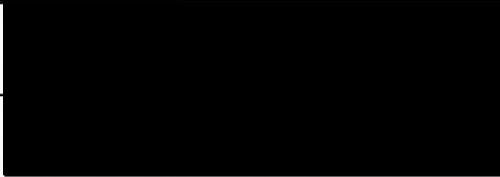


Committee on Energy and Commerce
U.S. House of Representatives
 Witness Disclosure Requirement - "Truth in Testimony"
 Required by House Rule XI, Clause 2(g)

1. Your Name: <i>ANNE SMITH</i>		
2. Are you testifying on behalf of the Federal, or a State or local government entity?	Yes	No ✓
3. Are you testifying on behalf of an entity that is not a government entity?	Yes	No ✓
4. Other than yourself, please list which entity or entities you are representing: <i>n/a</i>		
5. Please list any Federal grants or contracts (including subgrants or subcontracts) that you or the entity you represent have received on or after October 1, 2011: <i>—</i>		
6. If your answer to the question in item 3 in this form is "yes," please describe your position or representational capacity with the entity or entities you are representing: <i>n/a</i>		
7. If your answer to the question in item 3 is "yes," do any of the entities disclosed in item 4 have parent organizations, subsidiaries, or partnerships that you are not representing in your testimony?	Yes	No
8. If the answer to the question in item 3 is "yes," please list any Federal grants or contracts (including subgrants or subcontracts) that were received by the entities listed under the question in item 4 on or after October 1, 2011, that exceed 10 percent of the revenue of the entities in the year received, including the source and amount of each grant or contract to be listed:		
9. Please attach your curriculum vitae to your completed disclosure form.		

Signature: _____



Date: _____

4 / 11 / 13

Anne E. Smith **Senior Vice President**

Dr. Anne Smith is an economist and decision analyst specializing in energy and environmental markets, economic impact assessment, and policy analysis. Dr. Smith has conducted major analyses on costs, benefits, and macroeconomic impacts generally of many important environmental issues, including air quality standards, global climate change and natural resource damage assessment (NRDA).

Dr. Smith has been engaged as an expert witness in major litigation, including New Source Review (NSR) litigation against several utilities, and the air quality nuisance suit *State of North Carolina v. TVA*, in which she was a central testifying expert. She testified before the Colorado Public Service Commission in the significant proceedings regarding the utility system costs of alternatives for meeting the requirements of the Colorado Clean Air – Clean Jobs Act in 2010. She has testified numerous times before the US Congress. Dr. Smith also helps private corporations devise business strategies to address changing regulatory and business environments. She has particularly deep experience in electricity sector issues, including system operations optimization, pricing, compliance planning and risk management, integrated resource planning, and long-range investment planning.

Before joining NERA, Dr. Smith headed the Climate & Sustainability Group at Charles River Associates. Prior to that, she headed the Environmental Policy Practice and served on the Board of Directors at Decision Focus Incorporated, and earlier served as an economist in the Office of Policy Planning and Evaluation at the USEPA.

Dr. Smith received her BA degree in Economics from Duke University in 1977, *summa cum laude*, and is a member of Phi Beta Kappa. She received her MA and PhD degrees in Economics from Stanford University, where her studies concentrated in industrial organization, decision sciences, and labor economics. Her PhD degree included a minor in Stanford's Engineering-Economic Systems Department (presently known as the Department of Management Sciences and Engineering).

Education

Stanford University

PhD, Economics (with minor in Engineering-Economic Systems), 1984

Stanford University

MA, Economics, 1981

Duke University

BA Economics, *summa cum laude*, 1977

Professional Experience

Current	NERA Economic Consulting Senior Vice President
1998-2011	Charles River Associates Vice President and leader of the Climate & Sustainability Group
1984-1998	Decision Focus Incorporated (later DFI-Aeronomics) Principal, Vice President, and leader of the Environmental Policy Practice; Member of DFI Board of Directors from 1997-1998.
1981-1982	SRI International Research Analyst
1977-1979	Economic Analysis Division of the Office of Policy Planning and Evaluation of the U.S. Environmental Protection Agency Economist

Testimony in Regulatory and Judicial Proceedings

Court and Hearings Boards

Expert witness on emissions-related damages estimates in United States of America v. Westvaco Corporation, Civil Action No. MJG 00-CV-2602, U.S. District Court for the District of Maryland. Written expert report filed February 21, 2012; deposition March 22, 2012.

Expert witness on cost to utilities and associated state macroeconomic and state revenue impacts of sectoral carbon limits, State of New Mexico Environment Improvement Board, EIB 11-16(R), in the matter of Proposed Repeal of Regulation 20.2.100 NMAC – “Greenhouse Gas Reduction

Program.” Written expert report filed October 7, 2011; testimony and cross examination December 13, 2011.

Expert witness on cost to utilities and associated state macroeconomic and state revenue impacts of multi-state GHG cap-and-trade policy, State of New Mexico Environment Improvement Board, EIB 11-15(R), in the matter of Proposed Repeal of Regulation 20.2.350 NMAC – “Greenhouse Gas Cap and Trade Provisions.” Written expert report filed September 15, 2011; testimony and cross examination November 8, 2011.

Expert witness in international arbitration on business damages under the auspices of the Permanent Court of Arbitration, Case No. 2009-18. Expert report on markets for Kyoto Protocol compliance instruments filed June 29, 2010; expert report on business damages filed December 8, 2010; cross examination on September 2, 2011.

Expert witness on economic benefits to a company from delayed compliance in PennEnvironment and Sierra Club v. GenOn Northeast Management Company, Civil Action No. 07-00475, U.S. District Court for Western District of Pennsylvania. Expert report finalized May 6, 2011, but not filed due to settlement of case.

Expert witness on costs and risks, Public Utilities Commission of the State of Colorado, Docket No. 10M-245E, in the matter of the Commission consideration of Public Service Company of Colorado Plan in compliance with House Bill 10-1365, “Clean Air – Clean Jobs Act.” Written answer testimony filed September 17, 2010; written cross-answer testimony filed October 8, 2010; written supplemental answer testimony filed November 9, 2010; written supplemental cross-answer testimony filed November 15, 2010. Cross-examinations on October 28, 2010 and November 19, 2010.

Expert witness on cost and economic impacts, State of New Mexico Environment Improvement Board, EIB 10-04(R), in the matter of Proposed Regulation 20.2.350 NMAC – “Greenhouse Gas Cap and Trade Provisions.” Written expert report filed August 16, 2010; testimony and cross examination September 29, 2010.

Expert witness on cost-benefit analysis in State of North Carolina *ex. rel.* Roy Cooper, Attorney General (Plaintiff) v. Tennessee Valley Authority (Defendant), Case No. 1:06-CV-20, U.S. District Court for the Western District of North Carolina, Asheville Division. Written expert report filed February 27, 2007; deposition June 19, 2007; testified July 29, 2008.

Expert witness on utility company compliance costs and emissions impact of an alternative emissions control approach to the proposed mercury control policy for the State of Illinois, (in the matter of proposed new Ill. Adm. Code 225, *Illinois Pollution Control Board Hearings on the matter of Control of Emissions from Large Combustion Sources (Mercury)*). Written testimony filed July 28, 2006; cross examination at IPCB hearings on August 14-17, 2006 (Chicago IL).

Expert witness on estimating economic benefits of visibility improvements, *State of Washington Pollution Control Hearings Board*, expert report filed December 1998 (summary judgment in favor of client before testimony occurred).

Congressional Hearings

“The American Energy Initiative – A Focus on EPA’s New Proposal to Tighten National Standards for Fine Particulate Matter in the Ambient Air” *U.S. House of Representatives Committee on Energy and Commerce, Subcommittee on Energy and Power*, June 28, 2012.

“The American Energy Initiative – A Focus on What EPA’s Utility MACT Rule Will Cost U.S. Consumers” *U.S. House of Representatives Committee on Energy and Commerce and Subcommittee on Energy and Power*, February 8, 2012.

“Innovative Practices to Create Jobs and Reduce Pollution” *U.S. Senate Committee on Environment and Public Works, Subcommittee on Green Jobs and the New Economy*, October 13, 2011.

“Quality Science for Quality Air” *U.S. House of Representatives Committee on Science, Space, and Technology, Subcommittee on Energy and the Environment*, October 4, 2011.

“Auctioning under Cap and Trade: Design, Participation and Distribution of Revenues” *U.S. Senate Committee on Finance*, May 7, 2009.

“Legislative Hearing Regarding the American Clean Energy and Security Act” *U.S. House of Representatives Committee on Energy and Commerce and Subcommittee on Energy and Environment*, April 24, 2009.

“Economic Impacts of Florida Executive Order 07-127” before Florida Energy Commission (November 19, 2007), and at hearings held by House and Senate Committees of the Florida State Legislature (both on December 12, 2007).

“America’s Climate Security Act of 2007, S.2191” *Legislative Hearing of the Senate Committee on Environment and Public Works*, November 8, 2007.

“Counting the Change: Accounting for the Fiscal Impacts of Controlling Carbon Emissions” *House Committee on the Budget*, November 1, 2007.

“Lessons Learned from Existing Cap and Trade Programs” *House Committee on Energy and Commerce, Subcommittee on Energy and Air Quality*, March 29, 2007.

“Energy Market and Economic Impacts of a Proposal to Reduce Greenhouse Gas Intensity with a Cap and Trade System,” *U.S. Senate Committee on Energy and Natural Resources*, January 24, 2007.

“Science and Risk Assessment behind the EPA’s Proposed Revisions to the Particulate Matter Air Quality Standards,” *U.S. Senate Environment and Public Works Committee*, July 19, 2006.

“Economic Impacts of Various Proposals to Reduce Domestic Greenhouse Gas Emissions,” *U.S. Senate Committee on Energy and Natural Resources*, September 20, 2005.

“The Proposed Regional Haze Regulation and its Relationship to the Work of the Grand Canyon Visibility Transport Commission,” *U.S. Senate Committee on Energy and Natural Resources, Subcommittee on Forests and Public Land Management*, October 1997.

“Scientific Foundations for U.S. EPA’s Proposed New National Ambient Air Quality Standard for PM_{2.5},” *U.S. Senate Committee on Environment and Public Works, Subcommittee on Clean Air, Wetlands, Private Property, and Nuclear Safety*, February 1997.

Examples of Prior Economic Analysis Projects

Independent project—Using a unit-level model of the U.S. utility generating markets, projected compliance actions and costs of complying with EPA’s Mercury and Air Toxics Standards (MATS) rule, with and without implementation of the Cross-State Air Pollution Rule (CSAPR). Results were compared to EPA’s cost analysis, and macroeconomic impacts of those compliance costs were estimated. Analysis was performed using the N_{ew}ERA integrated model of the U.S.

American Coalition for Clean Coal Electricity—Prepared an analysis of the cumulative compliance costs of four regulations affecting the U.S. electric generating sector: the Cross-State Air Pollution Rule (CSAPR), the proposed utility MACT rule, the proposed Section 316(b) cooling water intake rule, and the anticipated coal ash handling rule. Macroeconomic impact analysis of compliance costs was performed using a REMI model.

Tri-State Generation and Transmission Association, Farmington Electric Utility System and El Paso Electric—Prepared analysis of costs of altered utility system operations, oil and gas sector retrofits, and projected offsets supplies to reduce emissions under two different greenhouse gas policies adopted by the State of New Mexico. Also performed an analysis of the macroeconomic impacts of estimated the compliance costs using a REMI model. Analysis was submitted as expert testimony in hearings on the repeal of the rules.

Ameren Missouri—Assisted in the development of a probabilistic method for the company’s integrated resource plan of 2008, including working with stakeholders to incorporate their comments and issues, writing requests for approval of approach to the Missouri Public Service Commission, conducting expert elicitations of Ameren content experts, and leading the modeling activities to generate multiple probabilistic scenarios of future market conditions, which were a foundation for the company’s final IRP analysis. Was engaged to also support the company’s 2011 IRP, using the same technical approach that was developed for 2008.

Peabody Energy—Prepared detailed analyses of Public Service of Colorado’s cost-of-service impacts under alternative plans proposed by the utility for meeting its requirements under the Colorado Clean Air – Clean Jobs Act. Prepared multiple expert reports to the Colorado Public

Service Commission (PSC) on alternatives' system costs, risks and on expected future Federal emissions regulatory requirements. Appeared for cross-examination twice before the Colorado PSC.

Edison Electric Institute, EPRI, other industry organizations, and private corporations—Developed an integrated modeling framework for assessing costs and economic impacts of multi-pollutant emissions trading policies in the U.S. Framework incorporates a bottom-up, unit-level model of U.S. electricity sector with a top-down macroeconomic model of the U.S. economy at large. Submitted formal comments on cost and impact analyses of the Clean Air Mercury Rule (CAMR), and the Clean Air Interstate Rule (CAIR).

Several clients—Since 2003, have analyzed the costs and economic impacts of most of the climate bills being proposed to cap U.S. greenhouse gas emissions using a computable general equilibrium model, MRN-NEEM. Analyses have included estimates of impacts to society at large, and to value of assets owned by individual companies. Also projected carbon allowance prices and demand for carbon credits/offsets.

Reason Public Policy Institute—Assessed benefits, costs, and regional economic impacts of proposed national air quality standards for particulate matter and ozone. Used the multi-region REMI national model to assess economic impacts, including regional competitiveness effects, job loss/creation by sector, income impacts, and equity/distributional impacts. Uncertainty analysis on health damage functions and benefits valuation was also part of this assessment. Report was cited in Supreme Court briefs in *American Trucking Association v. EPA*.

Nuclear Electric, plc, U.K.—Developed an engineering-based economic model of U.K. energy markets for use in evaluating U.K. and EC carbon policy options, including emissions fees, emissions trading, and a range of other incentives.

U.S. Environmental Protection Agency—Developed engineering-based model (GEMINI) integrating environmental and energy-economy feedbacks, for use in evaluating a range of regulatory options to control greenhouse gases; this effort involved a detailed analysis of energy subsidy impacts.

Grand Canyon Visibility Transport Commission—Led the development of the GCVTC's integrated assessment system, its associated database of emissions control measures, and projected baseline of visibility conditions in the southwestern region of the United States; applied a 15-region REMI model to assess the macroeconomic impacts of alternative visibility management strategies.

Professional Activities

Panel of Experts on “Lessons Learned from the European Union’s Emissions Trading Scheme and the Kyoto Protocol’s Clean Development Mechanism,” U.S. General Accountability Office, 2008. (Report: GAO-09-151, released November 2008).

Congressionally Mandated Committee on Management of Certain Radioactive Waste Streams Stored in Tanks at Three Department of Energy Sites, National Academy of Sciences, 2005-2006.

Committee on Risk-Based Approaches for Transuranic and High-Level Radioactive Waste, National Academy of Sciences, 2003–2005.

National Coal Council, member, 2001–2011.

Committee on the Characterization of Remote-Handled Transuranic Waste for the Waste Isolation Pilot Plant, National Academy of Sciences, 2001–2002.

Programmatic Review of EPA’s PM_{2.5} Research Program, Subcommittee on Risk Management, Board of Scientific Counselors, U.S. Environmental Protection Agency, 1999.

Technical Expert to Committee on Idaho National Engineering and Environmental Laboratory High-Level Waste Alternative Treatments, Board on Radioactive Waste Management, National Academy of Sciences, 1998.

Committee to Evaluate Science, Engineering, and Health Basis of DOE’s Environmental Management Program, Subcommittee on Priority Setting, Timing and Staging, National Academy of Sciences, 1995–2002.

Panel on DOE’s Environmental Restoration Priority-setting System, National Academy of Sciences, 1992–1993.

Dialogue on Global Climate Change and National Energy Policy, Keystone Foundation, Keystone, CO, 1989–1990.

Working Group on Assessment of the Impact of Pollutants on the Marine Environment, Group of Experts on Scientific Aspects of Marine Pollution (GESAMP), United Nations, Bangkok, Thailand, 1984.

Working Group on Biological Aspects of Thermal Pollution of the Marine Environment, GESAMP, United Nations, Rome, Italy, 1983.

Ad-hoc Committee on Cost-Benefit Analysis, United Nations Economic Commission for Europe, Geneva, Switzerland, 1982.

Publications and Relevant Major Project Reports

An Evaluation of the PM_{2.5} Health Benefits Estimates in Regulatory Impact Analyses for Recent Air Regulations. Report prepared for Utility Air Regulatory Group, December 2011.

“Climate Engineering – Alternative Perspective,” Chapter 1.2 in *Smart Solutions to Climate Change – Comparing Costs and Benefits*, Bjorn Lomborg (ed.), Cambridge University Press, 2010.

“Effects of Land Use Tradeoffs on the U.S. Agriculture Sector under a Carbon Policy,” (with Sugandha Tuladhar, Mei Yuan, and others), submitted to *Applied Economic Perspectives and Policy*, 2010.

“Evaluation of Health Effects of Ambient Ozone,” (with Roger O. McClellan, Mark W. Frampton, and others), *Inhalation Toxicology*, Vol. 21(S2), September 2009, pp. 1-36.

“R&D Policy,” (with W. David Montgomery and Lee Lane), Chapter 1.5 in *A Taxing Debate: Climate Policy Beyond Copenhagen*, Ian Marsh (ed.), Growth No. 61, CEDA – the Committee of Economic Development of Australia, August 2009

“Macroeconomic Analysis of American Clean Energy and Security Act of 2009,” (with Robert Baron, Scott Bloomberg and others), *USAEE Dialogue*, Vol. 17(2), August 2009, pp. 12-16.

“A Top-Down Bottom-up Modeling Approach to Climate Change Policy Analysis,” (with Sugandha D. Tuladhar, Mei Yuan, and others), *Energy Economics*, Vol. 31(S2), July 2009, pp. S223-S234.

”A Statement on the Appropriate Role for Research and Development in Climate Policy,” (with Kenneth J. Arrow, Linda R. Cohen and others), *Economists’ Voice*, February 2009.

“Price, Quantity, and Technology Strategies for Climate Change Policy,” (with W. David Montgomery), Chapter 27 in *Human Induced Climate Change: An Interdisciplinary Assessment*, M. Schlesinger *et al.* (eds.), Cambridge University Press, 2007.

“Methods and Results from a New Survey of Values for Eastern Regional Haze Improvements,” (with Michael A. Kemp, Timothy H. Savage, and Catherine L. Taylor), *Journal of the Air and Waste Management Association*, Vol. 55, November 2005, pp. 1767-1779.

“Implications of Trading Implementation Design for Equity-Efficiency Trade-offs in Carbon Permit Allocations” (with Martin Ross and David Montgomery), CRA Working Paper, December 2002.

“Not All Problems Have Been Solved in Emissions Trading.” *Natural Gas*, John Wiley & Sons, Inc., December 2001, pp. 15–20.

“An Empirical Mechanistic Framework for Heat Related Illness,” (with Nathan Chan, Mark Stacey, and others), *Climate Research*, Vol. 16, January 2001, pp. 133–143.

“Global Climate Change and the Precautionary Principle,” (with W. David Montgomery) , *Human and Ecological Risk Assessment*, Vol. 6, No. 3, 2000, pp. 399–412.

“Analysis of the Reduction of Carbon Emissions through Tradable Permits or Technology Standards in a CGE Framework,” (with E. Balistreri, P. Bernstein, and others), *AERE/Harvard Workshop on Market-Based Instruments for Environmental Protection*, Cambridge, MA, July 18–20, 1999.

“An Integrated Assessment Framework for Climate Change and Infectious Diseases,” (with N. Chan, K. Ebi, and others), *Environmental Health Perspectives*, Vol. 107, No. 5, May 1999.

“Preserving Flexibility in the Kyoto Protocol.” *Journal of the Forum for Environmental Law, Science, Engineering, and Finance*, August 1998.

“Making Appropriate Comparisons of Estimated and Actual Costs of SO₂ Emissions Reductions under Title IV,” Paper 98-TP49.01, *Air and Waste Management Association Conference*, San Diego, CA (June 14–18, 1998).

“The Costs of Reducing Utility SO₂ Emissions—Not As Low As You Might Think,” (with Jeremy Platt and Denny Ellerman), Massachusetts Institute of Technology, Center for Energy and Environmental Policy Research, WP-98010, August 1998; a shorter version of the paper was published in *Public Utilities Fortnightly*, May 15, 1998.

“Statistical Shell Game,” *EEI’s Electric Perspectives*, May-June 1997, pp. 38–52.

“The Real Particulate Matter Culprit: EPA’s Flawed Assumptions,” Commentary, *Inside EPA’s Risk Policy Report*, Vol. 3, No. 2, February 21, 1997, pp. 35–38.

“The GCVTC Integrated Assessment: Putting All the Science Together.” Paper 96-TP46.04, *Air and Waste Management Association Conference*, Nashville, TN, June 23–28, 1996.

“Energy Modeling with Environmental Constraints.” *Nuclear Energy in the 21st Century—An Environmental Bonus?* Proceedings of the International Conference of the British Nuclear Energy Society, Bath, U.K., April 14–15, 1994.

“Integrated Environmental/Energy Policy Analysis for the U.K.” (with Stephen M. Haas), *Global Climate Change: Science, Policy, and Mitigation Strategies*, C.Mathai and G. Stensland, eds., Air and Waste Management Association, 1994.

“A Multi-attribute Approach to Choosing Adaptation Strategies,” (with H. Quan Chu), *Global Climate Change: Science, Policy, and Mitigation Strategies*, C.V. Mathai and G. Stensland (eds.), Air and Waste Management Association, 1994.

“The Effect of Daytime Running Lights on Crashes between Two Vehicles in Saskatchewan: A Study of a Government Fleet,” (with G. Sparks, R. Neudorf, and others), *Accident Analysis and Prevention*, Vol. 25, No. 5, 1993, pp. 619–625.

“Issues in Implementing Tradable Allowances for Greenhouse Gas Emissions.” Paper 91–169.4, *Proceedings of the Air & Waste Management Association Conference*, Vancouver, BC, June 1991.

“Environmental Policy Assessment in the 1990s,” (with J. D. Scheraga), *Forum for Social Economics*, Autumn 1990.

“A Probabilistic Model for Assessing Damages of Acid Deposition to Painted Surfaces.” *Acid Rain: Scientific and Technical Advances*, Selper Ltd., London, 1987.

“TANKS: A Software Tool for Managing the Risks of Underground Storage Tanks.” *Managing Environmental Risks*, Air Pollution Control Association, Washington, D.C., 1987.

“The Costs and Benefits of Sulphur Oxide Control,” (with R. Barnes and G. Parkinson), *Journal of the Air Pollution Control Association*, 1983.

Development of Decision Analysis Methodology for Health Risk Assessment – An Illustrative Application to Alternative Air Quality Standards for Carbon Monoxide, (with P. McNamee and M. W. Merkhofer). SRI International Report prepared for U.S. Environmental Protection Agency under Contract 68-02-3575. 1983.