

**NSF EPSCoR: Building Research Capacity
Congressional Briefing
Monday, October 3, 2011**

Maine EPSCoR: From EPSCoR to Market

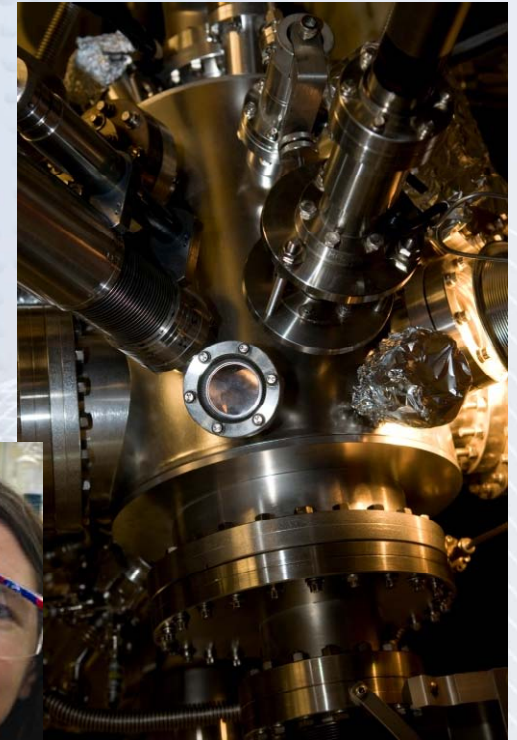
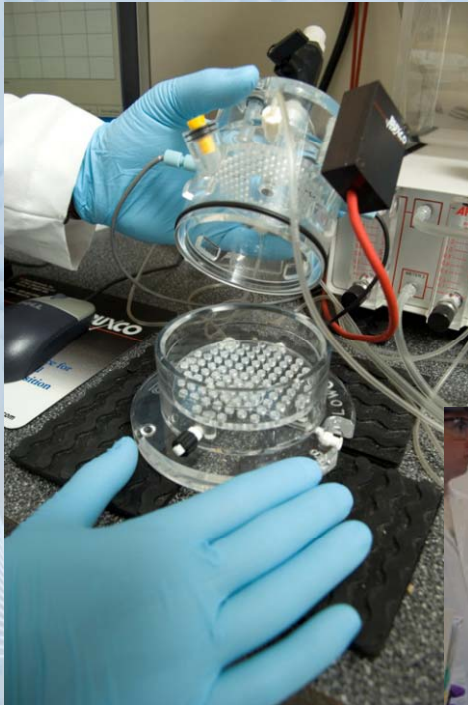


Fundamental
Research



Technological
Innovation

Specific challenges
that directly impact
societal needs



- **Maine EPSCoR has been building research capacity since it became an EPSCoR state in 1980.**
- **Maine EPSCoR is located at the University of Maine, which is the state's flagship research institution & only PhD-granting university.**
- **Three recent NSF EPSCoR RII program examples demonstrate economic impact ability for the state.**



UMaine Advanced Structures and Composites Center NSF EPSCoR RII 1996-1999: \$5M, three-year award for construction of a 30,000 sq. ft. facility for engineered wood research at UMaine.



➤ Global recognition as
a one-stop shop for
integrated composite
materials
development.



- Over \$80M in grants and contracts
- 13 patents granted
- 68 faculty & 100+ students/year



UMaine Advanced Structures and Composites Center

- Public infrastructure/construction, consumer products, force protection, & homeland security.



- ISO 17025
accredited with
10 integrated labs



- Facility now
87,000 sq. ft.



Advanced Structures and Composites Center

- Leading the way in deep offshore wind research.

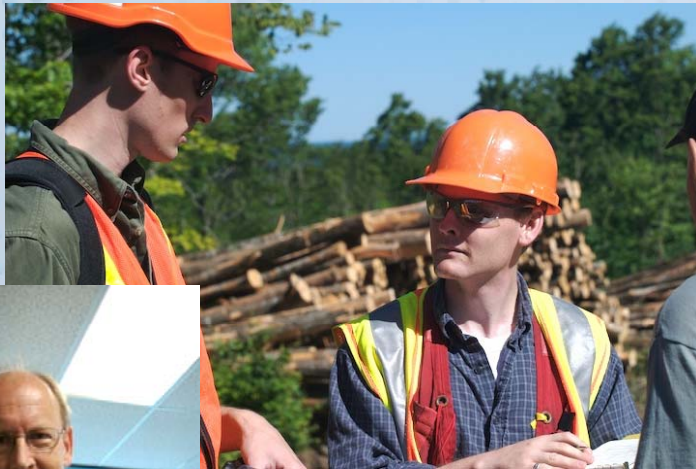


- New 37,000 sq. ft. laboratory for design, manufacturing, & testing.



UMaine Forest Bioproducts Research Institute

NSF EPSCoR RII 2006-2009: \$6.9M, three-year award to support research on separating wood components into chemicals and extracts for new uses.

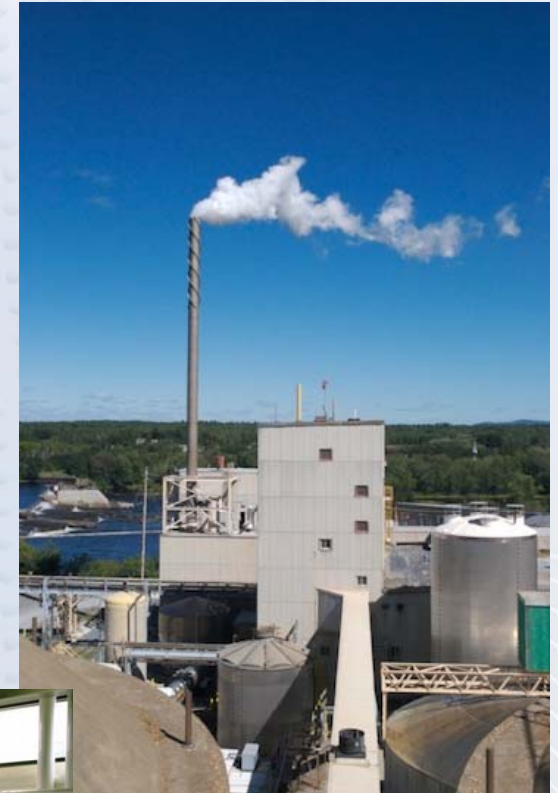


- Seeking to create and commercialize new wood bioproducts for both existing and new industries
- Supported over 50 faculty and 100 students
- Acquired over \$3.5M in major research equipment for the state



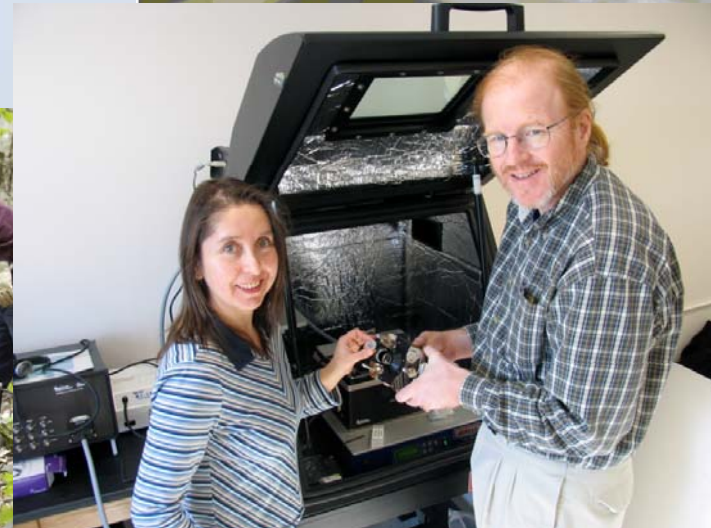
UMaine Forest Bioproducts Research Institute

- From UMaine laboratory to industry demonstration project with major private investment
- Added value to existing paper pulping processing stream
- Resulted in \$30M DoE grant to industry partner to commercialize technology for jet fuel



UMaine Forest Bioproducts Research Institute

- Resulted in \$4.8M state bond funding for new FBRI technology center located at industry partner
- Over 20 patents issued or in process
- Subsequent external funding from NSF, USDA, DoD DoE, DoT



Maine's Sustainability Solutions Initiative

NSF EPSCoR RII 2009-2014: \$20M, five-year award to examine publicly-defined ecological, social, & economic issues in order to develop solutions for sustainability for the state

Statewide engagement for maximum impact:

- 11 colleges & universities collaborating on research & education in sustainability science
- supporting over 110 faculty and 220 student research internships



Maine's Sustainability Solutions Initiative

Different type of investment in statewide capacity:

- Public stakeholders help to drive the research questions
- Landscape change model: intersection of urbanization, forest ecosystem management, and climate and energy
- Sustainability science approach takes longer to mature to economic impact



Maine's Sustainability Solutions Initiative

Tidal Power Project:



- Public and private stakeholder engagement
- Significantly leveraging other federal and private funding
- NSF EPSCoR added new dimension to project



Maine's Sustainability Solutions Initiative

Brown Ash Project:

- Economic development for Maine's tribal communities



Extreme climate events:

- Rising sea levels & coastal concerns
- Storm water runoff

- High return on investment
- EPSCoR projects align with state S&T action plan
- Maine Innovation Economy Advisory Board is State EPSCoR Committee



2010 Science and Technology Action Plan
A Bold Approach to Stimulate Maine's
Economy



Maine Innovation Economy Advisory Board
and
Maine Office of Innovation

