

GREEN ENERGY FOR A CLEANER FUTURE

The technology underlying the Biogas Energy Project is an advanced, high-rate “anaerobic phased solids digester,” or APS Digester. It uses naturally occurring bacteria to break down, or “digest,” organic solid and liquid wastes in an oxygen-free, or “anaerobic,” system. In the process, it produces biohydrogen and biomethane that can be burned as fuels.

There are great potential environmental and business benefits of the APS Digester: It greatly reduces waste disposal costs and helps businesses comply with environmental regulations. And using the generated bio-gases as fuel reduces our dependency on fossil fuels.

As the APS Digester goes to market, it offers a safe and economical means of dealing with the growing amount of organic wastes generated daily throughout the world.

THE BIOGAS ENERGY PROJECT THANKS THESE SPONSORS FOR GRANTS, LABOR AND MATERIALS:

- Public Interest Energy Research (PIER) Program of the California Energy Commission
- California Integrated Waste Management Board
- The Propane Education & Research Council (PERC)
- Graybar
- Norcal Waste Systems, Inc.



UC DAVIS
UNIVERSITY OF CALIFORNIA

AND

ONSITE POWER SYSTEMS INC.

PRESENT THE

**BIOGAS ENERGY PROJECT
COMMERCIAL DEMONSTRATION FACILITY
START-UP CEREMONY**

TUESDAY, OCTOBER 24, 2006

10 A.M.

AT UC DAVIS

FOREWORD

The Biogas Energy Project is an innovative public-private alliance between UC Davis and Onsite Power Systems, Inc.



The project leaders are (L-R) Dave Konwinski, CEO of Onsite Power Systems, and Ruihong Zhang, a UC Davis professor of biological and agricultural engineering.

HOW WASTE BECOMES ENERGY

- In this process, called an “anaerobic digester,” the action begins when organic waste material is loaded into the system. (“Organic” means it’s made from plants and animals. In this case, the waste material is food scraps from San Francisco restaurants.)
- Under oxygen-free (anaerobic) conditions, naturally occurring bacteria break the waste down into organic acids and water.
- At this stage, some hydrogen is produced, drawn off and is ready for use as fuel.
- Next, the water containing organic acids is mixed with other bacteria to produce methane (natural gas).
- The methane is then captured, cleaned and compressed for use in natural-gas buses, cars and trucks. It also may be burned in an engine.

PROGRAM

WELCOME AND INTRODUCTIONS

DAVE KONWINSKI

CEO, Onsite Power Systems, Inc.

SPEAKERS

DAN LUNGREN

U.S. Representative, California Third Congressional District
(Counties of Sacramento, Amador, Calaveras and Alpine)

NEAL VAN ALFEN

Dean, UC Davis College of Agricultural and Environmental Sciences

ENRIQUE LAVERNIA

Dean, UC Davis College of Engineering

RUIHONG ZHANG

Professor, UC Davis Department of Biological and Agricultural Engineering

VAL TIANGCO

Senior technical lead, Public Interest Energy Research (PIER) Program
California Energy Commission

MARGO REID BROWN

Chair, California Integrated Waste Management Board

DAVE KONWINSKI

CEO, Onsite Power Systems, Inc.

START-UP CEREMONY

DAVE KONWINSKI AND RUIHONG ZHANG will conduct the official start-up ceremony.

CONCLUSION

Thank you for attending. Please join us for refreshments.