

Segmentation Workshop

May 7, 2014



Agenda

- Analysis of Snohomish Proposal
- New Proposals for the Montana Intertie
 - Gaelectric Proposal
 - PPC Proposal
- Next Steps

Analysis of Snohomish Proposal

- Snohomish's segmentation proposal would exclude "radial" facilities in the Pacific Northwest from the network segment and assign the cost of those facilities to the customers who use those facilities
- BPA has analyzed its system and functionalized its transmission facilities based on criteria proposed by Snohomish. This presentation summarizes that analysis
- BPA is in the process of identifying billing determinants and resultant rate impacts to customers
- With respect to Snohomish's alternative, BPA staff believes that it has faithfully and accurately applied the criteria in the manner intended by Snohomish
- Snohomish reviewed and commented on staff's analysis prior to this presentation
- BPA's analysis of this or any other alternative does not mean that BPA endorses that alternative or the Snohomish definition of radial service

Step 1) Identification of Radial Service

- Criteria presented at April 16th workshop (please refer to that presentation for the criteria)
- Voltage of facilities was not considered in this assessment—strictly a functional analysis
- Each facility was examined and assessed using the criteria (1,522 separate facilities)
- 102 candidates were identified as potentially radial (encompassing 325 separate facilities)
 - Excludes interconnections looped with other transmission owners (e.g., Sno-King Tap (PSE, SCL, SnoPUD), LaPine-Chiloquin (PAC to K-Falls))

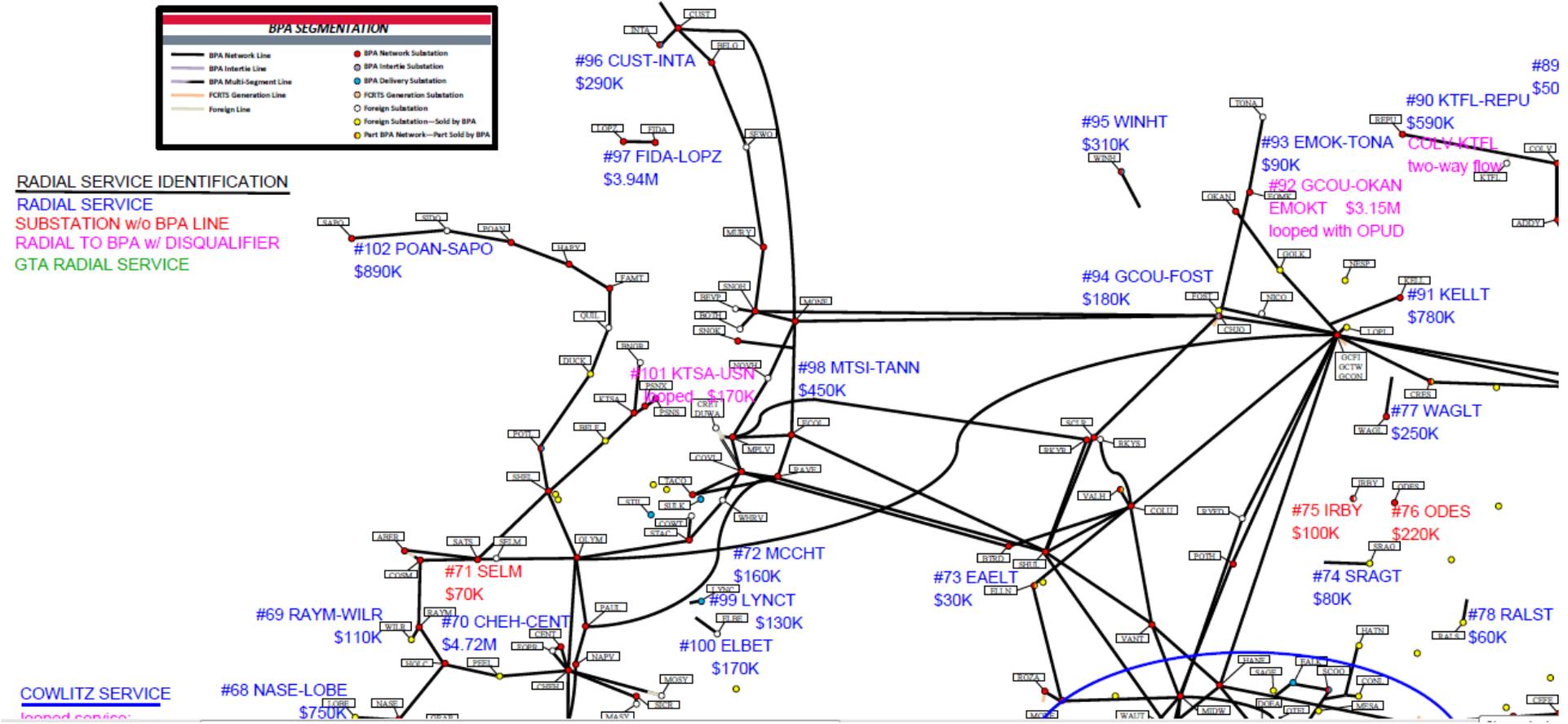
Step 1) Identification of Radial Service

- BPA's facilities were examined as well as facilities beyond BPA ownership
 - If the customer owns the line, it is not radial
 - If the customer interconnects with BPA or another transmission system, completing a closed loop, it is not radial
 - If the interconnection is an open loop, it is radial
- Of the 102 candidates, 31 were excluded due to disqualifying criteria (closed looped service, wheeled or federal generation)
- The 71 remaining instances were deemed to provide radial service

Step 2) Facilities Associated with Radial Service

- For each of the 71 instances, all facilities connected to the radial line(s) are included
 - All Segmentation Study costs that are associated with the identified line(s)
 - Includes lines, substations, switchgear, and meters that are currently in the Network segment

Step 2) Facilities Associated with Radial Service



Step 3) Revenue Requirement Determination

- A rule of thumb was used to estimate the revenue requirement for each facility
 - Rule of Thumb = Investment \times 0.07 + O&M \times 3.01
 - Example: Anderson Ranch—Mountain Home No 1
 - Investment = \$4,449,861; O&M = \$38,869
 - Revenue Requirement = $(\$4,449,861 \times 0.07) + (\$38,869 \times 3.01)$
= \$428,490
- The total revenue requirement for the 71 instances of Radial Service is \$34.53 million
- The total network revenue requirement is \$650.46 million

Step 3) Revenue Requirement Determination

- Radial service facilities comprise 5.3% of the network revenue requirement
 - Two radials amount to \$10K apiece (Dexter tap 0.76mi., Kennewick tap 0.54mi.)
 - 30 of the radials are less than \$100K apiece, which is 0.015% of the network revenue requirement
 - These 30 radials total \$1.52M in revenue requirement
 - The most expensive radial is \$5.08M (Coos-Curry/Bandon service)
 - 6 of the radials are more than \$1M (\$18.3M in total, or 53% of the total radial)
- 31 excluded facilities comprise 2.4% (\$15.6 million)

Step 4) Radial Service Customer Identification

- Identify the points of delivery using the 71 instances of radial service
- 72 customers are identified with at least one POD on radial service facilities
 - Includes Avista (1), Idaho (2), and PacifiCorp (3)
 - For others: 29 are westside, 25 are eastside, 15 are southern Idaho
- 23 customers receive all or most of its service over radial service facilities

Step 5) Transfer Service Radial Service Identification

- Same criteria used for transfer customers (independent of BPA ownership)
- If transferor owns the radial, it is deemed radial service
- If transferor's radial is also used for generation, it is not radial service
- If transfer customer owns the radial, it is not radial service
- Identified 37 instances of radial service for transfer customers
 - 5 of these are already included in the BPA identification
- 25 transfer customers have some load served over radial service
 - 6 of these receive all or most of its service over radial service

Work Still in Progress

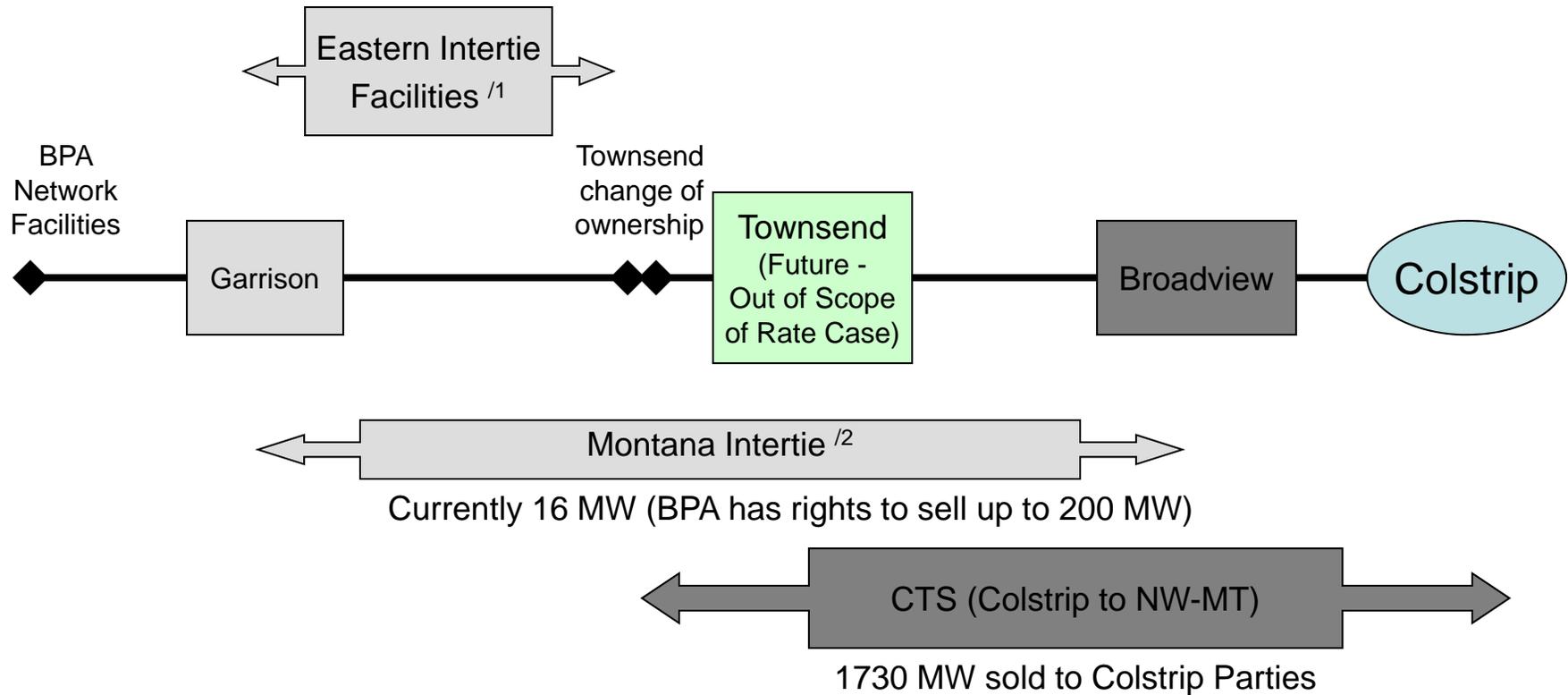
Step 6) Associate Loads/Billing Determinants with Radial Service PODs

- Once complete, calculate a radial service rate
 - $\$34.5\text{M} \div$ total BPA radial service load
- Calculate new Network rates, excluding the \$34.5M
- For transfer customers with radial service, apply the BPA-based rate to the transfer radial service load
- Reduce the PF & IP rates by the transfer radial service revenue
- For each customer, calculate the total annual bill with and without radial service alternative
 - Delta will be due to lower Network rates, lower PF/IP rates, higher radial service charge (where applicable)
- Assumes static state of load service (customer does not shift load from radial POD to network POD)

Gaelectric Proposal

- Roll Montana Intertie rate into Network service
 - Includes all 200 MW that BPA has rights to sell
- Gaelectric proposes that there is a significant benefit in a roll in that eliminates a pancake charge and results in minimal effects to other customers' rates
- Background
 - BPA considered this option in BP-12 and BP-14
 - At that time the Administrator decided not to roll in the rate

Existing Montana Interconnections



/1 Eastern Intertie Facilities have a capacity of 1915 MW per the Montana Intertie Agreement. 1730 MW is sold to the Colstrip Parties at the TGT rate. The Eastern Intertie consists of facilities owned by BPA which are segmented separate from BPA's Network facilities.

/2 The Montana Intertie Agreement identifies an exchange granting BPA capacity rights to 185MW from Broadview to Garrison, which is sold at the IM rate. Only 16MW is sold.

Montana/Eastern Intertie Analysis

- In the Segmentation analysis, BPA identifies assets related to the Eastern Intertie segment. These facilities support multiple BPA transmission services including:
 - Montana Intertie Service (IM)
 - Townsend-Garrison Transmission (TGT)
 - Eastern Intertie Hourly Product
- Any over/under recovery on costs allocated to this segment are allocated to all other segments

Assignment of costs on Eastern Intertie

- Per the IM Agreement, costs associated with the Eastern Intertie are \$12.5M
 - This cost is recovered on a pro rata share between sales of TGT and IM
 - For BP-14:
 - TGT = 1,730 MW (99%)
 - IM = 16 MW (1%)
 - BPA has a right to sell up to 200 MW of IM which would shift the allocation of costs between these two products
 - Eastern Intertie Hourly costs developed based on Eastern Intertie segmented costs (\$9.9M in BP-14) over possible sales (1,930 MW)
 - No use of the product forecast in BP-14

Treatment of Revenues

- BPA recognizes revenue received as IM and TGT as credits against the segmented Revenue Requirement for the Eastern Intertie
- Any under/over recovery is allocated among other segments based on Net Plant Investment

● Ex:

Eastern Intertie in BP-14	
Eastern Intertie Segmented Revenue Requirement	\$9.9M
Revenue Credits *	-\$0.9M
less IM Revenues	-\$0.1M
less TGT Revenues	-12.4M
Remaining Revenue Requirement	-3.5M

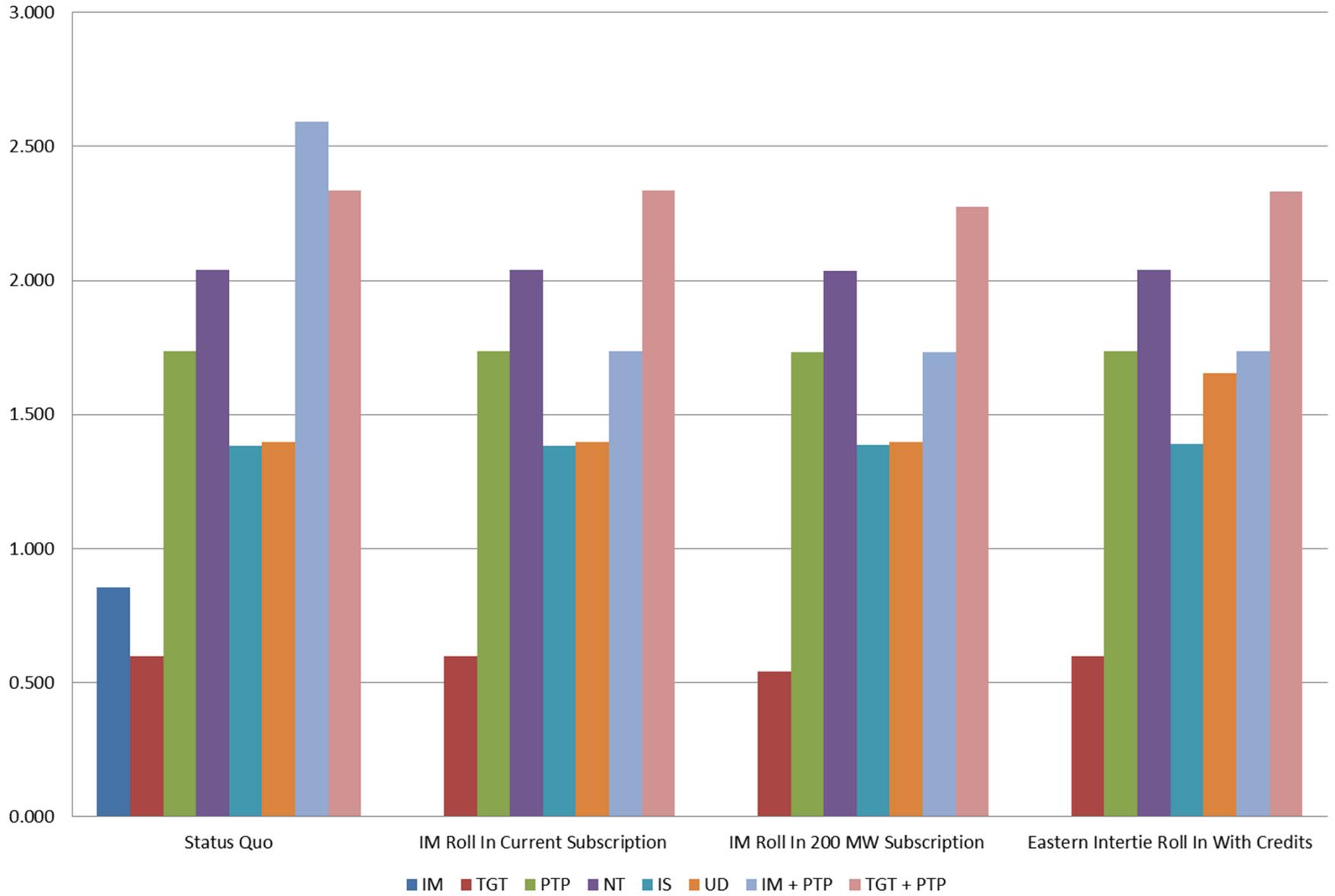
<----Credit allocated to all other segments based on net plant investment

*Revenue Credits not including TGT

Eastern/Montana Intertie Scenarios

	Scenario 1	Scenario 2	Scenario 2a	Scenario 3
	Status Quo	IM Roll In Current Subscription (16 MW)	IM Roll In 200 MW IM Subscription	Eastern Intertie Roll In with Credits
Eastern Intertie Investment	Separate segment	Separate segment	Separate segment	Investment rolled into Network
IM Rate	Collected based on share of Eastern Intertie costs	Eliminated. Customers pay only Network rate	Eliminated. Customers pay only Network rate . Assumes additional sale of 184 MW on the Network	Eliminated. Customers pay only Network rate
TGT Credits	Collected based on share of Eastern Intertie costs per Montana Intertie Agreement. Credited to Eastern Intertie segment	Collected based on share of Eastern Intertie costs per Montana Intertie Agreement. Credited to Eastern Intertie segment	Collected based on share of Eastern Intertie costs per Montana Intertie Agreement. Credited to Eastern Intertie segment	Collected based on share of Eastern Intertie costs per Montana Intertie Agreement. Credited to Eastern Intertie segment

Rates Under Various Montana/Eastern Intertie Scenarios



Rates and Rate Impact Under Various Montana/Eastern Intertie Scenarios

	Status Quo	IM Roll In		IM Roll In 200 MW Subscription		Eastern Intertie Roll In With Credits	
	Rate	Rate	Change from Status Quo	Rate	Change from Status Quo	Rate	Change from Status Quo
IM	\$ 0.855	\$ -	-100%	\$ -	-100%	\$ -	-100%
TGT	\$ 0.598	\$ 0.598	0%	\$ 0.541	-10%	\$0.598	0%
PTP	\$ 1.736	\$ 1.737	0%	\$ 1.734	0%	\$1.735	0%
NT	\$ 2.041	\$ 2.041	0%	\$ 2.037	0%	\$2.040	0%
IS	\$ 1.385	\$ 1.385	0%	\$ 1.386	0%	\$1.390	0%
UD	\$ 1.399	\$ 1.399	0%	\$ 1.399	0%	\$1.399	0%
IM + PTP	\$ 2.591	\$ 1.737	-33%	\$ 1.734	-33%	\$1.735	-33%
TGT + PTP	\$ 2.334	\$ 2.335	0%	\$ 2.275	-3%	\$2.333	0%

Rates Include SCD where applicable

PPC Proposal for Montana Intertie



Next Steps

- Starting in mid-May, BPA will request customer involvement in developing a white paper on the regional Segmentation discussion
 - This paper will inform the BPA executives for making the decision on a Segmentation methodology for the Initial Proposal
- June 11 workshop will conclude Segmentation discussion (just-in-case—June 25 on calendar)

BP-16 Segmentation Timeline

JAN	FEB	MAR	APR	MAY	JUN
<p>Jan 28 Workshop: Kick-Off</p>	<p>Feb 19 Workshop: Principles development and benchmarking</p>	<p>Mar 20 Workshop: Customer Proposals</p>	<p>Apr 16 Workshop—Share work-in-progress</p>	<p>May 7 Workshop—Share work-in-progress</p> <p>Mid-May Transmit draft white paper to customers</p> <p>Mid-May Provide customers expectations on what feedback is needed for the white paper</p> <p>End of May Customer’s white paper comments due</p> <p>May 29 Workshop—Share final analytical results</p>	<p>June 11 Workshop—review white paper</p> <p>June 25 Workshop, if needed</p>