Infrastructure

Experts at The Brattle Group have extensive experience advising infrastructure investors, operators, and regulators across the energy, transportation, telecom, water, and waste sectors. They have published widely on subjects ranging from demand forecasting techniques to finance and marketing and have presented papers at conferences in the US, Europe, and Australia.

Brattle combines in-depth industry experience and rigorous analyses to help clients develop strategies for changing markets, make critical business decisions, and answer complex economic and financial questions in regulation and litigation. Our consultants bring a unique combination of economic modeling skills, market knowledge, and an understanding of public policy imperatives. Our in-house teams work with academic and industry experts around the globe on a wide range of matters.

ENERGY

Our firm is an industry leader in the economics and finance of energy assets, with in-depth experience in the electricity, natural gas, and petroleum markets. Our clients include electric and gas utilities, independent power producers, pipeline companies and shippers, electric transmission companies, technology vendors, trade associations, non-governmental organizations, regulators, government agencies, and consumer advocates.

We advise clients in the acquisition and divestiture of energy assets, auction design, and the pricing, design, and risk management of utility services, along with associated policy questions. Brattle's experts regularly provide testimony before regulatory agencies on a wide range of policy, rate, and business matters, as well as in settings where these issues are the subject of litigation or arbitration.

- As the Greek government moved to privatize gas utilities, a gas transmission company hired Brattle to provide consulting services related to tariff rules and remuneration. Our team designed and populated a financial model to calculate regulated revenues and identify key risks and opportunities.
- On behalf of the European branch of a global asset manager, Brattle evaluated the economic impact of legal provisions related to the regulation of a hydroelectric energy plant. Our team developed a discounted cash flow (DCF) model to assess how a new legal provision affected the concessionaire. Our client leveraged this work in technical discussions with regulators.



 Brattle experts prepared a benchmarking study on behalf of the Australian Energy Regulator (AER), reviewing the approaches of eight regulators – located in Australia, Italy, the Netherlands, New Zealand, the UK, and the US – to determine the rate of return. Brattle's report analyzed each regulator's approach to utility regulation and compared the rate of return methodology applied by each regulator to that of the AER. The report highlighted the key differences across methods and opined on best practices.

TRANSPORTATION

Brattle advises transport companies, operators, governments, and regulatory agencies on restructuring, regulatory reform, public policy, and strategy. We have assisted clients in a broad range of transportation issues related to competition, regulatory policy, market assessment, demand modeling and forecasting, service design and pricing, cost analysis, operation and investment analysis, project evaluation, dispute resolution, intellectual property management, and business strategy. Our work has touched upon all transport modes – including the aviation, auto, railroad, postal, and shipping industries – in transportation-related disputes.

- Toll Roads: A Brattle team supported a prominent Italian transportation firm during the bidding phase for new concessions on freeway assets. Our experts developed the financial-regulatory model used for the bidding process, conducted an impact analysis of different traffic scenarios and other variables related to the tender, and forecasted traffic patterns.
- Airports: Brattle economists prepared position papers on behalf of an Italian association of airports in response to the Italian Transport Regulation Authority's (ART) tariff model. Brattle analyzed the methodology proposed to calculate cost efficiency and estimated efficiency gains of Italian airports. Our team also developed a separate methodology to calculate the weighted average cost of capital (WACC) parameters – in particular, the riskfree rate in light of quantitative easing and an equity risk premium – and evaluated the different incentives of dualtill regulation compared to single-till regulation.
- Railways: On behalf of an Italian railway company, a Brattle team conducted a benchmarking analysis of the costs of regional passenger services by examining other operators in Italy and around Europe. Using proprietary data, Brattle also estimated the efficient costs of regional passenger services and supported the company during a public consultation regarding the efficient costs before the Italian ART.
- Maritime Services: Brattle supported an international investment fund during a due diligence process for the acquisition of a stake in a company operating tugboat services in several Italian seaports. Our team analyzed the economic and regulatory aspects of tugboat services and implemented an independent regulatory model to determine the expected amount of future annual revenues. Brattle supported the investor on other strategic and regulatory aspects of the concession contracts held by the company.



TELECOMMUNICATIONS

The Brattle Group has deep experience analyzing telecommunications infrastructure to provide wireless and fixed-line services that deliver voice, video, and broadband. We have evaluated the markets for telecommunications services and equipment, trends in the communications industry, and business feasibilities as part of strategic advisory projects, policy analyses, and in support of commercial litigation. Our clients span the industry, from investors, manufacturers, and technology leaders to wireless and wireline service providers and policymakers.

REPRESENTATIVE ENGAGEMENTS

- Brattle has been involved in various spectrum policy issues and auction design issues. Our work in this area has included the development of policy analyses and participation in proceedings before the Federal Communications Commission (FCC) and US Congress concerning spectrum allocation and auction design issues.
- In helping develop guidance for the determination of a single EU methodology calculating the WACC in the telecoms sector, Brattle experts completed a major study for the European Commission's Directorate-General for Communications Networks, Content and Technology

(DG Connect). Subsequently, Brattle experts advised operators and regulators on the determination of the WACC.

 Brattle experts supported a leading Italian telecoms company in promoting its co-investment offer under Article 76 of the European Electronic Communications Code of 2018 during the regulatory and antitrust proceedings with Italy's competition authority (AGCM) and communications regulator (AGCOM), as well as the European Commission.

WATER AND WASTE

We have worked with both investor- and municipal-owned water and waste utilities on regulatory matters such as the appropriate cost of capital, recovery of infrastructure costs, and cost benefits of water plant investments. Our experts have assisted equity investors in assessing the ability of water and waste utilities to earn the allowed return on equity, evaluating conditions on mergers or acquisitions, and analyzing other factors that may affect the economics of an acquisition.

- Following the Italian government's regulation requiring the transfer of all powers on hydroelectric concessions to regional authorities, our experts provided an analysis of the regulation applicable to wet and dry assets of large hydroelectric concessions for a leading Italian energy company. The Brattle team also provided a critical assessment of the replacement and book values and a regulatory due diligence report on the value of the assets.
- In light of the competition law delegating the government to reorganize public services of the waste sector, Brattle assisted an Italian federation of companies operating in the public services of water, environment, electricity, and gas. Our experts provided an in-depth analysis of the optimal size of a waste collection service and the efficiency of an integrated service with treatment plants.



STATE AID

Our role in state aid proceedings, several of which were initiated by the European Commission, has been to conduct detailed empirical analysis, develop economic and financial models, and apply the Market Economy Investor Principle (MEIP) test to determine if the affected products and services were supplied at a level below market prices, resulting in below-market rates of return for the investors. Our expertise in market analyses, regulatory and consulting advice, and expert testimony as part of market reviews, competitive effects analysis, antitrust investigations, and mergers and joint ventures plays a significant role in the evaluation of state aid cases.

REPRESENTATIVE ENGAGEMENTS

- Brattle has advised large energy companies in several EU countries in connection with investigations by the European Commission of whether artificially low regulated tariffs or negotiated prices could constitute illegal state aid. We undertook detailed economic and financial analyses, including modeling the domestic electricity market and preparing a financial valuation model. Our analyses and written testimonies underpinned clients' legal cases.
- Throughout an EC investigation for state aid and the breach of internal market rules, Brattle assisted Airport Handling, an Italian ground handling company. Our study analyzed whether the investment of an airport operator in Airport Handling was consistent with the behavior of a rational private investor or whether it constituted state aid. The analysis looked at the expected profitability of the investment and described the underlying economic logic based on the specific regulation and legal context of the industries involved. To this end, Brattle analyzed Airport Handling's business plan and competitive position and the relative market size

of handling services in Italy, and showed that a rational private market investor would have found it economically beneficial to invest in ground handling services of the Milan airport with high probability.

 On behalf of the Italian Association of Toll Motorway and Tunnel Concessionaires, Brattle experts provided support on granting an extension of concessions by the Italian government and the European Commission. Our work entailed support on the economic and financial analysis, drafting financial plans, and participating in meetings with the stakeholders. We analyzed the different types of investments and the compensation scheme adopted to ensure their correct remuneration in the face of tariff increases capped over the years. We also examined the remuneration required – both for investments identified in existing concessions and for new investments – on the basis of the historical reconstruction of the dynamics of the concessionaires' revenues, and the cost orientation of forecasted prices consistent with investments.





COST OF CAPITAL

Over the last several decades, Brattle's experts have developed innovative methods to estimate the cost of capital at a line of business level. We assist companies that are considering vertical disintegration, facing radical changes to their cost structure, and entering foreign markets. These techniques supplement traditional measures with structured models of risk and careful analogies to other industries or timeframes. We frequently provide expert testimony before regulatory bodies, courts, and arbitration panels worldwide regarding the appropriate cost of capital, allowed rate of return, and discount rates.

- Brattle has assisted major utilities and gas companies during consultations launched by an energy regulator on criteria to calculate an update to the WACC of regulated activities. The projects involved an assessment of the proposed methodology and estimating specific WACC parameters (risk-free rate, market risk premium, cost of debt, gearing, inflation, etc.) to determine a reasonable range of values for the WACC.
- A team of Brattle experts assisted a leading Greek liquefied natural gas (LNG) transmission system operator in setting a methodology for measuring the cost of capital, taking into account the financial crisis for submission to the Greek energy regulator, RAE.
- Brattle experts assisted Telecom Italia in reviewing the cost of capital estimation carried out by the Italian communications regulator (AGCOM), focusing on the risk-free rate and the equity risk premium.
- Brattle was selected by the European Commission from 17 other potential firms to develop a common EU methodology for estimating the cost of capital in the European telecoms sector. In the report, Brattle highlighted areas where our experts considered it appropriate to set single EU-wide values for WACC parameters and recommended standard EU-wide methodologies to estimate parameter values specific to a member state. The report also assessed the reasonable return on investments for 'legacy' copper networks and Next Generation Access (NGA) networks.



CONTACT US

For more information about our Infrastructure work and to see a list of key contacts, please visit <u>brattle.com/practices/infrastructure/</u>.

ABOUT BRATTLE

The Brattle Group answers complex economic, regulatory, and financial questions for corporations, law firms, and governments around the world. We aim for the highest level of client service and quality in our industry.

We are distinguished by our credibility and the clarity of our insights, which arise from the stature of our experts; affiliations with leading international academics and industry specialists; and thoughtful, timely, and transparent work. Our clients value our commitment to providing clear, independent results that withstand critical review.

Brattle has 500 talented professionals across four continents. For additional information about our experts and services, please visit **brattle.com**.