Transmission & Distribution Planning for Climate Act

February 24, 2021

LIPA
Long Island Power Authority

TRANSMISSION AND DISTRIBUTION (T&D) PLANNING IN NEW YORK STATE

Local T&D Planning

- Conducted by each New York State utility for its local needs
- Costs are charged to utility customers
- PSEG Long Island develops LIPA's Local Transmission Plan

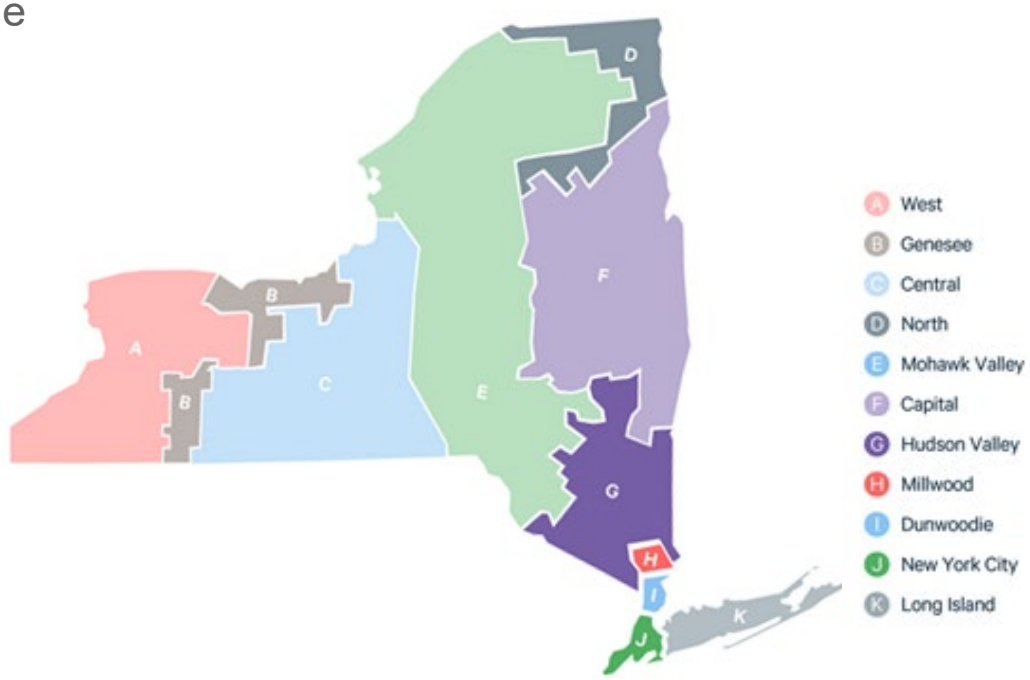
Power Grid Study for Local T&D and Bulk Transmission Planning

- Conducted by utilities, consultants and the Department of Public Service (DPS) / New York State Energy Research Development Authority (NYSERDA) with assistance from the New York Independent System Operator (NYISO)
- Public Service Commission (PSC) authorizes priority transmission projects for development by the New York Power Authority (NYPA)
- PSC selects local T&D projects that meet statewide needs, which may be eligible for statewide cost allocation

TRANSMISSION AND DISTRIBUTION (T&D) PLANNING IN NEW YORK STATE

Public Policy Transmission Planning

- PSC and LIPA identify needs (PPTN)
- Solicitation conducted by the NYISO
- Costs are allocated to zones that benefit
- PPTN related to the Climate Leadership and Community Protection Act (CLCPA) would be allocated statewide



LATEST DEVELOPMENTS

November '20: Utilities submitted Local T&D Studies

- $6.8 billion of local T&D projects already in utility plans (Phase 1)
- $17 billion additional projects proposed for CLCPA compliance (Phase 2)

January '21: DPS released draft Power Grid Study

- No additional bulk projects needed before 2030
- Commence PPTN process to prepare for OSW needs 2030-2035
- OSW interconnections should be designed to accommodate a future offshore grid

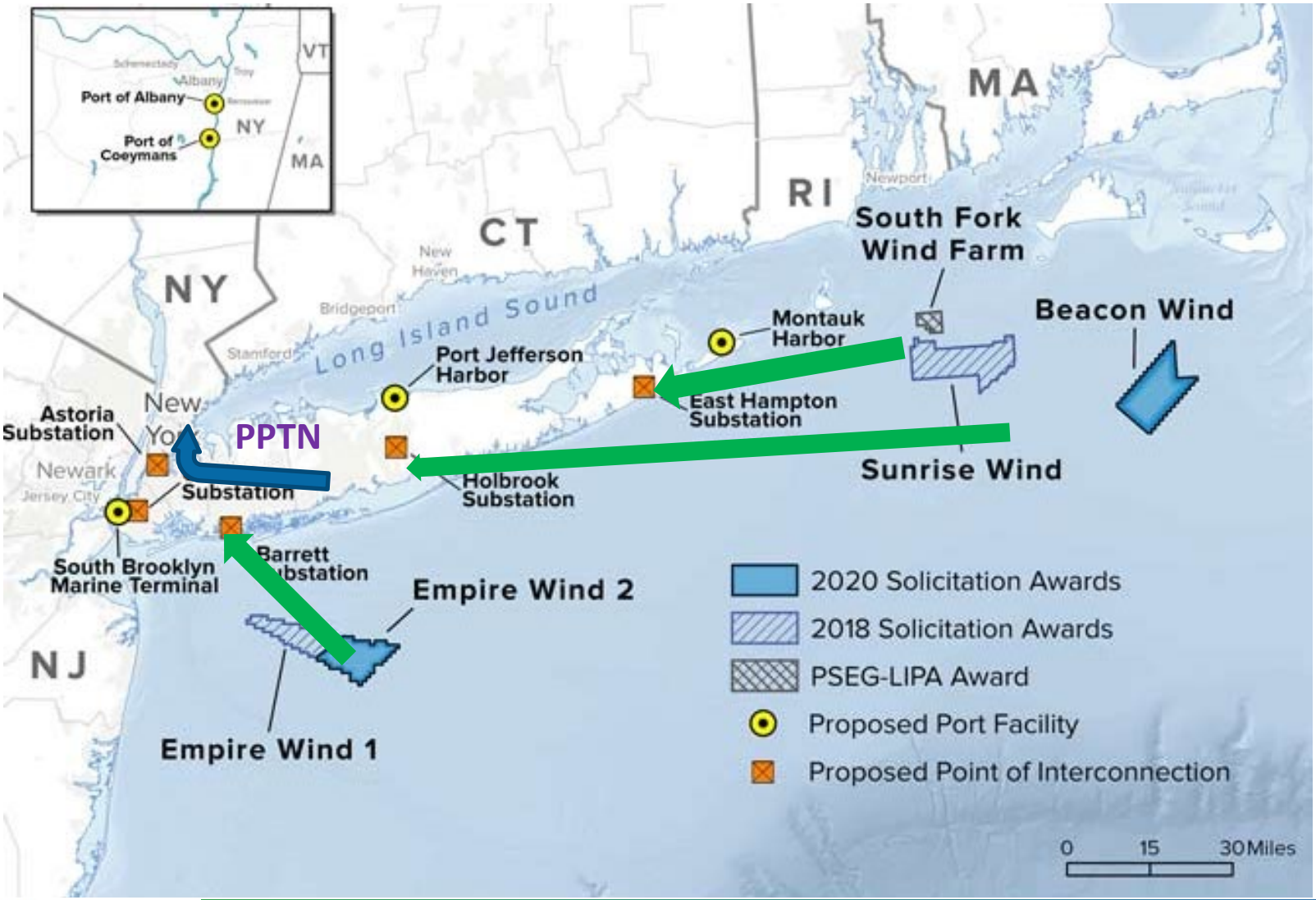
February '21: LIPA submitted referral to PSC for a PPTN related to OSW

- Increase LIPA export capability to NYC/Westchester
- Upgrade Ruland Road-East Garden City "backbone" to 345 kV

February '21: PSC Order on Utility Filing

- IOUs to pursue Phase 1 projects
- DPS staff to propose cost/benefit methodology for Phase 2 projects

OSW INTERCONNECTIONS TO LONG ISLAND



LIPA TRANSMISSION SYSTEM – PHASE 2 PROJECTS SUMMARY

- Transmission projects required to interconnect 3,000 MW of Offshore Wind to the LIPA system

Project Name	Project Description	Proposed In-Service Date	Estimated Project Cost
LIPA central corridor 138kV to 345kV conversion (1)	Convert existing transmission corridor: East Garden City to Newbridge Road to Ruland Road from 138kV to 345kV	2025-2035 TBD[2]	$221M
New 345 kV circuit	Install a new 345 kV circuit with PAR control from Shore Road to Ruland Rd. substations.	2025-2035 TBD[2]	$647M
Install two 138 kV Series Reactors	Install Series Reactor on Newbridge Road to Ruland Road circuit No.1 and No.2.	2025-2035 TBD[2]	$7M
Install new 345kV inter-tie to CE (1)	Install a new 345kV inter-tie with PAR control between LIPA and Con-Ed system	2025-2035 TBD[2]	TBD
Install new Voltage Control devices	Install new synchronous condenser(s) in LIPA system	2025-2035 TBD[2]	$200M
Upgrades of existing 69kV circuits	Upgrades on several existing sub-transmission 69kV circuits.	2024 -------- 2024 -------- 2025 --------- 2025	$68M --------- $100M --------- $27M --------- $11M
			$1.3B

1) Included in LIPA's referral of Public Policy Transmission Need
2) The proposed OSW related project In-Service dates will be staged to precede OSW Commercial Operating dates.

LIPA DISTRIBUTION SYSTEM – PHASE 2 PROJECTS SUMMARY

- Potential distribution projects to facilitate interconnection of distributed solar

Project Name	Project Description	Proposed In-Service Date	Estimated Project Cost
Yaphank Substation Upgrade	Install 33 MVA Bank, Swgr, Feeders & C&R	25-Jun	$12.0M
Wildwood Substation Upgrade	Replace 14 MVA Bank with 33 MVA Bank & Switchgear	25-Jun	$6.1M
Babylon Substation Upgrade	Install 33 MVA Bank, Swgr, Feeders & C&R	26-Jun	$20.2M
Doctors Path Substation (New)	Install 2-33 MVA Bank, Swgr & Transmission	2029	$22.7M
Add Breakers/Cubicles	Install 1 additional breaker cubicle at 12 substations	2021-2030	$7.3M
Upgrade distribution switchgears	Replacement of one ½ lineup of distribution switchgear at 9 substations	2021-2030	$40.0M
Grounding Protection upgrade	Install 3V0 relays and PTs on 135 transmission busses	2021-2030	$47.2M
Voltage Regulation for DER Feeders	Install 48-line regulators and/or capacitors on DER feeders	2021-2030	$11.7M
			$167M