

At AEP**New generation technology demonstrates our leadership**

AMERICAN ELECTRIC POWER'S technological leadership is propelling the company to the next generation of coal plants. AEP plans to build an Integrated Gasification Combined Cycle (IGCC) power plant to serve its customers by 2010. With a generating capacity of as much as 1,200 megawatts, it will be the largest facility of its type in the world.

AEP was the first utility to announce plans for such a plant, reinforcing the company's heritage of innovation. The plant will be located in one of AEP's eastern states and will represent the first new coal-fired generating capacity added to this part of the company's service territory since 1991.

The IGCC process uses a gasifier in which coal is partially combusted with oxygen and steam to form a synthetic gas, commonly known as "syngas." The syngas is cleaned to remove the particulate matter and sulfur compounds. The clean syngas is then fired in a gas turbine. The hot exhaust from the gas turbine passes through a heat recovery steam generator, where it produces steam that drives another turbine. Electricity is produced from both the gas turbine and the steam turbine, hence the term "combined cycle." This results in a more efficient conversion of energy from fuel to electricity than with conventional steam electric plants.

IGCC technology provides other advantages over traditional pulverized coal-fired plants. Emissions of sulfur dioxide, particulates, nitrogen oxides and mercury can be reduced significantly. Carbon dioxide emissions will also be lower. In addition, IGCC technology offers the potential for future retrofit of carbon dioxide capture systems at a lower capital cost and with lower efficiency losses when compared with conventional technologies.

AEP believes it is important to continue to be able to use coal to generate electricity in an economic and more environmentally responsible way. Coal is our nation's most abundant energy source.

IGCC technology has the potential to provide the lowest capital cost, highest efficiency and best emission characteristics among coal-based technologies, and the most carbon-friendly fossil-fuel technology over the long term.

AEP's decision to build an IGCC plant, combined with its plan for significant investments in emission-reduction technologies at existing coal-fired generating stations, underscores the company's commitment to coal as its primary energy source for the future.

