

**NERA**

ECONOMIC CONSULTING



**NERA Expertise in Motor Vehicle Non-Compliance,  
Air Quality Health Assessment, Consumer Product  
Liability Class Actions, Securities Class Actions, and  
White Collar Investigations**

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## I. Introduction

NERA Economic Consulting (NERA) has strong capabilities within and across geographies to help businesses in the automotive industry confront multi-faceted regulatory, legal, and business reputational threats. NERA's pertinent economic areas (non-compliance and environmental regulation, consumer product liability class actions, securities class actions, and white collar investigations), uniquely position us to provide internationally coordinated economic assistance in response to corporations facing complex and global matters. .

## II. About NERA

NERA is a premier economic consulting firm with more than 500 professionals operating in more than 25 offices worldwide. NERA combines the largest in-house team of economists in the economic consulting world with an extensive network of the leading academic and industry experts in their respective fields. We have a strong presence and reputation in both the US and the EU, with German offices located in Berlin and Frankfurt, and a deep knowledge of the relevant judicial systems.

NERA has a long-standing reputation for integrity, independence and work of the highest quality. Our firm is well known for its expertise and experience in dealing with government and regulatory investigations. NERA experts have been retained by defendants, plaintiffs, corporations and governments as court-appointed experts for judges; have testified in state and federal court in the US, and before Congress and a variety of regulatory agencies including the Department of Justice (DOJ), Securities and Exchange Commission (SEC), US Environmental Protection Agency (EPA); as well as in various international arbitrations venues.

Clients seek our assistance with their most complex problems, finding advantageous the cohesion of our firm, high standards of work, and ability of our teams' to work together seamlessly when such coordination is beneficial to the client, without compromising confidentiality.

NERA has strong capabilities in the following areas of expertise (addressed individually in the following sections):

- Motor vehicle non-compliance and environmental/fuel economy regulation;
- Air quality health impacts;
- Consumer product liability class action;
- Securities class action;
- Survey and sampling analysis in consumer product liability class actions; and
- White collar, enforcement, and investigations.

## III. Areas of Expertise

### 1. Motor Vehicle Non-Compliance and Emissions/Fuel Economy Regulation

NERA has more than three decades experience in evaluating mobile source emissions and fuel efficiency, including developing analyses on behalf of motor vehicle manufacturers in numerous non-compliance enforcement matters.

- NERA's enforcement engagements in the US have included developing analyses and testifying on behalf of US and foreign automobile and truck manufacturers in proceedings before the EPA and the California Air Resources Board (CARB).
- NERA's work related to (alleged) vehicle non-compliance has generally been confidential and therefore we are unable to list the specific projects by name
  - The analyses in these matters have considered the potential impacts of (alleged) non-compliance on manufacturers, customers and the environment.
  - NERA's analyses have been used by manufacturers in discussions with the EPA and CARB regarding potential penalties for non-compliance.
- NERA's work with non-compliance penalties builds upon our state-of-the-art modeling of automobile and truck markets including:
  - Nested-logit models to estimate new vehicle market demand, an econometric model to evaluate impacts on vehicle scrappage rates, a fleet population model to estimate the effects of changes in new vehicle sales and scrappage on overall vehicle populations over time, as well as an econometric model of vehicle miles of travel (VMT) to assess the potential "rebound effect" of changes in fuel efficiency on VMT.
  - The development of these empirical models has involved the creation of an extensive data base on new motor vehicle prices, characteristics and sales.
  - NERA has developed these models working closely with experts in automotive technology, emissions modeling, air quality modeling and public health.
  - These analyses have been used to develop estimates of the value that consumers place on fuel efficiency, horsepower and other vehicle characteristics, as well as on the potential impacts of environmental and fuel economy regulations on the environment, consumers and the economy.
  - The results of these analyses have been presented to US regulatory agencies, the US Office of Management and Budget (OMB), other White House organizations, and to the media.
- NERA has used these and other tools to develop analyses and expert testimony for many major mobile source air emission and fuel economy regulations over the past three decades. Our clients have included individual manufacturers as well as trade associations. These projects include the following:
  - CARB Zero Emission Vehicle (ZEV) regulations, including numerous modifications.
  - EPA regulation of emissions from all-terrain vehicles (ATVs).
  - CARB regulation of greenhouse gas (GHG) emissions from motor vehicles.

- Numerous other state regulations of GHG emissions from motor vehicles based on CARB standards.
- Litigation related to CARB and other state GHG regulations.
- EPA regulation of GHG emissions from new vehicles.
- National Highway Transportation and Safety Administration (NHTSA) regulation of Corporate Average Fuel Economy (CAFE) standards.
- EPA regulation of conventional emissions from heavy-duty trucks, including major standards for 2007 and 2010.
- EPA regulation of GHG emissions from heavy-duty trucks.
- NERA also has relevant experience related to air quality, motor vehicle emissions, and consumer choices in Europe. This experience includes:
  - NERA developed, for the French Ministry of Ecology, Energy, Sustainable Development, and Spatial Planning (MEEDDAT), an econometric model of vehicle choice, based on a large sample of individual household data. The model assessed the implications of differences in vehicle excise (registration) taxes on low-emitting vehicles based on consumer preferences for environmental and other characteristics, as well as price.
  - For a major multilateral development bank, NERA reviewed the estimated externality costs (e.g. health impacts) of NO<sub>x</sub>, SO<sub>2</sub>, and particulate emissions from stationary and mobile sources across the EU and wider European area, and their relationship to population density and per capita GDP.
  - NERA developed econometric models to estimate and simulate vehicle choices in the United Kingdom.
  - NERA conducted economy-wide studies of fuel consumption and associated emissions from vehicles assuming different regulatory requirements and policies.

## **2. Air Quality Health Impacts**

- NERA experts have over three decades of experience in evaluating and contributing to the methods by which the EPA and other entities translate information on emissions into population health risk estimates for ambient pollutants such as PM<sub>2.5</sub>, ozone, NO<sub>2</sub>, CO, and SO<sub>2</sub>, and others such as, mercury and air toxics. This includes:
  - Knowledge and review of the vast epidemiological literature on health effects of ambient pollutants, including statistical weaknesses and data limitations.
  - Independent statistical analysis of exposure-response functions for ozone health impacts based on results of clinical studies of lung function.

- Demonstrations of integrated uncertainty analyses of health risk estimates based on data from epidemiological and clinical health effects studies.
- Use of health risk estimation models used by regulators and the extensions of those models to perform more detailed uncertainty analysis of risk estimates. This includes the USEPA's BenMAP model for assessing epidemiologically-based health risks across different geographies, and USEPA Air Pollutants Exposure simulation model (APEX).
- NERA routinely demonstrates uncertainties and errors in regulator's health risk analyses, via expert testimony and written technical comments:
  - We are widely reputed for our effective presentations before the US Clean Air Scientific Advisory Committee (CASAC), which advises USEPA on the scientific evidence related to setting National Ambient Air Quality Standards.
  - We have written dozens of technical reviews of risk-related regulatory documents on multiple different pollutants, with a strong track record of making points that positively impact their final content. Draft documents we frequently review include ambient pollutant Health Risk and Exposure Assessments and Regulatory Impact Analyses.
  - We have prepared innovative independent risk analyses that demonstrated important aspects of uncertainty and bias in risk analysis methods used by regulatory bodies.
- Our experts have published peer-reviewed articles on air pollutant impact assessment methodologies, including three articles on PM2.5 health risk uncertainty analysis being published in 2015 issues of Risk Analysis.
- NERA experts have testified before committees of the US Senate and House of Representatives on PM2.5 and other air pollutant risk analyses and benefit-cost analyses related to policy developments.

### **3. Consumer Product Liability Class Action**

- NERA's experience in consumer class actions includes hundreds of clients (including, e.g., VW, Toyota, GE, Dole, RJ Reynolds, and Costco) across a broad range of industries and a wide array of claims.
- We have more than 20 in-house experts with testimonial experience at the class certification, liability and/or damages phases in a range of cases alleging that, e.g., false labeling or product defect led to overpayment and/or diminution of value.
- For the past three years, our published statistics on consumer class action settlements have been used as the preeminent resource for companies, attorneys and insurers seeking to understand the associated risk of class actions.
- At the class certification stage, we have used statistical analysis of market data and surveys to develop arguments that individualized review would be required to estimate any damages, and that a common, class-wide formula cannot be applied.

- For the automobile industry, we have analyzed consumer demand, measured the value that consumers place on automobile attributes, predicted the probability of a recall, forecasted the personal injury liability associated with recalls and valued the impact of a recall on corporate reputation or brand value.
- We have also used event study and time series analysis to measure changes in automobile prices coincident with a recall and used data associated with other similar recalls to forecast future recovery in automobile resale value.
- **Sample cases include:**
  - Provided expert testimony critiquing hedonic pricing models proposed by plaintiffs in a class action brought by owners of Volkswagen Rabbits in North Carolina and California involving claims relating to defective valve stem seals and their impact on resale value. The jury found no liability on the part of Volkswagen.
  - Provided expert testimony on behalf of Toyota Canada, in the class action litigations alleging unintended acceleration and faulty brake systems, providing economic analysis relevant to issues of class certification and alleged diminution of value.
  - Provided consulting support for an automobile manufacturer to quantify potential exposure (i.e., the number of personal injury claims and the likely settlement value for each) associated with allegedly defective part that led to a recall of almost 3 million vehicles and allegations of personal injury/death.
  - Provided consulting support for a non-US automobile manufacturer to quantify customer valuation of vehicle attributes through an analysis of vehicle purchases. Developed a market share simulation model to estimate the impact of changes in attributes of the sale of vehicles.

#### **4. Securities Class Action**

- NERA's Securities Practice dates from the 1970s and is widely recognized as a leader in the field.
- We have over 15 testifying in-house experts, a large and experienced support staff, and numerous academic and industry affiliates.
- NERA has experience and success testifying in securities class actions in jurisdictions across the US, EU, and Canada.
- NERA has worked on over 20 securities cases in the automobile industry.
- In the EU, we have been involved in securities actions brought by VEB, a non-profit shareholders' group that serves as representative for both current and former shareholders.
- NERA has been analyzing trends in securities class actions for more than 20 years. We publish annual reports on US trends, as well as trends globally, providing a highly sought-after source of information for risk managers, attorneys, insurers and

policymakers to assess likely exposures and the likelihood and magnitude of settlements. In fact, the Supreme Court has used these results to draw conclusions about the efficacy of litigation reform measures.

- NERA experts have been involved in many of the most high-profile securities class action cases including:
  - Erica P. John Fund, Inc. v. Halliburton Co;
  - Omnicom Securities Litigation;
  - PolyMedica Securities Litigation;
  - Adelphia Communications v FPL Group;
  - Jerry Ryan, et al. v Flowserve Corporation;
  - Williams Securities Litigation; and
  - Health Management Inc. Securities Litigation.

## **5. Survey and Sampling Analysis in Consumer Product Liability Class Actions**

- NERA's survey team has a strong presence across the US, with testifying experts in San Francisco, New York, Denver and Philadelphia.
- In the pre-certification phase of product defect cases alleging false/misleading advertising or omissions, our experts have designed, implemented and rebutted surveys that assess whether consumers were misled and whether the allegedly wrong impressions were material to their decision to make a purchase.
- Our experts have rebutted conjoint analysis surveys put forth by plaintiffs' firms in an attempt to demonstrate a loss in consumer value that can then be used as an input for estimating class-wide damages. Conjoint studies are a method to measure willingness to pay or the value that consumers associate with the presence or absence of a particular feature of a product. Such methods have been accepted in some courts to establish the value of a particular patented feature and are gaining acceptance in product liability matters.
- Recent high-profile consumer class cases in which NERA experts have successfully testified include:
  - E-cigarettes and cigarettes—NJOY, INC. Consumer Class Action Litigation; Sateriale, et al. v. R.J. Reynolds Tobacco Co;
  - Annuities and financial products—Vaccarino et al. v. Midland National Life Insurance Company; Chambers et al. v. North American Life;
  - Food Labeling cases—Brazil v. Dole Packaged Foods; Rahman v. Mott's LLP; Astiana v. Ben & Jerry's Homemade;
  - Software matters—Khoday v. Symantec Corp; and



- Consumer large appliance—In re: Whirlpool Corp. Front-Loading Washer Products Liability Litigation, *Butler v. Sears, Roebuck and CO.*
- NERA experts also have substantial statistical experience using samples and Census data to analyze issues of geographical limitations to class definition and in evaluating sampling conducted by plaintiffs. Recent examples include:
  - Use of Census data in tobacco-related class action cases to estimate the proportion of a potential class living in a particular state who were living in another jurisdiction at the time they were injured.
  - In the recent “Hot Fuels” litigation where the allegation was gasoline overcharge in states with higher average temperatures because the gas expands in hot weather, estimating the shares of alleged injuries occurring outside the plaintiff’s state of residence.
  - In a recent construction defect case, rebutting plaintiffs’ statistician’s use of a small sample of homes. The trial court excluded his opinion as a result.

**6. White Collar, Enforcement and Investigations**

- NERA regularly assists counsel with planning, responding to, and presenting evidence in response to government or regulatory agency investigations.
- We also have extensive experience assisting counsel with their representation of companies and individuals in civil and criminal enforcement actions and litigation, including at trial.
- Our experts have been retained both by regulators (SEC, DOJ, and European Commission) and by companies and individuals involved in government agency investigations and enforcement actions.
- We frequently assist with:
  - Analysis of materiality;
  - Analysis of remedies—disgorgement, restitution, and penalties; and
  - Analysis in insider trading cases.
- We have experience with analysis of manipulation of stock prices and benchmarks.
- We have assisted counsel with analysis of impact of bribery in FCPA and anti-corruption cases; similar analysis can apply to other fraudulent practices.
- NERA’s Antitrust and Competition practice has extensive experience dealing with key questions arising in investigation and enforcement actions dealing with market practices that may affect competition and commerce, such as:
  - Analysis of bid rigging, price fixing, market allocation, and other forms of criminal conduct;

- Estimating volume of commerce directly and indirectly affected;
  - Evaluating effective duration and impact of an alleged conspiracy;
  - Estimating likely magnitude of the government fine;
  - Using economic analyses to avoid prosecution, defending against criminal charges, or reaching a settlement;
  - Estimating the impact of overcharges, pass-on and lost profits;
  - Using sales or bidding data to analyze liability, impact, and damages; and
  - Importance of evaluating product supply and demand characteristics and pricing in affected markets.
- Sample cases include:
    - Assisted several companies in the joint defense of the largest EU damages claim to date.
    - Assisted several car manufacturers on various competition matters including damages claims in a wide range of jurisdictions.
    - Assisted the CEO of a publicly traded company in responding to allegations of violations of mining safety and environmental regulations and of committing securities fraud by not publicly disclosing said alleged violations.
    - Assisted individual Chairman of the Board of a publicly listed company with government allegations with regard to sharing inside information with third parties.
    - Assisted numerous individuals with presentations to various government agencies with regard to materiality of alleged criminal acts and alleged regulatory violations.
    - Assisted DOJ with presenting expert evidence at trial linked to the materiality of an accounting practice that led to inflation of the shares of a publicly listed government contractor.
    - Assessing aggregate investor losses in a criminal proceeding for purposes of sentencing.