

# Foreword and Acknowledgements

The Future of Natural Gas is the fourth in a series of MIT multidisciplinary reports examining the role of various energy sources that may be important for meeting future demand under carbon dioxide (CO<sub>2</sub>) emissions constraints. In each case, we explore the steps needed to enable competitiveness in a future marketplace conditioned by a CO<sub>2</sub> emissions price or by a set of regulatory initiatives. This report follows an interim report issued in June 2010.

The first three reports dealt with nuclear power (2003), coal (2007) and the nuclear fuel cycle (2010 and 2011). A study of natural gas is more complex than these previous reports because gas is a major fuel for multiple end uses — electricity, industry, heating — and is increasingly discussed as a potential pathway to reduced oil dependence for transportation. In addition, the realization over the last few years that the producible unconventional gas resource in the U.S. is very large has intensified the discussion about natural gas as a “bridge” to a low-carbon future. Recent indications of a similarly large global gas shale resource may also transform the geopolitical landscape for gas. We have carried out the integrated analysis reported here as a contribution to the energy, security and climate debate.

Our primary audience is U.S. government, industry and academic leaders, and decision makers. However, the study is carried out with an international perspective.

This study is better as a result of comments and suggestions from our distinguished external Advisory Committee, each of whom brought important perspective and experience to our discussions. We are grateful for the time they

invested in advising us. However, the study is the responsibility of the MIT study group and the advisory committee members do not necessarily endorse all of its findings and recommendations, either individually or collectively.

Finally, we are very appreciative of the support from several sources. First and foremost, we thank the American Clean Skies Foundation. Discussions with the Foundation led to the conclusion that an integrative study on the future of natural gas in a carbon-constrained world could contribute to the energy debate in an important way, and the Foundation stepped forward as the major sponsor. MIT Energy Initiative (MITEI) members Hess Corporation and Agencia Nacional de Hidrocarburos (Colombia), the Gas Technology Institute (GTI), Exelon, and an anonymous donor provided additional support. The Energy Futures Coalition supported dissemination of the study results, and MITEI employed internal funds and fellowship sponsorship to support the study as well. As with the advisory committee, the sponsors are not responsible for and do not necessarily endorse the findings and recommendations. That responsibility lies solely with the MIT study group.

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