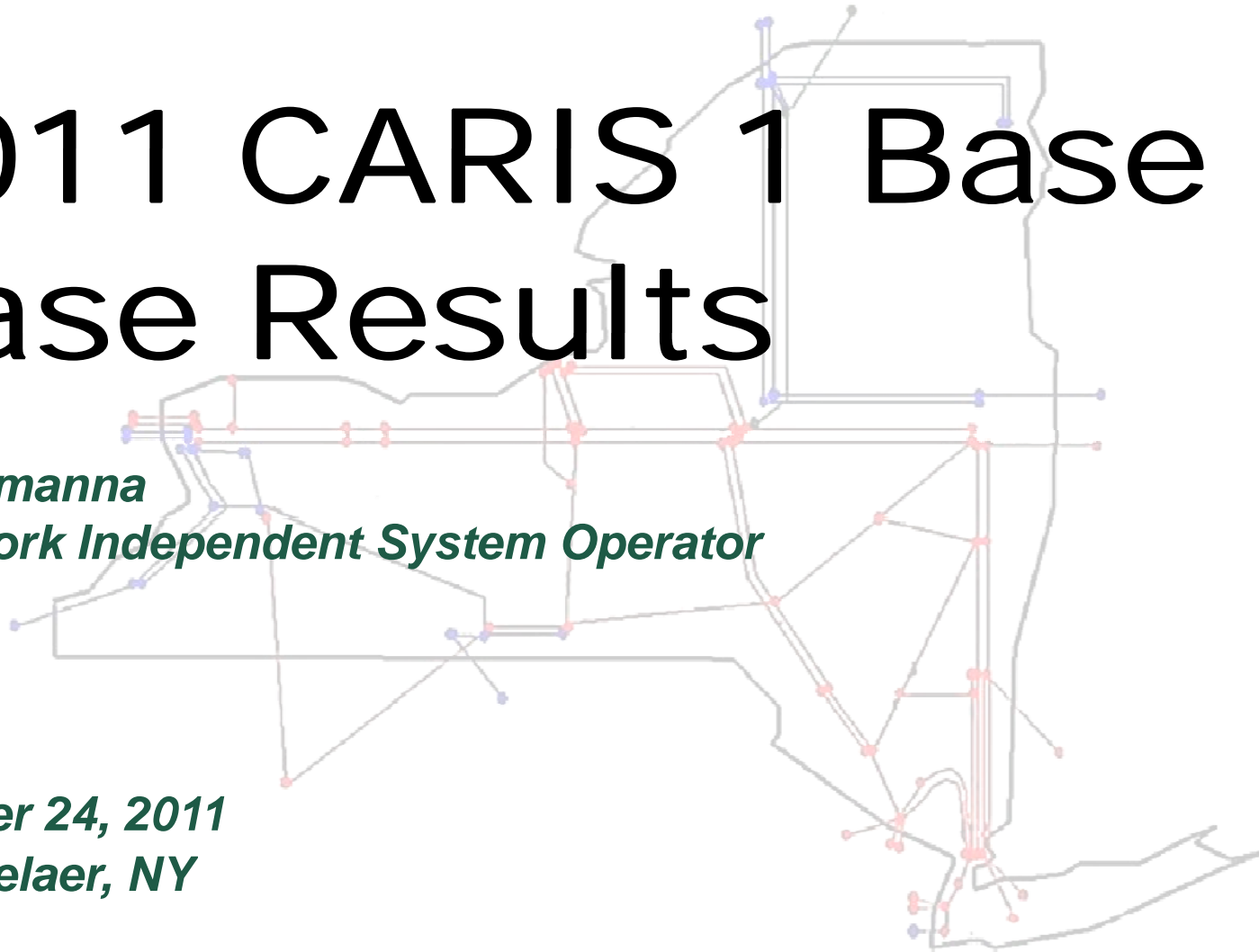


2011 CARIS 1 Base Case Results

*Bill Lamanna
New York Independent System Operator*

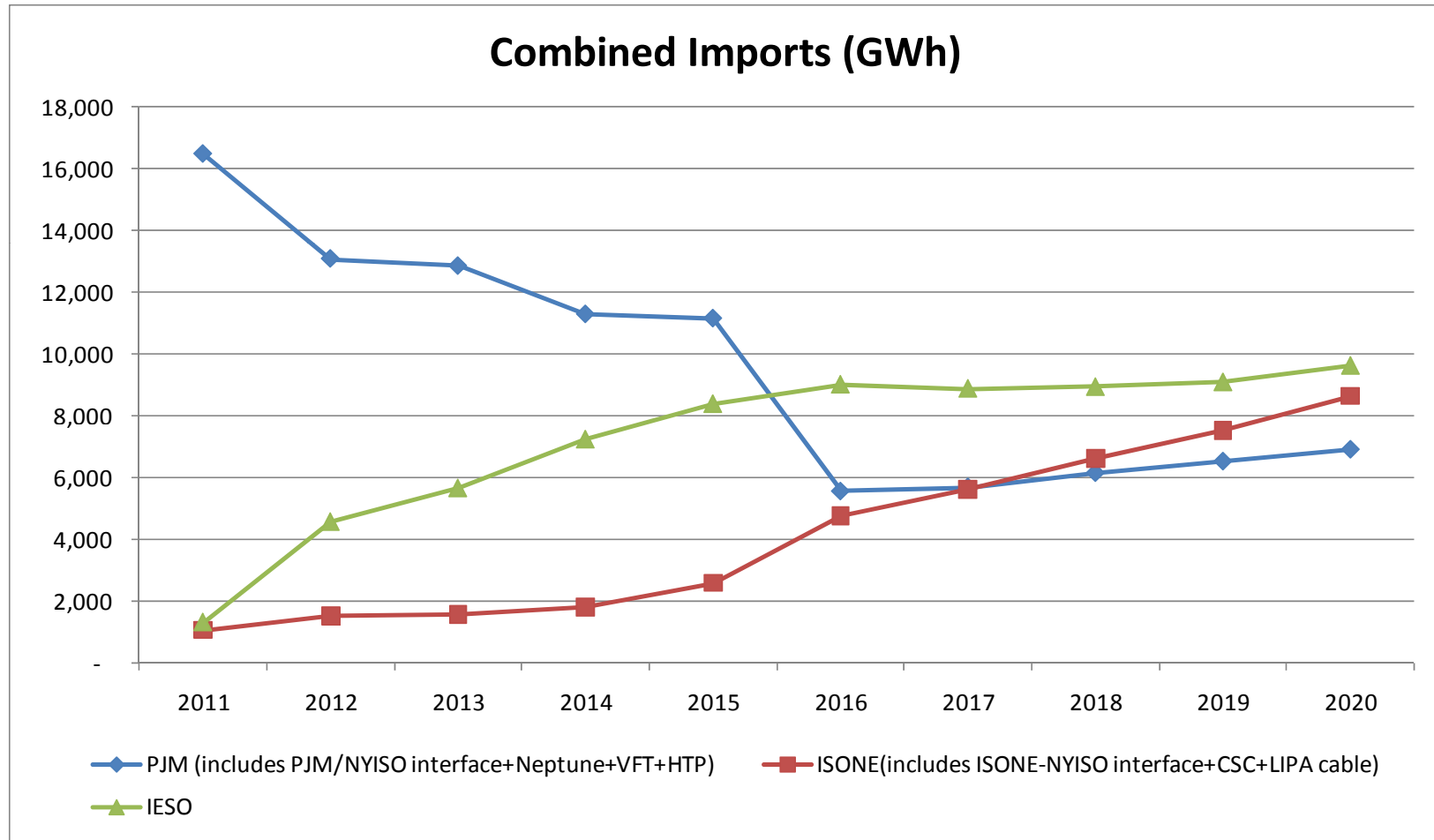
*October 24, 2011
Rensselaer, NY*



First Installment of Slides for 10/24/11 ESPWG Meeting

- ◆ **This slide deck is a first installment of the 10/19 posting scheduled for the 10/24 ESPWG meeting**
- ◆ **Additional content is expected to be ready for the required 10/19 posting**

Projected Net Imports (GWh)



Note: HQ is not modeled with a hurdle rate

Flat Dispatch Hurdle Rates (\$/MWh)

- ◆ **New England: 3 (unchanged)**
- ◆ **PJM: 3 (increased from 2)**
- ◆ **IESO: 5 (set at flat 5 as discussed October 6)**

Projected Demand\$ Congestion by Constraint (\$M)

Demand Congestion (\$M)	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total
LEEDS_PLTVLLEY_345	242	223	223	204	227	267	298	357	419	466	2,928
CENTRAL EAST	227	184	192	163	158	184	191	196	194	195	1,885
DUNWOODIE_SHORRD_345	18	23	25	29	31	33	36	38	42	49	325
Dunwoodie (I) to Long Island	14	16	17	18	20	20	21	23	24	27	199
FRESH KI 138 WILLOWBK2 138	7	9	9	10	10	11	12	13	15	17	113
GOTHL5 345 GOWANUSS 345	3	4	3	4	4	4	5	5	6	7	46
WEST CENTRAL-OP*	0	2	3	2	2	4	4	5	4	5	31
SBK:FRSHK_GOTHLN_345	2	1	1	2	2	2	2	2	2	3	18
FRKIL5_FRKILLR2_138	1	1	1	1	1	2	2	2	2	3	16
TWR:FRSHK_GOTLSN_345_3	1	1	1	1	1	1	1	1	2	3	14
ASTORIAW138_HG5_138*	0	1	0	1	1	1	1	1	1	1	6

* Reported numbers represent absolute values.

Nominal Demand\$ Congestion (\$M) 2006-2020

Nominal Value (\$M)	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
LEEDS_PLSNTVLY_345	452	435	667	149	232	242	223	223	204	227	267	298	357	419	466
CENTRAL EAST	195	572	1,199	435	491	227	184	192	163	158	184	191	196	194	195
DUNWOODIE_SHORRD_345	492	260	187	118	155	33	39	42	47	51	53	57	61	66	76
GREENWOOD LINES	119	90	113	87	132	9	10	11	12	13	13	15	17	19	23
GOTHLS_GOWANUSS_345	0	0	0	0	0	5	5	4	5	6	6	7	7	8	10
WEST CENTRAL-OP*	2	51	55	1	0	0	2	3	2	2	4	4	5	4	5
ASTORIAW138_HG5_138*	1	2	1	0	0	0	1	0	1	1	1	1	1	1	1

* Reported numbers represent absolute values.

Present Value of Demand\$ Congestion (\$M) 2006-2020

Present Value (\$M)	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
LEEDS_PLSNVLY_345	622	558	797	166	240	234	201	186	159	165	181	188	210	229	237
CENTRAL EAST	268	733	1,432	484	509	219	165	160	127	115	125	121	115	106	99
DUNWOODIE_SHORRD_345	677	333	223	131	161	32	35	35	36	37	36	36	36	36	39
GREENWOOD LINES	164	115	135	97	137	9	9	9	10	9	9	9	10	11	12
GOTHLS_GOWANUSS_345	0	0	0	0	0	5	4	4	4	4	4	4	4	5	5
WEST CENTRAL-OP*	3	65	66	1	0	0	1	2	2	2	2	3	3	2	2
ASTORIAW138_HG5_138*	2	2	2	0	0	0	1	0	0	0	0	0	0	0	0

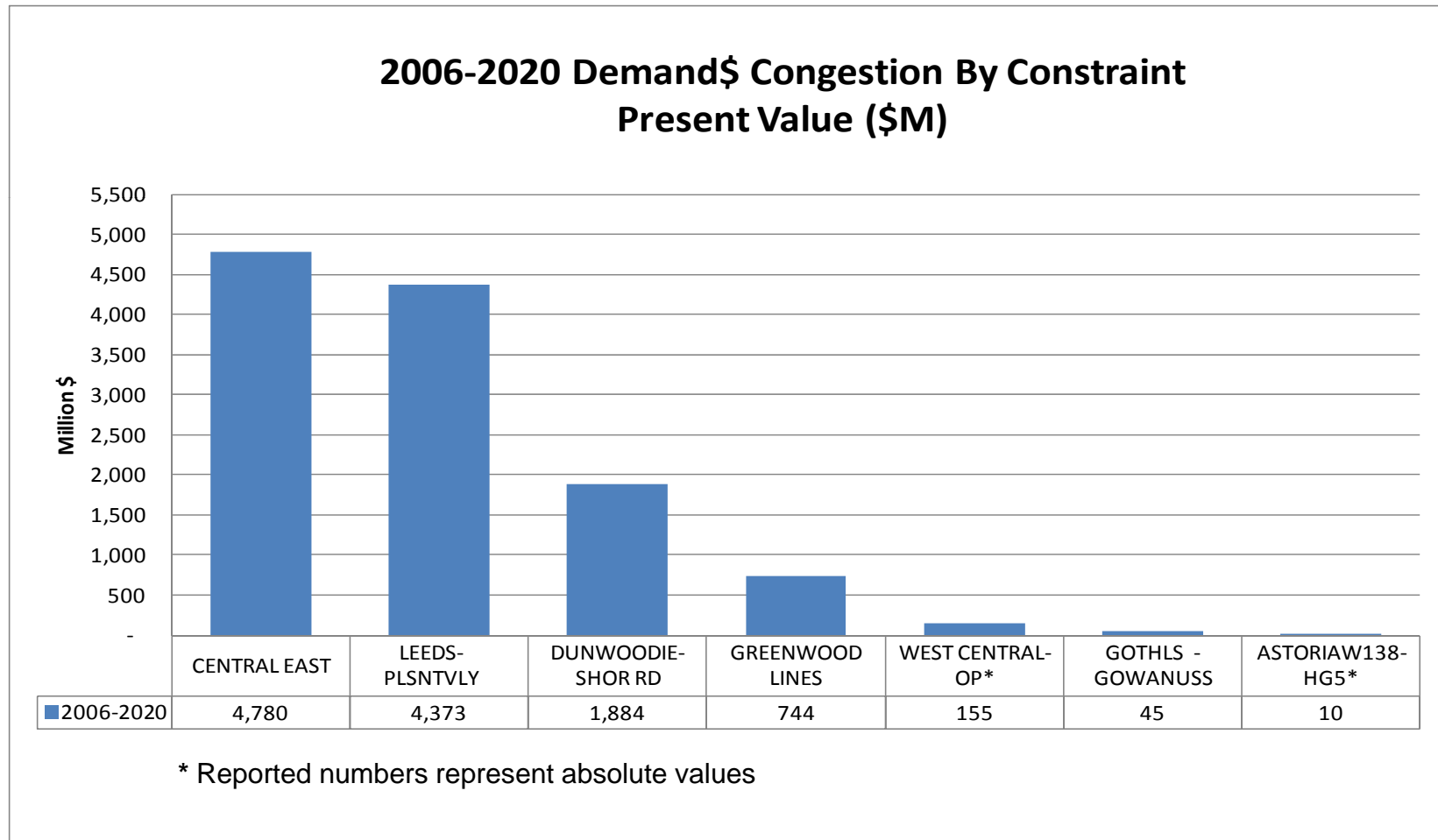
* Reported numbers represent absolute values.

Summation of Present Value of Demand\$ Congestion 2006-2020

	Present Value of Congestion (\$M)		
	Historic	Future	Sum
CENTRAL EAST	\$3,426	\$1,353	\$4,780
LEEDS-PLSNTVLY	\$2,383	\$1,990	\$4,373
DUNWOODIE-SHOR RD	\$1,526	\$358	\$1,884
GREENWOOD LINES	\$648	\$97	\$744
WEST CENTRAL-OP*	\$135	\$20	\$155
GOTHLS - GOWANUSS	\$1	\$43	\$45
ASTORIAW138-HG5*	\$6	\$4	\$10

* Reported numbers represent absolute values.

Top CARIS Constraints Present Value (\$M) 2006-2020



Historic Demand\$ Congestion by Zone (\$M)

Zone	2006	2007	2008	2009	2010
West	1	14	25	14	1
Genesee	2	14	9	4	6
Central	4	9	18	8	11
North	0	0	2	3	1
Mohawk Valley	2	5	10	4	5
Capital	27	74	143	53	62
Hudson Valley	54	87	176	57	73
Millwood	27	31	78	16	23
Dunwoodie	44	56	124	41	49
NY City	673	700	1403	503	560
Long Island	708	518	624	274	350
NYCA Total	1,542	1,508	2,613	977	1,141

Historic Congestion Source: PROBE DAM quarterly reports; The reported values are absolute values and include TCCs; DAM data include Virtual bidding & Transmission outages.

Projected Demand\$ Congestion by Zone (\$M)

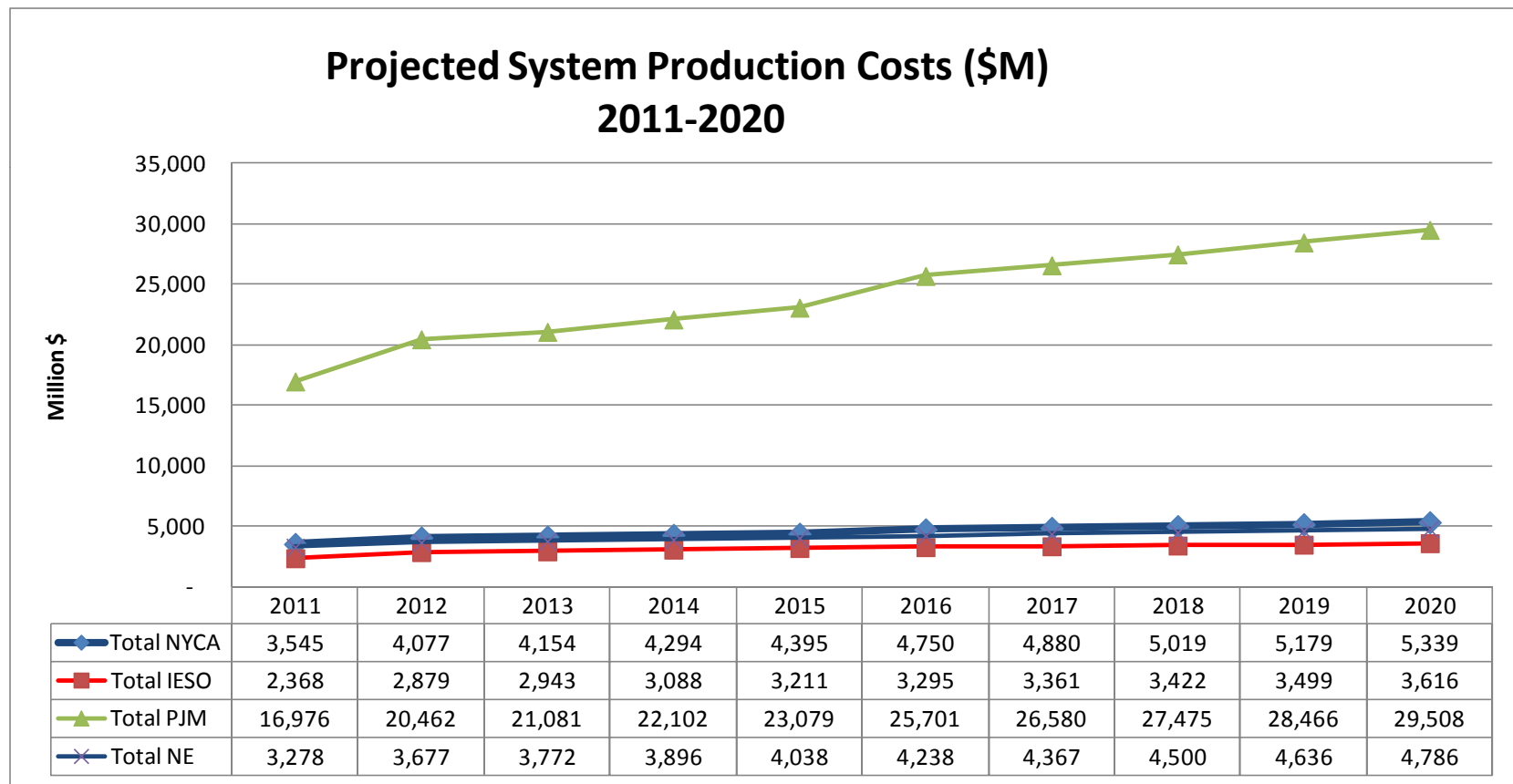
Demand\$ Congestion (\$M)	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
WEST	0	1	2	2	3	2	3	3	3	4
GENESSEE	1	0	0	0	1	1	1	1	1	1
CENTRAL	4	3	3	2	2	3	3	3	3	3
NORTH	5	6	7	7	6	6	6	6	6	6
MOHAWKVA	3	2	2	2	2	2	2	3	3	3
CAPITAL	40	34	35	30	30	34	35	36	36	36
HUDSONVA	53	48	49	44	46	53	57	64	70	75
MILLWOOD	19	17	17	15	16	19	20	23	26	27
DUNWOODI	36	32	33	30	31	36	39	45	50	54
NYCITY	332	302	308	284	300	341	372	425	477	525
LONGISLA	177	174	180	175	188	210	228	255	280	310
Total NYCA	670	619	636	592	626	707	766	863	954	1,044

* Reported numbers represent absolute values.

Projected Production Costs (\$M)

Production Cost (\$M)	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
WEST	362	405	411	418	413	438	454	466	473	492
GENESSEE	31	36	36	36	37	37	37	38	38	39
CENTRAL	484	545	554	580	585	617	624	624	632	635
NORTH	13	18	18	22	22	26	25	24	21	21
MOHAWKVA	4	4	4	5	5	5	4	4	4	4
CAPITAL	764	895	917	956	988	1,036	1,068	1,105	1,139	1,173
HUDSONVA	112	98	94	88	89	106	116	123	135	145
MILLWOOD	116	132	134	136	138	140	141	143	145	147
DUNWOODI	-	-	-	-	-	-	-	-	-	-
NYCITY	1,210	1,444	1,471	1,524	1,577	1,749	1,794	1,855	1,928	1,989
LONGISLA	449	500	514	530	541	596	615	638	664	694
Total NYCA	3,545	4,077	4,154	4,294	4,395	4,750	4,880	5,019	5,179	5,339
Total IESO	2,368	2,879	2,943	3,088	3,211	3,295	3,361	3,422	3,499	3,616
Total PJM	16,976	20,462	21,081	22,102	23,079	25,701	26,580	27,475	28,466	29,508
Total NE	3,278	3,677	3,772	3,896	4,038	4,238	4,367	4,500	4,636	4,786
Total Externals	22,621	27,017	27,796	29,086	30,328	33,234	34,308	35,398	36,601	37,909
Total System	26,166	31,094	31,949	33,380	34,723	37,984	39,188	40,416	41,780	43,248

Projected System Production Costs (\$M)



Historic Load and Generation (GWh)

YEAR	NYCA Actual GWh	
	Load	Generation
2004	160,211	147,171
2005	167,208	153,265
2006	162,237	148,359
2007	167,341	150,407
2008	165,613	144,619
2009	158,780	136,501
2010	163,505	139,357

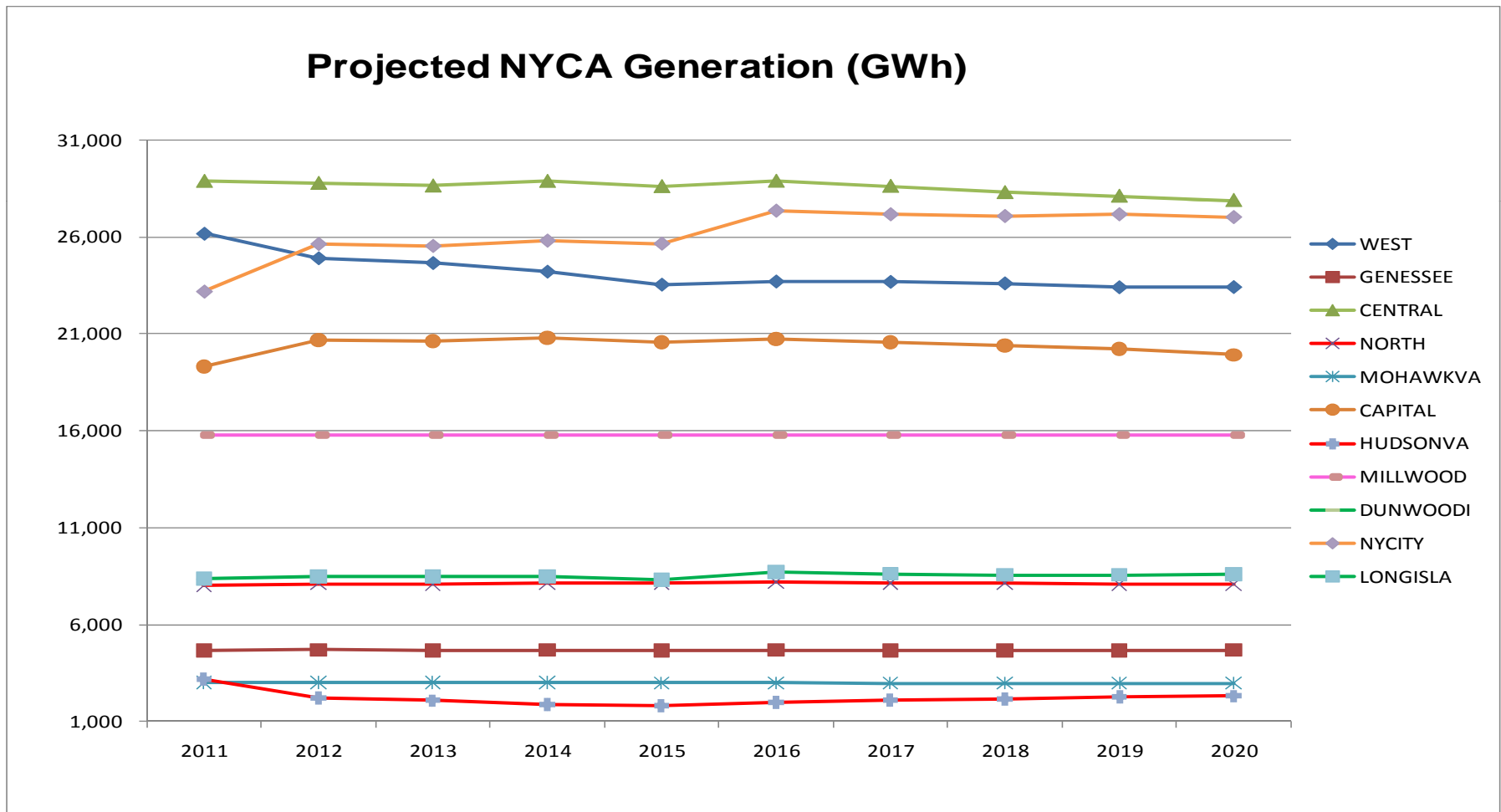
Source: NYISO Gold Books, 2005-2011.

Projected Generation (GWh)

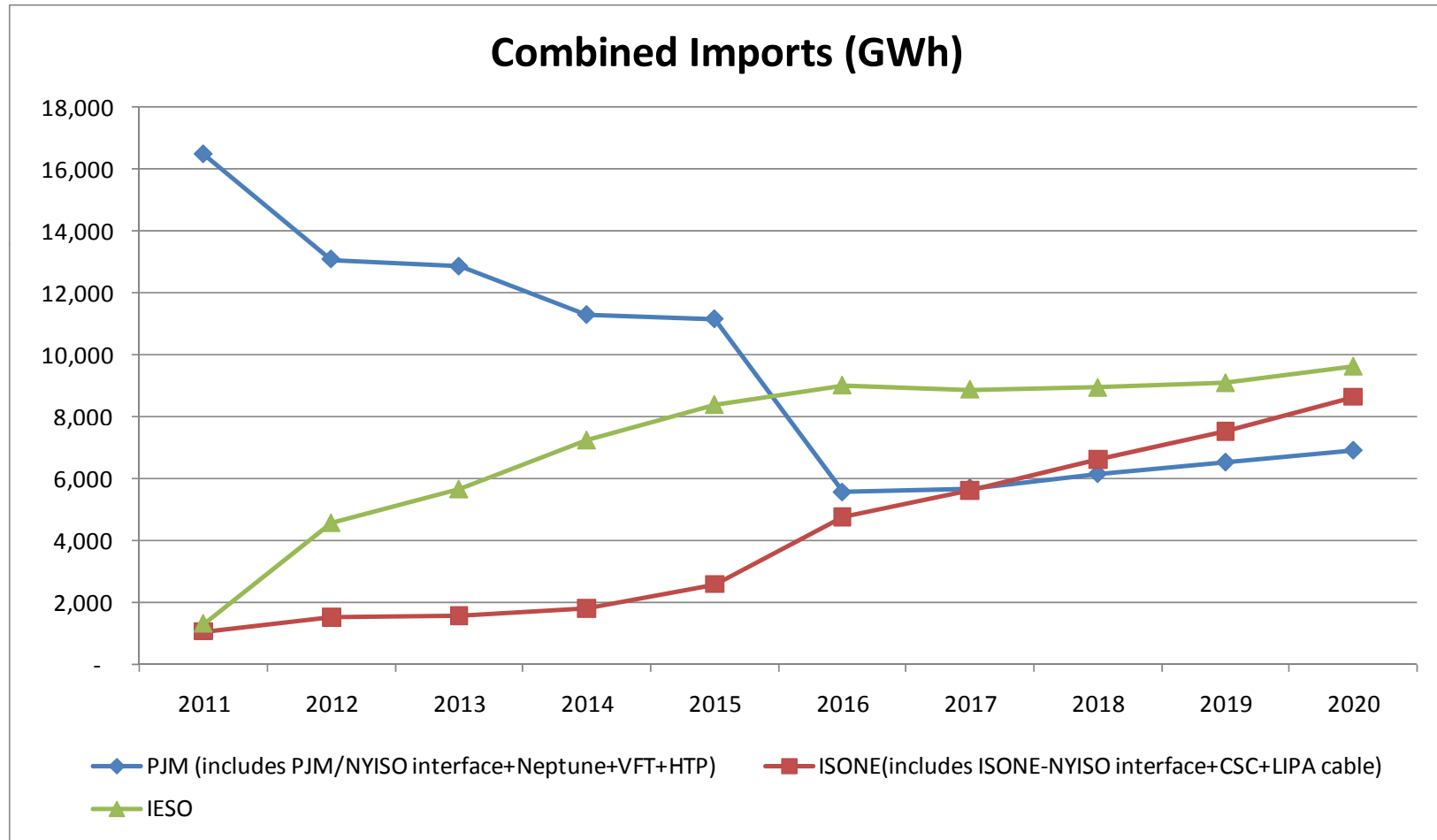
Generation (GWh)	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
WEST	26,180	24,904	24,654	24,204	23,529	23,691	23,672	23,594	23,391	23,402
GENESSEE	4,678	4,694	4,681	4,683	4,680	4,691	4,676	4,675	4,674	4,688
CENTRAL	28,875	28,769	28,636	28,874	28,604	28,881	28,619	28,292	28,106	27,887
NORTH	8,042	8,110	8,088	8,142	8,126	8,201	8,156	8,123	8,067	8,078
MOHAWKVA	2,994	2,993	2,996	3,001	2,986	2,982	2,977	2,977	2,977	2,974
CAPITAL	19,307	20,671	20,614	20,803	20,555	20,744	20,576	20,405	20,207	19,917
HUDSONVA	3,198	2,211	2,071	1,870	1,807	2,001	2,114	2,151	2,257	2,304
MILLWOOD	15,763	15,789	15,763	15,763	15,764	15,789	15,763	15,762	15,763	15,790
DUNWOODI	6	6	6	6	6	6	6	6	6	6
NYCITY	23,197	25,634	25,535	25,806	25,653	27,339	27,153	27,065	27,156	27,013
LONGISLA	8,367	8,500	8,466	8,468	8,298	8,697	8,621	8,567	8,566	8,582
Total NYCA	140,605	142,281	141,509	141,620	140,009	143,022	142,331	141,617	141,169	140,640
Total IESO	174,197	181,032	182,438	184,166	185,444	186,917	186,846	186,947	187,159	188,107
Total PJM	729,977	721,609	720,817	718,891	718,436	712,629	712,638	712,933	713,232	713,554
Total NE	131,854	132,125	132,172	132,436	133,209	135,310	136,157	137,124	138,013	139,158
Total HQ*	4,326	4,327	4,420	4,404	4,382	4,350	4,302	4,298	4,420	4,414
Total Externals	1,040,354	1,039,094	1,039,848	1,039,897	1,041,471	1,039,205	1,039,944	1,041,302	1,042,824	1,045,232
Total System	1,180,959	1,181,375	1,181,358	1,181,517	1,181,480	1,182,227	1,182,275	1,182,919	1,183,994	1,185,872

*Only Imports are modeled.

Projected NYCA Generation By Zone (GWh)



Projected Net Imports (GWh)



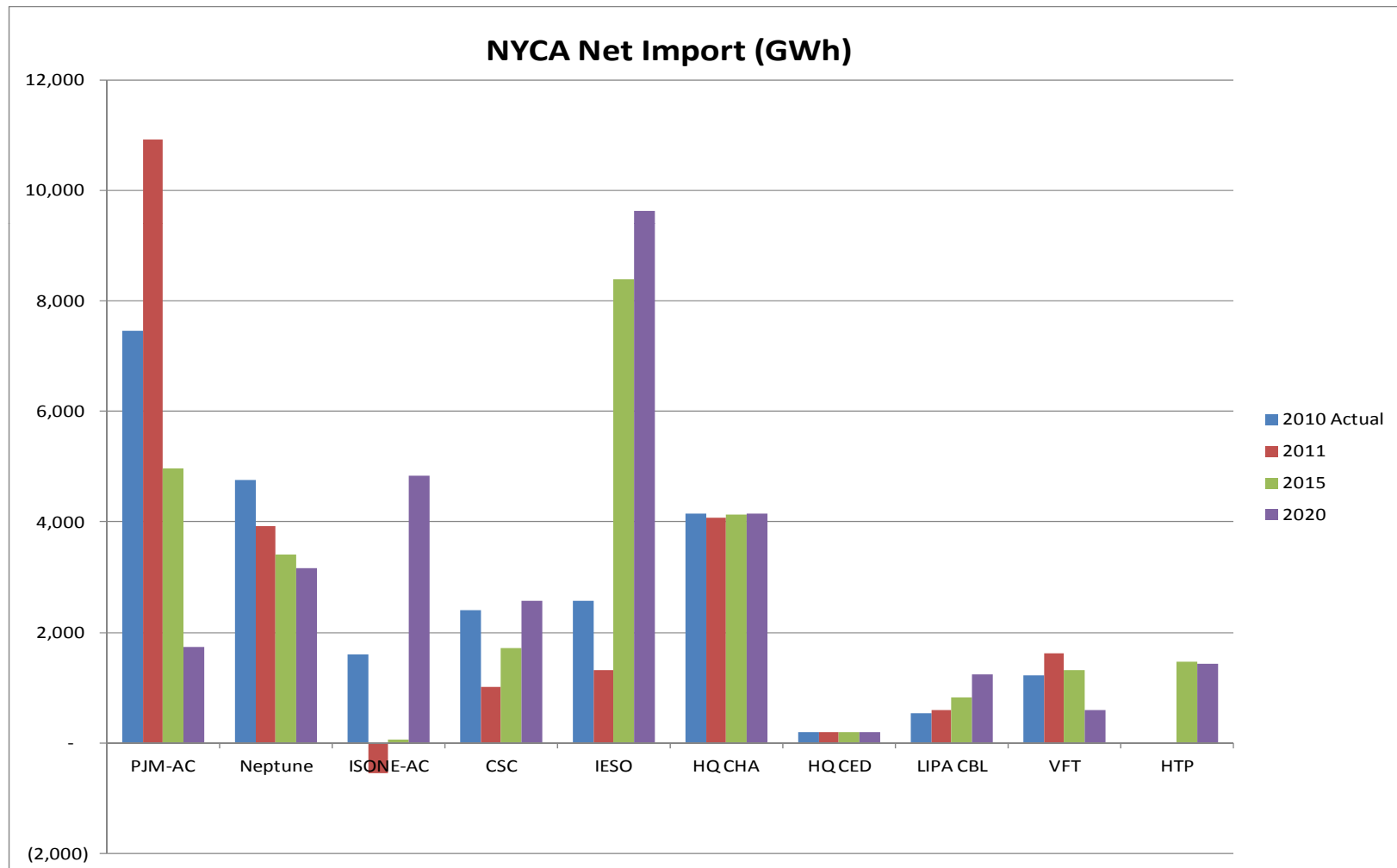
Note: HQ is not modeled with a hurdle rate

Projected Net Imports (GWh)

Import (GWh)	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
NYISO-PJM_SOFT	10,924	7,981	7,048	5,189	4,968	1,331	1,352	1,474	1,600	1,731
Neptune HVDC	3,929	3,621	3,592	3,412	3,409	2,703	2,770	2,913	3,018	3,158
ISONE-NYISO_SOFT	(545)	(361)	(375)	(383)	59	1,508	2,207	3,067	3,841	4,838
Cross Sound Cable	1,015	1,230	1,278	1,467	1,709	2,202	2,331	2,426	2,509	2,577
IMO-NYISO	1,314	4,569	5,658	7,239	8,391	9,019	8,887	8,942	9,095	9,630
NYISO-HQ CHA	4,070	4,070	4,160	4,146	4,124	4,093	4,046	4,043	4,160	4,155
NYISO-HQ CED	189	190	193	192	191	189	189	188	193	192
LIPA Cable	604	656	671	729	830	1,046	1,100	1,138	1,175	1,236
VFT	1,626	1,484	1,463	1,302	1,316	508	510	583	607	601
HTP	-	-	751	1,390	1,462	1,020	1,066	1,185	1,307	1,422
Total Imports	23,127	23,439	24,441	24,682	26,459	23,621	24,458	25,958	27,505	29,540

NYCA Net Imports

2010 Actual & 2011, 2015, 2020 Projected



Historic Zonal Generator Payments (\$M)

Zone	2006	2007	2008	2009	2010
West	1,530	1,630	1,701	835	1,035
Genesee	418	491	476	273	334
Central	1,612	1,753	1,825	1,062	1,280
North	633	659	779	393	406
Mohawk Valley	230	206	234	107	110
Capital	704	883	1,175	593	788
Hudson Valley	533	571	532	214	207
Millwood	1,145	1,252	1,725	773	887
Dunwoodie	56	39	39	28	11
NY City	1,895	2,072	2,405	1,125	1,369
Long Island	1,485	1,282	1,286	516	782
NYCA Total	10,241	10,840	12,178	5,919	7,209

Historic Generator Payment Source: PROBE DAM quarterly reports; Does not include BPCG and Ancillary services; DAM data include Virtual bidding & Transmission outages.

Projected Generator Payments (\$M)

Generator Payment (\$M)	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
WEST	1,031	1,111	1,128	1,157	1,174	1,230	1,267	1,303	1,335	1,377
GENESSEE	188	212	217	227	236	247	254	262	270	280
CENTRAL	1,209	1,351	1,381	1,451	1,499	1,586	1,621	1,655	1,697	1,742
NORTH	328	373	382	402	418	442	453	466	478	495
MOHAWKVA	123	139	143	149	154	161	166	171	177	183
CAPITAL	901	1,057	1,083	1,131	1,160	1,227	1,254	1,281	1,305	1,326
HUDSONVA	171	137	131	124	125	146	158	168	182	193
MILLWOOD	779	859	880	910	948	1,006	1,038	1,078	1,118	1,161
DUNWOODI	0	0	0	0	0	0	0	0	0	0
NYCITY	1,254	1,495	1,525	1,589	1,646	1,849	1,902	1,976	2,059	2,128
LONGISLA	483	532	543	563	577	638	658	685	714	747
Total NYCA	6,467	7,265	7,412	7,702	7,937	8,532	8,772	9,045	9,336	9,632

Historic Zonal Load Payments (\$M)

Zone	2006	2007	2008	2009	2010
West	868	983	1,061	511	629
Genesee	649	668	754	435	520
Central	779	928	1,060	569	726
North	351	413	474	193	183
Mohawk Valley	400	443	469	256	313
Capital	720	818	1,008	508	578
Hudson Valley	761	864	1,114	496	630
Millwood	252	263	385	132	168
Dunwoodie	442	494	706	315	375
NYCity	4,394	4,696	5,919	2,753	3,305
Long Island	2,353	2,261	2,535	1,231	1,577
NYCA Total	11,969	12,831	15,485	7,397	9,005

Historic Load Payment Source: PROBE DAM quarterly reports.
 DAM data includes Virtual bidding & Transmission outages.

Projected Load Payments (\$M)

Load Payments (\$M)	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
WEST	584	661	674	703	730	755	773	791	815	838
GENESSEE	411	464	477	499	521	545	565	585	609	634
CENTRAL	671	758	777	814	848	884	907	933	962	995
NORTH	217	281	292	307	323	341	354	367	383	400
MOHAWKVA	312	350	361	376	392	410	423	435	451	467
CAPITAL	520	574	589	609	633	667	685	705	729	755
HUDSONVA	529	585	603	625	653	693	717	745	777	810
MILLWOOD	151	167	171	177	185	197	205	215	225	236
DUNWOODI	320	352	360	372	387	411	426	448	469	493
NYCITY	2,891	3,183	3,255	3,366	3,504	3,726	3,864	4,065	4,270	4,500
LONGISLA	1,232	1,366	1,412	1,467	1,540	1,652	1,726	1,816	1,907	2,017
Total NYCA	7,839	8,740	8,970	9,314	9,714	10,280	10,645	11,105	11,598	12,144

Projected LBMPs (\$/MWh)

Load LBMP (\$/MWh)	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
WEST	39.9	45.4	46.6	48.7	50.9	53.0	54.7	56.4	58.3	60.2
GENESSEE	41.6	46.9	48.0	50.2	52.4	54.6	56.4	58.1	60.1	62.1
CENTRAL	42.9	48.3	49.6	51.7	53.9	56.5	58.3	60.1	62.1	64.1
NORTH	41.2	46.6	47.8	49.9	52.1	54.6	56.4	58.2	60.2	62.3
MOHAWKVA	43.8	49.3	50.6	52.7	54.9	57.6	59.4	61.3	63.3	65.4
CAPITAL	47.5	52.3	53.6	55.5	57.7	60.7	62.6	64.5	66.4	68.5
HUDSONVA	50.0	55.0	56.4	58.3	60.7	64.2	66.3	68.7	71.2	73.7
MILLWOOD	50.9	55.9	57.3	59.1	61.5	65.2	67.4	69.9	72.5	75.2
DUNWOODI	51.2	56.1	57.5	59.4	61.8	65.5	67.8	70.3	72.9	75.6
NYCITY	51.8	56.8	58.2	60.1	62.6	66.4	68.7	71.3	74.0	76.9
LONGISLA	53.9	59.3	60.9	63.1	65.8	69.7	72.2	75.0	77.9	81.2
IESO	37.9	41.6	42.6	44.4	46.3	48.0	49.6	51.3	53.0	54.8
PJM	43.8	50.2	51.8	54.5	56.9	61.4	63.6	65.7	68.1	70.5
NE	48.7	53.5	54.9	56.6	58.4	60.4	61.9	63.4	64.9	66.3

Projected SOx Emissions (Tons)

SOx Emissions (Tons)	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
WEST	20,717.9	16,159.8	15,489.2	14,059.7	12,849.5	13,354.7	13,222.6	13,007.3	12,689.7	12,288.8
GENESSEE	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
CENTRAL	1,295.5	264.9	267.9	223.4	187.7	201.8	210.8	211.8	208.0	219.2
NORTH	376.8	434.7	450.8	439.1	448.0	556.9	553.8	515.0	478.9	408.2
MOHAWKVA	52.8	3.3	3.3	8.2	8.1	3.3	3.2	3.2	3.2	8.0
CAPITAL	66.2	71.4	70.9	72.2	70.2	71.1	70.0	69.2	68.2	66.8
HUDSONVA	11,491.5	6,656.2	6,221.2	5,336.4	5,110.4	5,853.8	6,377.5	6,527.6	6,881.2	7,044.1
MILLWOOD	12.2	12.3	12.2	12.2	12.2	12.3	12.2	12.2	12.2	12.3
DUNWOODI	-	-	-	-	-	-	-	-	-	-
NYCITY	234.9	259.6	256.3	259.2	258.4	278.9	278.6	281.6	285.6	285.7
LONGISLA	5,779.4	5,738.1	5,696.1	5,647.0	5,438.7	5,768.2	5,708.9	5,771.0	5,751.8	5,809.4
Total NYCA	40,028	29,601	28,468	26,058	24,384	26,101	26,438	26,399	26,379	26,143

Projected SO_x Emission Costs (\$M)

SO _x Emission Costs (\$M)	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
WEST	2.07	4.85	4.76	4.43	4.15	4.42	4.49	4.53	4.53	4.49
GENESSEE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CENTRAL	0.13	0.08	0.08	0.07	0.06	0.07	0.07	0.07	0.07	0.08
NORTH	0.04	0.13	0.14	0.14	0.14	0.18	0.19	0.18	0.17	0.15
MOHAWKVA	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CAPITAL	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
HUDSONVA	1.15	2.00	1.91	1.68	1.65	1.94	2.16	2.27	2.45	2.57
MILLWOOD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DUNWOODI	-	-	-	-	-	-	-	-	-	-
NYCITY	0.02	0.08	0.08	0.08	0.08	0.09	0.09	0.10	0.10	0.10
LONGISLA	0.58	1.72	1.75	1.78	1.76	1.91	1.94	2.01	2.05	2.12
Total NYCA	4.00	8.88	8.75	8.21	7.88	8.64	8.97	9.18	9.41	9.56

Projected NOx Emissions (Tons)

NOx Emissions (Tons)	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
WEST	10,160	9,148	8,981	8,639	8,068	8,182	8,199	8,125	7,959	7,954
GENESSEE	6	7	7	7	7	6	6	6	6	6
CENTRAL	2,374	1,477	1,480	1,413	1,320	1,369	1,373	1,357	1,342	1,338
NORTH	395	401	401	405	404	412	409	406	400	398
MOHAWKVA	229	230	229	230	228	227	223	221	219	219
CAPITAL	915	961	955	963	921	900	885	869	854	835
HUDSONVA	3,708	2,399	2,211	1,930	1,854	2,118	2,275	2,319	2,462	2,523
MILLWOOD	1,046	1,049	1,046	1,046	1,046	1,049	1,046	1,046	1,046	1,050
DUNWOODI	-	-	-	-	-	-	-	-	-	-
NYCITY	2,381	2,576	2,535	2,573	2,529	2,775	2,743	2,713	2,728	2,718
LONGISLA	5,650	5,675	5,652	5,634	5,534	5,730	5,696	5,691	5,688	5,726
Total NYCA	26,866	23,923	23,497	22,840	21,912	22,768	22,857	22,752	22,705	22,766

Projected NOx Emission Costs (\$M)

NOx Emission Costs (\$M)	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
WEST	6.10	7.32	9.88	13.82	12.91	13.09	13.12	13.00	12.86	13.17
GENESSEE	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
CENTRAL	1.42	1.18	1.63	2.26	2.11	2.19	2.20	2.17	2.17	2.22
NORTH	0.24	0.32	0.44	0.65	0.65	0.66	0.66	0.65	0.65	0.66
MOHAWKVA	0.14	0.18	0.25	0.37	0.36	0.36	0.36	0.35	0.35	0.36
CAPITAL	0.55	0.77	1.05	1.54	1.47	1.44	1.42	1.39	1.38	1.38
HUDSONVA	2.22	1.92	2.43	3.09	2.97	3.39	3.64	3.71	3.98	4.18
MILLWOOD	0.63	0.84	1.15	1.67	1.67	1.68	1.67	1.67	1.69	1.74
DUNWOODI	-	-	-	-	-	-	-	-	-	-
NYCITY	1.43	2.06	2.79	4.12	4.05	4.44	4.39	4.34	4.41	4.50
LONGISLA	3.39	4.54	6.22	9.01	8.86	9.17	9.11	9.11	9.19	9.48
Total NYCA	16.12	19.14	25.85	36.54	35.06	36.43	36.57	36.40	36.68	37.69

Projected CO₂ Emissions (1,000 Tons)

CO ₂ Emissions (1000 Tons)	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
WEST	10,500	9,112	8,900	8,439	7,775	7,943	7,956	7,872	7,689	7,655
GENESSEE	3	5	5	6	5	3	2	2	1	2
CENTRAL	3,889	3,403	3,374	3,436	3,278	3,385	3,305	3,159	3,072	2,957
NORTH	121	146	144	172	164	193	179	161	133	129
MOHAWKVA	43	33	31	34	30	28	24	21	20	20
CAPITAL	7,543	8,127	8,106	8,204	8,077	8,129	8,058	7,993	7,922	7,813
HUDSONVA	2,617	1,617	1,500	1,305	1,250	1,426	1,538	1,573	1,665	1,707
MILLWOOD	-	-	-	-	-	-	-	-	-	-
DUNWOODI	-	-	-	-	-	-	-	-	-	-
NYCITY	11,807	12,943	12,870	12,977	12,885	13,764	13,669	13,638	13,705	13,612
LONGISLA	4,433	4,502	4,489	4,476	4,359	4,603	4,567	4,542	4,549	4,555
Total NYCA	40,956	39,887	39,418	39,049	37,823	39,474	39,298	38,961	38,755	38,449

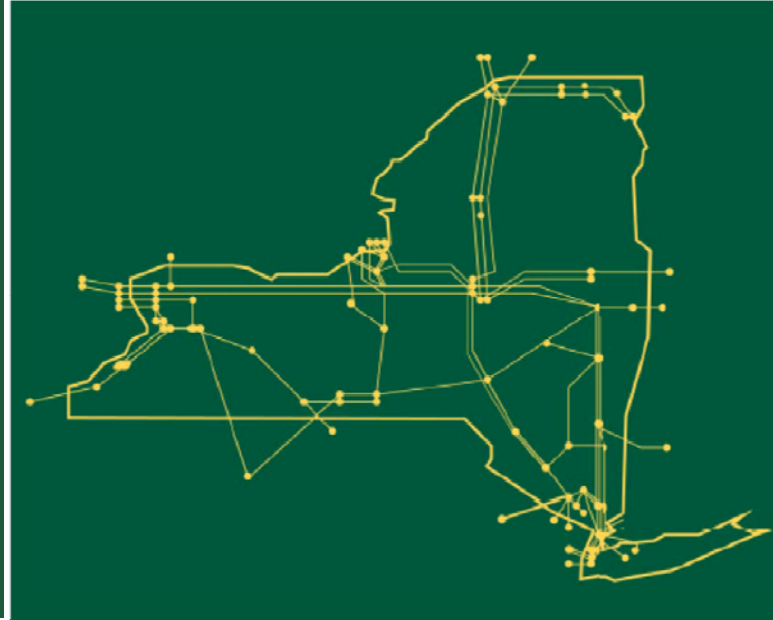
Projected CO₂ Emission Costs (\$M)

CO ₂ Emission Costs (\$M)	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
WEST	22.5	91.1	109.0	122.4	130.2	150.9	162.5	172.9	181.5	194.2
GENESSEE	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0
CENTRAL	8.3	34.0	41.3	49.8	54.9	64.3	67.5	69.4	72.5	75.0
NORTH	0.3	1.5	1.8	2.5	2.8	3.7	3.7	3.5	3.1	3.3
MOHAWKVA	0.1	0.3	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5
CAPITAL	16.1	81.3	99.3	119.0	135.3	154.4	164.6	175.5	187.0	198.2
HUDSONVA	5.6	16.2	18.4	18.9	20.9	27.1	31.4	34.5	39.3	43.3
MILLWOOD	-	-	-	-	-	-	-	-	-	-
DUNWOODI	-	-	-	-	-	-	-	-	-	-
NYCITY	25.3	129.4	157.7	188.2	215.8	261.5	279.3	299.5	323.4	345.3
LONGISLA	9.5	45.0	55.0	64.9	73.0	87.5	93.3	99.7	107.4	115.6
Total NYCA	88	399	483	566	634	750	803	856	915	975

Projected Load LBMP Loss Component (\$M)

Loss Costs (\$M)	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
WEST	7.9	12.1	12.8	14.1	15.1	15.4	15.9	16.2	16.7	17.4
GENESSEE	21.1	22.3	23.1	23.7	24.6	27.2	28.2	29.3	30.5	31.9
CENTRAL	54.9	58.8	60.3	62.2	63.6	71.7	73.1	74.8	76.5	78.8
NORTH	13.8	17.1	17.8	18.1	18.5	21.2	22.1	22.8	23.5	24.5
MOHAWKVA	34.6	36.1	37.2	38.1	38.9	43.4	44.4	45.5	46.6	48.2
CAPITAL	54.0	54.4	55.8	56.8	58.3	66.4	67.1	68.2	69.7	71.8
HUDSONVA	68.2	71.7	73.8	76.2	77.8	88.1	90.1	92.6	95.2	98.5
MILLWOOD	21.1	22.0	22.5	23.2	23.6	27.0	27.7	28.7	29.6	30.8
DUNWOODI	43.2	44.8	45.6	46.9	47.7	54.4	55.8	57.9	59.8	62.4
NYCITY	394.3	408.7	416.6	428.8	435.9	497.9	511.4	531.2	550.3	574.9
LONGISLA	169.0	176.9	182.7	188.8	194.2	221.6	229.5	238.8	247.6	259.7
Total NYCA	882	925	948	977	998	1,134	1,165	1,206	1,246	1,299

The New York Independent System Operator (NYISO) is a not-for-profit corporation responsible for operating the state's bulk electricity grid, administering New York's competitive wholesale electricity markets, conducting comprehensive long-term planning for the state's electric power system, and advancing the technological infrastructure of the electric system serving the Empire State.



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