
WOODY BIOMASS FEEDSTOCK: PROVIDING A RELIABLE, PREDICTABLE SUPPLY¹

Forest lands make up about one-third of the nation's total land area. They are capable of supplying about 368 million dry tons of biomass feedstock annually. Of this total, only 38 percent is currently being used. There is potential to expand feedstock supplies from currently unexploited biomass and from growth in supplies. Forest-based biomass feedstock could be nearly doubled by utilizing removals and residues that are currently unexploited. In addition, growth in forest resources utilization could provide nearly a quarter of the potential feedstock supply. The components of an expanded future feedstock supply do not mirror those of today. Currently, nearly 70 percent of existing biomass feedstock comes from within the forest products industries. Fuelwood accounts for nearly a quarter of current use with urban wood residue making up the remainder. In contrast to these percentages, the largest component, 44 percent of unexploited feedstock, comes from fuel treatments. The other major components are logging residue, 23 percent, and urban wood residue, 20 percent. Other removals and forest products residues make up the remainder. The amount of harvested wood in the U.S. is less than the annual forest growth and considerably less than the total forest industry, suggesting scope for significant growth in feedstock supplies. Forty three percent of this growth potential is concentrated in the forest products industries. Logging residue and other removals account for just over a quarter of the growth potential. Fuelwood and urban wood waste make up the remainder. While forest resources have the potential to sustainably contribute significantly more to the nation's biomass feedstock, much will depend on their extraction cost.

¹ The information in this note comes from: Perlack, Robert D., Lynn L. Wright, Anthony F. Turhollow, Robin L. Graham, Bryce J. Stokes, and Donald C. Erbach. 2005. Biomass as feedstock for a bioenergy and bioproducts industry: the technical feasibility of a billion-ton annual supply. A joint study sponsored by U.S. Department of Energy and U.S. Department of Agriculture. April. Available electronically at: <http://www.osti.gov/bridge>
