EXH. SR-2
DOCKET UE-210795
2022 PSE CEIP
WITNESS: SCOTT REEVES

BEFORE THE
WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

In the Matter of PUGET SOUND ENERGY, INC. 2021 Clean Energy Implementation Plan	**Docket UE-210795**

FIRST EXHIBIT (PROFESSIONAL QUALIFICATIONS) TO THE PREFILED RESPONSE TESTIMONY OF

SCOTT REEVES

ON BEHALF OF NW ENERGY COALITION AND FRONT AND CENTERED

OCTOBER 10, 2022

Scott Reeves

Director

Professional Experience

- Director at Cadeo Group (2021– present)
- Senior Associate at The Cadmus Group (2007-2021)
- Analyst at Indiana Department of Housing and Community Development (2006-2007)

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Education

B.A., Comparative Sociology
University of Puget Sound

M.P.A., Public Affairs
Indiana University

Scott brings over 15 years of experience in helping clients assess impacts and improve performance of energy efficiency and demand response programs. In this role, he is focused on improving strategy and outcomes of energy programs at the intersection of equity and clean energy planning. Scott has extensive experience in planning, design, and evaluation of income-qualified energy programs, including traditional EM&V, non-energy benefits, and locational analysis. He has extensive experience leading research and evaluation of demand response programs, involving research design, load impact analysis, customer energy journey, and value proposition. Scott is also currently on the Northwest Power and Conservation Council's Demand Response Advisory Committee.

Recent Project Experience

Locational Assessment for Community Benefits Targeting

Portland General Electric

In 2021, Scott led research for PGE aimed at developing a method to incorporate equity, environmental and resiliency factors within their distribution system planning proceeding with the goal of prioritizing grid investments that account for a wider range community benefits. This study involved a survey of available data for incorporating geospatial, customer-level, and grid attributes – variable selection was informed by stakeholder feedback, CBO workshops, regional policies, and best practices regarding locational targeting. Next, Cadeo conducted latent factor analysis for variable selection and developed composite indices for each factor. These data were incorporated within PGE's locational DER forecasting model, AdopDER, as an equity module to help evaluate trends of DER adoption accounting for DEI and environmental factors at the planning phase, to optimize energy and non-energy impacts and site selection for non-wires solution pilots.

EmPOWER Maryland Statewide Low-Income Program EM&V

Department of Housing and Community Development Authority

Since 2016 (and currently under Cadeo), Scott has led the Cadmus statewide evaluation of EmPOWER Maryland's low-income energy efficiency programs for single and multifamily buildings. This work involves a wide range of evaluation research, including calibrated simulation modeling, billing analysis, cost effectiveness, and process-focused research. Scott also participates in regional stakeholder meetings on behalf of DHCD, provides technical guidance to inform program planning, and supports the regulatory process for filings and commission hearings. Scott continues to serve as project lead for these evaluations under Cadeo.

Flexibility Benefit Valuation Study

In 2022, Scott led a study for the RTF aimed at exploring benefits of demand flexibility associated with energy efficiency measures. This research involved developing framework for different types of flexibility benefits and proposed methodologies for quantifying and monetizing specific benefit types. Research involved literature review of

Northwest Power and Conservation Council's Regional Technical Forum	existing flexibility benefits, methods of valuation, and applications in power system planning; interviews with experts in resource planning in the region and nationally; development of framework to illustrate various interactions between energy efficiency and demand response that yield flexibility benefits; and final recommendations for regional application.
Residential Demand Response Pilot Evaluations **Portland General Electric**	From 2016 through 2021, Scott led Cadmus' evaluation and planning research of PGE's residential demand response pilots, including peak time rebates, time of use, behavioral demand response, and smart thermostat direct load control. As project manager, Scott oversaw near-time evaluation of load impacts and customer experience through seasonal (winter and summer) analysis and reporting cycles. This continuous evaluation approach yielded recommendations to program design and delivery that regularly fed back into program revisions between event seasons.
Smart Grid Test Bed Project Evaluation (Phase 1) **Portland General Electric**	Beginning in 2019, Scott led the evaluation of PGE's Smart Grid Test Bed pilot project, which focused on the acceleration of flexible load resources and strategies for engaging customers in demand response. The evaluation assessed PGE messaging campaigns aimed at testing different customer value propositions and what resonated with different customer segments. Scott led a range of activities to assess outcomes of this project, including impact metrics derived from primary and secondary data collection, customer surveys, in-depth interviews, focus groups, and resonance assessments of different messaging campaigns. He worked closely with PGE to develop experimental designs to test various research questions, such as the effect of messaging campaigns on load impacts of PTR participation, migration to firmer demand response (e.g., smart thermostat DLC), and the effect of prenotification on event participation. The study also sought to understand barriers to participation and messaging that would maximize engagement, retention, and satisfaction of customers participating in demand response programs.
Low-Income Needs Assessment **Puget Sound Energy**	In 2020, Scott (under Cadmus) led a low-income needs assessment for PSE to identify gaps in historic delivery of low-income programs and ways to improve outreach and targeting for future programs. Through a geographic analysis using public and utility datasets, this study sought to identify gaps in historical program coverage and concentrations of unserved, income-eligible customers. To characterize underserved areas, this research developed a scoring approach that considered a combination of income and demographic criteria to generate prioritization scenarios based on high-need factors (e.g., high energy burden, tribal areas, race/ethnicity, language). Top-down estimates of energy efficiency potential were also developed to translate the geographic distribution of underserved households into those areas with highest concentrations of energy savings potential.
Clean Energy Transformation Act (CETA) Planning Support **PacifiCorp (Washington)**	In 2021, Scott led Cadmus' effort providing analytic support for PacifiCorp in response to CETA planning requirements, including development of its Clean Energy Implementation Plan and Equity Advisory Group process. Scott led research design and technical oversight of geographic analysis assessing highly impacted communities and vulnerable populations within the WA utility territory.

DER Non-Energy Impact Valuation Study

Portland General Electric

In 2021, Scott led an assessment of non-energy impacts (NEIs) associated with a suite of flexible load products from the host-customer and societal perspectives (including demand response, storage, distributed generation, and transportation electrification). This study provided an overview of NEIs by perspective and product type, highlighting specific benefits with greatest potential relevance and highest value for a given product/perspective. Using input from PGE and stakeholder priorities, a second phase of directed research focused on a literature review to identify sources of benefits valuation that could be leveraged/benchmarked for near-term cost effectiveness modeling. This research also sought to identify adaptable methods that could be used with PGE data sources, as well as gaps in current literature for valuation of key benefits. Another focus of this study assessed benefits specific to income-qualified and energy justice communities, including those products with highest impacts on energy burden and strategies to optimize specific benefits for these customers.

Low-Income Weatherization Program Evaluation

Puget Sound Energy

In 2012, Scott led Cadmus' evaluation of PSE's low-income weatherization program, involving a suite of EM&V research including assessment engineering algorithms, participation survey, stakeholder interviews, non-energy benefit assessment, and a geographic analysis aimed at efficiently targeting future delivery based on high energy intensity (usage per sqft).

In 2017, Scott led a follow-up to the evaluation of PSE's low-income weatherization program (in addition to its single family audit/retrofit program). This research included a comprehensive analysis of consumption data to estimate energy impacts at project and measure levels, and process evaluation involving customer surveys and interviews with program staff, delivery agencies, and stakeholders. Additionally, this study included a non-energy impact assessment conducting primary research to quantify impacts associated with economic (input/output modeling), environmental (GHG emissions reduction), and participant benefits (contingent valuation).

Time-of-Use Rate Design Analytic Support

Portland General Electric

In 2020, Scott led a series of analytic tasks supporting the selection of a new time-of-use rate schedule for regulatory filing. This included development of a bill impact calculator providing sensitivity testing for load shifting scenarios of three rate options, enrollment propensity modeling to assess customer characteristics correlated with rate acceptance, and a load shape clustering analysis used to assess customer segments from historical participation that yielded success in load shifting. Additionally, a literature review was conducted to assess customer rate design preferences, including best practices for structure time-of-use rates for electric vehicle owners.

EmPOWER Maryland Low-Income Planning Support

Maryland Department of Housing and Community Development Authority

In 2021, in support of the statewide planning process for the next phase of EmPOWER, Scott (initially with Cadmus, then through Cadeo), led a geographic analysis of low-income households (on behalf of DHCD) aimed at informing development of low-income goals and planning metrics. Through a gap analysis that identified unserved, income-eligible customers (at or below 250% FPL), the study leveraged historical evaluation data to estimate top-down energy efficiency potential for low-income single and multifamily buildings at the state-level and by utility territory. Additionally, several prioritization scenarios were developed to support future delivery strategies, including targeting customers with highest energy burden, and using customer housing and demographic characteristics in a composite scoring approach. Scott is currently participating in continued planning meetings (involving utilities, commission staff, public agencies, advocates, and evaluators) aimed at setting planning goals for low-income /

underserved communities and developing a set of equity metrics for future programming.

Roles and Positions

Senior Associate

Cadmus

Senior consultant, manager, and team leader within Cadmus' Advanced Analytics Group within Cadmus' Energy Services Division. From 2007 to 2021, Scott led technical research, analysis, and oversight across a diverse set of projects including process and impact evaluations, geospatial analysis, research design, and strategic planning. In this role, Scott was a subject-matter expert of income-qualified / equity-focused energy programs, conducting over 50 studies, including traditional EM&V, non-energy benefit assessment, and research supporting prioritization strategies and performance improvement.

Selected Publications and Press

Location Matters: Community Targeting for Equity, Environment, and Resilience
AESP Summer Conference (2022)

May Your Energy Journey Be Excellent: Initial Marketing Takeaways from a Neighborhood Smart Grid Pilot Project
ACEEE Summer Study Conference (2020)

Pathways for Deep Decarbonization – Modernization Best Practices
Grid Forward Annual Conference (2019)

Accelerating Grid Modernization: Leadership, Collaboration, and Performance-Based Regulation
Cadmus / GridFWD blog article (2019)

Strategic Electrification and the Changing Energy Paradigm: Challenges and Opportunities for Utilities
ACEEE Summer Study Conference (2018)

Destined for a Beautiful Marriage (EE and DR): Demand Response and EM&V Considerations
Efficiency Exchange Conference (2017)