

COLORADO SCHOOL OF MINES

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M. W. Scoggins
President

July 16, 2007

Hon. Rosemary Marshall, Chair
Hon. Joe Rice, Vice-Chair
Colorado House of Representatives Business Affairs and Labor Committee
Colorado State Capitol
200 East Colfax
Denver CO 80203

Hon. Jennifer Veiga, Chair
Hon. Lois Tochtrop, Vice-Chair
Colorado Senate Business, Labor and Technology Committee
Colorado State Capitol
200 East Colfax
Denver CO 80203

To the Honorable Chairs and Members of the House Business Affairs and Labor Committee and the Senate Business, Labor and Technology Committee:

On behalf of the Board of Directors of the Colorado Renewable Energy Authority, I hereby report to you regarding the activities of the Authority since its inception pursuant to H.B. 06-1322. Given that the Authority and the Colorado Renewable Energy Collaboratory are in the early stages of organization and implementation, this report is being submitted later than originally outlined in H.B. 06-1322.

The principal purpose of the Authority is to direct the allocation of state matching funds to support one or more research proposals of the Colorado Renewable Energy Collaboratory, a research consortium consisting of the Colorado School of Mines, Colorado State University, the University of Colorado – Boulder and the National Renewable Energy Laboratory. In accordance with H.B. 06-1322, state matching funds may be allocated to attract and support funding from federal and other public and private sources.

As of this time, the Directors of the Authority have made commitments to provide matching funds to two research projects, but no matching funds have yet been disbursed, as explained below.



Colorado Center for Biorefining and Biofuels

The Colorado Center for Biorefining and Biofuels, known as C₂B₂, is the first major project of the Collaboratory. C₂B₂ is a research venture between large and small businesses and the Collaboratory. The C₂B₂ partners will perform world class research to develop new biofuels and biorefining technologies and transfer these advances as rapidly as possible to the private sector. The University of Colorado – Boulder is the lead institution for C₂B₂, but all four Collaboratory institutions will play prominent roles.

Biorefining includes but is broader than biofuels. Biorefining produces many products from biomass, including fertilizers, plastics, fibers, cellulose for paper and many commercially valuable chemicals. Because most of these products now come from oil and gas, biorefining will reduce our dependence on oil and will also make biofuels more cost-competitive by creating secondary products to support the cost of refining.

The formation of C₂B₂ was announced by the Collaboratory in March, 2007, with four large business sponsors – Chevron, ConocoPhillips, Dow Chemical and Shell Global Solutions – and seven small business sponsors, including six Colorado-based businesses – BlueSun Biodiesel, Copernican Energy, PureVision Technologies, Inc., Range Fuels, Rocky Mountain Sustainable Enterprises, and Solix Biofuels. More sponsors are expected to join the program during 2007.

C₂B₂ has two separate research programs: shared research and directed or proprietary research. All sponsors pay annual fees to support the shared research program, with research projects to be selected by an advisory board. All sponsors, including the Collaboratory members, may acquire a non-exclusive right in any resulting patents. Sponsors may also contract with the Collaboratory to pursue specific research for the benefit of that sponsor, with patent rights established by the controlling contract.

Sponsors are attracted to C₂B₂ because they obtain the broad capabilities of four major research institutions through a single contract and a single point of contact. C₂B₂ also offers important value to the state and to the sponsors by providing educational and work opportunities for high school, undergraduate, graduate and post-doctoral students. C₂B₂ trains new researchers for Colorado and the Collaboratory, and sponsors have the opportunity to recruit future employees. C₂B₂ has the potential to attract many biorefining companies to Colorado to participate in the research programs and to benefit from the highly trained researchers and technical workers C₂B₂ will produce.

In support of C₂B₂, the Authority has committed to provide matching funds equal to the annual financial commitments of the sponsors for shared research projects, up to a maximum of \$500,000 in the first year, \$750,000 in the second year and \$1,000,000 in the third year of C₂B₂ operations. C₂B₂ will commence operations on July 1, 2007, and already has sponsor commitments in excess of \$500,000.

Center for Revolutionary Solar Photoconversion

The Center for Revolutionary Solar Photoconversion, or CRSP, was conceived in response to a request for proposals from the U.S. Department of Energy Office of Science. NREL is the lead Collaboratory institution for the CRSP proposal to DOE, but, again, all four Collaboratory institutions will fully participate. The research focus of CRSP is to produce clean solar fuels and electricity at costs comparable to current fuels and power through revolutionary new technologies in photoelectrochemistry and photobiology. As with all Collaboratory projects, the emphasis will be to create technologies ready for commercialization.

In support of the Collaboratory's proposal to DOE, the Authority Directors committed Authority funds to CRSP equal to 15% of DOE funding, up to a maximum match of one million dollars per year. The peer review responses to the CRSP proposal have been very favorable. However, as of this date, it appears that DOE will not fully fund this research program in Fiscal Year 2007, and no decisions will be made regarding Fiscal Year 2008 funding until Congress has determined the level of appropriations.

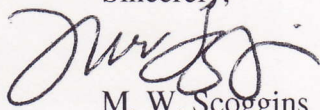
Conclusion

Much of the Collaboratory's efforts over the past year have been dedicated to the creation of a flexible organization that will allow Colorado's four leading renewable energy research institutions to combine their talents and their facilities across a broad range of research areas. The early success of C₂B₂ and the positive technical reviews of CRSP are very encouraging.

The Authority Directors look forward to more strong proposals from the Collaboratory that will achieve the statutory goals of H.B. 06-1322: to create new technologies for rapid commercialization, to train Colorado students as renewable energy researchers and technical employees, and to support the development of a renewable energy economy in Colorado.

The Directors of the Colorado Renewable Energy Authority are grateful for the support of the Colorado General Assembly. We will be pleased to respond to any questions you may have at this time or in the future.

Sincerely,



M. W. Scoggins

President, Colorado School of Mines

Chair, Colorado Renewable Energy Authority