

FUEL PROCESSING TAILORED TO ENVIRONMENTAL NEEDS. David H. Archer,
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Projected needs for electric energy will triple the usage of fossil fuels in U.S. power plants over next 20 to 30 years. Advanced techniques for power production are required to minimize emissions of SO₂, NO_x and particulates, thermal discharges, capital requirements for new plants, and overall energy costs. Fluidized bed combustion and gasification coupled with combined cycled generation can meet these requirements. Specific fluidized bed combustion and gasification processes for both coal and oil tailored to power production have been devised; and overall plant concepts, evaluated. Reduced power costs in comparison with conventional steam power plants are predicted.