

**BEFORE THE WASHINGTON  
UTILITIES & TRANSPORTATION COMMISSION**

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION,

Complainant,

v.

AVISTA CORPORATION d/b/a AVISTA UTILITIES,

Respondent.

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DOCKET NOS. UE-200900 and UG-200901 (*Consolidated*)

**PAUL J. ALVAREZ AND DENNIS STEPHENS**

**ON BEHALF OF THE  
WASHINGTON STATE OFFICE OF THE ATTORNEY GENERAL  
PUBLIC COUNSEL UNIT**

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**EXHIBIT PADS-3**

Curriculum Vitae of Dennis K. Stephens

**April 21, 2021**

## Curriculum Vitae – Dennis Stephens EE

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### Profile

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Mr. Stephens has over 35 years' experience in electric and gas distribution grid planning, design, operations management, and asset management, and the innovative use of technology to assist with these functions. He spent his entire career at Xcel Energy and its subsidiary Public Service Company of Colorado, a distribution utility serving 1.5 million electric customers and 1.4 million gas customers. After a series of electrical and gas engineering and management roles of increasing responsibility, Mr. Stephens retired as the Director of Innovation and Smart Grid Investments for all of Xcel Energy's electric and gas distribution businesses in 2011. He now works for the Wired Group and its clients on a part-time basis.

### Career History (all positions with Public Service Company of Colorado or its parent, Xcel Energy)

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**1976 -- Planning Engineer.** Performed electric distribution system planning for Southeast Denver, Boulder, Front Range and Cheyenne divisions, including system protection, voltage support and distribution system design.

**1983 – Senior Engineer, Electric Distribution Planning.** Provided direction and guidance for junior engineers. Led special projects relating to electric distribution system reliability and design. Promoted to Supervisor of Electric Distribution Planning with a staff of 12 electrical engineers with responsibility for capacity and reliability planning.

**1988 -- Manager of Operations, Colorado Front Range Division.** Responsible for all electric and gas distribution operations, including a high-pressure gas system (engineering, operations, and construction).

**1994 -- Manager of Operations & Maintenance Engineering, Southeast Denver.** Managed the design of gas and electric distribution system replacements.

**1997 -- Manager, Distribution Reliability Assessment, Xcel Energy South (CO, WY, TX, OK).** Led an engineering team focused on electric distribution grid reliability and capacity.

**1998 -- Director of Electric and Gas Operations, Southwest Denver Division.** Responsible for all aspects of electric and gas engineering, operations, and construction in the Southwest Denver Division.

**1999 -- Director of Operations, City and County of Denver Division.** Responsible for all aspects of electric and gas engineering, operations, and construction for Division, including downtown Denver. Promoted to Director, New Construction of electric and gas systems for the entire metro area.

**2001 -- Director Electric Distribution Asset Strategy, Xcel Energy.** Developed and implemented asset management strategies for all electric distribution assets in Xcel Energy's 8-state service area.

**2005 -- Director of Utility Innovations and Smart Grid Investments.** Led Xcel Energy's Utility Innovations department, developing and implementing new technologies and business processes in multiple electric and gas distribution functional areas. Advanced the concept of an Intelligent Network at Xcel Energy, and led several aspects of the SmartGridCity® demonstration project in Boulder, Colorado. Department secured a national Edison Award for Innovation in 2006. Retired in 2011.

**2016 – Senior Technical Consultant, Wired Group.**

### **Noteworthy Projects**

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**Smart Grid Solutions Development, 2010.** Worked with several large solution providers to develop and implement technical distribution grid solutions and innovations, including IBM, ABB, and Siemens.

**DER Integration Strategy and Roadmap Development, 2009.** Established DER integration strategy and road-maps for Xcel Energy, including technology and capability roadmap for high DER penetration geographies in Boulder, Colorado.

**SmartGridCity™ Project Development, 2008.** Developed the technical foundations for the SmartGridCity project in Boulder, Colorado (46,000 customers).

**Distribution Automation Design, 2007.** Worked with ABB Corporation to design software to identify and locate failures in underground cable. The ABB Smart Analyzer™ was programmed with three traps to capture detailed information using Oscilloscopy/Digital Fault Records (O/DFR).

**Utility Innovations Program Development, 2006.** Led the development of Xcel Energy's Utility Innovations program, for which Mr. Stephens' team receive a national Edison Award.

**Distribution Asset Optimization Process, 2005.** Taking advantage of SPL's Centricity Outage Management Program and Itron's Real Time Performance Management system (RTPM), developed a Distribution Asset Optimization process by mining AMI meter data and asset utilization information in the development of an enhanced asset loading forecasting process. The process took advantage of the systems' abilities to forecast sudden changes in usage patterns to take proactive mediation of equipment overloading.

**Distribution Asset Optimization Software Development, 2004.** Worked with Itron on the development of a Distribution Asset Optimization software program.

**Fixed AMI Communications Network Development, 2003.** Worked with Itron to pilot one of the first applications of a fixed wireless radio network to collect data from customer meters.

**Electric Asset Management Strategy Development, 2002.** Developed Xcel Energy's Electric Distribution Asset Management Strategy

**Automated Switching System Deployment, 2001.** Worked with S&C Electric Corporation to deploy its Intelliteam™ devices on Xcel Energy's distribution grid to reduce the number of customers impacted by an outage by isolate faults through automated switching routines.

**High Pressure Gas Pipe Replacement Program, 1988.** Initiated and managed the renewal and replacement of 26 miles of high pressure gas pipe, over a 5 year period, reducing the likelihood of seam

failures as outlined in an “Alert Notice” issued by the Department of Transportation’s Office of Pipeline Safety. Project roles included community engagement, government and regulator relations (PUC, DOT, EPA), and contractor management. Project completed 1 year ahead of schedule and 14% under budget.

### **Regulatory Appearances**

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**Pepco’s 2021-2023 Grid Investment and Plan.** Panel testimony with Paul J. Alvarez on behalf of the Maryland Office of People’s Counsel. MDPSC 9655. March 3, 2021

**Baltimore Gas & Electric Company’s 2021-2023 Grid Investment and Operations Plan.** Panel testimony with Paul J. Alvarez on behalf of the Maryland Office of People’s Counsel. MD PSC 9645. Aug 14, 2020.

**Review of Maryland Utilities’ 2019 Annual Performance Reports.** Comments of the Office of People’s Counsel. MD PSC 9353. June 8, 2020

**Duke Energy Carolinas/Duke Energy Progress \$2.3 billion Grid Improvement Plan.** Testimony before the North Carolina Utilities Commission critiquing Duke Energy’s Plan on behalf of a group of environmental and consumer advocates. NCUC E-7, Sub 1214 Feb 18, 2020 & E-2, Sub 1219 Mar 25, 2020.

**Indianapolis Power and Light’s proposed \$1.2 billion Grid Improvement Plan.** Testimony before the Indiana Utility Regulatory Commission on behalf of the City of Indianapolis critiquing Indianapolis Power and Light’s proposed \$1.2 billion Grid Improvement Plan. Cause 45264. October 7, 2019. The proceeding is still underway.

**Investigation into Distribution Planning Processes.** Comments to the Michigan Public Service Commission recommending a transparent, stakeholder-engaged distribution planning process. U-20147. September 11, 2019. The investigational proceeding is still underway.

**New Hampshire Public Utilities Commission Distribution Planning/Grid Modernization Proceeding.** Comments in IR 15-296 describing a transparent, stakeholder-engaged distribution planning process. The investigational proceeding is still underway.

**Pacific Gas and Electric 2019 General Rate Case.** Testimony in A.18-12-009 related to \$270 million in proposed “Integrated Grid Platform” investments, part of a long-term plan featuring an Advanced Distribution Management System (ADMS) implementation likely to cost as much as \$644 million. As an “integration” software package of little benefit, Mr. Stephens’ testimony rejected PG&E’s proposal in favor of several individual ADMS components of greater value PG&E failed to propose, such as a Distributed Energy Resource Management System (DERMS) and an automated volt-VAr control system for conservation voltage reduction. A settlement agreement between the parties is under review.

**Southern California Edison 2017 General Rate Case.** Testimony in A.16-09-001 related to \$2.3 billion in proposed grid modernization investments. Though portrayed by the Company as “required” to accommodate higher levels of distributed energy resources like photovoltaic solar panels, Mr. Stephens’ testimony identified appropriate investment proposals (related to grid state monitoring, modeling, and

frequent grid reconfiguration) while rejecting proposals which did not return benefits in excess of costs for customers (4kV circuit elimination and centralized, automated grid reconfiguration, as well as the systems and communications associated with centralized, automated grid reconfigurations). As a result of Mr. Stephens's testimony, the California PUC rejected \$462 million in unnecessary grid investments requested by SCE.

**Pacific Gas and Electric 2016 General Rate Case.** Testimony in A.15-09-001 related to \$100 million in proposed grid modernization investments. Though portrayed by the Company as "required" to accommodate higher levels of distributed energy resources like photovoltaic solar panels, Mr. Stephens' testimony rejected many proposed grid upgrades as either premature (due to insufficient DER on any one circuit or location) or unnecessary (due to safeguards in standard photovoltaic grid interconnection equipment). The California PUC rejected \$60 million in unnecessary grid investments requested by PG&E as a result of Mr. Stephens's testimony.

### **Notable Publications and Presentations**

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#### **Florida Storm Protection Plans: A Bonanza for Utilities, A Bust for Consumers and the State.**

Whitepaper co-authored with Paul J. Alvarez for AARP-Florida. October 5, 2020.

**Challenging Utility Grid Modernization Proposals.** With Sean Ericson and Dennis Stephens. Public Utilities Fortnightly. Part 1, August, 2020, pages 59-62; Part 2 to be published September, 2020.

**The Rush to Modernize: An Editorial on Distribution Planning and Performance Measurement.** With Paul Alvarez & Sean Ericson. Accepted for publication by Public Utilities Fortnightly. Anticipated publication June, 2019.

**Modernizing the Grid in the Public Interest: Getting a Smarter Grid at the Least Cost for South Carolina Customers.** Whitepaper co-authored with Paul Alvarez for GridLab. January 31, 2019

**Modernizing the Grid in the Public Interest: A Guide for Virginia Stakeholders.** Whitepaper co-authored with Paul Alvarez for GridLab. October 5, 2018.

**DistribuTECH 2010, Tampa, Florida.** "Realizing the Benefits of DER, DG and DR in the Context of Smart Grid"

**OSI 2008 User's Conference, Denver, Colorado; DistribuTECH 2007, San Diego, California.** "Smart Grid City: A blueprint for a connected, intelligent grid community"

**ABB 2007 World Conference, Jacksonville, Florida.** "Use of Distribution Automation Systems to identify Underground Cable Failure"

**North American T&D Conference 2005, Toronto, Canada; Itron 2005 User Conference, Boca Raton, Florida.** "Xcel Energy Utility Innovations and Distribution Asset Optimization"

**DistribuTECH 2005, San Diego, California.** "How Advanced Metering Technology is Driving Innovation at Xcel Energy"

**Education**

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Bachelor of Science Degree in Electrical Engineering, 1975, University of Missouri at Rolla.

**Awards**

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National Edison Award for Utility Innovations, 2006.