

**California Energy Commission**  
**AGENDA INPUT FORM (GENERAL)**

CEC 36 (Rev. 3-91)

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**DUE DATES:** A listing of Commission Business Meetings and Contracts Office due dates are available from the Secretariat.

**CONTACT PERSON:** Raquel E. Kravitz  
**PHONE NUMBER:** 916-327-1492  
**MS:** 43

**Date due to Contracts Office:** N/A

**Date due to Secretariat:** Aug. 6, 2014

**Proposed Business Meeting Date:** August 27, 2014

**AGENDA ITEM SUBJECT AND DESCRIPTION – This is the description that will appear on the agenda)**

TRUSTEES OF THE CALIFORNIA STATE UNIVERSITY. Possible approval of a resolution approving the six highest ranking grant applications totaling \$854,016 from the Public Interest Energy Research (PIER) program's Energy Innovations Small Grant Solicitation 14-01 Natural Gas portion. These grants were competitively selected and are capped at \$150,000 each. (PIER natural gas funding) Contact: Quenby Lum (10 minutes)

Natural Gas (14-01G)

West Biofuels, LLC., San Rafael, CA, *On-Site Agricultural Biomass Gasification as a Natural Gas Substitute*, Liao, Chang-hsien, \$150,000. This project will determine the feasibility of using currently under-utilized agricultural biomass residues for conversion to synthetic gas to replace or blend with natural gas for direct, on-site industrial and agricultural use. If successful, this project will benefit California rate payers by providing a viable alternative to natural gas to help achieve environmental and energy sustainability goals.

**CONSENT**       **DISCUSSION**      Time needed for presentation: 10 Minutes

**CHECK HERE IF YOU NEED A COPY OF YOUR SIGNED RESOLUTION/ORDER**

**SPECIFY AUDIO-VISUAL EQUIPMENT NEEDED FOR PRESENTATION**

**DEPUTY DIVISION DIRECTOR SIGNATURE**

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 Laurie ten Hope

Date:

Physical Sciences Inc., Pleasanton, CA, *Natural Gas Leak Detection Sensor for Widely Deployable Networks*, Frish, Michael, \$150,000. Natural gas leaks from pipeline infrastructure are potential safety risks as well as greenhouse gas sources. This project will determine the feasibility of developing miniature methane laser sensors to detect natural gas leaks in pipelines. The goal is to achieve low-cost mass production and low power consumption for widespread deployment at gas meters and other key locations within the natural gas pipeline infrastructure. If successful, this project will benefit California rate payers by decreasing the safety risks associated with natural gas leaks from gas pipelines.

Palios Corporation, Santa Clara, CA, *Apparatus for In-Situ Determination of Gas Pipeline Yield Strength*, Stephanou, Phillip, \$148,087. This project will determine the feasibility of using a novel ultrasonic measurement system to enable quick and cost effective non-destructive determination of the yield strength of undisturbed and in-place steel natural gas transmission pipelines in the field. If successful, this project will benefit California rate payers by improving public safety and reducing the cost and disruptions to service caused by intrusive measurements or unnecessary repairs.

University of California, Davis, Davis, CA, *Energy-Efficient Clothes Dryers: Self-Calibrating Automatic Cycle Termination Controller*, Pistochni, Theresa, \$129,614. This project will develop a low-cost, self-calibrating automatic controller that will reduce energy use in gas clothes dryers by 20% or more through accurately terminating the drying cycle when the remaining moisture content of the load is 2% or less. If successful, this project will benefit California rate payers by reducing the cost to operate clothes dryers.

University of California, Davis, Davis, CA, *Enrichment of Microbial Communities for Biogas Production in High-Solids*, Simmons, Christopher, \$126,315. This project will enhance biorenewable methane production by improving anaerobic digestion through development and characterization of a microbial community adapted to high-solids conditions. This project targets seasonal food processing residues, and aims to facilitate the distribution and to accelerate the adoption of anaerobic digestion in the food processing industry. If successful, this project will benefit California rate payers by increasing renewable biomethane production to offset fossil fuel use.

Solar Stream Innovations, Chino Hills, CA, *Enhancing Winter Solar Water Heating and High Temperature Chiller Operation*, Lee, Jeffrey, \$150,000. This project will determine the feasibility of fabricating a vacuum insulated manifold for retrofitting evacuated tube solar water heating collectors to increase winter water and space heating, and to generate high temperatures for efficient summer chiller operation. If this project is successful, the impact of the proposed project on California ratepayers will be to decrease natural gas peak demand during the winter for heating and during the summer for electricity generation.