

# Generating Electricity with 21<sup>st</sup> Century Technology

An important priority at Eastern Illini Electric Cooperative is providing our members with a reliable source of electricity while protecting the environment. We have accomplished this by partnering with cooperatives and municipalities in 8 Midwestern states. This partnership is an investment in the Prairie State Energy Campus located in southwestern Illinois. The generating facility will supply Eastern Illini members with reliable electricity for the next 30 years.

The Prairie State Energy Campus will be among the cleanest electric generating plants of its kind in the United States. This mine-mouth, coal-fired power plant will produce 1,600 megawatts of electricity when fully operational with enough electricity to power more than 1.5 million households. It will be fired with Illinois coal from a mine adjacent to the power plant.

Air quality is a concern of everyone. The technology utilized at the Prairie State Energy campus is the most current available. A large portion of the infrastructure is to ensure that the air coming out of the 730-foot tall stack is as clean as possible. This generating facility will burn 15 percent less coal per kilowatt and emit 15 percent less carbon dioxide than other coal-fired power plants operating today. By building the power plant next to the coal mine approximately 200,000 additional tons of CO<sub>2</sub> will be saved per year that is commonly associated with transportation and delivery of coal from off-site facilities.

Besides carbon dioxide, other typical emissions from coal-fired power plants are nitrogen oxide, sulfur dioxide, particulates and mercury.

- The Prairie State Energy Campus emissions will be less than half the average of regulated emission rates



of all U.S. coal-fired generating plants.

- Annual emission rates of nitrogen oxide will be less than 50 percent of the average Illinois electric power generators and less than 33 percent of the average of all U.S. electric power generators.
- The sulfur dioxide removal rates of 98 percent will be the highest of any permitted plant in the U.S.
- 99.9 percent of all particulates will be removed before exhausting from the stack.
- The mercury emissions will be within the present 2018 EPA regulated requirements.

Not only were emissions a concern, but the safe mining of the coal and not disturbing the land above was important. Imagine a town with several miles of blocks and streets. At the Prairie State Energy Campus only the “streets” will be mined and the “blocks” of coal will remain in the ground. This method of extraction is to prevent the ground above from

settling. Water usage was another concern. Much of the water that is converted to steam to turn the turbines to make the electricity will be cooled and recycled.

Eastern Illini has done everything within its power to provide our members with reliable, clean, affordable electricity for years to come. The only thing that can change the stability of our members’ energy supply is governmental regulation. It is imperative that you, as a member, keep abreast of Washington’s activities when it comes to regulation. Without legislative accountability, your energy may not be affordable or reliable in the future. This information is brought to you by Eastern Illini, a Touchstone Energy cooperative and your connection to powerful solutions.

