

Colorado State University

Office of the Vice President for Research

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**ELECTRIC POWER
SYSTEMS LAB**

430 N. College Avenue, Fort Collins, CO 80524

www.EECL.colostate.edu or www.energyinstitute.colostate.edu

Position Description: Postdoctoral Research Opportunity

The Energy Institute at Colorado State University is operated under the CSU Office of the Vice President for Research. The Institute builds on the long history of broad work in energy at the University and is intended to foster greater collaboration among CSU energy faculty across all eight colleges with broad access to new facilities for faculty and industry partners. This position will reside at the Powerhouse Energy Institute (when that building is completed in 2014) and Engines & Energy Conversion Laboratory housed off-campus in the old Fort Collins Power Plant building. This is an industrial working environment. Powerhouse is dedicated to providing safe, secure, and sophisticated facilities for university investigators and industry partners to collaboratively research clean energy in all facets of society.

CSU Classification: Full-time, 12-month post-doctoral position. This is a grant funded position with 12-months of identified funding.

Accountability: This position reports to Dan Zimmerle, R&D Manager in the Electric Power Systems Lab.

Salary and Benefits: Salary is negotiable and commensurate with qualifications and experience. Colorado State University also offers an excellent selection of benefits.

Position: Colorado State University is looking for an experimentalist with strong analytical instrumentation skills to lead the collection and analysis of the field data for a major methane emissions study. The advent and success of unconventional techniques for the extraction of natural gas presents a great opportunity to increase national energy security and lower the carbon footprint of our energy sector, if done correctly. Given the potency of methane (CH₄) as a greenhouse gas, even small leak rates contribute to accelerated rates of climate change. Understanding the role of natural gas in an effective national strategy for achieving a clean, low carbon future depends on understanding CH₄ emissions from production, delivery and use of natural gas and the degree to which emissions can be reduced.

Colorado State University is looking to hire a postdoctoral research associate to immediately join a team quantifying methane emissions from the U.S. natural gas gathering, processing, transmission, and storage systems. There are over 180,000 miles of long-distance gas pipelines in the U.S., including thousands of compressor stations placed at 40 to 100 mile intervals and approximately 400 storage facilities. Each basin includes hundreds of smaller boost compressor stations, and a wide range of gas processing plants. EPA estimates that emissions from all of these facilities account for more than 27% of the CH₄ from natural gas activities, but the underlying data are limited and more are required to have confidence in these estimates.

The project involves significant field data collection that will feed into a process-based bottom-up emissions model that explicitly accounts for uncertainty. Measurements will characterize the quantity, frequency and magnitude of venting activities and gross emitting sources, which likely dominate the overall leakage rate. The project involves significant collaboration with a major environmental consortium, several industrial partners and another university.

Results of the study will be summarized in a peer-reviewed public report and scientific journals, and will likely be featured in high-profile journals and in the popular press.

Requirements:

- PHD in Chemical Engineering, Atmospheric Science, Mechanical Engineering, Chemistry or equivalent
- Strong experimental research experience in atmospheric science, emissions measurement, or related area
- Strong experience with analytic instrumentation and experimental methods are required.
- The position requires 12-16 weeks of domestic US travel during 2013 for field measurements.

To Apply: Applicants should submit a resume with a cover letter that discusses their interest in this position and which documents their experiences relative to the specific duties of this position, listed above. The cover letter will be a significant factor in selection of successful candidate. Please also include the names and contact information (including phone number) of three professional references. Email application materials to chair of the search committee: Mac.McGoldrick@colostate.edu

Applications will be accepted until the position is filled; however, applicants should submit materials by April 22, 2013 for full consideration.

Colorado State University does not discriminate on the basis of race, age, color, religion, national origin or ancestry, sex, gender, disability, veteran status, genetic information, sexual orientation, or gender identity or expression. Colorado State University is an equal opportunity/equal access/affirmative action employer fully committed to achieving a diverse workforce and complies with all Federal and Colorado State laws, regulations, and executive orders regarding non-discrimination and affirmative action. The Office of Equal Opportunity is located in 101 Student Services.

Colorado State University is committed to providing a safe and productive learning and living community. To achieve that goal, we conduct background investigations for all final candidates being considered for employment. Background checks may include, but are not limited to, criminal history, national sex offender search and motor vehicle history.

ADVERTISING:

Colorado State University Engines & Energy Conversion Laboratory is looking to hire a postdoctoral research associate – an experimentalist with strong analytical instrumentation skills - to immediately join a team quantifying methane emissions from the U.S. natural gas gathering, processing, transmission, and storage systems. The project involves significant field data collection that will feed into a process-based bottom-up emissions model that explicitly accounts for uncertainty. Measurements will characterize the quantity, frequency and magnitude of venting activities and gross emitting sources, which likely dominate the overall leakage rate. The project involves significant collaboration with a major environmental consortium, several industrial partners and another university.

View the full position description at <http://www.eecl.colostate.edu>.

REQUIRED: PHD in Chemical Engineering, Atmospheric Science, Mechanical Engineering, Chemistry or related degree. Strong experimental research background in atmospheric science, emissions equipment or related area, and demonstrated experience with analytic instrumentation and experimental methods.

TO APPLY: Email a cover letter and CV highlighting your education and experience relative to the specific duties of this position to: Mac.McGoldrick@colostate.edu. Please include the names and phone numbers of three professional references. Applications will be accepted until the position is filled; however, applicants should submit materials by April 22, 2013 for full consideration.

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Advertising Plan:

1. List this position on the CSU job site
2. Advertise this on the EECL website
3. We will list this on the Western States Combustion Institute webpage
4. Each of the faculty involved – including faculty from our partner universities – will distribute to their colleagues / associates / department listserves and will consider various distribution lists for professional associations, etc...