

Efficiency Challenge 2004 Judge Bios

The contest administrators identified individuals with varying power supply experience to serve as judges for Efficiency Challenge 2004. Chris Calwell brings energy efficiency research and policy expertise, Dr. Arshad Mansoor possesses unparalleled technical knowledge and Doug McIlvoy's industry experience completes the team with his practical business perspective.

Chris Calwell

Policy & Research Director, Ecos Consulting

Chris Calwell co-founded Ecos Consulting in 1997 and manages the company's research efforts into new energy efficiency and environmental initiatives. He has served as lead author for a number of Ecos' reports on energy efficiency opportunities, most on behalf of the Natural Resources Defense Council (NRDC), the U.S. Environmental Protection Agency (EPA), the California Energy Commission and E Source. Before starting Ecos, he worked for NRDC's Energy Program from 1989 to 1995.

Mr. Calwell began investigations into power supply efficiency in 2001 for NRDC under a grant from the EPA. The findings from this project helped catalyze new policy activity at EPA's ENERGY STAR[®] program and at the California Energy Commission, whose Public Interest Energy Research (PIER) program, in 2003, funded a two-year focused analysis of power supply energy savings opportunities. Mr. Calwell leads the market and policy research for this project, and he is currently working with stakeholders on state, national and international efforts to increase power supply efficiency. His team's work has resulted in some notable outcomes: the EPA launched an ENERGY STAR specification for external power supplies in January 2005 and the California Energy Commission approved mandatory standards on these devices in December 2004.

Mr. Calwell holds a B.A. in environmental studies from Trinity University, and a M.A. from the Energy & Resource Group at the University of California at Berkeley. He serves on the editorial boards of *On Earth* and *Home Energy* magazines. Additionally, he co-founded and served as interim chair for the Southwest Colorado Renewable Energy Society.

Arshad Mansoor, Ph.D.

Vice President of Engineering, EPRI Solutions

As vice president of engineering, Dr. Arshad Mansoor provides technical leadership to the EPRI Solutions engineering team in a wide variety of engineering projects, including power system analysis; power distribution system reliability and quality evaluation; industrial and commercial power quality analysis, testing and measurement; distributed generation and renewable resource application; and assessment of performance-based rate structure for electric utilities. For the California Energy Commission's PIER study on power supply efficiency, he has served as the lead technical advisor.

During his graduate studies at the University of Texas at Austin, Dr. Mansoor worked for the university's Center for Energy Studies as a graduate research assistant. He received a

scholarship from the American Public Power Association (APPA) for evaluating the feasibility of a power-factor-based rate structure for nonlinear loads. His Ph.D. thesis involved analyzing the power system losses due to the proliferation of small nonlinear loads in electrical distribution systems. Dr. Mansoor joined the EPRI Power Electronics Applications Center (PEAC) in 1994 as an electrical systems engineer (the organization name changed to EPRI Solutions in 2004). He was the principal researcher in evaluating the performance of adjustable-speed drives as an energy-savings measure for residential, commercial and industrial applications.

Dr. Mansoor has conducted over 50 training courses in the United States and overseas on power quality, reliability, power system analysis, application of energy-efficient technologies, and distributed generation applications for utilities and industrial customers. He is an active member of the Institute of Electrical and Electronics Engineers (IEEE), has published numerous papers in journals and conference proceedings, and has served as panelist in various industry forums. He received a B.S.E.E. from the Bangladesh University of Engineering and Technology and an M.S.E.E. and Ph.D. from the University of Texas in Austin.

Doug McIlvoy

President, Power Electronics Strategies

After more than 30 years in the power electronics industry, Doug McIlvoy launched his own business as a consultant, helping companies develop technology and strategy for power conversion products. In 2001, Mr. McIlvoy retired from Celestica Power Systems as the general manager of the company's plant in Milwaukie, Oregon. While there, he led the development, manufacture and marketing of power conversion products for telecommunications and computer applications. He also was CEO of this plant when it was still VXI Electronics (it was acquired in 1999 by Celestica). Previously, Mr. McIlvoy led the same team in acquiring the site and talent from OECO Corporation in 1995, and formed VXI Electronics. The team sought and received venture capital to make the acquisition when the opportunity was presented by OECO ownership. Mr. McIlvoy spent 26 years with OECO Corporation as design engineer, project engineer, vice president of engineering, vice president of research & development, and served as its executive vice president prior to establishing VXI Electronics.

Over the years, Mr. McIlvoy has been actively involved with the leading industry associations and consortiums, and he still serves as co-chair of the PSMA Industry Education Committee. Other past distinctions include:

- Charter member of the Advisory Board to VPEC Consortium at Virginia Tech from 1983 -1992
- Member of the Navy Ad-Hoc Committee on Power Supply Quality and Reliability from 1985 -1990
- Member of the PSMA R&D Committee from 1992 -1996
- Member of the PSMA Board of Directors from 1993 -1999
- Chairman of PSMA from 1996 -1998
- Program chair of APEC for 1993, chair of APEC for 1994, and APEC administrator for 1995