Agenda 2020 Technology Alliance

Transforming the Forest Products Industry through Innovation

Energy Department Funds Agenda 2020-Sponsored Project to Increase Fiber Yield

Washington, DC, August 30, 2016--An Agenda 2020-sponsored effort to improve pulping is among 13 projects designated for $3.8 million total funding from the U.S. Department of Energy (DOE) Advanced Manufacturing Office through a program designed to spur the use of high-performance supercomputers to increase U.S. industrial energy efficiency and reduce environmental impacts.

The Agenda 2020 project, *Catalytic Pulping of Wood,* originated last year in partnership with the U.S. Forest Service and Forest Products Laboratory. The new and expanded project, with Oak Ridge National Laboratory, proposes to link supercomputing techniques with experimental investigation to develop cobalt-based catalysts that can delignify wood more effectively. Computational chemistry will be used to guide the design and predict the performance of prospective catalysts prior to synthesizing them, thereby accelerating the development process.

Catalytic methods offer a viable alternative to increase cellulose fiber yield by improving selectivity, reduce energy use, and eliminate the formation of certain odor-causing compounds associated with kraft pulping. Breakthrough technologies in chemical pulping providing 5% yield improvement would offer the potential for approximately $950 million per year savings in energy and wood costs. Pulp yield improvement is one of five priority research areas addressed by Agenda 2020's 2016 technology roadmaps, available for download at no charge at www.Agenda2020.org.

"This is a terrific example of how partnerships among government agencies, universities, and companies can create highly effective research synergies in the national interest," said Agenda 2020 director David Turpin. "This powerful team comprised of expertise from Oak Ridge National Laboratory, the U.S. Forest Service, the Forest Products Laboratory, the University of Tennessee Knoxville and Agenda 2020 member companies has an opportunity to make an important advancement in energy and resource efficiency."

Agenda 2020 is also working with the Lawrence Livermore and Lawrence Berkeley National Laboratories on one of the four HPC4Mfg seedling projects, to develop simulations to determine how water flows through porous paper pulp during and after the pressing process. The new press designs that could be developed from the data could reduce energy consumption by up to 20% (80 trillion BTU, worth $240M - $400M annually).

The pulp and paper industry is an essential segment of the national economy, making products necessary for everyday life from renewable resources.

For additional information about these projects, please refer to the HPC4Mfg Announcement or the DOE (EERE) Announcement.

The Agenda 2020 Technology Alliance is an industry-led consortium that promotes development of advanced technologies for the pulp and paper industry. For further information, please visit the website at www.Agenda2020.org.