EXHIBIT NO. _____ (TMP-2) DOCKET NOS. UE-170033/UG-170034 2017 PSE GENERAL RATE CASE WITNESS: THOMAS MICHAEL POWER

BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION,

DOCKETS UE-170033 and UG-170034 (Consolidated)

Complainant,

v.

PUGET SOUND ENERGY,

Respondent.

EXHIBIT TMP-2 TO PREFILED RESPONSE TESTIMONY

(NON-CONFIDENTIAL) OF THOMAS MICHAEL POWER

ON BEHALF OF NW ENERGY COALITION, RENEWABLE NORTHWEST, AND

NATURAL RESOURCES DEFENSE COUNCIL

QUALIFICATIONS OF THOMAS MICHAEL POWER

JUNE 30, 2017

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Q What is your current employment?

A I am a Principal in Power Consulting, an independent economic consulting firm. I am also a Research Professor and Professor Emeritus in the Economics Department at The University of Montana in Missoula, Montana

Please describe your formal education and training.

A I received my Bachelor's Degree in Physics from Lehigh University in Bethlehem, Pennsylvania. I graduated with honors and Phi Beta Kappa. I was elected a Woodrow Wilson Fellow in national competition and attended Princeton University where I received my Masters and Doctoral Degrees in Economics.

I taught math and physics at Lehigh University and have taught economics at Princeton University, Lehigh University, and the University of Montana. I have been on the faculty of the University of Montana since 1968. I served as Chairman of the Economics Department from 1978 to 2007. In August 2007 I retired from University teaching and administration. I am currently a Research Professor at The University of Montana. My specialties are regional economics and resource economics with an emphasis on energy, water, and environmental resources.

Q Have you testified as an expert witness before utility regulatory commissions?
 A Yes. Since 1974 I have appeared before numerous federal, state, and municipal regulatory commissions.

I have testified before the Federal Energy Regulatory Commission, the Northwest Regional Power Planning Council, and the Bonneville Power Administration as well as before various congressional committees.

I have also testified before the utility regulatory commissions in the following states:

Qualifications of Thomas Michael Power NW Energy Coalition Docket Nos. UE-170033/UG-170034 Exhibit No. ____ (TMP-2) Page 1 Arizona, Colorado, Florida, Idaho, Indiana, Illinois, Kansas, Montana, Nebraska, Nevada, Oklahoma, Oregon, Texas, Utah, and Washington.

In addition, I have testified in utility cases before the City Councils of Seattle, Austin, and Spokane. I have also testified before the Snohomish County, Washington, Public Utility Board and the Springfield, Oregon, Public Utility Board. I have testified before the Federal Court of Claims, in State District Courts in Idaho, North Dakota, Oregon, and Montana and in Federal Court in Montana.

I have testified before the Montana Board of Natural Resources and the Washington Department of Ecology, and the Washington Energy Facility Site Evaluation Council on the siting of energy facilities.

I have served as lecturer at National Association of Utility Regulatory Commissioners' Technical Conferences and at annual conferences of the Mid-America Regulatory Commissioners and the Western Utility Regulatory Commissioners.

Since 1988 I have served on the Montana Power Company Conservation and Least Cost Planning Advisory and Universal Benefits Advisory Committee. Since NorthWestern Energy Company took over the Montana Power distribution system, I have served on its Technical Advisory Committee and Universal Benefits Advisory Committee as well as its Natural Gas Technical Advisory Committee. For several years I also served on the Montana Regulatory Reform Working Group. In the past I have served on the Montana Governor's Citizens' Advisory Council on Energy. More recently I served on the Governor's Energy Security Task Force.

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Have you done other studies dealing with energy economics?

Yes. In 1975, I received an NSF/RANN grant to assemble a team of economists,

Qualifications of Thomas Michael Power NW Energy Coalition Docket Nos. UE-170033/UG-170034

Exhibit No. _____ (TMP-2) Page 2 geologists, and energy technologists to study coal development in the Northern Great Plains. That study led to a series of almost a dozen reports, the final summary being published as *Projections of Northern Great Plains Coal Mining and Energy Conversion Development*

1975-2000 A.D. Several of the other papers dealing with defining coal markets and energy projection techniques have also been published.

Between 1976 and 1985 I conducted studies of the economics of alternative energy
systems, transmission reliability, the applicability of the PURPA rate making standards to
hydroelectric system "going thermal", utility avoided costs, optimal operation of storage
hydroelectric facilities, development of electric utilities on Indian reservations, and the impact of
energy facility development on local economic development. In 1995 *Public Utilities Fortnightly* published my article on "Making Sense of Peak Load Cost Allocations."

Can you give examples of other studies have you done in the field of resource economics?

A In 2007 Stanford University Press published a book I edited and to which I contributed entitled *Accounting for Mother Nature: Changing Demands for Her Bounty* (with Terry Anderson and Laura Huggins). In 2001 Island Press published *Post-Cowboy Economics: Pay and Prosperity in the New American West*, which I co-authored with Richard Barrett. In 1996 two other books of mine were published. Island Press published *Lost Landscapes and Failed Economies: The Search for a Value of Place*. M.E. Sharpe published *Environmental Protection and Economic Well-Being: The Economic Pursuit of Quality*. The latter book is the rewritten and updated Second Edition of *The Economic Pursuit of Quality*, which was published by M.E. Sharpe, New York in 1988. I have also contributed over two dozen chapters to various other books. Among the many articles and reports I have published are: "Public

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Timber Supply, Market Adjustments, and Local Economies: Economic Assumptions of the Northwest Forest Plan," (*Conservation Biology*, 20(2):341-350, 2006), "The Economics of River and Wetland Restoration in the Vermillion River Basin," *Great Plains Natural Resources Journal*,4(2), Spring, 1999, "The Wealth of Nature," *Issues in Science and Technology*, National Academy of Sciences, Spring, 1996, "Economic Well-being and Environmental Protection in the Pacific Northwest," *Illahee: Journal for the Northwest Environment*, 11(3 & 4), Fall-Winter, 1995, and "Urban Disamenities" *Journal of Urban Economics*, June, 1981. In 1980, Westview Press published by book on *The Economic Value of the Quality of Life*. I have published papers on almost a dozen federal irrigation projects in the western states in addition to papers dealing with the value of in-stream flows for wildlife and recreational uses. I have testified before the State Board of Minerals and the Environment and the Oahe Conservancy Board in South Dakota as well as the Alberta Energy Resources Conservation Board and Natural Resource Conservation Board on topics related to resource development. I have also testified before various Canadian Federal Environmental Review Boards.

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