

CARIS Phase 2 Base Cases Update

Andrea Fossa
New York Independent System Operator

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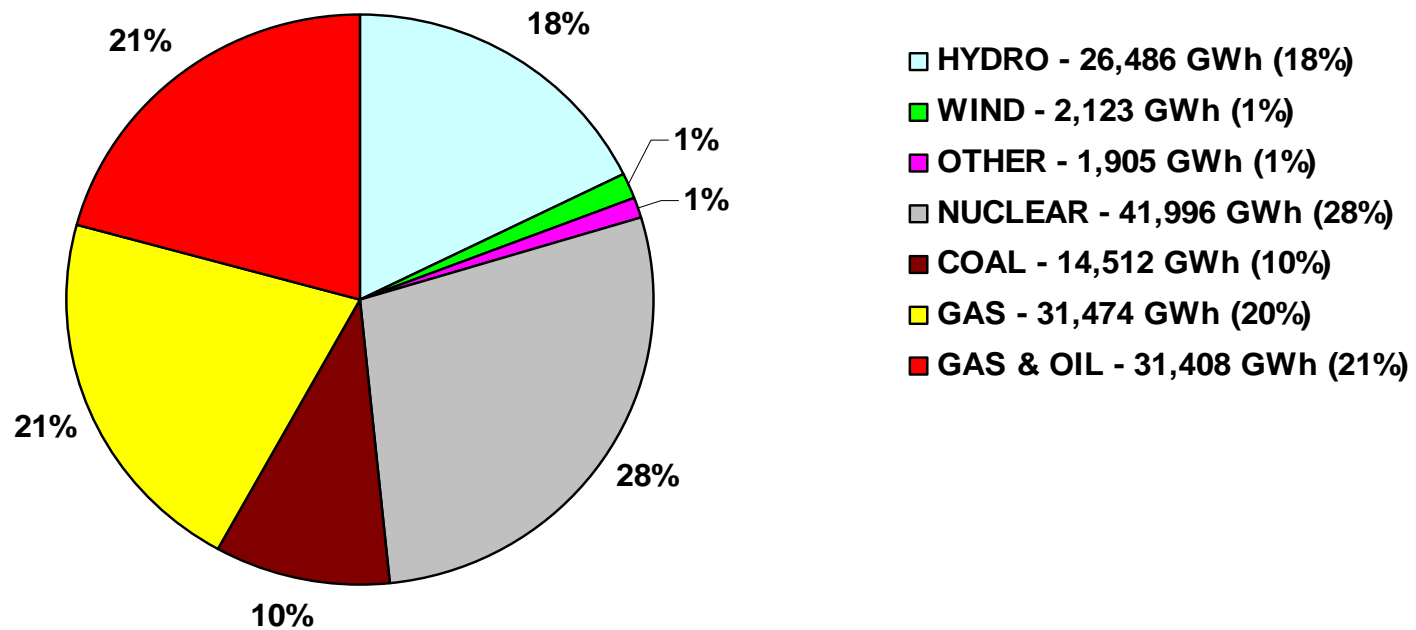
Topics

- 1. Generation by Type**
- 2. Implied Heat Rate by Superzones**
- 3. Preliminary Results for Base Cases for the remaining 7 of 10 years (previously presented results for 2014, '17, '22 on April 11)**

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Generation by Type

2014 NYCA Generation by Type



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Implied Heat Rate by Superzones: Year 2014

Superzone	Composite Heat Rate (mbtu/KWh)
Superzone K	9,666
Superzone J	9,472
Superzone G-I	9,436
Superzone A-F	8,541

- The Superzone Definition was taken from the 2010 RNA Report
- The Implied Heat Rate is defined as Zonal Average Spot Price divided by Average Gas Price
- When dealing with multiple zones, each zone was weighted by load

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Production Cost (M\$) for Seven Years of Base Cases

Production Cost Matrix (M\$)	2015	2016	2018	2019	2020	2021	2023
WEST	578	607	659	686	716	746	800
GENESSEE	31	30	30	31	32	33	35
CENTRAL	673	722	816	883	931	973	1,074
NORTH	98	106	126	136	147	156	173
MOHAWKVA	12	11	12	13	14	14	17
CAPITAL	1,191	1,238	1,356	1,415	1,474	1,534	1,650
HUDSONVA	331	352	394	406	434	461	497
MILLWOOD	135	133	133	136	142	144	149
DUNWOODI	-	-	-	-	-	-	-
NYCITY	2,115	2,230	2,442	2,573	2,706	2,879	3,156
LONGISLA	578	625	696	733	783	846	949
Total NYCA	5,742	6,054	6,662	7,013	7,378	7,786	8,501
Total Imports	856	885	969	1,029	1,091	1,145	1,275
Total NYCA +Imports (M\$)	6,598	6,939	7,632	8,042	8,469	8,931	9,777

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Load Payments (M\$) for Seven Years of Base Cases

Load Payment matrix (M\$)	2015	2016	2018	2019	2020	2021	2023
WEST	901	945	1,027	1,067	1,118	1,169	1,262
GENESSEE	646	679	741	773	812	851	929
CENTRAL	1,046	1,096	1,189	1,236	1,296	1,355	1,468
NORTH	383	402	437	456	480	499	538
MOHAWKVA	498	522	567	591	620	648	701
CAPITAL	773	810	876	911	953	993	1,073
HUDSONVA	784	824	899	941	991	1,043	1,138
MILLWOOD	223	236	261	273	287	303	330
DUNWOODI	508	533	578	598	621	648	690
NYCITY	4,214	4,436	4,852	5,077	5,326	5,574	6,062
LONGISLA	1,760	1,863	2,046	2,147	2,265	2,394	2,624
Total NYCA (M\$)	11,736	12,347	13,473	14,070	14,768	15,477	16,815

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Generation (GWh) for Seven Years of Base Cases

Generation Matrix (GWh)	2015	2016	2018	2019	2020	2021	2023
WEST	26,140	26,096	26,004	25,959	25,960	25,873	25,922
GENESSEE	4,676	4,689	4,678	4,681	4,699	4,688	4,698
CENTRAL	29,349	29,877	30,573	31,125	31,398	31,547	32,154
NORTH	9,679	9,751	9,919	10,010	10,121	10,171	10,266
MOHAWKVA	3,022	2,999	2,999	3,007	3,013	3,000	3,016
CAPITAL	19,759	19,806	20,339	20,632	20,855	21,074	21,454
HUDSONVA	4,790	4,841	4,974	4,961	5,027	5,079	5,191
MILLWOOD	17,151	17,202	17,151	17,151	17,202	17,151	17,151
DUNWOODI	6	6	6	6	6	6	6
NYCITY	28,497	28,955	29,719	30,306	30,907	31,816	32,867
LONGISLA	8,193	8,495	8,839	9,019	9,326	9,743	10,256
Total NYCA (GWh)	151,262	152,716	155,200	156,857	158,513	160,148	162,980
Total Imports	13,788	13,429	13,653	14,040	14,282	14,455	15,063
Total NYCA +Imports	165,050	166,146	168,853	170,897	172,795	174,604	178,044

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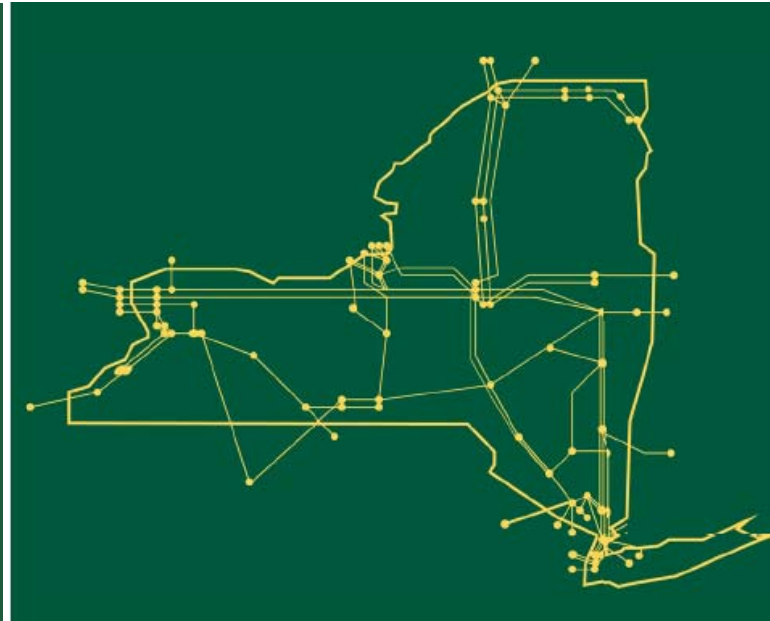
Congestion (M\$) for Seven Years of Base Cases

Demand Congestion (M\$)	2015	2016	2018	2019	2020	2021	2023
Leeds-PV	187	213	226	240	241	290	304

Demand Congestion (M\$)	2015	2016	2018	2019	2020	2021	2023
WEST	11	9	10	9	10	9	10
GENESSEE	6	5	4	4	5	4	5
CENTRAL	2	1	2	2	2	1	2
NORTH	5	5	5	5	5	4	4
MOHAWKVA	0	0	0	0	1	1	1
CAPITAL	9	8	8	9	9	8	9
HUDSONVA	26	28	30	31	33	37	39
MILLWOOD	9	9	10	11	11	12	13
DUNWOODI	19	20	21	22	22	25	26
NYCITY	228	241	270	292	319	343	388
LONGISLA	107	114	122	130	134	147	166
Total NYCA (M\$)	422	441	483	516	549	593	662

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