

Sai P. Shetty

SENIOR ENERGY ASSOCIATE

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Mr. Shetty has worked with electric utilities on issues related to regulatory retail ratemaking, rate design, load forecasting, utility program screening and transmission cost allocation/ratemaking. He regularly leads efforts to modernize electric rate design for residential, commercial and large industrial load customers. A significant portion of his work also focuses on embedded and marginal cost of service studies, which involve the appropriate allocation of utility costs among customer rate classes using economic theory and cost allocation principles.

Mr. Shetty has also worked in performance-based regulation to help quantify productivity growth in the electric transmission industry. Additionally, he has been involved in projects involving benefit-cost analysis frameworks for DERs and utility DSM; estimating demand for electric vehicles and residential solar photovoltaics; analysis of the Value of Lost Load (VoLL) to study the cost of electricity outages using a statistical approach based on historic data; analysis of customer cross-subsidies as a result of Net Energy Metering; and transmission electric rate litigation.

EDUCATION

- **University of Wisconsin-Madison**
MS in Economics
- **National Institute of Technology Karnataka (Surathkal, India)**
BTech in Chemical Engineering

JOB TITLES

- **Senior Energy Associate** (July 2023 – Present)
- **Associate** (July 2022 – June 2023)
- **Research Associate** (July 2021 – June 2022)
- **Electricity Modeling Specialist** (August 2019 – June 2021)

SELECTED CONSULTING EXPERIENCE

- **Impact Evaluation of Time-of-Use (TOU) Pilot.** Assisted three utilities in Maryland in quantifying the residential load impacts over the first summer of a three-year TOU pricing pilot. Conducted econometrics analysis to study residential customers' load patterns and isolate the effect of the pilot in the presence of exogenous factors that affect load consumption. Estimated demand elasticities quantifying customer's load shifting behavior in response to price signals.
- **Impact Evaluation of Peak Time Rebate (PTR) Program.** Analyzed the impact of a winter peaking PTR pilot program for an electric distribution utility in New Zealand. This involved the analysis of customers' response to day ahead notifications about peak events where customers stood to benefit by reducing peak usage in exchange for a rebate. Impacts were quantified using an econometric model that estimated peak reduction during event days.
- **Alternative Rate Design for Net Energy Metering (NEM) Customers.** Formulated rate design structures as part of a Maryland utility's efforts to understand the cross-subsidy between solar and non-solar customers. Analyzed alternatives to the standard volumetric pricing strategies in a bid to reduce the cross-subsidy and increase cost reflectivity.
- **Revenue Cap Mechanism for Electric Transmission.** As part of a regulatory rate case proceeding, assisted a large Canadian utility to study total factor productivity (TFP) trends for transmission companies. Built a model that calculates TFP growth for a sample of US utilities involved in transmission services, which provide a benchmark to compare the utility's productivity.
- **Analysis of Electric Transmission Networks for Ratemaking.** In a litigation proceeding involving electric transmission rates, assisted a renewable energy company in analyzing historical power flows and loads on a transmission owner's network in order to ascertain the degree of integration between systems of varying voltages for the purpose of cost recovery through rates.
- **Electric Rate Design.** Mr. Shetty has assisted with the design of time-varying electric rates for residential and commercial customers for multiple utilities. This involves analyzing electric costs and customer electric usage data to group utility costs based on different time periods during the day, which can then be leveraged to create an electric rate for customers that varies by the time of usage within the day.
- **Screening for Beneficial Electrification Measures.** Mr. Shetty has assisted multiple electric utilities in conducting benefit-cost analyses to screen proposed beneficial electrification

measures. This involved comparing cost information provided by utilities for a portfolio of programs against the sum total of benefits that the programs would offer to society to study their cost effectiveness.

- **Electric Vehicle Demand Estimation.** Updated Brattle’s national econometric model for electric vehicle demand estimation to include data through 2022 and forecast incremental EV sales for the state of Oregon for use in an Oregon utility’s integrated resource plan.
- **Time-Varying Rate (TVR) Design Pilots.** For utilities in New Mexico and Texas, assisted with the design of pilots for time-of-day (TOD), peak time rebates (PTR) and demand rates for residential and commercial customers. This involved designing pilot parameters such as sample size and recruitment approaches as well as the design of the TVRs itself.
- **Analysis of Material Modifications for Solar Developer.** For a solar developer, Mr. Shetty assisted with a study to show that a delayed commercial operate date for the project would not trigger a material modification under PJM’s tariff. The study involved a review of PJM interconnection studies and regional queue data and concluded that the project caused no adverse network impacts, required no system upgrades affecting other projects, and did not materially affect lower-queued projects.
- **Review of Forecasting Methodology.** For a Northeastern utility, conducted a comprehensive review of the utility’s load forecasting methodology for total energy sales and system peak demand for use in the utility’s integrated resource plan.
- **Rate Design for Large Load Customers.** For a Midwestern utility, assisted with the design of rates for attracting new large load customers that may have green energy requirements, which involved analyzing customer’s self-generation profiles against utility-owned generation and understanding marginal costs incurred by the utility to serve an additional customer.
- **Rate Modernization for Interstate Power and Light (IPL).** For IPL in Iowa, Mr. Shetty led a Brattle team that was responsible for assisting IPL in their 2023 rate case. Brattle conducted an embedded cost of service study, a marginal cost of service study and a complete review and overhaul of IPL’s existing rate designs by helping re-design the utility’s existing default rates as well as the design of new optional innovative TOD rates across five customer classes.
- **Innovative Rate Pilots for El Paso Electric (EPE).** For EPE’s New Mexico and Texas jurisdictions, Mr. Shetty led a team to design new and innovative time-varying rate pilots following the utility’s deployment of advanced metering infrastructure (AMI). This involved designing six bottom-up rates reflecting EPE’s costs as well as designing pilot parameters

such as target pilot customer, target recruitment samples, and pilot evaluation plans. Brattle also assisted EPE with recruitment strategies for customer enrollment in the pilots.

- **Rate Impact Analysis for Nevada Energy.** As part of Nevada Energy's 2024 DSM filing, Mr. Shetty led a rate impact analysis to estimate the impact on retail rates for all customer classes as a result of the proposed DSM plan for Nevada Power and Sierra Pacific Power. The analysis involved estimating rate impacts using results from the utility's capacity expansion models that produce differing revenue requirements as a result of load forecasts under different DSM scenarios.
- **Cost Allocation and Rate Review for University of Alaska.** As part of a rate proceeding before the Regulatory Commission of Alaska, Mr. Shetty assisted a Brattle expert in conducting a review of the proposed cost of service and resultant rates for the North and South Districts of Chugach Electric Association. As part of the work, Mr. Shetty also helped propose alternative cost allocation and reconciliation methods that resulted in more cost-reflective rates.
- **Mansfield Test for People's Electric Cooperative.** For PEC, Mr. Shetty assisted a Brattle expert with direct testimony that analyzed whether a set of transmission facilities owned by PEC were appropriate for "rolled-in" rate treatment, per the FERC standard. This study involved analyzing operational data, power flows, and system usage, and concluded that the facilities met the "any degree of integration" standard.
- **Load Impact Evaluation for Electric Utility in Missouri.** For an electric utility in Missouri, Mr. Shetty led a study to identify and estimate the peak impact for a default TOU and three optional TOU rates across the entire residential class. This involved an econometric estimation of customer load impacts using a quasi-experimental approach of identifying a matched control group of customers in order to quantify peak demand reductions for TOU customers.
- **Report on Rate Design Best Practices.** In collaboration with LBNL, Mr. Shetty co-authored a report on rate design best practices, identifying the trade-offs between designing electric rates with fixed, volumetric and demand-based rate components. The report is intended to provide regulators, utilities and other ratemaking stakeholders a framework to modernize electric utility rate design to reflect an evolving electric system.
- **Analysis of Large Load Cost Allocation.** For a large Southeastern electric Utility, Mr. Shetty conducted a review of the utility's cost allocation and revenue recovery methodology, specifically for large load customers (e.g. data centers). This involved reviewing the utility's

embedded and marginal cost of service models, as well as the class-specific rate design models to analyze whether the utility's methodology aligns with ratemaking best practices.

- **City of Batavia.** Brattle is currently assisting the City of Batavia in Illinois by conducting an integrated resource plan (IRP), an embedded cost of service (ECOS) study and a comprehensive assessment of the local utility's rate designs for different customer classes, the latter two of which are being led by Mr. Shetty.
- **UBCA Workgroup for Utilities in Maryland.** Mr. Shetty is currently leading an effort, representing two electric utilities in Maryland in the UBCA Workgroup stakeholder discussions initiated by the MD PSC. The Workgroup aims to propose a unified BCA methodology that can be applied to all utility-proposed energy efficiency and DER programs.
- **Ratemaking Workshop for Northeastern US Utility.** Along with a Brattle expert, Mr. Shetty conducted a 2-day workshop on the fundamentals of electric ratemaking for the rates and regulatory strategy teams at a Northeastern US electric and gas utility. Topics included the principles of embedded COS, marginal COS, performance based-ratemaking and innovative rate design.
- **Assessment of Electric Standby Rates.** For a US utility, Mr. Shetty led an engagement to conduct a comprehensive assessment of existing large industrial standby rates across five different operating companies of a large Southern electric utility. The engagement involved benchmarking existing rate offerings against best practices and providing recommendations for a revamped, cost-reflective standby rate.
- **Large Load Rate Design.** Mr. Shetty is currently assisting an electric utility in New Mexico with designing a new large load rate targeted at hyperscalers for prospective loads in the region. This engagement involved analyzing the utility's initial proposal, conducting analysis to ensure complete cost recovery and recommendations on potential contract service agreements to minimize risks of cost under-recovery or cost shifts to other customer classes.
- **Strategic Regulatory Ratemaking Review.** For National Grid, Mr. Shetty led an engagement conducting comprehensive research on existing regulatory ratemaking frameworks in practice across the US, focusing on performance-based regulation. The exercise resulted in a report that summarized elements of progressive ratemaking practices and strategic recommendations for the utility client to consider adopting into their regulatory process.
- **Transmission Cost Allocation Review.** For National Grid, Mr. Shetty is currently leading an engagement to study the utility's practices on allocating transmission costs across customer

classes and propose appropriate alternatives that align with economic theory, to analyze how different allocators may impact customer rates.

- **Seven-Factor and Mansfield Tests.** Mr. Shetty is currently assisting two electric utilities, one a Northwestern electric IOU and the other a Southern Cooperative, with FERC's Seven-Factor and Mansfield Tests. The tests analyze whether company assets may be considered distribution or transmission from a functional aspect and if found to be transmission, analyzing the appropriateness for rolled-in rate treatment per FERC's transmission rate standard.
- **Comprehensive Rate Assessment for ATCO.** For ATCO Electric, Mr. Shetty led a comprehensive review of the utility's rate offerings across customer classes by benchmarking against innovative rate design practices across the world. This is a strategic review intended to assist the utility with modernizing their electric rates in their upcoming rate case.
- **Cost Allocation Review for New Brunswick Power.** For NB Power, Mr. Shetty led a review of NB Power's existing cost allocation framework for embedded cost of service studies. This study involved analysis of NB Power's existing practices, critical analysis of proposed alternatives by intervenors, and jurisdictional research of standardized cost allocation practices adopted in other North American jurisdictions. Mr. Shetty authored an expert report along with Brattle co-authors, submitted as evidence in NB Power's rate filing.
- **Review of Large Residential Rate Design for Hydro-Québec.** Mr. Shetty led a review of HQ's proposed rate design for large residential customers and benchmarked HQ's design features against similar rate designs offered across American, Canadian and Nordic jurisdictions.

EXPERT EVIDENCE AND REGULATORY FILINGS

- Before the New Brunswick Energy and Utilities Board, "Review of NB Power Cost Allocation Methods for Production Plant", report filed on behalf of New Brunswick Power, Matter EL-002-2026, May 2026 (with Bruce Tsuchida and Tom Chapman).
- Before the Public Utility Commission of Texas, "El Paso Electric New Mexico Time-Varying Rate Pilot Design" report filed on behalf of El Paso Electric, Docket No. 56658, April 2024 (with Sanem Sergici, Goksin Kavlak, John Gonzalez and Paige Vincent).
- Before the New Mexico Public Service Commission, "El Paso Electric New Mexico Time-Varying Rate Pilot Design" report filed on behalf of El Paso Electric, Case No. 24-00113-UT, March 2024 (with Sanem Sergici, Goksin Kavlak, John Gonzalez and Paige Vincent).

- Before the Maryland Public Service Commission, “Baltimore Gas & Electric Performance Incentive Mechanism Programs”, report filed on behalf of Baltimore Gas & Electric, Case No. 9692, February 2023 (with Sanem Sergici, Nicholas Powers, Julia Olszewski and Sharan Ganjam)
- Before the Maryland Public Service Commission, “PC44 Time of Use Pilots: End of Pilot Evaluation”, report filed on behalf of Maryland Joint Utilities, Public Conference 44, October 4, 2021. (with Sanem Sergici, Ahmad Faruqui, Nicholas Powers, and Ziyi Tang). Available at: <https://www.brattle.com/insights-events/publications/pc44-time-of-use-pilots-end-of-pilot-evaluation/>
- Before the Régie de l’énergie, “Total Factor Productivity and X-Factor for Hydro-Quebec TransÉnergie”, report filed on behalf of Hydro-Québec TransÉnergie, Dossier R-4167-2021, February 19, 2021 (with Agustin J. Ros, Walter Graf, and Maria Castaner).

OTHER SELECTED PUBLICATIONS

- Ryan Hledik, Sanem Sergici, Sai Shetty, Peter Cappers, “Deliberate Rate Design: Creating Electricity Rates with Purpose”, January 2025.
- Ros, A.J., Shetty, S. & Tardiff, T. Performance based regulation in electricity and cost benchmarking: theoretical underpinnings and application. Journal of Regulatory Economics (2024). <https://doi.org/10.1007/s11149-024-09474-5>
- Ros, A. J. & Shetty, S. "Residential rooftop solar demand in the US and the impact of net energy metering and electricity prices." Energy Economics 118 (2023): 106491.