

**EXH. PKW-10
DOCKET UE-20____
2020 PSE PCORC
WITNESS: PAUL K. WETHERBEE**

**BEFORE THE
WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION**

**WASHINGTON UTILITIES AND
TRANSPORTATION COMMISSION,**

Complainant,

v.

PUGET SOUND ENERGY,

Respondent.

Docket UE-20____

**NINTH EXHIBIT (NONCONFIDENTIAL) TO THE
PREFILED DIRECT TESTIMONY OF**

PAUL K. WETHERBEE

ON BEHALF OF PUGET SOUND ENERGY

DECEMBER 9, 2020

Fund Raver-Paul Upgrades for BPA Transmission Purchase



EMC Decisional

Brian Tyson
Senior Engineer, Energy Delivery

June 21st, 2018

Recommendation

- **Participate in the Raver – Paul flowgate upgrades to enable purchase of 183 MW of BPA transmission**
- Overview:
 - 183 MW of BPA transmission service includes:
 - Mint Farm: 15 MW
 - Goldendale: 18 MW
 - LSR: 75 MW
 - Hopkins: 75 MW (pending 2018 re-study)
 - Estimated \$750k for shared upgrade costs with other utilities (including BPA OH costs)
 - Incremental Transmission cost would be \$1.6M/yr. for LSR, \$323k/yr for Mint Farm and \$387k/yr for Goldendale
 - Transmission cost for Hopkins would be \$1.6M/yr but is not an incremental cost
 - Contracts will be renewed indefinitely



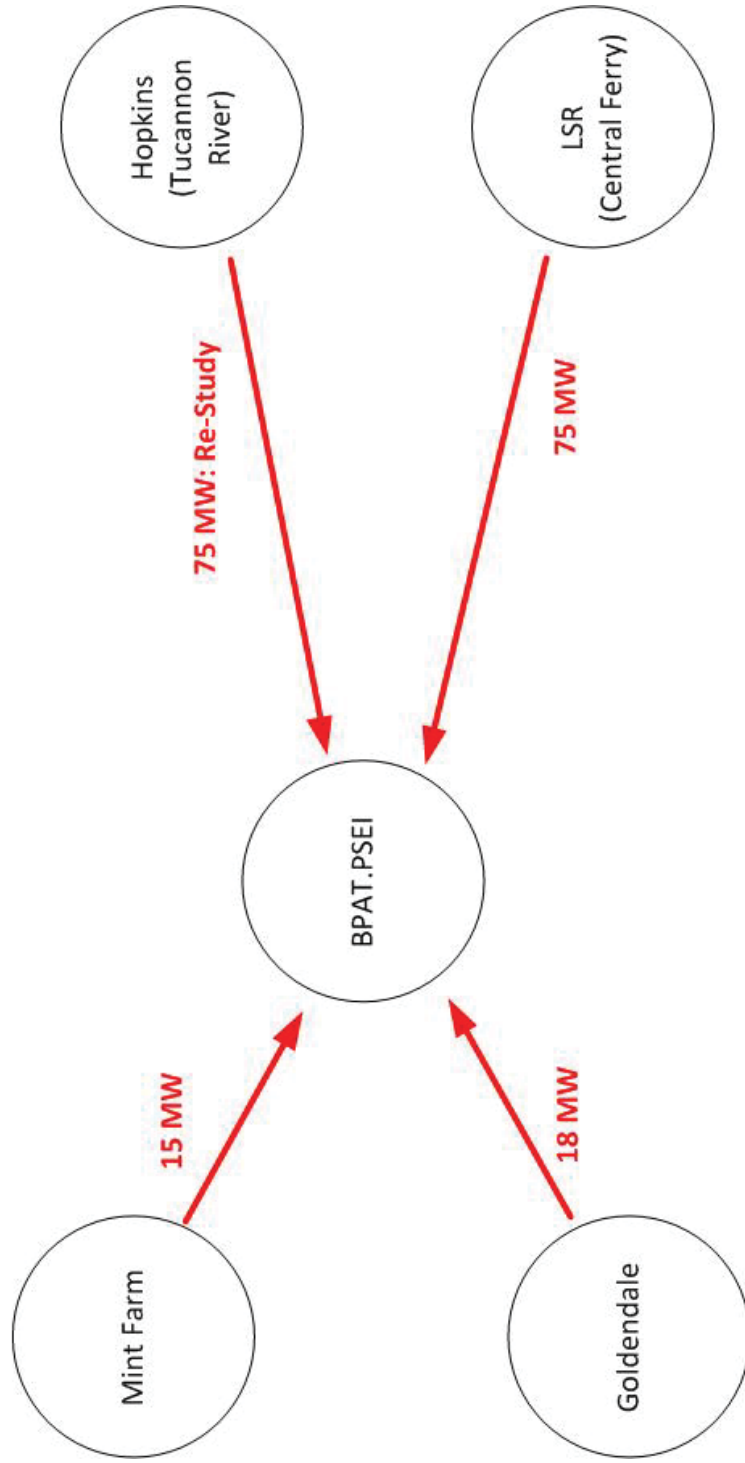
Background

- 2011 WUTC GRC Final Order: PSE is expected to provide for any renewal or acquisition of firm transmission “a full and detailed justification showing the prudence of this expense if the Company expects to continue to recover it in rates.”
- In 2016, PSE submitted a 15 MW TSR for Mint Farm and a 18 MW TSR for Goldendale to accommodate capacity increases from these two thermal plants.
 - 2016 Cluster Study determined that both TSRs require Raver-Paul upgrades to grant service
- 150 MW BPA transmission from Hopkins ends in March 2024 with no rollover rights due to a unique transmission agreement with BPA
 - PSE submitted transmission service requests (TSRs) to replace the expiring transmission, two from Hopkins and two from LSR
 - One 75 MW TSR for LSR requires Raver-Paul upgrades to grant service
 - One 75 MW TSR for Hopkins will most likely require Raver-Paul upgrades to grant service. Potential for additional upgrades following the results of the 2018 Cluster Study
- This EMC presentation is to request approval to move forward with the Raver-Paul Upgrades.

CONTRACTS FOR PURCHASE:			
Project	Start	Term	MW
Mint Farm	5/1/2017	5/1/2022	15
Goldendale	9/1/2016	9/1/2021	18
LSR	3/1/2024	3/1/2029	75
Hopkins	3/1/2024	3/1/2029	75
TOTAL			183



Mint Farm, Goldendale, LSR and Hopkins Cluster Study Results



Key Considerations for Funding Upgrades

- 2016 Cluster Study identified Raver – Paul upgrades
 - Preliminary Engineering Agreement shared cost is \$9k
 - Potential increase to \$100k depending on participants
 - Estimated construction shared cost with other utilities ranges from \$65,000 - \$750,000
 - Shared cost is dependent on number of parties that participate in upgrades
 - Applicable to all 4 transmission service contracts
- Current information from BPA suggests PSE’s ability to obtain this transmission in the future is very limited and uncertain
 - If we forego the opportunity now; it might be difficult to purchase the transmission capacity in the future
 - Analysis of BPA Long-Term Pending Queue indicates lack of future capacity on Cross Cascades and West of McNary Flowgate



Key Considerations for Funding Upgrades

- Additional capacity from Mint Farm (15 MW) and Goldendale (18 MW) and provides a \$15M portfolio benefit
- LSR 75 MW Contract
 - Uses include future phase at LSR, redirect elsewhere in BPA system, or resell to third party
- Hopkins 75 MW contract
 - Most likely to be granted following results in the 2018 Cluster Study
 - Raver-Paul upgrades
 - BPA/Avista/PSE agreement – local grid capacity
 - If Hopkins transmission is not replaced by 2024, PSE would have to replace the lost wind production with another renewable resource



Incremental Transmission Costs

Project	Demand	Calculation	Cost
Mint Farm	15 MW	BPA Transmission Rate (\$22/kW-yr)	\$323k/Yr
Goldendale	18 MW	BPA Transmission Rate (\$22/kW-yr)	\$387k/Yr
LSR	75 MW	BPA Transmission Rate (\$22/kW-yr)	\$1.6M/Yr
Total Cost			Yearly Cost: \$2.3M



Next Steps

EMC approves participation in BPA's Raver – Paul upgrade project to enable purchase of 183 MW of BPA transmission

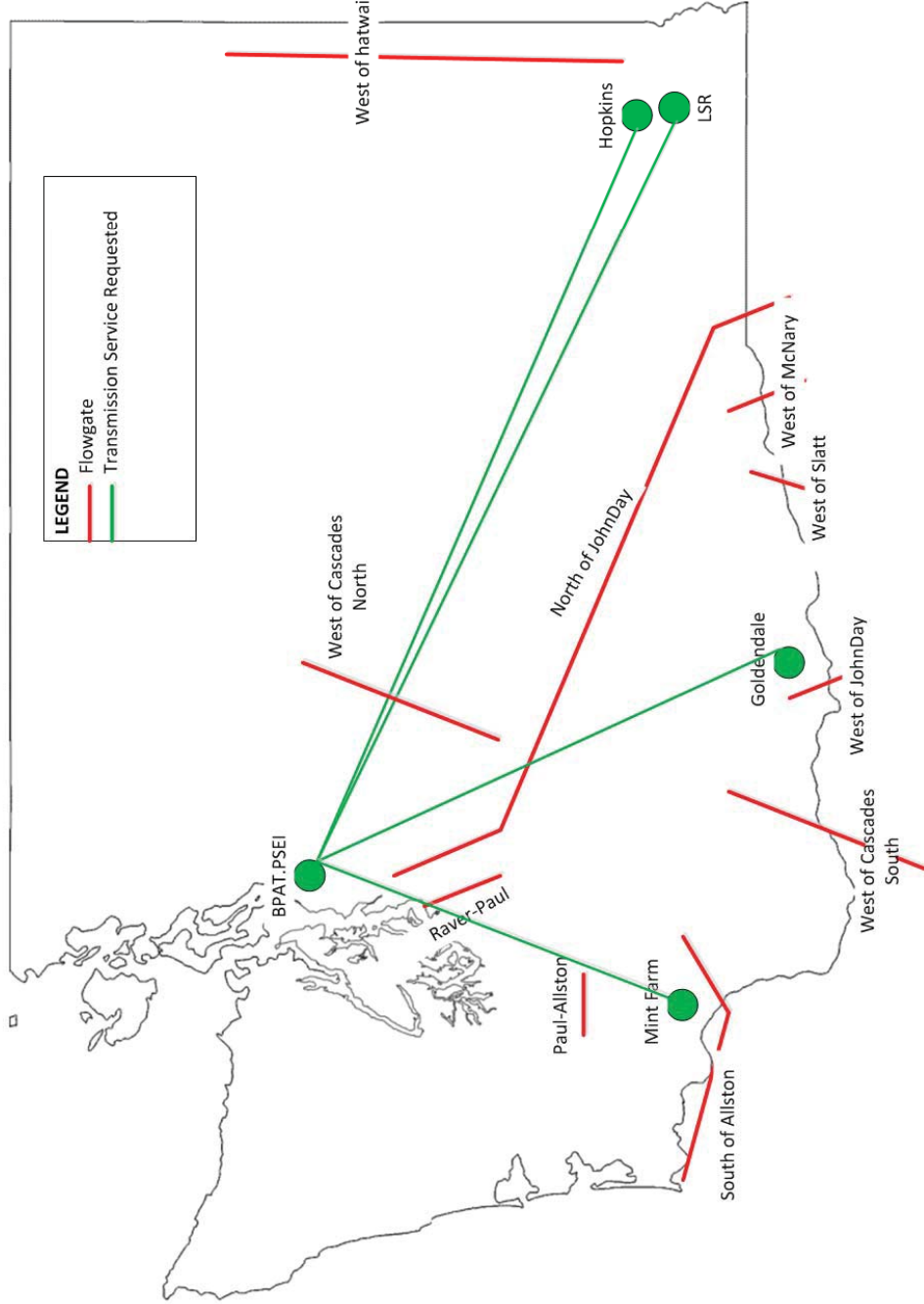


Appendix



June 21st, 2018

LSR, Goldendale, Mint Farm Flowgate Map



Alternative Uses for LSR 75 MW Transmission Purchase

<u>ALTERNATIVE USES</u>	<u>BENEFITS</u>	<u>RISKS</u>
Redirect (if not used for Hopkins)	<ul style="list-style-type: none"> Flexibility to utilize at MidC or other transmission needs 	<ul style="list-style-type: none"> Future uncertainty in redirecting transmission with future BPA transmission congestion If unable to redirect, PSE could be paying for unused transmission
Future LSR expansion or RFP Proposals (if not used for Hopkins)	<ul style="list-style-type: none"> Secures transmission for future renewable developments 	<ul style="list-style-type: none"> Uncertainty in the timing and development of LSR expansion and RFP projects



BPA Long term Queue Analysis

- Pending queue data was pulled on June 13, 2018 and is publically available on bpa.gov/transmission
- Queue analysis indicates that if PSE does not purchase, next requesters in the queue could reserve capacity into perpetuity
- Should PSE place new request in queue, it would enter the bottom of the queue, behind all other requests
- Upcoming BPA transmission model changes and no-build policy could affect PSE’s ability to purchase long-term transmission in future

Future Outlook of North Cascades North Flowgate

	2019	2020	2021	2022	2023	2024	2025	2026	2027
Remaining ATC (MW)	481	389	310	216	121	0	0	0	0
Less Pending Queued Requests (MW)	(726)	(689)	(278)	(656)	(749)	(798)	(1,075)	(1,169)	(1,179)

