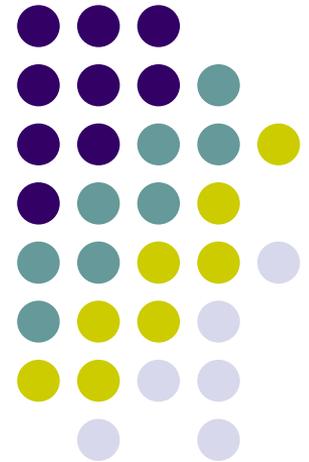
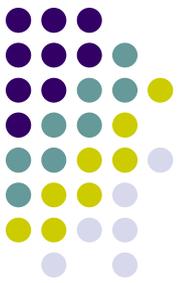


Why BPA Transmission Customers Aggregate Reservations

Feb. 11, 2013



Overview

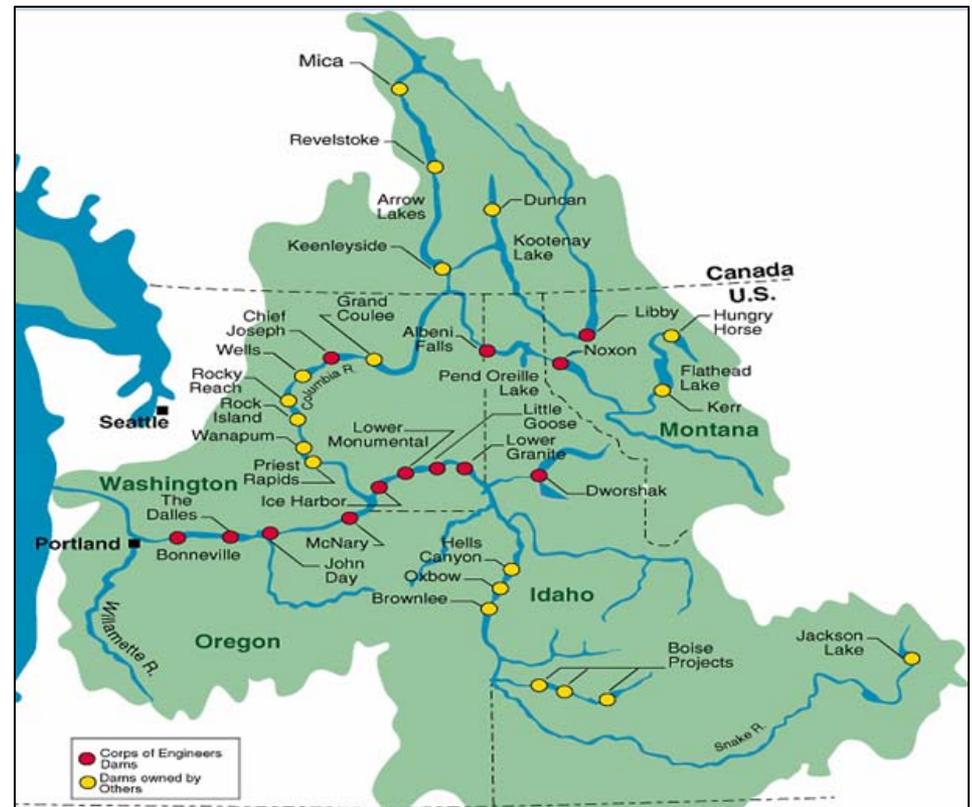


- The purpose of this presentation is to share the need for the aggregation feature within OASIS (currently “resale to self”).
- BPAT requires e-tags for PTP deliveries which identify generation source to load sink, and the type of transmission.
- To facilitate e-tag simplicity, BPAP and other BPAT customers “aggregate” multiple long-term reservations with like scheduling POR/POD (enables LT PTP transmission from a “system sale”).
- Short-term reservations can also be aggregated, but do not have the multiple reservation issue to the extent of long-term reservations from a system sale perspective.
- BPAP and other customers use the “resale to self” functionality in OASIS to aggregate these types of reservations.
- There is no resale involved. BPAT customers aggregate reservations in order to make scheduling less onerous, potentially avoiding unnecessary delays to submission of schedules. Specifically, to manage scheduling and reservations (redirects).

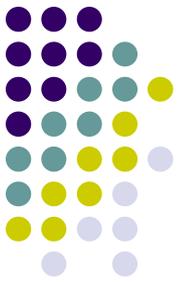


Federal Power is a System Sale

- Federal Columbia River Power System (FCRPS) is made up of over 30 hydro projects and CGS.
- BPAP sells federal power as a system sale. FCRPS is operated in a coordinated manner to enable power sales.
- “BPAPower” is the POR that represents the FCRPS.

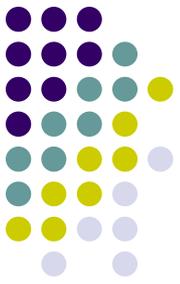


Power Sale



- BPAT requires the Contractual POR (Source field of TSR) and POD (Sink field of TSR) information for granularity when requesting long-term PTP transmission service.
- Information on the Contractual POR for the long-term PTP transmission request is provided by BPAP, and is to support the customer's power purchase from BPAP.
- Every long-term BPAP system sale has its own reservation and may then be aggregated into short-term reservations with like POR/POD and duration.

Aggregation Through Resale NAESB S&CPs (v. 2.1)

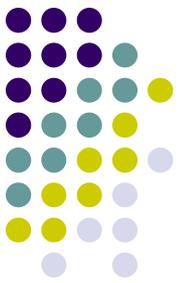


The NAESB standard allows for aggregation:

001-11.3.2 *With the exception of reservations subject to a Conditional Curtailment Option*, the Reseller shall have the right to aggregate multiple reservations into a single Resale provided that each reservation being aggregated is of exactly the same service attribute, priority, product and point of receipt/point of delivery. Long-term Firm Point-to-Point reservations or any other reservations subject to the terms of a Conditional Curtailment Option may not be aggregated to support a Resale.*

*Conditional Curtailment Option is a type of long-term firm PTP, and not related to STCP.

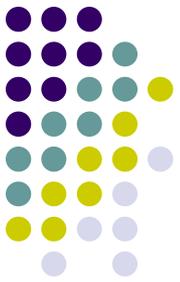
Multiple Reservations associated with a long-term PTP request



- BPAP has several groups fo reservations with like POR/POD and Start/Stop. These groups of reservations were in response to a single request (have identical Start/Stop, and Queue times).

Assign Ref	MW Req	MW Grant	Source	Sink	POR	POD
1800939	1	1	ICEHARBOR115	JOHNDAYINTI500	BPAPOWER	JOHNDAY
1800940	2	2	LITTLEGOOSE500	JOHNDAYINTI500	BPAPOWER	JOHNDAY
1800941	2	2	LOWERGRNT500	JOHNDAYINTI500	BPAPOWER	JOHNDAY
1800942	2	2	LVRMONUMNTL500	JOHNDAYINTI500	BPAPOWER	JOHNDAY
1800943	3	3	MCNARYCNTGS	JOHNDAYINTI500	BPAPOWER	JOHNDAY
1800944	4	4	THEDALSCNTGS	JOHNDAYINTI500	BPAPOWER	JOHNDAY
1800945	5	5	BONNEVILLE115	JOHNDAYINTI500	BPAPOWER	JOHNDAY
1800946	5	5	COLUMBIAGEN500	JOHNDAYINTI500	BPAPOWER	JOHNDAY
1800947	6	6	JOHNDAY500	JOHNDAYINTI500	BPAPOWER	JOHNDAY
1800948	8	8	CHIEFJOECNTGS	JOHNDAYINTI500	BPAPOWER	JOHNDAY
1800949	12	12	GRNDCULEECNTGS	JOHNDAYINTI500	BPAPOWER	JOHNDAY
		50	MW			

Single aggregated short-term reservation



- In order to simplify reservation management and scheduling, each of these long-term reservations with like POR/POD are aggregated to a single, short-term firm reservation of like duration.
- For scheduling and reservation purposes, the POR and POD of the reservation is used.

Assign Ref	MW Req	MW Grant	Source	Sink	POR	POD
1800939	1	1	ICEHARBOR115	JOHNDAYINTI500	BPAPOWER	JOHNDAY
1800940	2	2	LITTLEGOOSE500	JOHNDAYINTI500	BPAPOWER	JOHNDAY
1800941	2	2	LOWERGRNT500	JOHNDAYINTI500	BPAPOWER	JOHNDAY
1800942	2	2	LWRMONUMNTL500	JOHNDAYINTI500	BPAPOWER	JOHNDAY
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1800946	5	5	COLUMBIAGEN500	JOHNDAYINTI500	BPAPOWER	JOHNDAY
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1800948	8	8	CHIEFJOECNTGS	JOHNDAYINTI500	BPAPOWER	JOHNDAY
1800949	12	12	GRNDCULEECNTGS	JOHNDAYINTI500	BPAPOWER	JOHNDAY
		50 MW				



Assign Ref	MW Req	MW Grant	Source	Sink	POR	POD
1234567	50	50			BPAPOWER	JOHNDAY

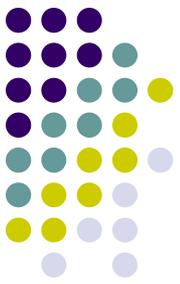
Why are there so many reservations to manage?



Active Market Hubs: The Pacific Northwest has several active power trading hubs.

- Other areas (such as the Eastern Interconnection) do not appear to have active market hubs, and rely on bilateral transactions between BAA's to support unanticipated shortfalls (occurs in very moderate amounts).
- BPA and WECC have many more transactions between multiple entities every day.
- E-tags for deliveries must reflect the appropriate POR/POD combination.

Why are there so many reservations to manage?



- BPAT transmission business model:** BPA preference customers that are in the BPA BAA (or use a portion of it) hold their own BPAT transmission contract (PTP or NT).
- PTP customers that deliver power over BPA system must schedule it (even if the generation and load is within the BA).
 - There is also an active secondary transmission market, which requires OASIS modifications to enable the transactions.