

The Cost of CO₂ Capture and Storage

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This presentation will give an overview of CO₂ capture and storage (CCS) technologies and their costs for electric power systems, including pulverized coal-fired power plants, natural gas combined cycle plants, and integrated coal gasification combined cycle plants. The presentation will review currently available CO₂ capture systems and the major factors that affect plant-level CO₂ capture costs. Several measures of capture cost will be reported and compared, including capital costs, added cost of electricity generation, and costs per ton of CO₂ captured and per ton of CO₂ avoided. The effect of CO₂ capture technology on overall plant efficiency will be discussed, as well as the impacts of recent cost escalations for power plants and other large-scale industrial projects. A range of costs for CO₂ transport and storage also will be presented to provide a picture of overall plant-level costs of a CO₂ capture and storage project. The outlook for future CCS technologies and costs also will be examined. Publicly available modeling tools for estimating CCS costs also will be presented.