

Wood Pellet, Biomass Power and Pulp-Paper Mills and Jack Clark's Tree Farm

At the February 15, 2014 Tyler County Forest Landowner Association General Meeting, industry representatives and a local tree farmer discussed the area's timber markets.



David McClintock

NAPCO, German Pellets & ETEC Biomass

David McClintock, President of North American Procurement Company (NAPCO), discussed the procurement and logging services NAPCO provides to German Pellets and will provide to the East Texas Electric Cooperative (ETEC) biomass plant scheduled to become operational in August 2014.

He stated that East Texas currently has a surplus of wood supplies. Historically, Woodville's chip mill was the largest in East Texas and the number of logging trucks on local road in years past exceeded what we see today. After the demand for chips decreased to the point that the mill became idle, NAPCO executives sought new opportunities for Tyler County's largest agricultural crop – pine trees. NAPCO sold the chip mill to German Pellets and is the sole supplier of wood to the Woodville plant.

Driven by Europe's green energy demands, German Pellets produces wood pellets which are carbon neutral and ships them to Europe for use in industrial power plants. The pellets are made from pine pulp made from trees that are typically removed when tree farms are thinned. Up to 160 loads of logs are trucked into the plant each day. The bark, which is removed from the logs, is burned to produce heat for processing. Starches, along with the resin in the wood, are used as binders. Very little water is used in the process. The BTU value of the resulting pellets is twice that of the chips used to make them. While the plant is currently operating at 75-80% capacity, at full production it will produce 600,000 tons of pellets annually. The plant provides 50 full time positions and creates at least 100 additional supporting jobs. The plant is designed such that it could be enlarged at a future date. The pellets are trucked to a pellet handling facility in Port Arthur where they are loaded onto ships every two-three weeks. The open-hulled ships transport 27,000 – 55,000 tons. German Pellets is constructing a second, larger pellet plant in Urania, Louisiana. Pellets produced there will be shipped out of Port Arthur and Baton Rouge.

David explained that the East Texas Electric Cooperative (ETEC) biomass plant is near the German Pellet Plant but is a totally different facility. The plant will produce 50 megawatts of electric power an hour, which is enough to meet the needs of 35,000 homes. The electricity generated will be used by ETEC's member owners located throughout 46 counties in East Texas and will ensure fewer power outages for members when severe weather strikes. ETEC is comprised of 10 not-for-profit electric distribution cooperatives: Bowie-Cass Electric Cooperative, Cherokee County Electric Cooperative, Deep East Texas Electric Cooperative, Houston County Electric Cooperative, Jasper-Newton Electric Cooperative, Sam Houston Electric Cooperative, Upshur Rural Electric Cooperative and Wood County Electric Cooperative. Because ETEC both owns the plant and will use the power generated by it, the facility is expected to be operational on a consistent basis. This situation is different from that of the Aspen biomass plant in Lufkin that did not have sufficient customers and from that of the Southern Power biomass plant near Nacogdoches whose customer, the city of Austin, dictates when the plant is operational.

The ETEC Biomass Plant cost \$200 million, will provide 25 full-time positions and will create an additional 50-75 supporting jobs. It is scheduled to burn its first fuel in June, to initiate its first boiler fire in July and to reach full production in August 2014. Fuel for the plant will be only biomass materials – tree tops, limbs, yaupon, urban waste, chips, and residual sawmill waste (excluding dust). No demolition wood will be used and there is no natural gas used in the process. The plant will require 70 loads of chips per day, five days a week. Individuals will be paid \$0-\$3 per ton for biomass. Woodville’s processed effluent water will be reclaimed and used for cooling at the plant. After use, the clean water will be released into Turkey Creek.

NAPCO needs more logging contractors, particularly more trucking capacity, to meet their demands.



David Savelle

MeadWestvack Evadale Pulp-Paper Mill

David Savelle, Procurement Forester for MeadWestvaco (MWW), presented information about the pulp and paper mill at Evadale in neighboring Jasper County.

The MWW Evadale Mill purchases both pine and hardwood pulpwood. All wood deliveries to the Evadale Mill are by truck. Three electronic scales operate

twenty-four hours a day, seven days a week, 365 days a year to process about 350 trucks per day. MWV engages four to twelve logging crews. Much of their wood comes from large acreage Timber Investment Management Organizations (TIMOs) with whom they have agreements. They maintain relationships with small logging operators to harvest plots as small as forty acres.

The requirement for wood from certified tree farms has become increasingly important for all US mills since 2013. There are three different certification systems. The American Tree Farm certification system is the most applicable for private tree farms. The Sustainable Forestry Initiative (SFI) certification was designed by industry for very large acreage. The Forest Stewardship Council (FSC) certification is international in scope and includes more stringent requirements. If a customer requires FSC certified wood, MWV will ensure that those standards are met. A forest certified by the American Tree Farm system meets most mills' requirements.

The MWV Evadale mill does NOT require that all the wood it purchases be certified by SFI, FSC, or the American Tree Farm System. They do require that all wood, fuel, and chips are purchase from someone trained in Forestry Best Management Practices (BMPs). The seller could be Texas Prologger or a Louisiana Master Logger, for example. The Texas Forestry Best Management Practices Handbook can be downloaded from http://texasforestservicetamu.edu/uploadedFiles/Sustainable/bmp/Publications/BMP%20Manual_Aug2010%20-%20web.pdf.

The MWV Evadale mill produces 619,000 tons of bleached paperboard annually. The paperboard is used for aseptic, food service products, office products, general packaging, graphic liners, and other paper products. The plant has three paper machines, five boilers, three turbine generators and two fiber lines. The forms of fiber processed are 33% pine pulpwood, 24% hardwood chips, 16% hardwood pulpwood and 12% pine chips. The remaining 15% is a fuel mix for powering the plant. The chip mill produces 1.5 million tons of chips and 235,000 tons of fuel in house.



Jack Clark

Jack Clark's Tree Farm

Jack Clark, a long-time local tree farmer, talked about his hobby – “playing with his timber.” He discussed the importance of having a written contract with a logger, preferably with the assistance of a professional forester. He expressed concern that during a thinning some loggers damage the trees left standing. Jack believes he would have had a better logger and received more money if he had employed a consultant forester when he harvested his trees about 1950.

Jack shared pictures of the forest he planted 26 years ago and highlighted specific pine trees that are infected with fusiform rust fungus. When he planted a new plot in 1998, his forester advised him to purchase seedlings that were pretreated to be resistant to fusiform rust. Jack was pleased to report that he has not observed any rust in that plot.

Jack recognizes now that he should have spent more time and money on site preparation before planting the seedlings in 1998. It would have reduced the proliferation of yaupon understory that is now so thick that it blocks his ability to walk among the young trees.