

Simultaneous Import Limits for Test Year 2019-2020

Bonneville Power Administration
Chelan County
Douglas County
Public County of Grant No. 2
Seattle City Light
Tacoma Power

Version 1.0

Introduction and Background

The Federal Energy Regulatory Commission (FERC) requires that jurisdictional utilities, from time to time, conduct studies that establish the maximum electrical simultaneous import limit (SIL) for that utility (i.e. balancing area). All wholesale power sellers must submit market power analyses every three years per 18 C.F.R. §35.37 (a) (1). These analyses help the FERC determine whether it should grant these sellers market-based rate authority. The results of these studies (i.e. analyses) are combined in a single report which is typically called the “FERC Market Power Study.”

In the electrical system of the Northwestern United States there are many non-FERC jurisdictional utilities that are not required to perform a Market Power Study. Accordingly, the jurisdictional utilities must perform studies to establish the approximate SIL for the non-jurisdictional utilities.

The Northwest Power Pool (NWPP) corporation is an independent service corporation providing services to entities in all or major portions of the states of Washington; Oregon; Idaho; Wyoming; Montana; Nevada; and Utah; a small portion of Northern California; and the Canadian provinces of British Columbia and Alberta. The jurisdictional utilities elected to commission the NWPP to perform the studies to establish the approximate SIL for the six non-jurisdictional entities that neighbor the jurisdictional entities.

Cases Studied

The test year for the 2019-2020 Market Power filing is for one calendar year, from December of 2019 to November of 2020. Docket No. ER99-845-020, et al. and the subsequent June 17, 2011, ***Order on Simultaneous Transmission Import Limit Results For The Northwest Region and Providing Direction on Submitting Studies*** provides the base for calculating the SIL for the northwest non-jurisdictional balancing authorities. The aforementioned document indicates that the following WECC power flow cases should be considered for examination. Only three cases were studied as detailed below:

2019-2020 Winter

The standard WECC power flow case catalog case for this season is titled ***20HW3a***.

2020 Spring

The standard WECC power flow case catalog case for this season is titled ***20HSP1a1***.

2020 Summer

The standard WECC power flow case catalog case for this season is titled ***20HS3a1***.

2020 Fall

There is no standard WECC case available for appropriately modeling fall conditions for the given year of study, however, the spring case was adjusted to reflect the loading for the fall season.

Seasonal ratings were utilized in each of the analyses performed.

Methodology

The general approach for determining the SIL follows the procedure outlined by the commission on December 16, 2009 (“Simultaneous Transmission Import Limit Study”¹) and additional direction from the June 17, 2011 Order referenced above.

Bonneville Power Administration (BPA)

First Tier Areas/States:

- British Columbia
- California
- Idaho
- Montana
- Nevada
- Oregon
- Washington

SIL Results

BPA does not directly own any generation. Therefore, it is not possible to determine the generation within the BPA Study Area using the normal expedient of owner name or number. For the purposes of this study, NWPP manually analyzed the three WECC power flow cases and identified all physical generation within the BPA balancing authority area. Under this methodology, BPA is considered a Net Exporter.

Chelan County Public Utility District #1

First Tier Areas

- Avista Corporation
- The Bonneville Power Administration
- Grant County Public Utility District
- Douglas County Public Utility District
- PacifiCorp
- Portland General Electric
- Puget Sound Energy

SIL Results

Chelan County PUD is a Net Exporter with far more generation than load.

¹ 65 slide PowerPoint presentation from Alfred Corbett, FERC Staff, 16 Dec 2009

Douglas County Public Utility District #1

First Tier Areas:

- Avista Corporation
- The Bonneville Power Administration
- Grant County Public Utility District
- Chelan County Public Utility District
- PacifiCorp
- Portland General Electric
- Puget Sound Energy

SIL results

Douglas County Public Utility District (PUD) is a Net Exporter. Douglas County PUD has far more generation than load and is consistently exporting outside its system.

Public Utility No. 2 of Grant County (Grant)

First Tier Areas

- Avista Corporation
- The Bonneville Power Administration
- Chelan County Public Utility District
- Douglas County Public Utility District
- PacifiCorp
- Portland General Electric
- Puget Sound Energy

SIL Results

Grant is a Net Exporter with far more generation than load.

Seattle City Light (SCL)

First Tier Areas

- The Bonneville Power Administration
- Puget Sound Energy
- Tacoma Power

SIL Results

SCL is a regular Net Importer of power with less generation than load.

Tacoma Power

First Tier Areas

- The Bonneville Power Administration
- Puget Sound Energy
- Seattle City Light

SIL Results

Tacoma Power is a Net Importer of power with less generation than load.

All workbooks are provided in the subsequent tables.

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Table 1: BPA 2019-2020

Description of Component	Name of Home BAA/Market			
	Winter (MW)	Spring (MW)	Summer (MW)	Fall (MW)
1 Simultaneous Incremental Transfer Capability The most limiting First Contingency Incremental Transfer Capability (FCITC), Normal Incremental Transfer Capability (NITC) or equivalent values. <i>Note i</i>				
2 Modeled Net Area Interchange (NAI) Enter a positive value and indicate the direction of flow in row 3 below. <i>Note ii</i>	9816	9168	12058	11533
3 Interchange Direction Indicate whether the Study Area NAI is export or import.	Export	Export	Export	Export
4 Total Simultaneous Transfer Capability (row 4 = row 1 +/- row 2). <i>Note iii</i>	-	-	-	-
5 Long-Term Firm Transmission Reservations Sum of the long-term firm transmission reservations from Table 2. <i>Note iv</i>	0	0	0	0
6 Calculated SIL Value (row 6 = row 4 - row 5). <i>Note v</i>	-	-	-	-
7 Historical Peak Load (Identify source if not from FERC Form No. 714). <i>Note vi</i>	10,094	9,198	8,776	6,232
8 Adjusted Historical Peak Load (row 8 = row 7 - row 5). <i>Note vii</i>	10,094	9,198	8,776	6,232
9 Uncommitted First-Tier Generation Amount of uncommitted generation modeled in the first-tier area. <i>Note viii</i>	39,527	36,882	37,873	38,973
10 SIL Study Value (row 10 = the minimum of the values entered in rows 6, 8 and 9 for each season). Use these SIL Study Values in the Market Share Screens. <i>Note ix</i>	-	-	-	-

Table 2: Chelan 2019-2020

Description of Component	Name of Home BAA/Market			
	Winter (MW)	Spring (MW)	Summer (MW)	Fall (MW)
1 Simultaneous Incremental Transfer Capability The most limiting First Contingency Incremental Transfer Capability (FCITC), Normal Incremental Transfer Capability (NITC) or equivalent values. <i>Note i</i>				
2 Modeled Net Area Interchange (NAI) Enter a positive value and indicate the direction of flow in row 3 below. <i>Note ii</i>	1179	1033	1079	1558
3 Interchange Direction Indicate whether the Study Area NAI is export or import.	Export	Export	Export	Export
4 Total Simultaneous Transfer Capability (row 4 = row 1 +/- row 2). <i>Note iii</i>	-	-	-	-
5 Long-Term Firm Transmission Reservations Sum of the long-term firm transmission reservations from Table 2. <i>Note iv</i>	0	0	0	0
6 Calculated SIL Value (row 6 = row 4 - row 5). <i>Note v</i>	-	-	-	-
7 Historical Peak Load (Identify source if not from FERC Form No. 714). <i>Note vi</i>	466	364	264	344
8 Adjusted Historical Peak Load (row 8 = row 7 - row 5). <i>Note vii</i>	466	364	264	344
9 Uncommitted First-Tier Generation Amount of uncommitted generation modeled in the first-tier area. <i>Note viii</i>	23,420	25,083	23,910	21,497
10 SIL Study Value (row 10 = the minimum of the values entered in rows 6, 8 and 9 for each season). Use these SIL Study Values in the Market Share Screens. <i>Note ix</i>	-	-	-	-

Table 3: Douglas

Description of Component	Name of Home BAA/Market			
	Winter (MW)	Spring (MW)	Summer (MW)	Fall (MW)
1 Simultaneous Incremental Transfer Capability The most limiting First Contingency Incremental Transfer Capability (FCITC), Normal Incremental Transfer Capability (NITC) or equivalent values. <i>Note i</i>				
2 Modeled Net Area Interchange (NAI) Enter a positive value and indicate the direction of flow in row 3 below. <i>Note ii</i>	277	430	359	404
3 Interchange Direction Indicate whether the Study Area NAI is export or import.	Export	Export	Export	Export
4 Total Simultaneous Transfer Capability (row 4 = row 1 +/- row 2). <i>Note iii</i>	-	-	-	-
5 Long-Term Firm Transmission Reservations Sum of the long-term firm transmission reservations from Table 2. <i>Note iv</i>	0	0	0	0
6 Calculated SIL Value (row 6 = row 4 - row 5). <i>Note v</i>	-	-	-	-
7 Historical Peak Load (Identify source if not from FERC Form No. 714). <i>Note vi</i>	182	168	172	158
8 Adjusted Historical Peak Load (row 8 = row 7 - row 5). <i>Note vii</i>	182	168	172	158
9 Uncommitted First-Tier Generation Amount of uncommitted generation modeled in the first-tier area. <i>Note viii</i>	24,607	25,882	24,721	22,838
10 SIL Study Value (row 10 = the minimum of the values entered in rows 6, 8 and 9 for each season). Use these SIL Study Values in the Market Share Screens. <i>Note ix</i>	-	-	-	-

Table 4: Grant

Description of Component	Name of Home BAA/Market			
	Winter (MW)	Spring (MW)	Summer (MW)	Fall (MW)
1 Simultaneous Incremental Transfer Capability The most limiting First Contingency Incremental Transfer Capability (FCITC), Normal Incremental Transfer Capability (NITC) or equivalent values. <i>Note i</i>				
2 Modeled Net Area Interchange (NAI) Enter a positive value and indicate the direction of flow in row 3 below. <i>Note ii</i>	644	296	1082	309
3 Interchange Direction Indicate whether the Study Area NAI is export or import.	Export	Export	Export	Export
4 Total Simultaneous Transfer Capability (row 4 = row 1 +/- row 2). <i>Note iii</i>	-	-	-	-
5 Long-Term Firm Transmission Reservations Sum of the long-term firm transmission reservations from Table 2. <i>Note iv</i>	0	0	0	0
6 Calculated SIL Value (row 6 = row 4 - row 5). <i>Note v</i>	-	-	-	-
7 Historical Peak Load (Identify source if not from FERC Form No. 714). <i>Note vi</i>	763	744	842	773
8 Adjusted Historical Peak Load (row 8 = row 7 - row 5). <i>Note vii</i>	763	744	842	773
9 Uncommitted First-Tier Generation Amount of uncommitted generation modeled in the first-tier area. <i>Note viii</i>	23,658	25,440	22,160	22,318
10 SIL Study Value (row 10 = the minimum of the values entered in rows 6, 8 and 9 for each season). Use these SIL Study Values in the Market Share Screens. <i>Note ix</i>	-	-	-	-

Table 5: Seattle City Light

Row	Description of Component	Winter (MW)	Spring (MW)	Summer (MW)	Fall (MW)
1	Incremental transfer capability values (either the First Contingency Incremental Transfer Capability (FCITC), Normal Incremental Transfer Capability (NITC) or equivalent values). <i>Note i</i>	479	369	411	358
2	Modeled Net Area Interchange (NAI) including the sum of long-term firm reservations from Table 2. <i>Note ii</i>	734	236	128	234
3	Indicate whether the Study Area NAI is export or import.	Import	Import	Import	Import
4	(row 4 = row 1 +/- row 2). <i>Note iii</i>	1,213	605	539	592
5	Sum of the long-term firm transmission reservations from Table 2. <i>Note iv</i>	1,153	1,153	1,153	1,153
6	(row 6 = row 4 - row 5). <i>Note v</i>	60	(548)	(614)	(561)
7	Seasonal historical peak load (identify source if not from FERC Form No. 714). <i>Note vi</i>	1,757	1,542	1,296	1,535
8	Study area adjusted native load. (row 8 = row 7 - row 5). <i>Note vii</i>	604	389	143	382
9	Amount of uncommitted generation modeled in the first-tier area. <i>Note viii</i>	21,043	22,425	18,950	18,915
10	SIL values (row 10 = the minimum of the values entered in rows 6, 8 and 9 for each season). Use these SIL values in the Market Share Screens. <i>Note ix</i>	60	(548)	(614)	(561)

Table 6: Tacoma Power

Row	Description of Component	Winter (MW)	Spring (MW)	Summer (MW)	Fall (MW)
1	Incremental transfer capability values (either the First Contingency Incremental Transfer Capability (FCITC), Normal Incremental Transfer Capability (NITC) or equivalent values). <i>Note i</i>	142	140	107	138
2	Modeled Net Area Interchange (NAI) including the sum of long-term firm reservations from Table 2. <i>Note ii</i>	317	210	210	198
3	Indicate whether the Study Area NAI is export or import.	Import	Import	Import	Import
4	(row 4 = row 1 +/- row 2). <i>Note iii</i>	459	350	317	336
5	Sum of the long-term firm transmission reservations from Table 2. <i>Note iv</i>	1,764	1,764	1,764	1,768
6	(row 6 = row 4 - row 5). <i>Note v</i>	(1,305)	(1,414)	(1,447)	(1,432)
7	Seasonal historical peak load (identify source if not from FERC Form No. 714). <i>Note vi</i>	901	830	667	800
8	Study area adjusted native load. (row 8 = row 7 - row 5). <i>Note vii</i>	(863)	(934)	(1,097)	(968)
9	Amount of uncommitted generation modeled in the first-tier area. <i>Note viii</i>	21,482	23,112	19,662	19,614
10	SIL values (row 10 = the minimum of the values entered in rows 6, 8 and 9 for each season). Use these SIL values in the Market Share Screens. <i>Note ix</i>	(1,305)	(1,414)	(1,447)	(1,432)