EXH. PKW-9C
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____**

EIGHTH EXHIBIT (CONFIDENTIAL) TO THE PREFILED DIRECT TESTIMONY OF

PAUL K. WETHERBEE

ON BEHALF OF PUGET SOUND ENERGY

REDACTED VERSION

DECEMBER 9, 2020

Shaded information is designated as Confidential per WAC 480-07-160

Talen Energy BPA Transmission RFP

PUGET SOUND ENERGY

EMC Decisional

May 20, 2019

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Tom Flynn
Manager, Energy Delivery

Recommendation

- **Submit [redacted] bid to Talen Energy for 50 MW BPA Point-to-Point transmission contract for 5 year term**
- Overview
  - Talen Energy seeking bids on two 50 MW BPA PTP contracts from Northwestern's system. Bids due May 22.
  - Contracts are 5-yrs starting 1/1/2020
  - BPA Transmission rate $22.2/KW – Yr, with PSE assumption of 3% annual escalation rate
  - Potential uses include 1) delivery of a seasonal or multi-year PPA, 2) transmission for a future MT wind resource, or 3) redirected elsewhere in BPA system for EIM or new renewable resource

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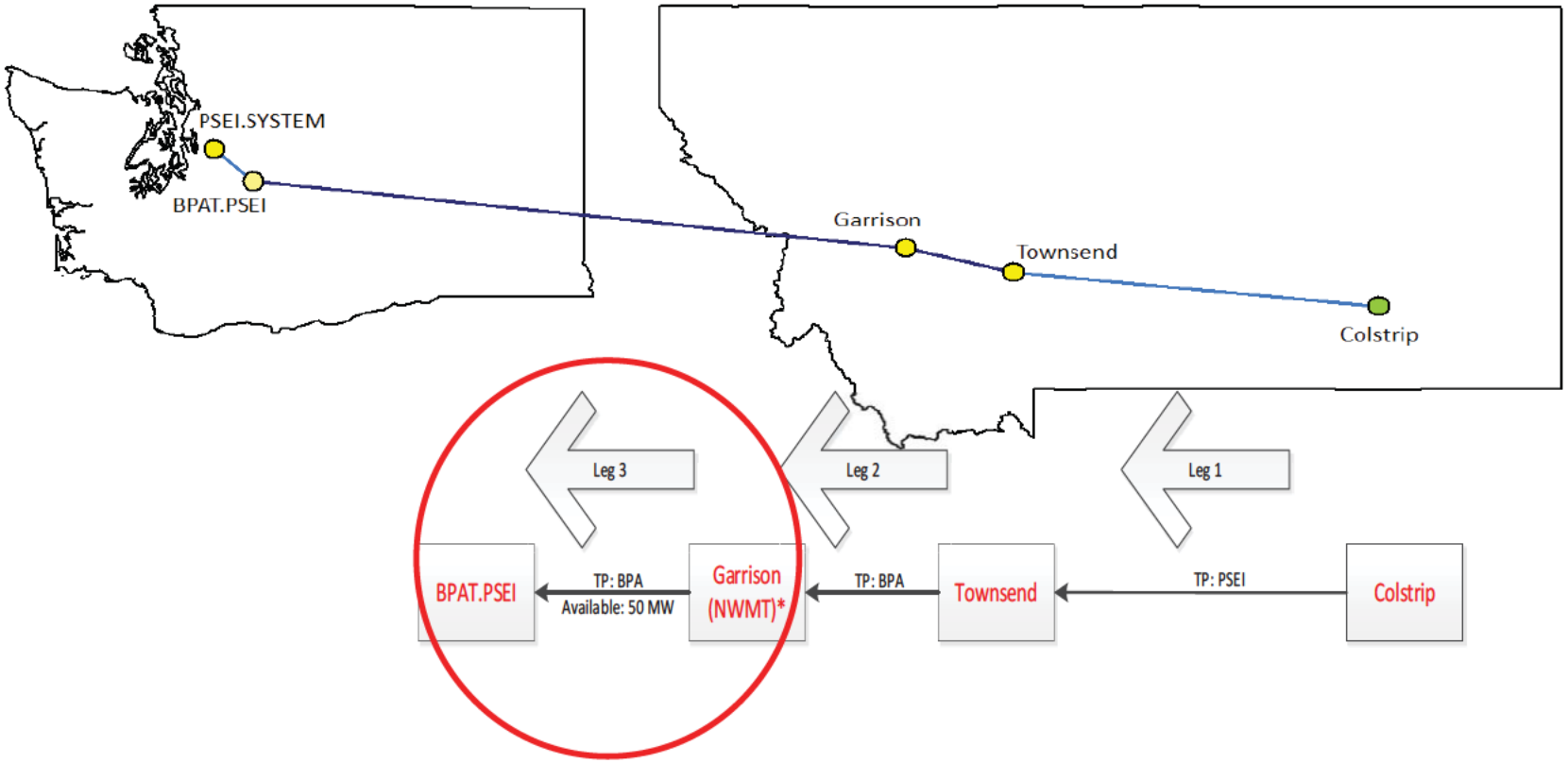
Background

- 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."
- The team is proposing to bid on a 50 MW BPA contract for delivery from NWMT (Garrison230kV) to PSE system.
- Bids are binding and due May 22, 2019 by 10 a.m. MDT.
- Transmission contracts are reassigned to successful bidder who retains rollover rights

CONTRACT FOR PURCHASE				
POR/POD	Start	Term	MW	5-yr Cost
NWMT - PSE	1/1/2020	12/31/2024	50	$5.5M

Colstrip Transmission Paths



Alternatives Uses of New Transmission

ALTERNATIVES	BENEFITS	RISKS

Transmission for Future MT Wind Resource	• Secures additional transmission for future wind development in Montana
	• Secure transmission today that is unlikely available in future
	  ◦ Lack of future capacity on Cross Cascades North flowgate
	• Addresses future transmission shortage to meet Clean Energy Standard
		• Unused BPA Transmission until COD
		  ❑ Mitigate near-term surplus by using for short-term contract/PPA, reselling/remarketing transmission or with redirects
		• No capacity on other Tx wheels in Montana

Seasonal Energy Contract or Multi-year PPA	• Secure added capacity for winter peak • Currently net short within resource adequacy plan for winter months. (see Appendix)	• No counterparty in MT for contract or PPA • If unable to redirect or resell, PSE could be paying for unused transmission (5-yr Power Cost: $5.5M)
Transmission Redirects	• Flexibility to utilize at MidC, EIM paths, or other new renewable resource	• Future uncertainty in redirecting transmission with future BPA transmission congestion • If unable to redirect or resell, PSE could be paying for unused transmission (5-yr Power Cost: $5.5M)

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Pricing Considerations & Regulatory Risk

- **Pricing Structure**
  - BPA Wheel: $5.5M over 5 years
  - Bid premium paid to Talen: One time payment
- **Bid Premium Pricing Strategy**
  - BPA Upgrade Costs on Garrison – PSEI path
    - [redacted] (Letter of Credit Interest on Collateral)
  - Portfolio Benefit: MT Wind Project Compared to WA Wind
    - [redacted]
  - Recommended Bid: [redacted]
  - Potential Competitor: Powerex (200 MW in BPA queue)
- **Regulatory Risk**
  - Meeting prudency requirements
  - If prudency is met, lag in rate recove

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Future Transmission Considerations

- **Clean Energy Standard Transmission Challenges**
  - Resource Need: Over 5,000 MW of new renewables
  - Transmission: Have ~2,000 MW in portfolio that might be usable
  - Not even half of what may be needed…
- **Regional Transmission Constraints**
  - Cross Cascades Transmission (see Appendix)
  - BPA's I-5 Corridor Project Cancelled
  - Transmission Corridors Built for Fossil Fuel Resources, not Renewables
- **Revised Prudency Strategy?**
  - Proactively seek Tx to renewable resource "zones"
  - Secure Tx in advance of renewable resources RFPs
  - Look for Tx freed up by coal or other generation plant closures
  - Regional collaboration

Recommendation

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Submit [redacted] bid to Talen Energy for 50 MW BPA Point-to-Point transmission contract for 5 year term

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Appendix

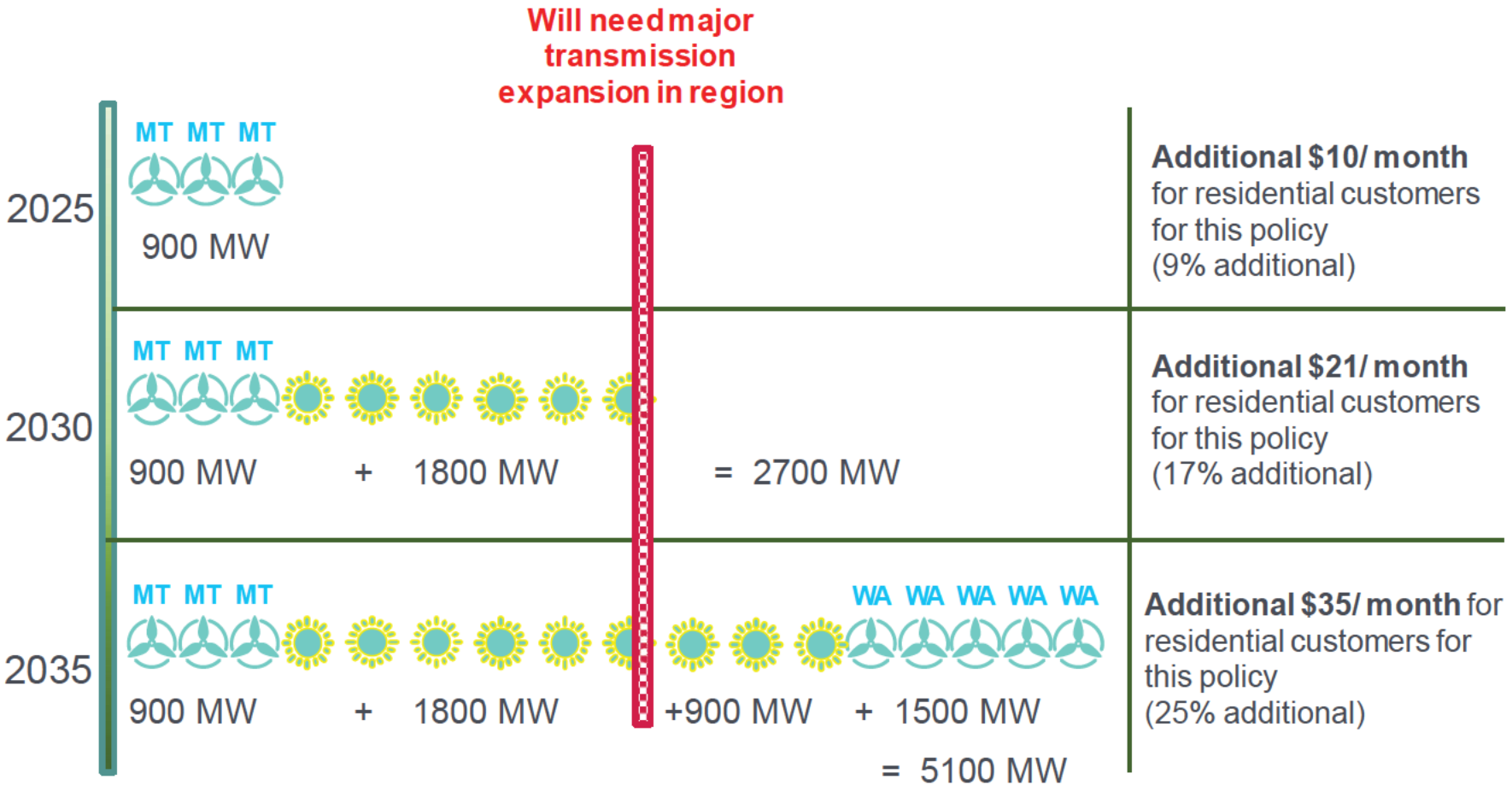
May 20th, 2019

Potential Resource Adequacy Mitigation

December 2019 RA Need	~(400)
Talen Tx RFP	*50*
EIM Redirect	150
LSR + Hopkins Redirect	100
BPA Delivered	100
Net Position	0

Renewable Resource Capacity Additions

Each icon represents 300 MW of wind or solar generation



- May be able to redirect existing transmission for new resources through 2030
- Requires regional studies by BPA/ Columbia Grid and possibly upgrade costs
- Continuing beyond 2030, major regional transmission expansions will be needed

BPA Long term Queue Analysis

- Pending queue data was pulled on May 13, 2019 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

	2020	2021	2022	2023	2024	2025	2026	2027	2028
Remaining ATC (MW)	758	732	705	648	474	417	359	301	242
Less Pending Queued Requests (MW)	379	13	(502)	(553)	(832)	(888)	(746)	(803)	(856)

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Portfolio Benefit Comparison

Analysis shows a [redacted] ortfolio benefit of Montana Wind compared to Washington Wind.

	MT Wind	WA Wind	Battery *	Total WA Wind
MW	50	57	40	97
Output MWh	185,972	185,972		185,972
Capacity Factor	42%	37%		
Peak Capacity Credit %	45%	6%	42%	
Peak Capacity Credit	21	4	17	21
Transmission Cost $/kW-Year	73.56	35.73		

Cost Difference ($ in Millions):

For WA Wind: [redacted]

For MT Wind: [redacted]

**Battery was included to provide for identical peak capacity credit for Washington Wind since Washington's Wind Capacity credit is only 6% compared to Montana's Wind Capacity credit of 45%*

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BPA's Transmission Upgrades (Costs)

Montana to Washington (M2W) Project Cost = $140M

Garrison to Ashe (GASH) Project Cost (Project complete 2029) = $1,060M

Total Transmission Upgrade Costs for Garrison TSRs = $1,200M

Total TSRs in BPA's Active Queue = 965 MW

Estimated Upgrade Cost for Talen 50 MW TSR = $62M

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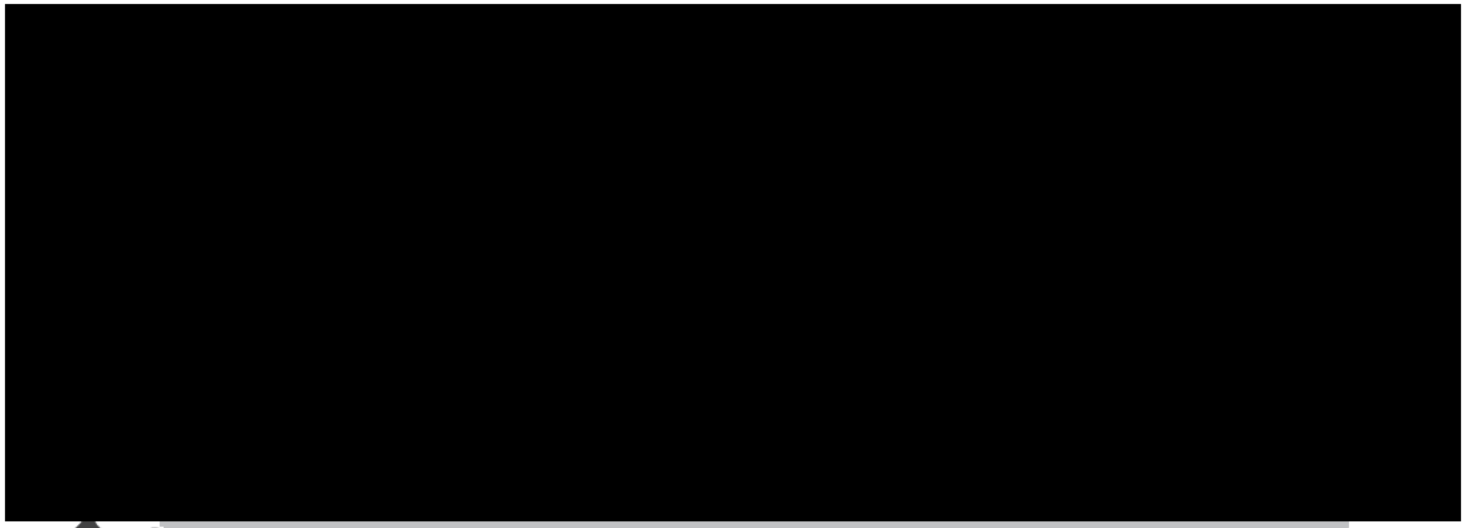
Current BPA policy requires transmission customer to post collateral for their share of project upgrades costs.



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