

Book Review

Tillman, D. A.: *Wood as an Energy Resource*. 252 pp., numerous figs. New York: Academic Press 1978. DM 27.95

"Wood as an Energy Resource" by David A. Tillman is a very useful reference work which presents a solid base of technical information in a context of economic, resource, energy, and environmental considerations.

An appreciation of the new interest in wood fuel is provided by a brief but adequate historical account of alternative fuels and the special niches now being occupied by wood fuels in this and in other countries. The author attaches great advantage to diversity in energy supply options. He anticipates that wood fuel has a significant part to play in this country's future; then addresses the question: "— what is the proper position, a right role for wood as an energy source."

The author assesses the future of wood in the energy arena by defining its intrinsic value and position within the family of combustible fuels. He seeks to resolve problems created on the one hand by promoters and on the other hand by detractors of wood fuel; and by the fact that there are many wood fuels with different levels of usefulness.

On the subject of the supply and delivery of wood fuels the author concludes that the advantages of using wood in an optimum situation are great; concomitantly the penalties of selecting the wrong supply-delivery system are severe. Guidance in the necessary decision making is provided by information on extraction costs, on transportation costs as a function of distance, and on energy recovery processes.

In one chapter it is pointed out that advanced deployment systems can overcome the inherent disadvantages of many wood fuels while capitalizing on their inherent advantages. In co-combustion, wood is blended with coal, or with another waste to achieve economy of scale advantages, to decrease dependency on a single fuel, and to reduce environmental problems. Cogeneration of process steam and electricity can achieve large gains in efficiency whether with boilers using wood alone, other fuels, or mixed fuels. The pulp and paper industry already half dependent on wood residue fuel, has achieved a leading position in cogeneration.

Chapters on the resource base and potential supplies of wood fuel review available data and projected supplies with assumed levels of management. Tillman anticipates that for the remainder of this century, wood fuels will come from the residues of forest management, forest harvesting and forest products manufacturing. He expects no measurable contributions from energy plantations.

Tillman expects wood fuels to contribute about 4.1×10^{15} Btu by the year 2000. While this is not earth-shaking, it provides diversification and amounts to 4.2% of anticipated total energy consumption.

Tillman's experience and background give him high credibility in the field of wood utilization in general and in wood fuels in particular. Timber management in the future will benefit from increased salvage and use of materials useful for no other purpose than fuel, and increasingly, fuel will figure in timber management strategies.

Wood as an Energy Resource deserves a place in the library of all concerned with forestry, wood utilization and alternative energy sources.

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