2022 Integrated Resource Plan

June 23, 2021



OVERVIEW OF THE 2022 INTEGRATED RESOURCE PLAN

The Integrated Resource Plan (IRP) is a comprehensive assessment of LIPA's resource and transmission assets that identifies reliable, environmentally compliant, cost effective, and timely options for meeting future demand

- PSEG Long Island, as agent of and acting on behalf of LIPA, has commenced the development of a new 2022 IRP for electric power supply to the electric grid for Long Island and the Rockaways
- IRPs are typically conducted every 3 5 years with a 10+ year planning horizon
 - The 2017 IRP rejected proposals to build new combined-cycle plants and identified future challenges of integrating offshore wind
 - The 2022 IRP will use a Study Period of 2022 2040 with a focus on changes needed by 2030
- The IRP will produce an Action Plan



WHAT'S NEW FOR THE 2022 IRP?

- In 2019, New York State adopted the Climate Leadership and Community Protection Act (CLCPA) which includes aggressive goals to decarbonization the electric grid
- CLCPA will require sweeping changes to LIPA's power supply portfolio and planning for future generation and transmission
- Transitioning to a carbon-free grid involves both adding new clean sources of energy and retiring older, fossil-fueled power plants





Near-Term Challenges

- Contracts with existing fossil-fired plants, which currently meet about 80% of local capacity needs, are set to expire in the next 5-10 years and will need to be replaced by clean energy
- Integration of offshore wind, solar, and energy storage resources will necessitate upgrades to the on-Island transmission grid
- New York State CLCPA goals and New York Independent System Operator market reforms are changing the rules of the electric business

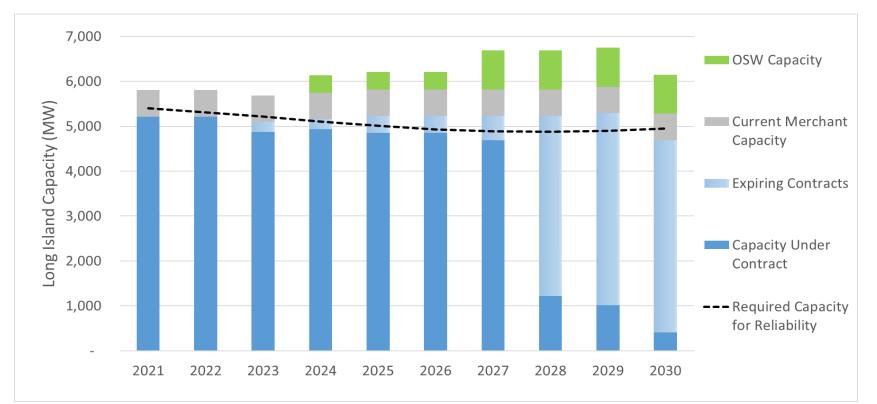
Long-Term Challenges

- Transitioning Long Island to a zero emissions reliable power grid by 2040
- Meeting growth in electric vehicles and building electrification



GENERATION RESOURCE ADEQUACY

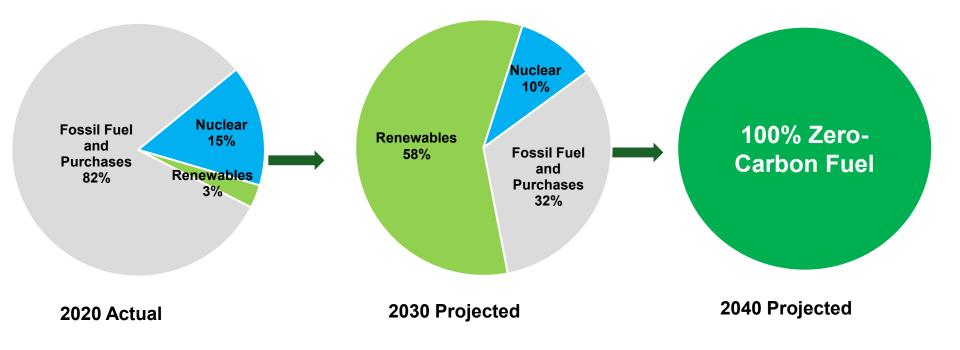
- Existing resources meet LIPA's capacity requirements through 2030
- Most power purchase contracts with fossil units expire by 2030
- Many older, LILCO-era fossil units are candidates to retire by 2030





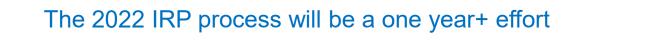
CURRENT AND PROJECTED FUEL MIX

- The large majority of LIPA's current fuel supply mix uses fossil fuels
- By 2040, LIPA will serve its customers with 100% zero-carbon electricity generation





TIMELINE







COLLABORATION

LIPA and PSEG Long Island staff will be collaborating with additional resources, including:

Consultant Support

• Consultant with extensive industry experience is being retained to assist in IRP development

Utilizing Academic and National Expertise

 Stony Brook University and Brookhaven National Laboratory representatives to provide input on topics and identify emerging technology

BSA	
June 21, 2021	
Tom Falcone Chief Executive Officer of the Long Island Power Authority	
Dear Tom,	
Brookhaven Science Associates, LLC (BSA), as the manager of Brook Laboratory for the U.S. Department of Energy, would like to express its supporting the Long Island Power Aduntry (LIPA) in evaluation of Resource Pan. BSA anticipates it mpt/hwould be possible for BSA or 1. Server as a scientific and engineering resource to LPA to addre questions that may arise in the course of LIPA svaluation 2. (diently emergina technologies that maint mach the LIPA head	interest in the Integrated
Plan. Terms of an agreement for BSA to support LIPA in this manner would should LIPA be interested in such support. Spicerely,	be confirmed
Jong Minth	
Dr. Jim Misewich	Stony Brook University
Associate Laboratory Director for Energy and Photon Sciences Directorate	Office of the Vice Precisitent for Research 55427 Frank Medille, X. Mermolin Ultrary Sang-Break, NY 1174-335
5,	Solary Brook, NY 11784-3365 Tel 631 652 7870
	www.storyteroic.edu/escarch
	June 21, 2021
	Mr. Thomas Falcone Chief Executive Officer The Long Island Power Authority
	Dear Mr. Falcone, On behalf of Story Brook University. I am pleased to express our vulliagness to lead technical experite to the Long Mand Fower Authority as you evaluate your integrated Resource Plan. As with our partners at Brookham Science Associates, we anticipate it might/would be possible for Story Brook as in the Course of Life A evaluation. I. Serve as a scientific and engineering resource to LIFA to address technical questions that may site in the Course of Life A evaluation.
	and y doe to not could out LEA S versionation. 2. Identify emerging technologies that might impact the LIPA Integrated Resource Plan. We would request that terms of an agreement for Stony Brook's support to LIPA be confirmed should LIPA be interested in such support.
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	Suchard J. Reeder Vice President for Research
	CC: Michael Dering Rick Shanday Judy Greiman
	S.NY (FF) Market Market and Market



IRP Website, Email & Notifications

- A dedicated public <u>webpage</u> has been created on the LIPA website
- Interested parties can sign up to an email list to receive IRP related updates
- Questions and feedback can be provided directly via an online form or via email to <u>IRP@lipower.org</u>

Public Comment Period

- LIPA and PSEG Long Island will post the proposed IRP scope of work and seek public comments for a period of 30 days
- Additional opportunities for public comments will be provided later in the IRP process

