshore wind, 18 especially with the cancelation of projects 19 like Empire Wind II, LIPA could look at 20 co-ownership opportunities, perhaps even with 21 the New York Power Authority. 22 When it comes to solar, we can 23 look at the Long Island Solar Roadmap for prime opportunities for LIPA to step in, 24 25 especially as it makes targeted facility MGR Reporting, Inc. 1-844-MGR-RPTG

1 2-13-24 - LIPA IRP Public Hearing 2 upgrades to expand hosting capacity or project significant growth in DER penetration. 3 LIPA should look into the 4 5 installing and owning thermal energy networks. 6 In addition to making geothermal heat pumps 7 more affordable for ratepayers, the minimal fee for access to the network could provide 8 9 another revenue stream for LIPA. 10 LIPA must proceed cautiously over the three to six gigawatts of DEFRs projected 11 12 in our emergency mix. To all extents 13 possible, the future of our electric grid must 14 not contain false solutions like biofuels, renewable and natural gas, biomass, waste 15 16 incineration and green hydrogen. It must 17 focus on renewables and technologies that have 18 been proven to work like solar and wind 19 coupled with battery storage and exploration 20 of tidal and wave power. 21 Hydrogen for electricity 22 generation is not a zero emissions technology 23 regardless of how the hydrogen is produced. Hydrogen combustion produces nox emissions and 24 25 tremendously problematic local and public MGR Reporting, Inc. 1-844-MGR-RPTG

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 health issues and is against Section 73 of the
 CLCPA.

Utilities across the US are 4 5 increasingly pursuing projects that blend hydrogen with natural gas for various end 6 7 uses. However research shows these projects will increase consumer costs, exacerbate air 8 9 pollution awhile minimally reducing greenhouse 10 gas emissions. The results of the LIPA 11 Hydrogen Demonstration Project in Brentwood with General Electric verified this. 12

13 The demonstration achieved only 14 marginal reductions in CO2 while increasing 15 nox emissions and consuming more water. For 16 these reasons, Caithness should be looked at 17 for a complete transition to a renewable 18 energy site, not a future for hydrogen.

Biomethane is being proposed as a substitute for various processes, but this renewable natural gas, like fossil gas, is nearly pure methane. For these reasons, we urge LIPA not to rely on RNG or hydrogen or other supposedly clean fuels 'cause we don't know if they will count for CLCPA purposes, it

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1 2-13-24 - LIPA IRP Public Hearing 2 could be a useless investment, they are not 3 clean and continue to release co-pollutants, and there isn't RNG to utilize. 4 We should rather research 5 6 technologies like wave and tidal turbines, 7 which are also dispatchable with unlimited supply around Long Island. 8 9 LIPA's utilization of nuclear 10 energy must be revisited. The future of 11 nuclear must grapple with the contents of 12 nuclear reactors are not green, a red paper by the Atlanta Nation, the Environmental Task 13 14 Force and the American Indian Law Alliance. With the limited time, I'll 15 16 mention there was no evaluation of the rate 17 design aside from the time of day rates, nor 18 the impacts of delays in implementing TOD on 19 TRP forecast. Similarly the canceled wind 20 21 projects are not accounted for, which is 22 likely unfortunate timing but speaks to the 23 need for proactive contingency planning. And a core missing piece that 24 25 should be looked at is addressing gap funds MGR Reporting, Inc. 1-844-MGR-RPTG

1 2-13-24 - LIPA IRP Public Hearing 2 for pre-weatherization needs. And we see 3 nothing about buried distribution lines that are prone to failing during storms. 4 The 5 avoided costs of frequent repairs paired with the lost revenue because customers cannot use 6 7 electricity must be factored in. And with that I want to thank you 8 9 for your time and hard work that this IRP 10 reflects. I'm looking forward to see how it 11 can be better shaped moving into the future. 12 Thank you. MR. LOCASCIO: Thank you, Ryan. 13 14 We appreciate you being here today. 15 We're going to move you back to 16 the attendee list and we'll be bringing in Billi Roberti. 17 18 I would mention again if there are 19 folks on Zoom that would like to make 20 comments, we ask that you raise your hand. After Billi we have Andrew Manitt and he's the 21 22 last person at this point that we have in the 23 queue to speak. 2.4 With that, I'll turn it over to 25 Billi Roberti. MGR Reporting, Inc.

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1 2-13-24 - LIPA IRP Public Hearing MS. ROBERTI: Good morning. 2 3 Everything Ryan said I agree with, okay, so I may be duplicating a little bit. 4 5 My name is Billi Roberti, I'm a 6 homeowner in Huntington Station with solar 7 geothermal, an EV and a heat pump clothes dryer. So surprise, I'm a renewable energy 8 9 and energy efficiency consultant. My company 10 is Green Choice Consulting. Thank you for 11 this opportunity to speak. 12 I have some questions included in 13 my comments. Overall the IRP summary is good 14 in can do. What it lacks is a vision of the future, isn't that important when planning for 15 16 it? 17 In terms of the strategic 18 objectives, when it talks about reliability 19 and resilience, it wants to go to the top 20 ten percent reliability among peer utilities, 21 which means comparing it to public-owned 22 utilities. Or do you mean investor-owned 23 utilities? Two different populations. Public-owned utilities have much higher 24 25 satisfaction ratings so that's a higher bar. MGR Reporting, Inc. 1-844-MGR-RPTG

1 2-13-24 - LIPA IRP Public Hearing Customer experience, deliver top 2 3 25 percent customer satisfaction in JD Power studies. Same question: The public-owned 4 5 utilities, a much higher bar, which one are we talking about? 6 7 Clean energy, encourage beneficial electrification of transportation and 8 9 buildings such as electric vehicles and cold 10 climate heat pumps, does this include 11 geothermal heat pumps, the most efficient and 12 peak reducing kind? Cold climate heat pumps 13 usually refer to air source heat pumps. We 14 need to get our terminology consistent and 15 clear. 16 Information technology and cyber 17 security, deploy modern grid management 18 technology and data analytics benchmarked the 19 top 25 percent of utilities. Again, are we 20 comparing it to publicly-owned utilities or investor-owned utilities? 21 22 In terms of key findings, by 2030 23 the additional of solar and offshore wind resources will cause LIPA's carbon footprint 24 25 to decline by over 70 percent from 2010 MGR Reporting, Inc. 1-844-MGR-RPTG

1 2-13-24 - LIPA IRP Public Hearing levels, how will this be affected by delays in 2 3 current offshore wind projects? As offshore wind and battery 4 5 storage resources come online, LIPA will be 6 able to retire up to 800 megawatts existing 7 LIPA power plants by 2030. How will delays in current offshore wind projects affect these 8 9 figures and dates? 10 LIPA's transition to time of day rates in '24 to '25, these dates are now 2025 11 to 2026 since this rollout is now scheduled to 12 13 start in 2025 due to PSEG IT problems. Ноw 14 will this one-year delay affect your demand reduction goals? 15 16 What is the public outreach plan 17 for time of day rates? Hopefully it's already 18 started for people opening new accounts since 19 they will automatically be put on these rates, they need to know to shift as much electricity 20 use as possible out of that peak time of 3:00 21 22 to 7:00 p.m. 23 Outreach should be started soon 24 for everyone else. Existing customers much 25 need to know to shift electricity use out of MGR Reporting, Inc. 1-844-MGR-RPTG

1 2-13-24 - LIPA IRP Public Hearing 2 that peak. So far there have been two bill inserts about time of day rates since 2022. 3 Outreach of the inserts is largely infective, 4 5 many people like me get their bills online and don't look at them. I just looked at two 6 7 years' worth today before this meeting. More publicity via television, radio and social 8 9 media needs to be done and on early, often and 10 inclusively. 11 And two-way transmission is a 12 really good upgrade to our grid. How about 13 decarbonizing the grid? The IRP still 14 includes Empire Wind II, which has been canceled. How confident are you that it will 15 16 be rebid? If it is rebid by Equinor, how confident are you that they will do a much 17 better job in public outreach so that 18 19 opposition in Long Beach and Island Park is 20 quelled? 21 What will happen to the tax and 22 pilot payments at Barret, Northport and Port 23 Jefferson if some or all of the plants are retired? The explanation is unclear in the 24 25 Will they end when the plants are report.

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1 2-13-24 - LIPA IRP Public Hearing 2 decommissioned or closed no longer working, 3 not necessarily taken apart? VDER, Value of Distributed Energy 4 5 Resources, that calculation killed solar for commercial properties, which is a vastly 6 7 untapped solar potential since they can often produce more electricity than they need so 8 9 community solar is a good way to create a new 10 revenue stream for the building owners. 11 What are you doing to modify VDER, 12 also known as Darth Vader, in order to 13 encourage more commercial properties to 14 install community solar? We have a tremendous untapped resource, we have tremendous solar 15 16 capacity on Long Island. 17 Regarding battery storage. Since 18 in East Hampton, municipalities have 19 instituted battery storage bans. My town has. This slows progress. What public outreach is 20 21 LIPA doing to allay these fears? Fire fears. 22 Disbatchable emission-free resources, DEFRs, 23 and storage. I think time will tell that RNG, 24 hydrogen gas and carbon capture will not work 25 as well as many think and will have very MGR Reporting, Inc.

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 limited use.

3 What's a net energy cost from electrolysis to create the hydrogen gas from 4 5 the water and then convert it back to electricity? I'd rather research dollars 6 7 going to technologies like wave and tidal turbines, they are also dispatchable and 8 9 there's an unlimited free supply of this 10 untapped energy around Long Island, we're an island for goodness sake. 11

12 What is lacking in how LIPA's 13 revenues will increase with these changes? 14 Now I know we shouldn't count our chickens before they hatch, but we should also at least 15 16 put something in that we expect revenues to 17 increase. Cheap, nonprofit electricity would 18 be great, there's no mention of the Inflation 19 Reduction Act or how it can provide funding 20 for energy storage, transmission, distributed 21 energy resources and renewable energy 22 infrastructure investments. Areas which the 23 IRP has identified as priorities. The IRA provides public power 24

25 utilities with direct pay tax credits for

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1 2-13-24 - LIPA IRP Public Hearing 2 installing these assets. Private companies don't have -- investor-owned utilities don't 3 have this option. 4 There's also no forward thinking 5 6 on LIPA owning or part owning any renewable 7 energy resources, such as utility-scale offshore wind or solar. The Long Island Solar 8 9 Roadmap tells us where these solar 10 opportunities are and we're not exploiting 11 that. 12 With so much water surrounding the 13 island, LIPA should conduct some feasibility 14 studies on owning up and coming technologies to take advantage of tidal and wave energy 15 16 generation. These two are continuously 17 generating resources so they have no gaps in 18 production unlike wind and solar and can be 19 curtailed if needed. They're being developed 20 in Europe, just take a look at the science channel. They are talking all about studies 21 22 being done on the Orkney Islands where 23 tremendous, destructive tidal and waves going on that they are checking out how well their 24 25 equipment will hold up.

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1 2-13-24 - LIPA IRP Public Hearing 2 Both air source heat pumps and 3 ground source heat pumps, I'll call it geothermal, increase energy consumption and 4 5 LIPA revenue. When demand is low in winter, 6 LIPA's not doing enough to support customers 7 transitions to them. PSEG just now changed how the rebates are calculated and lowered the 8 9 cash incentive, that's the wrong direction 10 here. I counted five bill inserts since 11 12 2022 promoting air source heat pumps without 13 any mention of the more efficient geothermal 14 Why is PSEG public outreach heat pumps. geared to promoting the second-best heating 15 16 and cooling system and none to promoting the 17 best? 18 The tables in your report 19 comparing the cost of buying a new central air 20 conditioning system versus air source heat 21 pump does not even include a column for 22 geothermal heat pumps and the costs don't show 23 the reductions from federal and state credits. My clients have been amazed that geothermal 24 25 ends up costing less to install than air MGR Reporting, Inc. 1-844-MGR-RPTG

1 2-13-24 - LIPA IRP Public Hearing 2 source heat pumps when all the rebates and tax 3 credits are factored in. Their lower maintenance and operating costs are another 4 5 plus. It is in LIPA's best interest to 6 7 drive the adoption of geothermal heat pumps because they lower summer peak, add to winter 8 9 consumption yet and slow the growth of winter 10 peak compared to air source heat pumps. It would be good if LIPA looked 11 12 into installing and own utility thermal energy networks. By the way, what is happening with 13 14 the Public Service Commission mandated LIPA UTEN Pilot? Having seen anything about that. 15 16 In addition to making geothermal heat pumps 17 more affordable for ratepayers with the UTENs, 18 the minimal fee for accessing the network 19 would provide another revenue stream for LIPA, it can be a great investment. 20 21 Also I see no mention of the 22 increase kilowatt sales which means higher 23 revenue for LIPA from customers switching from 24 fossil fuel heating to heat pumps and from 25 cars with internal combustion engines to EVs. MGR Reporting, Inc. 1-844-MGR-RPTG

1 2-13-24 - LIPA IRP Public Hearing 2 This income potential is completely ignored, 3 the focus has been on ensuring enough 4 capacity. Also overlooked is that as winter 5 6 consumption grows, the grid efficiency 7 improves and this may offset the projected 8 rate increases to pay for all the grid 9 upgrades. Better all year round usage lowers 10 the per kilowatt cost to LIPA because it uses 11 more of its capacity regularly, it's not just 12 sitting out there in a bank not collecting any 13 interest by the way. 14 Other comments. I see nothing about burying distribution lines that are 15 16 prone to failing during storms. Although 17 expensive, the avoided cost of frequent 18 repairs paired with the lost revenue because 19 customers cannot use electricity must be 20 factored in. Avoided costs are very important 21 to pay attention to. 22 I believe, on another point, the 23 fixed monthly charge, the basic service, should cover the full amount of billing and 24 25 fixed costs to provide electric service since MGR Reporting, Inc. 1-844-MGR-RPTG

1 2-13-24 - LIPA IRP Public Hearing 2 solar customers still rely on the grid. That's a kind of insurance. Some of these 3 costs are hidden in rates that volumetric, 4 5 meaning the more you use the more you pay even if that use is during low consumption times. 6 7 Being tied to the grid is Why should those who are not net 8 insurance. 9 zero electricity subsidize those who are? And 10 by the way it also subsidizes fossil fuel 11 users. Infrastructure and other charges 12 buried elsewhere and moved into a fixed charge would reduce these other costs and there would 13 be no net change to those who are not net 14 In other words, we are putting the 15 zero. 16 costs where they belong. 17 I disagree with the assessment 18 that lifetime ownership costs of EVs are on 19 par with internal combustion energy vehicles. My experience is that EVs are substantially 20 21 The battery is expected to last at lower. 22 least ten years, most original owners keep 23 their cars for only five. Plus EV batteries are going down in cost over time. 24 But the 25 savings and no fluctuations in gas prices MGR Reporting, Inc.

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1 2-13-24 - LIPA IRP Public Hearing 2 which go up and down by \$0.10 sometimes in a 3 week's time and no maintenance, so little maintenance. You don't have an engine. You 4 5 don't have to do the lube of the engine, you 6 don't have an alternator, you don't have a 7 carburetor. You don't have an exhaust system. MR. LOCASCIO: If you could wrap 8 9 up and then you can submit your written testimony. 10 MS. ROBERTI: I'm glad LIPA is 11 12 studying vehicle to everything, electric grid and buildings. The car battery could provide 13 enough electricity to modestly power a home 14 for days during a system power outage. 15 16 Thank you again and please consider adding some of my ideas to the IRP. 17 18 Thank you. 19 MR. LOCASCIO: Thank you so much, 20 Billi. Good seeing you as always, too. 21 We're going to bring in Andrew. 22 At this point we have no other speakers behind 23 Andrew so I would remind folks if there is a desire to speak, please raise your hand now so 24 25 we make sure we bring you in. MGR Reporting, Inc.

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1 2-13-24 - LIPA IRP Public Hearing 2 And with that, I'll turn it over 3 to Andrew. MR. MANITT: Thank you for your 4 5 professional planning efforts and the opportunity to comment on the IRP. 6 7 My name is Andrew Manitt and I work with the sustainability institute at 8 9 Molloy University. 10 First of all, we're encouraged 11 that LIPA is keeping on track in its planning 12 to meet its portion of New York State climate goals, it's good to see. It didn't always 13 14 seem that way but it seems like you are now. I do want to reiterate some of 15 16 Billi's comments about ground source heat pumps, they do seem to be missing from the 17 18 planning and I think that's a mistake. 19 I also want to stress that it's 20 important to have diversity in generation. 21 Looking at the projections, we do seem to be 22 putting a lot of our eggs into the offshore 23 wind basket. I think it would be useful to try to diversify that more either with new 24 25 technologies that are coming online or with MGR Reporting, Inc. 1-844-MGR-RPTG

1 2-13-24 - LIPA IRP Public Hearing 2 more solar. 3 I think you should consider policies that promote more solar battery 4 5 combination installations at homes and businesses not only for the goals of reducing 6 7 greenhouse gas emissions and meeting state goals, but also for the peak shaving that they 8 9 can provide and promoting resilience here on 10 Long Island for when storms come and people are off the grid not of their own choice. 11

Having a battery back up is useful thing forhomes and businesses.

14 I have a couple of questions about some of the graphs. In the graph on page 58, 15 16 will the cost of megawatt hour building envelope improvements come down into the 17 18 avoided costs range as heat pumps become more 19 I'm assuming that one of the reasons common? 20 the cost per savings is so high on building 21 envelopes is because a lot of buildings aren't 22 heated with electricity so you're not saving a 23 lot of electricity by improving building 24 envelopes.

25 It would be good to know what the MGR Reporting, Inc. 1-844-MGR-RPTG

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 projection is if -- as more buildings are
 electrified whether that changes that
 particular calculation.

Also in the forecast of costs 5 6 graph on page 62, it shows growing costs from 7 renewables through 2040. But as I understand it most of the cost of renewables is in the 8 9 capital cost not the operating cost. At some 10 point in the future when there's a sufficient 11 renewable capacity built out, do those costs 12 start coming down? That's my question about that graph. I know it's out of the planning 13 14 window but it would be interesting to know.

15 And my last comment is kind of a 16 The graphic on page 45 is a little picky one. confusing at first glance. You've got the 17 18 label wind lull periods sitting right in the 19 period that isn't a wind lull with two arrows 20 pointing out towards the lulls. I think it 21 would be more understandable if you had two separate labels, one in each of the lull 22 23 periods that said lull period.

And that's all I've got. Thank you very much for the opportunity.

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1 2-13-24 - LIPA IRP Public Hearing 2 MR. LOCASCIO: Great. Thank you, 3 Andrew. So at this time we do not have any 4 5 additional speakers lined up in the queue. Ι will give it a couple more seconds in the 6 7 event we have someone that hasn't had a chance to raise their hand just yet. 8 9 MR. STEPHENSON: As you wait, 10 because I think Billi and Ryan both mentioned 11 it. I think it's an important item which is 12 tidal energy. We have looked at that, we 13 continue to look at that. It's got some 14 interesting characteristics in that it could be kind of anti-correlated, to use a technical 15 16 term, with the offshore wind. In other words, during those wind lulls there's no reason to 17 18 think that the tidal energy would dissipate, 19 so that's a good thing. 20 But even if you get beyond the 21 costs of tidal energy, you've got the issue 22 which is it's the D in DEFR, which is dispatchable, it's not dispatchable. 23 So although I think it may play a role in the 24 25 future, it doesn't have that dispatchability MGR Reporting, Inc. 1-844-MGR-RPTG

1 2-13-24 - LIPA IRP Public Hearing 2 which I think is going to be a critical component going forward. 3 MR. LOCASCIO: Great. Thank you, 4 5 Gary. So at this time we have no 6 7 additional speakers lined up in the queue, so 8 that will conclude today's public comment 9 session. 10 I do want to thank again everyone 11 that came out this morning on a snow day to 12 join us virtually for the second installment 13 of our IRP public comments. 14 As a reminder, we will have a final public comment session on Thursday 15 16 evening at 6:00 p.m. at the YMCA in Far 17 Rockaway. 18 Comments can also be submitted by 19 e-mail to IRP@LIpower.org, and that will 20 conclude today's hearing. Thank you again, 21 everyone. Have a great day. 22 (Time noted: 11:06 a.m.) 23 24 25 MGR Reporting, Inc.

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1 2-13-24 - LIPA IRP Public Hearing CERTIFICATE 2 3 STATE OF NEW YORK) 4 : ss.: COUNTY OF QUEENS 5) 6 7 I, NICOLE MANN, a Notary Public for and 8 within the State of New York, do hereby certify: 9 I reported the proceedings in the 10 within-entitled matter, and that the within 11 transcript is a true record of such proceedings. 12 I further certify that I am not related to any of the parties to this action by blood or by 13 14 marriage and that I am in no way interested in the 15 outcome of this matter. 16 IN WITNESS WHEREOF, I have hereunto set my hand this 20th day of February 2024. 17 18 19 20 21 22 23 NICOLE MANN 24 25 MGR Reporting, Inc. 1-844-MGR-RPTG