PNUCC Northwest Regional Forecast
Data Gathering

PNUCC annually collects and publishes the *Northwest Regional Forecast of Power Loads and Resources.* These annual reports provide the collective thinking of Northwest electric utilities regarding future supply and demand in the Northwest. The following summarizes the approach taken to collect, review and publish the information. A brief description (with example) of the data that is gathered is provided

Timeline

October – Request data from utilities/BPA
December – Receive data submittals
January – Release draft for utility review
May – Publish an Executive Summary and Regional Assessment

Data Collected

Load Forecast

Each utility provides a 10-year forecast of their expected monthly firm load for both a one-hour peak and average energy. See Appendix A.

Transfers

Utilities provide monthly peak and energy amounts data for transfers within and beyond the region (labeled as contracts, imports or exports). See Appendix B.

Hydro Generation

Basic information about each hydro project is supplied by each utility. See Appendix C. Monthly average generation and plant capability for the majority of hydro projects is supplied by the Corps of Engineers for each of 70 water conditions.

Other Generating Resources

Monthly values for non-hydro resource capability are provided for both capacity and energy. Utilities reflect forced outages and outages from maintenance in their estimates. See Appendix D.

Future Resources

Utilities report future resources that reflect various levels of commitment to the projects. See Appendix E. Projects that are under construction are included into the regional load/resource balance based on their in-service date.

Regional Load/Resource Report

All of the data from individual utilities is combined producing a regional accounting of requirements and resources. See Appendix F.

Year		Annual Average	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul
2006-07	Peak	2495.4	2208.1	1851.9	1936.4	2051.4	2349.8	2495.4	2348.5	2052.7	1959.1	1823.3	2051.4	2051.4
	Energy	1545.8	1518.4	1428.1	1465.1	1567.8	1737.5	1754.4	1699.1	1561.3	1467.7	1404.0	1472.9	1472.9
2007-08	Peak	2549.3	2248.4	1887.0	1969.5	2081.3	2389.4	2549.3	2396.6	2092.4	2005.9	1864.2	2096.9	2096.9
	Energy	1576.5	1545.7	1455.4	1491.1	1591.9	1768.0	1792.7	1733.6	1591.9	1502.8	1435.2	1504.8	1504.8
2008-09	Peak	2590.9	2294.5	1926.0	2007.9	2118.4	2429.1	2590.9	2438.8	2135.9	2046.2	1900.0	2137.2	2137.2
	Energy	1606.0	1576.9	1484.6	1520.4	1620.5	1797.3	1822.0	1764.8	1624.4	1532.1	1462.5	1533.4	1533.4
2009-10	Peak	2634.5	2337.4	1960.4	2042.3	2152.2	2467.4	2634.5	2480.4	2173.6	2085.9	1935.1	2177.5	2177.5
	Energy	1634.4	1605.5	1511.3	1546.4	1647.1	1826.5	1853.2	1795.3	1653.0	1561.3	1489.2	1562.0	1562.0
2010-11	Peak	2690.4	2381.0	1996.2	2077.4	2187.3	2557.8	2690.4	2533.7	2220.4	2130.7	1977.3	2225.6	2225.6
	Energy	1669.5	1634.8	1537.9	1573.0	1673.8	1892.2	1892.8	1833.7	1688.7	1594.5	1521.7	1595.8	1595.8
2011-12	Peak	2750.2	2433.6	2039.7	2122.3	2234.1	2568.2	2750.2	2587.7	2263.3	2176.2	2020.2	2274.4	2274.4
	Energy	1702.7	1670.5	1571.7	1606.8	1709.5	1901.3	1935.1	1872.0	1721.2	1628.9	1554.2	1630.9	1630.9
2012-13	Peak	2805.4	2487.6	2085.2	2168.4	2282.2	2623.4	2805.4	2643.6	2317.3	2223.0	2063.8	2324.4	2324.4
	Energy	1739.6	1706.9	1605.5	1641.9	1746.6	1941.6	1974.1	1913.0	1762.2	1664.0	1588.0	1666.0	1666.0
2013-14	Peak	2865.2	2542.2	2130.7	2215.2	2331.6	2680.0	2865.2	2700.8	2368.0	2271.1	2109.3	2375.8	2375.8
	Energy	1777.3	1744.0	1640.6	1677.0	1784.3	1983.2	2016.3	1953.9	1800.5	1700.4	1622.4	1702.4	1702.4
2014-15	Peak	2926.3	2598.7	2178.2	2263.3	2381.6	2737.2	2926.3	2759.3	2419.3	2320.5	2155.4	2427.8	2427.8
	Energy	1815.8	1782.3	1676.4	1713.4	1822.6	2026.1	2059.2	1996.2	1839.5	1736.8	1658.2	1739.4	1739.4
2015-16	Peak	2992.0	2656.6	2226.3	2312.7	2433.6	2796.3	2992.0	2818.4	2466.1	2370.6	2202.2	2481.7	2481.7
	Energy	1855.0	1821.3	1712.8	1751.1	1862.3	2069.6	2105.4	2039.1	1875.3	1774.5	1693.9	1777.8	1777.8

Utility A TO Utility B

DESCRIPTION: Seasonal Exchange Start Date: February 1981 End Date: October 2019

OPERATING YEARS Peak (MW)	AUG 1-15	AUG 16-31	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR 1-15	APR 16-30	MAY	JUN	JUL
2006-07	8.23	8.23	7.63	7.18	7.49	9.93	7.21	7.90	9.88	10.53	10.53	8.24	9.18	7.76
2007-08	8.23	8.23	7.63	7.18	7.49	9.93	7.21	7.90	9.88	10.53	10.53	8.24	9.18	7.76
2008-09	8.23	8.23	7.63	7.18	7.49	9.93	7.21	7.90	9.88	10.53	10.53	8.24	9.18	7.76
2009-10	8.23	8.23	7.63	7.18	7.49	9.93	7.21	7.90	9.88	10.53	10.53	8.24	9.18	7.76
2010-11	8.23	8.23	7.63	7.18	7.49	9.93	7.21	7.90	9.88	10.53	10.53	8.24	9.18	7.76
2011-12	8.23	8.23	7.63	7.18	7.49	9.93	7.21	7.90	9.88	10.53	10.53	8.24	9.18	7.76
2012-13	8.23	8.23	7.63	7.18	7.49	9.93	7.21	7.90	9.88	10.53	10.53	8.24	9.18	7.76
2013-14	8.23	8.23	7.63	7.18	7.49	9.93	7.21	7.90	9.88	10.53	10.53	8.24	9.18	7.76
2014-15	8.23	8.23	7.63	7.18	7.49	9.93	7.21	7.90	9.88	10.53	10.53	8.24	9.18	7.76
2015-16	8.23	8.23	7.63	7.18	7.49	9.93	7.21	7.90	9.88	10.53	10.53	8.24	9.18	7.76

Energy (MWa)	AUG 1-15	AUG 16-31	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR 1-15	APR 16-30	MAY	JUN	JUL	AVERAGE ENERGY
2006-07	8.23	8.23	7.63	7.18	7.49	9.93	7.21	7.90	9.88	10.53	10.53	8.24	9.18	7.76	**8.4**
2007-08	8.23	8.23	7.63	7.18	7.49	9.93	7.21	7.90	9.88	10.53	10.53	8.24	9.18	7.76	**8.4**
2008-09	8.23	8.23	7.63	7.18	7.49	9.93	7.21	7.90	9.88	10.53	10.53	8.24	9.18	7.76	**8.4**
2009-10	8.23	8.23	7.63	7.18	7.49	9.93	7.21	7.90	9.88	10.53	10.53	8.24	9.18	7.76	**8.4**
2010-11	8.23	8.23	7.63	7.18	7.49	9.93	7.21	7.90	9.88	10.53	10.53	8.24	9.18	7.76	**8.4**
2011-12	8.23	8.23	7.63	7.18	7.49	9.93	7.21	7.90	9.88	10.53	10.53	8.24	9.18	7.76	**8.4**
2012-13	8.23	8.23	7.63	7.18	7.49	9.93	7.21	7.90	9.88	10.53	10.53	8.24	9.18	7.76	**8.4**
2013-14	8.23	8.23	7.63	7.18	7.49	9.93	7.21	7.90	9.88	10.53	10.53	8.24	9.18	7.76	**8.4**
2014-15	8.23	8.23	7.63	7.18	7.49	9.93	7.21	7.90	9.88	10.53	10.53	8.24	9.18	7.76	**8.4**
2015-16	8.23	8.23	7.63	7.18	7.49	9.93	7.21	7.90	9.88	10.53	10.53	8.24	9.18	7.76	**8.4**

UTILITY A

Please review and update all information.

The number of units of capacity should reflect actual "continuous" operations conditions. In some cases this may be the same as nameplate rating.

Please calculate thermal output "net of maintenance" on a monthly basis for non-hydro resources.

Transmission line owner refers to the owners of the main line connected to the facility.

Resources are non-utility generation (NUG) if the percent ownership by the utility is less than 50 percent.

The output for hydro projects is assumed to be purchased by the dam owner unless otherwise noted under comments.

HYDRO

Name	County	FERC Number	# Units/ Capacity (MW)	Total Nameplate Rating (MW)	Transmission Line Owner	Dam Owner	Comments
Dam 1	Multnomah	123	(3) 24	72	Utility A	Utility A	
Dam 2	Clackamas	4567	(1) 21.0 (1) 27.0	48	Utility A	Utility A	
Dam 3	Washington	890	(2) 52.0 (1) 26.0	130	Utility A	Utility A	
Dam 4	King	2468	(4) 40 (2) 35 (2) 25 (2) 10	300	Utility B	Utility B	Output: Utility A: 25%; Utility B: 75%

Generic Generating Resource Plant

Resource Type: Combined Cycle CT
Location: Multnomah
Owner(s): Utility A 50%
Utility B 25%
Utility C 25%

Commercial Operation Date: 1981
Nameplate Rating: 500 MW
Annual Ave Energy: 450 MWa
Regional % Avail.: 85%

Expected Generation - MWa

	1-Aug	15-Aug	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	1-Apr	15-Apr	MAY	JUN	JUL	Annual Energy MWa
2006-07	485	485	485	485	485	485	485	485	485	450	450	100	485	485	450
2007-08	485	485	485	485	485	485	485	485	485	415	415	230	485	485	458
2008-09	485	485	485	485	485	485	485	485	485	375	375	120	485	485	445
2009-10	485	485	485	485	485	485	485	485	485	485	435	0	485	485	443
2010-11	485	485	485	485	485	485	485	485	485	485	485	200	485	485	461
2011-12	485	485	485	485	485	485	485	485	485	485	485	200	485	485	461
2012-13	485	485	485	485	485	485	485	485	485	485	485	200	485	485	461
2013-14	485	485	485	485	485	485	485	485	485	485	485	200	485	485	461
2014-15	485	485	485	485	485	485	485	485	485	485	485	200	485	485	461
2015-16	485	485	485	485	485	485	485	485	485	485	485	200	485	485	461

Capacity - MW

	1-Aug	15-Aug	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	1-Apr	15-Apr	MAY	JUN	JUL
2006-07	485	485	485	485	485	485	485	485	485	485	485	485	485	485
2007-08	485	485	485	485	485	485	485	485	485	485	485	485	485	485
2008-09	485	485	485	485	485	485	485	485	485	485	485	485	485	485
2009-10	485	485	485	485	485	485	485	485	485	485	485	485	485	485
2010-11	485	485	485	485	485	485	485	485	485	485	485	485	485	485
2011-12	485	485	485	485	485	485	485	485	485	485	485	485	485	485
2012-13	485	485	485	485	485	485	485	485	485	485	485	485	485	485
2013-14	485	485	485	485	485	485	485	485	485	485	485	485	485	485
2014-15	485	485	485	485	485	485	485	485	485	485	485	485	485	485
2015-16	485	485	485	485	485	485	485	485	485	485	485	485	485	485

UTILITY A

Please review and update. Please note whether a resource has changed planning status. If "newly installed" (began commercial operation or start of contractual agreements) in 2005, please move to that status and note actual commercial operation date.

Resource	Location	FERC #/SIC	Type	Nameplate Rating-MW	January Peak MW	Average Annual Energy MWa	Commercial Operation Date
NEW GENERATING CAPACITY ACTUALLY INSTALLED - December 2005							
Utility A Wind Farm	Portland, OR	987654	Wind	45	25	15	Nov-05
UNDER CONSTRUCTION:							
Willamette Dam	Portland, OR	654321	Hydro	250	245	215	Oct-06
PLANNED RESOURCES:							
Irvington Coal	Portland, OR	123456	CCCT	150	150	125	May-10

PROSPECTIVE RESOURCES:

UNDER CONSIDERATION:

NORTHWEST REGION
Requirements and Resources

Annual Energy in Average Megawatts	2006-07	2007-08	2008-09	2009-10	2010-11
REQUIREMENTS					
Load	21,312	21,678	21,978	22,279	22,570
Exports	894	807	747	840	800
	22,206	22,486	22,725	23,119	23,370
RESOURCES					
Hydro	11,824	11,824	11,823	11,824	11,825
Small Thermal & Miscellaneous	24	24	24	24	24
Combustion Turbines	1,300	1,513	1,530	1,511	1,522
Renewables	618	656	652	656	655
Cogeneration	1,212	1,212	1,229	1,222	1,218
Imports	2,108	1,685	1,520	1,209	1,004
Large Thermal	4,303	4,540	4,352	4,588	4,421
	21,388	21,455	21,129	21,033	20,668
SURPLUS (DEFICIT)	**(818)**	**(1,031)**	**(1,596)**	**(2,085)**	**(2,702)**
POTENTIALLY AVAILABLE RESOURCES					
Independent Power Producer Projects [1/]	2,677	2,677	2,677	2,677	2,677
Hydro Generation - Average Water [2/]	3,807	3,805	3,805	3,805	3,805

[1/] Includes generation located within the Northwest that is not otherwise committed to regional load. Potential purchases from outstide the region are not incorporated.
[2/] Additional hydro generation (above critical water) available in average water conditions from main hydro projects.