

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: <u>J. Edward Cichunowicz</u>		
2. Are you testifying on behalf of the Federal, or a State or local government entity?	Yes	No <input checked="" type="checkbox"/>
3. Are you testifying on behalf of an entity that is not a government entity?	Yes	No <input checked="" type="checkbox"/>
4. Other than yourself, please list which entity or entities you are representing: <u>None</u>		
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: <u>None</u>		
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:		
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: J. Edward Cichunowicz

Date: November 11, 2013

J. EDWARD CICHANOWICZ

J.E. Cichanowicz, Inc.
236 N. Santa Cruz Ave
Suite #202
Los Gatos, CA 95030
(408) 395-1085 ec@jecinc.info

INDEPENDENT CONSULTANT (ENVIRONMENTAL TECHNOLOGIES)

J.E. CICHANOWICZ, INC.
(July 1993-present)

J. Edward (Ed) Cichanowicz provides consulting services for utility industry clients in developing environmental control strategies to meet mandates of federal, state, and local regulatory agencies. His specialty is evaluating the technical feasibility, cost, and risk of both mature and evolving technologies to control emissions from fossil fuel generating stations. His expertise includes selective catalytic reduction (SCR) for nitrogen oxides (NO_x), technologies for control of mercury and carbon dioxide (CO₂), as well as flue gas desulfurization processes for sulfur dioxide (SO₂) and sulfur trioxide (SO₃).

Mr. Cichanowicz's services can be categorized as follows:

Design and Implementation of Environmental Control Technologies

Mr. Cichanowicz has developed environmental compliance plans and equipment designs for coal-fired and natural-gas fired generating stations. Clients have included Detroit Edison, Duke Power Company, Exelon Power, FirstEnergy Corporation, Luminant, New England Power, New York State Electric & Gas Corporation, NiSource, Oglethorpe Power, Public Service Electric & Gas Corporation, Southern Company, Tennessee Valley Authority, Reliant Energy, and a number of rural co-operatives. Specific duties include evaluating the performance, cost, and risk of various control options.

Optimizing the Performance of Selective Catalytic Reduction (SCR) NO_x Control

Mr. Cichanowicz has 30 years of research, design, and commercialization experience in SCR NO_x control technology. He is the lead author of the publication *SCR Operating and Maintenance Guideline*, funded by the Electric Power Research Institute (EPRI), for application to coal-fired generators. Also for EPRI he authors the *Gas Turbine/Combined Cycle Post-Combustion Emission Control Best Practices Guideline*, addressing SCR and carbon monoxide controls for gas turbines. He is the lead developer of CatReact™, EPRI's catalyst management software. He has assisted over 20 utility companies in deploying SCR, including developing a process specification, evaluating supplier proposals, critiquing and witnessing flow model studies, and reviewing start-up and guarantee testing.

J. EDWARD CICHANOWICZ

He has represented owners of SCR equipment in arbitration and mediation proceedings. He has been awarded three patents for a next-generation catalytic reactor to control emissions of both NO_x and mercury.

Technical Analysis of Federal and State Rulemaking

Industry associations such as the Utility Air Regulatory Group, the American Coalition for Clean Coal Electricity, the American Public Power Association, and the National Rural Electric Cooperative Association retain Mr. Cichanowicz to project how power providers will respond to regulatory initiatives. Specifically, Mr. Cichanowicz and associates have developed algorithms to simulate the compliance decisions of power generators in more than 25 states to meet both federal and state initiatives for control of emissions of NO_x, SO₂ and SO₃, particulate matter, and mercury. For the Ontario Ministry of the Environment, he was part of a team that developed a strategic plan to meet proposed provincial mercury legislation.

He has authored over fifty “white papers” for industry groups, among the more recent summarizing the feasibility of carbon capture and sequestration technologies for CO₂, and cost trends for environmental control equipment.

TECHNICAL PROJECT MANAGER ELECTRIC POWER RESEARCH INSTITUTE (1978-1993)

Duties at EPRI focused on managing research projects to develop and commercialize environmental control technologies, and improve plant performance. Specific activities included:

- developing strategies to enhance power plant thermal and environmental performance using integrated design concepts for environmental controls. This work in 1988 received the National Academy of Environmental Engineers *Excellence in Environmental Engineering* award.
- evaluating SCR feasibility for power stations, including managing engineering studies, and supervising the design and testing of five pilot plants.
- managing engineering studies of advanced technologies for combined control technologies for nitrogen oxides, sulfur dioxide, and particulate emissions.

J. EDWARD CICHANOWICZ

RESEARCH ENGINEER

ENERGY & ENVIRONMENTAL RESEARCH CORPORATION
(1975-1978)

Developed combustion systems to control NO_x emissions for coal, fuel oil, and natural gas-fired boilers, under sponsorship of the U.S. Environmental Protection Agency, oil refiners, and industrial fuel consumers.

FURTHER BACKGROUND INFORMATION

Mr. Cichanowicz has been awarded (and has pending) numerous patents in NO_x and environmental control technology, and power-efficient data center concepts. He has authored or co-authored over 100 technical papers. He is an active member of the American Society of Mechanical Engineers, and the Air & Waste Management Association.

EDUCATION

Clarkson University: BS in Mechanical Engineering, 1972

University of California at Berkeley: MS in Mechanical Engineering & Thermal Sciences, 1975