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BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

CITY OF SEATAC,

Petitioner,

v.

PUGET SOUND ENERGY, INC.,

Respondent.
.....

CITY OF CLYDE HILL,

Petitioner,

v.

PUGET SOUND ENERGY, INC.,

Respondent.

Docket No. UE-010891
(Consolidated)

Docket No. UE-011027
(Consolidated)

DECLARATION OF CURTIS L.
BAGNALL IN SUPPORT OF THE
CITY OF SEATAC'S MOTION FOR
SUMMARY DETERMINATION

Curtis L. Bagnall, P.E. declares as follows:

1. I am currently employed as Vice President and Electric Utility Engineer for CH2M Hill. I am a senior project manager and senior engineer with almost 30 years of experience in planning, analysis, design and construction related to electric utility

DECLARATION OF CURTIS L. BAGNALL IN
SUPPORT OF THE CITY OF SEATAC'S MOTION
FOR SUMMARY DETERMINATION - 1

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1 operations, power supply, transmission, distribution, financing and operations. A copy of
2 my resume is attached.

3 2. I have been asked by the City of SeaTac to review certain materials
4 submitted to the Washington Utilities and Transportation Commission by Puget Sound
5 Energy (“PSE”) in Docket UE-010891 relating to the operation of the three phase circuit
6 on South 170th Street.

7 3. Standard practice for electric systems is to operate using three phases. This
8 arrangement provides a good combination of economy and capacity. A three-phase
9 circuit is able to supply 3 times the amount of electric power as a single-phase circuit for a
10 given current (amperage).

11 4. Standard utility underground system design practice is to use a “backbone”
12 feeder to carry power from one area to the next. This system is tapped periodically to
13 provide a local feeder for serving the local loads. This is very similar to a freeway and
14 frontage road arrangement.

15 5. Puget Sound Energy (PSE) uses 600 amp, three-phase circuits for its
16 backbone system; it then uses a single-phase 200-amp circuit for local distribution. On
17 many systems, the 200-amp circuit is also three-phase.

18 6. Essentially all residential customers are served with a single-phase service
19 drop. This normally provides more than adequate capacity for residential loads.

20 7. An aerial photograph of the area along S. 170th Street between 37th Avenue
21 S. and Military Road S. indicates there are about 40 residences that front S. 170th Street.
22 This represents a load of from 125 to 200 kW. At typical distribution voltages of less than
23 15 kV, this represents 8 to 9 amps of load. A 200-amp, distribution-voltage circuit can
24 easily serve this load.

25
DECLARATION OF CURTIS L. BAGNALL IN
SUPPORT OF THE CITY OF SEATAC'S MOTION
FOR SUMMARY DETERMINATION - 2

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CERTIFICATE OF SERVICE

I HEREBY CERTIFY that I have this day served the DECLARATION OF CURTIS L. BAGNALL, P.E. IN SUPPORT OF CITY OF SEATAC'S MOTION FOR SUMMARY DETERMINATION, upon all parties of record in this proceeding, via facsimile, followed by U.S. mail, as follows:

Kirstin S. Dodge
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Greg A. Rubstello
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Seattle, WA 98101-1686

Dennis J. Moss, Administrative Law Judge
Washington Utilities and Transportation Commission
1300 S. Evergreen Park Drive S.W.
P. O. Box 47250
Olympia, WA 98504-7250

DATED at Seattle, Washington, this _____ day of August, 2001.

Jo Ann Sunderlage
Secretary to Carol S. Arnold

DECLARATION OF CURTIS L. BAGNALL IN
SUPPORT OF THE CITY OF SEATAC'S MOTION
FOR SUMMARY DETERMINATION - 4

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