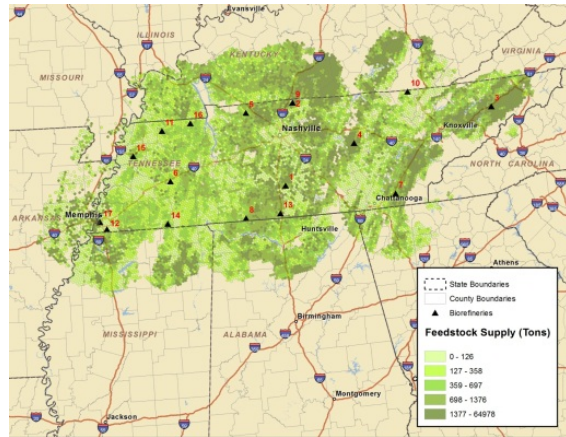


## Potential for Tennessee to Meet a 20% Renewable Transportation Fuel Demand with Herbaceous Crops

The purpose of this study is to evaluate the economic impacts to the state of Tennessee of the construction and operation of a Single Plant – 78 million gallons, eleven plants – 850 million gallons, and seventeen plants – 1.3 billion gallons. It was assumed that the farmers used round bale harvest technology, the plants were all 80.3 million gallon facility operating at 95%, transport of the feedstock was direct to plant, a conversion rate of 80 gallons ethanol per dry ton of feedstock, the feedstock is switchgrass, and yield varies over the landscape.

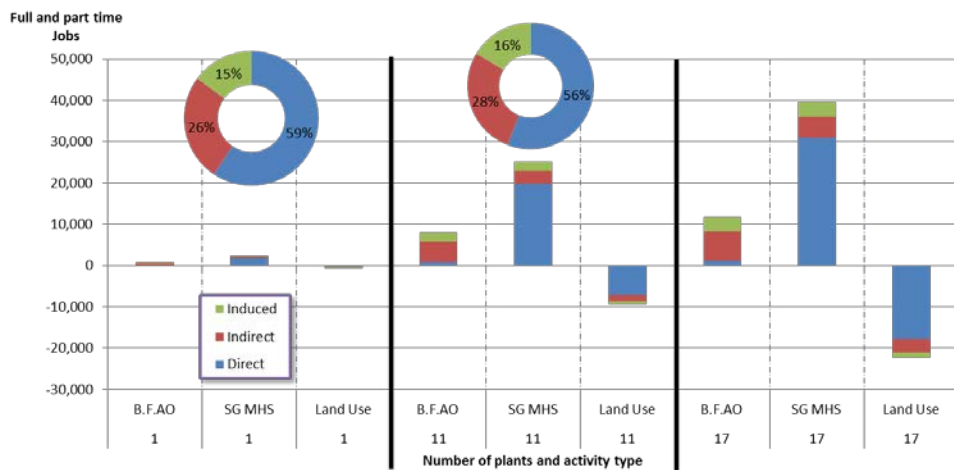


The facilities were located using a modeling system called BioFLAME, a spatial analytical feedstock cost minimizing site selection tool. The initial facility was located in south central part of the state south of Nashville. As plants were added, they first were located near pasture lands and the last 7 or so used more and more cropland.

The price of biomass for the initial plant was between \$63 and \$65 per dry ton. The last plant located in the analysis was paying over \$100/dry ton and located in the southwest part of the state.

The initial plant will create an estimated \$23.7 million as a result of facility construction and \$400 million in economic activity. Approximately 2500 jobs will be created. \$15.3 billion as a result of investment and annual operating will result in \$6.7 billion dollars if the entire industry is constructed.

Potentially, large gains in economic activity and employment opportunities will be available; and impacts occur initially where pasture acreage may currently be available. It appears that feedstock costs will increase significantly if single feedstock is relied upon as better and better land gets converted and transportation distance of feedstock increases.



B.F. AO, Are jobs created by bio refinery production  
 SG MHS are jobs created as a result of switchgrass maintenance, harvest, and storing activities  
 Land Use are jobs lost as a result of crop shifts.

**For additional information see:**

[Potential for Tennessee to Meet a 20% Renewable Transportation Fuel Demand with Herbaceous Crops.](#)

**Citation:**

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