EXH. PKW-6
DOCKETS UE-19___/UG-19___
2019 PSE GENERAL RATE CASE
WITNESS: PAUL K. WETHERBEE

BEFORE THE
WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION, **Complainant,** **v.** **PUGET SOUND ENERGY,** **Respondent.**	**Docket UE-19____** **Docket UG-19____**

FIFTH EXHIBIT (NONCONFIDENTIAL) TO THE PREFILED DIRECT TESTIMONY OF

PAUL K. WETHERBEE

ON BEHALF OF PUGET SOUND ENERGY

JUNE 20, 2019

150 MW Mid-C Transmission Purchase

PUGET SOUND ENERGY

EMC Decisional

John Mannetti
Director, Energy Ops Resource Planning and Asset Management
Sylvia Gard
Engineer, Energy Delivery

October 19th, 2017

Recommendation

Accept 150 MW BPA Mid-C transmission contract for 5 year term

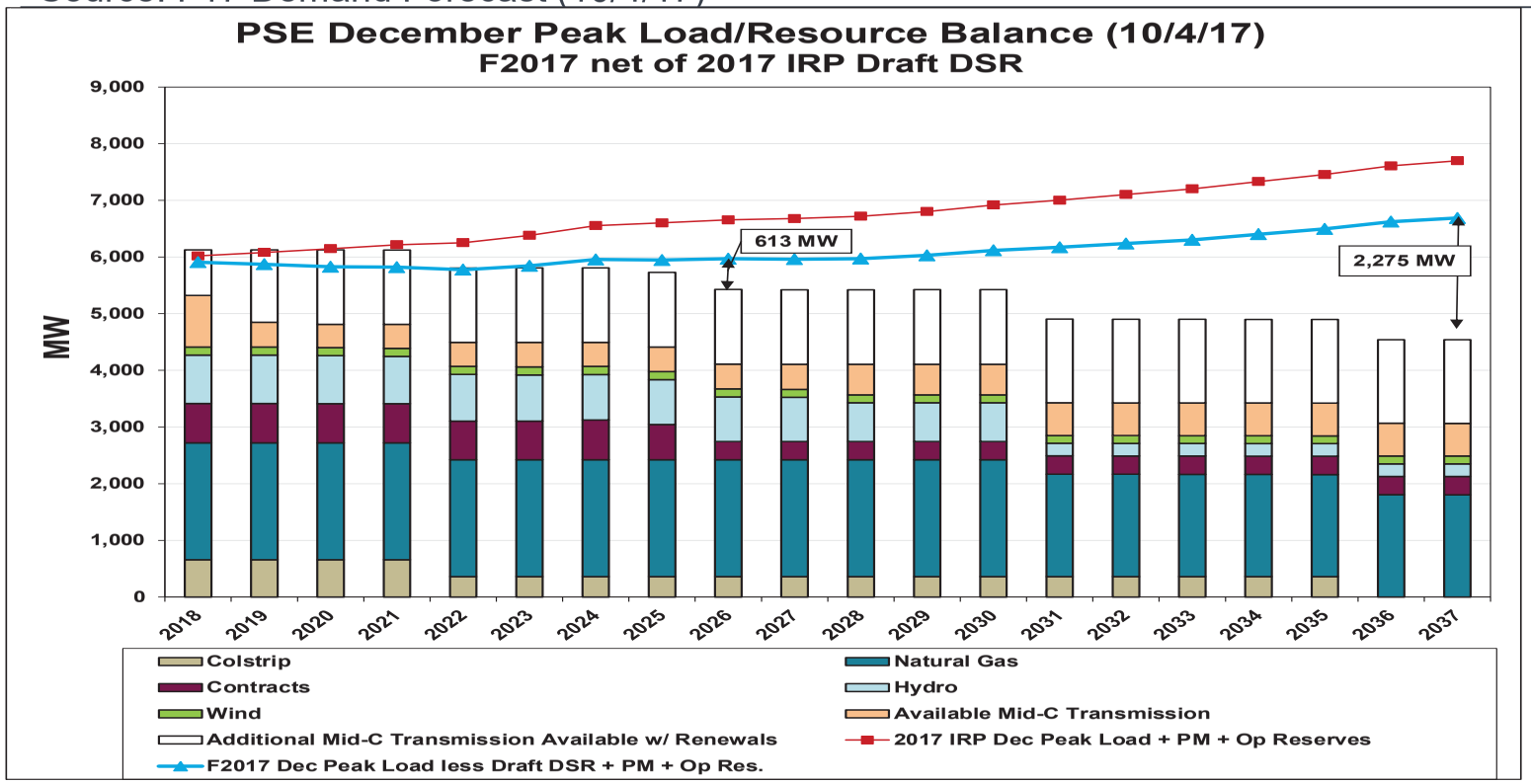
Overview:

- PSE requested 150 MW transmission in 2013
- BPA has granted 100 MW transmission contracts and 50 MW transmission are anticipated in the coming weeks
- 100 MW contracts start Nov 2018 and anticipated 50 MW start in Nov 2017
- Purchase rate $21.52/KW – Yr, with PSE assumption of 3% annual escalation rate
- Contract is renewed indefinitely
- This is a Mid-C resource-specific transmission contract

WHY?

Short-fall of Mid-C Transmission in 2022

Source: F17 Demand Forecast (10/4/17)



Deficit/(Surplus) - MW	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
F17 (10/4/17)	(107)	(46)	22	93	446	574	746	874	1,228	1,256	1,298	1,380	1,493	2,099	2,202	2,301	2,432	2,557	3,067	3,157
F17 after 17 IRP DSR	(146)	(160)	(220)	(272)	19	101	226	307	613	600	613	674	765	1,338	1,418	1,496	1,605	1,709	2,201	2,275

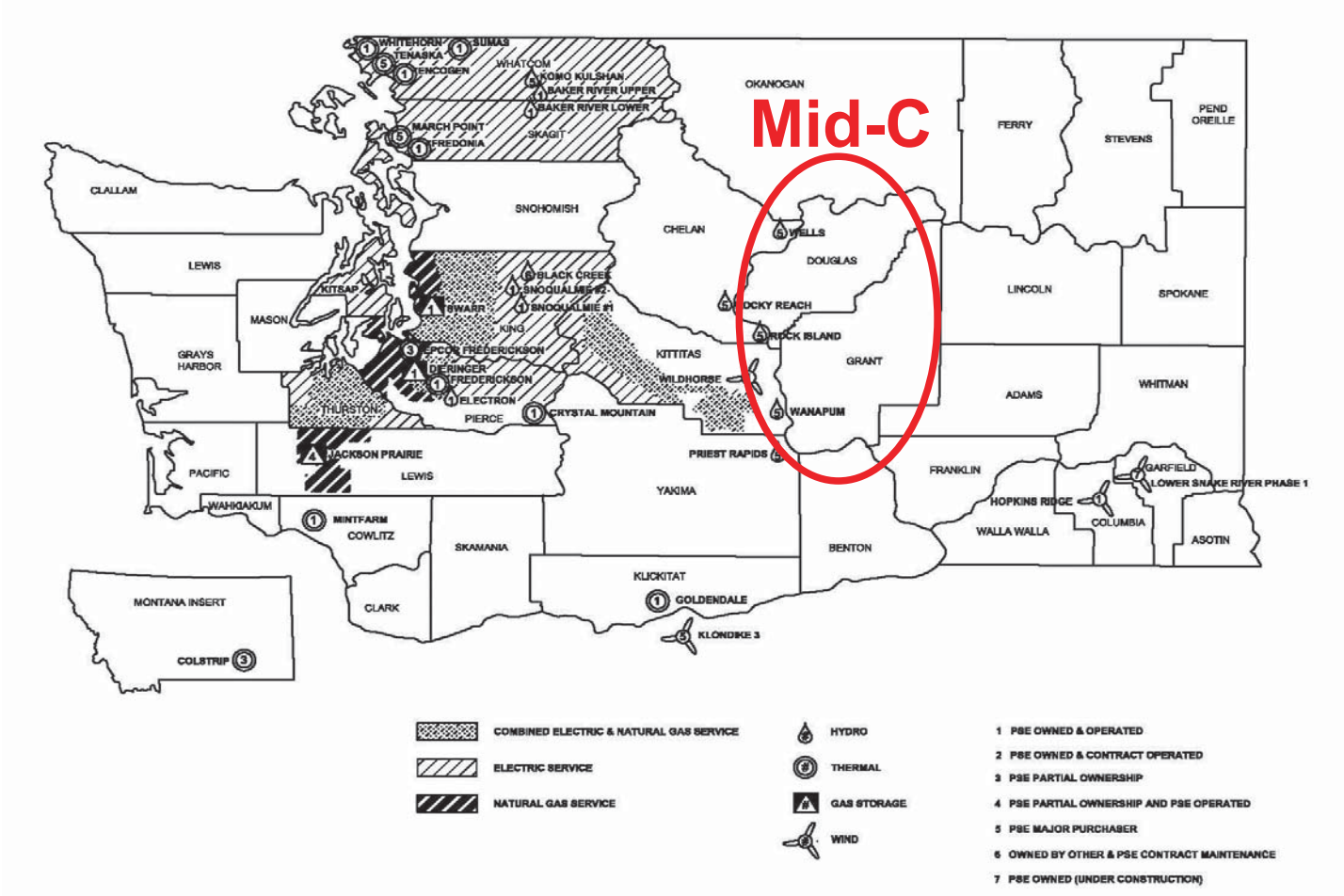
PUGET SOUND ENERGY

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."
- PSE had submitted 150 MW Mid-C transmission to BPA due to a projected shortage of Mid-C transmission in the 2018 timeframe. These transmission requests have been in "STUDY" status in BPA's transmission queue
- The requests had been identified in 2013 Network Open Season (NOS) as needed upgrades. However, BPA has now identified that no upgrades are needed
- BPA transmission contracts are generally renewed for the minimum term of 5 years to retain renewal rights and allow flexibility to reevaluate transmission need

CONTRACTS FOR PURCHASE:			
Project	**Start**	**Term**	**MW**
Sickler	11/1/2018	11/1/2023	50
Vantage	11/1/2018	11/1/2023	50
Vantage	11/1/2017	11/1/2022	50
Total			**150**

Remote Resource Map - Mid-C Resources



PUGET SOUND ENERGY

Key Alternatives

ALTERNATIVES	RISKS
Acquisition of New Transmission	• Increased reliance on bi-lateral market • Increased BPA Transmission cost
Defer the Acquisition of New Transmission	• Future BPA transmission uncertain/limited • Lack of capacity on Cross Cascades North flowgate • Mitigate near-term surpluses by reselling/remarketing transmission
Construct Natural Gas Peaker Plant	• Foregoing 150 MW of new transmission leaves PSE 113 MW short in 2025 • Contracting new transmission is appreciably cheaper • Portfolio benefit for 150 MW of new transmission ranges between $40 to $58 million depending on the scenario • Delays new peaker build from 2025 to 2026 and has a ripple effect in the timing of builds in the proceeding years
Demand Response	• Acquiring new transmission does not displace demand response nor conservation • The timing of demand response and conservation was not evaluated
Redirect LSR – Hopkins Transmission to Mid-C	• Reduced risk of purchasing short-term transmission or curtailing wind output* • Future BPA policy may shift to more expensive daily purchases

* Purchasing short-term transmission for LSR – Hopkins during event of redirecting monthly firm transmission from LSR – Hopkins to Mid-C during Nov-Mar

PUGET SOUND ENERGY

Recommendation

EMC approves the purchase of 150MW of Mid-C Transmission

Appendix

October 19th, 2017

BPA Long term Queue Analysis

- Pending queue data was pulled on October 16, 2017 and is publically available on bpa.gov/transmission
- Queue analysis indicates that if PSE does not renew, 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

	2018	2019	2020	2021	2022	2023	2024	2025	2026
Remaining ATC (MW)	552	579	490	400	309	217	125	31	0
Less Pending Queued Requests (MW)	(726)	(689)	(585)	(642)	(727)	(683)	(699)	(793)	(824)

Peak Need for the F17 Forecast

Deficit/ (Surplus) - MW	2018	2019	2020	2021	2022	2023	2024	2025
Before Conservation	(107)	(46)	22	93	446	574	756	874
After Conservation	(138)	(136)	(172)	(202)	98	182	314	404
Conservation + DR	(146)	(160)	(220)	(272)	19	101	226	307
Cons. + DR + Redirect	(334)	(348)	(408)	(460)	(170)	(90)	32	113

Portfolio Benefit Model Assumptions

- Base Case: 2017 IRP Clean Air Rule Scenario
- Updated load and peak requirements based on the F2017 load forecast
- Transmission counts as peak capacity by displacing future capacity resources
- Tested 100 MW and 150 MW of new transmission with ongoing renewals:
  - 100 MW - 11/1/2018 & 50 MW 11/1/2017
  - 2018 costs: $21.52/KW-year escalated at 3% annually (PSE assumption)
- Resell value for the excess transmission in the short term was not included as an benefit for the new transmission