

Western Forest Health and Biomass Energy Potential

A Report to the Oregon Office of Energy

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April 2001



PRINTED ON RECYCLED PAPER

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Foreword

The Western Biomass Consortium is pleased to endorse this thoughtful and important discussion of forest health and its link to biomass energy development.

The wildfires that swept the West during the summer of 2000 bore witness to the results of a failed decades-long fire suppression policy. Western state governments and the federal government are developing initiatives such as the federal fuel management program to try to reduce the dangers of catastrophic fire as quickly as possible.

This manuscript is especially timely because community awareness of fire dangers and the increasing cost of energy is high. After careful reading, one comes away with an understanding of the policies that created our present difficulties and the options available to us to address them. The issue of forest health is many faceted: it affects air and water quality and streamflow, greenhouse gas emissions, wildlife habitat and conservation. There is no easy resolution to the contentiousness inherent in efforts to establish new ways to deal with western forests.

Biomass energy development offers a synergistic opportunity to improve forest health while reducing the enormous costs of forest treatment. At the same time, increased biomass energy usage will reduce American dependence on foreign fossil fuels.

The authors of this manuscript provide a significant analysis of past problems as well as present opportunities to address those problems, with case studies of actual and proposed programs to develop biomass energy production facilities in the West.

We are grateful to the Oregon Office of Energy for enabling us to complete this publication. We believe that it is a useful addition to the dialogue around forest health. Its information makes for a better understanding of issues and positions.

Barbara Charnes, Executive Director
Western Biomass Consortium
Denver, Colorado

Acknowledgments

The authors thank Barbara Charnes and the members of the Western Biomass Consortium, who have not only encouraged this work but provided invaluable technical reviews as it went along. We are also indebted to the USDA Forest Service's Forest Products Laboratory in Madison, Wisconsin, and the DOE National Renewable Energy Laboratory in Golden, Colorado, which provided financial and technical support to an earlier white paper that has been incorporated into this study for the Oregon Office of Energy.

For providing review comments and data, we are indebted to Bob Allen, Barbara Charnes, Nils Christoffersen, Lance Clark, Steve Jolley, Bob Judd, Tad Mason, Susan LeVan, Pat Perez, Howard Rosen, John Sheehan, Mark Yancey, and John White

For providing guide service, local expertise, and insight into Oregon conditions, we thank Dan Bishop, Jim Brown, Lance Clark, Noel Colby-Rotelle, Bruce Dunn, Gordon Foster, Mike Hayward, Walt Jennis, Russ Layne, Gary Lettman, Larry McCulgin, Brian Nelson, Doug Robin, Paul Service, Diane Snyder, John Szymoniak, and Rick Wagner.

If, in spite of all this good help, errors and deficiencies remain, they are ours, not theirs.

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Executive Summary

Large areas of Western forests need treatment to reduce flammable fuels. Without such reduction, these forests are likely to experience wildfires that threaten people, communities and the environmental integrity of the forests themselves (NCWD 1994, US GAO 1999, USDA Forest Service 2000). Time is short. Every year these forests remain untreated, fuel continues to build up and heightens the risk that the next ignition will become a catastrophic wildfire. The fires of the summer of 2000 sent a clear message: Something must be done, and the sooner the better. However, two significant obstacles remain: How do we effectively mobilize the necessary action? What should we do with all of the biomass that needs to be removed from at-risk forests?

Significant related federal action has taken place over the past year, and, in the case of Oregon, a major federal-state cooperative effort has been launched that addresses forest health issues. This report documents some of the forest conditions in the West and cites some of the studies that are available to people who wish to further pursue forest health issues. Also discussed are general energy issues tied to forest health and the role they play in any attempt to enlarge the biomass energy industry. Finally, this study looks at two areas of Eastern Oregon to provide a general sense of the amount of forest fuels that may exist there and the possibility that those fuels could be directed into biomass energy facilities.

The report's general conclusion is that significant opportunities exist to link forest health treatment and biomass energy production, but several obstacles must be successfully addressed before biomass energy developers are likely to move into the region. The obstacles to forging a link between forest health treatments and the biomass energy industry stem from two interlocking problems that require simultaneous solution. First, to make biomass fuel delivery feasible, forest managers must have a viable market within reasonable distance that pays an adequate price. Second, to assure payback of large initial investments, investors in energy production facilities must have a reliable fuel source at prices that allow competitive production over a long enough period. Today, neither of these situations exists.

The challenge for decision makers, then, is to bring energy policy and land management together to focus on a regional situation. Billions of dollars are at stake, as are the futures of hundreds of forest-related communities. In the past, these communities depended heavily on federal timber management policies, and they are now undergoing massive adjustments as federal timber harvests are reduced without associated forest activities or jobs to replace them. Also at stake is the health of millions of people and millions of acres of

Western forests. Forests overloaded with stressed, dying trees will burn at some point, most likely in the near future.

Other values are at stake as well. Water from forested mountain watersheds is an extraordinarily valuable commodity in much of the West. Altered watersheds that no longer provide the normal quantity or quality of water impose hardship and cost on the region. On the other hand, restored and well-managed watersheds could confer equally significant benefits. Air quality is already well below thresholds desired for public health (primarily because of the amount of fossil fuels burned in the transportation sector) and cannot tolerate the additional pollutants that would result from a return to fire-based management of the region's forests and woodlands.

The situation cries out for a thoughtful, coordinated approach to new policy that addresses forest management, environmental regulation and energy supply. Such an approach is difficult at best—and is made even more difficult by the fact that the Western situation is larger than any state or local jurisdiction but is only one small part of the federal policy arena. With no clear “fit” between the scope of the problem and the reach of the political institutions available to address it, the current situation in the West challenges the United States in ways that are, perhaps, unprecedented. With exceptional challenge, however, often comes exceptional opportunity.

The exceptional opportunity in this case is to create a brighter environmental future, showing the way toward a future less dependent on imported and limited petroleum and more reliant on domestic, sustainable, renewable energy supplies. That future requires additional research and development, as well as policy support to break free of past economic limits. It offers a partial solution to forest problems that seem otherwise intractable.

From this limited study, we are convinced that the potential for breaking through the forest health-biomass energy gridlock is as promising in Eastern Oregon as anywhere in the West. Clearly, it will require more detailed studies than were possible in the brief period available for this general overview. Improved forest inventories on private lands, major changes in federal forest policies and better economic analyses of energy facility locations are all indicated. Many such efforts are under way, spurred by the sense of urgency created by the fires of 2000. The primary question, perhaps, is whether the current interest and momentum can be maintained should the next few years experience fewer wildfire problems or if other policy items capture the agenda. The problems and potentials, as outlined in the following report, will not go away. The authors hope that neither will the political will to develop solutions.