

Abstract for an Invited Paper
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Nuclear Power Now and in the Near Future

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The presentation will describe the present status of nuclear power in the United States including its operating, economic, and safety record. This status report will be based on publicly-available records of the U.S. Department of Energy, the U.S. Nuclear Regulatory Commission, and the Institute of Nuclear Power Operations. The report will provide a brief description and state the impact of both the Three Mile Island and Chernobyl accidents. It will list the lessons learned and report significant improvements in U.S. nuclear power plants. The major design differences between Chernobyl and U.S. nuclear reactors will be discussed. The presentation will project the near future of nuclear power considering the 2005 Energy Bill, initiatives by the U.S. Department of Energy and industry, and public opinions. Issues to be considered include plant operating safety, disposition of nuclear waste, protection against proliferation of potential weapons materials, economic performance, environmental impact and protection, and advanced nuclear reactor designs and fuel cycle options. The risk of nuclear power plant operations will be compared to risks presented by other industrial activities.