

**EXH. PKW-53C
DOCKETS UE-190529/UG-190530
UE-190274/UG-190275
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-190529
Docket UG-190530 (*Consolidated*)**

In the Matter of the Petition of

PUGET SOUND ENERGY

**For an Order Authorizing Deferral
Accounting and Ratemaking Treatment
for Short-life IT/Technology Investment**

**Docket UE-190274
Docket UG-190275 (*Consolidated*)**

**NINETEENTH EXHIBIT (CONFIDENTIAL) TO THE
PREFILED REBUTTAL TESTIMONY OF**

PAUL K. WETHERBEE

ON BEHALF OF PUGET SOUND ENERGY

**REDACTED
VERSION**

JANUARY 15, 2020

**Puget Sound Energy
Winter Peak Planning Incremental Costs
2019 GRC Rebuttal Power Cost Update**

REDACTED VERSION

| | 2019 GRC Rebuttal Update | | | | 2019 GRC Proposed | | | | Increase / (Decrease) | | | |
|----------------------------------------------------------------------|--------------------------|--------------|--------------|--------------|-------------------------|--------------|--------------|--------------|-----------------------|-----|-----|-----|
| | Rate Year Winter Months | | | | Rate Year Winter Months | | | | Winter Months | | | |
| | Jan-21 | Feb-21 | Nov-20 | Dec-20 | Jan-21 | Feb-21 | Nov-20 | Dec-20 | Jan | Feb | Nov | Dec |
| Calculation for BAL-002-WECC-1 & 2 Reserve Requirement | | | | | | | | | | | | |
| PSE load - gross of DSR | 5,100 | 4,925 | 4,886 | 5,182 | 5,100 | 4,925 | 4,886 | 5,182 | - | - | - | - |
| Demand-side resources (conservation) | (328) | (331) | (222) | (246) | (328) | (331) | (222) | (246) | - | - | - | - |
| Demand response included in DSR Pt. Roberts | - | - | - | 12 | - | - | - | 12 | - | - | - | - |
| Third-party load in PSE BA (includes 449 customer load) | (8) | (8) | (8) | (8) | (8) | (8) | (8) | (8) | - | - | - | - |
| Subtotal load subject to contingency reserve | 617 | 617 | 617 | 617 | 617 | 617 | 617 | 617 | - | - | - | - |
| PSE generators in PSE BA or pseudo-tied | 5,381 | 5,203 | 5,273 | 5,557 | 5,381 | 5,203 | 5,273 | 5,557 | - | - | - | - |
| Third-party generation in PSE BA | 3,103 | 3,089 | 3,181 | 3,120 | 3,103 | 3,089 | 3,181 | 3,120 | - | - | - | - |
| Subtotal generation subject to contingency reserve | 241 | 241 | 241 | 241 | 241 | 241 | 241 | 241 | - | - | - | - |
| | 3,344 | 3,330 | 3,422 | 3,361 | 3,344 | 3,330 | 3,422 | 3,361 | - | - | - | - |
| Total load and generation subject to reserve requirement (MW) | 8,725 | 8,533 | 8,695 | 8,918 | 8,725 | 8,533 | 8,695 | 8,918 | - | - | - | - |
| Spinning Reserve Requirement 3% (MW) | 131 | 128 | 130 | 134 | 131 | 128 | 130 | 134 | - | - | - | - |
| Supplemental Reserve Requirement, 3% (MW) | 131 | 128 | 130 | 134 | 131 | 128 | 130 | 134 | - | - | - | - |
| Total Bal-002-WECC-1 & 2 Reserve Requirement (MW) | 262 | 256 | 261 | 268 | 262 | 256 | 261 | 268 | - | - | - | - |

| | | | | | | | | | | | | |
|--------------------------------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|---|---|---|---|
| On-peak hours | 400 | 384 | 384 | 416 | 400 | 384 | 384 | 416 | 0 | 0 | 0 | 0 |
| Normal peak (MW) | 5,100 | 4,925 | 4,886 | 5,182 | 5,100 | 4,925 | 4,886 | 5,182 | - | - | - | - |
| BPA loss return at MidC (MW) | (71) | (71) | (71) | (71) | (71) | (71) | (71) | (71) | - | - | - | - |
| Normal peak less BPA loss return (MW) | 5,029 | 4,854 | 4,815 | 5,111 | 5,029 | 4,854 | 4,815 | 5,111 | - | - | - | - |
| Planning margin @ 12.1% (MW) | 608 | 587 | 583 | 618 | 608 | 587 | 583 | 618 | - | - | - | - |
| Add back BPA loss return (MW) | 71 | 71 | 71 | 71 | 71 | 71 | 71 | 71 | - | - | - | - |
| Subtotal demand-side resources | (328) | (331) | (222) | (246) | (328) | (331) | (222) | (246) | - | - | - | - |
| Add 449 customer load | 309 | 309 | 309 | 309 | 309 | 309 | 309 | 309 | - | - | - | - |
| Resources needed - normal peak + planning margin (MW) | 5,689 | 5,490 | 5,556 | 5,863 | 5,689 | 5,490 | 5,556 | 5,863 | - | - | - | - |

**Puget Sound Energy
Winter Peak Planning Incremental Costs
2019 GRC Rebuttal Power Cost Update**

REDACTED VERSION

| 2019 GRC Rebuttal Update | | | | 2019 GRC Proposed | | | | Increase / (Decrease) | | | |
|--------------------------|--------|--------|--------|-------------------------|--------|--------|--------|-----------------------|-----|-----|-----|
| Rate Year Winter Months | | | | Rate Year Winter Months | | | | Winter Months | | | |
| Jan-21 | Feb-21 | Nov-20 | Dec-20 | Jan-21 | Feb-21 | Nov-20 | Dec-20 | Jan | Feb | Nov | Dec |

| | | | | | | | | | | | |
|--------------------------------------|------|------|------|------|------|------|------|------|------|------|------|
| Upper Baker - assume 1 hour peak | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX |
| Lower Baker - assume 1 hour peak | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX |
| Snoqualmie | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX |
| <i>Sub-total Westside Hydro (MW)</i> | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX |
| Mid C Wells | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX |
| Mid C Rooky Reach | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX |
| Mid C Rock Island | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX |
| Mid C Wanapum | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX |
| Mid C Priest Rapids | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX |
| <i>Sub-total Mid-Columbia (MW)</i> | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX |
| Colstrip 1&2 | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX |
| Colstrip 3&4 | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX |
| Enogen | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX |
| Whitehorn 2&3 | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX |
| Fred1 | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX |
| Frederickson 1&2 | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX |
| Fredonia 1 & 2 | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX |
| Fredonia 3 & 4 | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX |
| Ferndale | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX |
| Sumas | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX |
| Goldendale | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX |
| Mint Farm | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX |
| <i>Sub-total thermal (MW)</i> | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX |

| | | | | | | | | | | | |
|----------------------------|----|----|----|----|----|----|----|---|---|---|---|
| Hopkins Ridge @ 12% | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 0 | 0 | 0 | 0 |
| Wild Horse @ 12% | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 0 | 0 | 0 | 0 |
| Klondike III @ 12% | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 0 | 0 | 0 | 0 |
| LSK @ 12% | 41 | 41 | 41 | 41 | 41 | 41 | 41 | - | - | - | - |
| <i>Sub-total wind (MW)</i> | 99 | 99 | 99 | 99 | 99 | 99 | 99 | - | - | - | - |

| | | | | | | | | | | | |
|---------------------------------|-------|-------|-------|-------|-------|-------|-------|------|------|------|------|
| BC Hydro Point Roberts | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX |
| Canadian EA | (25) | (24) | (30) | (26) | (25) | (24) | (30) | 0 | 0 | 0 | 0 |
| PG&E Exchange | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 0 | 0 | 0 | 0 |
| QF Koma Kulsam Hydro | 3 | 2 | 6 | 4 | 3 | 2 | 6 | 0 | 0 | 0 | 0 |
| QF Twin Falls | 11 | 9 | 10 | 10 | 11 | 9 | 10 | 0 | 0 | 0 | 0 |
| QF Weeks Falls | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 0 |
| Sch. 91 - Total | 21 | 21 | 22 | 20 | 21 | 21 | 22 | 0 | 0 | 0 | 0 |
| WECC reserves requirement | (262) | (256) | (261) | (268) | (262) | (256) | (261) | - | - | - | - |
| Regulation Balancing | (123) | (123) | (123) | (123) | (123) | (123) | (123) | - | - | - | - |
| Electron PPA | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX |
| Centralia PPA | 395 | 380 | 396 | 395 | 395 | 380 | 396 | - | - | - | - |
| Skookumchuck PPA | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX |
| Lund Hill PPA | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX |
| 449 Customer | 309 | 309 | 309 | 309 | 309 | 309 | 309 | 0 | 0 | 0 | 0 |
| Microsoft | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 0 | 0 | 0 | 0 |
| Peaking ST Contracts | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | 0 | 0 | 0 | 0 |
| On Peak Net Purch. less BC West | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | 0 | 0 | 0 | 0 |
| AURORA On-Peak Purchases | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | 0 | 0 | 0 | 0 |
| <i>Sub-total Contracts (MW)</i> | 2,020 | 1,964 | 1,724 | 1,771 | 2,020 | 1,964 | 1,724 | 0 | 0 | 0 | 0 |

Total resources available (MW) 5,189 5,119 4,971 4,957

**Puget Sound Energy
Winter Peak Planning Incremental Costs**
2019 GRC Rebuttal Power Cost Update

REDACTED VERSION

| | 2019 GRC Rebuttal Update | | | 2019 GRC Proposed | | | Increase / (Decrease) | | |
|--------------------------------------------------------|----------------------------------------------|--------------|--------------|-------------------|--------------|--------------|-----------------------|------------|-------------|
| | Jan-21 | Feb-21 | Dec-20 | Jan-21 | Feb-21 | Dec-20 | Jan | Feb | Dec |
| System MW short / (long) | 501 | 371 | 906 | 501 | 371 | 906 | - | - | - |
| Winter on-peak purchase need (25 MW increments) | 525 | 375 | 925 | 525 | 375 | 925 | - | - | - |
| PSE Mid-C Contract Capacity | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX |
| Spinning Reserve Requirement | (131) | (128) | (134) | (131) | (128) | (134) | - | - | - |
| Regulation | (123) | (123) | (123) | (123) | (123) | (123) | - | - | - |
| Canadian Entitlement Return | (25) | (24) | (26) | (25) | (24) | (26) | - | - | - |
| Short Term Purchase - PSE | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX |
| Short Term Purchase - AURORA | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX |
| Short Term Purchase - AURORA - at Westside | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX |
| Wild Horse Generation | 33 | 33 | 33 | 33 | 33 | 33 | 0 | 0 | 0 |
| Schedule 449 Customers | 309 | 309 | 309 | 309 | 309 | 309 | 0 | 0 | 0 |
| Microsoft | 67 | 67 | 67 | 67 | 67 | 67 | 0 | 0 | 0 |
| <i>Total committed transmission capacity (MW)</i> | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX |
| BPA Mid-C IR (Douglas Wells) | 266 | 266 | 266 | 266 | 266 | 266 | - | - | - |
| Rock Island to Beverly Park (non BPA) | 50 | 50 | 50 | 50 | 50 | 50 | - | - | - |
| Rocky Reach to White River (non BPA) | 400 | 400 | 400 | 400 | 400 | 400 | - | - | - |
| BPA Mid-C PTP for winter peaking | 1,825 | 1,825 | 1,825 | 1,825 | 1,825 | 1,825 | - | - | - |
| <i>Total available transmission rights</i> | <i>2,541</i> | <i>2,541</i> | <i>2,541</i> | <i>2,541</i> | <i>2,541</i> | <i>2,541</i> | - | - | - |
| Transmission available for on-peak purchases (MW) | 711 | 754 | 904 | 711 | 754 | 904 | - | - | - |
| Total short / (long) transmission (MW) | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX |
| Transmission to purchase (MW) | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX |
| BPA Charge kw/day | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX |
| plus Op Reserves per MWh of 0.34 | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX |
| <i>Winter peak incremental cost summary</i> | <i>Estimated premium for Peak MidC Index</i> | | | | | | | | |
| \$3.0 Est. cost for Westside delivered power | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX |
| Transmission ST Purchases | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX |
| TOTAL incremental cost (in \$000's) | XXXX | XXXX | XXXX | XXXX | XXXX | XXXX | \$0 | \$0 | XXXX |
| <i>Total Winter Peaking Costs \$ (1,000s) =</i> | | | | | | | XXXX | | |