



**SCREENING “ANNOUNCED” WOOD BIO-ENERGY PROJECTS**

*Business/Financial: bio-energy*

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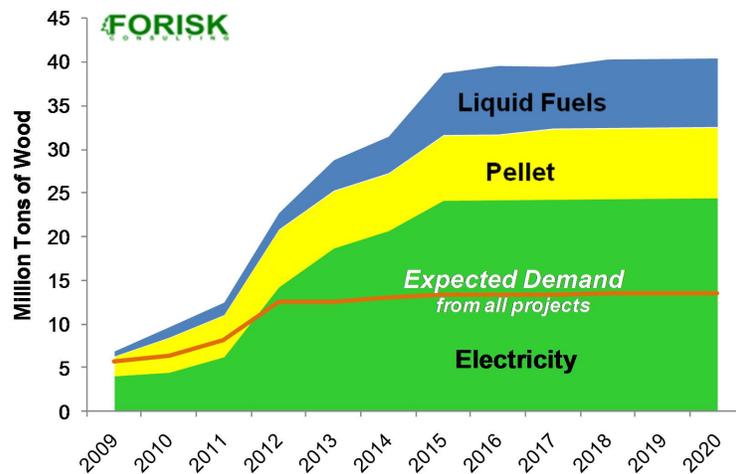
**INTRODUCTION:** As of October 22, 2009, *Wood Bioenergy South* reported 112 announced wood-consuming bio-energy projects in the U.S. South. If all of these projects succeed, they will represent 40.4 million tons of incremental wood demand per year by 2020. However, reality indicates that only a fraction of these projects will succeed. To become operational, bioenergy projects must survive a gauntlet of activities, from locating a site to securing financing to obtaining permits to project construction and procuring raw material. While the order and nature of these specific activities vary, they provide a means for screening the viability of bio-energy markets at the local level.

How can forest industry professionals quickly assess announced projects to determine their relevance to wood demand and timber markets in their local wood basin?

**SCREENING IN TWO STEPS:** Each month in *Wood Bioenergy South*, Forisk applies a two-step screen to publicly announced wood-consuming bio-energy projects. The screen asks two simple questions of each project. The first question is a technology screen and asks, “Does the project rely on proven or unproven technology?” Proven technologies include pelletizing and boilers. Alternately, cellulosic ethanol from wood feedstock is still evolving and, as of today, fails the screen.

The second question is a status screen and asks, “Has this project secured two or more of the necessary resources, permits or agreements?” Qualifying criteria include financing, air quality permits, Engineering Procurement and Construction

contracts (EPC contracts), power purchase agreements for electricity facilities, interconnection agreements for electricity facilities, and raw material supply agreements.



**Fig. 1:** Expected wood demand from wood-using bio-energy projects by 2020.

When this screen is applied to the 112 projects referenced above, 55 projects pass the screen and are expected to consume 13.6 million tons of wood per year by 2020 (**Fig. 1**).

There are other considerations, of course, relevant to announced projects. These considerations include the actual raw material mix needed by the project, the estimated wood-to-energy conversions, and the stages and timing of each project. However, for initial analysis, this two-step process effectively screens highly speculative from realistically viable projects, given publicly available information.

**OPERATION:** The following examples illustrate an application of this two-step screen.

In the first example, an electric cooperative is developing a wood-to-electricity facility in a state located in the U.S. South. It passes the technology screen, as it will use a proven technology (boiler). The project has two of the necessary permits or agreements: a wood supply agreement and financing; therefore, it passes the status screen (*Table 1*).

In the second example, another biomass energy company is developing a wood-to-electricity facility, also in the U.S. South, and passes the technology screen. It does not have any of the permits or contracts, but has applied for an air quality permit with the state. Thus, as of December 2009, it does not pass the status criteria.

| Project                | Location            | Type        | Meet Technology Criteria? | Status               | Permits/Contracts   | Meet Status Criteria? |
|------------------------|---------------------|-------------|---------------------------|----------------------|---|-----------------------|
| Electric Cooperative   | Southern U.S. state | Electricity | Yes                       | Permitting/Contracts | Wood supply agreement with supplier; financing from Clean Renewable Energy Bonds. | Yes                   |
| Biomass Energy Company | Southern U.S. state | Electricity | Yes                       | Permitting/Contracts | Applied for air quality permit.   | No                    |

*Table 1: Application of two-step screen of bioenergy projects.*

**APPLICATION:** This screen provides an efficient and practical method for supporting local market and competitive analysis by forest industry firms and timberland managers. Specifically, it helps mill managers identify sources of raw material competition while supporting forest owner efforts to segregate viable from speculative new markets for wood fiber.

In addition, the screen provides a framework for tracking announced bioenergy projects over time, as it allows for changes in technology as well as progress or regress by known projects. At the end of the day, the screen provides a first step for determining which projects are relevant to your market and forest industry activities.

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