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4 BEFORE THE
5 WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION
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7
8 In the Matter of the Petition of:

No. _____

9
10 PUGET SOUND ENERGY, INC.

AFFIDAVIT OF JOHN M. PHILLIPS IN
SUPPORT OF PSE'S PETITION FOR
DECLARATORY ORDER AND
FOR ACCOUNTING ORDER

11
12 for a Declaratory Order and Accounting
13 Order Regarding the Reclassification of
14 Certain Facilities and Accounting
15 Treatment Consistent Therewith
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20 STATE OF WASHINGTON)
21) ss.
22 COUNTY OF KING)
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25

26 John M. Phillips, being first duly sworn on oath, deposes and says:

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28 1. My name is John M. Phillips. My title is Manager Transmission Contracts for
29 Puget Sound Energy, Inc. ("PSE"), based in Bellevue, Washington. My business address is
30 P.O. Box 97034, Bellevue, Washington 98009-9734.
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34 2. I make this affidavit in support of PSE's Petition for Declaratory Order and
35 for Accounting Order in the above-referenced docket. I am over the age of eighteen (18)
36 years and make this Affidavit based on personal knowledge, and am competent to do so.
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40 3. I graduated from the University of Washington in 1987 with a Bachelor of
41 Science in Electrical Engineering. Prior to my current position, I worked as a Consulting
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Affidavit of
John M. Phillips – 1

Perkins Coie LLP
The PSE Building
10885 N.E. Fourth Street, Suite 700
Bellevue, WA 98004-5579
Phone: 425.635.1400
Fax: 425.635.2400

1 Engineer in the Transmission Contracts group of PSE performing transmission service and
2
3 regional planning studies. My background also includes distribution design and planning at
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5 PSE.
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7
8 **SUMMARY**
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10 4. I am responsible for the preparation of the lists of those 55 kV to 115 kV
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12 Washington area facilities identified in Exhibit A and Exhibit B to the Petition for
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14 Declaratory Order and for Accounting Order (referred to hereinafter as the “Proposed
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16 Reclassified Facilities”) that PSE now seeks reclassification as transmission facilities. In
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18 preparation of Exhibit A and Exhibit B, I reviewed the portions of Order No. 888 of the
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20 Federal Energy Regulatory Commission (“FERC”) that adopted the seven factors of local
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22 distribution and considered the operational and regulatory changes discussed below that
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24 have occurred since 2001. With that background information, I evaluated PSE’s
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26 transmission facilities 55 kV and above (sometimes referred to hereinafter as “PSE’s
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28 transmission system facilities”). My conclusions are summarized in PSE’s proposed lists of
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30 the Proposed Reclassified Facilities that PSE now seeks reclassification as transmission
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32 facilities.
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37 **RECLASSIFICATION OF THE PROPOSED RECLASSIFIED FACILITIES IS CONSISTENT WITH**
38 **HOW PSE OPERATES, PLANS AND PROVIDES SERVICE ON THESE FACILITIES**
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40 5. As background, PSE’s transmission system facilities consist of facilities at
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42 500 kV, 230 kV, 115 kV and 55 kV. For these facilities, regardless of the voltage or nature
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44 of the facility, PSE operates, plans and provides service on these transmission facilities
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1 under the same processes. PSE Load Dispatchers monitor and operate the Proposed
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3 Reclassified Facilities in real-time, the same as PSE's 230 kV or 500 kV facilities.
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5 6. In accordance with North American Electric Reliability Corporation
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7 (“NERC”) and regional planning requirements, PSE provides transmission and generating
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9 modeling data to the Western Electricity Coordinating Council (“WECC”) for its facilities
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11 55 kV and above. These data are used in creating the computer model of the Western
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13 Interconnection that is used in planning studies across the Western United States. WECC,
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15 ColumbiaGrid, PSE, and other transmission providers use this model to perform regional
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17 planning studies, sub-regional planning studies, and local planning studies, respectively.
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19 WECC, ColumbiaGrid, PSE, and other transmission providers also use this model in
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21 determining operational and transmission service needs.
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25 7. Compliance with NERC reliability standards for the Bulk Electric System
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27 became mandatory with the passage of the Energy Policy Act of 2005, and PSE has applied
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29 these standards to its facilities with voltages 100 kV and above, as required by NERC and
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31 FERC. The scope of these standards includes, among other things, operational requirements
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33 of the system, including but not limited to situational awareness, resources balancing,
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35 scheduling, protection, vegetation management and maintenance. Additionally, mandatory
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37 reliability standards also address transmission planning, interconnection requirements,
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39 facility ratings and modeling data requirements. In practice, many requirements of these
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standards also influence planning and operation of PSE's few remaining 55 kV facilities.¹

These requirements do not extend to distribution facilities, such as the reduced voltage system operated at 4 kV, 12.5 kV and 34.5 kV.

**EVALUATION OF PSE'S TRANSMISSION FACILITIES IN LIGHT OF
THE FERC SEVEN-FACTOR TEST**

8. In Order No. 888, FERC provided seven factors to guide the transmission and distribution classification process. As set forth in Order No. 888, those factors are:

- (1) Local distribution facilities are normally in close proximity to retail customers.
- (2) Local distribution facilities are primarily radial in character.
- (3) Power flows into local distribution systems; it rarely, if ever, flows out.
- (4) When power enters a local distribution system, it is not reconsigned or transported on to some other market.
- (5) Power entering a local distribution system is consumed in a comparatively restricted geographical area.
- (6) Meters are based at the transmission/local distribution interface to measure flows into the local distribution system.
- (7) Local distribution systems will be of reduced voltage.

Order No. 888 at 30,341.

9. Applying these seven factors, I treated all electrical facilities that have an operating voltage of 230 kV and above as transmission facilities. The 230 kV facilities

¹ The Proposed Reclassified Facilities include six 55 kV lines and five 55 kV substations that PSE anticipates upgrading to 115 kV in the near future. PSE operates and plans for these lines as transmission facilities.

1 connect PSE's systems to bulk transmission grids and support transfers of power to regional
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3 markets. The seven factors provided by FERC in Order No. 888 to guide the transmission
4
5 and distribution classification process support the conclusion that PSE's 230 kV and above
6
7 facilities should remain classified as transmission.
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10 10. Next, I determined whether other facilities of lower voltage (i.e., 115 kV and
11
12 below) should be classified as transmission or distribution facilities. Based on the seven
13
14 factors provided by FERC in Order No. 888 to guide the transmission and distribution
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16 classification process, I determined that
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- 18
19 (i) PSE's 34 kV and below facilities should remain classified
20 as distribution; and
21
22 (ii) those 55 kV and 115 kV Washington area facilities
23 identified in Exhibit A and Exhibit B to the Petition should
24 be reclassified from "wholesale distribution" facilities to
25 "transmission" facilities.
26
27

28 A description of this evaluation is provided below.
29

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31 **1. First Factor: Local Distribution Facilities are Normally in Close**
32 **Proximity to Retail Customers**
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34 11. The first factor of whether facilities are local distribution facilities is whether
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36 such facilities are normally in close proximity to retail customers. Due to the nature of its
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38 service territory, PSE's transmission system facilities are in relatively close physical
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40 proximity to its load. However, such facilities are typically used to support service to
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42 communities across a wide region. Additionally, the majority of PSE's customers are served
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44 at secondary voltage levels (less than 600 V) with some additional load being served at
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1 primary voltage levels (typically at 12.5 kV or 34.5 kV). These loads are two- and one-
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3 transformation levels, respectively, removed from PSE's transmission system facilities.
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5 Although a few customers take direct service at the 115 kV level, PSE serves the majority of
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7 this load through PSE's Open Access Transmission Tariff ("OATT")-based service. The
8
9 Proposed Reclassified Facilities support the transmission of power over a broad region.
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12 **2. Second Factor: Local Distribution Facilities are Primarily Radial in**
13 **Character**
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15 12. The second factor looks to whether the facilities in question are primarily
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17 radial in character. PSE operates its transmission system facilities as a network system with
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19 most of the system having at least two sources. The networked nature of PSE's system
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21 places it in parallel operation with higher voltage (i.e., 230 kV, 345 kV, and 500kV)
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23 facilities. For example, the Bonneville Power Administration ("BPA"), as path operator of
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25 the Westside Northern Intertie transmission path between Washington and British Columbia,
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27 studies the Puget Sound area transmission system to determine the transfer capability of the
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29 path, and PSE's transmission system facilities can affect the transfer capacity of the path.
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32 Due to the networked nature of the greater Puget Sound transmission system, PSE works
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34 with its neighboring transmission owners through ColumbiaGrid, a regional planning entity,
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36 to address constraints and reliability concerns on the system down to and including the
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38 55 kV level. The Proposed Reclassified Facilities are part of an integrated network with
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40 neighboring (and overlapping) transmission providers.
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3. **Third Factor: Power Flows Into Local Distribution Systems; It Rarely, If Ever, Flows Out**

13. The third factor addresses power flows. Historically, the flow of power on PSE's transmission system facilities has primarily delivered power from PSE generation and off-network resources to retail load. For areas within PSE's service territories, with greater concentrations of generation and lower loads, such as Whatcom and Skagit Counties, this can result in power flowing out of PSE's system in those areas and flowing back onto the system in other areas, such as King County. Also, with the increase in third-party generation and cross-system transmission service, PSE is now seeing (i) generation being exported out of its system and (ii) transmission service entering PSE's transmission system facilities at one point of receipt and flowing across the Proposed Reclassified Facilities and leaving at a different point of delivery. Since 2001, PSE has seen and continues to see increased power flows into, across, and out of the Proposed Reclassified Facilities.

4. **Fourth Factor: When Power Enters a Local Distribution System, It is Not Reconsigned or Transported on to Some Other Market**

14. The fourth factor considers whether power that enters a local distribution system is reconsigned or transported on to some other market. PSE provided transfer service to third-party wholesale customers, such as BPA and municipal utilities, utilizing PSE's transmission system facilities. PSE has converted all of its historical transfer service agreements to service pursuant to its OATT. In recent years, PSE has interconnected third-party generators, such as independent power producers, that export power out of PSE's system to off-system customers. In the future, PSE is likely to see additional requests for

1 interconnection for off-system exports and may see additional exports from existing third-
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3 party generation on its system. In addition, PSE is seeing long-term and short-term use
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5 across PSE's transmission system facilities to deliver power to and from the Canadian
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7 border.
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10 **5. Fifth Factor: Power Entering a Local Distribution System is**
11 **Consumed in a Comparatively Restricted Geographical Area**
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13 15. The fifth factor considers whether power entering a local distribution system
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15 is consumed in a comparatively restricted geographical area. PSE's transmission system
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17 facilities deliver power to distribution substations, which transform the power from either
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19 55 kV or 115 kV to 4 kV, 12.5 kV (more typically), or 34.5 kV. The majority of these
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21 distribution substations deliver power through radial 12.5 kV feeders to restricted
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23 geographic areas typically several miles in radius. In addition to its radial nature, the
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25 lower 12.5 kV voltage restricts these feeders from delivering power over longer distances
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27 due to voltage constraints. In contrast, PSE's 55 kV and above facilities, due to their
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29 networked nature and higher voltages and capacities, are capable of delivering power over
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31 longer distances and broader geographic regions, such as entire counties or multiple
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33 counties. In short, power flows (i) into the Proposed Reclassified Facilities to serve PSE
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35 load and (ii) through the Proposed Reclassified Facilities to other systems and to serve loads
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37 of other utilities.
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1 **Sixth Factor: Meters are Based at the Transmission/Local**
2 **Distribution Interface to Measure Flows Into the Local Distribution**
3 **System**

4 16. The sixth factor looks to whether meters are based at the transmission/local
5 distribution interface to measure flows into the local distribution system. PSE employs
6 interchange metering at all of its interfaces with neighboring Balancing Authorities at the
7 115 kV, 230 kV, and 500 kV voltage levels. These meters constantly monitor flows both
8 into and out of PSE’s transmission system and allow PSE to balance loads and generation
9 within its Balancing Authority. For example, PSE uses its transmission system facilities (as
10 measured by these meters) to provide imbalance service for third-party transactions when
11 scheduled power flows do not match the customer’s actual load or actual generation output
12 and when deploying generation reserves when resources are lost. PSE uses these meters to
13 measure power flows into and out of the system for operational and ancillary services.
14

15 **Seventh Factor: Local Distribution Systems will be of Reduced**
16 **Voltage**

17 17. The seventh factor addresses whether the facilities will be of reduced voltage.
18 As discussed above, PSE serves the majority of its customers at secondary voltage levels
19 (less than 600 V) with some additional load being served at primary voltage levels (typically
20 12.5 kV). These loads are two- and one-transformation levels, respectively, removed from
21 PSE’s transmission system facilities. PSE’s distribution operations, planning, and
22 construction standards are based on the 34.5 kV and below system. In summary, PSE’s local
23 distribution facilities operate at lower voltages (typically 12.5 kV) to deliver power within a
24

1 smaller geographic area, whereas PSE's transmission facilities operate at higher voltages
2
3 (55 kV and above) to transmit power across larger geographic areas.
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6 **CONCLUSION**

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8 18. Taken together, application of the seven-factor test leads to the following
9 conclusions:
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- 11
12 (i) PSE's 230 kV and above facilities should remain classified
13 as transmission facilities;
14
15 (ii) PSE's 34 kV and below facilities should remain classified
16 as distribution facilities; and
17
18 (iii) those 55 kV and 115 kV Washington area facilities
19 identified in Exhibit A and Exhibit B to the Petition should
20 be reclassified from "wholesale distribution" facilities to
21 "transmission" facilities.
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25 In short, I conclude that PSE should abandon the bifurcation of 55 kV and 115 kV facilities
26 into "wholesale distribution" and 230 kV facilities into "transmission" facilities and return
27 to PSE's classification of all such facilities 55 kV and above as transmission.
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EXECUTED this 16th day of September, 2011, at Bellevue, Washington.



John M. Phillips

SUBSCRIBED and SWORN to before me this 16th day of September, 2011 by John M. Phillips.



KJ Campbell

Print Name:
Karen Campbell

Notary Public in and for the State of
Washington, residing at Bellevue

My commission expires: 7/18/12
