

West of Cascades North Path Curtailment and Congestion Management Tools Workshop

August 26th, 2010



Purpose of Workshop

- Follow-up on parking lot issues from last workshop held on August 10, 2010
- Address customer training recommendations from the West of Cascades North Curtailment and Congestion Management Lessons Learned report issued July 9, 2010
- Develop a foundation for how and why congestion management tools work the way they do
- Engage in customer feedback

Parking Lot Issues

- Parking Lot issues will be posted on the BPA website with comments that either directly address the question or point to where it will be addressed (i.e., workshop, within an existing recommendation, etc)
- Today's workshop will address five of the parking lot issues from the last workshop (see following tables)

Parking Lot Issues

	General Topic	Specific Comments and Clarification
1	What busses were the voltage stability limits associated with?	
2	WECC SOL study cases(s) need additional scrubbing and evaluation.	<ul style="list-style-type: none"> • Several customers expressed view that the system is too dynamic to go into the outage simply assuming that the SOLs from study cases performed 1 month or 2 weeks prior to an outage accurately model constraints during the event
3	Review of BPA's response to / reply on customer requests for redirects.	<ul style="list-style-type: none"> • During this outage, BPA denied or, from many customers' perspective, didn't act on numerous redirect suggestions / requests. • These requests could have helped minimize the financial impact of the WOC-N outage
4	Clarification for how / when Long-Term Firm requests are calculated using Short-Term Firm methodology	



- Indicates issue covered on 8/26/10

Parking Lot Issues, cont.

	General Topic	Specific Comments and Clarification
5	Impact of SOL constraints on business decision to suspend or to resume hourly sales.	<ul style="list-style-type: none"> • Customer perception was that real-time interface and coordination between Tx Sales and Ops was not close. • Analysis of customers' suggestions and redirect requests may have been lacking, and this left an important decision support tool largely unused.
6	Relative value / efficacy comparing curtailment tool vs. stop sales tool.	<ul style="list-style-type: none"> • Customer feedback is that the stop sales tool is a "sledgehammer"; lacks specificity, hard to fine tune. • Perception that the redirect tool allows the market to respond and adjust in a way better aligned w/ customers' financial interests.
7	The Tx system is showing how hard it's being stretched. Outages like this one tend to strand East of Cascades generation resources	<ul style="list-style-type: none"> • Reinforcements and upgrades to the Tx system could reduce the likelihood of this type of outage, and mitigate the impact of such outages when they do occur. • This event reflects how closely the Tx system is operating to its physical limits • Several customers stated they came very close to not being able to serve local, organic load.
8	During curtailment events, are dynamic generation schedules treated differently?	<ul style="list-style-type: none"> • BPA's response impacts requirements for operating reserves. • Some customers are interpreting NERC standards / requirements differently from BPA.



Parking Lot Issues, cont.

	General Topic	Specific Comments and Clarification
9	Customers expressed interest in participating with workshops / smaller focus groups	<ul style="list-style-type: none"> • Redirect Methodology • Icarus Operations • “Granularity” of forecasts for generation and SOL • Communications out from BPA to customers – medium, content, format, receipt, and feedback • Urgent messages / guidance can get lost in the volume and too-busy format of other content that BPA routinely has to communicate
 10	BPA should consider a mix of media for training on new procedures and protocols.	<ul style="list-style-type: none"> • Conference call only format is less effective – consider Live Meeting, VTC with supporting products • Training should focus on content, clarity and customer feedback
11	Follow-up for this WOC-N meeting during week of 23 August	<ul style="list-style-type: none"> • Opportunity for BPA to practice listening and clarity in its communications • Content and format to be determined
12	Outage planning, forecasting, and coordinate remains a perceived performance gap for BPA	<ul style="list-style-type: none"> • Cathy Ehli acknowledged this several times in her comments • Several comments about the “dark period” after the 2-week outage notice goes out and the outage actually starts. • Several customers comment about how the variability between forecast and actual SOL during outages impacts their operations planning and revenue projection.



- Indicates issue covered on 8/26/10

Available Transfer Capability (ATC) Methodology Overview

ATC Overview

- BPA Transmission's ATC Methodology
- ATC Calculations
- Overview of *De Minimis* Logic
- Path Utilization Factor (PUF) Calculators

BPA Transmission's ATC Methodology

- BPA Transmission's ATC methodology is posted at:
http://www.transmission.bpa.gov/business/atc_methodology/
- Uses ATC methods for external interconnections and interties (defined Point of Receipt/Point of Delivery or POR/POD paths)
- Uses Available Flowgate Capability (AFC) methods for internal flowgates (PUF calculations)
- Congestion mitigation tools use same calculation methods as validation & award/approval processes in the Short Term ATC Methodology

ATC Calculations

- Long Term Point To Point (PTP) transmission service requests impacts are calculated based on the Transmission Service Request (TSR) Source/Sink using the Network Composite POD
- Short Term PTP request impacts are calculated based on POR/POD
- Short Term Redirect Requests are assessed on net of impacts removed from the parent path and new impacts of redirect path
- Once Awarded & Accepted, resulting ATC/AFC is updated on OASIS (in System Data)
- Outages, when entered into the system, result in lowered Total Transmission Capability (TTC) and resulting reduction in ATC/AFC
- At 10 PM of the Preschedule (PS) day, the calculation of Non Firm (NF) ATC changes to use scheduled MW, replacing reserved MW

Overview of *De Minimis* Logic

- To accommodate incidental calculated impacts on flowgates, the *de minimis* test was developed to optimize AFC management
- Flowgate impacts are considered *de minimis* if the request's impacts are $\leq 10\text{MW}$ and $\leq 10\%$ of flow
- Short Term *de minimis* impacts are not deducted from flowgate AFC inventory

Path Utilization Factor (PUF) Calculators

- Long Term (LT) PUF Calculator:
 - http://www.transmission.bpa.gov/Business/ATC_Methodology/LT_PUF_Calculator_09_29_09.xls

- Short Term (ST) PUF Calculator:
 - http://www.transmission.bpa.gov/tx_availability/PUF_calculator_short_term.xls

- OASIS Scenario Analyzer:
 - <https://www.oatioasis.com/cgi-bin/webplus.dll?script=/woa/woa-SA-entripage.wml&Provider=BPAT>

Locating Outage Information

Locating Outage Information Overview

- Where to find outage information in OASIS
- How to set up alarm notifications for messages in OASIS
- Where to find outage information on the Transmission website

Where Outage Information Is Posted

webOASIS

- BPAT Outage Report
- Notices

Transmission website

- Outages & Interruptions
- Proposed 45 Day Outage Plan

Other

- WECCNET

BPA Transmission Outage Report

- BPA Transmission Outage Report is located on the OASIS home page: <http://www.oatioasis.com/bpat/index.html>
- Expand the Outage folder and select “BPAT Outages”

The screenshot displays the OASIS web application interface. The top navigation bar includes links for Reservations, Sys Data, Offerings, Resale, NITS/NLS, Reductions, Data, Company, Home, Help, and Logout. Below this, a secondary row of links includes Ancillary, Offerings, Security, Deals, CG Deals, Schedules, Notices, User, Bulletin, Options, and Auction. The main content area features a 'Select Provider' dropdown, 'Documents' and 'AdminView' buttons, and a 'Documents' section with 'Page Refresh' and 'Search' buttons. A left sidebar contains a tree view of document categories, with 'Outages' expanded to show 'BPAT Outages', 'Outages & Interruptions', and 'Proposed 45 Day Outages'. A black arrow points to the 'BPAT Outages' link. The main content area displays the 'BONNEVILLE POWER ADMINISTRATION Transmission' banner and a 'Welcome to BPA Transmission Services OASIS' message. Two news items are visible: 'Posted 08/10/10: webOASIS Release 3.4.20 Update' and 'Posted 08/10/10: OASIS Points Deactivation'. The footer contains logos for aed, Bchudra, RioRivers, CLECO, and Duquesne Light.

BPA Transmission Outage Report, cont.

- Automatically generated
- Sorted by Outage start date/time
- Includes Real-time changes
 - Outage Name for Real-time changes will start with "RT"
 - Planned outages will include acronym for path
- Provides 30 day report (current day +30)

Note: Information on BPAT Outage Report is also posted on the Outage and Interruptions page

Exception: Real-time updates

RT E. OUTAGE	135364	BPAT	
RT E. OUTAGE	135367	BPAT	
RT E. OUTAGE	135370	BPAT	
NI	135156	BPAT	NI_Fore

WOCN	134388	BPAT	WOCN_9/2	DC_S>N(BPAT)	1904.0	2010			
NI	133716	BPAT	NI_D_9/7-9/10	NOJDAY(BPAT)	5980.0	2010 <td></td> <td></td> <td></td>			
				C-CASC_S(BPAT)	4525.0	2010-09-02 08:00	2010-09-02 15:00	Scheduled	T
				NI_TOTL_N>S(BPAT)	2100.0	2010-09-07 07:00	2010-09-07 18:00	Scheduled	T
				NI_TOTL_S>N(BPAT)	1400.0	2010-09-07 07:00	2010-09-07 18:00		
				NI_WEST_N>S(BPAT)	1700.0	2010-09-07 07:00	2010-09-07 18:00		
				NI_WEST_S>N(BPAT)	1000.0	2010-09-07 07:00	2010-09-07 18:00		
				NI_TOTL_N>S(BPAT)	2100.0	2010-09-08 07:00	2010-09-08 18:00		
				NI_TOTL_S>N(BPAT)	1400.0	2010-09-08 07:00	2010-09-08 18:00		
				NI_WEST_N>S(BPAT)	1700.0	2010-09-08 07:00	2010-09-08 18:00		
				NI_WEST_S>N(BPAT)	1000.0	2010-09-08 07:00	2010-09-08 18:00		
				NI_TOTL_N>S(BPAT)	2100.0	2010-09-09 07:00	2010-09-09 18:00		
				NI_TOTL_S>N(BPAT)	1400.0	2010-09-09 07:00	2010-09-09 18:00		
				NI_WEST_N>S(BPAT)	1700.0	2010-09-09 07:00	2010-09-09 18:00		
				NI_WEST_S>N(BPAT)	1000.0	2010-09-09 07:00	2010-09-09 18:00		
				NI_TOTL_N>S(BPAT)	2100.0	2010-09-10 07:00	2010-09-10 18:00		
				NI_TOTL_S>N(BPAT)	1400.0	2010-09-10 07:00	2010-09-10 18:00		
				NI_WEST_N>S(BPAT)	1700.0	2010-09-10 07:00	2010-09-10 18:00		
				NI_WEST_S>N(BPAT)	1000.0	2010-09-10 07:00	2010-09-10 18:00		
WOCN	133811	BPAT	WOCN_9/7-9/9	C-CASC_N(BPAT)	4780.0	2010-09-14 06:00	2010-09-14 15:00	Scheduled	T
WOCN	134034	BPAT	WOCN_9/7-9/9	C-CASC_N(BPAT)	7110.0	2010-09-14 06:00	2010-09-14 15:00	Scheduled	T
WOCN	135173	BPAT	WOCN_9/14-9/16	C-CASC_N(BPAT)	6080.0	2010-09-14 06:00	2010-09-16 18:00	Scheduled	T
WOCN	135169	BPAT	WOCN_9/15-9/19	C-CASC_N(BPAT)	5320.0	2010-09-15 07:00	2010-09-19 15:00	Scheduled	T
WOCN	135171	BPAT	WOCN_9/15-9/16	C-CASC_N(BPAT)	4990.0	2010-09-15 07:00	2010-09-16 18:00	Scheduled	T
WOCN	134218	BPAT	WOCN_9/15	C-CASC_N(BPAT)	4980.0	2010-09-15 07:00	2010-09-15 19:00	Scheduled	T
WOCN	134220	BPAT	WOCN_9/15	C-CASC_N(BPAT)	7360.0	2010-09-15 07:00	2010-09-15 19:00	Scheduled	T

BPA Transmission Outage Report, cont.

Outage Names use a short acronym to describe the path(s) included in the outage:

Planned:

- COI – California Oregon Intertie (AC)
- PDCI – Pacific Direct Current Intertie (DC)
- NI – Northern Intertie
- IDNW – Idaho Northwest
- LAGR – LaGrande
- RATS – Reno Alturas Transmission System
- WOH – West of Hatwai
- WOG – West of Garrison (Montana Northwest)
- MONR_ECOL – Monroe Echo Lake
- NOHANF – North of Hanford
- NOJDAY – North of John Day
- PAUL_ALSN – Paul Allston
- RAVR_PAUL – Raver Paul
- SOALSN – South of Allston
- WOCN – West of Cascades North
- WOCS – West of Cascades South
- WOSLATT – West of Slatt
- WOMCNY – West of McNary

Real-time:

- RT N. Outage – Northern Intertie
- RT S. Outage – COI, PDCI or Reno Alturas
- RT E. Outage – LaGrande & Idaho Northwest
- RT WOG – West of Garrison
- RT WOH – West of Hatwai

OASIS Notices

- Outages are also posted in the Notices section of OASIS
- To review outages posted for a selected day:
 - Select BPAT as TP
 - Select Outage in Category drop down list
 - Select appropriate time period
- System events and in-hour curtailments are posted in the Curtailment category

Message Summary for: BPAT

TP: BPAT | Customer Code: ALL | Time: Posted | Yesterday

Ref: [] | Category: OUTAGE | Enter

Buttons: Add New, Columns, User Range, Spreadsheet, Download CSV

Posting Ref	Message	Time Of Last Update	Time Posted	Subject	Category	Valid From T
80572	PUGET SOUND AREA NORTHERN	2010-08-10 09:49 PD	2010-08-09 09:25 PD	PSANI ADVISORY: 8/11: HE1	OUTAGE	2010-08-11 00:00
80571	OUTAGEID-134372,STAT-SCHE	2010-08-10 07:12 PD	2010-08-09 09:22 PD	NI	OUTAGE	2010-08-11 00:00
80573	OUTAGEID-134377,STAT-SCHE	2010-08-09 09:28 PD	2010-08-09 09:28 PD	COI	OUTAGE	2010-08-17 00:00
80578	OUTAGEID-134388,STAT-SCHE	2010-08-09 13:17 PD	2010-08-09 13:17 PD	WOCs	OUTAGE	2010-09-02 08:00
80579	OUTAGEID-134390,STAT-SCHE	2010-08-09 14:04 PD	2010-08-09 14:04 PD	PDCI	OUTAGE	2010-10-05 06:00
80580	OUTAGEID-134393,STAT-SCHE	2010-08-09 14:06 PD	2010-08-09 14:06 PD	PDCI	OUTAGE	2010-10-05 06:00

OASIS Notices, cont.

- System events and in-hour curtailments are posted in the Curtailment category
 - Change the Category to Curtailment
 - Select appropriate time period
- Select the message to view

The screenshot displays the OASIS system interface. At the top left is the OATI logo. Below it are navigation tabs: Message, Discretion, Std Of Conduct, and Personnel. The main content area is titled "Message Summary for: BPAT". It features a search form with fields for TP (set to BPAT), Customer Code (set to ALL), Time (set to Posted), User Range, Ref, and Category (set to CURTAILMENT). Below the search form are buttons for Add New, Columns, User Range, Spreadsheet, Download CSV, and Close.

Posting Ref	Message	Time Of Last Update	Time Posted ↓	Subject	Category	Val
77370	BPA has curtailed Wind PI		2010-05-16 22:29 PD	BPA Wind Curtailment	CURTAILMENT	201
77396	DSO216 LEVEL 1 WIND CURTA	2010-05-17 13:36 PD	2010-05-17 13:36 PD	EVENT: DSO216, 5/16/2010	CURTAILMENT	201
77426	Scheduled outage of Echo				CURTAILMENT	201
77443	BPA is declaring a transm				CURTAILMENT	201
77479	West of Cascades North ap				CURTAILMENT	201
77482	WEST OF CASCASES NORTH E	2010-			CURTAILMENT	201
77483	WEST OF CASCASES NORTH E	2010-			CURTAILMENT	201
77484	WEST OF CASCASES NORTH E	2010-			CURTAILMENT	201
77544	Greater than 90% reserves				CURTAILMENT	201
77568	West of Cascades North ap				CURTAILMENT	201
77574	OVER LOADED ON THE PATH H	2010-			CURTAILMENT	201
77575	DSO216 LEVEL 1 WIND CURTA	2010-			CURTAILMENT	201
77576	DSO216 LEVEL 1 WIND CURTA	2010-			CURTAILMENT	201
77597	DSO216 LEVEL 1 WIND CURTA	2010-			CURTAILMENT	201

A "Message Details" window is open over the table, showing the following information:

- Provider: BPAT
- Posting Ref: 77443
- Category: CURTAILMENT
- Subject: BPA TRANSMISSION SYSTEM EMERGENCY
- Customer Name: BPATDSenior
- Customer Code: BPAT
- Customer Dun: 959010968
- Time Posted: 2010-05-18 10:25 PD
- Valid From: 2010-05-18 08:12 PD
- Valid To: 2010-05-18 12:00 PD
- Message: BPA is declaring a transmission system emergency due to West of Cascades North (path 4).
- Time Of Last Update:

At the bottom of the Message Details window are buttons for Print View, Audit, and Close.

Message Alarms

- Users can set up alarms to receive notification of message posting
 - From the Options tab; select “Alarm Preferences” – Configure Alarm Preference screen will display
 - While logged in to OASIS – the soft or hard alarms display a visual alarm in the upper right corner – sound can also be checked to alert user
 - Email selected will send an automated message – not necessary to be logged in to receive notifications

The screenshot shows the OATI OASIS interface. The 'Options' tab is selected and circled in red. The main content area displays 'Message Alarms' settings for various categories. Each category has radio buttons for 'Soft', 'Hard', and 'None', and checkboxes for 'Sound' and 'Email'.

Category	Soft	Hard	None	Sound	Email
Want-Ad	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>
Curtailment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Discount	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>
Oasis Maint Notice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>
Outage	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
OASIS Maintenance Outage	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>
Emergency Deviation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>
Merger Partners	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>
Voluntary Consent	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>
Incidental Disclosures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>
SOC	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>
OTHER	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
NETWORK UNDESIGNATION	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>
CONGESTION RELIEF OFFERS	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>
Merchant Alerts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>
WAIVER	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>
Discretion Alarms					
Discretion	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>
ATC Alarms					
NATC	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/>	<input type="checkbox"/>

Locating Outage Information on the External Website

- Both the “Outages & Interruptions” and the “Proposed 45 Day Outages” can be accessed:

- From OASIS home page:

<http://www.oatioasis.com/bpat/index.html>

-OR-

- From Transmission Services’ home page: www.transmission.bpa.gov
 - Select “Transmission Availability”

The top screenshot displays the OASIS home page interface. It features a navigation bar with tabs for 'Documents' and 'AdminView'. Below this is a 'Documents' section with a 'Page Refresh' button and a search box. A list of document categories is shown, including 'NAESB Home Page', 'Registration Procedures', 'OASIS Notices', 'Doing Business', 'Transmission Availability', 'Outages', 'BPAT Outages', 'Outages & Interruptions', 'Proposed 45 Day Outages', and 'Performance Metrics'. A 'Document Upload' and 'File Refresh' link is also present. On the right side, there is a 'BONNEVILLE' logo and a news item dated 08/10/10 regarding OATI rescheduling.

The bottom screenshot shows the Transmission Services home page. The header includes 'BONNEVILLE POWER ADMINISTRATION' and 'Transmission'. Below the header is a navigation bar with links for 'About BPA', 'Business', 'Projects', 'Lands & Community', and 'Education & Careers'. The main content area is divided into several sections: 'Commercial Business Information' (with a link to 'Transmission Availability'), 'News & Events' (with links to 'webOASIS Release 3.4.20 Update', 'OASIS Points Deactivation', and 'West of Cascades North (WOCN) Path Congestion Follow-Up'), and 'Lands & Community' (with links to 'Safety First', 'Real Property', 'Crime Witness', 'Danger Tree', 'Regional Service', 'Community Invo', and 'GIS Mapping'). A 'USA.gov' logo is visible in the bottom left corner.

Outages & Interruption Information

- Includes planned outage information
 - Select a path to jump to those outages
 - Select “Daily/Hourly Limits” to view 14 day graph

BPA Transmission Outage & Interruption Information

Effective March 30, 2007, BPA Transmission Services (BPAT) has implemented its OASIS on [OATI wesTTrans](#). Transmission availability is posted in OASIS.

BPA makes no representations or warranties of any kind, express or implied, about the accuracy of this information, or related graphics contained on this website, and disclaims any and all liability with respect thereto.

Decisions based on information on these pages are solely the visitor's responsibility. Transmission Services reserves the right to modify TTC, and ATC until 08:00 on the day of WECC Preschedule day. Changes to TTC and ATC after 08:00 of the WECC Preschedule day will be addressed in Real Time.

Direct questions or comments to [TBL Path Capacity](#), BPA Transmission Services, 360-418-8496.

Related Information

[Outage Plans with Capacity Estimates](#)

Known Constraints

[Jump to [COI](#), [PDCI](#), [WNI](#), [ENI](#), [MTNW](#), [WOH](#), [LaGrande](#), [RATS](#), [NJD](#), [WOM](#), [ELM](#), [RP](#), [PA](#), [SOA](#), [NOH](#), [WOS](#)]

Capacity Restrictions caused by forced outages on Real-Time are not posted below. Real-Time outages are communicated among affected Parties by means of WECC telenet messages and can be viewed in OASIS.

COI Constraints (last modified Tuesday, August 10, 2010, 14:46) [Daily/Hourly Limits](#)

Date(s)	Duration	MW Limit (N-S)	MW Limit (S-N)	Reason for Path Reduction
06/01/10-11/01/10	HE 0100 on 06/01/10 - HE 2400 on 10/31/10	4800	3675	Summer Seasonal SOL Limits
08/08/10-08/10/10	HE 0100 on 08/08/10 - HE 2400 on 08/09/10	4625	3675	Anticipated Northern CA Hydro & Hemingway-Summer Lake Flows (Actual limit determined dynamically in Real-time)
08/10/10-08/11/10	HE 0100 on 08/10/10 - HE 2400 on 08/10/10	4525	3675	Anticipated Northern CA Hydro & Hemingway-Summer Lake Flows (Actual limit determined dynamically in Real-time)
08/11/10-08/12/10	HE 0100 on 08/11/10 - HE 2400 on 08/11/10	4525	3675	Anticipated Northern CA Hydro & Hemingway-Summer Lake Flows (Actual limit determined dynamically in Real-time)
08/12/10-08/13/10	HE 0100 on 08/12/10 - HE 2400 on 08/12/10	4525	3675	Anticipated Northern CA Hydro & Hemingway-Summer Lake Flows (Actual limit determined dynamically in Real-time)
	HF 0100 on 08/13/10 - HF 2400 on			Anticipated Northern CA Hydro & Hemingway-Summer Lake Flows (Actual limit determined

Outages & Interruption Daily/Hourly Limits

- Graphs can be viewed in Daily or 14 day format

WNI	EMI	COI	PDCI	LAG	MTNW	RATS	WOH	NJD	WOM	ELM	RP	PA	SOA	NOH	WOS	All Paths	
N-S	S-N	N-S	S-N	N-S	S-N	E-W	W-E	E-W	W-E	N-S	S-N	E-W	N-S	E-W	N-S	S-N	E-W
ENI (S-N)	8/14/2010	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400
IDNW (E-W)	8/14/2010	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400
IDNW (W-E)	8/14/2010	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
LaG (E-W)	8/14/2010	413	413	413	413	413	413	413	413	413	413	413	413	413	413	413	413
LaG (W-E)	8/14/2010	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350
MTNW (E-W)	8/14/2010	1950	1950	1950	1950	1950	1950	1950	1950	1950	1950	1950	1950	1950	1950	1950	1950
MTNW (W-E)	8/14/2010	1245	1245	1245	1245	1245	1245	1245	1245	1245	1245	1245	1245	1245	1245	1245	1245
NJD (N-S)	8/14/2010	7800	7800	7800	7800	7800	7800	7800	7800	7800	7800	7800	7800	7800	7800	7800	7800
NOH (N-S)	8/14/2010	4100	4100	4100	4100	4100	4100	4100	4100	4100	4100	4100	4100	4100	4100	4100	4100
PA (N-S)	8/14/2010	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250
PDCI (N-S)	8/14/2010	2990	2990	2990	2990	2990	2990	2990	2990	2990	2990	2990	2990	2990	2990	2990	2990
PDCI (S-N)	8/14/2010	975	975	975	975	975	975	975	975	975	975	975	975	975	975	975	975
RATS (N-S)	8/14/2010	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300
RATS (S-N)	8/14/2010	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300
RP (N-S)	8/14/2010	1330	1330	1330	1330	1330	1330	1330	1330	1330	1330	1330	1330	1330	1330	1330	1330
SOA (N-S)	8/14/2010	3100	3100	3100	3100	3100	3100	3100	3100	3100	3100	3100	3100	3100	3100	3100	3100
WNI (N-S)	8/14/2010	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400
WNI (S-N)	8/14/2010	2000	2000	2000	2000	2000	2000	1088	1057	1055	1041	1011	993	975	975	922	922
WOCN	8/14/2010	6780	6780	6780	6780	6780	6780	5360	5360	5360	5360	5360	5360	5360	5360	5360	5360
WOCN	8/14/2010	4990	4990	4990	4990	4990	4990	4990	4990	4990	4990	4990	4990	4990	4990	4990	4990
WOH (E-W)	8/14/2010	4250	4250	4250	4250	4250	4250	4250	4250	4250	4250	4250	4250	4250	4250	4250	4250
WOM (E-W)	8/14/2010	2870	2870	2870	2870	2870	2870	2870	2870	2870	2870	2870	2870	2870	2870	2870	2870
WOS (E-W)	8/14/2010	4100	4100	4100	4100	4100	4100	4100	4100	4100	4100	4100	4100	4100	4100	4100	4100

Bonneville Power Administration Hourly OTC Path Limits

Requires [Internet Explorer 5.01](#) or [Netscape 6](#)

EMI	COI	PDCI	LAG	MTNW	RATS	WOH	NJD	WOM	ELM
N-S	S-N	N-S	S-N	N-S	S-N	E-W	W-E	E-W	W-E

[- Click here to download -](#)

th	date	he01	he02	he03	he04	he05	he06	he07	he08	he09	he10	he11	he12	he13	he14	he15	he16
(N-S)	8/19/2010	1650	1414	1223	1142	1163	1398	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
(N-S)	8/20/2010	1646	1361	1180	1108	1164	1394	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650
(N-S)	8/21/2010	1608	1263	1078	995	1012	1075	1158	1506	1798	1996	2093	2114	2120	2075	2048	2041
(N-S)	8/22/2010	2270	2247	2223	2223	2223	2270	2249	2400	2400	2400	2400	2400	2400	2400	2400	2400
(N-S)	8/23/2010	2270	2247	2223	2223	2223	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
(N-S)	8/24/2010	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
(N-S)	8/25/2010	2270	2247	2223	2223	2223	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
(N-S)	8/26/2010	2270	2247	2223	2223	2223	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
(N-S)	8/27/2010	2270	2247	2223	2223	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
(N-S)	8/28/2010	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
(N-S)	8/29/2010	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
(N-S)	8/30/2010	2448	2402	2380	2380	2402	2448	2286	1700	1700	1700	1700	1700	1700	1700	1700	1700
(N-S)	8/31/2010	2448	2402	2380	2380	2402	2448	2286	1700	1700	1700	1700	1700	1700	1700	1700	1700
(N-S)	9/1/2010	2448	2402	2380	2380	2402	2448	2286	1700	1700	1700	1700	1700	1700	1700	1700	1700

[Click on value to see constraint](#)

Path Constraint for 8/14/2010 he12:

[Click on value to see constraint](#)

path	dates	duration	flow limit	description
PDCI	01/01/10-09/01/10	00:00	HE 0100	on 01/01/10 - HE 2400 on 09/01/10
S-N	975	LADWP-Northbound	flow restriction	(Effective since 00:01 17DEC08)

Color Legend:	Path Rating (RTC)	Short-term Seasonal Default	Estimate	Known Limit (Customer)	Studied	Pre-Schedule	Scheduling Limit (Manual)	Real-Time Limit
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Proposed Outages

- Proposed Outage page includes:
 - 45 Day outage plans
 - Schedule for 45 day outage process
 - Long-range plans
 - Link to sign up for Capacity L forum

Long Range Significant Outage Plans and 45-day Outage Plans Page

This page provides links to Outage Plans for the Long Range Significant Outages and 45-Day Outage Planning Processes. To receive updates when outage plans are posted or revised, [sign up for the CAPACITY L e-mail forum](#).

[Schedule for NWPP 45-Day Outage Coordination Process](#) - updated 01MAR10

Immediate to Near Term Changes to Outage Plans

45-Day Outage Plan

The following estimates are for information purposes only and are subject to change as studies are done to confirm limits.

September 2010

- [Final Outage Plan with Capacity Estimates for September 2010](#) - Posted 02AUG10
- [Revised Coordinated Outage Plan with Capacity Estimates for September 2010](#) - Posted 29JUL10
- [Coordinated Outage Plan with Capacity Estimates for September 2010](#) - Posted 28JUL10
- [Initial Outage Plan with Capacity Estimates for September 2010](#) - Posted 20JUL10

August 2010

- [Final Outage Plan with Capacity Estimates for August 2010](#) - Posted 01JUL10
- [Coordinated Outage Plan with Capacity Estimates for August 2010](#) - Posted 23JUN10
- [Initial Outage Plan with Capacity Estimates for August 2010](#) - Posted 17JUN10

Additional Information

- WECCNet
 - Customers can sign up to receive WECCNet messages via registration form on the WECC web site at www.wecc.biz under Committees. In the Group Quick Link drop down, select CIIMS, then select Documents.

Network Congestion Validation (aka Stop Hourly Sales)

Network Congestion Validation Overview

- Network Congestion Validation is Stop Hourly Sales
- Objective of the Validation
- When the Tool Is Used
- How the Tool Is Implemented
- How the Tool Logic Works

Network Congestion Validation

- A Tool in BPA Transmission's commercial transaction processing system
- Implemented via a validation check that is applied to TSRs before the Approval state by BPA Transmission
- Allows BPA Transmission systems to disallow new TSR transactions that have non-*de minimis* impacts on specified flowgate
- Documented in the "Network Congestion Validation" bulletin on the BPA Transmission web site:
(<http://www.transmission.bpa.gov/includes/getForCF6.cfm?ID=1835&CFID=7944104&CFTOKEN=19784791>)

Objective of the Validation

- Minimize the exposure to schedules that would impact a flowgate by preventing the granting of additional scheduling rights
 - Used when flowgates are determined to be at risk of excess flows
 - Mitigates the lack of an hourly ATC methodology on our internal flowgates

When the Tool Is Used

- BPA Transmission Dispatch monitors the System Operating Limits (SOLs) and flows on the BPA Transmission flowgates
 - When there are excess flows or a high likelihood of excess flows on a flowgate, dispatch can make the decision to implement the Network Congestion Validation

How The Tool Is Implemented

- Dispatch calls real time scheduling & conveys the need to implement the validation for a specific flowgate and the time period to be covered by the action
- Dispatch posts notice of the event in OASIS Messages under the category "CURTAILMENT"
- Real time Scheduler makes two entries in the system to activate the validation (one for firm & one for non-firm)
- Real time Scheduler terminates these entries, if directed by dispatch that the problem has been relieved before the planned time period

How the Tool Logic Works

- The Network Congestion Validation is applied to all subsequent requests for transmission service (except Resale & Loss Return TSRs) upon the receipt of a TSR
- If there are active Network Congestion Validation entries, TSRs are checked for their explicit impacts on the affected flowgate for the defined time period
- If there are non-*de minimis* impacts, the TSR fails validation
- If a TSR fails this validation, it is “REFUSED” with the message of “Network Congestion”
- Note: Redirect requests are evaluated based on the redirect path only, not based on “net” impacts

iCRS Network Curtailment Calculator (aka Curtailment Advisor)

Overview

- What is Curtailment Advisor
- Curtailment Advisor Tool Objective
- When the Tool is Used
- How the Tool is Implemented
- How the Tool Works
- Curtailment Advisor Tool Example

What is Curtailment Advisor

- This is BPA Transmission's curtailment calculator tool for its network flowgates
- A tool in BPA Transmission's Integrated Curtailment and Redispatch System (iCRS) platform
- Implemented within-hour
- Allows BPA Transmission Dispatcher to curtail scheduled transactions that have non-*de minimis* impacts on specified network flowgates

Curtailment Advisor Tool Objective

- Reduce the actual loading on network flowgates by curtailing scheduled transactions contributing to the high flow
 - Used when flowgates are determined to be at risk of excess flows
 - Mitigates the lack of an hourly ATC methodology on our internal flowgates
 - Provides corrective control (vs. the preventative control of Network Congestion Validation or ATC methodology)

When the Tool is Used

- BPA Transmission Dispatch monitors the System Operating Limits (SOLs) and flows on the BPA Transmission flowgates
- When there are excess flows or a high likelihood of excess flows on a flowgate within the hour, Dispatch can make the decision to implement curtailments
- When BPAT is implementing in-hour curtailments on a flowgate, Dispatch can also make the decision to implement Network Congestion Validation to stop hourly sales in future hours

How the Tool is Implemented

- Dispatch launches the iCRS Curtailment Advisor
- Dispatcher enters the amount of actual flow relief desired on the particular flowgate
- The tool calculates the impact and relief available from every schedule consistent with the Short Term Firm (STF) PUF Calculator:
 - http://www.transmission.bpa.gov/Business/ATC_Methodology/PUF_Calculator_short_term.xls
- E-Tags curtailed by the Curtailment Advisor are identified on the tag by:
 - Congestion on network flowgate. [iCRS#####]

How the Tool Works

- All e-Tags having non-*de minimis* impacts on the network flowgate are identified
- They are sorted by NERC transmission priority
- Schedules within each priority are curtailed pro rata (by the same percentage) to get the necessary relief
- If more relief is needed, then the next NERC transmission priority is curtailed pro rata until relief is achieved

Curtailment Advisor Tool Example

1. Retrieve Tag Stack

ID	POR	POD	Entry Product		PORPTDF	PODPTDF	Entry PTFD	Entry Pot. Relief MW
			MW	Code				
A	BC.US.Border	BPAT.PGEPOD	60	0-NX	0.06517	-0.33497	0.40014	24.0082
B	ChehalisPwr	BPAPower	50	0-NX	0.36190	-0.07776	0.43965	21.9826
C	Centralia	BPAT.PGEPOD	30	0-NX	0.33778	-0.33497	0.67275	20.1825
D	BPAT.PGEPOR	BC.US.Border	65	1-NS	0.46652	0.06517	0.40134	26.0874
E	BC.US.Border	BPAT.PGEPOD	25	1-NS	0.06517	-0.33497	0.40014	10.0034
F	WhtCrkWind	BC.US.Border	38	1-NS	0.32334	0.06517	0.25817	9.8103
G	CENTRALIA	PSEI.SYSTEMPOD	20	1-NS	0.33778	0.08438	0.25340	5.0681

2. Subtotal first priority block (0-NX) and compare with Relief Target (76 MW)

Subtotal 0-NX = 24.0082 + 21.9826 + 20.1825 = 66.1733

Subtotal 0-NX = 66.1733 < 76 = Relief Target

Curtailment Advisor Tool Example, cont.

3. Curtail all 0-NX by **100%**

ID	POR	POD	Entry MW	Product Code	Entry PTDF	Initial %	MW to Curtail	Entry Act. Relief MW
A	BC.US.Border	BPAT.PGEPOD	60	0-NX	0.40014	100.000%	60	24.0082
B	ChehalisPwr	BPAPower	50	0-NX	0.43965	100.000%	50	21.9826
C	Centralia	BPAT.PGEPOD	30	0-NX	0.67275	100.000%	30	20.1825
D	BPAT.PGEPOR	BC.US.Border	65	1-NS	0.40134	0.000%	-	0.0000
E	BC.US.Border	BPAT.PGEPOD	25	1-NS	0.40014	0.000%	-	0.0000
F	WhtCrkWind	BC.US.Border	38	1-NS	0.25817	0.000%	-	0.0000
G	CENTRALIA	PSEI.SYSTEMPOD	20	1-NS	0.25340	0.000%	-	0.0000

4. Calculate Relief Needed

Relief Needed = Target - Current Relief = 76 - 66.1733 = **9.8267**

Curtailment Advisor Tool Example, cont.

5. Subtotal next priority block (1-NS)

Subtotal 1-NS = 26.0874 + 10.0034 + 9.8103 + 5.0681 = 50.9691

ID	POR	POD	Entry Product		PORPTDF	PODPTDF	Entry PTDF	Entry Pot. Relief MW
			MW	Code				
A	BC.US.Border	BPAT.PGEPOD	60	0-NX	0.06517	-0.33497	0.40014	24.0082
B	ChehalisPwr	BPAPower	50	0-NX	0.36190	-0.07776	0.43965	21.9826
C	Centralia	BPAT.PGEPOD	30	0-NX	0.33778	-0.33497	0.67275	20.1825
D	BPAT.PGEPOR	BC.US.Border	65	1-NS	0.46652	0.06517	0.40134	26.0874
E	BC.US.Border	BPAT.PGEPOD	25	1-NS	0.06517	-0.33497	0.40014	10.0034
F	WhtCrkWind	BC.US.Border	38	1-NS	0.32334	0.06517	0.25817	9.8103
G	CENTRALIA	PSEI.SYSTEMPOD	20	1-NS	0.33778	0.08438	0.25340	5.0681

6. Compare with Relief Needed

Subtotal 1-NS = 50.9691 > 9.8267 = Relief Needed

Curtailment Advisor Tool Example, cont.

7. Calculate Initial % for 1-NS block

Initial % = $9.8267 / 50.9691 = 19.280\%$

8. Distribute Initial % and round **MW to Curtail** to nearest MW

ID	POR	POD	Entry MW	Product Code	Entry PTFD	Initial %	MW to Curtail	Entry Act. Relief MW
A	BC.US.Border	BPAT.PGEPOD	60	0-NX	0.40014	100.000%	60	24.0082
B	ChehalisPwr	BPAPower	50	0-NX	0.43965	100.000%	50	21.9826
C	Centralia	BPAT.PGEPOD	30	0-NX	0.67275	100.000%	30	20.1825
D	BPAT.PGEPOR	BC.US.Border	65	1-NS	0.40134	19.280%	13	5.2175
E	BC.US.Border	BPAT.PGEPOD	25	1-NS	0.40014	19.280%	5	2.0007
F	WhtCrkWind	BC.US.Border	38	1-NS	0.25817	19.280%	7	1.8072
G	CENTRALIA	PSEI.SYSTEMPOD	20	1-NS	0.25340	19.280%	4	1.0136

9. Meet Relief Needed?

Subtotal 0-NX Act. Relief = 66.1733

Subtotal 1-NS Act. Relief = 10.0390

Total Relief = 76.2123 > 76

10. End

Comments, Questions and Next Steps

- Today's presentation video will be placed on the BPA website:
http://www.transmission.bpa.gov/customer_forums/wocn/default.cfm
- New Parking Lot issues will be addressed and posted
- Feedback