

Bioenergy Innovations at Idaho National Laboratory

Solving Feedstock Challenges Today

Biomass National User Facility Process Demonstration Unit (PDU)



Reconfigurable PDU is located in 27,000-ft³ high bay at INL's Energy Systems Laboratory



- ✓ Full-scale, integrated biomass processing system
- ✓ Operational since October 2013
- ✓ More than 500 tons of feedstock processed
- ✓ Meet customers' lab and pilot-scale testing needs
- ✓ Accelerates scale-up and commercialization

Engineering Solutions

- ✓ Improved design of biomass processing and handling equipment
- ✓ Altered biomass material properties to enable use of existing equipment

Biomass National User Facility Bioenergy Feedstock Library

- ✓ Physically storing, tracking research feedstocks
- ✓ Assimilates samples into single data system



Supply Chain Development

- ✓ Stochastic techno-economic assessments
- ✓ Characterizing raw biomass, feedstock product, storage performance
- ✓ Developing framework for risk-based analysis
- ✓ Decoupling feed processing from conversion

Understanding tradeoffs in cost, quality, and risk helps customers establish a successful supply chain

