

# Fashioning a Future for Energy and Environmental Education

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An Epilogue to *Strategic Planning for Energy and the Environment's* three part series on energy and environmental education and training.

This issue of *Strategic Planning for Energy and the Environment* concludes a three part series of articles that have focused on energy and environmental education and training. This three-part series addressed the roles of academe, the public sector, and the private sector, respectively, in developing a well-educated cadre of energy and environmental professionals.

The first article, in the Fall 1996 issue, was written by an academic, who argued for integrating traditionally technical energy and environmental curricula with social, economic and political learning objectives. Through an integrated curricula, energy and environmental professionals could become more effective decision makers since they would be better prepared to address the non-technical realities that pervade the energy and environmental field.

The second article (Winter 96-97), written by government personnel, considered the important role of federal, state and local governments in promoting education programs that cut across all age groups and skill levels. Government has recognized that in a free market economy it is ultimately the consumption decisions of the populace that dictate our energy and environmental conditions. Since energy resources and environmental quality are 'public goods,' the impacts from private consumption decisions affect us all. Therefore, we cannot overstate the role of government in developing a well-educated consumer responsive to public needs and social goals.

Lastly, the third set of articles (found in this issue) discusses the role of private trade organizations, technical associations, and companies in fostering the continued education and training of energy and environmental professionals. Trade groups and technical associations have a

mission to keep their members current—a non-trivial task in today's rapidly changing technical, economic, and political landscape—but a task that can be facilitated by the formation of *alliances* of public, private, and academic organizations. These alliances, representing groups with often different, but not competing objectives, can expand the education and training possibilities and allow scarce resources to be used efficiently. Such alliances may be most effective at the local or regional level (possibly coordinated by a national body) since local needs and problems are often unique.

An overarching theme in this series of articles is that of cooperation and collaboration among academe, the public sector, and the private sector. Each group has its own educational contributions to make individually; however, each could learn from each other's insights, experience, and creativity. For example, curriculum design could be greatly enhanced if academe regularly consulted trade and technical organizations to ascertain the skills needed by graduating students. Or, as another example, trade associations could work with the public sector and academe to promote and sponsor professional training programs, possibly at academic or government facilities. Such interaction would make each group more effective in accomplishing its own mission. This message needs to be heard as we prepare to address the emerging energy and environmental problems of the new millennium.

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#### ABOUT THE AUTHOR

**James J. Winebrake, Ph.D.**, is currently an assistant professor in the Integrated Science and Technology Program at James Madison University where he teaches environmental and energy-related courses. Dr. Winebrake received his Ph.D. from the University of Pennsylvania's Center for Energy and the Environment. He also holds a M.S. in technology and policy from M.I.T. and a B.S. in physics from Lafayette College. His current areas of research include alternative transportation fuels, air-quality modeling, and environmental policy analysis. Previous to his position at JMU, Dr. Winebrake worked for three years at the U.S. Department of Energy as a technology specialist in the Office of Energy Efficiency and Renewable Energy.