



Colorado Cleantech Industry Association

## INNOVATION INFRASTRUCTURE

*The foundation for Renewable Energy Research in the US was laid in Colorado two decades ago with the formation of NREL.*

**Issue:** Colorado is home to the DOE's National Renewable Energy Laboratory (NREL) and many other national labs, major research universities including top 10 ranked University of Colorado, Colorado School of Mines and Colorado State University, and the unique Colorado Renewable Energy Collaboratory. Ranked second in the US for intellectual capital, Colorado houses many of the world's best renewable energy and climate research institutions. In order to grow the research capacity at these institutions critical research funding and resources for facility retrofits/upgrades and new construction is necessary.

**Importance to the Colorado Cleantech Epicenter:** NREL and the major universities are nearly at capacity with respect to physical facilities and many existing buildings require renovation and new equipment to tackle the critical scientific bottlenecks of the global energy and climate challenge. And, five of the six research centers of the Collaboratory rely on the facilities at NREL and the universities. Today, each of these institutions has shovel-ready energy research facility (retrofits and new construction) plans in-place. The Collaboratory is ready to launch two new research centers and established research programs are ready to expand.

**Federal Opportunities and Programs:** Funding in the stimulus legislation for US DOE, NSF, NIST and other federal agencies can provides funding for retrofits and/or new construction. In the case of the federal laboratories, full funding of research budgets should be encouraged. In the case of State research infrastructure funding, federal partnering to provide a portion of the budgets would accelerate the development of these critical and "shovel ready" facilities. Agencies should be prompted to consider partial funding of these pending Colorado research facilities and research programs, as follows:

- Colorado School of Mines: Earth Energy Institute building (net required \$60 million with 1,000 new jobs).
- University of Colorado at Boulder, East Campus Energy-Related Buildings Cluster: Biotechnology Systems building (net required \$130 million with 3,100 new jobs) and Geosciences building (net required \$60 million and 1,500 new jobs).
- Colorado State University: Energy & Environment Engineering building (net required \$97 million and hundreds of new jobs).
- Collaboratory: \$2.5 million in FY 09 and 10 for matching private sector corporate members co-funding of shared research and, \$19 million for new Carbon Management research center located at the School of Mines.

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