



Kushal D. Patel

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ENERGY AND ENVIRONMENTAL ECONOMICS, INC.
Senior Partner

San Francisco, CA

Mr. Patel has worked in the energy industry for over 20 years, spanning from the deregulation and restructuring of the electric and gas sectors in the 1990s to today. He currently helps lead E3's Asset Valuation and Strategy practice, working with infrastructure funds, large institutional investors (like pensions), technology companies, and project developers on valuing and assessing assets, projects, and technologies critical to the future of energy. His work has involved supporting clients making multibillion-dollar investments – into utilities, technology companies, and development platforms – and decisions around individual assets and portfolios, consisting of renewables, energy storage, and/or distributed energy resources, as well as newer technologies needed in the energy transition, such as low carbon fuels, long duration energy storage, enhanced geothermal, and advanced nuclear. He also helps lead E3's strategy practice, working with clients on market, technology, and off-take strategy as well as general corporate strategy leveraging the best-in-class insights. Mr. Patel supports utility clients and public sector clients on a variety of additional topics, especially around emerging and low- to zero-carbon technologies.

Before joining E3, Mr. Patel was the Director of Corporate Development and Project Finance at a rapidly growing solar and energy efficiency engineering, procurement, and construction company in Washington, DC. Mr. Patel has direct project financing experience for residential to utility scale solar PV projects along with other finance activities such as debt/equity structuring and revolving lines of credit. Prior to that position, Mr. Patel worked in the Energy Practice at NERA Economic Consulting as part of the Oliver Wyman Group in New York City and Washington, DC.

General Topic Areas

- Developing and expanding upon E3's expertise on data centers, including incorporating data center impacts into E3's custom modeling and supporting a variety of clients with related issues, including utilities on load forecasting, strategy support, and interconnection process improvement, technology companies on procurement and clean energy accounting frameworks, and data center companies and investors on site assessment and power supply options
- Developing and supporting E3's best-in-class markets analytical toolkit that relies on a combination of in-house models as well as Energy Exemplar's PLEXOS production cost and capacity expansion modeling platform, with a focus on price and asset revenue forecasting along with benefit-cost analysis that supports a wide number of clients across all markets in North America, leveraging all the insights being generated at E3 across our practice areas with a focus on transparency and intellectual honesty regarding potential techno-economic pathways around the Energy Transition
- Supporting venture capital investors and later stage investors looking to deploy capital in new technologies to combat climate change, ranging from distributed energy resources, energy storage technologies, and advanced generation technologies, like enhanced geothermal and small modular nuclear reactors, along with green hydrogen projects

- Supporting project developers, utilities, and investors on developing strategies to execute on ambitious goals such as capital deployment, go-to-market strategies, and ESG mandates
- Supporting clients on investments into energy transition assets, ranging from existing renewables and energy storage assets to assets needed for long-term decarbonization

Sample Engagements

- Supported Virginia's Joint Legislative Audit and Review Commission (JLARC) in analyzing the ratepayer impacts of data center load growth in the state, which contains half of all primary market data center capacity
- Advised a number of state agencies, such as NYSERDA and DPS in New York on a host of topics including energy storage, distributed energy resource, hydrogen, carbon emission standards, and technology strategy needed to achieve ambitious climate targets
- Supported a developer of a large multi-state green/blue hydrogen pipeline looking at potential future need and demand across multiple economic sectors
- Supported Global Infrastructure Partners on providing market advisory services for the Northeastern U.S. to support their recent acquisition of Eversource's stake into several offshore wind projects
- Supported Blackstone Infrastructure Partners as their market advisor in their multibillion-dollar investment in the Northern Indiana Public Service Company
- Supported a Macquarie Asset Management and Ontario Teachers' Pension Plan as their market advisor on their successful multibillion-dollar investment into Puget Sound Energy
- Currently supporting a number of investors looking to invest in various U.S., Canadian, and Caribbean utilities by providing market advisory and local regulatory/policy analysis
- Recently supported a large gas and electric utility in developing a Strategic Planning Toolkit that was a bottoms-up modeling and scenario planning exercise to create a new modeling framework and a number of new modeling tools to examine, in a rigorous quantitative manner, future states of the world to guide strategic planning that included robust capabilities on modeling capital expenditures and resource needs
- Supported numerous transaction diligences ranging from portfolios of distributed energy resources to large multibillion-dollar investments into utilities along with a number of energy storage and renewable platforms
- Recently led market analysis and revenue forecasting to support several first-of-its kind tax equity financings into stand alone energy storage assets across the U.S. after the passing of the Inflation Reduction Act
- Supporting several large corporates on developing renewable procurement strategy as well as supporting on cutting-edge decarbonization analysis such as hourly matched clean energy procurement
- Testified in front of the U.S. House of Representatives Subcommittee on Energy, discussing the growth of energy storage in the context of its costs and benefits to the U.S. grid and its role in wholesale markets

STANDARD SOLAR, INC.

Director, Corporate Development and Project Finance

Rockville, MD

March 2012 - July 2013

- Head of corporate development and project finance, investor/Board relations, financial reporting, and budget development/forecasting.
- Collaborated across departments and worked directly with lenders/underwriters and equity and JV partners to identify new sources of corporate/project finance and led financing due diligence, negotiations, and closings.
- Assisted with the launch of an expanded energy efficiency product line along with new smart home, LED, and backup battery/generator product lines by developing finance and sales tools to create a successful launch.

OLIVER WYMAN GROUP – NERA ECONOMIC CONSULTING

Senior Consultant, Energy Practice

New York City/Washington D.C.

June 2002 – June 2011

- Managed energy procurements valued at over \$40 billion for renewable energy certificates/projects (e.g. solar, wind, biomass, hydro), block power, and full-requirements electric supply in Pennsylvania, New Jersey, Ohio, Illinois, Spain, and Portugal on behalf of utilities which included: extensive financial, and risk analysis of potential bidders and project developers; power purchase agreement design and pricing; project and bid valuation; extensive analysis of the wholesale and retail energy and fuel markets; creation of portfolio cost and bid benchmarks; procurement and bid evaluation design and analysis; software and website development; internal team management, extensive bidder, client, and regulatory interaction; procurement rules creation; and retail tariff design.
- Modeled, valued, and analyzed generation assets on an extensive project finance, economic, and dispatch level such as determining financing and hedging options and valuing solar, wind, nuclear, and fossil-fuel generation assets.
- Performed several audits of a major electric retailer’s operations in PJM, MISO, and ERCOT and authored reports with findings, conclusions, and recommendations on business and strategy to senior management.
- Composed and edited a 15-year Integrated Resource Plan for the Baltimore Gas & Electric and Allegheny utilities in Maryland and performed extensive modeling, forecasting, and analysis of the underlying energy efficiency and demand response initiatives (EmPOWER) as well as the renewables, emission, electric, capacity, and fuel markets.
- Created testimony for various deferred energy cost proceedings, which included extensive review, analysis, and evaluation of several western U.S. utilities resource planning, hedging, and energy purchasing/selling strategies.
- Performed an extensive analysis and review of a major paper and pulping company’s renewable and conventional energy strategy for its mills in 10 states and co-authored a report recommending actions to the Board of Directors.

Education

Dartmouth College
 Bachelor of Arts (A.B.) Engineering Sciences, Economics
Concentrations in Corporate Finance and International Trade

Hanover, NH
 June 2001

Dartmouth College, Thayer School of Engineering

Hanover, NH

Bachelor of Engineering (B.E.) Materials Science

June 2002

Dartmouth College, Thayer School of Engineering

Hanover, NH

Master of Engineering Management (M.E.M.)

June 2002

Operations Management and Optimization Methods

Winner of Henderson Prize for Outstanding Thesis

George Washington University, School of Business

Washington, DC

Master of Accountancy (M.A.)

June 2011