

# Appendix H: Additional Information

## Long Island Offshore Wind Export Public Policy Transmission Planning Report

**A Report from the New York  
Independent System Operator**

DRAFT for May 31, 2023, MC

**DRAFT – FOR DISCUSSION PURPOSES ONLY**

## Appendix H: Additional Information

The New York Public Service Commission (PSC) March 2021 Order Addressing Public Policy Requirements for Transmission Planning Purposes provided, *“The NYISO shall also consider other metrics in its evaluation of this Public Policy Requirement, including: changes in production costs; Load-Based Marginal Prices; transmission losses; emissions; Installed Capacity costs; Transmission Congestion Contract revenues; transmission congestion; impacts on transfer limits; and, resource deliverability.”* This appendix provides, for each of the metrics identified in the PSC Order, either a data figure or reference to other appendices where the supporting information can be found.

### Production Cost Changes

Appendix L, Figure 3 contains the production cost savings for each of the Baseline, Policy, and Policy + Barrett-Valley Stream Scenarios.

### Load-Based Marginal Prices

The figure below shows the estimated NYISO Location Based Marginal Prices (LBMPs) for each of the Baseline, Policy, and Policy + Barrett-Valley Stream Scenarios.

Case	NYISO Annual Average LBMP (\$/MWh)											
	Baseline				Policy				Policy + B-VS			
	2030	2035	2040	2045	2030	2035	2040	2045	2030	2035	2040	2045
Pre-Project	39	43	54	68	37	39	55	78	37	40	56	79
T035 - LS Power	39	43	55	69	37	39	54	76	37	39	54	76
T036 - NextEra Core 1	39	43	55	69	37	39	54	77	37	40	55	78
T037 - NextEra Core 2	39	43	55	69	37	39	54	77	37	40	55	78
T038 - NextEra Core 3	39	43	55	69	37	39	54	76	37	40	55	78
T039 - NextEra Core 4	39	43	55	69	37	39	54	77	37	40	55	78
T040 - NextEra Core 5	39	43	55	69	37	39	54	77	37	40	55	78
T041 - NextEra Core 6	39	43	55	69	37	39	54	77	37	40	55	78
T042 - NextEra Core 7	39	43	55	69	37	39	54	77	37	40	55	78
T043 - NextEra Enh 1	39	43	55	69	38	39	54	76	38	40	54	77
T044 - NextEra Enh 2	40	43	55	69	38	39	54	76	38	40	55	76
T047 - Propel Base 1	39	43	55	69	37	39	54	77	38	40	55	78
T048 - Propel Base 2	39	43	55	69	37	39	54	77	37	40	55	78
T049 - Propel Base 3	39	43	55	69	37	39	54	77	37	39	54	77
T051 - Propel Alt 5	39	43	55	69	37	39	54	76	37	40	55	77
T052 - Propel Alt 6	39	43	55	69	37	39	54	76	37	39	54	77
T053 - Propel Alt 7	39	43	55	69	37	39	54	76	37	39	54	77

### Transmission Losses

The figure below shows the total NYCA transmission losses for each of the Baseline, Policy, and Policy + Barrett-Valley Stream Scenarios.

Case	Transmission Losses (GWh)											
	Baseline				Policy				Policy + B-VS			
	2030	2035	2040	2045	2030	2035	2040	2045	2030	2035	2040	2045
Pre-Project	3,423	3,797	4,265	5,095	3,863	5,646	7,937	9,210	3,864	5,648	7,934	9,205
T035 - LS Power	3,423	3,792	4,264	5,089	3,862	5,662	7,924	9,217	3,863	5,662	7,921	9,217
T036 - NextEra Core 1	3,398	3,760	4,229	5,046	3,835	5,608	7,847	9,140	3,842	5,610	7,854	9,134
T037 - NextEra Core 2	3,402	3,766	4,236	5,054	3,828	5,607	7,853	9,141	3,837	5,607	7,858	9,132
T038 - NextEra Core 3	3,398	3,770	4,236	5,053	3,830	5,602	7,851	9,135	3,837	5,606	7,850	9,127
T039 - NextEra Core 4	3,380	3,746	4,211	5,023	3,807	5,567	7,800	9,081	3,814	5,572	7,806	9,071
T040 - NextEra Core 5	3,401	3,769	4,238	5,055	3,831	5,604	7,848	9,134	3,839	5,607	7,850	9,130
T041 - NextEra Core 6	3,396	3,758	4,227	5,045	3,834	5,606	7,850	9,140	3,844	5,610	7,851	9,132
T042 - NextEra Core 7	3,396	3,758	4,227	5,045	3,834	5,606	7,850	9,140	3,844	5,610	7,851	9,132
T043 - NextEra Enh 1	3,389	3,749	4,217	5,030	3,793	5,563	7,789	9,064	3,797	5,562	7,792	9,058
T044 - NextEra Enh 2	3,412	3,774	4,242	5,064	3,831	5,604	7,853	9,130	3,835	5,605	7,852	9,130
T047 - Propel Base 1	3,507	3,880	4,359	5,191	3,867	5,684	7,958	9,268	3,872	5,685	7,955	9,261
T048 - Propel Base 2	3,420	3,787	4,259	5,082	3,844	5,630	7,884	9,174	3,841	5,631	7,881	9,169
T049 - Propel Base 3	3,425	3,794	4,268	5,097	3,863	5,678	7,945	9,259	3,862	5,677	7,945	9,252
T051 - Propel Alt 5	3,426	3,797	4,267	5,094	3,857	5,651	7,908	9,199	3,855	5,652	7,908	9,193
T052 - Propel Alt 6	3,436	3,805	4,277	5,102	3,869	5,661	7,923	9,219	3,869	5,664	7,921	9,216
T053 - Propel Alt 7	3,415	3,786	4,254	5,074	3,847	5,632	7,879	9,170	3,847	5,632	7,875	9,163

## Emissions

Appendix L, Figures 11-13 contain the estimates for CO<sub>2</sub> emissions; Figures 20-22 contain the estimates for SO<sub>2</sub> emissions; and Figures 23-25 contain the estimates for NO<sub>x</sub> emissions.

## Installed Capacity Costs

Appendix N, Figure 18 contains the total capital cost reduction for a selected set of proposed projects for the Policy and Policy + Barrett-Valley Stream Scenarios.

## Transmission Congestion Contract Revenues

The figure below shows the total NYCA transmission congestion rent, representing the total potential transmission congestion contract revenue, for each of the Baseline, Policy, and Policy + Barrett-Valley Stream Scenarios.

Case	Transmission Congestion Rent (\$M)											
	Baseline				Policy				Policy + B-VS			
	2030	2035	2040	2045	2030	2035	2040	2045	2030	2035	2040	2045
Pre-Project	443	669	633	693	729	3,527	6,973	8,801	864	3,630	7,157	9,018
T035 - LS Power	407	579	527	600	650	3,357	6,517	8,125	650	3,364	6,555	8,171
T036 - NextEra Core 1	422	589	554	621	683	3,389	6,743	8,550	871	3,591	6,935	8,835
T037 - NextEra Core 2	405	550	515	588	649	3,299	6,540	8,183	838	3,502	6,731	8,472
T038 - NextEra Core 3	402	547	509	566	646	3,317	6,368	7,927	852	3,508	6,564	8,225
T039 - NextEra Core 4	484	602	608	701	655	3,397	6,732	8,614	855	3,581	6,926	8,925
T040 - NextEra Core 5	402	563	513	558	670	3,359	6,442	8,038	866	3,549	6,658	8,326
T041 - NextEra Core 6	421	589	544	598	681	3,407	6,575	8,325	880	3,615	6,766	8,598
T042 - NextEra Core 7	421	589	544	598	681	3,407	6,575	8,325	880	3,615	6,766	8,598
T043 - NextEra Enh 1	447	561	545	628	582	3,285	6,382	7,986	792	3,486	6,591	8,212
T044 - NextEra Enh 2	447	563	546	634	575	3,280	6,390	8,007	771	3,467	6,612	8,007
T047 - Propel Base 1	408	578	528	600	667	3,357	6,542	8,185	884	3,565	6,896	8,700
T048 - Propel Base 2	407	577	530	597	673	3,355	6,717	8,407	903	3,593	7,025	8,916
T049 - Propel Base 3	404	570	524	590	665	3,352	6,543	8,148	715	3,394	6,689	8,399
T051 - Propel Alt 5	407	576	528	598	665	3,359	6,478	8,098	879	3,549	6,830	8,613
T052 - Propel Alt 6	406	576	527	593	666	3,338	6,477	8,084	874	3,535	6,699	8,375
T053 - Propel Alt 7	406	574	522	575	669	3,348	6,475	8,083	889	3,537	6,720	8,420

## Transmission Congestion

The figure below shows the total NYCA demand congestion cost for each of the Baseline, Policy, and Policy + Barrett-Valley Stream Scenarios.

Case	Demand Congestion (\$M)											
	Baseline				Policy				Policy + B-VS			
	2030	2035	2040	2045	2030	2035	2040	2045	2030	2035	2040	2045
Pre-Project	186	286	302	374	301	3,562	10,795	14,449	316	3,751	11,079	14,781
T035 - LS Power	206	286	298	433	324	3,630	10,772	14,399	322	3,636	10,833	14,463
T036 - NextEra Core 1	222	325	349	440	265	3,618	11,033	14,890	295	3,655	11,167	15,004
T037 - NextEra Core 2	204	318	325	421	267	3,516	10,776	14,444	325	3,568	10,904	14,589
T038 - NextEra Core 3	203	315	310	392	265	3,546	10,766	14,389	324	3,593	10,882	14,550
T039 - NextEra Core 4	327	342	442	574	271	3,608	11,100	15,082	330	3,644	11,260	15,293
T040 - NextEra Core 5	202	300	300	376	294	3,593	10,819	14,490	334	3,630	10,980	14,658
T041 - NextEra Core 6	222	327	330	410	269	3,669	10,974	14,805	297	3,721	11,087	14,946
T042 - NextEra Core 7	222	327	330	410	269	3,669	10,974	14,805	297	3,721	11,087	14,946
T043 - NextEra Enh 1	271	290	351	467	296	3,513	10,712	14,399	287	3,558	10,837	14,457
T044 - NextEra Enh 2	266	270	340	481	282	3,495	10,632	14,273	264	3,553	10,782	14,273
T047 - Propel Base 1	207	283	304	434	302	3,621	10,859	14,603	309	3,653	10,994	14,801
T048 - Propel Base 2	204	282	301	431	308	3,612	10,840	14,571	311	3,698	11,132	15,018
T049 - Propel Base 3	198	271	303	425	302	3,600	10,857	14,572	300	3,610	10,856	14,632
T051 - Propel Alt 5	207	282	301	424	313	3,643	10,867	14,582	312	3,649	10,988	14,761
T052 - Propel Alt 6	201	286	303	423	305	3,583	10,856	14,559	316	3,611	10,930	14,645
T053 - Propel Alt 7	202	285	295	400	303	3,588	10,836	14,505	314	3,607	10,936	14,604

## Impacts on Transfer Limits

Appendix I, Figures 2-5 contain the N-1 transfer limit calculation results for each of the Policy and Policy + Barrett-Valley Stream Scenarios.

## Resource Deliverability

Appendix L, Figures 7-9 contain the energy deliverability metric results for each of the Baseline, Policy, and Policy + Barrett-Valley Stream Scenarios.