



Colorado Renewable Energy Collaboratory

Partners for Clean Energy

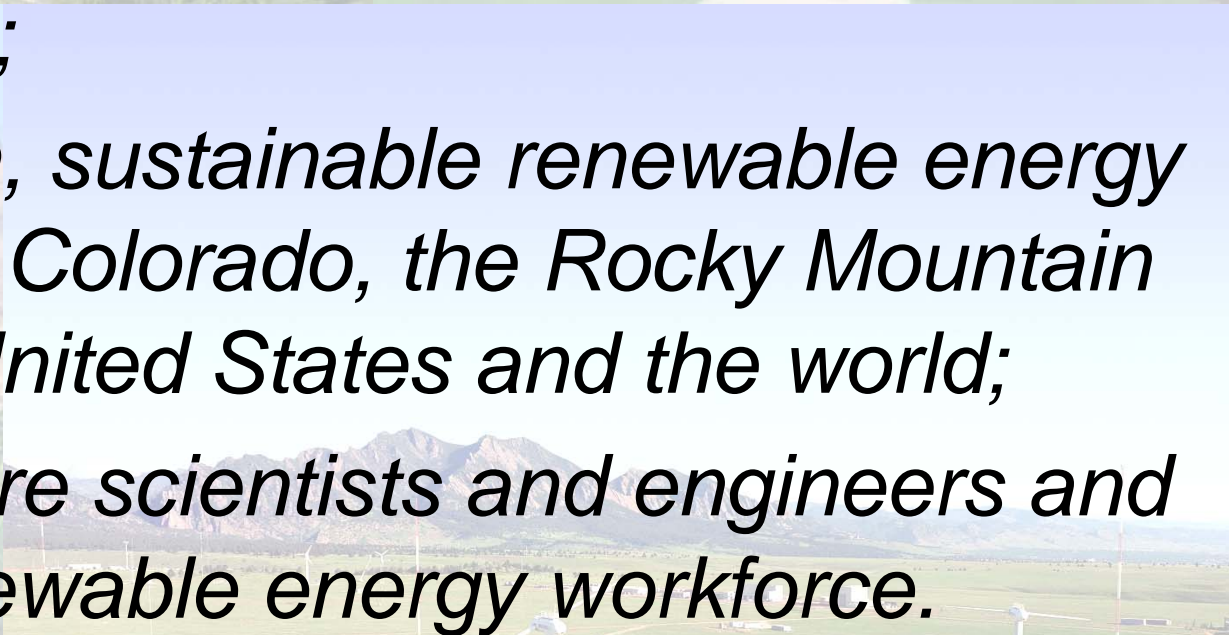
A Research Collaboration of
National Renewable Energy Laboratory
Colorado School of Mines
Colorado State University
University of Colorado at Boulder

IEEE COLORADO SYMPOSIUM
May 17, 2008



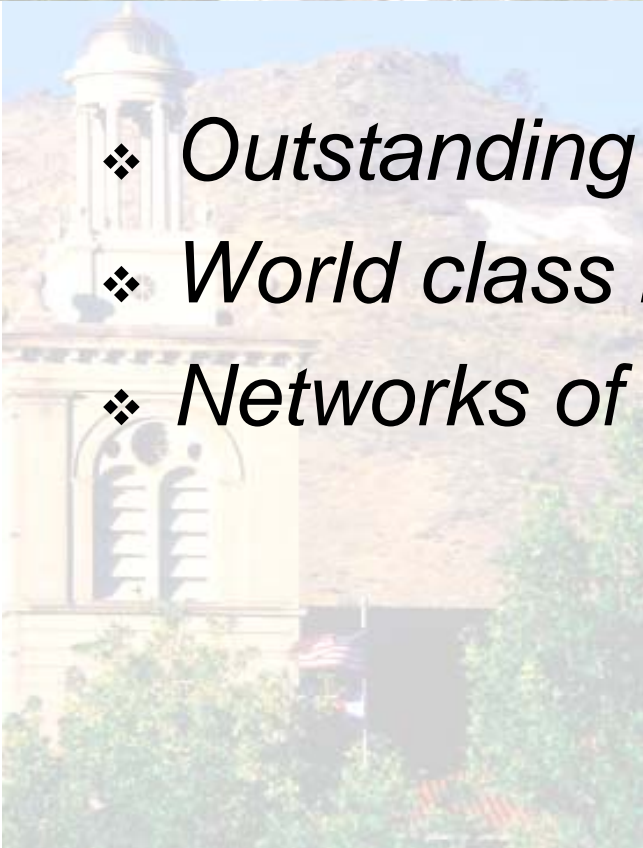



The Collaboratory works with public and private partners to:

- ❖ Create and commercialize renewable energy technologies;*
 - ❖ Build a clean, sustainable renewable energy economy for Colorado, the Rocky Mountain region, the United States and the world;*
 - ❖ Educate future scientists and engineers and train the renewable energy workforce.*
- 



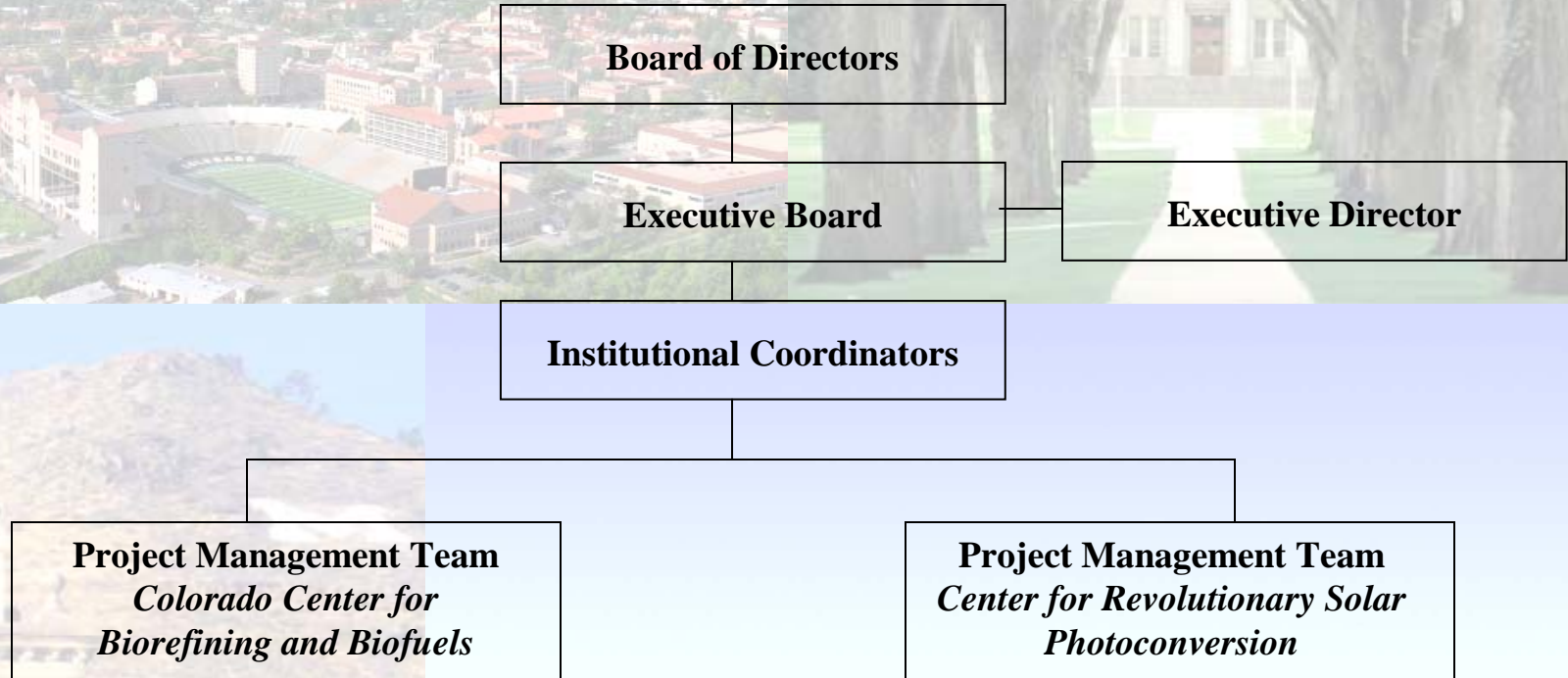
Through the Collaboratory, four premier research institutions combine their

- 
- 
- ❖ *Outstanding faculties and researchers*
 - ❖ *World class laboratory facilities*
 - ❖ *Networks of public and private partners*

The Collaboratory . . .

- Created at the request of U.S. Senator Ken Salazar
- Enjoying bipartisan support from
 - Governors Owens and Ritter
 - The entire Colorado Congressional delegation and
 - The Colorado General Assembly

Colorado Renewable Energy Collaboratory Management Structure



Future Projects Areas:

- **Wind Energy**
- **Applied Solar Research Center**
- **Carbon Management**
- **Energy Efficiency**

Collaboratory Centers

- ❖ Center focus is defined by energy technologies and opportunities, not by institutional boundaries
- ❖ Research assets of the four institutions combine with research assets of public and private partners to achieve goals
- ❖ Private partners with market understanding and impact help identify research targets
- ❖ The Collaboratory will also partner with other universities, labs and institutes

Collaboratory Centers

Existing

- ❖ Colorado Center for Biorefining and Biofuels
- ❖ Center for Revolutionary Solar Photo-conversion

Proposed

- ❖ Center for Research and Education in Wind
- ❖ Solar Technology Acceleration Center
- ❖ Center for Carbon Management
- ❖ Center for Energy Efficiency & Management

CRSP – Center for Revolutionary Solar Photoconversion

Scientific Director: Arthur Nozik, Ph.D, NREL

Areas of research include:

- ❖ • photovoltaics (inorganic and organic),
- ❖ • photophysics,
- ❖ • photoelectrochemistry,
- ❖ • photochemistry,
- ❖ • photobiology, and
- ❖ • nanoscience

CREW – Center for Research & Education in Wind

Areas of research include:

- ❖ Turbine Modeling
- ❖ Electrical systems
- ❖ Control of wind energy systems
- ❖ Turbine Testing
- ❖ Atmospheric sciences

Basic Model of Center Structure

❖ Administrative Operations

- Lead Institution
 - Financial management
 - Signatory of formal agreements
- ***Single point of contact for center partners***

❖ Center Oversight

- Collaboratory Center Team
 - Reps from four Collaboratory institutions
- Center Advisory Board
 - Collaboratory and partner representatives

Basic Model of Center Operations

❖ Shared Research

- Supported by partner's annual contributions
 - Large companies - \$50,000; Small companies (below 500 emp) - \$10,000
- Faculties submit research proposals
- Private partners help identify preferred proposals for seed grants
- Private partners can join in patent process and receive no-fee, non-exclusive licenses
- State matching funds support shared research

Basic Model of Center Operations

❖ Sponsored Research

- Research defined by private partner(s)
- Can include researchers from one or more Collaboratory and public partner institutions
- Single contract encompasses all institutions, including IP agreements
- Lead institution handles all financial and administrative duties
- Partners can opt for traditional contracts with single or multiple institutions

Independent Research Projects

- ❖ Collaboratory research projects independent of a Center
- ❖ Projects of special significance
- ❖ Must include at least three of four institutions
- ❖ May include other public or private collaborators



Colorado Renewable Energy Collaboratory

Partners for Clean Energy

For more information, please visit our website:

www.coloradocollaboratory.org

Or contact:

David Hiller

Executive Director

Colorado Renewable Energy Collaboratory

410 17th Street, Suite 1400

Denver CO 80202

303.376.2631 phone

303.376.2600 fax

david.hiller@coloradocollaboratory.org