



Long Island Offshore Wind Export PPTN: Production Cost & Capacity Benefit Results

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Agenda

- **Evaluation Metrics Overview**
- **Study Assumptions**
- **Production Cost**
- **Performance**
- **Capacity Benefit**
- **Next Steps**

Evaluation Metrics Overview

Long Island Offshore Wind Export PPTN

- **PSC Order for Public Policy Transmission Need (PPTN):**
 - CLCPA constitutes a Public Policy Requirement driving the need for transmission to increase the export capability from Long Island to the rest of New York State to ensure full output of at least 3,000 MW of offshore wind interconnected to Long Island
 - Add at least one bulk transmission intertie cable connecting between Long Island and the rest of the New York Control Area and additional transmission expansion or upgrades, as necessary
- **To pass the Viability & Sufficiency Assessment, each project provided full output of at least 3,000 MW of offshore wind connected to Long Island under line outage conditions**
 - Also assuming 6,000 MW of offshore wind connected to New York City to achieve the CLCPA goal of 9,000 MW by 2035

Evaluation Metrics

- Transfer Analysis & Cost per MW
- Expandability – Electrical & Physical
- Operability
- **Production Cost**
- **Performance**
- **Capacity Benefits**
- Capital Cost Estimate
- Voluntary Cost Cap
- Property Rights & Routing
- Potential Construction Delays
- Other Considerations: Metrics prescribed in PSC Order, Interconnection Studies, Consequences for Other Regions, Impact on Wholesale Electricity Markets, Integration with Local Transmission Owner Plans

*Results for metrics in **red** will be discussed today

Study Assumptions

Market Impacts

- One of the metrics for the Long Island PPTN is to evaluate how a proposed project impacts to NYISO-administered wholesale electricity markets via production cost savings and capacity benefits
- Overall similar approach to AC Transmission PPTN by leveraging recent study databases
 - MAPS simulations to calculate production cost simulations
 - MARS simulations to calculate benefit of LOLE changes due to transmission project topology change
- Production cost 20-year calculation (from a common project in-service date) comparing cost savings, emissions, and other system conditions of cases with and without each project
- Given the uncertainty of resource and market conditions over a 30-year period, these results can only be used for comparative purposes and cannot be used as a predictor of long-term energy and capacity market prices

Production Cost and Capacity Benefit Cases

■ 2 Study Cases

• Baseline Case

- Outlook Contract Case as starting points for production cost database
- RNA base case as starting points for capacity benefit database
- Gold Book base load forecast
- NYSERDA REC and OREC awards, but not Tier 4
- 6 GW OSW in NYC, 3 GW OSW in LI

• Policy Case

- Outlook Policy Case S2 as starting points for production cost database
- 2022 RNA Policy Case S2 as starting points for capacity benefit database
- Consistent with Climate Action Council load forecast
- Tier 4 projects, NYSERDA awards, and Outlook capacity expansion assumptions
- 6 GW OSW in NYC, 6 GW OSW in LI

- **Production cost simulations studied incremental study years (2030, 2035, 2040, 2045) with results extrapolated to calculate 20-year impacts**
- **Capacity Benefit simulations performed on study year 2030 case**
- **Barrett – Valley Stream constraints relaxed consistent with Viability & Sufficiency Assessment assumptions**

MAPS and MARS Starting Databases

- **Details on the assumptions of the starting models can be found in the Data Matrices in the 2021-2040 System & Resource Outlook and 2022 RNA report and appendices:**
 - Outlook Report
<https://www.nyiso.com/documents/20142/33384099/2021-2040-Outlook-Report.pdf>
 - Outlook Appendix
<https://www.nyiso.com/documents/20142/33395392/2021-2040-System-Resource-Outlook-Appendix.pdf>
 - RNA Report
<https://www.nyiso.com/documents/20142/2248793/2022-RNA-Report.pdf>
 - RNA Appendix
<https://www.nyiso.com/documents/20142/34651464/2022-RNA-Appendices.pdf>

Production Cost

Production Cost Metric

- **Purpose:** assess the economic benefits by reducing generation production cost
- **Evaluation:** GE-MAPS production cost simulations
- **Look For:** larger production cost savings that reduces the societal cost of producing electricity to meet New York demand

Production Cost

- Simulation Review
- Simulation Results
- Observations
- Technical Details

Simulation Review

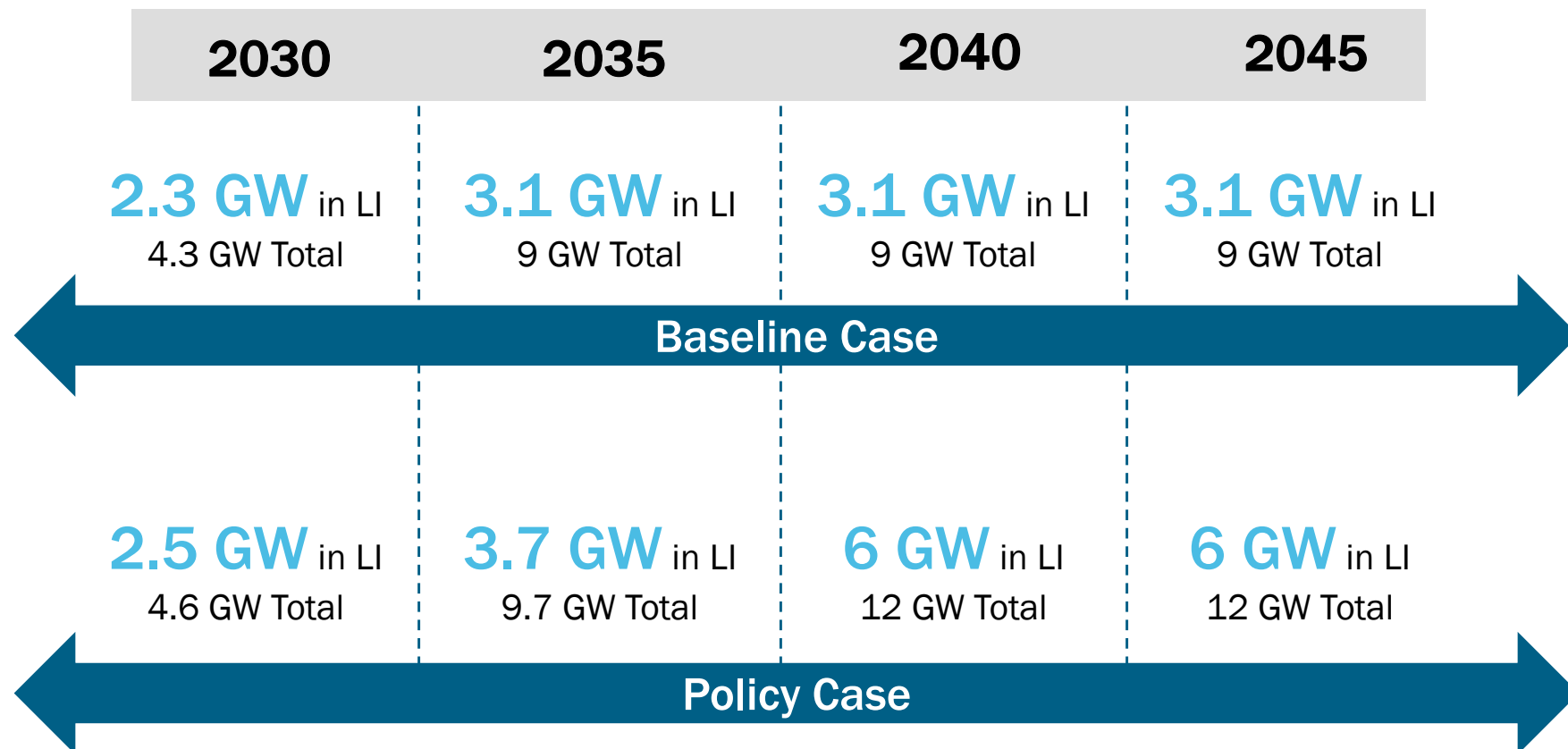
Production Cost Simulation Summary

- **2 “Reference” Cases Developed**
 - Baseline = Outlook Contract Case w/ 9 GW OSW (3 GW in LI)
 - Policy = Outlook Policy S2 Case w/ 12 GW OSW (6 GW in LI)
- **New Round-Trip Contingencies Added in LI and NYC**

High Level Case Differences

Assumption (2040 Year)	Baseline	Policy Case
Load	160,980 GWh	235,731 GWh
Fossil Capacity	25,613 MW	0 MW
DEFR Capacity	0 MW	27,199 MW
Renewable Capacity	30,383 MW (3,000 MW LI OSW)	80,473 MW (6,000 MW LI OSW)
HQ Import	11,529 GWh	16,345 GWh

OSW Addition Timelines



Annual Energy Forecasts - GWh

Year	Baseline	Policy
2021 Actual	152,147	
2025	151,360	155,237
2030	152,040	170,335
2035	157,330	210,782
2040	167,060	242,518

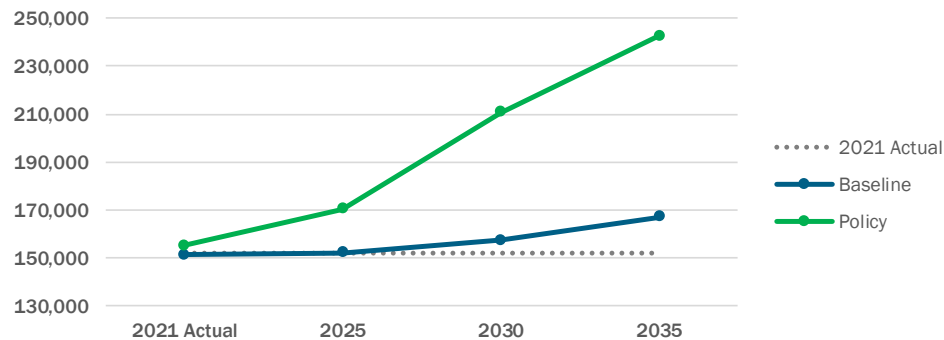
Summer Peak Forecasts - MW

Year	Baseline	Policy
2021 Actual	31,528	
2025	32,140	30,205
2030	32,263	30,763
2035	32,927	35,096
2040	33,622	39,024

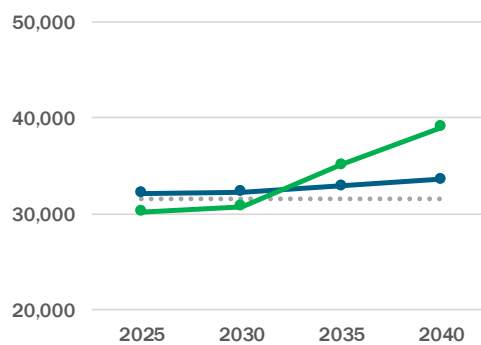
Winter Peak Forecasts - MW

Year	Baseline	Policy
2021 Actual	23,708	
2025	24,775	22,350
2030	26,062	26,587
2035	29,157	35,788
2040	33,478	42,993

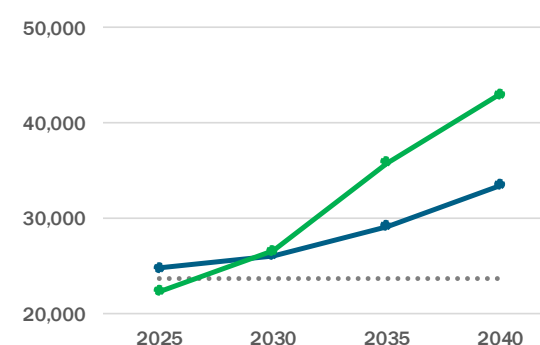
Annual Energy Forecasts - GWh



Summer Peak Forecasts - MW



Winter Peak Forecasts - MW



Production Cost Metric

- Represents societal cost of producing electricity to meet New York electricity demand
- NYISO adjusts for import cost and export “revenue” and designates adjusted metric as “NYCA Wide Production Cost”

$$\text{Annual NYCA Wide Production Cost} = \sum_{\text{hour } 1}^{\text{hour } 8760} \text{Fuel} + \text{VOM} + \text{Emissions} + \text{Import Cost}$$

Note: Import cost is negative if exporting, which looks like a “revenue”. Import/export transactions are priced using LBMP at a proxy node.  New York ISO

What Should We Expect?

- Production cost savings originate from “swapping” more expensive generation w/ cheaper sources
- Most savings in LI will be achieved by replacing thermal/DEFR energy with \$0 previously curtailed energy

Annual OSW Curtailment

Area	Values	Baseline				Policy_S2_P3			
		Y2030	Y2035	Y2040	Y2045	Y2030	Y2035	Y2040	Y2045
LI	OSW Capacity (MW)	2,279	3,079	3,079	3,079	2,539	3,689	5,989	5,989
	Potential Energy Production (GWh)	8,927	12,153	12,190	12,145	9,974	14,622	24,048	23,965
	Curtailment (GWh)	49	520	345	147	173	538	3,131	2,473
	Curtailment Rate (%)	1%	4%	3%	1%	2%	4%	13%	10%
NYC	OSW Capacity (MW)	2,046	5,976	5,976	5,976	2,046	5,976	5,976	5,976
	Potential Energy Production (GWh)	8,368	22,929	23,020	22,928	8,368	22,931	23,022	22,929
	Curtailment (GWh)	4	83	3	0	1	2	2	16
	Curtailment Rate (%)	0%	0%	0%	0%	0%	0%	0%	0%

Simulation Results

Production Cost Savings (20-yr NPV \$M)

Project Code	Project Developer	Project Name	Estimated Total 20-Year Savings (2022 \$M)	
			Baseline	Policy
T035	LS Power	Atlantic Gateway	104	340
T036	NextEra	New York Renewable Connect - Core 1	108	303
T037	NextEra	New York Renewable Connect - Core 2	108	364
T038	NextEra	New York Renewable Connect - Core 3	109	380
T039	NextEra	New York Renewable Connect - Core 4	39	305
T040	NextEra	New York Renewable Connect - Core 5	107	339
T041	NextEra	New York Renewable Connect - Core 6	110	291
T042	NextEra	New York Renewable Connect - Core 7	110	291
T043	NextEra	New York Renewable Connect - E1	87	458
T044	NextEra	New York Renewable Connect - E2	81	441
T047	NYP&A/NY Transco	Propel NY Energy - Base Solution 1	109	337
T048	NYP&A/NY Transco	Propel NY Energy - Base Solution 2	99	313
T049	NYP&A/NY Transco	Propel NY Energy - Base Solution 3	102	344
T051	NYP&A/NY Transco	Propel NY Energy - Alternate Solution 5	104	341
T052	NYP&A/NY Transco	Propel NY Energy - Alternate Solution 6	96	352
T053	NYP&A/NY Transco	Propel NY Energy - Alternate Solution 7	108	360

Production Cost Savings (Annual \$M)

Project Code	Baseline (nominal \$M)				Baseline NPV (2022 \$M)				Policy (nominal \$M)				Policy NPV (2022 \$M)			
	2030	2035	2040	2045	2030	2035	2040	2045	2030	2035	2040	2045	2030	2035	2040	2045
T035	4	21	23	14	3	9	7	3	7	20	100	126	4	8	29	26
T036	4	22	23	16	2	9	7	3	2	16	97	119	1	7	28	25
T037	4	23	23	16	2	9	7	3	10	31	98	124	6	13	29	26
T038	3	23	25	16	2	10	7	3	10	32	105	126	6	13	31	26
T039	-5	18	13	-3	-3	7	4	-1	9	25	79	109	5	10	23	23
T040	3	23	23	16	2	9	7	3	7	24	101	117	4	10	30	24
T041	4	23	24	16	2	9	7	3	1	4	102	126	1	2	30	26
T042	4	23	24	16	2	9	7	3	1	4	102	126	1	2	30	26
T043	2	22	19	9	1	9	6	2	16	36	114	164	9	15	33	34
T044	2	22	17	6	1	9	5	1	17	32	111	158	10	13	32	33
T047	5	22	23	16	3	9	7	3	6	19	103	124	4	8	30	26
T048	3	22	22	14	2	9	6	3	6	21	93	114	4	8	27	24
T049	3	22	23	13	2	9	7	3	6	21	102	128	4	9	30	27
T051	4	21	23	15	2	9	7	3	7	14	107	132	4	6	31	27
T052	3	21	21	13	2	8	6	3	6	22	105	131	3	9	31	27
T053	4	22	23	17	3	9	7	3	7	23	106	134	4	9	31	28

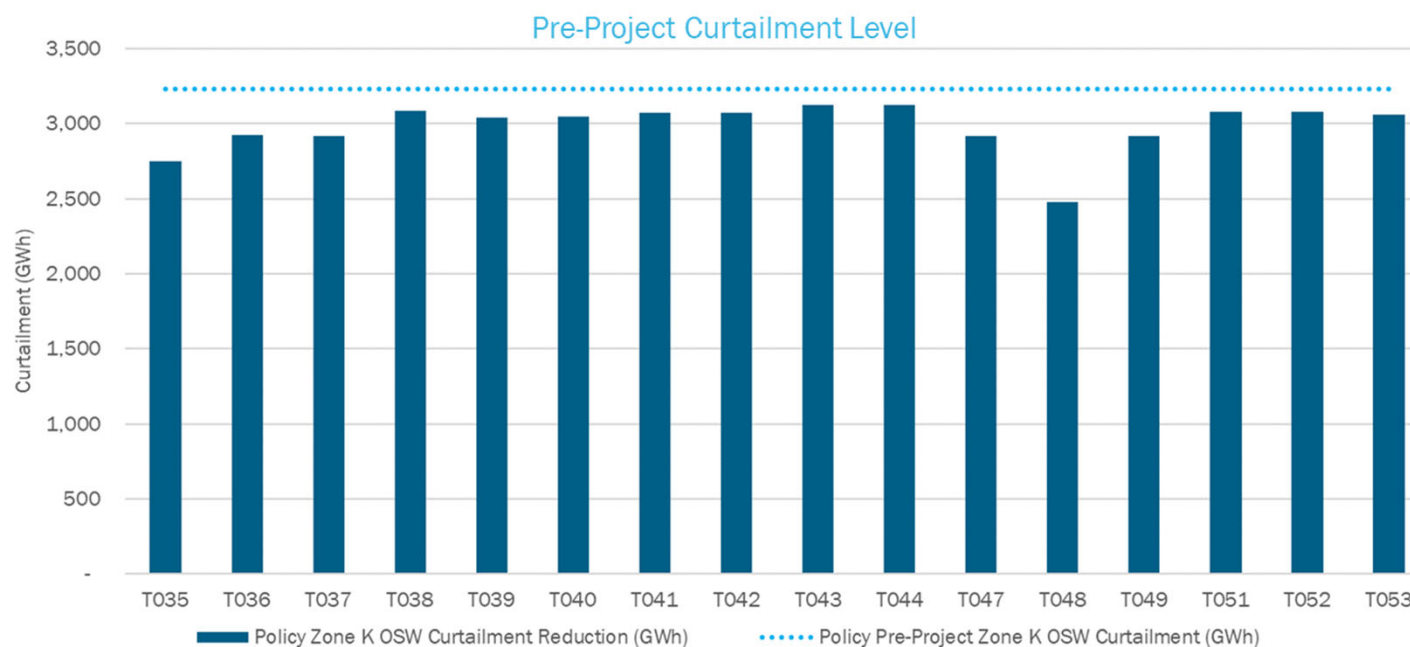
Observations

OSW Curtailment Observations

- Pre-project OSW curtailment rates relatively low ~ 10%
- Displaced energy is oftentimes from other renewables, which produces minimal savings by swapping low-cost energy
- Imported energy from neighboring regions “dampens” savings; savings would likely be higher if only internal fossil/DEFR generation was dispatched for curtailment
- Empire Wind 2 transmission constraint (Barrett – Valley Stream 138kV) relaxed in Baseline/Policy cases
- The model only factors all-lines in-service condition (no maintenance or random transmission outages)

Differentiation Between Project Savings

- Projects eliminate most OSW curtailment in Long Island



Barrett – Valley Stream Scenario

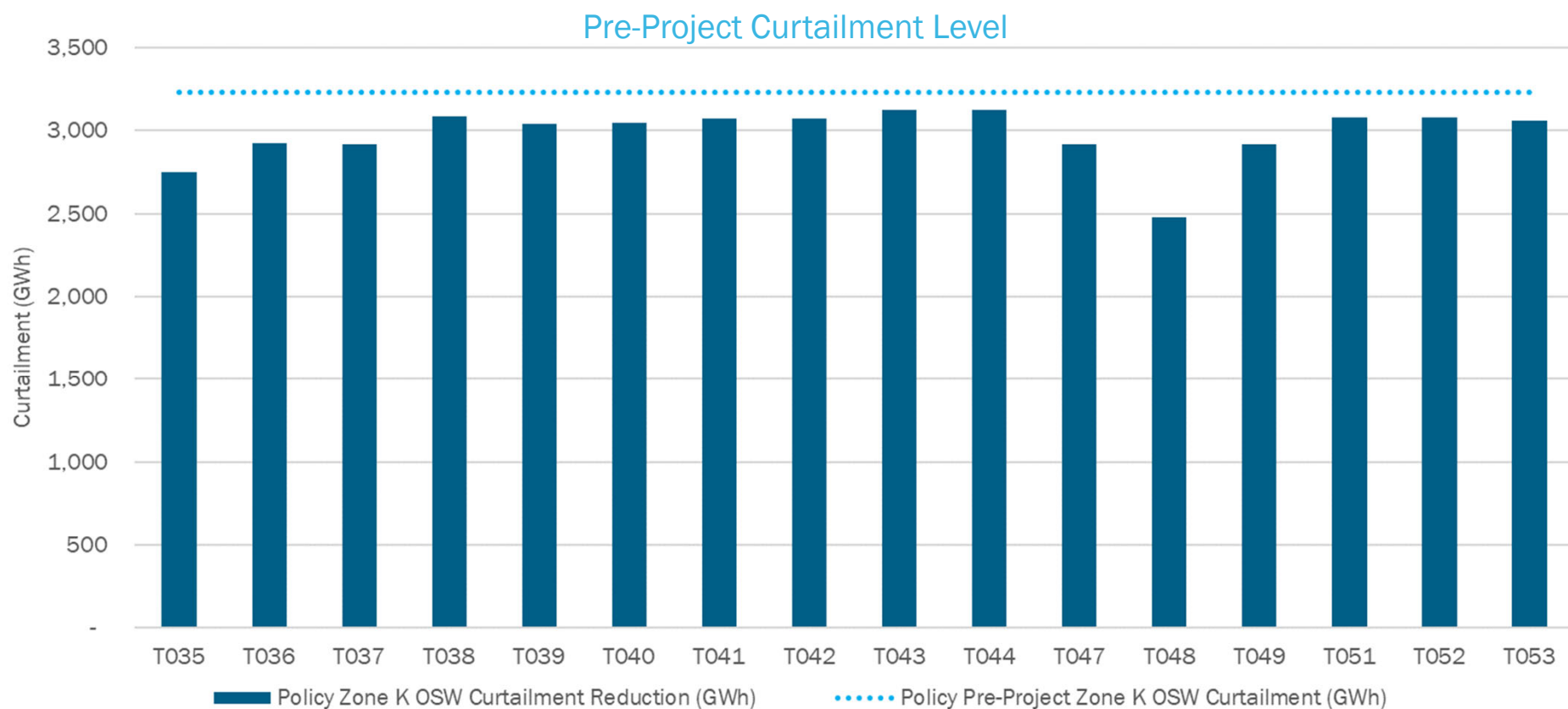
- **Q958/959: Empire Wind II is an up to 1,500 MW NYSERDA-awarded OSW project connecting to Barrett – Valley Stream 138 kV lines**
 - Accepted cost allocation in CY21 for POI SUFs
 - Currently in the Additional SDU Study
- **Empire Wind II overloads Barrett-Valley Stream and Valley Stream – East Garden City 138 kV lines, even pre-contingency**
 - Stakeholders argued that the Empire Wind II project will be responsible for local deliverability upgrades and not the Public Policy Transmission Project
 - Viability & Sufficiency Assessment criteria did not require fixing this constraint, but NYISO said that certain constraints may be respected in the evaluation
- **All analysis to date assumes that Barrett-Valley Stream has been upgraded such that it is not constraining**
- **NYISO is evaluating whether to perform a scenario assuming that this circuit is still constraining**

Technical Details

Annual OSW Curtailment

Area	Values	Baseline				Policy_S2_P3			
		Y2030	Y2035	Y2040	Y2045	Y2030	Y2035	Y2040	Y2045
LI	OSW Capacity (MW)	2,279	3,079	3,079	3,079	2,539	3,689	5,989	5,989
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	Curtailment (GWh)	49	520	345	147	173	538	3,131	2,473
	Curtailment Rate (%)	1%	4%	3%	1%	2%	4%	13%	10%
NYC	OSW Capacity (MW)	2,046	5,976	5,976	5,976	2,046	5,976	5,976	5,976
	Potential Energy Production (GWh)	8,368	22,929	23,020	22,928	8,368	22,931	23,022	22,929
	Curtailment (GWh)	4	83	3	0	1	2	2	16
	Curtailment Rate (%)	0%	0%	0%	0%	0%	0%	0%	0%

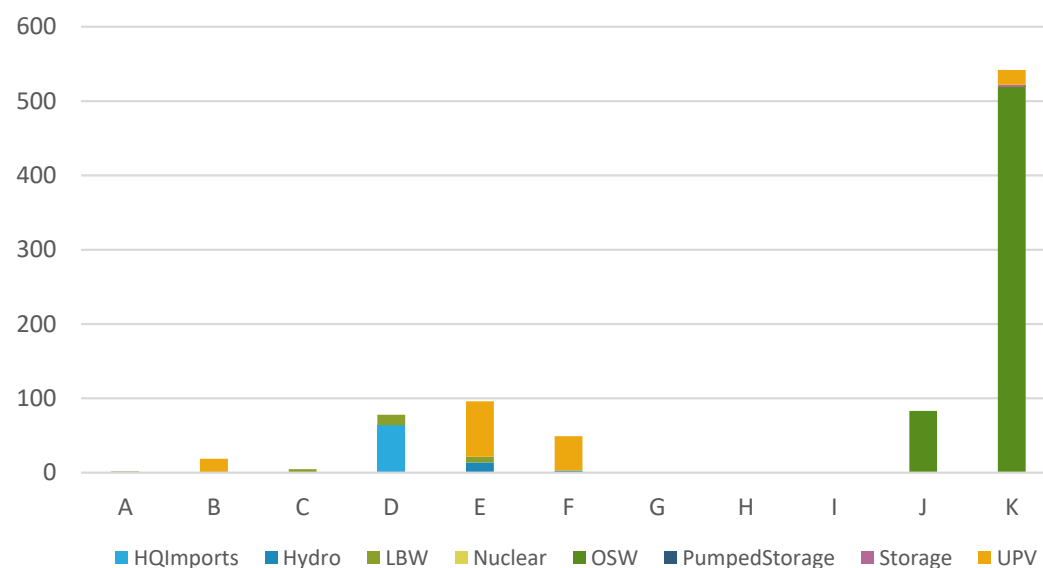
2040 Policy LI Curtailment Reduction



Baseline Case Curtailment (GWh)

Curtailments Baseline (GWh)	2030	2035	2040	2045
West	1	2	1	1
Genesee	17	19	14	8
Central	2	5	2	1
North	33	77	29	22
Mohawk Valley	92	96	89	120
Capital	44	49	37	31
Hudson Valley	1	1	1	1
Millwood	-	-	-	-
Dunwoodie	-	-	-	-
NY City	4	83	3	-
Long Island	51	543	359	152
NYCA Total	244	875	535	337

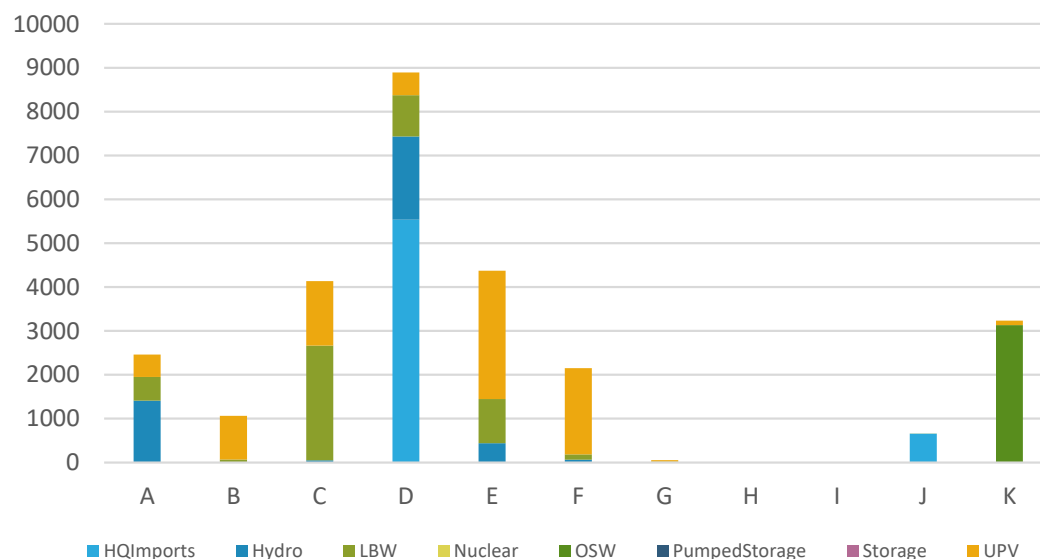
2035 Baseline Case Curtailments (GWh)



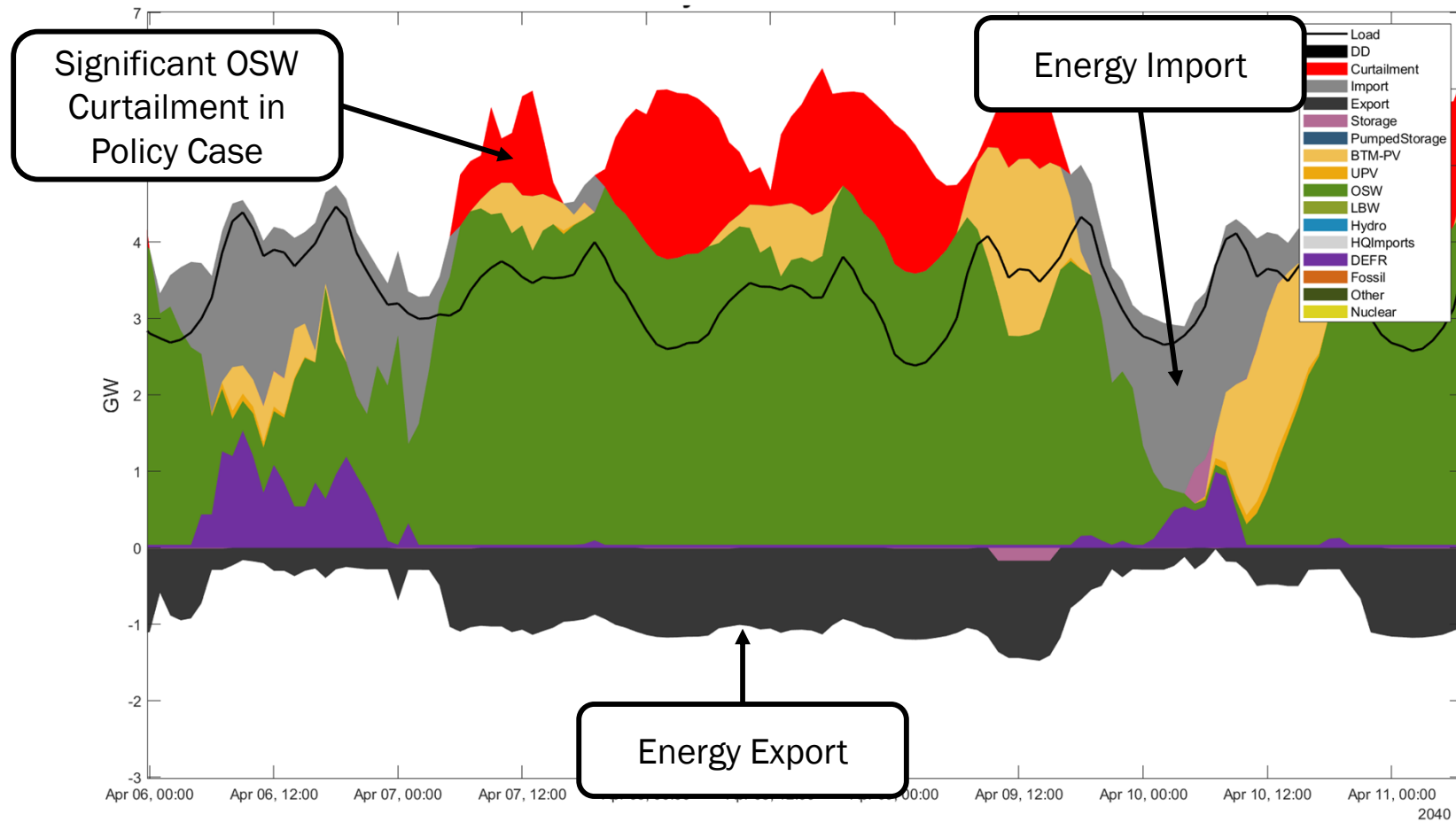
Policy Case Curtailment (GWh)

Curtailments Policy (GWh)	2030	2035	2040	2045
West	17	1,043	2,461	1,500
Genesee	23	106	1,063	1,559
Central	127	2,552	4,135	3,976
North	72	1,403	8,893	7,575
Mohawk Valley	280	1,557	4,371	3,765
Capital	108	978	2,148	1,901
Hudson Valley	1	146	56	34
Millwood	-	-	-	-
Dunwoodie	-	-	-	-
NY City	22	302	657	304
Long Island	198	565	3,235	2,550
NYCA Total	848	8,652	27,018	23,164

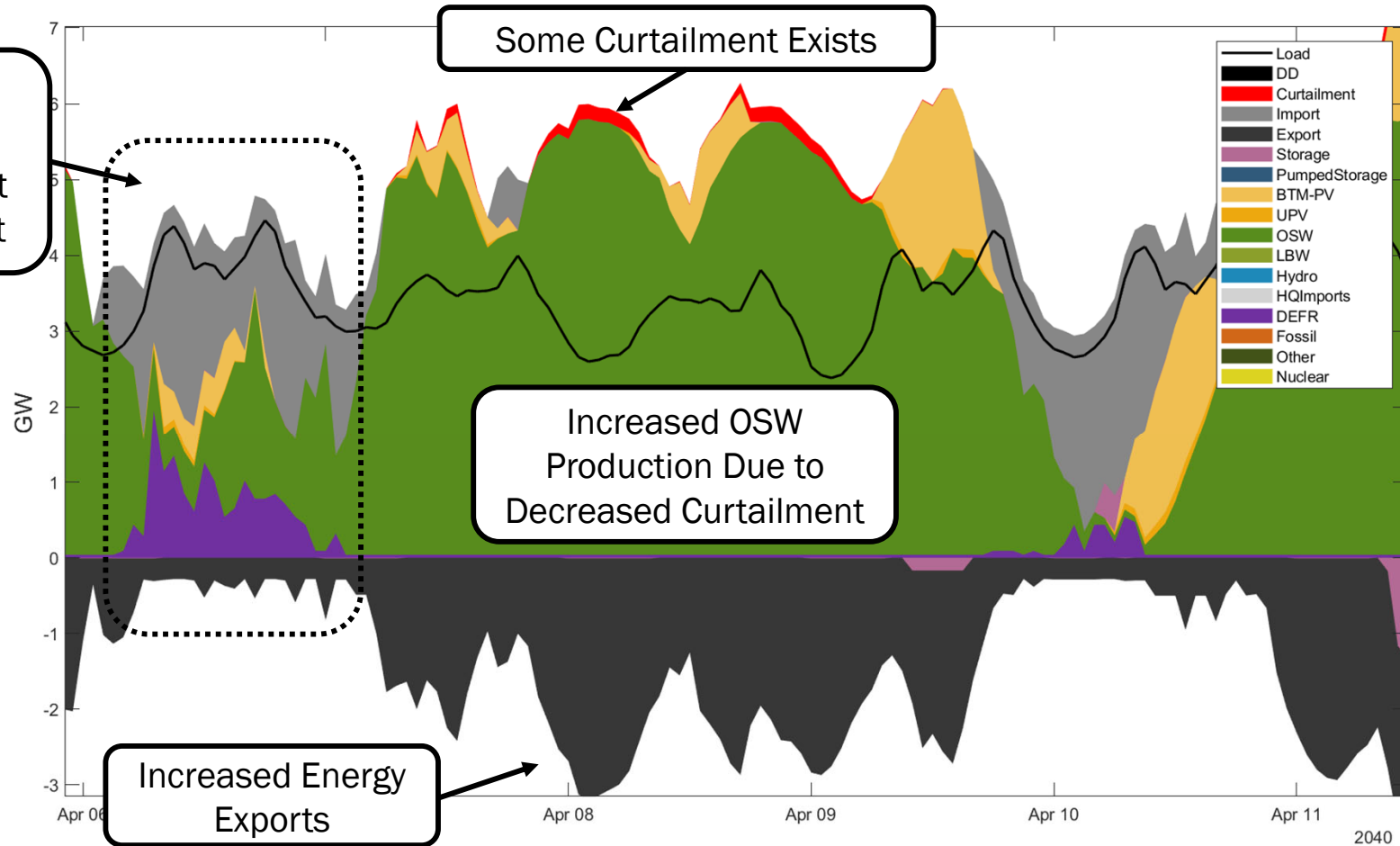
2040 Policy Case Curtailments (GWh)



Pre-Project LI Operation (4/6/2040 - 4/11/2040)



Post-Project LI Operation (4/6/2040 - 4/11/2040)



Performance

Performance Metric

- **Purpose:** consider how the proposed project may affect the utilization of the system
- **Evaluation:** Long Island energy transfers, offshore wind generated energy, emissions reductions
- **Look For:** higher Long Island import/export, higher offshore wind generation, lower emissions

Performance Metric

- **Production cost models provide hourly granularity system and market data to estimate how the NYISO system could change due to a proposed project**
 - OSW Curtailment
 - Long Island Tie Line Utilization
 - Emissions

OSW Production (20-Year GWh)

Case	Baseline Case	Policy Case
	LI	LI
Pre Project	221,768	331,461
T035 - LSP	5,306	27,439
T036 - NextEra Core 1	5,282	29,042
T037 - NextEra Core 2	5,285	28,799
T038 - NextEra Core 3	5,289	30,494
T039 - NextEra Core 4	5,275	30,326
T040 - NextEra Core 5	5,282	30,083
T041 - NextEra Core 6	5,286	30,467
T042 - NextEra Core 7	5,286	30,467
T043 - NextEra Enhanced 1	5,304	31,531
T044 - NextEra Enhanced 2	5,309	31,534
T047 - Propel Base 1	5,285	29,227
T048 - Propel Base 2	5,287	25,419
T049 - Propel Base 3	5,285	29,453
T051 - Propel Alt 5	5,296	30,640
T052 - Propel Alt 6	5,294	30,681
T053 - Propel Alt 7	5,291	30,305

Delta from Base

LI Transmission Utilization (2040 MWh)

Case	Baseline Case		Policy Case	
	Import	Export	Import	Export
Base	8,420	3,945	9,025	5,038
T035 – LS Power	8,913	4,480	10,395	8,766
T036 – NextEra Core 1	8,702	4,264	12,070	10,600
T037 – NextEra Core 2	9,891	5,450	12,681	11,189
T038 – NextEra Core 3	11,320	6,894	13,734	12,442
T039 – NextEra Core 4	9,090	4,541	11,157	9,695
T040 – NextEra Core 5	8,797	4,374	10,955	9,644
T041 – NextEra Core 6	8,479	4,048	11,972	10,718
T042 – NextEra Core 7	8,479	4,048	11,972	10,718
T043 – NextEra Enh 1	13,689	9,221	16,055	14,645
T044 – NextEra Enh 2	10,014	5,567	12,534	11,184
T047 – Propel Base 1	7,968	3,559	10,792	9,286
T048 – Propel Base 2	7,782	3,358	9,867	7,953
T049 – Propel Base 3	7,868	3,445	10,647	9,132
T051 – Propel Alt 5	8,736	4,280	11,565	8,311
T052 – Propel Alt 6	8,187	3,751	10,770	9,402
T053 – Propel Alt 7	8,148	3,731	10,419	9,138

C02 Emissions Impacts in Policy Case (20-Year mmTons change from pre-Project)

20-Year Estimated C02 Emissions Impact (Million Tons)				
Case	LI	NYC	NYISO	Region
Policy Case (Total)	23,921	70,464	174,926	8,060,406
T035 - LSPower	(2,022)	1,160	1,023	(4,423)
T036 - NextEra Core 1	(2,175)	489	496	(3,161)
T037 - NextEra Core 2	(2,182)	1,353	1,412	(4,361)
T038 - NextEra Core 3	(2,184)	1,385	1,302	(3,690)
T039 - NextEra Core 4	(2,210)	1,376	1,792	(6,280)
T040 - NextEra Core 5	(2,151)	1,384	1,235	(3,786)
T041 - NextEra Core 6	(2,169)	586	400	(2,762)
T042 - NextEra Core 7	(2,169)	586	400	(2,762)
T043 - NextEra Enh 1	(2,142)	955	1,583	(7,530)
T044 - NextEra Enh 2	(2,102)	1,286	2,459	(7,950)
T047 - Propel Base 1	(2,082)	1,169	1,362	(9,685)
T048 - Propel Base 2	(2,089)	1,228	1,036	(4,515)
T049 - Propel Base 3	(2,145)	1,243	1,490	(8,547)
T051 - Propel Alt 5	(2,241)	1,301	907	(4,658)
T052 - Propel Alt 6	(2,091)	1,165	1,128	(4,816)
T053 - Propel Alt 7	(2,217)	1,123	988	(4,746)

20-Year Estimated C02 Emissions % Impact				
Case	LI	NYC	NYISO	Region
Policy Case (Total)	23,921	70,464	174,926	8,060,406
T035 - LSPower	-8.45%	1.65%	0.58%	-0.05%
T036 - NextEra Core 1	-9.09%	0.69%	0.28%	-0.04%
T037 - NextEra Core 2	-9.12%	1.92%	0.81%	-0.05%
T038 - NextEra Core 3	-9.13%	1.97%	0.74%	-0.05%
T039 - NextEra Core 4	-9.24%	1.95%	1.02%	-0.08%
T040 - NextEra Core 5	-8.99%	1.96%	0.71%	-0.05%
T041 - NextEra Core 6	-9.07%	0.83%	0.23%	-0.03%
T042 - NextEra Core 7	-9.07%	0.83%	0.23%	-0.03%
T043 - NextEra Enh 1	-8.95%	1.36%	0.91%	-0.09%
T044 - NextEra Enh 2	-8.79%	1.82%	1.41%	-0.10%
T047 - Propel Base 1	-8.70%	1.66%	0.78%	-0.12%
T048 - Propel Base 2	-8.73%	1.74%	0.59%	-0.06%
T049 - Propel Base 3	-8.97%	1.76%	0.85%	-0.11%
T051 - Propel Alt 5	-9.37%	1.85%	0.52%	-0.06%
T052 - Propel Alt 6	-8.74%	1.65%	0.65%	-0.06%
T053 - Propel Alt 7	-9.27%	1.59%	0.57%	-0.06%

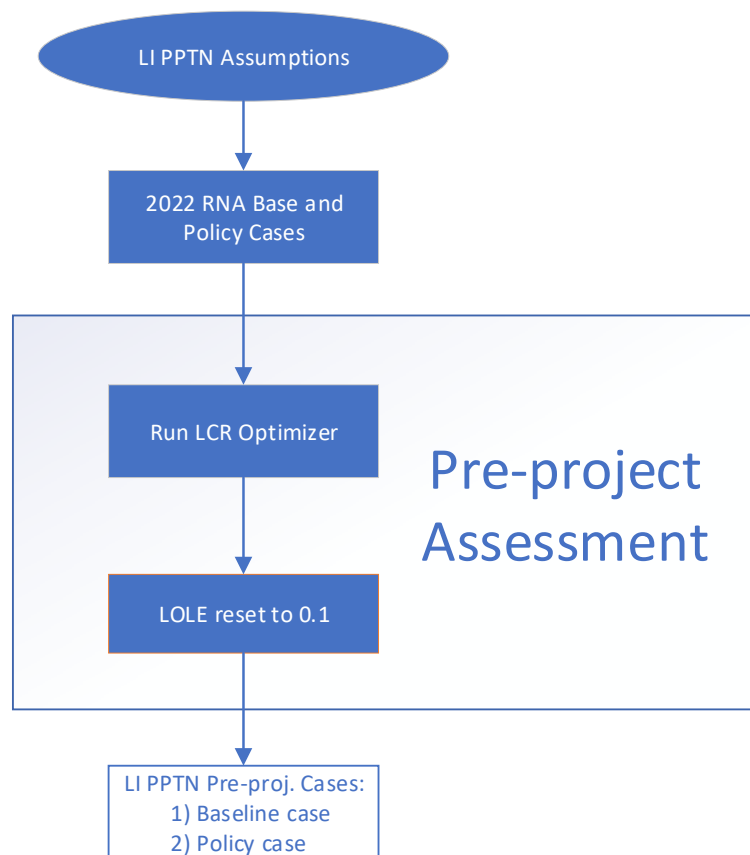
Capacity Benefit

Capacity Benefit Metric

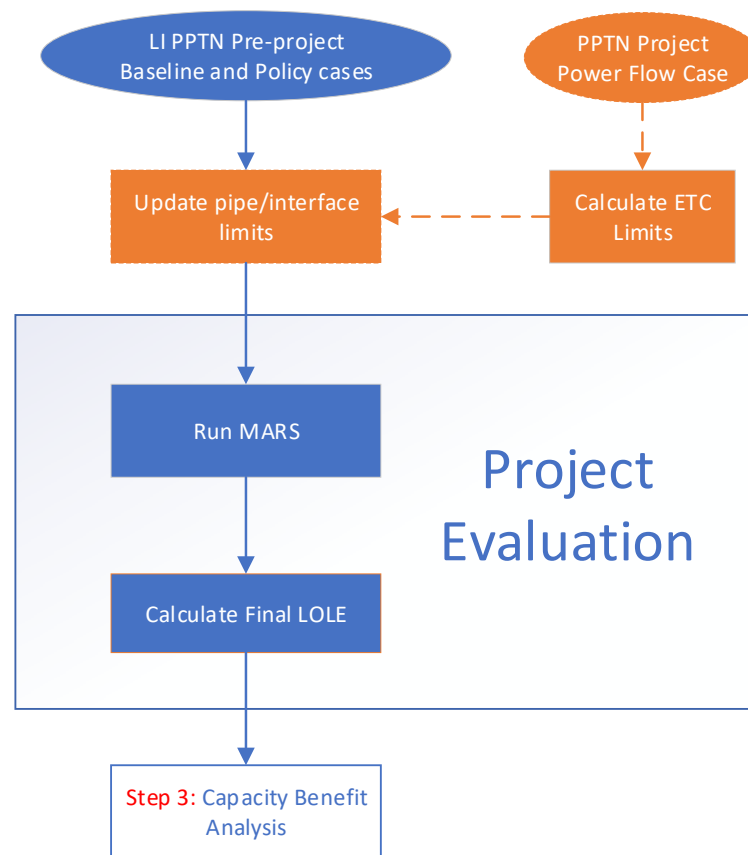
- **Purpose:** Evaluate the incremental capacity benefits each proposed project provides
- **Evaluation:** compare the pre- and post-project system resource adequacy to identify the reduction in the NYCA loss of load expectation (LOLE)
- **Look For:** greater reduction in the NYCA LOLE compared to the pre-project case

Capacity Benefit Evaluation

Step 1: LI PPTN Pre-project Cases Assessment

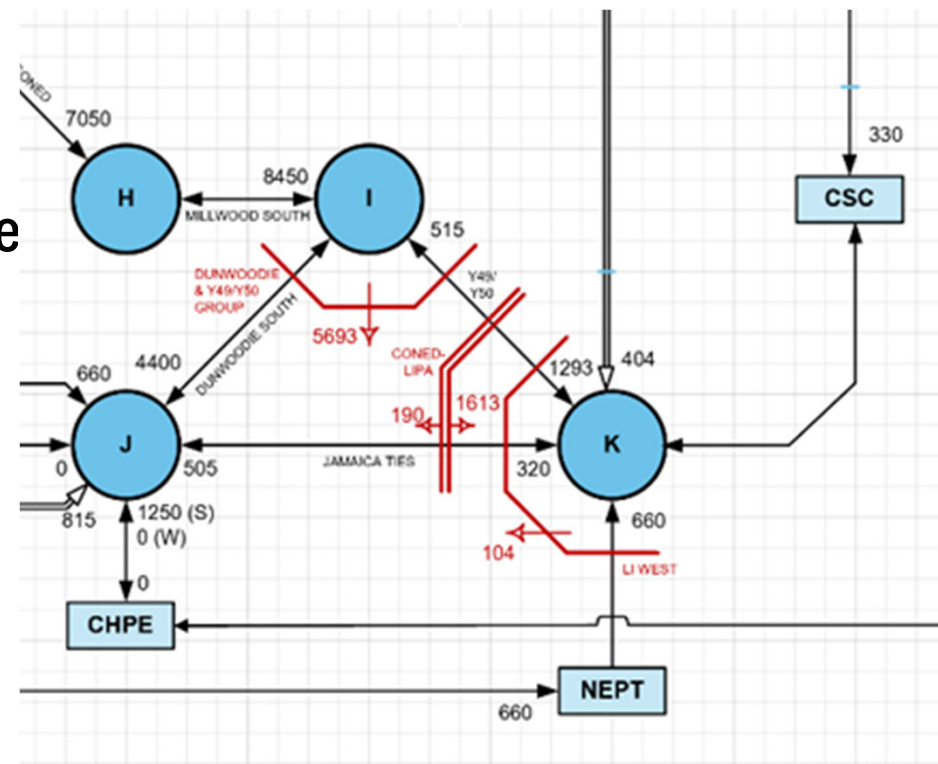


Step 2: LI PPTN Project Capacity Benefit Evaluation



MARS Topology

- “Pipe and bubble” simplified representation of the transmission system
- Starting point: 2022 RNA 2030 Baseline and Policy S2 Cases
- Use existing interface limits for pre-project cases
- “Pipe” limits updated using post-project extreme criteria transfer limits



Emergency Transfer Limits - Imports

Importing (North - South) Emergency Transfer Limits (MW)								
Project	DunSouth (I-J & I-K)	I TO J	H TO K	ConEd-LIPA	LI West Reverse	NE TO K	I TO K	J TO K
Base Case	5693	4400	0	1613	999999	404	1293	320
T035 - LSPower	5693	4400	3550	1613	999999	404	1293	320
T036 - NextEra Core1	7768	4400	0	3763	999999	404	3443	320
T037 - NextEra Core 2	7993	4400	0	3763	999999	404	3343	545
T038 - NextEra Core 3	7993	4400	0	3738	999999	404	3743	895
T039 - NextEra Core4	6143	4400	0	3588	999999	404	3268	320
T040 - NextEra Core5	7718	4400	0	3663	999999	404	3343	320
T041 - NextEra Core 6	7493	4400	0	4638	999999	404	4343	320
T042 - NextEra Core 7	7493	4400	0	4638	999999	404	4343	320
T043 - NextEra Enh 1	6718	4400	1200	3188	999999	404	4043	595
T044 - NextEra Enh 2	6718	4400	0	3188	999999	404	4043	595
T047 - Propel Base 1	6393	4400	0	3013	999999	404	1993	1020
T048 - Propel Base 2	6393	4400	0	3013	999999	404	1993	1020
T049 - Propel Base 3	6393	4400	0	3013	999999	404	1993	1020
T051 - Propel Alt 5	7093	4400	0	3738	999999	404	2693	1020
T052 - Propel Alt 6	7793	4400	0	3788	999999	404	3293	470
T053 - Propel Alt 7	7118	4400	0	3613	999999	404	3118	495

* Assumes NUFs restore pre-Project transfer capability

Emergency Transfer Limits - Exports

Exporting (South - North) Emergency Transfer Limits (MW)								
Project	K TO H	LIPA- ConEd	LI West	K TO NE	K TO I	K TO J	J TO I	J-I &K-I
Base Case	0	190	104	414	515	505	1999	99999
T035 - LS Power	3575	190	104	414	515	505	1999	99999
T036 - NextEra Core1	0	3090	3004	414	3090	805	1999	99999
T037 - NextEra Core 2	0	3665	3579	414	2915	1555	1999	99999
T038 - NextEra Core 3	0	3940	3854	414	3290	1480	1999	99999
T039 - NextEra Core4	0	3265	3179	414	3490	580	1999	99999
T040 - NextEra Core5	0	4240	4154	414	4465	580	1999	99999
T041 - NextEra Core 6	0	3615	3529	414	3790	630	1999	99999
T042 - NextEra Core 7	0	3615	3529	414	3790	630	1999	99999
T043 - NextEra Enh 1	1200	4915	4829	414	3940	1130	1999	99999
T044 - NextEra Enh 2	0	4915	4829	414	3940	1130	1999	99999
T047 - Propel Base 1	0	2065	1979	414	1690	1205	1999	99999
T048 - Propel Base 2	0	1815	1729	414	1340	1280	1999	99999
T049 - Propel Base 3	0	2115	2029	414	1740	1205	1999	99999
T051 - Propel Alt 5	0	2915	2829	414	2540	1205	1999	99999
T052 - Propel Alt 6	0	3815	3729	414	3365	1255	1999	99999
T053 - Propel Alt 7	0	3840	3754	414	3415	1255	1999	99999

Monetary Value of LOLE Reductions

- **Cost of Reliability Improvement (CRI) is compensation that a generator would receive in the capacity market for providing comparable LOLE benefits**
- **\$0.8M - \$2.5M per 0.001 LOLE change CRI range in 2022 State of Market report utilizing current demand curve values**

Results

Projects	NYCA LOLE (event day/year)		Delta LOLE		Annual Capacity Benefit (2022 \$M using CRI of \$0.8M per 0.001 LOLE)	
	Baseline Case	Policy Case	Baseline Case	Policy Case	Baseline Case	Policy Case
Pre-Project at Criteria	0.10008	0.10047				
T035 - LS Power	0.07430	0.07413	-0.02578	-0.02634	\$19.36	\$19.79
T036 - NextEra Core1	0.08012	0.07848	-0.01996	-0.02199	\$14.99	\$16.52
T037 - NextEra Core 2	0.06279	0.06157	-0.03729	-0.03890	\$28.01	\$29.22
T038 - NextEra Core 3	0.05754	0.05393	-0.04254	-0.04654	\$31.95	\$34.96
T039 - NextEra Core4	0.08854	0.08876	-0.01154	-0.01171	\$8.67	\$8.80
T040 - NextEra Core5	0.08854	0.08876	-0.01154	-0.01171	\$8.67	\$8.80
T041 - NextEra Core 6	0.08672	0.08655	-0.01336	-0.01392	\$10.04	\$10.46
T042 - NextEra Core 7	0.08672	0.08655	-0.01336	-0.01392	\$10.04	\$10.46
T043 - NextEra Enh 1	0.05627	0.05231	-0.04381	-0.04816	\$32.91	\$36.17
T044 - NextEra Enh 2	0.06311	0.05811	-0.03697	-0.04236	\$27.77	\$31.82
T047 - Propel Base 1	0.05789	0.05533	-0.04219	-0.04514	\$31.69	\$33.91
T048 - Propel Base 2	0.05786	0.05513	-0.04222	-0.04534	\$31.71	\$34.06
T049 - Propel Base 3	0.05789	0.05533	-0.04219	-0.04514	\$31.69	\$33.91
T051 - Propel Alt 5	0.05770	0.05498	-0.04238	-0.04549	\$31.83	\$34.17
T052 - Propel Alt 6	0.06717	0.06251	-0.03291	-0.03796	\$24.72	\$28.51
T053 - Propel Alt 7	0.06601	0.06166	-0.03407	-0.03881	\$25.59	\$29.15

Capacity Benefit Observations

- Proposed projects with Long Island to New York City ties provide greatest LOLE reductions compared to other proposed projects
- No straight-forward approach to extrapolate 2030 results into 20-year net present value benefit calculations
- The magnitude of the capacity benefits would be significantly lower when comparing the post-project NYCA LOLE to the “as-planned” model, rather than the model “at-criterion”
 - The pre-project LOLE of the “as-planned” system is 0.0071

Next Steps

Results Review Schedule

- **February 16: Review production cost, performance, and capacity benefit results**
- **March 2: Review potential construction delays, property rights & routing**
- **March TPAS/ESPWG: Cost estimates and results follow-up**
- **April TPAS/ESPWG: Initial report review**

Comments

- **Further questions and comments regarding these results can be sent to PublicPolicyPlanningMailbox@nyiso.com**
 - Comments are requested as soon as they are available, but no later than February 23, 2023
- **Comments will be posted for stakeholder consideration**

Questions?