HARVARD UNIVERSITY
JOHN F. KENNEDY SCHOOL OF GOVERNMENT

# Deploying IGCC in This Decade With 3Party Covenant Financing Volume I

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## FOREWORD

These two volumes emanate from fourteen months of research, discussion and countless drafts. The three authors, William Rosenberg, Dwight Alpern, and Michael Walker, conducted meetings with key players, including officials from both the federal and state government, representatives of the power, engineering, coal and chemical industries, environmental groups and academic experts. We are especially grateful for the cooperation of the Carbon Mitigation Initiative at Princeton University and two of its leaders, Robert Socolow and Robert Williams, and for the continuing advice from the MIT Laboratory for Energy and the Environment.

Both of these volumes have been extensively peer reviewed by a team of experts, including faculty at Harvard, Yale, and Princeton. The authors have consulted with officials from the Electric Power Research Institute (EPRI), Center for Clean Air Policy (CCAP), and the National Association of Regulatory Utility Commissioners (NARUC). The authors also benefited from a workshop held at the John F. Kennedy School in February, 2004. Over eighty experts from across the country participated in a discussion on opportunities to overcome the financial and political challenges confronting the deployment and commercialization of Integrated Gasification Combined Cycle technologies (IGCC), (see the ENRP rapporteur's report: “Workshop on Integrated Gasification Combined Cycle: Financing and Deploying IGCC Technologies in this Decade,” #2004-06).

These reports are part of a three-year program in the Kennedy School's Energy Technology Innovation Project (ETIP), a joint effort of the Environment and Natural Resources Program (ENRP) and the Science, Technology and Public Policy Program (STPP). ETIP has fostered extensive work on the obstacles and opportunities for development and utilization of IGCC technologies in China and India, as well as in the United States.

These efforts are stimulated by three policy imperatives: the need to increase the use of indigenous coal supplies and to meet a growing demand for electricity; the need to clean up our air, and reduce the threat of global climate change; and the need to address the nation's energy security. These reports provide a blueprint of how the United States might take the initial steps to commercially deploy IGCC technology to significantly improve our air, economy, and national interest.

We are very grateful for the support of the National Commission on Energy Policy, the Department of Energy, the Environmental Protection Agency, the Hewlett Foundation, the Packard Foundation, the Roy Family Fund, and the hundreds of experts who have generously given the authors the benefit of their advice and counsel.

John Holdren and Henry Lee
Co-chairs, Energy Technology and Innovation Project

## REPORT ORGANIZATION

The paper is divided into two volumes. Volume I describes IGCC technology, why it is an important advanced clean coal technology for generating electricity, the hurdles to near-term deployment, the 3Party Covenant financing and regulatory program to stimulate near-term IGCC deployment, and how the 3Party Covenant improves the economics of IGCC technology to make it competitive. Appendix A of Volume I outlines the components of federal legislation that are needed to implement the 3Party Covenant.

Volume II provides a detailed legal analysis of the federal and state authorities and regulatory mechanisms for implementing the 3Party Covenant, including a review of traditional electric utility regulatory systems, the current regulatory systems in 5 specific states, and a model regulatory mechanism for review and approval of IGCC project costs under the 3Party Covenant.

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