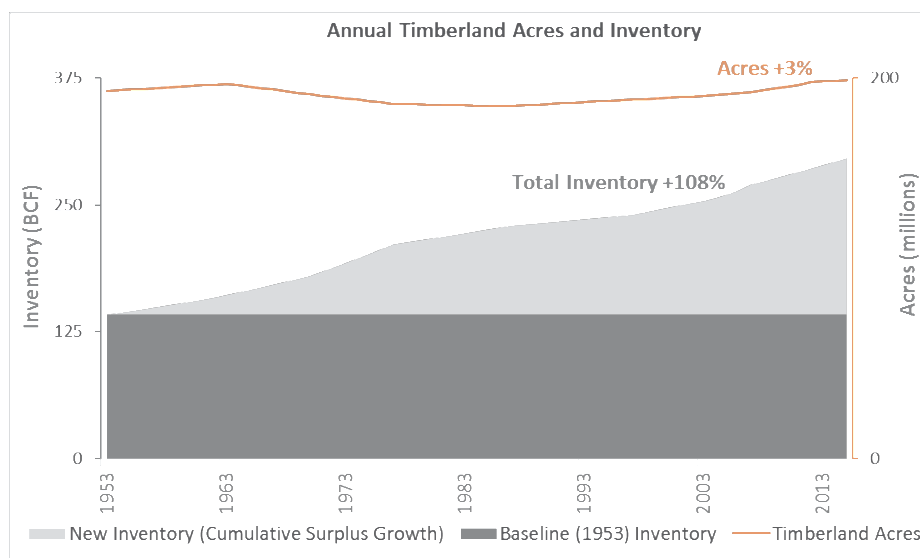


## Forest Products Industry Barriers to Producing Biofuels

*BDC is a 501c3 organization focused on education and brokering partnerships in order to accelerate the deployment of economic bioprocesses and assist the forest products industry to get the most value from the tree. BDC membership represents bioprocess companies and the major forest products companies.*

*BDC believes that the U.S. Forest Industry should be the leader in production of biofuels and chemicals or their intermediates. We appreciate efforts the TAC is taking to look into how to effect policy change that will remove barriers to this production from the industry.*



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- In 1953, the forest timber inventory was about 140 billion ft<sup>3</sup> and has steadily risen by over 100% to about 290 billion ft<sup>3</sup>.
- This volume is orders of magnitude greater than any other source of biomass and can be harvested year-round.
- North America is one of the areas of the world where there is an overall increase in forest size and an increasing sequestration of CO<sub>2</sub>. U. S. Commercial forests are very well managed

- It is our belief that the Forest Products Industry should be the natural leader in the economic expansion of sustainable biofuels, biochemicals, and biomaterials. BDC, through our experience and knowledge gained from its members, recognizes several barriers to the use of wood as the primary source of biomass. Key examples:
  - Very tight constraints on what timber is RFS2 eligible make it difficult for the industry to invest in processes to produce biofuels and bioproducts.
  - Operational restrictions make integrating bio-processes in existing U.S. Saw Mills and Pulp Mills complex, leading again to difficulty for the industry to invest.
    - Eligible wood must be kept segregated and run separately from other wood, then
    - The product must be kept separated from other products, and
    - The final fuel product must be produced at the single site.
- Three easy regulation changes would remove barriers and provide incentive for the Forest Products Industry to invest in biofuel and bioproduct production.
  - Allow co-mingling of eligible wood, using mass balance to determine the eligible volumes of RFS2 biofuel or intermediate product produced at the conversion site.
  - Allow intermediate product to be transported to another site for final processing to biofuels and bioproducts. For example, biomass biocrude could be made at multiple sites and transported to existing petroleum refineries. This is a technically proven process, and some refineries have run trials to validate the pathway.
  - Allow intermediates to be co-processed at the final site for generation of RINs, again using mass balance methods to determine the eligible volumes of RFS2 eligible biofuels produced.

- More difficult legislative changes are needed to provide competitive value to the nation, most states, and society.
  - Permit wood from National Forests to be processed into biofuels/bioproductions in the same way it is allowed for ordinary products. Additionally, the U.S. Forest Service believes that industry would assist with forest thinning and be an aid to reducing forest fires if those residuals were “not restricted”.
  - Drop the plantation restriction for biomass grown on private lands. Restrictions on private lands impede progress and lower the value of land and biomass grown on that land.

As a result of these restrictions and barriers, the U.S. and Canada only have 5 large, funded projects for woody biomass to fuels. This is in contrast a larger number of high-volume projects in Scandinavia where there are policy incentives. The North American projects are:

- Ensyn and partners constructed a 10 million gallon per year Rapid Thermal Pyrolysis (RTP) plant in Cort Norde, Quebec that will serve their developed markets for heating oil.
- Ensyn and Roseburg Forest Products are constructing a 20 million gallon per year RTP facility in Vienna, Georgia.
- Licella and Canfor Forest Products have partnered to build a 20 million gallon per year bio-oil facility at the Canfor pulp mill in Prince George, Canada. Licella piloted the patented hydrothermal-catalytic technology in Somersby, Australia.
- Velocys has announced the Bayou Fuels Project in Natchez, Mississippi, where over 200,000 tons per year of “certified” wood residuals will be gathered from within a 75-mile radius of the facility. They will use ThermoRecovery International (TRI) gasification technology and Velocys’ “microchannel” Fischer Tropsch gas to liquid (GTL) technology to produce 20 million gallons per year of jet or diesel fuel and benzene.

- Red Rock Biofuels has announced a GTL facility in Lakeview, Oregon, where they will obtain 126,000 tons per year of forest residuals within a 125-mile radius and produce 15 million gallons per year of transportation fuel (jet fuel, diesel, and gasoline blend)

This projected ~85 million gallons stands in sharp contrast to the 8.5 billion gallons of cellulosic biofuel (or 13.0 billion gallons of advanced biofuels) Statutory Goal published in the Federal Register.

In considering the policy changes that have been recommended, note that there is a fundamental scientific principle that the rate of CO<sub>2</sub> “take up” from the atmosphere is proportional to the rate of tree growth. This means young growing forests contribute significantly more to reducing atmospheric CO<sub>2</sub> than slow growing older trees. Managing commercial forests so that old growth is replaced with fast growing young trees is good for the environment. All commercial forests must continue to be well managed.

Although “old growth” forests, recreational areas and national parks will continue to be protected, the use of commercial forests should be encouraged as the primary source of renewable biomass over the short and medium term.

QUESTIONS/COMMENTS PLEASE CALL OR E-MAIL THOSE BELOW

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