

CLEAN ENERGY

CLUSTER PROFILE | FORT COLLINS, CO

The Clean Energy Cluster is comprised of companies who develop, produce, and distribute technologies that promote more efficient and sustainable production and use of power. The dominant player in the Fort Collins Clean Energy Cluster is Woodward. Advanced Energy and its subsidiary AE Solar are also global leaders in clean energy. Anchored by the research at CSU and its Powerhouse Energy Institute, the Clean Energy Cluster is active in its pursuit of innovative energy solutions. The City of Fort Collins and Fort Collins Utilities further support the cluster as a large purchaser and by providing access to the power grid for testing purposes. A true triple helix partnership is what makes this cluster tick.



The City of Fort Collins supports the Clean Energy Cluster through its sponsorship of the Colorado Clean Energy Cluster (CCEC) and Innosphere. In addition, the City has offered direct business assistance to Clean Energy companies in the form of rebates on select fees and taxes related to significant expansions.

In 2013, the City invested \$25,000 in the CCEC. Other members contributed a total of \$68,280 in the cluster organization. The City also contributed \$20,000 to the Net Zero Cities Symposium and invested \$60,000 in Innosphere. The 3 clean energy client companies in Innosphere raised \$700,000 and created 8 jobs. Finally, the City pledged to invest \$23.5 million in tax rebates for a private investment of \$206 million. In all, the City spent \$1 for every \$9 other private and public participants invested.

2013 NEWS & ACHIEVEMENTS

- The **ELECTRIFICATION COALITION**, in partnership with **CSU** and the cities of Fort Collins and Loveland, launched an initiative to encourage the adoption of plug-in electric vehicles.
- **WOODWARD** announced that it will build its new world headquarters in Fort Collins on the site of the former Link-N-Greens near Old Town.
- **ADVANCED ENERGY** acquired REFUsol Holding, a German-based PV provider.
- Construction continued on the 100,000 sf addition to **POWERHOUSE** campus, which will house the **CSU** Energy Research Institute and the Center for the New Energy Economy.

SPECIALTIES: SMART GRID • DISTRIBUTED POWER • ENGINES & ENERGY CONVERSION • WATER / ENERGY NEXUS • BIOFUELS • ENERGY STORAGE

RESOURCES & ASSETS

RESEARCH

- ◆ Colorado Renewable Energy Collaboratory – includes CU-Boulder, Colorado School of Mines, and the National Renewable Energy Laboratory
- ◆ CSU's Clean Energy Supercluster
- ◆ CSU's Powerhouse Energy Institute
- ◆ CSU's Center for the New Energy Economy
- ◆ CSU's Center for Networked Distributed Power
- ◆ CSU's Hydromachinery Laboratory & Turbine Research

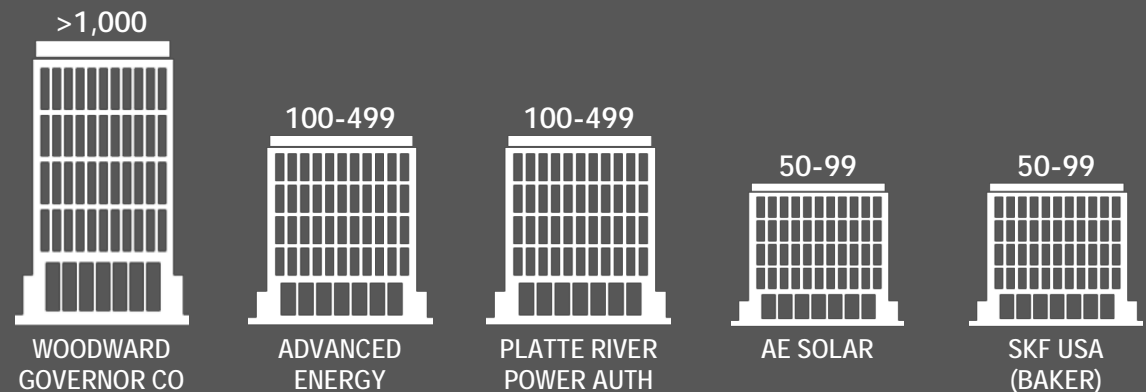
INCUBATION & COMMERCIALIZATION

- ◆ CSU – Powerhouse Energy Institute – Integrid Lab
- ◆ Colorado Renewable Energy Collaboratory
- ◆ CSU Ventures - Cenergy
- ◆ Rocky Mountain Innosphere

FUNDING & TECHNICAL ASSISTANCE

- ◆ NoCo Capital / Angels
- ◆ CSU Clean Energy Supercluster Seed Grants

TOP 5 EMPLOYERS (BY NUMBER OF EMPLOYEES)



Source: QCEW

BY THE NUMBERS

AS OF DECEMBER 31, 2013:

OF FIRMS



25

EMPLOYMENT



2,161

EMPLOYMENT
CHANGE 2011-12



-58

EARNINGS PER
WORKER



\$101,935

NON-CITY \$ TO CITY \$
INVESTED



\$9

Source: OCEW, City of Fort Collins

INNOVATION

2013 SBIR AWARDS: \$1.7 MILLION

COLORADO POWER ELECTRONICS received a Phase II grant to continue the development of a hybrid direct drive PPU.

SEAFORTH received a Phase I grant to test and develop improved ignition methods for vehicle combustion systems and a sensitive instrument for measuring electrons.

INGREENIUM received a Phase I grant to develop better power measurement solutions.

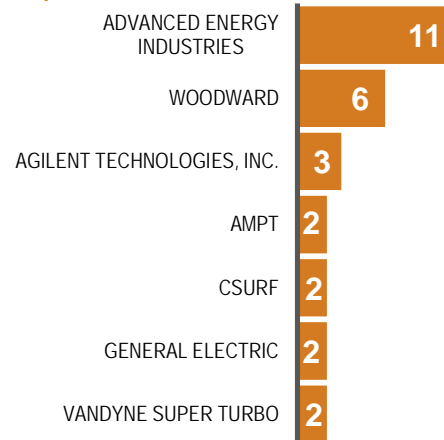
CARBO ANALYTICS received a Phase I grant to develop an instrument that will aid in biomass utilization.

CREATIVE LIGHT SOURCE received a Phase I grant to advance low-cost photovoltaics.

PATENTS AWARDED 2013



Top Patent Producers



Note: Patent Producers are identified based on the assignee name.

Source: US Patent Office

BUSINESS FORMATION & EXPANSION

2013 INCUBATION & ACCELERATION

Companies	3
Employees	8
Venture Capital Raised	\$700,000
City Investment	\$6,364

Note: City contribution is the share of the overall contribution to Innosphere dedicated to clean energy companies.

Source: Rocky Mountain Innosphere, City of Fort Collins

EXPANSION & RELOCATION:

Companies	1
New Jobs	700
Capital Investment	\$200 million
City Investment	\$23.5 million

Source: City of Fort Collins



Launched in 2006, the Colorado Clean Energy Cluster is a non-profit, member-based organization that is focused on growing the clean energy sector through projects and initiatives that directly benefit Colorado clean energy companies. Central to the CCEC's success is the collaboration between the private sector, the public sector, and academia – the Triple Helix.

The CCEC's current projects are FortZED, the International Cleantech Network, and C3E. FortZED is designed to be a high profile demonstration project to show the potential for distributed power systems and demand side management in a Zero-Energy District. The International Cleantech Network aims to provide global access to Colorado clean energy companies. C3E is a workforce development and networking program for advancing women in clean energy.

