

RNA 2006

Base, Scenario & Sensitivity LOLE Results

ESPWG/TPAS Meeting

January 9, 2007

For Discussion Purposes Only

LOLE Results

- ◆ Results are presented for the following:
 - *Base Case*
 - *High Forecast*
 - *Thermal Transfer Limits Base & High Forecast*
 - *Free Flowing Transfer Limits Base & High Forecast*
 - *Coal Retirement/Environmental Scenario*
 - *Poletti Retirement Deferred to 2010*
 - *NUG Retirement Scenario*
 - *NYPA PPA*
 - *NYPA Clean Coal*

LOLE Results: Base Case & High Forecast

Base Case

Year	A	B	C	D	E	F	G	H	I	J	K	NYCA
2007		0.002			0.001				0.002	0.002		0.002
2008	0.001	0.008			0.002				0.008	0.007	0.001	0.011
2009		0.027			0.010		0.001		0.035	0.053	0.002	0.056
2010		0.042			0.015		0.003		0.058	0.096	0.004	0.101
2011		0.058			0.021		0.003		0.077	0.140	0.006	0.146
2012		0.088			0.035		0.004		0.137	0.246	0.016	0.254
2013		0.096			0.039		0.005		0.180	0.320	0.024	0.331
2014		0.132			0.059		0.007		0.267	0.442	0.046	0.456
2015	0.001	0.169			0.080		0.011	0.001	0.373	0.585	0.075	0.604
2016		0.190			0.102		0.014		0.463	0.738	0.124	0.764

High Forecast

Year	A	B	C	D	E	F	G	H	I	J	K	NYCA
2007		0.003			0.001				0.004	0.003	0.001	0.004
2008	0.001	0.012			0.004		0.001		0.013	0.012	0.003	0.017
2009		0.045			0.016		0.002		0.059	0.091	0.004	0.096
2010		0.081			0.031		0.006		0.111	0.163	0.009	0.169
2011		0.109			0.044	0.001	0.006		0.142	0.254	0.014	0.264
2012		0.174			0.008		0.009		0.270	0.448	0.037	0.461
2013		0.204			0.102		0.011		0.367	0.643	0.056	0.665
2014		0.303			0.160	0.001	0.024		0.573	0.914	0.111	0.944
2015	0.001	0.432			0.257	0.001	0.034	0.001	0.832	1.292	0.201	1.336
2016		0.569			0.368	0.002	0.053	0.001	1.203	1.833	0.410	1.912

LOLE Results: Thermal Transfer Limits

Base Forecast

Year	A	B	C	D	E	F	G	H	I	J	K	NYCA
2007		0.002			0.001				0.002	0.002		0.003
2008	0.001	0.008			0.002				0.008	0.007	0.001	0.010
2009		0.027			0.010		0.002		0.035	0.043	0.003	0.045
2010		0.041			0.015		0.004		0.058	0.069	0.005	0.074
2011		0.058			0.022		0.005		0.078	0.097	0.009	0.102
2012		0.089			0.035		0.008		0.139	0.181	0.022	0.191
2013		0.097			0.040		0.008		0.184	0.218	0.034	0.231
2014		0.134			0.059		0.015		0.272	0.334	0.063	0.349
2015	0.001	0.171			0.082		0.022	0.001	0.383	0.455	0.096	0.477
2016		0.192			0.103	0.001	0.030		0.473	0.569	0.168	0.598

High Forecast

Year	A	B	C	D	E	F	G	H	I	J	K	NYCA
2007		0.003			0.001				0.004	0.003	0.001	0.004
2008		0.012			0.004		0.001		0.014	0.011	0.003	0.016
2009		0.045			0.016		0.002		0.058	0.071	0.004	0.076
2010		0.081			0.031		0.007		0.111	0.133	0.012	0.140
2011		0.110			0.044	0.001	0.010		0.144	0.181	0.020	0.192
2012		0.177			0.082	0.001	0.018		0.277	0.350	0.050	0.365
2013		0.207			0.104	0.001	0.021		0.378	0.468	0.075	0.492
2014		0.307			0.162	0.001	0.039		0.589	0.729	0.149	0.763
2015	0.001	0.434			0.262	0.002	0.061	0.001	0.848	1.027	0.276	1.076
2016		0.578			0.374	0.004	0.095	0.001	1.218	1.455	0.526	1.540

LOLE Results: Free Flowing Transfer Limits

Base Forecast

Year	A	B	C	D	E	F	G	H	I	J	K	NYCA
2007		0.002			0.001				0.002	0.002		0.002
2008		0.007			0.002				0.008	0.006		0.009
2009		0.029			0.010		0.001		0.030	0.033	0.001	0.034
2010		0.044			0.015		0.003		0.047	0.052	0.002	0.054
2011		0.063			0.022	0.001	0.005		0.066	0.072	0.006	0.076
2012		0.103			0.038	0.001	0.008		0.111	0.121	0.013	0.123
2013		0.120			0.044	0.001	0.009		0.131	0.143	0.019	0.147
2014		0.174			0.068	0.001	0.014		0.186	0.208	0.031	0.213
2015		0.236			0.099	0.001	0.022		0.257	0.285	0.054	0.295
2016		0.293			0.128	0.002	0.029		0.316	0.357	0.088	0.367

High Forecast

Year	A	B	C	D	E	F	G	H	I	J	K	NYCA
2007		0.003			0.001				0.004	0.003		0.004
2008		0.012			0.004		0.001		0.013	0.011	0.001	0.014
2009		0.047			0.017		0.002		0.050	0.055	0.002	0.058
2010		0.087			0.031		0.007		0.093	0.103	0.006	0.106
2011		0.117			0.045	0.002	0.011		0.124	0.136	0.014	0.143
2012		0.206			0.088	0.002	0.020		0.225	0.244	0.035	0.252
2013		0.264			0.117	0.002	0.024		0.285	0.313	0.055	0.326
2014		0.410			0.188	0.004	0.046		0.447	0.490	0.108	0.509
2015		0.570			0.309	0.005	0.076	0.001	0.631	0.682	0.213	0.712
2016		0.771			0.449	0.009	0.113	0.001	0.877	0.925	0.406	0.971

LOLE Results: Coal Retirement Scenario

Year	A	B	C	D	E	F	G	H	I	J	K	NYCA	NYCA BFVLT	Difference
2009	0.001	0.194			0.067		0.033		0.179	0.216	0.007	0.257	0.056	0.201
2010	0.002	0.279			0.102	0.002	0.054		0.265	0.323	0.018	0.371	0.101	0.270
2011	0.001	0.268			0.100	0.002	0.050	0.001	0.254	0.333	0.020	0.389	0.146	0.243
2012	0.002	0.382			0.166	0.002	0.077		0.401	0.493	0.045	0.539	0.254	0.285
2013	0.000	0.428			0.205	0.002	0.083		0.492	0.630	0.068	0.670	0.331	0.339
2014	0.001	0.564			0.272	0.002	0.117		0.668	0.865	0.102	0.914	0.456	0.458
2015	0.001	0.671			0.376	0.003	0.162		0.859	1.077	0.168	1.139	0.604	0.535
2016	0.001	0.804			0.450	0.003	0.204		1.038	1.260	0.299	1.340	0.764	0.576

note: BFVLT = Base Forecast with Voltage Limits = Base Case

This scenario retires all coal units except Cayuga and Somerset beginning in 2009 or 2015

LOLE Results: Poletti Ret. Deferred to 2010

Year	A	B	C	D	E	F	G	H	I	J	K	NYCA	NYCA BFVLT	Difference
2009		0.007			0.002		0.001		0.008	0.009	0.001	0.011	0.056	-0.045

LOLE Results: NUG Retirement Scenario

Year	A	B	C	D	E	F	G	H	I	J	K	NYCA	NYCA BFVLT	Difference
2007	0.001	0.003			0.001				0.003	0.003	0.001	0.004	0.002	0.002
2008		0.011			0.003		0.001		0.011	0.010	0.002	0.014	0.011	0.003
2009		0.066			0.025		0.003		0.077	0.100	0.006	0.106	0.056	0.050
2010		0.105			0.041		0.006		0.126	0.166	0.013	0.172	0.101	0.071
2011		0.126		0.001	0.051	0.001	0.008		0.148	0.225	0.019	0.234	0.146	0.088
2012		0.210			0.091	0.001	0.012		0.257	0.381	0.043	0.393	0.254	0.139
2013		0.236			0.108	0.001	0.011		0.318	0.473	0.060	0.492	0.331	0.161
2014		0.431			0.210	0.008	0.025		0.527	0.716	0.125	0.739	0.456	0.283
2015	0.001	0.776		0.001	0.443	0.029	0.049	0.001	0.928	1.127	0.261	1.178	0.604	0.574
2016		0.934		0.001	0.543	0.042	0.064	0.001	1.154	1.377	0.477	1.452	0.764	0.688

NUG Generation Retirement Capacity by Zone

Year	A	B	C	D	E	F	G	H	I	J	K	NYCA
2007	167		1		3	0						172
2008								9			18	26
2009			78	240		2		55			71	446
2010					2						11	13
2011						12				21		33
2012						90					23	113
2013												0
2014						265					14	279
2015			340		3	134						476
2016			6		0	1					44	51
Sum	167	0	425	240	8	504	0	64	0	21	180	1609

This scenario was developed by retiring NUG units at their contract expiration date and scaling all the capacity in the zone accordingly.

LOLE Results: NYPA PPA

Year	A	B	C	D	E	F	G	H	I	J	K	NYCA	NYCA BFVLT	Difference
2010		0.024			0.009		0.001		0.029	0.038	0.003	0.042	0.101	-0.059
2011		0.041			0.014		0.003		0.050	0.058	0.006	0.063	0.146	-0.083
2012		0.057			0.022		0.004		0.076	0.095	0.013	0.101	0.254	-0.153
2013		0.072			0.028	0.001	0.005		0.108	0.145	0.024	0.152	0.331	-0.179
2014		0.093			0.038		0.007		0.146	0.187	0.040	0.201	0.456	-0.255
2015		0.129			0.059		0.010	0.001	0.227	0.294	0.071	0.314	0.604	-0.290
2016	0.001	0.153			0.073		0.014		0.320	0.390	0.117	0.417	0.764	-0.347

This sensitivity was developed by adding a generator in Zone J with a UCAP of 500 MW with an in service date by the summer of 2010

LOLE Results: NYPA Clean Coal

Year	A	B	C	D	E	F	G	H	I	J	K	NYCA	NYCA BFVLT	Difference
2013		0.041			0.016		0.003		0.131	0.266	0.015	0.276	0.331	-0.055
2014		0.055			0.026		0.005		0.198	0.378	0.029	0.390	0.456	-0.066
2015		0.070			0.031		0.006		0.297	0.522	0.053	0.538	0.604	-0.066
2016		0.074			0.038		0.009		0.400	0.668	0.094	0.692	0.764	-0.072

This sensitivity was developed by adding a of 680 MW generator in Zone A with an in service date by the summer of 2013