

Available System Impact and Facility Transmission Studies

!!IMPORTANT DISCLAIMER!! Northern Tier Transmission Group (“NTTG”) documents are produced using historical or modeled Available Transfer Capability (“ATC”) information provided by the transmission providers funding its activities. Historical or modeled records have not been adjusted unless indicated, may contain errors, and may not be consistent between transmission providers. If errors or discrepancies between records are discovered, NTTG documents may not be corrected. These documents are illustrative and should not be used to make transmission business decisions. Each transmission provider calculates the ATC of the transmission facilities it owns or operates according to the methodology set forth in Attachment C of its Open Access Transmission Tariff (“OATT”), and posts ATC on its Open Access Same-time Information System (“OASIS”). Transmission service must be requested over the OASIS of each transmission provider with whom you wish to do business. Transmission service requests are processed by each transmission provider according to the terms and conditions of its OATT.

Provider	Study Type	Queue date	OASIS reference	Affiliate (Yes/No)	Service Period Requested	POR/POD or Location Description	Requested capacity (MW)	Constraint	Report Issue Date/ Study Name	System Upgrades Necessary (Yes/No)	Estimated Cost
DESERET		No SIS or FS Studies conducted in the last two years									
IPCO	SIS	2/11/2008	71860556	No	1/1/2014-1/1/2034	JBSN/LGBP	300	Bridger West, Borah West, Idaho-Northwest,	4/11/2008 Jim Bridger - LaGrande System Impact Study Report	Yes	\$276,000,000
IPCO	SIS	2/11/2008	71860558 and 71860559	No	1/1/2014-1/1/2034	JBSN/LGBP	300 and 400	Bridger West, Borah West, Idaho-Northwest,	4/11/2008 Jim Bridger - LaGrande System Impact Study Report	Yes	\$644,000,000
IPCO	SIS	4/24/2008	72117544	Yes	1/1/2012-1/1/2032	IPCO Midpoint 345/IPCO	18	voltage/reactive problems	6/25/2008 Wells 138-IPC System 18 MW System Impact Study Report	12MVar reactor	Not applicable at this time.
IPCO	SIS	5/15/2008	72148207	Yes	1/1/2009-1/1/2027	NPSS/IPCO	35	South of North Powder/Brownlee East	7/10/2002 North Powder Switching Station-IPCO System Impact Study	Yes	23.85 Million
IPCO	SIS	8/5/2008	72314187	Yes	10/1/2010-12/31/2031	IPCO Midpoint 345/IPCO	64	WOM	9/2008, Midpoint 345 - IPC System 64 MW System Impact Study	Yes	\$1,737,500
IPCO	SIS	9/22/2008	72525793	Yes	10/1/2008-1/1/2038	BMPR/IPCO	210	Ambient Temperature	12/27/08 Network Service Increase for Bennett Mountain Power Plant - Review Winter capacity.	No	N/A
IPCO	SIS	10/20/2008	72597247	Yes	9/1/2013-1/1/2050	MDSK/IPCO	76	WOM	12/27/2008 Network Service Request Increase Shoshone Falls Hydro Project	Yes	\$10,320,000 for phase 5 of the cluster group, estimated \$3.8M to this project.
IPCO	SIS	10/8/2008	72568424	Yes	4/1/2012-1/1/2050	OBBLPR/IPCO	325	Ontario-Caldwell 230kV Line	Service Request Highway 30 & I84 Generation Project	Yes	\$29,540,000
NWMT	SIS	3/12/2001	356950	No	01/01/2004 to 01/01/2012	CROSSOVER-NWMT.SYSTEM	200		Miles City DC Tie East to West 200 MW Upgrade Issued August 5, 2002	Yes	Static VAr devices at Rosebud, Custer and Crossover. (200 MVar would be required. 100 MVar at Crossover and 50 MVar each at Rosebud and Custer.) Build another 230 kV connection from Miles City to either Broadview or Colstrip. However, connecting to Colstrip would require an increase in the 500/230 kV transformer. No estimate provided.

Available System Impact and Facility Transmission Studies

!!IMPORTANT DISCLAIMER!! Northern Tier Transmission Group (“NTTG”) documents are produced using historical or modeled Available Transfer Capability (“ATC”) information provided by the transmission providers funding its activities. Historical or modeled records have not been adjusted unless indicated, may contain errors, and may not be consistent between transmission providers. If errors or discrepancies between records are discovered, NTTG documents may not be corrected. These documents are illustrative and should not be used to make transmission business decisions. Each transmission provider calculates the ATC of the transmission facilities it owns or operates according to the methodology set forth in Attachment C of its Open Access Transmission Tariff (“OATT”), and posts ATC on its Open Access Same-time Information System (“OASIS”). Transmission service must be requested over the OASIS of each transmission provider with whom you wish to do business. Transmission service requests are processed by each transmission provider according to the terms and conditions of its OATT.

Provider	Study Type	Queue date	OASIS reference	Affiliate (Yes/No)	Service Period Requested	POR/POD or Location Description	Requested capacity (MW)	Constraint	Report Issue Date/ Study Name	System Upgrades Necessary (Yes/No)	Estimated Cost
NWMT	SIS	3/12/2001	356950	No	01/01/2004 to 01/01/2012	CROSSOVER-NWMT.SYSTEM	200		Miles City Asynchronous Tie East to West 100 MW Upgrade Issued December 5, 2003	Yes	Additional shunt capacitors at Broadview, Crossover and Miles City. A minimum of 340 MVar (100 MVAC at Broadview, 100 MVAC at Crossover, and 140 MVAC at Miles City) would be required. No estimate provided.
NWMT	SIS	3/10/2004	1107583	No	06/01/2004 to 07/01/2008	CROSSOVER-NWMT.SYSTEM	27/37		Miles City Asynchronous Tie East to West 100 MW Upgrade	Yes	Additional shunt capacitors at Broadview, Crossover and Miles City. A minimum of 340 MVar (100 MVAC at Broadview, 100 MVAC at Crossover, and 140 MVAC at Miles City) would be required. No estimate provided.
NWMT	SIS	8/1/2003	799892	No	7/1/2005 to 07/01/2006	NWMT.SYSTEM-BURKE	111		Centennial Power, Inc. Rocky Mountain Power - Hardin Generation Project TSR Stand-alone & Co-existing SIS Issued February 19, 2004	Yes	System improvements and/or Remedial Action Scheme estimated between \$1.25 M and \$3.75 M.
NWMT	SIS	3/16/2004	1116124	No	04/01/2010 to 04/30/2011	COLSTRIP-HTSP	54		Great Northern Power Development TSR SIS Report Issued December 20, 2005 Revised January 18, 2006	Yes	System improvements estimated at \$169 Million.
			OPEN SEASON								
NWMT	SIS	6/25/2004	1292490	No	05/01/2005 to 05/01/2008	NWMT.SYSTEM-BRDY	39		Montana-Idaho Path Open Season Study Report Issued May 10, 2005, NWE Montana to Idaho Open Season Update Issued January 17, 2006, Report on Open Season Study of 500 kV Option Issued February 28, 2007, Mountain States Transmission Intertie (MSTI) Open Season Update Meeting Issued December 5, 2007,	Yes	Latest estimate is \$1 Billion Dollars for 430 miles of 500 kV from Townsend to Midpoint Idaho. Facility is rated at 1500 MW southbound.
NWMT	SIS	10/11/2004	70629771	No	1/1/2007 to 01/01/2017	NWMT.SYSTEM-BRDY	25				
NWMT	SIS	10/11/2004	70270083	No	01/01/2006 to 01/01/2007	NWMT.SYSTEM-BRDY	25				
NWMT	SIS	12/1/2004	70304283	No	01/01/2006 to 01/01/2016	NWMT.SYSTEM-BRDY	75				
NWMT	SIS	12/1/2004	70304286	No	01/01/2006 to 01/01/2016	NWMT.SYSTEM-BRDY	25				
NWMT	SIS	12/6/2004	70307881	No	01/01/2010 to 01/01/2030	NWMT.SYSTEM-BRDY	150				
NWMT	SIS	6/6/2007	71435417	No	01/01/2013 to 01/01/2018	BPAT.NWMT-BRDY	100				
NWMT	SIS	6/6/2007	71435426	No	01/01/2013 to 01/01/2018	NWMT.SYSTEM-BRDY	100				

Available System Impact and Facility Transmission Studies

!!IMPORTANT DISCLAIMER!! Northern Tier Transmission Group (“NTTG”) documents are produced using historical or modeled Available Transfer Capability (“ATC”) information provided by the transmission providers funding its activities. Historical or modeled records have not been adjusted unless indicated, may contain errors, and may not be consistent between transmission providers. If errors or discrepancies between records are discovered, NTTG documents may not be corrected. These documents are illustrative and should not be used to make transmission business decisions. Each transmission provider calculates the ATC of the transmission facilities it owns or operates according to the methodology set forth in Attachment C of its Open Access Transmission Tariff (“OATT”), and posts ATC on its Open Access Same-time Information System (“OASIS”). Transmission service must be requested over the OASIS of each transmission provider with whom you wish to do business. Transmission service requests are processed by each transmission provider according to the terms and conditions of its OATT.

Provider	Study Type	Queue date	OASIS reference	Affiliate (Yes/No)	Service Period Requested	POR/POD or Location Description	Requested capacity (MW)	Constraint	Report Issue Date/ Study Name	System Upgrades Necessary (Yes/No)	Estimated Cost
			END OPEN SEASON				539				
NWMT	SIS	7/10/2005	70518113	No	11/01/2010 to 11/01/2011	NWMT.SYSTEM-BURKE	57		60 MW TSR 70518113 POR NWMT.SYSTEM at Hardin POD BURKE Customer Centennial TSR SIS Phase 1 Report Issued November 9, 2007	Yes	Potential 500 kV upgrades. No estimate provided.
NWMT	SIS	1/25/2008	71877976	No	09/01/2008 to 09/01/2013	NWMT.SYSTEM- BPAT.NWMT	100	Constraints on the south of Great Falls path.	100 MW 71877976 POR NWE System POD BPAT System Customer NaturEner McCormick Energy LLC TSR SIS Issued 05/30/2008	Yes	\$39.43 Million dollar estimate for 230 kV line from Great Falls to East Helena to Three Rivers. Also estimated was \$255 Thousand dollars for automated curtailment schemes if conditional service was accepted.
NWMT	SIS	1/25/2008	71877987	No	9/1/2008 to 09/01/2008	NWMT.SYSTEM- BPAT.NWMT	100	Constraints on the south of Great Falls path and the north of Great Falls path.	100 MW TSR 71877987 POR NWE System POD BPAT System Customer NaturEner USA, LLC TSR SIS Issued 05/30/2008	Yes	\$83.5 Million dollar estimate for a new 230 kV line from Great Falls to East Helena to Three Rivers (cost sharing), a 115 kV line from South Cut Bank to Great Falls, substation and switchyard upgrades, and reconductoring of Harlowton to Judith Gap Tap to Judith Gap 100 kV. Also estimated was \$279.5 to 675 Thousand dollars for automated curtailment schemes if conditional service was accepted.
NWMT	SIS	8/5/2008	72401291	No	4/1/2009 to 04/01/2014	NWMT.SYSTEM-YTP	53	100 kV lines in East Helena, Judith Gap and Harlowton.	53 MW TSR 72401291 POR NWE.SYSTEM at Judith Gap POD YTP 53 MW Customer InVenergy TSR SIS Issued 11/11/2008	Yes	\$13.27 Million dollar estimate for reconductoring of 100 kV lines in the Helena area. Also estimated was \$35 Thousand for automated curtailment schemes if conditional service was accepted.
NWMT	SIS	8/5/2008	72401294	No	04/01/2009 to 04/01/2014	NWMT.SYSTEM- BPAT.NWMT	53	100 kV lines in East Helena, Judith Gap and Harlowton.	53 MW TSR 72401294 POR NWE.SYSTEM at Judith Gap POD BPAT 53 MW Customer InVenergy TSR SIS Issued 11/11/2008	Yes	\$13.27 Million dollar estimate for reconductoring of 100 kV lines in the Helena area. Also estimated was \$35 Thousand for automated curtailment schemes if conditional service was accepted.

Available System Impact and Facility Transmission Studies

!!IMPORTANT DISCLAIMER!! Northern Tier Transmission Group ("NTTG") documents are produced using historical or modeled Available Transfer Capability ("ATC") information provided by the transmission providers funding its activities. Historical or modeled records have not been adjusted unless indicated, may contain errors, and may not be consistent between transmission providers. If errors or discrepancies between records are discovered, NTTG documents may not be corrected. These documents are illustrative and should not be used to make transmission business decisions. Each transmission provider calculates the ATC of the transmission facilities it owns or operates according to the methodology set forth in Attachment C of its Open Access Transmission Tariff ("OATT"), and posts ATC on its Open Access Same-time Information System ("OASIS"). Transmission service must be requested over the OASIS of each transmission provider with whom you wish to do business. Transmission service requests are processed by each transmission provider according to the terms and conditions of its OATT.

Provider	Study Type	Queue date	OASIS reference	Affiliate (Yes/No)	Service Period Requested	POR/POD or Location Description	Requested capacity (MW)	Constraint	Report Issue Date/ Study Name	System Upgrades Necessary (Yes/No)	Estimated Cost
NWMT	SIS	8/7/2008	72407782	No	12/01/2009 to 12/01/2014	NWMT.SYSTEM-BPAT.NWMT	80	Big Timber Transformer overloads and a 50 kV line in the Big Timber area.	80 MW TSR 72407782 POR NWE.SYSTEM at Lower Duck Creek 161 kV Customer Coyote Wind LLC TSR SIS Issued 11/14/2008	Yes	\$1.24 Million dollar estimated for an upgrade of the 25 MVA bank at Big Timber to 50 MVA bank (161/50 kV) and reconductoring of 1.94 Miles of 50 kV line segment between Big Timber and Melville.
PAC	SIS	8/8/2008	508341 / Q1037	Yes	12/31/2009 to 12/31/28	PACEW-PACEW	201		Nov-08	Assumed Gateway	Gateway Expansion
PAC	SIS	8/8/2008	508355 / Q1038	Yes	4/1/10 to 4/1/28	Talbot-Walla Walla	51 MW		Nov-08	Yes	New/modified transmission lines - estimated at 292,000,000
PAC	SIS	8/8/2008	508362 / Q1039	Yes	12/13/09 to 12/31/28	PACEW-PACEW	99		Nov-08	Assumed Gateway	Gateway Expansion
PAC	SIS	8/8/2008	508370 / Q1040	Yes	11/1/09 to 11/1/28	PACEW-PACEW	50		Nov-08	Assumed Gateway	Gateway Expansion
PAC	SIS	8/6/2008	507939 / Q1031	Yes	12/1/10 to 1/1/28	PACE-PACE	16-25		Nov-08	Yes	Upgrades / building new distribution lines - estimated at \$4,000,000 to \$15,000,000
PAC	SIS	9/4/2008	513817 / Q1052	Yes	6/1/09 to 6/1/28	PACE-PACE	2-10		Dec-09	Yes	135kV Inerconnection - \$1,300,000
PAC	SIS	9/22/2008	51616 / Q1053	Yes	5/1/09 to 11/1/28	PACE-PACE	6-64		Jan-09	No	
PAC	SIS	10/21/2008	523183 / Q1077	Yes	12/25/08 to 1/1/28	PACE-PACE	1-4		Jan-09	No	
PAC	SIS	12/3/2008	531024 / Q1090	Yes	6/1/12 to 6/1/13	REDB-PACE (PACE-NNH)	600		Feb-09	No	
PAC	SIS	12/3/2008	530263 / Q1089	Yes	3/1/11 to 3/1/28	PACE-PACE	53		Feb-09	No	
PAC	SIS	11/4/2008	526123 / Q1084	Yes	10/1/11 to 10/1/28	PACE-PACE	18		Feb-09	No	
PAC	SIS	11/4/2008	526124 / Q1085	Yes	10/1/11 to 10/1/28	PACE-PACE	9		Feb-09	No	
PAC	SIS	12/16/2008	533532 / Q1100	No	11/30/09 to 11/30/14	Walla Walla-MIDC	100	Wallula-MIDC	Mar-09	Yes	New transmission facilities required, or option of seasonal conditional curtailment.
PAC	SIS	1/28/2009	541087 / Q1109	Yes	2/1/09 to 2/1/24	PACE-PACE	2-100		Apr-09	No	
PAC	SIS	1/27/2009	540950 / Q1108	Yes	10/1/09 to 10/1/19	VNL(Craig/Hayden)-PACE	2-100		Apr-09	No	
PAC	SIS	3/4/2009	546410 / Q1111	Yes	1/1/14 to 1/1/29	PACE-PACE	461		May-09	Assumed Gateway	Gateway Expansion
PAC	SIS	3/19/2009	548695 / Q11117	Yes	1/1/10 to 1/1/19	PACE-PACE	25		Jun-09	No	
PAC	SIS	4/24/2009	552990 / Q1127	Yes	5/1/10 to 1/1/29	PACE-PACE	2-4		Jul-09	No	

Available System Impact and Facility Transmission Studies

!!IMPORTANT DISCLAIMER!! Northern Tier Transmission Group (“NTTG”) documents are produced using historical or modeled Available Transfer Capability (“ATC”) information provided by the transmission providers funding its activities. Historical or modeled records have not been adjusted unless indicated, may contain errors, and may not be consistent between transmission providers. If errors or discrepancies between records are discovered, NTTG documents may not be corrected. These documents are illustrative and should not be used to make transmission business decisions. Each transmission provider calculates the ATC of the transmission facilities it owns or operates according to the methodology set forth in Attachment C of its Open Access Transmission Tariff (“OATT”), and posts ATC on its Open Access Same-time Information System (“OASIS”). Transmission service must be requested over the OASIS of each transmission provider with whom you wish to do business. Transmission service requests are processed by each transmission provider according to the terms and conditions of its OATT.

Provider	Study Type	Queue date	OASIS reference	Affiliate (Yes/No)	Service Period Requested	POR/POD or Location Description	Requested capacity (MW)	Constraint	Report Issue Date/ Study Name	System Upgrades Necessary (Yes/No)	Estimated Cost
PAC	SIS	4/6/2009	551493.500.501.503 / Q1121-1124	No	1/1/13 to 1/1/33	PACE (Harmony)-MDWP	80, 7, 10, 10		Jul-09	No	
PAC	SIS	4/29/2009	554206 / Q1131	Yes	5/15/11 to 1/1/22	PACEW-PACEW	8-20		Aug-09	No	
PAC	SIS	6/8/2009	560666 / Q1141	Yes	9/30/10 to 9/30/29	PACEW-PACEW	111		Sep-09	Assumed Gateway	Gateway Expansion
PAC	SIS	6/25/2009	563056 / Q1144	Yes	1/1/10 to 1/1/15	PACEW-PACEW	17		Oct-09	Assumed Gateway	Gateway Expansion
PAC	SIS	7/30/2009	567900 / Q1148	Yes	12/1/11 to 1/1/21	PACEW-PACEW	16		Nov-09	No	
PAC	SIS	9/9/2009	575862 / Q1159	Yes	12/31/10 to 1/1/29	PACEW-PACEW	201		Nov-09	Assumed Gateway	Gateway Expansion
PAC	SIS	3/25/2008	Q994	No	--	Panguitch Substation	31	Glen Canyon-Sigurd	Mar-09	Yes	Infrastructure upgrades: \$15 - 25 million.
PAC	FS	6/4/2008	495604 / Q949	Yes	6/1/12 to 6/1/28	PACE-PACE	636	Camp Williams-Spanish Fork	Mar-09	Yes	Option 2: New 345kV line - \$151.4 million
PAC	FS	3/25/2008	Q994	No	--	Panguitch Substation	31	Glen Canyon-Sigurd	Sep-09	Yes	\$20-\$47 million.
PGE	LGIP/ FAC	9/2/2003	03-016	Yes	10/31/2009	Beaver Plant, Clatskanie, OR	556	230kV	IR#03-016 1/2005	Yes	Unknown
PGE	Withdrawn	7/12/2004	03-017	Yes	11/1/2006	West Linn, OR	4.4		Withdrawn		
PGE	SGIP/FAC	8/20/2007	07-018	No	Spring 2010	Round Butte, OR	18.5	none	IR# 07-018 Facilities study Addendum	Yes	Option #1 - \$600,000 Option #2 \$3,900,000
PGE	LGIP/FAC	9/4/2007	07-019	Yes	12/31/2012	Boardman, OR	385	none	Study in progress	Yes	Study in progress
PGE	LGIP/FAC	9/4/2007	07-020	Yes	12/31/2012	Coyote Springs, Boardman, OR	256	none	Study in progress	Yes	Study in progress
PGE	LGIP/FEAS	9/4/2007	07-021	Yes	12/31/2012	Boardman, OR	89	***Request Withdrawn***			
PGE	LGIP/FAC	9/4/2007	07-022	Yes	12/31/2012	John Day, Boardman, Warm Springs, OR area	375	none	Study in progress	Yes	Study in progress
PGE	Withdrawn	9/4/2007	07-023	Yes	12/31/2012	John Day, Boardman, Warm Springs, OR area	375	***Request Withdrawn***			
PGE	LGIP/FAC	10/9/2007	07-024	Yes	12/1/2011	Near Beaver Plant, Clatskanie, OR	100	230kV	IR#07-024 (100MW at Beaver 230kV Site) 1/30/2009	Yes	unknown
PGE	LGIP/FAC	10/9/2007	07-025	Yes	12/1/2011	Near Beaver Plant, Clatskanie, OR	200	230kV	IR#07-025 (200MW at Beaver 230kV Site) 1/30/2009	Yes	unknown
PGE	LGIP/FEAS	10/9/2007	07-026	Yes	12/1/2011	Molalla, OR (vicinity of Barnards Rd and Dryland Rd intersection)	100	none	IR#07-026 (100MW at Molalla 57kV Site) 2/25/2008	No	\$1,572,000

Available System Impact and Facility Transmission Studies

!!IMPORTANT DISCLAIMER!! Northern Tier Transmission Group ("NTTG") documents are produced using historical or modeled Available Transfer Capability ("ATC") information provided by the transmission providers funding its activities. Historical or modeled records have not been adjusted unless indicated, may contain errors, and may not be consistent between transmission providers. If errors or discrepancies between records are discovered, NTTG documents may not be corrected. These documents are illustrative and should not be used to make transmission business decisions. Each transmission provider calculates the ATC of the transmission facilities it owns or operates according to the methodology set forth in Attachment C of its Open Access Transmission Tariff ("OATT"), and posts ATC on its Open Access Same-time Information System ("OASIS"). Transmission service must be requested over the OASIS of each transmission provider with whom you wish to do business. Transmission service requests are processed by each transmission provider according to the terms and conditions of its OATT.

Provider	Study Type	Queue date	OASIS reference	Affiliate (Yes/No)	Service Period Requested	POR/POD or Location Description	Requested capacity (MW)	Constraint	Report Issue Date/ Study Name	System Upgrades Necessary (Yes/No)	Estimated Cost
PGE	LGIP/FEAS	10/9/2007	07-027	Yes	12/1/2011	Molalla, OR (vicinity of Barnards Rd and Dryland Rd intersection)	200	none	IR#07-027 (200MW at Molalla 230kV Site) 2/25/2008	No	\$6,696,000
PGE	LGIP/FEAS	10/9/2007	07-028	Yes	12/1/2011	Turner, OR vicinity of Marion Rd SE and Hunsaker Rd SE)	100	none	IR#07-028 (100MW at Turner 100kV Site) 2/25/2008	No	\$5,478,000
PGE	LGIP/FEAS	10/9/2007	07-029	Yes	12/1/2011	Turner, OR vicinity of Marion Rd SE and Hunsaker Rd SE)	200	none	IR#07-029 (200MW at Turner 230kV Hunsaker Site) 2/25/2008	No	\$9,834,000
PGE	LGIP/SIS	5/12/2008	08-030	Yes	5/1/2014	Boardman, OR	419	none	Study in progress	Yes	Study in progress
PGE	Withdrawn	5/12/2008	08-031	Yes	5/1/2014	Clatskanie, OR	450	***Request Withdrawn***			
PGE	LGIP	9/15/2008	08-032	Yes	12/31/2013	Vicinity of Ringling MT	200	Study in progress: Contracted out to Northwestern Energy			
PGE	LGIP	1/5/2009	09-033	Yes	5/1/2014	Vicinity of Maupin, OR	200	unknown	Study in progress: Contracted out to	unknown	Study in progress: Contracted out to Northwestern Energy
PGE	LGIP	4/20/2009	09-034	Yes	2010	Round Butte, OR	18.5	unknown	Study in progress: Contracted out to	unknown	Study in progress: Contracted out to Northwestern Energy
PGE	LGIP	7/9/2009	09-035	No	9/1/2013	Vicinity of Arlington, OR	500	unknown	Study in progress: Contracted out to	unknown	Study in progress: Contracted out to Northwestern Energy
PGE	NITS/SIS	9/10/2008	NI-01	Yes	11/1/09-11/1/10	Beaver Plant, Clatskanie, OR	550	South of Allston Path	NI-01 (550MW from existing Beaver Plant Units 1-8) 1/16/2009	Yes	Unknown
PGE	NITS/SIS	5/30/2008	NI-02	Yes	5/1/14-4/30/15	Boardman, OR	419	none	Study pending	Yes	Study pending
PGE	NITS/SIS	5/13/2008	NI-03	Yes	5/1/14-4/30/15	Port Westward Plant, Clatskanie, OR	450	***Request Withdrawn***			
PGE	NITS/SIS	6/11/2008	NI-04	Yes	6/1/13-6/1/14	Boardman, OR	385	none	Study pending	Yes	Study pending
PGE	NITS/SIS	6/11/2008	NI-05	Yes	6/1/13-6/1/14	Coyote Springs	256	none	Study pending	Yes	Study pending
PGE	NITS/SIS	6/11/2008	NI-06	Yes	6/1/13-6/1/14	Warm Springs, OR area	375	none	Study pending	Yes	Study pending
PGE	NITS/SIS	6/11/2008	NI-07	Yes	5/1/13-8/1/14	Beaver/Port Westward Plant Site, Clatskanie, OR	100	***Request Withdrawn***			
PGE	NITS/SIS	6/11/2008	NI-08	Yes	5/1/13-8/1/14	Beaver/Port Westward Plant Site, Clatskanie, OR	200	South of Allston Path	NI-08 (200MW from Peaker Plant at Port Westward) 1/16/2009	Yes	unknown
PGE	NITS/SIS	6/11/2008	NI-09	Yes	5/1/13-8/1/14	Molalla, OR (vicinity of Barnards Rd and Dryland Rd intersection)	100	unknown	NI-09 (100MW at Molalla 57kV Site) 1/16/2009	unknown	unknown



Available System Impact and Facility Transmission Studies

!!IMPORTANT DISCLAIMER!! Northern Tier Transmission Group (“NTTG”) documents are produced using historical or modeled Available Transfer Capability (“ATC”) information provided by the transmission providers funding its activities. Historical or modeled records have not been adjusted unless indicated, may contain errors, and may not be consistent between transmission providers. If errors or discrepancies between records are discovered, NTTG documents may not be corrected. These documents are illustrative and should not be used to make transmission business decisions. Each transmission provider calculates the ATC of the transmission facilities it owns or operates according to the methodology set forth in Attachment C of its Open Access Transmission Tariff (“OATT”), and posts ATC on its Open Access Same-time Information System (“OASIS”). Transmission service must be requested over the OASIS of each transmission provider with whom you wish to do business. Transmission service requests are processed by each transmission provider according to the terms and conditions of its OATT.

Provider	Study Type	Queue date	OASIS reference	Affiliate (Yes/No)	Service Period Requested	POR/POD or Location Description	Requested capacity (MW)	Constraint	Report Issue Date/ Study Name	System Upgrades Necessary (Yes/No)	Estimated Cost
PGE	NITS/SIS	6/11/2008	NI-10	Yes	5/1/13-8/1/14	Molalla, OR (vicinity of Barnards Rd and Dryland Rd intersection)	200	unknown	NI-10 (200MW at Molalla 230kV Site) 1/16/2009	unknown	unknown
PGE	NITS/SIS	7/28/2009	NI-12	Yes	1/1/15-1/1/25	Coyote Springs	256	unknown	Study in progress	Study in progress	Study in progress
PGE	NITS/SIS	7/29/2009	NI-13	Yes	1/1/15-1/1/25	Boardman, OR	385	unknown	Study in progress	Study in progress	Study in progress
PGE	NITS/SIS	7/30/2009	NI-14	Yes	1/1/15-1/1/25	Carty	450	unknown	Study in progress	Study in progress	Study in progress
PGE	NITS/SIS	7/31/2009	NI-15	Yes	1/1/15-1/1/25	Maupin	200	unknown	Study in progress	Study in progress	Study in progress