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Study Finds 11-Year Gap between Announced Wood Biofuel Production and Commercial Viability of In-Development Technologies; Cellulosic Ethanol Won't Materially Contribute to EPA Renewable Fuel Targets by 2022

ATHENS, GEORGIA – May 17, 2011 – A new study evaluates the viability of the wood-based transportation fuel sector in the United States. Wood biofuel projects attract strong private and public investment, and advance federal energy policy objectives. Published by Forisk Consulting and the Schiamberg Group, the study details 12 technologies and 36 projects that convert wood to fuels including ethanol, butanol, diesel, gasoline, and jet fuel. Projects producing drop-in fuels have superior potential for investors. Wood-based biofuels will fail to contribute substantively to EPA's Renewable Fuel Standard targets in 2011 or 2022.

"Major technical hurdles will likely disrupt commercialization for most of the technologies under development," notes co-author Dr. Bruce Schiamberg of the Schiamberg Group. The study finds an 11 year gap on average between estimated technology viability and firm announcements. A promising approach of note is the gasification technology under development by firms like Rentech and ClearFuels for diesel and/or jet fuel. INEOS New Planet, Rappaport Energy and Coskata, and Kior are pursuing innovative approaches using gasification and microbes, and catalytic fast pyrolysis. Other firms studied include, for example, Mascoma, BlueFire Renewables and Enerkem.

Impacts on US timber markets appear minimal, with the highest potential wood use concentrated in Alabama, California, Michigan, Mississippi and Tennessee. "If all projects succeed, the total impact on wood raw material markets peaks at 8.8 million dry tons per year by 2030," says co-author Ms. Amanda Lang, Managing Editor of *Wood Bioenergy US*. This represents just over 3% incremental wood use relative to the existing forest products industry.

"Ultimately, investors must think hard about allocating capital to projects that require 10+ years of technological development and rely on EPA renewable fuel mandates, which are essentially moving targets." says co-author Dr. Brooks Mendell.

Transportation Fuels from Wood: Investment and Market Implications of Current Projects and Technologies includes the status of 36 cellulosic biofuel projects and estimated commercialization timelines for 12 technology approaches. The study includes implications for bioenergy and timberland investors. For more information, visit www.foriskstore.com and click "Bioenergy."

About Forisk and the Schiamberg Group: Forisk provides forward-looking analysis for timberland investments, wood markets and bioenergy projects. The Schiamberg Group provides technical evaluations and applications development to companies across the life sciences and alternative energy industries.

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