Experts At CSU Show How Volkswagen Beat Colorado's Emissions Testing

CBS 4 Denver came up to the Colorado State Energy Institute to find out how and why the State of Colorado emissions testing program didn't catch Volkswagen's polluting.

CSU Professors Anthony Marchese and Shantanu Jathar tested several VWs and shared their results with CBS4 News Reporter Rick Sallinger.

[Click here to watch the report!]

Energy Institute Director Bryan Willson to keynote at UC DAVIS Solution Summit

The University of California Davis hosted the Food, Ag, and Health Solution Summit December 2-3rd. Energy Institute Director Bryan Willson delivered a keynote address at this conference.

The two-day event included "events to foster uncommon collaborations around ideas and technology to enable universal access to safe and nutritious food."

"The Summit will bring together entrepreneurs, farmers, industry executives, researchers, students, and technology developers in an out-of-the-box format over three days. Bridging silos, crossing disciplines and fusing new partnerships, the events aim to uncover solutions for enabling safe, sustainable, and secure nutrition for all."

Source: http://foodaghealth.solutions/summit/

[Learn more about the Food, Ag and Health Solution Summit...]

EVENTS
CSU to host workshop on food, energy and water in Washington, DC.

Food, energy and water are fundamental human needs. They're also deeply interconnected. To offer comprehensive, systems-level insights and solutions to global food, energy and water problems, Colorado State University will host a two-day workshop, Food-Energy-Water: Nexus Issues in Energy Production, December 7-8 at the Marriott Residence Inn, Arlington, Virginia. Registration is free but required.

Discussions will begin with food-energy-water issues in two key energy sectors: oil and gas production and biofuels production. The gathering will be designed to evaluate the general research needs related to sustainable energy production.

Speakers will include Ken Reardon, who will provide an overview of biofuels production; Keith Paustian, professor of soil ecology in the College of Agricultural Sciences, who will address climate change issues associated with biofuels; and Ken Carlson, professor of civil and environmental engineering, who will speak on the current state and future vision of interactions among agriculture, oil and gas production, and water systems.

Read more.

The workshop is free, however registration is required. Click here to register online.

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Energy Institute partner Envirofit sells millionth stove

In early November Envirofit announced the sale of their one-millionth cookstove. “Envirofit is a for-profit social enterprise that designs, manufactures, and sells clean cookstoves in developing nations. They have developed a product line of low cost, high performing biomass cookstoves that reduce fuel consumption up to 60 percent while reducing harmful emissions up to 82 percent compared to open fires. Envirofit has operations in India, East Africa, West Africa, and Latin America with 480 direct employees and has helped create approximately 3,000 jobs across the value chain.”

The Energy Institute serves as a research and development partner for Envirofit, providing design testing services aimed at helping Envirofit succeed, including materials development and emissions testing and prototype stoves.

For more information on the Millionth Stove click here.
Energy Institute researchers publish results from the first year of the Fort Collins Commuter Study

Colorado State University researchers have exposed a sad irony to the seemingly healthy choice of bicycling to work: While cyclists are reaping the benefits of exercise, they may be increasing their exposure to harmful air pollution.

CSU air quality researchers John Volckens and Jennifer Peel have published the first set of results from their multi-year Fort Collins Commuter Study. They recruited 45 non-smoking, healthy Fort Collins commuters to wear monitoring and GPS tracking equipment that measured their air pollution exposure as they commuted by bicycle and car between work and home within the city.

"We wanted to ask practical questions that would empower people to make choices to reduce their exposure," said Volckens, an associate professor of mechanical engineering and director of the Center for Energy Development and Health in the CSU Energy Institute. Peel is an associate professor in the Department of Environmental and Radiological Health Sciences.

The researchers asked two questions: If you cycle or drive to work, how does your air pollution exposure change? Also, if you had a choice of route - the direct, busy one, or the less busy, longer one - could you change your exposure to pollution?

Read more.
Backed by CSU science, NJ utility embarking on $905M pipeline upgrade

The state of New Jersey's largest utility provider has some leaky pipes, which they'll soon fix to the tune of a $905 million infrastructure upgrade.

This massive improvement plan is one based in science that originated at Colorado State University. A team headed by Joe von Fischer, associate professor in the College of Natural Sciences' Department of Biology, has led the charge to identify and quantify methane leaks in natural gas pipelines crisscrossing several U.S. cities.

New Jersey's Public Service Electric and Gas Company (PSE&G) is set to modernize 510 miles of gas mains and 38,000 service lines, in large part motivated by the work of von Fischer and collaborators: research associate Adam Gaylord, and Jay Ham, professor of environmental physics and micrometeorology in the College of Agricultural Sciences.

Read more.

Rural Energy Center Awarded USDA Grant

The Rural Energy Center, a member of the Colorado State University Energy Institute, has been awarded a $50,000 grant from the U.S. Department of Agriculture (USDA) to continue research on renewable energy system investments for Colorado agriculture producers.

In June 2015 the Rural Energy Center began accepting applications from ag producers interested in participating in free solar and wind energy assessments for producers with center pivot sprinklers. Applications were accepted on an ongoing basis, and by August the Rural Energy Center had reached capacity and producers were put on a wait list.

"I've been very pleased that we've received applications from a wide array of producers in different parts of the state," said Cary Weiner, director of the Rural Energy Center. "With the opportunity to look at the economic feasibility of solar and wind systems in at least seven different utility service territories, we will not only help individual producers make informed decisions, but we will also be able to identify the key indicators of feasible projects."

Read more.
College of Engineering Faculty Awards

The College of Engineering held their annual All-College meeting on November 3rd. Congratulations to Energy Institute faculty member Peter Young who was awarded the George T. Abell Outstanding Teaching & Service Faculty Award.

"Professor Young has established a reputation as an inspirational teacher at the undergraduate and graduate levels, and a pioneer in the online learning space. His work impacts our students on many levels, from academic performance to overall retention."

Click here to see the full list of faculty and staff award winners.

Ciprian Dumitrache earned CSU Ventures Silver Driver of Innovation Award

The Graduate Student Showcase (or Gradshow) is a one-day conference for graduate students to present their work and connect with other grad students and faculty from CSU and learn about other disciplines.

The Energy Institute congratulates student Ciprian Dumitrache for winning the: Drivers of Innovation: The CSU Ventures Award.

The Drivers of Innovation awards highlight the leading edge of the most innovative research originating from CSU research. Awardees in this category have presented innovative research capable of solving commercial needs that benefit society. Additionally, the awardees have demonstrated a solid capability to communicate their science clearly as well as a superior ability to visually represent their research in a manner that is accessible to all audiences.

Ciprian is a part of the Laser Sensing & Diagnostics Laboratory at the Energy Institute.

Project Title: Towards Laser Ignition by Rapid Heating of Water Vapor

Summary: Our project represents a novel technique to laser ignition based on the rapid heating of water vapor using a pulsed infrared laser source at 2.7 µm. The laser energy is absorbed by the water vibrational modes that quickly transfer the energy to translational modes leading to temperature increase. When compared to classical laser ignition (spark induced laser ignition) this approach has the advantage of being energetically more efficient (requires less energy).

The ultimate goal of our project is to improve combustion efficiency by reducing CO and NOx emissions and increase engine performance.
Support the Energy Institute

Powerhouse Earns LEED Platinum Certification

Completed in 2014, the Powerhouse Energy Campus is home to a variety of interdisciplinary laboratories and research spaces alongside offices and classrooms for CSU researchers, and space for partner companies and start-ups.

In 2015 the Powerhouse Energy Campus was awarded the Platinum Level certification from U.S. Green Building Council.

[LEED certification image]

Learn more about the LEED green building certification program.

The Energy Institute delivers real-world energy solutions that address global challenges through both its research and programming. This is possible through investment from key partners, such as corporations, foundations and individual donors.

Home to the Energy Institute, the innovative Powerhouse Energy Campus facility is funded by private support and philanthropy.

With your support, the Energy Institute and Powerhouse Energy Campus can continue to foster pivotal energy transformations that benefit our world.

Contact us to learn more about giving.
We're Social. For current news and events follow the Energy Institute on Facebook and Twitter.