6.0 Economic Analysis

Introduction

The Kentucky Mountain Power Project will be located 8 miles N.E. of Hazard, Kentucky. The project will consist of two 250 megawatt CFB boilers feeding a single 500 megawatt steam turbine. The steam turbine will drive an electric generator supplying power to the AEP transmission system and beyond.

The construction of the Kentucky Mountain Power project will occur over a 4 year period. During the construction there will average 400-600 craft and contract workers on site. These workers will either be residents of the eastern Kentucky area or workers who temporarily relocate to the area for the term of the construction.

Once construction is completed the plant will operate on a 24/7 basis with a significant contingent of employees to operate and maintain the plant during the regular work days and a far reduced staff operating the plant on the night shifts and weekends.

Fuel supply for the project will be a combination of waste coal from various sites in the Eastern Kentucky area and run-of-mine fuel from mines adjacent to the plant site or very close to the plant site. Nearly 1,000,000 tons of waste fuel and almost 3,000,000 tons of run-of-mine fuel will be used annually. Fuel will be transported to the site by truck from both the waste fuel sites and the mines.

Limestone for sulfur removal will be provided from limestone mines located either in the Somerset area or the Pine Mountain areas of Kentucky. Nearly 500,000 tons of limestone will be required each year.

6.1 Economic Impact Summary

The overall economic impact of the project to the surrounding area will be significant. This impact will occur in two distinct phases, the construction phase and the operating phase.

The total capital expenditure for the project will be over $ 750,000,000. Typically 60% of the capital cost is materials and 40% is labor. Based on this distribution $450,000,000 will be spent on materials and $300,000,000 will be the labor component of the project. Using the recognized standards that for every dollar spent in a community there is a resulting additional two dollars generated in the community, the impact of the construction of the Kentucky Mountain Power project on the regional community will be quite large. Assuming that 50% of the labor dollars and 10% of the materials will flow through the local community the total economic impact on the community during the approximately three to four year construction period will be over $585,000,000.

The economic impact of the project on the community when in operation while not as large as the impact of the construction will still be significant. The operating budget for the project includes the following annual expenditures;

Annual Operating Payroll	$ 4,900,000
Annual Coal Expenditure	$33,000,000
Annual Limestone Expenditure	$ 4,900,000
Annual Parts and Material Expenditures	$ 6,500,000
Total	**$49,300,000**

Using the same standard of two dollars generated for every dollar spent the economic impact of the project when it is operating will be over $100,000,000.

The economic benefits generated by the construction and operation of the Kentucky Mountain Power plant near Hazard, Kentucky will be significant. These benefits will range from the scores of construction labor jobs generated during the 3-4 year construction period to the creation of a regional industrial park and development of a potable water supply plant with the possibility of delivering up to 5 million gallons of water per day to the adjacent communities.

6.2 Employment

Construction --

The Kentucky Mountain Power project will have a significant impact on local and regional employment. These benefits will accrue to the community both during construction and when the plant is in operation. The construction of Kentucky Mountain Power will take up to 4 years from start to finish. During the construction phase of the project there will be over 400 and as many as 1000 jobs created. These jobs will include craft labor jobs and project supervision and project management jobs.

Craft labor jobs will range from skilled positions such as foremen, boilermakers. pipefitters, electricians, millwrights, operating engineers, carpenters and concrete finishers to laborers. These positions will have significant salaries and corresponding benefits.

Experience has shown that many of these skilled craftsmen while not currently living in the Eastern Kentucky region consider this region as there home. It is expected that there will be a significant influx of construction labor returning home to the communities surrounding the plant during the construction period.

In addition to these skilled labor positions, there will be construction management positions including a Project Manager, Project Engineer and various support engineers, construction superintendents and construction managers. All total, there will be 30 or more of these highly paid positions during the construction period.

It is expected that the construction payroll for this project will be on the order of $150,000,000 or approximately $37,500,000 per year. Most of this payroll will flow directly to the Eastern Kentucky region in the form of housing, transportation, meals and other living expenses for the construction personnel.

During construction the operating crews for the power plant will be hired and trained. The majority of the operating personnel will be employed during the last year of construction. The construction payroll for these personnel will be on the order of $5,000,000.

In summary, the direct economic impact of the construction payroll for the project will be over $155,000,000.

Operations --
The Kentucky Mountain Power project will operate for 30 years or more. During the operation of the plant there will be ongoing jobs directly within the power plant as well as supporting jobs outside the plant including mining and fuel reclaim jobs, limestone supply and transportation jobs.

The ongoing operation and maintenance of the plant will be undertaken by an operating company. This company will have approximately 64 fulltime employees filling jobs ranging from the Project General Manager to plant operators to plant security personnel. The annual budget for the operation of the plant will be on the order of $5,000,000 per year.

The plant will be contracting for run-of-mine coal, waste coal and limestone. Estimates for the supply of these commodities indicate that there will be 50 truck drivers hired to transport the materials from their point of origin to the plant location. The annual expense for this transportation service is expected to be over $2,500,000.

On a regular basis, two week annually, two additional weeks every five years and for 30 days every 10 years the plant will undergo major maintenance. These outages will employ significant numbers of skilled craftsmen, the same ones as employed during the plant construction. It is expected that the annual labor cost for these outages and other outages will range from $1,000,000 to as much as $5,000,000.

Employment Impact Summary

Construction Labor –	$155,000,000
Annual Operations Labor –	$ 5,000,000
Annual Transportation Labor –	$ 2,500,000
Annual Craft Support Labor –	$ 1,000,000

6.3 Housing

The impact of the project on the regional housing market will occur in direct correlation with the manpower levels for the construction of the project and the operation of the project.

The construction of the project will generally impact two types of housing, higher priced single family rentals and lower priced housing such as motels, campgrounds and other types of multiple resident facilities.

The construction management team will consist of professionals such as engineers and specialized technicians. The majority of these individuals will relocate to the Eastern Kentucky region on a temporary basis. The core construction management team will consist of 25 to 30 professionals. Many of these individuals will bring families when the relocate. The will be seeking single family rental houses for periods ranging from 4 years to 9 months. Assuming an average rental for single family homes of $750 per months the rental paid by these positions will be over $500,000.

The plant operations positions will be filled by a combination of nationwide hires and local hires. It is expected that 12-15 of the 64 fulltime operations positions will be filled by power plant specialists. These specialists will relocate permanently to the Eastern Kentucky area. The balance of the positions, approximately 50, will be filled by local hires.

The 12-15 specialists will be seeking single family residences, generally on the higher end of the housing market. At an average cost of $150,000 these individuals will quickly inject over $2,200,000 into the regional housing market. The balance of the plant operating personnel will already have housing in the area.

The construction labor will find varied housing to fit its needs. This housing will range from rental trailers, campgrounds to motels. A quick analysis of this impact based on 1/3 of the 600 construction labor renting housing costing on the order of $10 per night, 5 days a week for a 4 year period results housing expenditures over $2,000,000.

In addition to the housing impact, considerable discretionary dollars will be spent by these employees in the communities for food, travel and entertainment as well as providing an incremental tax revenue base and tax revenues to the local governments to support the surrounding communities.

Housing Impact Summary

Construction Management Housing	20-30 residences	$500,000
Construction Labor Housing	200+ living spaces	$2,000,000
Operating Personnel Housing	12-15 residences	2,200,000

6.4 Industrial Park

As part of the development of the project Kentucky Mountain Power has agreed to donate to The Knott County Development Authority approximately 900 acres for development as an industrial park. This land is well suited to development of this nature as it is reclaimed mine lands which are generally level in nature. It is very likely that this industrial park will house industries generated as a result of the existence of the power plant. A preliminary layout of the industrial park has been prepared and is included in this document.

The development of the industrial park and the power plant is being supported by the development of a major heavy haul road and bridge from the existing Highway 80. The bridge

to be constructed by the State of Kentucky will begin adjacent to Highway 80 and span across Ball Fork Hollow. Kentucky Mountain Power will construct the balance of the heavy haul road from the bridge to the power plant entrance and the industrial park area.

6.5 Golf Course

An additional 250 acres of reclaimed mine property will be donated directly to Knott County for the development of a championship golf course. The course will consist of 18 holes, a clubhouse/pro shop, maintenance facilities and other facilities necessary for this type of facility. The cost to construct the golf course has been estimated at over $10,000,000.

6.6 Water System

A significant additional project associated with the power plant will be the construction of a water supply system to provide the power plant with makeup water in amounts of up to 8.4 million gallons per day. The water system will consist of a pumping station located on the North Fork of the Kentucky River, a 23 mile water supply line, a reservoir expansion, and a water treatment plant.

The benefits of the water treatment plant will be multifaceted. The cost of construction of the plant and associated facilities is $47,000,000. It has been estimated that up to 30% of this cost or $15,000,000 will be construction labor, as with the power plant construction much of this labor expenditure will end up in the local economy.

Once the plant is in operation the operating labor expenses will be on the order of $500,000 per year.

Far beyond the cost of the construction of the water treatment plant will be the ability to supply significant amounts of water to the surrounding communities of Knott, Perry and Breathitt Counties and the industrial park. The Kentucky Water Resource Development Commission has identified these counties as having the lowest level of access to public water in the state. Less than 50% of the households in Breathitt and Knott County have public water and less than 75% of the residences in Perry County. KMP is working with the Kentucky Infrastructure Authority and local communities to further develop the water resource of the project to determine ways to expand it to provide more water to the local community.

The water supply and treatment systems are currently sized to provide an additional 1,000,000 gallons of potable water per day beyond the requirements of the power plant. Using current standards this additional water supply will have the capability of supplying water to approximately 5000 residences.

An evaluation is being undertaken to determine whether it is practical to expand the supply and treatment systems so that an additional 4,000,000 gallons per day, bringing the total to 5,000,000 gallons per day, can be made available for residential and industrial use. In the event that this expansion is practical and economical there will be a capability to supply 25,000 residences as far away as Letcher County.

6.7 Fuel Supply

The Kentucky Mountain Power plant will be using 3,000,000 tons per year of run-of-mine coal and 1,000,000 tons per year of waste coal. This fuel will be in addition to existing fuel supplied by the mining operators in the region and will not offset any existing production. Production of this quantity of fuel will expand the depressed mining industry in the local area. The project's annual budget for fuel is over $33,000,000 per year. Most of this expenditure will be to local coal suppliers and will funnel directly into the local economy.

While difficult to quantify, economically, the environmental impact on the region resulting from the reclaiming and burning of waste coal piles and ponds will be significant. Kentucky Mountain Power presently has long term contracts or leases for waste coal from many sites. In addition, Kentucky Mountain Power is evaluating many additional sites as potential supplies of waste fuel.

6.8 Transmission Line

Engineers have estimated that the construction of this project will result in a significant reduction in line losses on the American Electric Power (AEP) system. Line losses are those losses that occur when energy is transmitted over long distances. Heat escapes from the conductors into the atmosphere resulting in power that is generated but lost and never sold.

The Kentucky Mountain Power plant is located in a remote section of the AEP transmission system which is poorly served by generating plants. It is estimated that when this plant becomes operational line losses on the AEP system will be reduced by 40 Mw. This essentially means that AEP gains back 40 Mw that could not previously be sold. Assuming a cost of $1500 per Kw to construct new generating capacity, the savings in line losses will offset $60,000,000 in capital costs to AEP. Additionally, this additional 40 Mw can be sold by AEP to its customers. At $28.00 per MwHr. this 40 Mw will result in additional annual revenue to AEP of over $9,000,000.