

Amparo Nieto

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Ms. Nieto is an economist with over 25 years of consulting experience in the energy industry, both domestically and internationally. Her extensive knowledge of best-practice energy regulation allows her to provide clients with the tools to effectively address a broad range of regulatory policy and market design issues. She brings to E3 her deep expertise in innovative marginal cost-based ratemaking, incentive regulation, and efficient price mechanisms for distributed energy resources (DERs) to achieve more cost-effective clean policy goals.

Ms. Nieto has filed extensive expert reports and testified before state public commissions in matters of optional time-of-use rates, dynamic pricing options, alternatives to net metering, and marginal cost of service studies that reveal the grid value of DERs, system-wide and locationally. For many years, Ms. Nieto has directed a membership-based utility working group that discusses rate innovation and regulatory strategies.

Ms. Nieto has been published in The Electricity Journal and other industry journals, including papers on the integration of price-responsive demand within wholesale markets, and optimal DER ratemaking, among others. Prior to joining for E3, Ms. Nieto worked at NERA Economic Consulting and Economists Incorporated.

ENERGY AND ENVIRONMENTAL ECONOMICS **Senior Director**

San Francisco, CA
Oct 2020 –

- Advises and testifies on the development of electricity marginal cost studies
- Provides expert reports and expert testimony representing entities in matters of electricity rate design, marginal cost-of-service studies, energy contracts, and regulatory policy measures.
- Consults on enhancements to ratemaking including alternative time of use and multi-part rates to replace or improve net metering and distributed energy resources compensation mechanisms.
- Conduct an evaluation of energy battery storage opportunities in California and other markets.
- Directs E3's "*Advanced Utility Rates Group*", a utility-membership group that focuses on designing innovative rates and regulatory models to more efficiently integrate emerging DER technologies.

ECONOMICS INCORPORATED **Senior Vice President**

San Francisco, CA
Nov 2017 – Sep 2020

- Led consultant in the utility rate and marginal cost of service practice.
- Cost of service and rate case testimony
- Net energy metering alternatives.
- Team lead in market power analysis.
- Directed a utility working group on electricity ratemaking.
- Supported clients on electric vehicle rate proceedings through participation in large stakeholder proceedings.

NERA ECONOMIC CONSULTING

Senior Consultant / Vice President

Los Angeles

2000 –2017

Madrid, Spain

1995 - 1999

- Managed regulatory policy ratemaking and wholesale market design.
- Designed the parameters of competitive energy auctions for default electricity service and renewable resources in the U.S., Mexico and Spain.
- Regularly conducted workshops on marginal cost methods for utilities and Commission staff.
- Consulted during the restructuring of the electricity sector in Spain and Ireland.
- Directed a utility working group on electricity rates and cost of service studies.

Examples of utility clients:

- BC Hydro, British Columbia, Canada
- Central Maine Power Company, Maine
- Con Edison, New York
- Eugene Water and Electric Board, Oregon
- Eversource Energy, New Hampshire
- Los Angeles Department of Water and Power (LADWP), California
- MidAmerican Energy Company, Iowa
- Manitoba Hydro, Manitoba, Canada
- Newfoundland Labrador & Hydro, Newfoundland, Canada
- New York Service Electric and Gas, New York
- Rochester Gas and Electric, New York
- NB Power, New Brunswick, Canada
- Nicor Gas, Naperville, Illinois
- Nova Scotia Power Co., Canada.
- Otter Tail Power (OTP), Minnesota, North Dakota, South Dakota
- Sierra Pacific Power Company and Nevada Power d/a/a NV Energy, Nevada
- Salt River Project (SRP), Arizona
- Sacramento Municipal Utility District (SMUD), California
- Xcel Energy, Minnesota

Descriptions of projects by practice area are provided below.

Rate Design / DER Evaluation / Marginal Cost Studies

- *California Public Utilities Commission, California.* Development of alternatives to net energy metering including the design of advanced rates to address the cost shifting to non-solar customers as part of the CPUC proceeding Net Energy Metering 3.0.
- *Sacramento Utility Municipal District, California.* Advised the utility in the development of rate structures that more cost-effectively integrate solar generation into the utility's service territory. Analyzed the value of new demand response rates and recommended revisions to electricity rates for distributed energy resources to address inequity concerns from traditional net metering.
- *Nova Scotia Power, Canada.* Lead the modelling of marginal costs of distribution and analysis of value streams that will contribute to residential energy storage.
- *NYSERDA, New York.* Development of alternative rate options in modelling of cost impacts of electrification goals.
- *Eversource Energy Company, New Hampshire.* Prepared an electricity distribution marginal cost analysis by location and time of use and report on principles and use of those estimates to set rates and compensation for excess energy exported to the grid by rooftop solar generation, under the NH Net Metering docket. More recently, filed testimony as part of the utility's Rate Case

on tariff design, marginal cost study for distribution service, and embedded cost of service study. Provided recommendations to improve the utility's current time of use and non-time of use electricity rate structures, and the allocation of revenue requirement to each rate class. Currently advising on the design of a TOU rate pilot and rates for electric vehicles.

- *Otter Tail Power (OTP) Company, MN, ND and SD.* Provided on-going advisory and expert witness services during their rate cases in Minnesota, North Dakota and South Dakota. Prepared marginal cost studies; designed TOU tariffs supported by smart meters. Conducted a cost-benefit analysis of the Company's portfolio of interruptible and load control rates and recommended design of critical peak pricing rates. Designed economic development rates for large business customers, time-of-use electricity tariffs, standby rate.
- *Salt River Project, AZ.* Reviewed SRP's Marginal cost of service study and provide recommendations for improvement in approaches. Reviewed SRP's proposed Residential Customer Generation Price Plan (E-27) and authored expert report with opinion on the soundness of the proposal. Presented opinion before the SRP's Board of Directors during on-site hearings.
- *Xcel Energy, MN.* Retained by Xcel Energy to conduct a cost analysis that would help decide on the minimum fixed charge that residential rates should include in order to recover the marginal costs of connection to the grid, meter and service. The results of her marginal cost study informed Xcel Energy's residential rate design and was considered as an input for the Company's decoupling proceedings.
- *NV Energy, Nevada.* Provided testimony before the Public Service Commission of Nevada regarding NV Energy's proposed changes to Sierra Pacific's residential rates for customers with distributed generation, which are billed under net metering. Reviewed the utility's marginal cost methods in light of the interconnection of Nevada Power and Sierra Pacific transmission systems.
- *Avangrid, New York.* Advised NYSEG and RG&E. Conducted marginal distribution cost-of-service studies and recommended use of results for improvements to distribution rate designs during the Companies' rate cases. Supported the utility during the initial steps to determine compensation of DERs, as directed by the Commission VDER Order within the Reforming the Energy Vision (REV) proceeding.
- *Electricity Regulatory Board (ERB), Kenya, Africa.* Co-authored the 2001 Electricity Tariff Policy report for ERB, aimed at improving the financial health of the sector and viability of the Kenya Power and Lighting Company by increasing rates while promoting the efficient expansion of electricity service. Developed financial and cost of service models for calculation of utility revenue requirement and design of tariffs. Trained the ERB staff on models.
- *KenGen, Kenya, Africa.* Designed the pricing framework of a new Power Purchase Agreement between the incumbent generator (KenGen) and the distribution utility (KPLC).
- *Fair Trading Commission (FTC), Barbados.* Reviewed Barbados Light & Power Company's embedded cost-of-service study and conducted a marginal electricity cost study.
- *Barbados Federal Trade Commission, Barbados.* Advised the Commission on matters related to Barbados Power and Light (BP&L)'s rate application. Review includes the utility's estimated cost of capital and revenue requirement, the embedded and marginal electricity cost methods used by the utility to allocate costs to customer classes and time of use rate proposals.
- *NB Power, New Brunswick, Canada.* Recommended approach to estimate the incremental costs to the utility when customers opt-out of smart metering, taking into account the pace of smart

meter deployment plans. Provided rate design recommendations in the light of smart grid investments.

- *Saudi Electricity Company, Saudi Arabia.* Assisted Saudi utility on a reasonable approach to develop standby and buyback rates for cogeneration facilities.
- *Abu Dhabi, UEA.* Advised on the reform of distribution rates and suitable mechanism to undertake cost allocation based on marginal costs. Proposed revision to existing electricity cross-subsidies.

Performance-based Regulation

- *UK Energy Networks Association, UK.* Advisor to the Association on evaluating a potential reform of electricity distribution network planning standards including incentives to enhance the investment strategy given the emergence of smart grids and distributed resources.
- *Grid Australia, Sydney, Australia.* Advisory services regarding performance-based regulation (PBR) methods for electricity distribution.
- *Edison Electric Institute (EEI), U.S.* Co-author of report "Making a Business of Energy Efficiency: Sustainable Business Models for Utilities," a report on incentive mechanisms to achieve utility goals for energy efficiency and demand response.
- *Regulatory Office for Network Industries (RONI), Slovakia.* Directed the team that assisted the Slovakian regulatory commission on the design of efficient support mechanisms for renewable energy sources and a reliable system of issuing guarantees of origin for RES. Trained the commission staff on best practice RES regulation.

Wholesale Market Design, Competition Analysis, Procurement of Renewables

- *Illinois Power Agency (IPA), U.S.* Assessment of parameters and benchmark analysis for Solar Renewable Energy Credits (SRECs) in the context of the auction held by Ameren Illinois Company and Commonwealth Edison to procure RECs from solar distributed generation resources.
- *Southern California Edison, Los Angeles, California, U.S.* Member of the team that advised the utility's Supply Group on improvements to the mechanism for contracting with renewable generation resources.
- *Analysis of Utility Mergers, Various Utilities, U.S.* Review the competitive impact on electricity markets of a number of proposed utility mergers. Analyzed potential horizontal and vertical market power impacts.
- *Commission for Energy Regulatory of Ireland, Ireland.* Member of the market design team for the all-island electricity market. Design of options for a capacity payment mechanism on the island of Ireland that would be viable and sensible in the context of the Irish electricity market.
- *Independent System Operator (ISO) of New England, U.S.* Advised the ISO-NE on revisions to ISO's Forward Capacity Market (FCM), with regard to the Alternative Capacity Price Rule.
- *Iberdrola, Spain.* Member of the energy practice team advising a large Spanish electric utility regarding its regulatory strategy in preparation for the restructuring of the electricity sector in Spain as well as general advise in a broad range of regulatory issues involving retail access, stranded cost analysis and open access tariffs. Participated in industry working groups in charge of proposing detailed policy rules.

- *Ministry of Energy, Argentina.* Comprehensive review of the Argentine wholesale electricity market and their impact on competition. Recommended revisions to market rules.

Transmission Planning and Cost Allocation

- *Australian Energy Market Commission, Australia.* Reviewed and co-authored a report providing a discussion of the proposed revisions to the electricity market rules in Australia regarding firm transmission rights. Analyzed the suitability of financial transmission rights, or their equivalent, for the Australian market. Conducted a survey of international transmission planning and cost-allocation methodologies.
- *TransGrid, Australia.* Reviewed the proposed transmission planning processes, including arrangements to introduce competitive solicitations and non-wires alternatives in long-term transmission planning.
- *Alberta Electric System Operator (AESO), Calgary, Alberta.* Analyzed AESO's cost study and recommended revisions to improve transmission tariffs and cost allocation approach.
- *Commission for Energy Regulatory of Ireland, Ireland.* Participated in the drafting of the all-island electricity market rules and recommended changes to the Transmission Use of System (TUoS) charges for the Republic of Ireland.
- *NYISO, New York, U.S.* Provided recommendations to the New York Independent System Operator for a reform of their Black Start service compensation mechanism as part of the ISO Tariff.

Testimony and Expert Reports

- Before the New Hampshire Public Utilities Commission, Rebuttal Testimony, "Cost of Service Studies and Rate Design," on behalf of the Public Service Company of New Hampshire d/b/a Eversource Energy, March 3, 2020.
- Before the New Hampshire Public Utilities Commission, Direct Testimony, "Marginal Distribution Cost of Service Study and Implications for Rate Design," on behalf of Eversource Energy, May 28, 2019.
- Before the New Hampshire Public Utilities Commission, Direct Testimony, "Allocated Cost of Service Study," on behalf of the Public Service Company of New Hampshire d/b/a Eversource Energy, May 28, 2019.
- Before the North Dakota Public Service Commission, In the Matter of the Application of Otter Tail Power Company for Authority to Increase Rates for Electric Utility Service in North Dakota. Marginal Cost of Service Study, June 2018.
- Before the Public Utilities Commission of Nevada, Rebuttal Testimony: "Marginal Costs, Revenue Reconciliation and Rate Design for Net Metering Customers," In the Matter of the Application of Sierra Pacific Power Company d/a/a NV Energy for Authority to Reform Rates for Electric Utility Service in 2016 General Rate Case, October 31, 2016.
- Before the Public Utilities Commission of the State of Minnesota, Rebuttal Testimony, "Fixed Charges, Marginal Cost Study, and Rate Design," In the Matter of the Application of Otter Tail Power Company for Authority to Increase Rates for Electric Utility Service in Minnesota, September 12, 2016.

- Before the Public Utilities Commission of the State of Minnesota, Direct Testimony: “Fixed Charges and Rate Design Policy,” In the Matter of the Application of Otter Tail Power Company for Authority to Increase Rates for Electric Utility Service in Minnesota, February 16, 2016.
- Deposition testimony regarding analysis of SRP’s adoption of a new net metering rate E-27 for solar customers. In the context of Salt River Project vs. Solar City Lawsuit. August 2016.
- Before the New York State Public Service Commission, Direct Testimony: “Rochester Gas & Electric Corporation Electricity and Natural Gas Marginal Cost of Service Studies,” June 2015.
- Before the New York State Public Service Commission, Direct Testimony: “New York State Electric and Gas Electricity and Natural Gas Marginal Cost of Service Studies,” June 2015.
- Before the Salt River Project Board of Directors, Testimony: “Review of SRP Proposed Residential Customer Generation Price Plan,” February 2015.
- Before the State of North Carolina Utilities Commission, Testimony: “Review of Alternative Application of the Peaker Method Proposed by EPCOR USA North Carolina LLC with respect to Computation of Avoided Energy and Capacity Costs,” July 23, 2010.
- Before the New Brunswick Board of Commissioners of Public Utilities, Testimony, with Wayne Olson: “The Role of DSM and Demand Response in Load Forecasting and Integrated Resource Planning,” on behalf of the New Brunswick Public Intervener, November 9, 2006.

Journal Publications and Conference Papers

1. “Compensatory Framework for Storage and Microgrids for their Value as Capacity and Grid Resources.” Presented at 32nd Annual Western Conference (CRRI), Monterey, CA, June 28, 2019.
2. “Examining the Key Pricing Policy Elements of New York’s Reforming the Energy Vision.” Presented at the 31st Annual Western Conference (CRRI), Monterey, CA, June 28, 2018.
3. “Estimating the Value of Distributed Energy Resources and Implications for Rates.” Presented at the California Municipal Utility Rates Group (CMRG), May 2018.
4. “Marginal Cost Methods and Efficient Rate Design,” Utility of the Future Rates Group, San Francisco, CA, April 2018.
5. “Value-Based Tariff Model for Distributed Energy Resources: Principles and Framework Options.” Presented at 30th Annual Western Conference (CRRI), Monterey, CA, June 28, 2017.
6. “Incentive Methods for Electricity Distribution”. Presented at Rutgers University’s 29th Annual Western Conference (CRRI), Monterey, California, June 23, 2016.
7. Nieto, Amparo (2016) “Optimizing Prices for Small-Scale Distributed Generation Resources: A Review of Principles and Design Elements”, *The Electricity Journal*.
8. Nieto, Amparo (2012) “Wholesale Energy Markets: Setting the Right Framework for Price Responsive Demand”. *The Electricity Journal*.
9. Nieto, Amparo (2012) “*The Role of Demand Response in the Efficiency of Electricity Wholesale Markets*”. *Papeles de Economía Española, Madrid. Issue 134, December 2012.*
10. Nieto, Amparo (2007) “*Locational Electricity Capacity Markets: Alternatives to Restore the Missing Signals*”. *The Electricity Journal, Volume 20.*

11. NERA (2007) *"The Line in the Sand: The Shifting Boundary between Markets and Regulation in Network Industries"*. Co-author.
12. Nieto, Amparo (2006) *"Performance-Based Regulation of Electricity Transmission in the US: Goals and Necessary Reforms"* *Energy Regulation Insights*, Issue 28.
13. Nieto, Amparo (2000) *"Analysis of the Electricity Sector in Spain"*. *Utility Regulation in the EU. Privatisation International and Centre for the Study of Regulated Industries (CRI), Utility Regulation 2000 Series, Volume 1*.
14. "Renewable Microgrids: Getting the Pricing Right." Presented at the Marginal Cost Working Group (MCWG), Washington, D.C., May 5, 2016.
15. "Policy Options to Address Cross Subsidies from Self-Generation." Presented at the 12th Annual National Law Seminars International Conference on Electric Utility Ratemaking, Las Vegas, Nevada, March 14, 2016.
16. "Demand Charges and their Role in Net Energy Metering." Presented at the "Residential Demand Charges Symposium," EUCI, Calgary, Canada, December 1, 2015.
17. "Utility Regulation in the Era of Distributed Renewables: Is There a Need for a New Business Model?" Presented at Rutgers University's 28th Annual Western Conference (CRRI), Monterey, California, June 26, 2015.
18. "Solar Distributed Generation and Rate Restructuring." Presented at the California Municipal Rates Group (CMRG), Sacramento, California, May 18, 2015.
19. "Integrating Renewable Resources through Capacity Markets: The Case of California." Presented at Law Seminars International's Energy in California, San Francisco, California, Sep 16, 2014.
20. "Rate Design Options to Deal with Solar Net Metering Concerns." Presented at the California Municipal Rates Group (CMRG), Sacramento, California, April 25, 2014.
21. "Capacity Markets Put to the Test: New Approaches to Meet Evolving Reliability Needs." Rutgers University's 27th Annual Western Conference (CRRI), Monterey, California, June 26, 2014.
22. "Connecting Wholesale and Retail Pricing: A Look at Required Policy and Market Design Decisions." Presented at the Harvard Electricity Policy Group, Dana Point, CA, March 7, 2013.
23. "Demand Response and its Role within Wholesale Energy and Capacity Markets." Presented at Rutgers University's 25th Annual Western Conference (CRRI), Monterey, California, June 2012.
24. "Achieving Efficient Demand Response through Dynamic Rates." Presented at Law Seminars International's Electric Ratemaking Conference, Las Vegas, Nevada, February 9, 2009.
25. "Critical Peak Pricing: A Marginal Cost Approach." Presented at the Marginal Cost Working Group (MCWG), Phoenix, Arizona, April 2008.
26. "Electricity Rate Structure Design: "Rate Design and Cost Studies." University of PURC's World Bank International Training Program on Utility Regulation, Florida, January 16, 2007.
27. "Demand Bidding Programs in ISO/RTO Environments." Presented at the Marginal Cost Working Group (MCWG), Austin, Texas, October 12, 2006.
28. "Responding to EPart 2005: Looking at Smart Meters for Electricity, Time-Based Rate Structures, and Net Metering." Sponsored by Edison Electric Institute, May 2006.

29. "Locational Generation Capacity Payments in New England." Presented at the Marginal Cost Working Group (MCWG), Albuquerque, New Mexico, April 27, 2005.
30. "Analysis of the International Experience with Performance Based Regulation." Presented at the Marginal Cost Working Group (MCWG), Nevada, April 3-5, 2000.

Education

Fiscal Studies Institute Madrid, Spain
Master's Degree in Economics and Public Policy (Honors)

Advanced microeconomics, macroeconomics, micro-econometrics, public policy economics, optimal fiscal theory.

University of Carlos III Madrid, Spain
B.A., Economics

Concentration on microeconomics, macroeconomics, competition policy, industrial economics, international economics, financial analysis, and econometrics.

Citizenship

United States of America
Spain