Load and Resource Assessment for NSPI

(All values in MW except as noted)

2012

		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
A	Total System Peak	2308	2291	2033	1840	1630	1502	1591	1585	1498	1645	1880	2232
B	Interruptible Demand	309	314	306	299	314	315	315	352	333	322	336	314
C	Firm Peak (A - B)	2000	1978	1727	1541	1317	1186	1276	1234	1165	1323	1544	1918
D	Required Reserve (C x 20%)	400	396	345	308	263	237	255	247	233	265	309	384
E	Required Capacity (C + D)	2400	2373	2073	1849	1580	1424	1531	1480	1398	1588	1853	2302
F	Existing Resources	2363	2363	2363	2363	2363	2363	2363	2363	2363	2363	2363	2363
	Total Cumulative Additions:												
G	Thermal	49	49	49	49	49	49	49	49	49	49	49	49
H	Hydro	0	0	0	0	0	0	0	0	0	0	0	0
I	Firm Contracted Wind *	0	0	0	0	0	0	6	6	6	6	6	6
J	Firm RES (2015) *	0	0	0	0	0	0	0	0	0	0	0	0
K	Community Feed-in-Tariff *	0	0	0	0	0	0	0	0	0	0	0	0
L	Less Derations	0	0	44	227	263	280	328	328	313	232	46	0
M	Total Firm Supply Resources (F + G + H + I + J + K - L)	2412	2412	2368	2185	2149	2131	2090	2090	2105	2186	2372	2417
	+ Surplus / - Deficit (M - E) *	12	38	295	336	569	707	559	609	706	598	518	115
	Reserve Margin % (M -C)/ C *	21%	22%	37%	42%	63%	80%	64%	69%	81%	65%	54%	26%

Notes:

1) Demand values as per NSPI 2011 Load Forecast, April 2011 - demand values include the effects of DSM.

2) Resource additions as outlined in the 2011 10 Year System Outlook (http://oasis.nspower.ca/en/home/default/forecastsandassessments.aspx):

- Thermal and Hydro Capacity additions as per the Port Hawkesbury (PH) Biomass (Base Case) Plan. (The PH Biomass Project is configured as an Energy Resource Interconnection Service (ERIS) and is therefore not included in the table).
- Firm Contracted Wind includes wind projects expected to be in-service in 2012. The assumed firm capacity contribution is based on a combined three year average of actual capacity factor during peak hours and the annual forecasted value (as per formula agreed on by NSPI and the Renewable Energy Industry Association of Nova Scotia and as modeled in the NSPI 2009 IRP Update).
- Firm RES (2015) represents an addition of renewable energy to comply with the 2015 RES announced in the Province's Renewable Electricity Plan in April 2010. The value in the table includes the firm contribution of dispatchable generation as well as an assumed firm capacity value of intermittent wind generation. For long-term planning purposes the firm capacity value of wind is based on the winter capacity factor (generator capacity multiplied by the winter capacity factor).
- The Community Feed-in-Tariff represents distribution-connected renewable energy projects as outlined in the Province's Renewable Electricity Plan in April 2010. The value in the table is the assumed firm capacity value of intermittent generation for small-scale projects and is based on an assumed 20% capacity factor.

3) Derations include seasonal variability in wind capacity and thermal unit reductions due to ambient temperature and maintenance.

4) NSPI planning criteria requires a reserve margin equal to 20% of its firm system load.

* Reflects an assumed firm capacity value of intermittent generation for long-term planning purposes. For short-term assessments (e.g. 18-Month Load and Capacity Assessment) the assumed on peak capacity may be less.

Load and Resource Assessment for NSPI

(All values in MW except as noted)

2013

		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
A	Total System Peak	2277	2260	2006	1815	1608	1481	1569	1564	1478	1623	1855	2202
B	Interruptible Demand	308	313	305	297	311	313	313	349	330	320	334	312
C	Firm Peak (A - B)	1970	1948	1701	1518	1297	1169	1256	1215	1148	1303	1521	1889
D	Required Reserve (C x 20%)	394	390	340	304	259	234	251	243	230	261	304	378
E	Required Capacity (C + D)	2364	2337	2041	1821	1556	1402	1508	1458	1377	1564	1825	2267
F	Existing Resources	2363	2363	2363	2363	2363	2363	2363	2363	2363	2363	2363	2363
	Total Cumulative Additions:												
G	Thermal	82	82	82	82	82	82	82	82	82	82	82	82
H	Hydro	0	0	0	0	0	0	0	0	0	0	0	0
I	Firm Contracted Wind *	6	6	6	6	6	6	6	6	6	6	6	6
J	Firm RES (2015) *	10	10	10	10	10	10	10	10	10	10	10	10
K	Community Feed-in-Tariff *	0	0	0	0	0	0	0	0	0	0	0	0
L	Less Derations	0	0	46	229	273	290	336	336	321	232	46	0
M	Total Firm Supply Resources (F + G + H + I + J + K - L)	2460	2460	2415	2232	2188	2170	2125	2125	2140	2229	2415	2460
	+ Surplus / - Deficit (M - E) *	97	123	373	410	631	768	617	667	763	665	589	193
	Reserve Margin % (M -C)/ C *	25%	26%	42%	47%	69%	86%	69%	75%	86%	71%	59%	30%

Notes:

1) Demand values as per NSPI 2011 Load Forecast, April 2011 - demand values include the effects of DSM.

2) Resource additions as outlined in the 2011 10 Year System Outlook (http://oasis.nspower.ca/en/home/default/forecastsandassessments.aspx):

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3) Derations include seasonal variability in wind capacity and thermal unit reductions due to ambient temperature and maintenance.

4) NSPI planning criteria requires a reserve margin equal to 20% of its firm system load.

* Reflects an assumed firm capacity value of intermittent generation for long-term planning purposes. For short-term assessments (e.g. 18-Month Load and Capacity Assessment) the assumed on peak capacity may be less.

Load and Resource Assessment for NSPI

(All values in MW except as noted)

2014

		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
A	Total System Peak	2242	2225	1974	1786	1583	1458	1545	1539	1455	1597	1826	2167
B	Interruptible Demand	304	309	301	293	307	308	308	344	325	315	330	308
C	Firm Peak (A - B)	1938	1916	1674	1493	1276	1150	1236	1195	1129	1282	1496	1859
D	Required Reserve (C x 20%)	388	383	335	299	255	230	247	239	226	256	299	372
E	Required Capacity (C + D)	2325	2299	2008	1792	1531	1380	1483	1434	1355	1538	1796	2231
F	Existing Resources	2363	2363	2363	2363	2363	2363	2363	2363	2363	2363	2363	2363
	Total Cumulative Additions:												
G	Thermal	82	82	82	82	82	82	82	82	82	82	82	82
H	Hydro	4	4	4	4	4	4	4	4	4	4	4	4
I	Firm Contracted Wind *	6	6	6	6	6	6	6	6	6	6	6	6
J	Firm RES (2015) *	10	10	10	10	10	10	10	10	10	10	10	10
K	Community Feed-in-Tariff *	2	2	2	2	2	2	2	2	2	2	2	2
L	Less Derations	0	0	47	230	274	291	337	337	322	233	47	0
M	Total Firm Supply Resources (F + G + H + I + J + K - L)	2466	2466	2420	2237	2193	2175	2130	2130	2145	2234	2420	2466
	+ Surplus / - Deficit (M - E) *	141	167	412	445	662	796	647	696	790	696	624	236
	Reserve Margin % (M -C)/ C *	27%	29%	45%	50%	72%	89%	72%	78%	90%	74%	62%	33%

Notes:

1) Demand values as per NSPI 2011 Load Forecast, April 2011 - demand values include the effects of DSM.

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Load and Resource Assessment for NSPI

(All values in MW except as noted)

2015

		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
A	Total System Peak	2208	2191	1945	1760	1559	1436	1521	1516	1433	1573	1799	2135
B	Interruptible Demand	298	303	295	288	302	303	303	338	320	310	324	303
C	Firm Peak (A - B)	1910	1888	1649	1472	1257	1133	1218	1178	1113	1263	1475	1832
D	Required Reserve (C x 20%)	382	378	330	294	251	227	244	236	223	253	295	366
E	Required Capacity (C + D)	2292	2266	1979	1766	1509	1360	1462	1414	1335	1516	1770	2198
F	Existing Resources	2363	2363	2363	2363	2363	2363	2363	2363	2363	2363	2363	2363
	Total Cumulative Additions:												
G	Thermal	82	82	82	82	82	82	82	82	82	82	82	82
H	Hydro	4	4	4	4	4	4	4	4	4	4	4	4
I	Firm Contracted Wind *	6	6	6	6	6	6	6	6	6	6	6	6
J	Firm RES (2015) *	51	51	51	51	51	51	51	51	51	51	51	51
K	Community Feed-in-Tariff *	4	4	4	4	4	4	4	4	4	4	4	4
L	Less Derations	0	0	53	236	280	298	343	343	328	239	53	0
M	Total Firm Supply Resources (F + G + H + I + J + K - L)	2509	2509	2456	2273	2229	2211	2166	2166	2181	2270	2456	2509
	+ Surplus / - Deficit (M - E) *	217	243	477	507	720	852	704	753	846	754	686	311
	Reserve Margin % (M -C)/ C *	31%	33%	49%	54%	77%	95%	78%	84%	96%	80%	67%	37%

Notes:

1) Demand values as per NSPI 2011 Load Forecast, April 2011 - demand values include the effects of DSM.

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Load and Resource Assessment for NSPI

(All values in MW except as noted)

2016

		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
A	Total System Peak	2173	2156	1914	1731	1534	1413	1497	1492	1410	1548	1770	2101
B	Interruptible Demand	292	297	290	283	296	298	298	332	314	304	318	297
C	Firm Peak (A - B)	1880	1859	1624	1449	1238	1115	1199	1160	1096	1244	1452	1804
D	Required Reserve (C x 20%)	376	372	325	290	248	223	240	232	219	249	290	361
E	Required Capacity (C + D)	2256	2231	1949	1739	1485	1339	1439	1392	1315	1493	1742	2164
F	Existing Resources	2363	2363	2363	2363	2363	2363	2363	2363	2363	2363	2363	2363
	Total Cumulative Additions:												
G	Thermal	82	82	82	82	82	82	82	82	82	82	82	82
H	Hydro	4	4	4	4	4	4	4	4	4	4	4	4
I	Firm Contracted Wind *	6	6	6	6	6	6	6	6	6	6	6	6
J	Firm RES (2015) *	51	51	51	51	51	51	51	51	51	51	51	51
K	Community Feed-in-Tariff *	10	10	10	10	10	10	10	10	10	10	10	10
L	Less Derations	0	0	56	239	283	301	346	346	331	242	56	0
M	Total Firm Supply Resources (F + G + H + I + J + K - L)	2515	2515	2459	2276	2232	2214	2169	2169	2184	2273	2459	2515
	+ Surplus / - Deficit (M - E) *	259	284	510	537	747	876	730	777	869	780	717	351
	Reserve Margin % (M -C)/ C *	34%	35%	51%	57%	80%	99%	81%	87%	99%	83%	69%	39%

Notes:

1) Demand values as per NSPI 2011 Load Forecast, April 2011 - demand values include the effects of DSM.

2) Resource additions as outlined in the 2011 10 Year System Outlook (http://oasis.nspower.ca/en/home/default/forecastsandassessments.aspx):

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Load and Resource Assessment for NSPI

(All values in MW except as noted)

2017

		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
A	Total System Peak	2135	2119	1881	1702	1508	1389	1471	1466	1386	1522	1740	2065
B	Interruptible Demand	287	291	284	277	291	292	292	326	308	299	312	291
C	Firm Peak (A - B)	1849	1828	1597	1425	1217	1097	1179	1140	1077	1223	1428	1774
D	Required Reserve (C x 20%)	370	366	319	285	243	219	236	228	215	245	286	355
E	Required Capacity (C + D)	2219	2194	1916	1710	1461	1316	1415	1368	1293	1468	1713	2128
F	Existing Resources	2363	2363	2363	2363	2363	2363	2363	2363	2363	2363	2363	2363
	Total Cumulative Additions:												
G	Thermal	82	82	82	82	82	82	82	82	82	82	82	82
H	Hydro	4	4	4	4	4	4	4	4	4	4	4	4
I	Firm Contracted Wind *	6	6	6	6	6	6	6	6	6	6	6	6
J	Firm RES (2015) *	51	51	51	51	51	51	51	51	51	51	51	51
K	Community Feed-in-Tariff *	16	16	16	16	16	16	16	16	16	16	16	16
L	Less Derations	0	0	59	242	286	304	349	349	334	245	59	0
M	Total Firm Supply Resources (F + G + H + I + J + K - L)	2521	2521	2462	2279	2235	2217	2172	2172	2187	2276	2462	2521
	+ Surplus / - Deficit (M - E) *	302	327	546	569	774	901	757	804	894	808	749	393
	Reserve Margin % (M -C)/ C *	36%	38%	54%	60%	84%	102%	84%	90%	103%	86%	72%	42%

Notes:

1) Demand values as per NSPI 2011 Load Forecast, April 2011 - demand values include the effects of DSM.

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Load and Resource Assessment for NSPI

(All values in MW except as noted)

2018

		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
A	Total System Peak	2096	2080	1846	1670	1480	1363	1444	1439	1360	1493	1707	2026
B	Interruptible Demand	281	286	279	272	285	287	287	320	303	293	306	286
C	Firm Peak (A - B)	1815	1794	1567	1398	1195	1077	1158	1119	1057	1201	1401	1741
D	Required Reserve (C x 20%)	363	359	313	280	239	215	232	224	211	240	280	348
E	Required Capacity (C + D)	2178	2153	1881	1678	1434	1292	1389	1343	1269	1441	1681	2089
F	Existing Resources	2363	2363	2363	2363	2363	2363	2363	2363	2363	2363	2363	2363
	Total Cumulative Additions:												
G	Thermal	82	82	82	82	82	82	82	82	82	82	82	82
H	Hydro	4	4	4	4	4	4	4	4	4	4	4	4
I	Firm Contracted Wind *	6	6	6	6	6	6	6	6	6	6	6	6
J	Firm RES (2015) *	51	51	51	51	51	51	51	51	51	51	51	51
K	Community Feed-in-Tariff *	20	20	20	20	20	20	20	20	20	20	20	20
L	Less Derations	0	0	61	244	288	306	351	351	336	247	61	0
M	Total Firm Supply Resources (F + G + H + I + J + K - L)	2525	2525	2464	2281	2237	2219	2174	2174	2189	2278	2464	2525
	+ Surplus / - Deficit (M - E) *	347	372	583	603	803	927	785	831	920	837	782	436
	Reserve Margin % (M -C)/ C *	39%	41%	57%	63%	87%	106%	88%	94%	107%	90%	76%	45%

Notes:

1) Demand values as per NSPI 2011 Load Forecast, April 2011 - demand values include the effects of DSM.

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Load and Resource Assessment for NSPI

(All values in MW except as noted)

2019

		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
A	Total System Peak	2061	2046	1815	1643	1455	1341	1420	1415	1337	1469	1679	1993
B	Interruptible Demand	276	280	274	267	280	282	281	314	297	288	301	280
C	Firm Peak (A - B)	1785	1765	1542	1376	1175	1059	1139	1101	1040	1181	1378	1713
D	Required Reserve (C x 20%)	357	353	308	275	235	212	228	220	208	236	276	343
E	Required Capacity (C + D)	2142	2118	1850	1651	1410	1271	1366	1321	1248	1417	1654	2055
F	Existing Resources	2363	2363	2363	2363	2363	2363	2363	2363	2363	2363	2363	2363
	Total Cumulative Additions:												
G	Thermal	82	82	82	82	82	82	82	82	82	82	82	82
H	Hydro	4	4	4	4	4	4	4	4	4	4	4	4
I	Firm Contracted Wind *	6	6	6	6	6	6	6	6	6	6	6	6
J	Firm RES (2015) *	51	51	51	51	51	51	51	51	51	51	51	51
K	Community Feed-in-Tariff *	20	20	20	20	20	20	20	20	20	20	20	20
L	Less Derations	0	0	61	244	288	306	351	351	336	247	61	0
M	Total Firm Supply Resources (F + G + H + I + J + K - L)	2525	2525	2464	2281	2237	2219	2174	2174	2189	2278	2464	2525
	+ Surplus / - Deficit (M - E) *	383	407	614	630	827	948	808	853	941	861	810	470
	Reserve Margin % (M -C)/ C *	41%	43%	60%	66%	90%	110%	91%	97%	110%	93%	79%	47%

Notes:

1) Demand values as per NSPI 2011 Load Forecast, April 2011 - demand values include the effects of DSM.

2) Resource additions as outlined in the 2011 10 Year System Outlook (http://oasis.nspower.ca/en/home/default/forecastsandassessments.aspx):

- Thermal and Hydro Capacity additions as per the Port Hawkesbury (PH) Biomass (Base Case) Plan. (The PH Biomass Project is configured as an Energy Resource Interconnection Service (ERIS) and is therefore not included in the table).
- Firm Contracted Wind includes wind projects expected to be in-service in 2012. The assumed firm capacity contribution is based on a combined three year average of actual capacity factor during peak hours and the annual forecasted value (as per formula agreed on by NSPI and the Renewable Energy Industry Association of Nova Scotia and as modeled in the NSPI 2009 IRP Update).
- Firm RES (2015) represents an addition of renewable energy to comply with the 2015 RES announced in the Province's Renewable Electricity Plan in April 2010. The value in the table includes the firm contribution of dispatchable generation as well as an assumed firm capacity value of intermittent wind generation. For long-term planning purposes the firm capacity value of wind is based on the winter capacity factor (generator capacity multiplied by the winter capacity factor).
- The Community Feed-in-Tariff represents distribution-connected renewable energy projects as outlined in the Province's Renewable Electricity Plan in April 2010. The value in the table is the assumed firm capacity value of intermittent generation for small-scale projects and is based on an assumed 20% capacity factor.

3) Derations include seasonal variability in wind capacity and thermal unit reductions due to ambient temperature and maintenance.

4) NSPI planning criteria requires a reserve margin equal to 20% of its firm system load.

* Reflects an assumed firm capacity value of intermittent generation for long-term planning purposes. For short-term assessments (e.g. 18-Month Load and Capacity Assessment) the assumed on peak capacity may be less.

Load and Resource Assessment for NSPI

(All values in MW except as noted)

2020

		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
A	Total System Peak	2026	2011	1785	1615	1431	1318	1396	1391	1315	1444	1650	1959
B	Interruptible Demand	271	276	269	262	275	277	277	309	292	283	295	276
C	Firm Peak (A - B)	1755	1735	1516	1352	1155	1041	1119	1082	1023	1161	1355	1684
D	Required Reserve (C x 20%)	351	347	303	270	231	208	224	216	205	232	271	337
E	Required Capacity (C + D)	2106	2082	1819	1623	1386	1249	1343	1299	1227	1393	1626	2020
F	Existing Resources	2363	2363	2363	2363	2363	2363	2363	2363	2363	2363	2363	2363
	Total Cumulative Additions:												
G	Thermal	82	82	82	82	82	82	82	82	82	82	82	82
H	Hydro	4	4	4	4	4	4	4	4	4	4	4	4
I	Firm Contracted Wind *	6	6	6	6	6	6	6	6	6	6	6	6
J	Firm RES (2015) *	51	51	51	51	51	51	51	51	51	51	51	51
K	Community Feed-in-Tariff *	20	20	20	20	20	20	20	20	20	20	20	20
L	Less Derations	0	0	61	244	288	306	351	351	336	247	61	0
M	Total Firm Supply Resources (F + G + H + I + J + K - L)	2525	2525	2464	2281	2237	2219	2174	2174	2189	2278	2464	2525
	+ Surplus / - Deficit (M - E) *	419	443	645	658	850	970	831	875	962	885	838	505
	Reserve Margin % (M -C)/ C *	44%	46%	63%	69%	94%	113%	94%	101%	114%	96%	82%	50%

Notes:

1) Demand values as per NSPI 2011 Load Forecast, April 2011 - demand values include the effects of DSM.

2) Resource additions as outlined in the 2011 10 Year System Outlook (http://oasis.nspower.ca/en/home/default/forecastsandassessments.aspx):

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3) Derations include seasonal variability in wind capacity and thermal unit reductions due to ambient temperature and maintenance.

4) NSPI planning criteria requires a reserve margin equal to 20% of its firm system load.

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Load and Resource Assessment for NSPI

(All values in MW except as noted)

2021

		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
A	Total System Peak	1991	1976	1754	1587	1406	1295	1372	1367	1292	1419	1622	1925
B	Interruptible Demand	267	271	264	258	271	272	272	304	287	278	290	271
C	Firm Peak (A - B)	1725	1705	1489	1329	1135	1023	1100	1064	1005	1141	1332	1654
D	Required Reserve (C x 20%)	345	341	298	266	227	205	220	213	201	228	266	331
E	Required Capacity (C + D)	2070	2046	1787	1595	1362	1228	1320	1276	1206	1369	1598	1985
F	Existing Resources	2363	2363	2363	2363	2363	2363	2363	2363	2363	2363	2363	2363
	Total Cumulative Additions:												
G	Thermal	82	82	82	82	82	82	82	82	82	82	82	82
H	Hydro	4	4	4	4	4	4	4	4	4	4	4	4
I	Firm Contracted Wind *	6	6	6	6	6	6	6	6	6	6	6	6
J	Firm RES (2015) *	51	51	51	51	51	51	51	51	51	51	51	51
K	Community Feed-in-Tariff *	20	20	20	20	20	20	20	20	20	20	20	20
L	Less Derations	0	0	61	244	288	306	351	351	336	247	61	0
M	Total Firm Supply Resources (F + G + H + I + J + K - L)	2525	2525	2464	2281	2237	2219	2174	2174	2189	2278	2464	2525
	+ Surplus / - Deficit (M - E) *	455	479	677	686	874	992	854	898	983	909	866	540
	Reserve Margin % (M -C)/ C *	46%	48%	65%	72%	97%	117%	98%	104%	118%	100%	85%	53%

Notes:

1) Demand values as per NSPI 2011 Load Forecast, April 2011 - demand values include the effects of DSM.

2) Resource additions as outlined in the 2011 10 Year System Outlook (http://oasis.nspower.ca/en/home/default/forecastsandassessments.aspx):

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