

Exh. RTL-4
Docket UE-19____
Witness: Rick T. Link

**BEFORE THE WASHINGTON
UTILITIES AND TRANSPORTATION COMMISSION**

WASHINGTON UTILITIES AND
TRANSPORTATION COMMISSION,

Complainant,

v.

PACIFICORP dba
PACIFIC POWER & LIGHT COMPANY

Respondent.

Docket UE-19____

PACIFICORP

EXHIBIT OF RICK T. LINK

**Project-Wide Wind Repowering SO and PaR PVRR(d) (Benefit)/Cost, February
2018**

December 2019

Exhibit No. RTL-4

| | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------------|---------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Cost of Project | \$1 | \$57 | \$59 | \$36 | (\$38) | (\$57) | (\$56) | (\$59) | (\$57) | (\$60) | (\$59) | (\$62) | (\$60) | (\$33) | \$59 | \$78 | \$80 | \$82 | \$84 | \$86 | \$88 |
| Change in NPC | (\$145) | \$1 | \$2 | \$1 | (\$10) | (\$12) | (\$12) | (\$13) | (\$14) | (\$14) | (\$15) | (\$16) | (\$23) | (\$25) | (\$27) | (\$27) | (\$27) | (\$27) | (\$28) | (\$29) | (\$30) |
| Change in Emissions | (\$18) | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | (\$2) | (\$3) | (\$3) | (\$4) | (\$5) | (\$5) | (\$6) | (\$6) | (\$6) | (\$6) | (\$6) |
| Change in VOM | (\$1) | \$0 | \$0 | \$0 | (\$0) | (\$0) | (\$0) | (\$0) | (\$0) | (\$0) | (\$0) | (\$0) | (\$0) | (\$0) | (\$0) | (\$0) | (\$0) | (\$0) | (\$0) | (\$0) | (\$0) |
| Change in DSM | (\$9) | \$0 | \$0 | \$0 | (\$0) | (\$0) | (\$1) | (\$1) | (\$1) | (\$1) | (\$1) | (\$1) | (\$1) | (\$1) | (\$1) | (\$1) | (\$1) | (\$1) | (\$2) | (\$2) | (\$2) |
| Change in Deficiency | (\$0) | \$0 | \$0 | (\$0) | (\$0) | (\$0) | \$0 | \$0 | \$0 | (\$0) | \$0 | (\$0) | (\$0) | (\$0) | (\$0) | (\$0) | (\$2) | (\$1) | (\$1) | \$5 | \$0 |
| Change in PTC losses (dumped energy) | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| Change in System Fixed Cost | \$7 | (\$0) | (\$0) | \$0 | (\$0) | (\$0) | (\$0) | (\$0) | (\$0) | (\$0) | \$0 | \$0 | (\$0) | \$3 | \$3 | \$3 | \$3 | \$2 | \$2 | \$2 | \$4 |
| Net (Benefit)/Cost | (\$165) | \$58 | \$61 | \$37 | (\$49) | (\$69) | (\$73) | (\$72) | (\$76) | (\$77) | (\$83) | (\$88) | (\$61) | \$27 | \$45 | \$48 | \$49 | \$55 | \$51 | \$52 | \$54 |

OFPC Natural Gas, Zero CO2 Price-Policy Scenario

| | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------------|---------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| (Benefit)/Cost | PVRR(d) | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 |
| Cost of Project | \$1 | \$57 | \$59 | \$36 | (\$38) | (\$57) | (\$56) | (\$59) | (\$57) | (\$60) | (\$59) | (\$62) | (\$60) | (\$33) | \$59 | \$78 | \$80 | \$82 | \$84 | \$86 | \$88 |
| Change in NPC | (\$174) | \$1 | \$2 | \$1 | (\$11) | (\$13) | (\$14) | (\$14) | (\$16) | (\$17) | (\$17) | (\$18) | (\$25) | (\$27) | (\$27) | (\$29) | (\$37) | (\$38) | (\$40) | (\$43) | (\$50) |
| Change in Emissions | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| Change in VOM | (\$2) | \$0 | \$0 | \$0 | (\$0) | (\$0) | (\$0) | (\$0) | (\$0) | (\$0) | (\$0) | (\$0) | (\$0) | (\$0) | (\$0) | (\$0) | (\$0) | (\$1) | (\$1) | (\$1) | (\$1) |
| Change in DSM | (\$13) | \$0 | \$0 | (\$1) | (\$1) | (\$2) | (\$2) | (\$2) | (\$2) | (\$2) | (\$2) | (\$2) | (\$2) | (\$2) | (\$2) | (\$2) | (\$2) | (\$2) | (\$2) | (\$2) | (\$2) |
| Change in Deficiency | (\$2) | (\$0) | \$0 | \$0 | (\$0) | (\$0) | \$0 | \$0 | (\$0) | \$0 | (\$0) | \$0 | (\$0) | (\$0) | (\$0) | (\$1) | (\$2) | (\$0) | (\$3) | \$0 | (\$1) |
| Change in PTC losses (dumped energy) | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| Change in System Fixed Cost | \$20 | (\$0) | (\$0) | (\$0) | (\$0) | (\$0) | (\$0) | (\$0) | (\$0) | (\$0) | (\$0) | (\$0) | (\$0) | \$0 | \$0 | \$13 | \$10 | \$11 | \$11 | \$11 | \$20 |
| Net (Benefit)/Cost | (\$171) | \$58 | \$62 | \$36 | (\$50) | (\$71) | (\$71) | (\$75) | (\$74) | (\$79) | (\$80) | (\$82) | (\$87) | (\$62) | \$29 | \$47 | \$51 | \$51 | \$48 | \$51 | \$54 |

Medium Natural Gas, Medium CO2 Price-Policy Scenario

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|--------------------------------------|---------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| (Benefit)/Cost | PVRR(d) | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 |
| Cost of Project | \$1 | \$57 | \$59 | \$36 | (\$38) | (\$57) | (\$56) | (\$59) | (\$57) | (\$60) | (\$59) | (\$62) | (\$60) | (\$33) | \$59 | \$78 | \$80 | \$82 | \$84 | \$86 | \$88 |
| Change in NPC | (\$159) | \$1 | \$2 | \$1 | (\$11) | (\$14) | (\$14) | (\$15) | (\$16) | (\$18) | (\$18) | (\$18) | (\$26) | (\$28) | (\$31) | (\$33) | (\$43) | (\$33) | (\$22) | (\$15) | (\$15) |
| Change in Emissions | (\$1) | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | (\$1) | (\$1) | (\$1) | (\$0) | \$0 | \$0 |
| Change in VOM | (\$1) | \$0 | \$0 | \$0 | (\$0) | (\$0) | (\$0) | (\$0) | (\$0) | (\$0) | (\$0) | (\$0) | (\$0) | (\$0) | (\$0) | (\$0) | (\$0) | (\$0) | (\$0) | (\$0) | (\$0) |
| Change in DSM | (\$6) | \$0 | \$0 | \$0 | (\$0) | (\$0) | (\$0) | (\$0) | (\$0) | (\$0) | (\$0) | (\$1) | (\$1) | (\$1) | (\$1) | (\$1) | (\$1) | (\$1) | (\$1) | (\$1) | (\$1) |
| Change in Deficiency | (\$1) | (\$0) | \$0 | (\$0) | \$0 | \$0 | (\$0) | (\$0) | (\$0) | (\$0) | \$0 | (\$0) | (\$0) | (\$0) | (\$1) | (\$1) | (\$2) | \$3 | \$2 | (\$0) | \$1 |
| Change in PTC losses (dumped energy) | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| Change in System Fixed Cost | (\$14) | (\$0) | (\$0) | (\$0) | (\$0) | (\$0) | (\$0) | (\$0) | (\$0) | (\$0) | \$0 | \$0 | \$1 | \$1 | \$1 | \$16 | (\$2) | (\$16) | (\$28) | (\$28) | |
| Net (Benefit)/Cost | (\$180) | \$58 | \$62 | \$37 | (\$49) | (\$71) | (\$70) | (\$74) | (\$74) | (\$79) | (\$77) | (\$82) | (\$88) | (\$62) | \$25 | \$43 | \$48 | \$48 | \$46 | \$41 | \$44 |

Medium Natural Gas, High CO2 Price-Policy Scenario

| | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------------|---------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| (Benefit)/Cost | PVRR(d) | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 |
| Cost of Project | \$1 | \$57 | \$59 | \$36 | (\$38) | (\$57) | (\$56) | (\$59) | (\$57) | (\$60) | (\$59) | (\$62) | (\$60) | (\$33) | \$59 | \$78 | \$80 | \$82 | \$84 | \$86 | \$88 |
| Change in NPC | (\$186) | \$1 | \$2 | \$1 | (\$11) | (\$13) | (\$14) | (\$15) | (\$16) | (\$18) | (\$18) | (\$19) | (\$27) | (\$39) | (\$45) | (\$47) | (\$49) | (\$32) | (\$33) | (\$28) | (\$27) |
| Change in Emissions | (\$16) | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | (\$2) | (\$3) | (\$3) | (\$6) | (\$6) | (\$5) | (\$6) | (\$4) | (\$4) | (\$4) | (\$3) | (\$3) |
| Change in VOM | (\$1) | \$0 | \$0 | \$0 | (\$0) | (\$0) | (\$0) | (\$0) | (\$0) | (\$0) | (\$0) | (\$1) | (\$1) | (\$2) | (\$2) | (\$2) | (\$2) | (\$2) | (\$2) | (\$2) | (\$2) |
| Change in DSM | (\$8) | \$0 | \$0 | (\$1) | (\$1) | (\$0) | (\$0) | (\$0) | (\$1) | (\$1) | (\$1) | (\$1) | (\$2) | (\$2) | (\$2) | (\$2) | (\$2) | (\$2) | (\$2) | (\$2) | (\$2) |
| Change in Deficiency | (\$2) | (\$0) | \$0 | \$0 | (\$0) | (\$0) | (\$0) | (\$0) | \$0 | \$0 | \$0 | \$0 | (\$0) | (\$0) | (\$0) | (\$0) | (\$1) | (\$1) | (\$1) | (\$0) | (\$1) |
| Change in PTC losses (dumped energy) | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| Change in System Fixed Cost | \$19 | (\$0) | (\$0) | \$0 | (\$0) | (\$0) | (\$0) | (\$0) | (\$0) | (\$0) | (\$0) | (\$0) | \$18 | \$19 | \$20 | \$22 | (\$4) | (\$4) | (\$3) | (\$15) | (\$18) |
| Net (Benefit)/Cost | (\$193) | \$58 | \$61 | \$36 | (\$50) | (\$71) | (\$70) | (\$74) | (\$74) | (\$79) | (\$79) | (\$85) | (\$92) | (\$61) | \$25 | \$44 | \$44 | \$40 | \$40 | \$37 | \$37 |