Inventory of Biomass Feedstock Programs & Activities in the Federal Government

This inventory was developed by the members of the Feedstocks Team of the Logistics and Distribution Working Group of the Biomass Research and Development (R&D) Board. The purpose of this inventory is to determine the level of logistical activities within the federal government and to identify federal programs engaged in biomass feedstock logistics research, development, demonstration, and deployment (RDD&D). The inventory will help improve coordination and collaboration across the federal government to overcome barriers in the commercialization of biofuels.

When this inventory was created, feedstock logistics were defined as activities and functions that link the feedstock production and conversion functions in the supply chain. These functions involve assessing, planning, implementing, and controlling the efficient flow and storage of biomass feedstocks between supply and use. "Logistical programs" were defined as having, in part, some RDD&D feedstock logistical activities. Team members provided information on their respective programs and other programs of knowledge.

All of the programs in the inventory are associated with the Department of Energy (DOE) and the Department of Agriculture (USDA). DOE's efforts are concentrated in the Office of the Biomass Program (OBP), whereas USDA has efforts within the Agricultural Research Service (ARS), Forest Service (FS), and National Institute of Food and Agriculture (NIFA). There are Small Business Innovation Research (SBIR) programs in both departments with limited logistical activities. The Small Business Technology Transfer (STTR) program is only in DOE. There are some additional logistical activities under the Biomass R&D Initiative (BRDi) and Sun Grant Initiative. Both of these initiatives are federally funded—either wholly or partially. OBP is the only "logistics program" (i.e., primary mission is feedstock logistics). All of the other inventory items are more of a "program activity," or component of a program, with a broader mission than logistics. Most of the ancillary programs with some logistics are primarily feedstock production and conversion programs.

DOE includes four program elements: competitive grants, a regional partnership, congressionally developed projects, and SBIR/STTR grants. The competitive grants were specific projects to address high-volume logistical issues. There were five of these projects across the United States that addressed different types of feedstocks. The other program elements include only logistical projects or projects that have some level of logistics as a component. There are also logistical programs at the Idaho National Laboratory and Oak Ridge National Laboratory. Overall, there are 18 DOE program units, activities, and example projects in the inventory. The feedstocks includes agricultural residues and energy crops. All aspects of the logistical components of the supply chain are covered in these activities.

USDA's bioenergy research uses a complete supply chain approach, integrating feedstock logistics with feedstock development, production, and conversion. USDA's intramural feedstock development, sustainable feedstock production, and feedstock logistics activities are coordinated through the Department's five Regional Biomass Research Centers, which are led by ARS and FS R&D. USDA's extramural research is administered by NIFA and FS and includes NIFA's large Coordinated Agriculture Projects for bioenergy R&D, as well as BRDi, which NIFA manages jointly with DOE. NIFA also funds some feedstock logistic R&D through SBIR, formula grant, and other grant programs. FS funds some feedstock logistics research through its R&D program, Technology & Development Centers, and Biomass Utilization Grants. In addition, funding through USDA's Biomass Crop Assistance Program supports demonstration and deployment of feedstock logistics technologies. This inventory summarized 42 USDA program units, activities, and projects involving feedstock logistics R&D.

The range of efforts includes competitive grants and in-agency R&D. The competitive grants included technology development and some demonstration and pilot testing. There were no large-scale deployment activities specifically for logistics.

Projects' goals were very varied—ranging from the discovery and advancement of the underlying science to technology and systems development and demonstration. The research spanned several areas, including information, data collection, and synthesis; experimental field studies on systems; engineering testing and development; technology demonstration; and basic to applied research on material properties and handling. The logistics efforts involved a full range of agricultural and forestry residues to several types of energy crops.

This inventory is a report from the Feedstocks Team of the Logistics and Distribution Working Group of the Biomass R&D Board. It is current as of December 2011.
View the Inventory Tables by agency:

- **DOE**
- **USDA**
- **Joint USDA-DOE**
- **National Laboratories**

Or view the full Excel spreadsheet of the Inventory Table.