

**Exh. JDW-2
Docket UE-230482
Witness: John D. Wilson**

**BEFORE THE WASHINGTON
UTILITIES AND TRANSPORTATION COMMISSION**

In the Matter of

PACIFIC POWER & LIGHT COMPANY

**2022 Power Cost Adjustment Mechanism
Annual Report**

DOCKET UE-230482

EXHIBIT TO TESTIMONY OF

JOHN D. WILSON

**ON BEHALF OF STAFF OF
WASHINGTON UTILITIES AND
TRANSPORTATION COMMISSION**

Background and Experience Profile

March 28, 2024

JOHN D. WILSON

Vice President
Grid Strategies, LLC

SUMMARY OF PROFESSIONAL EXPERIENCE

- 2023– Present* **Vice President, Grid Strategies, LLC.** Provides research, technical assistance, and expert testimony on electric- and gas-utility planning, economics, and regulation. Reviews electric utility prudence, cost allocation and rate design. Designs and evaluates electrification and energy efficiency programs for electric utilities, including cost recovery mechanisms and performance incentives. Evaluates performance of renewable resources and designs performance evaluation systems for procurement. Designs and assesses resource planning and procurement strategies for regulated and competitive markets.
- 2019–23* **Research Director, Resource Insight, Inc.** Same services as above.
- 2007-19* **Deputy Director for Regulatory Policy, Southern Alliance for Clean Energy.** Directed regulatory policy, including supervision of experts in areas of energy efficiency, renewable energy, and market data. Provided expert witness testimony to utility regulators. Directed litigation activities, including support of expert witnesses. Represented SACE on numerous legislative, utility, and private committees across a wide range of climate and energy related topics.
- 2001–06* **Executive Director, Galveston-Houston Association for Smog Prevention.** Directed advocacy and regulatory policy related to air quality, including ozone, air toxics, and other industrial, utility, and transportation pollutants. Served on the Regional Air Quality Planning Committee, Transportation Policy Technical Advisory Committee, and Steering Committee of the TCEQ Science Committee.
- 2000–01* **Senior Associate, The Goodman Corporation.** Provided transportation and urban planning consultant services to cities and business districts across Texas.
- 1997–99* **Senior Legislative Analyst and Technology Projects Coordinator, Office of Program Policy Analysis and Government Accountability, Florida Legislature.** Author or team member for reports on water supply policy, environmental permitting, community development corporations, school district financial management and other issues – most recommendations implemented by the 1998 and 1999 Florida Legislatures. Edited statewide government accountability newsletter and coordinated online and internal technical projects.
- 1997* **Environmental Management Consultant, Florida State University.** Project staff for Florida Assessment of Coastal Trends.
- 1992-96* **Research Associate, Center for Global Studies, Houston Advanced Research Center.** Coordinated and led research for assessments of environmental and resource issues in the Rio Grande / Rio Bravo basin and the Greater Houston region. Coordinated and edited book on climate change in Texas.

EDUCATION

BA, Physics (with honors) and history, Rice University, 1990.

MPP, John F. Kennedy School of Government, Harvard University, 1992. Concentration areas: Environment, negotiation, economic and analytic methods.

PUBLICATIONS

“Urban Areas,” with Judith Clarkson and Wolfgang Roeseler, in Gerald R. North, Jurgen Schmandt and Judith Clarkson, *The Impact of Global Warming on Texas: A Report of the Task Force on Climate Change in Texas*, 1995.

“Quality of Life and Comparative Risk in Houston,” with Janet E. Kohlhase and Sabrina Strawn, *Urban Ecosystems*, Vol. 3, Issue 2, July 1999.

“Seeking Consistency in Performance Incentives for Utility Energy Efficiency Programs,” with Tom Franks and J. Richard Hornby, *2010 American Council for an Energy-Efficient Economy Summer Study on Energy Efficiency in Buildings*, August 2010.

“Monopsony Behavior in the Power Generation Market,” with Mike O’Boyle and Ron Lehr, *Electricity Journal*, August-September 2020.

REPORTS

“Policy Options: Responding to Climate Change in Texas,” Houston Advanced Research Center, US EPA and Texas Water Commission, October 1993.

Houston Environmental Foresight Science Panel, *Houston Environment 1995*, Houston Advanced Research Center, 1996.

Houston Environmental Foresight Committee, *Seeking Environmental Improvement*, Houston Advanced Research Center, January 1996.

Florida Coastal Management Program, *Florida Assessment of Coastal Trends*, June 1997.

Office of Program Policy Analysis and Government Accountability, *Best Financial Management Practices for Florida School Districts*, Report No. 97-08, October 1997.

Office of Program Policy Analysis and Government Accountability, *Review of the Community Development Corporation Support and Assistance Program*, Report No. 97-45, February 1998.

Office of Program Policy Analysis and Government Accountability, *Review of the Expedited Permitting Process Coordinated by the Governor’s Office of Tourism, Trade, and Economic Development*, Report No. 98-17, October 1998.

Office of Program Policy Analysis and Government Accountability, *Florida Water Policy: Discouraging Competing Applications for Water Permits; Encouraging Cost-Effective Water Development*, Report No. 99-06, August 1999.

“Smoke in the Water: Air Pollution Hidden in the Water Vapor from Cooling Towers – Agencies Fail to Enforce Against Polluters,” Galveston Houston Association for Smog Prevention, February 2004.

“Reducing Air Pollution from Houston-Area School Buses,” Galveston Houston Association for Smog Prevention, March 2004.

“Who’s Counting: The Systematic Underreporting of Toxic Air Emissions,” Environmental Integrity Project and Galveston Houston Association for Smog Prevention, June 2004.

“Mercury in Galveston and Houston Fish: Contamination by Neurotoxin Places Children at Risk,” Galveston Houston Association for Smog Prevention, October 2004.

“Exceeding the Limit: Industry Violations of New Rule Almost Slid Under State’s Radar,” Galveston Houston Association for Smog Prevention, January 2006.

“Whiners Matter! Citizen Complaints Lead to Improved Regional Air Quality Control,” Galveston Houston Association for Smog Prevention, June 2006.

“Bringing Clean Energy to the Southeastern United States: Achieving the Federal Renewable Energy Standard,” Southern Alliance for Clean Energy, February 2008.

“Cornerstones: Building a Secure Foundation for North Carolina’s Energy Future,” Southern Alliance for Clean Energy, May 2008.

“Yes We Can: Southern Solutions for a National Renewable Energy Standard,” Southern Alliance for Clean Energy, February 2009.

“Green in the Grid: Renewable Electricity Opportunities in the Southeast United States,” with Dennis Creech, Eliot Metzger, and Samantha Putt Del Pino, World Resources Institute Issue Briefs, April 2009.

“Local Clean Power,” with Dennis Creech, Eliot Metzger, and Samantha Putt Del Pino, World Resources Institute Issue Briefs, April 2009.

“Energy Efficiency Program Impacts and Policies in the Southeast,” Southern Alliance for Clean Energy, May 2009.

“Recommendations for Feed-In-Tariff Program Implementation In The Southeast Region To Accelerate Renewable Energy Development,” Southern Alliance for Clean Energy, March 2011.

“Renewable Energy Standard Offer: A Tennessee Valley Authority Case Study,” Southern Alliance for Clean Energy, November 2012.

“Increased Levels of Renewable Energy Will Be Compatible with Reliable Electric Service in the Southeast,” Southern Alliance for Clean Energy, November 2014.

“Cleaner Energy for Southern Company: Finding a Low Cost Path to Clean Power Plan Compliance,” Southern Alliance for Clean Energy, July 2015.

“Analysis of Solar Capacity Equivalent Values for Duke Energy Carolinas and Duke Energy Progress Systems,” prepared for and filed by Southern Alliance for Clean Energy, Natural Resources Defense Council, and Sierra Club in North Carolina NCUC Docket No. E-100, Sub 147, February 17, 2017.

“Seasonal Electric Demand in the Southeastern United States,” Southern Alliance for Clean Energy, March 2017.

“Analysis of Solar Capacity Equivalent Values for the South Carolina Electric and Gas System,” Southern Alliance for Clean Energy, March 2017.

“Solar in the Southeast, 2017 Annual Report,” with Bryan Jacob, Southern Alliance for Clean Energy, February 2018.

“Energy Efficiency in the Southeast, 2018 Annual Report,” with Forest Bradley-Wright, Southern Alliance for Clean Energy, December 2018.

“Solar in the Southeast, 2018 Annual Report,” with Bryan Jacob, Southern Alliance for Clean Energy, April 2018.

“Tracking Decarbonization in the Southeast, 2019 Generation and CO₂ Emissions Report,” with Heather Pohman and Maggie Shober, Southern Alliance for Clean Energy, August 2019.

“Seasonal Electric Demand in the Southeastern United States,” with Maggie Shober, Southern Alliance for Clean Energy, April 2020.

“Making the Most of the Power Plant Market: Best Practices for All-Source Electric Generation Procurement,” with Mike O’Boyle, Ron Lehr, and Mark Detsky, Energy Innovation Policy & Technology LLC and Southern Alliance for Clean Energy, April 2020.

“Monopsony Behavior in the Power Generation Market,” *The Electricity Journal* 33, with Mike O’Boyle and Ron Lehr (2020).

“Municipal Coal in Ohio: Implications of PJM’s Behind-the-Meter Generation,” with Paul Chernick and James Harvey, April 2020.

“Review of Nova Scotia Power’s 2020 Integrated Resource Plan,” prepared for the Nova Scotia Consumer Advocate, NSUARB Matter No. M08059, with Paul Chernick, January 2021.

“Implementing All-Source Procurement in the Carolinas,” prepared for Natural Resources Defense Council, Sierra Club, Southern Alliance for Clean Energy, South Carolina Coastal Conservation League and Upstate Forever, for submission in NCUC Docket E-100, Sub 165, and SCPSC Dockets 2019-224-E and 2019-225-E, February 2021.

“Intelligent Feeder Project: Comments on Nova Scotia Power’s Final Report,” prepared for the Nova Scotia Consumer Advocate, NSUARB Matter No. M09984, June 2021.

“MGCC Pricing Formula for PG&E’s Day-Ahead Hourly Real Time Pricing (DAHRTP) Rates,” joint report prepared by PG&E, Small Business Utility Advocates, CPUC Public

Advocates Office, California Large Energy Consumers Association, and Enel X, CPUC Dockets A.20-10-011 and A.19-11-019, March 2022.

“The Era of Flat Power Demand is Over,” with Zach Zimmerman, Grid Strategies LLC, December 2023.

“Generator Interconnection Scorecard: Ranking Interconnection Outcomes and Processes of the Seven U.S. Regional Transmission System Operators,” with Richard Seide, Rob Gramlich, and J. Michael Hagerty, Grid Strategies LLC and Brattle Group, February 2024.

SELECTED PRESENTATIONS

“Clean Energy Solutions for Western North Carolina,” presentation to Progress Energy Carolinas WNC Community Energy Advisory Council, February 7, 2008.

“Energy Efficiency: Regulating Cost-Effectiveness,” Florida Public Service Commission undocketed workshop, April 25, 2008.

“Utility-Scale Renewable Energy,” presentation on behalf of Southern Alliance for Clean Energy to the Board of the Tennessee Valley Authority, March 5, 2008.

“An Advocates Perspective on the Duke Save-a-Watt Approach,” ACEEE 5th National Conference on Energy Efficiency as a Resource, September 2009.

“Building the Energy Efficiency Resource for the TVA Region,” presentation on behalf of Southern Alliance for Clean Energy to the Tennessee Valley Authority Integrated Resource Planning Stakeholder Review Group, December 10, 2009.

“Florida Energy Policy Discussion,” testimony before Energy & Utilities Policy Committee, Florida House of Representatives, January 2010.

“The Changing Face of Energy Supply in Florida (and the Southeast),” 37th Annual PURC Conference, February 2010.

“Bringing Energy Efficiency to Southerners,” Environmental and Energy Study Institute panel on “Energy Efficiency in the South,” April 10, 2010.

“Energy Efficiency: The Southeast Considers its Options,” NAESCO Southeast Regional Workshop, September 2010.

“Energy Efficiency Delivers Growth and Savings for Florida,” testimony before Energy & Utilities Subcommittee, Florida House of Representatives, February 2011.

“Rates vs. Energy Efficiency,” 2013 ACEEE National Conference on Energy Efficiency as a Resource, September 2013.

“TVA IRP Update,” TenneSEIA Annual Meeting, November 19, 2014.

“Views on TVA EE Modeling Approach,” presentation with Natalie Mims to Tennessee Valley Authority’s Evaluating Energy Efficiency in Utility Resource Planning Meeting, February 10, 2015.

“The Clean Power Plan Can Be Implemented While Maintaining Reliable Electric Service in the Southeast,” FERC Eastern Region Technical Conference on EPA’s Clean Power Plan Proposed Rule, March 11, 2015.

“Renewable Energy & Reliability,” 5th Annual Southeast Clean Power Summit, EUCI, March 2016.

“Challenges to a Southeast Carbon Market,” 5th Annual Southeast Clean Power Summit, EUCI, March 2016.

“Solar Capacity Value: Preview of Analysis to Date,” Florida Alliance for Accelerating Solar and Storage Technology Readiness (FAASSTeR) meeting, Orlando, FL, November 2017.

“Making the Most of the Power Plant Market: Best Practices for All-Source Electric Generation Procurement,” Southeast Energy and Environmental Leadership Forum, Nicholas Institute for Environmental Policy Solutions, August 2020.

“Making the Most of the Power Plant Market: Best Practices for All-Source Electric Generation Procurement,” Indiana State Bar Association, Utility Law Section, Virtual Fall Seminar, September 2020.

“Resource Adequacy, Reserve Margin, & Seasonal Planning,” 2022 Georgia IRP Training and Roundtable Series, February 2022.

“Six Lessons from the PG&E Real Time Pricing Rate Proceeding,” 45th Peak Load Management Alliance Conference, April 2022.

“The Era of Flat Power Demand is Over,” EFI Foundation, February 2024.

EXPERT TESTIMONY

2008 **South Carolina PSC** Docket No. 2007-358-E, surrebuttal testimony on behalf of Environmental Defense, the South Carolina Coastal Conservation League, Southern Alliance for Clean Energy and the Southern Environmental Law Center. Cost recovery mechanism for energy efficiency, including shareholder incentive and lost revenue adjustment mechanism.

2009 **North Carolina NCUC** Docket No. E-7, Sub 831, direct testimony on behalf of Environmental Defense Fund, Natural Resources Defense Council, Southern Alliance for Clean Energy, and Southern Environmental Law Center. Cost recovery mechanism for energy efficiency, including shareholder incentive and lost revenue adjustment mechanism.

Florida PSC Docket Nos. 080407-EG through 080413-EG, direct testimony on behalf of Southern Alliance for Clean Energy and the Natural Resources Defense Council. Energy efficiency potential and utility program goals.

South Carolina PSC Docket No. 2009-226-E, direct testimony in general rate case on behalf of Environmental Defense, the Natural Resources Defense

Council, the South Carolina Coastal Conservation League, Southern Alliance for Clean Energy and the Southern Environmental Law Center. Cost recovery mechanism for energy efficiency, including shareholder incentive and lost revenue adjustment mechanism.

2010 **North Carolina NCUC** Docket No. E-100, Sub 124, direct testimony on behalf of Environmental Defense Fund, the Sierra Club, Southern Alliance for Clean Energy, and Southern Environmental Law Center. Adequacy of consideration of energy efficiency in Duke Energy Carolinas and Progress Energy Carolinas' 2009 integrated resource plans.

Georgia PSC Docket No. 31081, direct testimony on behalf of Southern Alliance for Clean Energy. Adequacy of consideration of energy efficiency in Georgia Power's 2010 integrated resource plan, including cost effectiveness, rate and bill impacts, and lost revenues.

Georgia PSC Docket No. 31082, direct testimony on behalf of Southern Alliance for Clean Energy. Adequacy of consideration of energy efficiency in Georgia Power's 2010 demand side management plan, including program revisions, planning process, stakeholder engagement, and shareholder incentive mechanism.

2011 **South Carolina PSC** Docket No. 2011-09-E, allowable ex parte briefing on behalf of Southern Alliance for Clean Energy, South Carolina Coastal Conservation League, and Upstate Forever. Adequacy of South Carolina Electric & Gas's 2011 integrated resource plan, including resource mix, sensitivity analysis, alternative supply and demand side options, and load growth scenarios.

South Carolina PSC Docket Nos. 2011-08-E and 2011-10-E, allowable ex parte briefing on behalf of Southern Alliance for Clean Energy, South Carolina Coastal Conservation League, and Upstate Forever. Adequacy of Progress Energy Carolinas and Duke Energy Carolinas' 2011 integrated resource plans, including resource mix, sensitivity analysis, alternative supply and demand side options, cost escalation, uncertainty of nuclear and economic impact modeling.

2013 **Georgia PSC** Docket No. 36498, direct testimony on behalf of Southern Alliance for Clean Energy. Adequacy of consideration of energy efficiency in Georgia Power's 2013 integrated resource plan, including cost effectiveness, rate and bill impacts, and lost revenues, economics of fuel switching and renewable resources.

South Carolina PSC Docket No. 2013-392-E, direct testimony with Hamilton Davis in Duke Energy Carolinas need certification case on behalf of the South Carolina Coastal Conservation League and Southern Alliance for Clean Energy. Need for capacity, adequacy of energy efficiency and renewable energy alternatives, and use of solar power as an energy resource.

- 2014 **South Carolina PSC** Docket No. 2014-246-E, direct testimony generic proceeding on behalf of the South Carolina Coastal Conservation League and Southern Alliance for Clean Energy. Methods for calculating dependable capacity credit for renewable resources and application to determination of avoided cost.
- 2015 **Florida PSC** Docket No. 150196-EI, direct testimony in Florida Power & Light need certification case on behalf of Southern Alliance for Clean Energy. Appropriate reserve margin and system reliability need.
- 2016 **Georgia PSC** Docket No. 40161, direct testimony on behalf of Southern Alliance for Clean Energy. Adequacy of consideration of renewable energy in Georgia Power's 2016 integrated resource plan, including portfolio diversity, operational and implementation risk, analysis of project-specific costs and benefits (including location and technology considerations), and methods for calculating dependable capacity credit for renewable resources.
- 2019 **Georgia PSC** Docket Nos. 42310 and 42311, direct testimony with Bryan A. Jacob in Georgia Power's 2019 integrated resource plan and demand side management plan on behalf of Southern Alliance for Clean Energy. Adequacy of consideration of renewable energy in IRP, retirement of uneconomic plants, and use of all-source procurement process. Shareholder incentive mechanism for both renewable energy and DSM plan.
- 2020 **Nova Scotia UARB** Matter No. M09519, direct testimony with Paul Chernick in Nova Scotia Power's application for approval of the Smart Grid Nova Scotia Project on behalf of the Nova Scotia Consumer Advocate. Cost classification, decommissioning costs, justification for software vendor selection, and suggested changes to project scope.
- Nova Scotia UARB** Matter No. M09499, direct testimony with Paul Chernick in Nova Scotia Power's 2020 annual capital expenditure plan on behalf of the Nova Scotia Consumer Advocate. Potential to decommission hydroelectric systems, review of annually recurring capital projects, use of project contingencies, and cost minimization practices.
- Nova Scotia UARB** Matter No. M09579, direct testimony with Paul Chernick in Nova Scotia Power's application for the Gaspereau Dam Safety Remedial Works on behalf of the Nova Scotia Consumer Advocate. Alternatives to proposed project, project contingency factor, estimation of archaeological costs, and replacement energy cost calculation.
- Nova Scotia UARB** Matter No. M09707, direct testimony with Paul Chernick on Nova Scotia Power's 2020 Load Forecast on behalf of the Nova Scotia Consumer Advocate. Impacts of recession, application of end-use studies, improvements to forecast components, and impact of time-varying pricing.

California PUC Docket A.19-10-012, direct and rebuttal testimony with Paul Chernick in San Diego Gas & Electric's application for the Power Your Drive Electric Vehicle Charging Program on behalf of the Small Business Utility Advocates. Ensuring that utility-installed chargers advance California goal for electric vehicles. Budget controls. Reporting requirements. Evaluation, monitoring and verification processes. Outreach to small business customers.

California PUC Docket A.19-08-013, direct testimony in Southern California Edison's 2021 general rate case (track 2) on behalf of the Small Business Utility Advocates. Reasonableness of remedial software costs to be included in authorized revenue requirement.

Georgia PSC Docket Nos. 4822, 16573 and 19279, direct, rebuttal and surrebuttal testimony in Georgia Power Company's PURPA avoided cost review on behalf of the Georgia Large Scale Solar Association. Reviewing compliance with prior Commission orders. Application of capacity need forecast in projection of avoided capacity cost. Calculation of cost of new capacity. Proposal of standard offer contract.

California PUC Docket A.19-11-019, direct, reply, responsive, and reply to responsive testimony with Paul Chernick in Pacific Gas & Electric's 2021 general rate case (phase 2) on behalf of the Small Business Utility Advocates. Cost of service methods. Rate design, including customer charges, demand charges, real time pricing tariffs, TOU differentials and periods.

Nova Scotia UARB Matter No. M09548, direct testimony on the audit of Nova Scotia Power's Fuel Adjustment Mechanism on behalf of the Nova Scotia Consumer Advocate. Reasonableness of fuel contract costs. Scope of study on dispatch practices. Impact of greenhouse gas shadow pricing. Compliance issues related to resource planning.

2021 **California PUC** Docket R.20-11-003, direct and reply testimony on rulemaking to ensure reliable electric service in the event of an extreme weather event on behalf of the Small Business Utility Advocates. Modifications to Critical Peak Pricing programs and Time of Use periods. Modifications to load management programs.

Nova Scotia UARB Matter No. M09898, direct testimony on Nova Scotia Power's Annually Adjusted Rates on behalf of the Nova Scotia Consumer Advocate. Effect of delays in power contract. Unit modeling assumptions. Variable capital costs. Application of Time-Varying Pricing.

Nova Scotia UARB Matter No. M09920, direct testimony on Nova Scotia Power's Annual Capital Expenditure Plan for 2021 on behalf of the Nova Scotia Consumer Advocate. Cost minimization. Project contingency. Economic analysis model. Analysis of specific projects.

Nova Scotia UARB Matter No. M09777, direct testimony with Paul Chernick on Nova Scotia Power's Time-Varying Pricing Tariff Application on behalf of the Nova Scotia Consumer Advocate. Effect of proposed TVP tariffs on load, capacity savings, and energy costs. Recommended CPP tariffs. Treatment of demand charges in TVP tariffs. Implementation and evaluation of TVP tariffs. Lost revenue adjustment mechanism.

South Carolina PSC Docket Nos. 2019-224-E and 2019-225-E, surrebuttal testimony on 2020 Integrated Resource Plans filed by Duke Energy Carolinas and Duke Energy Progress. All-source procurement process. Process for resolution of disputed issues in IRP proceedings.

California PUC Docket A.20-10-011, direct and reply testimony with Paul Chernick in Pacific Gas & Electric's Commercial Electric Vehicle Day-Ahead Hourly Real Time Pricing Pilot on behalf of the Small Business Utility Advocates. Rate design for real time pricing tariff. Marketing to small businesses. Evaluation plan.

California PUC Docket R.20-08-020, direct and reply testimony with Paul Chernick in rulemaking to revisit net energy metering (NEM) tariffs on behalf of the Small Business Utility Advocates. Rate design for NEM tariff. Method for analyzing NEM tariff program.

California PUC Docket A.20-10-012, direct testimony with Paul Chernick in Southern California Edison's 2021 general rate case (phase 2) on behalf of the Small Business Utility Advocates. Cost of service methods. Rate allocation and design, including customer charges and real time pricing tariffs.

Nova Scotia UARB Matter No. M10176, direct testimony on Nova Scotia Power's Smart Grid Nova Scotia Solar Garden Pilot Rate Rider on behalf of the Nova Scotia Consumer Advocate. Addressing risks associated with future cost changes.

Nova Scotia UARB Matter No. M10110, direct testimony on Nova Scotia Power's Wreck Cove hydroelectric project on behalf of the Nova Scotia Consumer Advocate. Reasonableness of project and unresolved issues.

California PUC Docket A.19-08-013, direct testimony in Southern California Edison's 2021 general rate case (track 3) on behalf of the Small Business Utility Advocates. Reasonableness and prudence of remedial and replacement software costs to be included in authorized revenue requirement.

Nova Scotia UARB Matter No. M10197, direct testimony on Nova Scotia Power's Tusket Main Dam Refurbishment Authorization to Overspend application on behalf of the Nova Scotia Consumer Advocate. Whether the project should proceed and whether full cost recovery is justified.

Colorado PUC Proceeding No. 21AL-0317E, answer testimony in Public Service Company of Colorado's 2021 general rate case (phase 1) on behalf of

Energy Outreach Colorado. Reasonableness of capital project costs, choice of test year, adjustment to load to reflect effects of pandemic.

2022 **California PUC** Docket A.21-05-017, direct testimony with Paul Chernick in Liberty Utilities Calpeco 2022 general rate case on behalf of the Small Business Utility Advocates. Marginal cost study, revenue allocation, rate design.

Nova Scotia UARB Matter No. M10366, direct testimony on Nova Scotia Power's Annual Capital Expenditure Plan for 2022 on behalf of the Nova Scotia Consumer Advocate. Alignment with IRP and new regulation. Cost minimization. Project contingency. Post-project review. Total cost of ownership. Economic analysis model. Decommissioning. Analysis of specific projects.

California PUC Docket A.21-10-010, direct testimony on Pacific Gas and Electric's proposed Electric Vehicle Charge 2 Program on behalf of the Small Business Utility Advocates. Program scale and unit costs. Cost controls. Cost Allocation.

Nova Scotia UARB Matter No. M10569, direct testimony on Nova Scotia Power's 2022 Load Forecast Report on behalf of the Nova Scotia Consumer Advocate. Impact of multi-hour average temperatures and wind speed on load. Use of multiple weather stations in load forecast. Electrification forecast. Load Research Sample model. DSM adjustment.

Nova Scotia UARB Matter No. M10400, direct testimony on Nova Scotia Power's Work Management and Scheduling & Dispatch Application on behalf of the Nova Scotia Consumer Advocate. Economic analysis. Additional applications for software. Contingency guidelines. Total cost of ownership.

Massachusetts DPU Docket No. 22-22, direct, surrebuttal and supplemental testimony on Eversource Energy's 2022 Base Distribution Rate Case on behalf of the Cape Light Compact. Allocation of distribution revenue requirement.

Nova Scotia UARB Matter No. M10431, direct testimony on Nova Scotia Power's 2022 General Rate Application on behalf of the Nova Scotia Consumer Advocate. Board directives. Fuel costs. Capital project revenue requirements. Deferral accounts and riders. Cost allocation. Residential customer charge.

2023 **Nova Scotia UARB** Matter No. M10959, direct testimony on Nova Scotia Power's 2023 Application for Annually Adjusted Rates on behalf of the Nova Scotia Consumer Advocate. Seasonal and time-varying rates. Impact of Maritime Link power delivery. Cost of service study updates.

California PUC Docket R.22-07-005, direct testimony on Rulemaking to Advance Demand Flexibility Through Electric Rates. Income-graduated fixed charge: cost categories, rate design, and impacts on electrification, low-income ratepayers, and energy efficiency.

Nova Scotia UARB Matter No. M10960, direct testimony on Eastward Energy's 2023 General Rate Application on behalf of the Nova Scotia Consumer Advocate. System Expansion Investments. Customer connection incentive program. Impacts on electrification programs.

Nova Scotia UARB Matter No. M10416, direct testimony on the audit of Nova Scotia Power's Fuel Adjustment Mechanism on behalf of the Nova Scotia Consumer Advocate. Reasonableness of biomass fuel costs. Shortfall in expected customer benefits from Maritime Link transmission project. Regional joint dispatch. Accounting issues related to coal supplies and wind farm tax credits. Impact of demand response and time-varying rates on fuel costs.

Nova Scotia UARB Matter No. M11009, direct testimony on the disposition of the Nova Scotia Power Maritime Link Inc's Holdback. Benefits of Maritime Link, including energy- and capacity-related benefits. Offset of replacement energy costs. Sufficiency of regulatory process to recover customer benefits.

Nova Scotia UARB Matter No. M11017, direct testimony on Nova Scotia Power's Annual Capital Expenditure Plan for 2023 on behalf of the Nova Scotia Consumer Advocate. Capital projects with risk. Reliability investments. Cost minimization practices, including project contingency, total cost of ownership, project delivery model, and post-project reviews. Analysis of specific projects.

Kentucky PSC Case No. 2022-00402, direct testimony on Kentucky Utilities and Louisville Gas and Electric's application for the retirement of seven fossil-fired generation units on behalf of Metropolitan Housing Coalition, Kentuckians for the Commonwealth, Kentucky Solar Energy Society, and Mountain Association. Demonstration that retirement of units meets statutory standard to overcome rebuttable presumption against retirement. Consideration of utility replacement portfolio and membership in PJM. Definition of dispatchable electric generating capacity. Use of dispatch practices including full flexibility operating mode for renewables. Updates to resource adequacy methods. Economic test for investment in small-frame CT units.

Nova Scotia UARB Matter No. M11108, direct testimony on Nova Scotia Power's 2023 Load Forecast Report on behalf of the Nova Scotia Consumer Advocate. Use of lagged temperatures and wind speed to forecast/normalize load. Use of multiple weather stations in load forecast. Electrification forecast, including backup to heat pumps and electric vehicle demand. Load research sample model. DSM adjustment.

Washington UTC Docket No. UE-230172, direct and cross-answer testimony on PacifiCorp's 2024 General Rate Case on behalf of the WUTC Staff. Net power costs. Revision to power cost adjustment mechanism (PCAM).

