

**LIPA COMMUNITY ADVISORY BOARD  
MEETING AGENDA  
Monday, September 19, 2022  
8:00 A.M.**

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- I. Welcome & Introductions *(5 minutes)*
- II. Clean Energy Transition *(20 minutes)*
- III. South Fork Wind Update – Jen Garvey *(20 minutes)*
- IV. Update on Reliability and Resiliency Initiatives *(20 minutes)*
- V. Upcoming Tariff Proposals *(20 minutes)*
- VI. Community Update *(5 minutes)*
- VII. Legislative Commission Update *(5 minutes)*
- VIII. Round Table Discussion *(25 minutes)*

**Next Meeting Dates:**

**Friday, December 16, 2022**

Community Advisory Board Meeting

LIPA Board Room – Uniondale, NY



# COMMUNITY ADVISORY BOARD MEETING

September 19, 2022

# A G E N D A

01

Clean Energy Transition

02

South Fork Wind Update

03

Update on Reliability and Resiliency Initiatives

04

Upcoming Tariff Proposals

05

Community Update

06

Legislative Commission Update

07

Roundtable Discussion





# WELCOME & INTRODUCTIONS



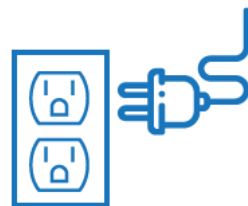
# CLEAN ENERGY TRANSITION UPDATE

# MEETING NEW YORK'S CLEAN ENERGY GOALS



Renewables  
**70% by 2030**

Electric Sector  
GHG Reduction  
**100% by 2040**



Energy Efficiency  
**185 trillion BTU  
reduction by 2025**



Climate Action  
Council



Offshore Wind  
**9,000 MW  
by 2035**



Battery Storage  
**3,000 MW  
by 2030**



Solar Energy  
**6,000 MW  
by 2025**  
**10,000 MW  
by 2030**

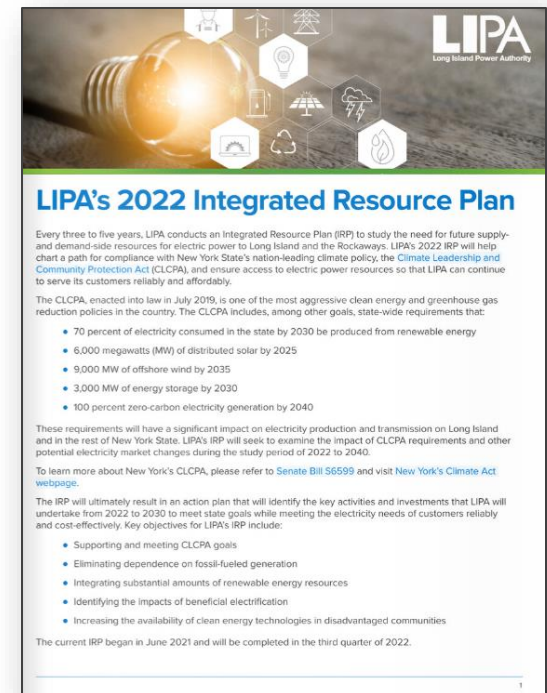


Electric Vehicles  
**100% zero-emission  
vehicles by 2035**



# ACHIEVING A ZERO-CARBON ELECTRIC GRID

- In June 2021, LIPA launched an **Integrated Resource Plan (IRP)** to study the transition to a zero-carbon grid by 2040
- The IRP will result in an action plan for the period of 2023 to 2030 that will recommend key actions and investments needed to **achieve state goals** while continuing to meet the electricity needs of LIPA's customers **reliably and cost-effectively**
- IRP preliminary results will be available in **Q1 2023**
- An initial public hearing was held in September 2021. Additional opportunities for public input will be provided as study results are available



[Fact Sheet: LIPA's 2022 Integrated Resource Plan](#)

# CLEAN ENERGY TRANSITION ON LONG ISLAND IS UNDERWAY

## Long Island Clean Energy Projects in Service and Under Procurement

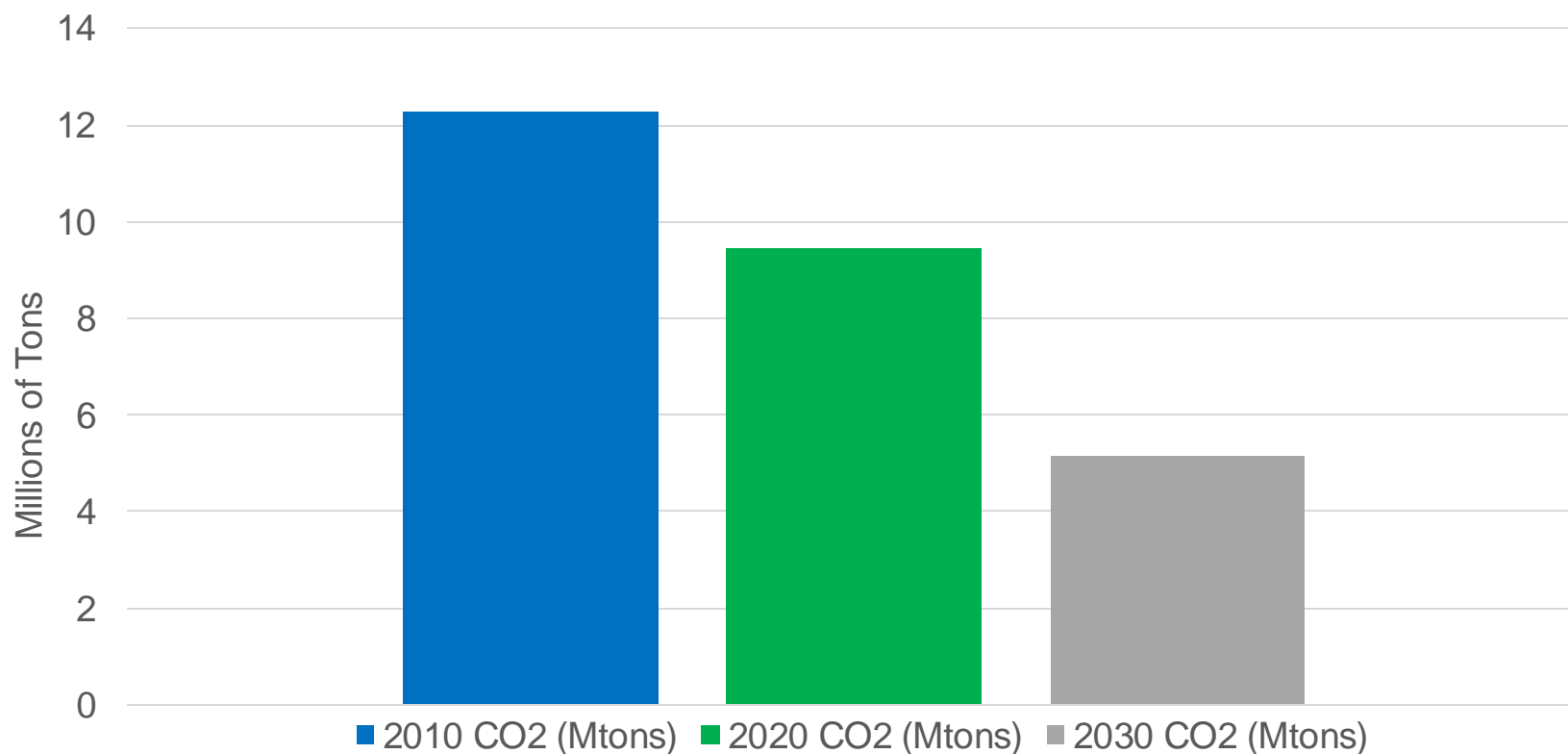
	Size (MW AC)	In-service (Est.)
<b>Solar (830 MW)<sup>1</sup></b>		
Long Island Solar Farm	32	2011
Eastern Long Island Solar Project	11	2013
Shoreham Solar Commons	25	2018
Riverhead Solar	20	2019
Kings Park Solar 1 and 2	4	2019
Solar Feed-in Tariffs I-III	89	2021-2022
LI Solar Calverton	23	2021
Riverhead Solar II	36	2022
Behind-the-meter	577	2000-2022
Solar Communities (FIT V)	15	2022
<b>Offshore Wind (2,270 MW)</b>		
South Fork Wind Farm	130	2023
Sunrise Wind	880	2024
Empire Wind 2	1,260	2026
<b>Energy Storage (360 MW)<sup>2</sup></b>		
East Hampton & Montauk Storage	10	2018 & 2019
TBD	175	2025
TBD	175	2030
<b>Total</b>	<b>3,460</b>	





## LIPA'S CARBON FOOTPRINT IS DECLINING RAPIDLY

LIPA's carbon emissions expected to decrease approximately **60% by 2030** from 2010 levels from already planned actions



# SOUTH FORK WIND GROUNDBREAKING



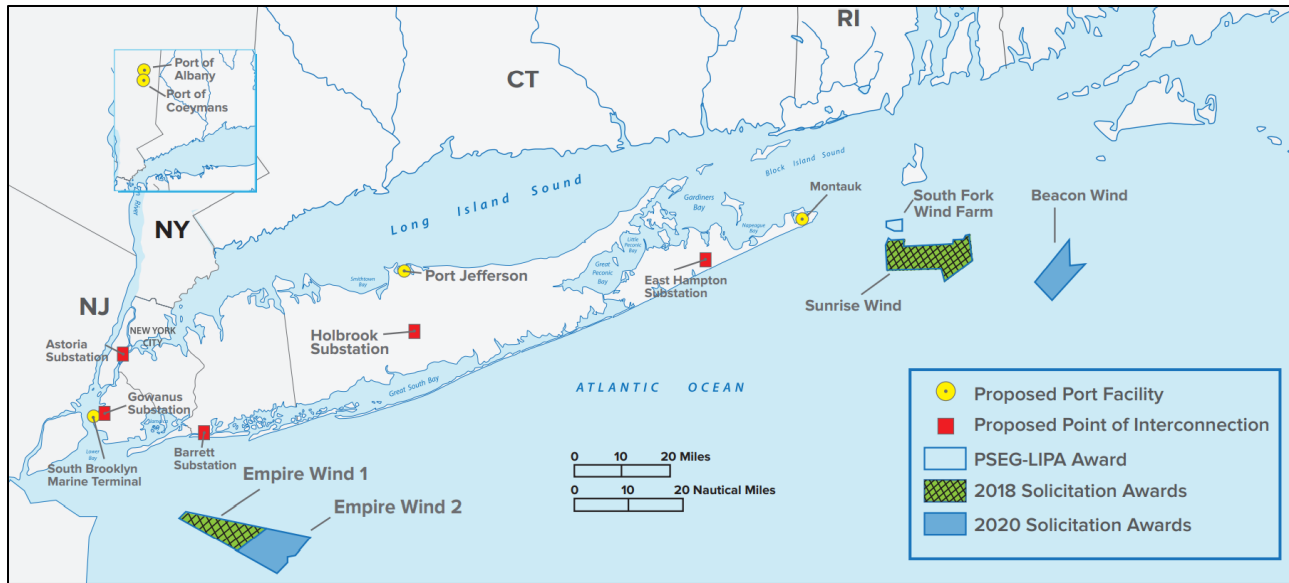
## South Fork Wind Farm

In 2017, the LIPA Board approved the first power purchase agreement in the country for offshore wind in federal waters

### Fast Facts

- Operational in 2023
- Meets growing energy needs of South Fork
- Extensive environmental review and public comment process
- Enough to power 70,000 homes
- Equivalent of taking 60,000 cars off the road annually
- **More to come!** Three offshore wind projects will interconnect with Long Island by 2027

# NEW YORK OFFSHORE WIND PROJECTS

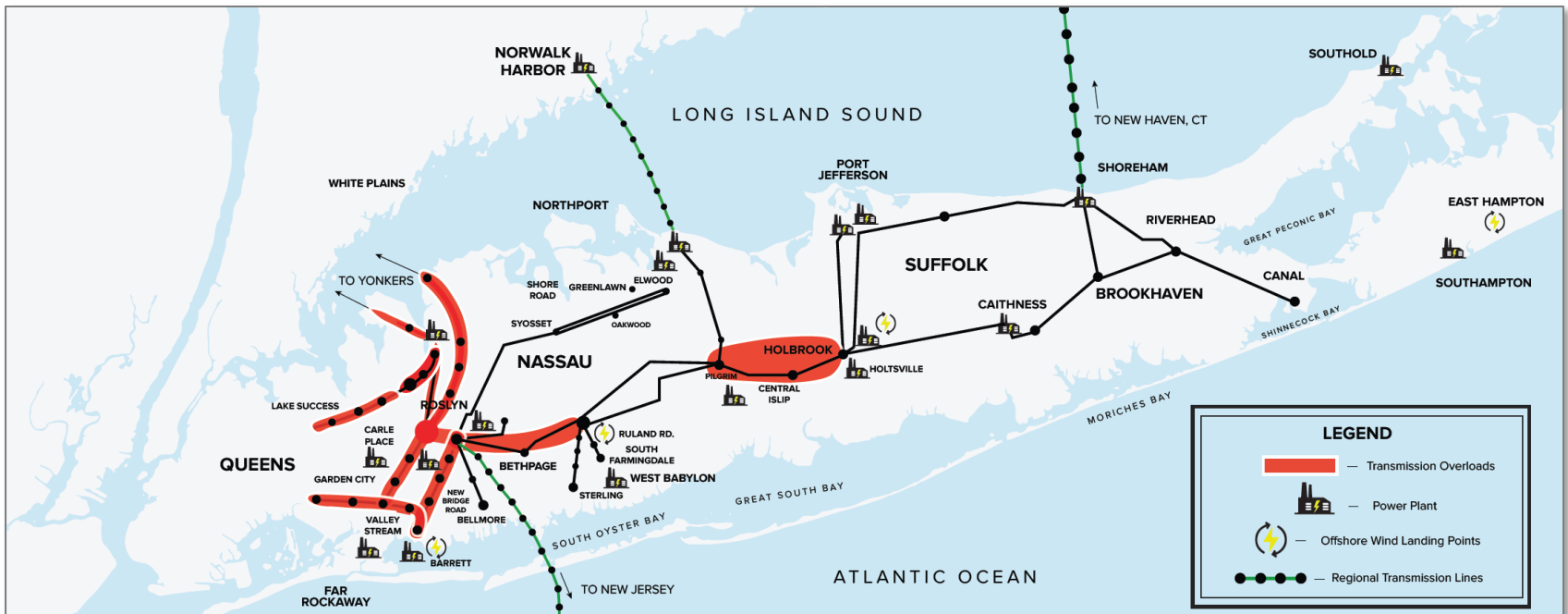


Project Name	Owner	Size (MW)	Contract Off-Taker	Interconnect Utility	In-Service Date
South Fork Wind	Joint Venture: Ørsted and Eversource	130 MW	LIPA	LIPA	2023
Empire Wind 1	Equinor Wind US LLC	816 MW	NYSERDA	ConEd	2024-25
Sunrise Wind	Joint Venture: Ørsted and Eversource	880 MW	NYSERDA	LIPA	2024-25
Empire Wind 2	Equinor Wind US LLC	1,260 MW	NYSERDA	LIPA	2026-27
Beacon Wind	Equinor Wind US LLC	1,230 MW	NYSERDA	ConEd	2028



# UPGRADING THE LONG ISLAND ELECTRIC GRID FOR OSW

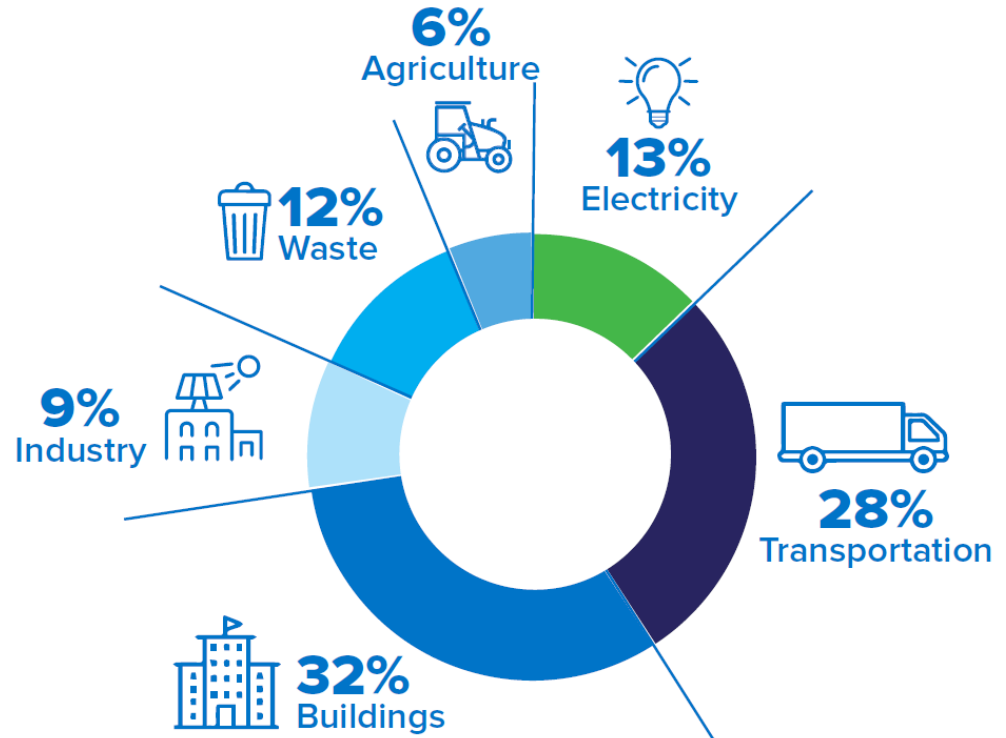
- LIPA and Con Edison conducted a regional study in 2020 to connect **9,000 megawatts (MW) of offshore wind** to Long Island and New York City electric grid
- In 2021, the New York State Public Service Commission (PSC) confirmed in New York State's Power Grid Study the need for **Long Island's transmission system upgrades** to move offshore wind-generated electricity onshore and to the rest of the state



# BUILDINGS AND TRANSPORTATION

- **Buildings and transportation** produce **the majority** of New York's carbon emissions
- Steps need to be taken to reduce Long Island's carbon footprint, including the electrification of transportation and heat and hot water in buildings and homes

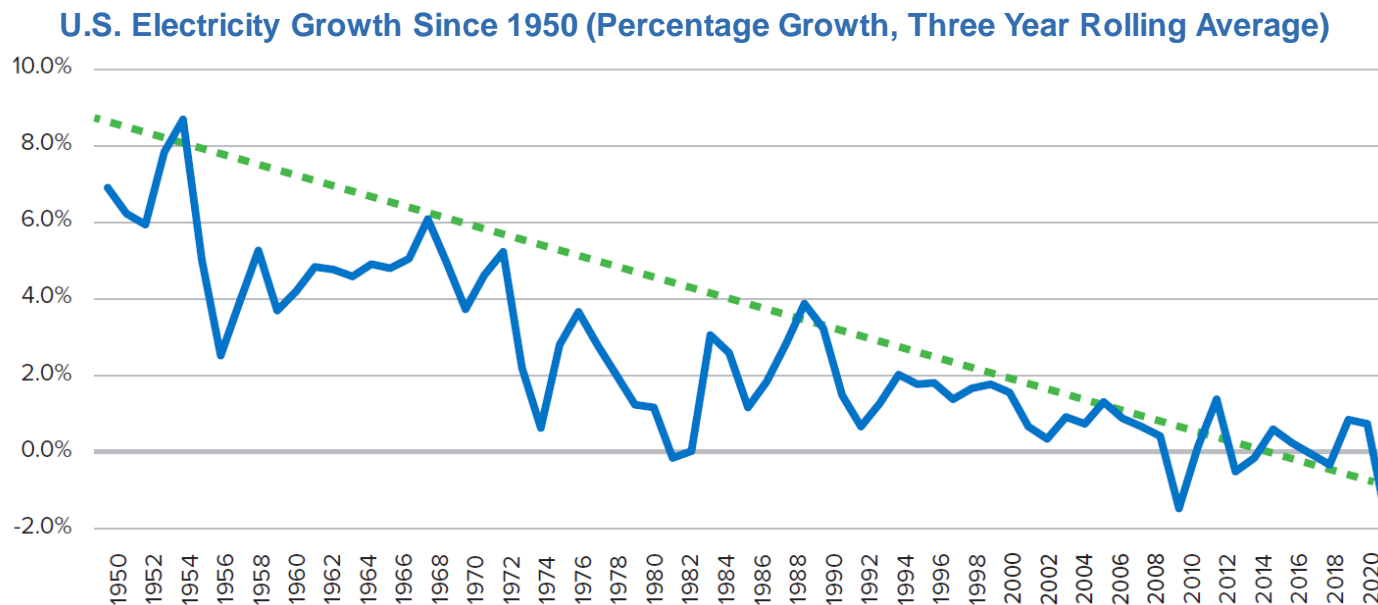
New York State Carbon Emission Sources



*Data from New York State Department of Environmental Conservation 2021 Statewide GHG Emissions Report*

# ELECTRIC LOAD GROWTH WILL BE SIGNIFICANT

- New York's electric demand will grow **65 to 80% by 2050**, primarily to electrify transportation and building sectors that are the majority of the state's carbon emissions
- 80% load growth is less than **2% per year spread over 30 years**, which is modest relative to historic growth



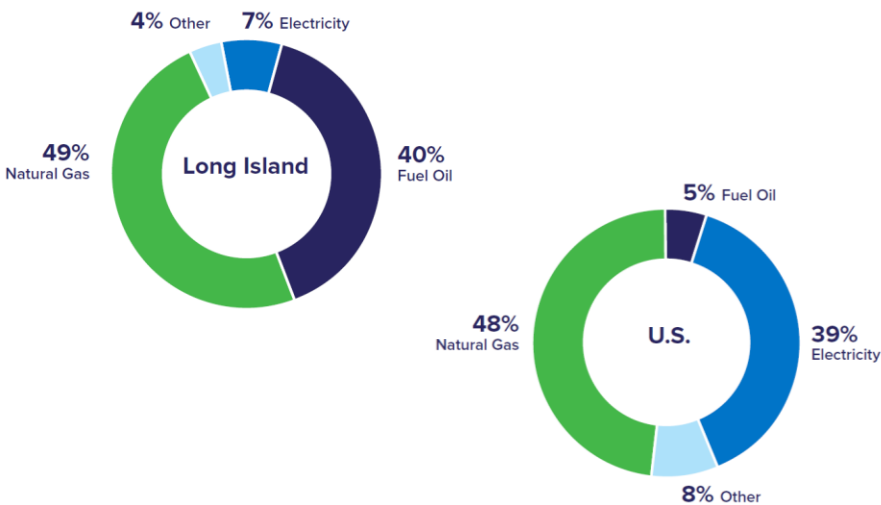
Source: Monthly Energy Review, U.S. Energy Information Agency, March 2021



# BUILDING DECARBONIZATION SAVES MONEY AND CARBON FOR LONG ISLAND

- Cold climate heat pumps can help customers **save on both carbon and money**
- LIPA is leveraging our customer insights, relationships, and contractor network to accelerate heat pump adoption

Long Island Homes Heat with Oil  
at Eight Times the National Average



Long Island Households Could Save Money  
and Reduce Their Carbon Footprint with Heat Pumps

	Buying NEW Central Air Conditioning	Buying NEW Air-Source Heat Pump
Upfront Cost	\$6,700	\$9,700
LIPA Rebate		\$2,400
<b>Net Cost</b>	<b>\$6,700</b>	<b>\$7,300</b>
Annual Home Heat Bill	\$1,800	\$800
<b>Annual Savings</b>		<b>\$1,000</b>
Payback Period		Less than one year
<b>Carbon Footprint from heating (2022)</b>		<b>-42%</b>
Carbon Footprint from heating (2040)		-100%

*Example is for typical Long Island home with oil heat and a need to replace their central air-conditioning with a new unit. Figures do not reflect impact of new incentives from the Inflation Reduction Act or the recent increase in oil prices since November 2021.*



# SOUTH FORK WIND UPDATE

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## UPDATE ON RELIABILITY AND RESILIENCY INITIATIVES

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# LIPA BOARD'S VISION FOR RELIABILITY AND RESILIENCY

The LIPA Board of Trustees has set objectives for reliability and resiliency to measure management's performance

LIPA Board's **reliability** objectives:

- Provide **top decile levels of reliability** as measured by system average outage duration
- **Improve circuit conditions** that cause customers to experience 4 or more sustained or 6 or more momentary outages in any 12-month period
- Utilize **modern system design and technology** to anticipate and minimize outages, and provide for **preventative and predictive maintenance**

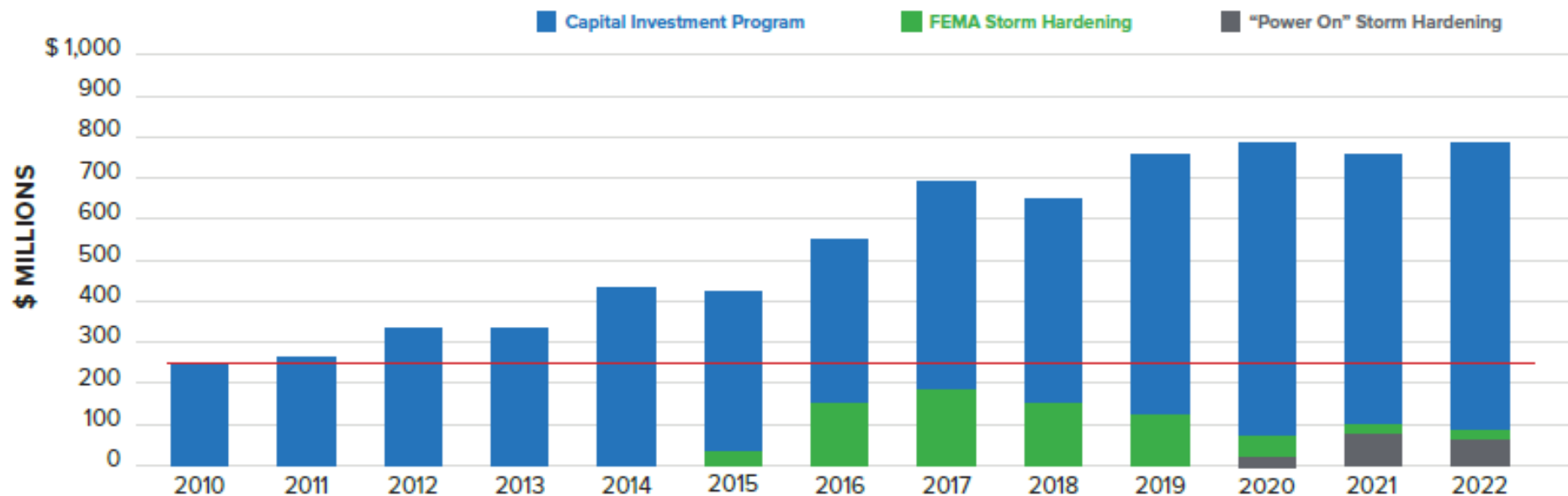
LIPA Board's **resiliency** objectives:

- Mitigate effects of climate change through multi-year programs to **reduce the number and duration of outages caused by storms**
- Assure **timely and accurate communication** to customers about outages and restoration times
- **Independently verify emergency restoration plans and testing of IT systems**



## INVESTMENT IN RELIABILITY & RESILIENCY

- LIPA has invested a record **\$4.9 billion** in infrastructure since 2016 to improve the reliability and resiliency of Long Island's electric grid
- **300% increase** since 2010
- In addition to customer funds, LIPA is eligible for FEMA and other grants due to its status as a public power utility



# A CUSTOMER-DRIVEN APPROACH TO GRID RESILIENCY

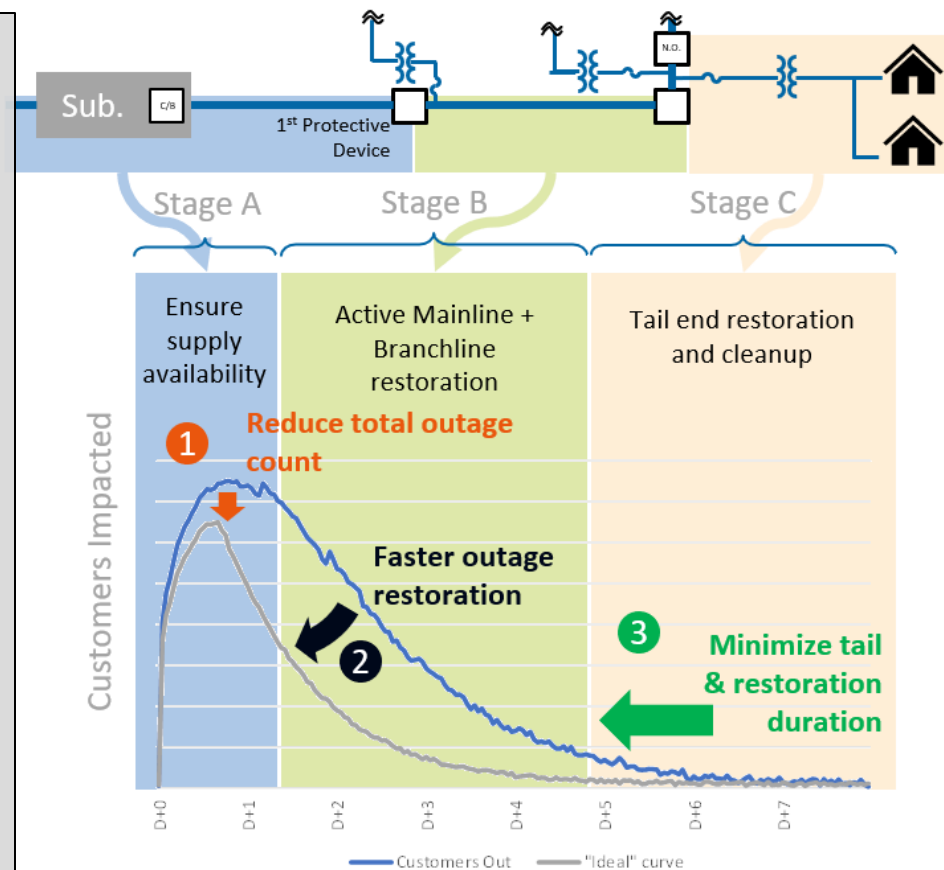
The Long Island Grid Resiliency Improvement Program seeks to **quantify and further reduce the number of customers and restoration times** after a severe weather event

## Reduce the number of outages by:

- Continuing to harden worst performing distribution circuits
- Hardening one transmission supply feed to every substation in a load pocket
- Reducing number of customers behind each protective device to less than 500
- Additional hazard tree removal and deploying intelligence to the tree trim cycle

## Shorten length of storm restoration by:

- Utilizing smart meter data for operational intelligence
- Selective undergrounding of hard to access rear-lot service
- Deploying electricians for low-voltage restoration



Illustrative Restoration Curve



# INVESTMENT IN RELIABILITY & RESILIENCY

- LIPA expects **\$500 million to \$560 million** in Capital Budget funds to be spent on transmission and distribution (T&D) projects in 2022, including **\$70+ million** for storm hardening. Total capital budget of **\$783 million**.
- Included within the 2022 performance metrics of the reformed LIPA contract with PSEG Long Island are requirements for future work on **resiliency programs**:
  - Overhead hardening of **44 mainline circuits**
  - **~150 ASUVs** to be installed and commissioned
  - **Underground Pilot** for rear-lot service for a minimum of four locations in 2022 and develop program for 2023\*
  - Develop plans to **harden supply** to each of the eight transmission load pockets\*
  - Operationalizing **Automatic Circuit Recloser Vipers** (ACRV) for a minimum of ten circuits and develop program for 2023
  - Manage the amount of **double wood poles** by end of 2022
- **Storm hardening pilot programs** will be evaluated at the end of 2022 to determine future funding
- Increased **underground cable replacement** included in 2022 budget
- **Climate study** to be complete by year-end



# ENHANCED VEGETATION MANAGEMENT

- Included in 2022 performance metrics is an expansion of vegetation management programs by **\$14.9 million** from \$32 million in 2021 to **\$47 million** in 2022
- Includes an expanded Hazard Tree Removal Program targeting **12,000 trees** (up from 3,000 previously)
- Utilizing **intelligence and analytics** regarding species, growth rate, and location to limit vegetation-caused outages
- Includes implementing a new “**Trim to Sky**” protocol on circuits to the first protective device on each circuit





# **UPDATE ON RELIABILITY AND RESILIENCY INITIATIVES: FEMA**

# FINANCIAL IMPACT OF STORMS

Storm	Cost Incurred by LIPA	Recovered from FEMA/Other Grants
Tropical Storm Irene (2011)	\$168 million	\$144 million
Superstorm Sandy (2012)	\$704 million	\$670 million
Winter Storm Nemo (2013)	\$14 million	\$11 million
Winter Storm Stella (2017)	\$14 million	\$4 million
Tropical Storm Isaias (2020)	\$310 million	\$276 million*
Tropical Storm Ida (2021)	\$9 million	\$6.75 million*
<b>TOTAL</b>	<b>\$1.2 BILLION COST</b>	<b>\$1.1 BILLION RECOVERED</b>

*\*expected*

LIPA is eligible for FEMA and other grants due to its status as a public power utility, **mitigating a significant portion of the financial risk of storms and impacts on customer bills**

In addition to funds for storm restoration costs (above), **LIPA is also eligible for grants for storm hardening to reduce damage in future storms**



# TROPICAL STORM ISAIAS – AUGUST 2020

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## Mitigation Opportunities – 406 Isaias Grant

- LIPA submitted a request for Mitigation funding under section **406 of the Stafford Act** on December 1, 2021. The Hazard Mitigation Plan seeks **\$426 million** of funding to harden 200+ circuits. (Section 406 is a non-competitive grant program).
- The Hazard Mitigation Plan was submitted using the same “tools in the toolbox” as was approved by FEMA (and DHSES) after Superstorm Sandy.
- As part of the HMP, LIPA submitted a BCA prepared by the FEMA BCA specialist that supported the \$426 million request.
- LIPA was asked to refine the scope of work as FEMA was seeking detailed engineering packages for each of the 164-circuit selected for mitigation before awarding the grant.
  - The process to prepare an RFP, hire the contractor, walk the circuits and prepare the engineering for each circuit will take 12-13 months and cost \$9.8 million.
  - PSEG Long Island issued the RFP earlier this month and is expected to award the contract(s) by the end of October to perform the detailed engineering.

# TROPICAL STORM ISAIAS – AUGUST 2020

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## Mitigation Opportunities — 404 Isaias Grant

- LIPA submitted a **404 Hazard Mitigation Plan** with NY State DHSES on November 1, 2021, and modified the filing on February 28, 2022, to reflect feedback from DHSES staff, seeking approximately **\$3 million** of funding.
- The HMP targets three transmission crossings originally included in the Sandy HMP that sought funding for nine crossings. The LOU provided funding for six crossing and therefore LIPA is requesting funds to harden the remaining three.
- The crossings include:
  - Seaford Oyster Bay Expressway at Clark Street
  - Wantagh Parkway at Park Avenue
  - Route 347 at Gibbs Pond Road

# REMNANTS OF IDA – SEPTEMBER 2021

## Public Assistance - Ida

- LIPA applied for and has submitted documentation for PA grants related to 2 projects totaling **\$8,598,476**.
- Match is 90%.

## Funding

Cat B:	Env Cleanup	Obligated	\$ 104,286
Cat F:	Outside Crews	Pending FEMA 406 HMP*	<u>7,634,342</u>
	Anticipated Recoveries @ 90%		<u>\$7,738,628</u>

*\* Detailed engineering and associated reports have been requested. 12-13month process to conclude July 2023.*

# UDSA FINANCING

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- Last session, the Legislature authorized the issuance of Utility Debt Securitization Authority (UDSA) bonds on LIPA's behalf to refinance debt for savings and fund resiliency investment
- UDSA bonds have “triple-A” ratings and lower interest and debt service coverage requirements than LIPA bonds
- Last week, UDSA issued \$935 million of bonds:
  - Funded **\$100 million of 2022 storm resiliency investment** through the issuance of “green bonds” at a lower cost than LIPA debt
  - Refinanced LIPA and UDSA debt for interest savings
  - **Present value savings for customers: \$42 million**





# **UPDATE ON RELIABILITY AND RESILIENCY INITIATIVES: OMS UPDATE**

# STATUS OF PSEG LONG ISLAND OMS AND TELECOM

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## PSEG Long Island redeployed CGI Outage Management System (OMS) v6.7.8 into production on February 6, 2022 after numerous delays

- OMS v6.7 failed during Tropical Storm Isaias in August 2020
- LIPA customers have spent over **\$45 million** on OMS and communication system remediation to date\*
- Re-deployment of OMS was delayed at least four times to February 2022
  - *Smart meter integration into OMS was further delayed from March 2022 to June 2022. Without smart meter integration several important storm management / restoration features were not available to customers. Performance (stress) testing on this integration was completed in September 2022*
- PSEG Long Island reports that the system is functioning as expected

*PSEG has provided a \$17 million credit to management fees paid by LIPA through 2025 to partially offset OMS remediation costs*

# LIPA'S IV&V OF OMS

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## **Phase I of LIPA's IV&V of PSEG Long Island's OMS deployment consists of initiation, shakedown, functional testing, and performance testing of the deployed systems**

- Review of OMS design specifications, configurations, and interface implementations
- Running PSEG Long Island's functional and performance tests (under hurricane conditions) to independently repeat and verify test results
- Reviewing the design of PSEG Long Island's tests to ensure the tests are adequate to evaluate whether OMS v 6.7.8 complies with requirements
- Development of Phase 2 plans for further testing, as needed

# JUNE BOARD REPORT: OMS IV&V PHASE I FINDINGS

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## **PSEG Long Island did not follow mature IT practices in its functional testing used to certify the OMS v 6.7.8 ready for deployment**

- Many test scripts were not documented accurately or completely. They relied upon the testers' implicit knowledge to execute the tests which risks reliability and repeatability of the tests
- PSEG Long Island does not use version control systems for tracking test cases, test data, or configuration. This causes uncertainty as to what test scripts, test cases, and test data were used for validating the system
- Some test cases did not match the OMS system behavior but were marked as passed by PSEG Long Island based on implicit "understanding" that the functionality works. These practices compromise the integrity of the test plan
- Mistakes in mapping functionality to the test objectives also reduce the effectiveness and reliability of the testing done by PSEG Long Island



# JUNE BOARD REPORT: IV&V PHASE I RECOMMENDATIONS

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## **LIPA recommendations from Phase I IV&V:**

- PSEG Long Island should review all their existing functional test scripts and re-test each script until all the tests pass on a “repeatable” basis
- Focus on improving test management practices, which will involve staff training and appropriate use of Software Development Life Cycle (SDLC) and test management tools
- Ensure that system, integration, and user acceptance testing follows a defined cadence and is organized accordingly
- Develop a Quality Assurance and Quality Review processes around testing and test management

**LIPA’s IV&V of the OMS will continue until all the identified issues are remedied and PSEG Long Island implements the necessary process and organizational changes.**

**LIPA will update the Board on the status of its IV&V at the September 28, 2022 Board meeting.**



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# UPCOMING TARIFF CHANGES

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# UPCOMING PROPOSED TARIFF CHANGES

## Annual Budget and Rate Update

LIPA Staff proposes to modify the Tariff to implement rate adjustments as determined through LIPA's annual budget process. Consistent with LIPA's annual budget process, a proposed budget will be published in early November 2022, in advance of the budget workshop for LIPA's Board, which will be held on November 16. The resulting rate adjustments will increase the annual aggregate delivery revenues of LIPA by an amount not to exceed two and one-half percent and will be effectuated through a pro rata increase to all Service Classifications.

## Prolonged Outage Credits

LIPA Staff is proposing changes to LIPA's Tariff to offer bill credits and food and medicine spoilage reimbursements consistent with Commission policy for residential and small business customers affected by a Widespread Prolonged Outage. These proposed changes will better align LIPA's Tariff with other electric utilities in the State.



# UPCOMING PROPOSED TARIFF CHANGES

## **Large Renewable Host Community Benefit**

Staff is proposing to implement a Host Community Benefit Program in the LIPA service territory. The Program will provide an annual bill credit to residential electric utility customers with premises located in a Renewable Host Community for each of the first ten years that an MRE Facility operates in that Renewable Host Community.

## **Long Island Choice Merchant Function Charge**

Staff is proposing to create a Merchant Function Charge, applicable to all customers receiving electric commodity service from LIPA, and to establish the purchase of receivables rate for ESCOs that participate in Long Island Choice and utilize the Consolidated Bill Option with Purchase of Receivables.

## **Interconnection Cost Sharing**

The proposal will seek to implement new rules for sharing the costs of distribution system upgrades among DER project developers and to make other changes to further conform the SGIP to recent Commission policy and the July 2021 Order. The proposed changes will also conform the SGIP to the New York State Standardized Interconnection Requirements and Application Process for New Distributed Generators and Energy Storage Systems 5 MW or Less Connected in Parallel with Utility Distribution Systems used by other utilities in the State.



# UPCOMING PROPOSED TARIFF CHANGES

## KEY DATES:

Notice of  
Proposed  
Rulemaking  
Filed

September 14

September 14, 2022  
Vol. XLIV  
Issue 37

DEPARTMENT OF STATE  
Division of Administrative Rules

**NEW YORK STATE**  
**REGISTER**

Public Hearing  
Nassau County  
333 Earle Ovington Blvd  
Uniondale, NY

November 16

November 17

Public Hearing  
Suffolk County  
100 Veterans Mem. Highway  
Hauppauge, NY

LIPA Board  
Meeting

December 14

# LIPA TIME-OF-DAY RATE

- Developing and implementing enhanced electric rate designs is a key part of achieving New York's Climate Act goal of a carbon-free electric grid by 2040
- **LIPA will develop and adopt new Time of Day rates for all electric customers over the next three years.** Customers will still have an option for a fixed rate. LIPA will deploy programs, services and tools to help customers minimize summer peak usage and bills
- Shifting electric use during a few peak hours to other times of day reduces need to buy energy from sources that are **less environmentally friendly and more expensive** and the need to make **expensive investments in the electric grid** (substations, transformers) to meet peak capacity
- Customers can choose **electric vehicles, heat pumps, and battery storage** and save money by using cheaper off-peak power
- Tariff change to implement this proposal is expected to go to the board in Q1 2023, with implementation in 2024.



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# COMMUNITY NEWS

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# NORTH SHORE RAIL TRAIL



- 10-mile path from Port Jefferson to Wading River is now home to a trail for walking, running, and biking using LIPA's right of way
- LIPA took part in the opening of the North Shore Rail Trail on a site formerly occupied by a 19<sup>th</sup> century railroad line
- LIPA gained ownership of land after the rail line was abandoned in the 1930s
- The project dates to the 1970s, but inactivity and funding complications delayed it becoming a reality for decades



Photo Credit: Denise Byrne

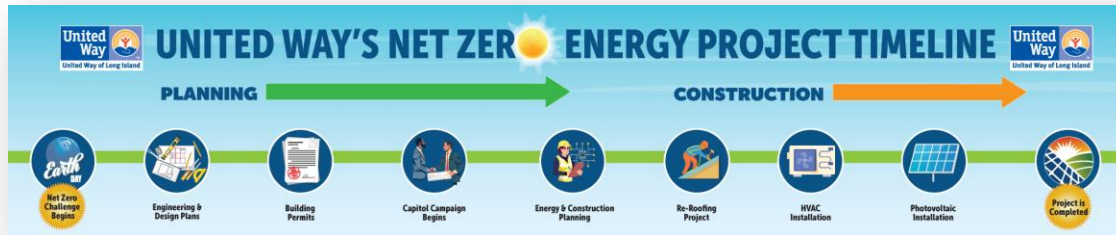


Photo Credit: Suffolk Times



# UNITED WAY GRANT

- LIPA recently awarded United Way of Long Island with a grant worth **\$200,000** in support of the organization's Net Zero Energy Challenge campaign
- United Way's headquarters in Deer Park will include rooftop solar, air-source heat pumps, and electric vehicle charging
- **United Way expects \$60,000+ in reduced energy bills to be reinvested back into their core mission for Long Island**
- United Way runs programs in their facility for **disadvantaged young adults and veterans** providing skills training in **clean energy jobs of the future**





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# LEGISLATIVE COMMISSION

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# NEW YORK STATE LEGISLATIVE COMMISSION ON THE FUTURE OF LIPA

- The 2022 New York State budget enacted a Legislative Commission on the Future of LIPA to investigate and report to the legislature on the establishment of a public power model of management for LIPA's assets
- Eight members of the Commission have been announced so far. There will also be an Advisory Committee to the Commission, but that has not yet been appointed
- The first hearing will likely be held later this year



## Commission Members Appointed



Senator Kevin Thomas  
Co-Chair



Assemblyman Fred W. Thiele Jr.  
Co-Chair



Senator  
Phil Boyle



Senator  
James Gaughran



Assemblywoman  
Stacey Pheffer Amato



Assemblyman  
Doug Smith



Senator  
James Sanders



Assemblywoman  
Judy Griffin



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## ROUNDTABLE DISCUSSION

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