EMPOWERING THOSE WE SERVE

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The expansion of Holcomb Station is in response to growing energy needs among electric cooperatives in Kansas and neighboring states. The new generation reinforces the region's power supply needs, and the investment and jobs created from plant construction and operations will provide a solid tax and employment base for western Kansas.

The project is proposed for the 10,000-acre site of the existing 360-megawatt (MW) Holcomb Station, located approximately four miles south of Holcomb, Kansas. Currently, the project includes two additional supercritical pulverized coal units, each capable of generating 700 MW.

PROJECT STRUCTURE

The units will be owned by generation and transmission cooperatives Tri-State Generation & Transmission Association, Inc., Golden Spread Electric Cooperative, Inc., and Sunflower Electric Power Corporation. Together, these wholesale power suppliers serve more than 1.5 million consumer-owners of 66 electrical cooperatives in seven states.

Golden Spread, Sunflower, and Tri-State will jointly own the first new unit. Golden Spread will own 400 MW of the unit's output, Sunflower will own 200 MW (with 75 MW being reserved for Midwest Energy through a power purchase agreement) and Tri-State will own 100 MW. Tri-State will also own the second 700-MW unit.

The total installed cost of the two plants is expected to be $3.8 billion.

ECONOMIC BENEFITS

The Project will maximize the value of the existing Holcomb Station site for the benefit of Sunflower Electric's six Member systems for generations to come. Successful completion of the project will also:

- Provide participants with a reliable, cost-efficient source of base load power
- Improve power system reliability with additional base load generating capacity
- Stabilize rates by reducing the cooperatives' purchased power
- Bring competitively priced fuel diversity to existing generation portfolios

Local and Regional Benefits

The benefits created by the Project for communities located in the region include job creation, new tax revenues, and an increased demand for goods and services. The late Dr. Ralph Gamble, a noted rural economist and professor at Fort Hays State University, conducted an economic impact study to determine the effects of the project.

during the construction period. According to the Gamble study, these workers will earn more than $42 million per year and the taxes collected will increase by more than $1 million. The total spending of construction crews in Kansas is expected to be more than $56 million during the construction period.

"We're not fuel biased; we're cost biased. Our goal is to provide the people in central and western Kansas with reliable, affordable power." -- Earl Watkins, Sunflower president and CEO

Benefits During Operation

At full operation, the project will add nearly 250 full-time equivalent positions, earning over $15 million per year, in western Kansas. There will be a need for an additional 100 full-time workers to operate the Holcomb Station after the additional units go into commercial operation. As shown below, it is estimated that more than 2,500 jobs (direct and induced) will be created in Kansas with an annual payroll of $78 million during the construction period.

Total Annual Project Impacts, Two Units			
	Jobs	Earnings	Local & State Sales Taxes
Temporary Impacts			
Western Kansas	1,501	$42,349,442	$1,161,301
Eastern Kansas	967	$35,951,022	$453,799
Kansas	2,466	$78,300,464	$9,334,256
Out-of-State	11,857	$321,905,176	NA
Permanent Impacts			
Western Kansas	274	$14,822,980	$299,919
Eastern Kansas	53	$1,362,918	$54,311
Kansas	329	$16,157,450	$683,971
Out-of-State	280	$7,396,847	NA

Construction and operation of the project will also result in the purchase of many goods and services for the power plant and by the workforce. Goods and services during construction will be obtained from various local, national, and international vendors. Certain construction materials will likely be obtained locally, while major equipment will be obtained nationally and internationally.

Benefits for Sunflower Electric

Sunflower will earn development and facility use fees in addition to income received for operating and maintaining the new plants. Sunflower will also benefit from being able to spread its labor and administrative expenses over additional generating units. Additionally, lower fuel costs for Unit 1 will result from the economies of scale related to larger coal purchases.

These project revenues and cost savings will be utilized by Sunflower to offset capital and operating expenses that would have otherwise been charged to Sunflower's Member systems.

TECHNOLOGY SELECTION

Supercritical pulverized coal (SCPC) technology was selected because, at the scale required for the generation needs of the region, it was found to be the only commercially available technology that met all of the requirements of the project. Various renewable energy sources were considered, but they were not capable of providing base load capacity requirements. Natural gas-based generation was not proposed because of the significantly higher cost of natural gas and other factors. Integrated gasification combined cycle (IGCC) generation technology was not proposed, as there are no commercial examples of this technology at the scale required to satisfy the needs of the cooperatives.

POWER PLANT MAJOR COMPONENTS

The new units are designed to use sub-bituminous, low-sulfur coal. Once the coal is pulverized, fans blow it through low nitrogen oxide burners into the steam generator where it is burned.

The steam generators in each unit will be comprised of water-filled tubes. Burning coal releases thermal energy, which is absorbed by the water in the tubes. The temperature of the water rises and is converted directly into steam. The steam is then piped from the steam generator to the steam turbines.

The steam turbines' rotating blades are attached to a shaft. As the high-pressure steam from the steam generator passes through the turbine blades, the pressure and thermal energy of the steam is converted to mechanical energy, causing the blades to turn the shafts of the turbines that are connected to the electric generators. The generators convert the mechanical energy of the rotating shafts into electric energy.

After the steam passes through the turbines, it flows into the condensers. The steam is cooled and condensed back into water. The water is then pumped back into the tubes of the steam generator to be made into steam again.

Air Emissions

Air emissions will be minimized through various reduction methods. Sulfur dioxide (SO_2) emissions are controlled with a dry-lime flue gas desulfurization (FGD) system. Particulate emissions are controlled with a fabric filter baghouse that will remove more than 99% of the particulate matter or dust. NO_x emissions are controlled with a combination of low-NO_x burners, separated overfire air (SOFA), and selective catalytic reactors (SCR). Mercury emissions are controlled through the use of powdered activated carbon (PAC). The PAC is injected into the exhaust gas upstream of the FGD system. The PAC with the adsorbed mercury is collected in the baghouse.

The flue gas from the steam generator passes through the emissions control systems, then through the induced draft fans, and is exhausted through the stack. The stacks, each equipped with a continuous emissions monitoring system, will consist of an outer concrete shell and an inner flue.

Mercury Controls

The project will include the injection of PAC for the control of mercury emissions and will meet the New Source Performance Standards (NSPS) for mercury emissions as well as the provisions of the new Clean Air Mercury Rule.

The plants will be operated in a way that will result in total mercury emissions from all three units combined, including the existing 360-MW Holcomb Station and the additional 700-MW units that make up the project, being less than the current emissions from the single unit at the existing Holcomb Station.

Ambient Air Quality

The U.S. Environmental Protection Agency (EPA) developed a series of National Ambient Air Quality Standards (NAAQS) to protect and enhance the quality of the nation's air resources, promote the public health and welfare and the productive capacity of its population. The project has been designed to incorporate the latest in air emissions control technologies to help fulfill this directive.

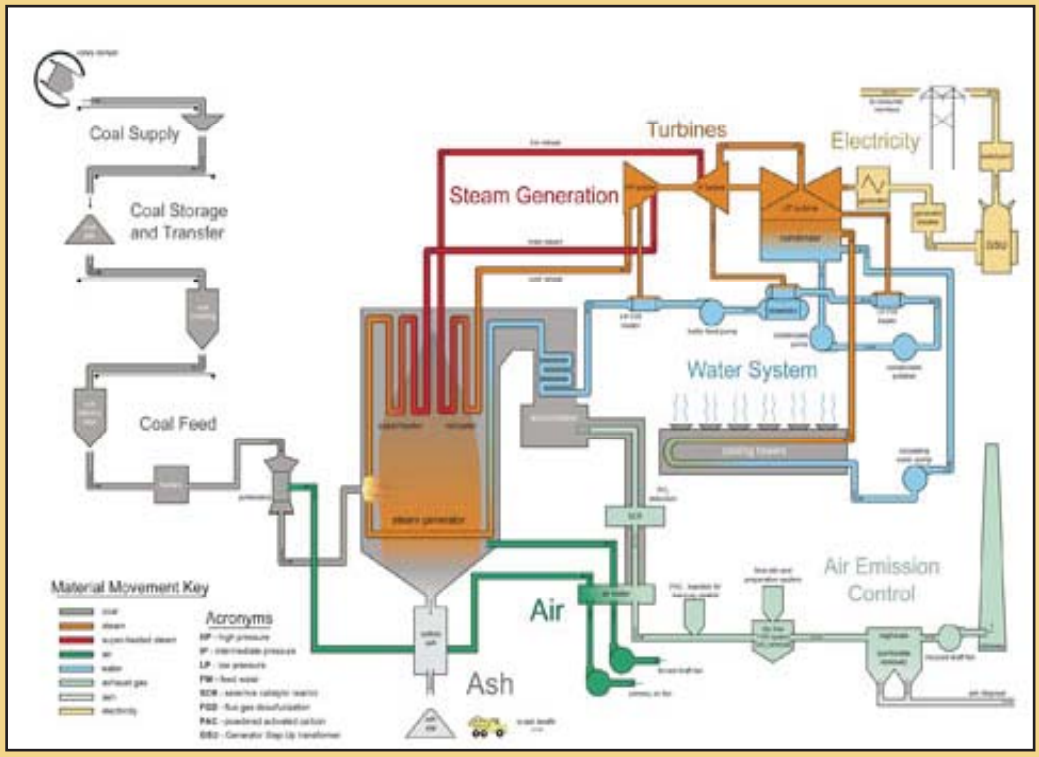
As part of the air quality permitting process for the project, extensive air quality modeling was conducted to determine the maximum impacts the new units will have on the ambient air quality. These analyses show that the impact of emissions from the proposed units will be only a small fraction of what is allowed by EPA.

Water

The project will use water rights appropriated to Sunflower and rights purchased by Wheatland Electric Cooperative, Sunflower's largest Member cooperative and water supplier. Each new unit will require about 8,000 acre-feet of water annually.

In anticipation of the project, Wheatland purchased or contracted for the purchase of approximately 34,000 acres of sand hills land. Following conversion from agricultural to industrial rights, Wheatland anticipates having about 34,000 acre-feet of water available for power plant and other uses.

We appreciate Sunflower's commitment to expand their operations in Kansas and pursue its options to provide reliable and affordable energy to its customers and to Kansas employers, which ultimately benefits all of Kansas."
---Kansas Chamber of Commerce



Coal

The project's economics indicate that coal should be the primary fuel source. The supply will be mined in Wyoming's Powder River Basin. While the capital cost of a coal-based plant is significantly higher than a gas-based plant, the fuel costs are much lower. Given current gas prices, the fuel cost from gas is significantly more expensive than coal.

While there is increasing demand on the nation's low sulfur coal supplies, Sunflower and Tri-State are both members of a fuel supply cooperative that is one of the largest buyers of coal in the nation.

Transmission Facilities

Transmission facility investments necessary to support the new generation will be met by both new construction and upgrades to the existing transmission infrastructure. At least two high voltage lines will be necessary to move the electricity from Holcomb to Tri-State's primary load areas in Colorado.

Additional transmission lines will also be built or upgraded to move power to the participants in the project. Preliminary studies indicate a significant investment in transmission infrastructure in Kansas, Oklahoma, and Texas will be required.