

## **A Look at “The Future of Coal”**

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**Abstract:** In the report “The Future of Coal: Options for a Carbon-Constrained World”, edited by John Deutch and Ernest Moniz, an interdepartmental study by the Massachusetts Institute of Technology (MIT) examines coal generation options in the presence of regulation or government intervention to reduce global warming.

This MIT study has some important virtues: it has the best descriptions of the chemical processes occurring in the various combustion technologies of any general-interest document, and it identifies important incentive problems that need to be addressed if regulations are imposed. But it has some notable drawbacks as well: it shows a bias against integrated gasifier combined cycle (IGCC) plants and towards pulverized combustion (PC) plants, and it makes no mention of any of the achievements of the Great Plains Synfuels Plant (GPSP). GPSP’s work is extremely relevant in this context, despite differences in its technology and those used for electricity generation, because it is a commercial scale facility that successfully and profitably operates carbon capture and sequestration (CCS) technology.

In this study, the MIT study is re-examined. In particular, the numbers used are updated, and the possibilities for IGCC technology are explored in detail.