



# Workshop on Improving the Disabled Veteran Business Enterprise (DVBE) Contracting Opportunity with the California Energy Commission

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# Purpose of today's discussions



- Identify areas of opportunity for DVBE companies to provided needed technical and contract assistance for the Energy Commission PIER Program
- Identify ways qualified DVBEs can better explain their qualifications and capabilities to allow them to increase their future opportunities to provide services to the PIER Program
- Assist qualified DVBE and potential DVBE companies in understanding the certification requirements with California Department of General Services

# Agenda



1:00p.m.

## Introductions and Opening Remarks

- Mike Gravely, Energy Systems Research Office Manager
- Contracts Office
- DGS

1:15 p.m.

## Overview of Energy Commission and PIER Contracting Opportunities

- Mike Gravely, Energy Systems Research Office Manager

1:40 p.m.

## The PIER Program Technical Areas of Interest

- Philip Misemer, Transportation Research Lead

2:10 p.m.

## Q and A

- Mike Gravely, Moderator
- Philip Misemer, Facilitator

2:30 p.m.

## DVBE Roles, Open Discussion

- Mike Gravely, Moderator
- Philip Misemer, Facilitator

3.:00 p.m.

## DVBE Registration Process and Database Management

- DGS

3:55 p.m.

## Closure

- Mike Gravely
- DGS

# Opening Comments



- Rachel Grant, Energy Commission Contracting
- Michael Aguilio, Customer Liaison Officer,  
Department of General Services
- Philip Misemer, Energy Commission PIER Program

# California Energy Commission Responsibilities



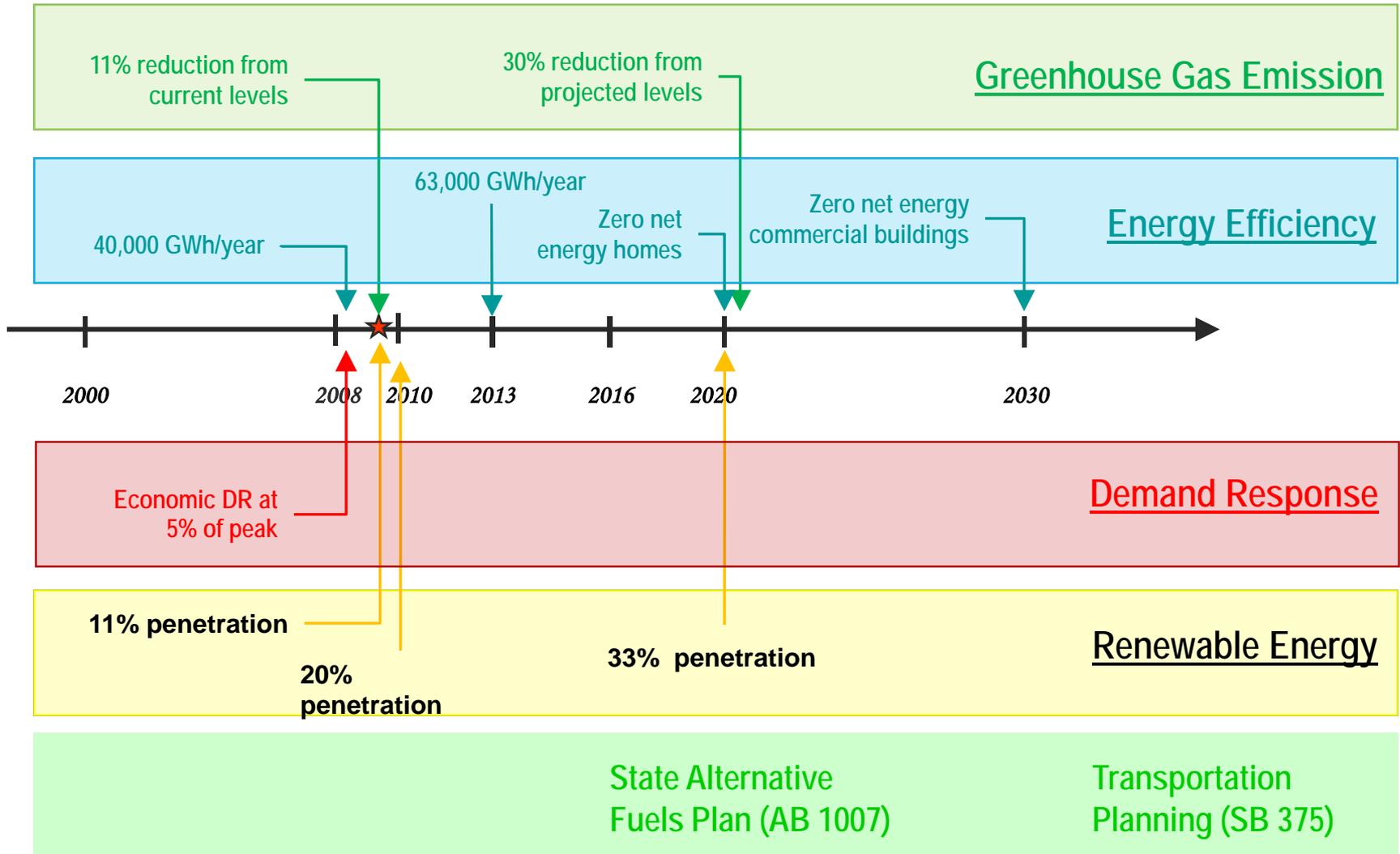
- Forecasting future energy needs and keeping historical energy data.
- Licensing thermal power plants 50 megawatts or larger.
- Promoting energy efficiency by setting the state's appliance and building efficiency standards and working with local government to enforce those standards.
- Supporting renewable energy by providing market support to existing, new, and emerging renewable technologies; providing incentives for small wind and fuel cell electricity systems; and providing incentives for solar electricity systems in new home construction.
- Implementing the state's Alternative and Renewable Fuel and Vehicle Technology Program.
- Planning for and directing state response to energy emergencies.
- Supporting public interest energy research that advances energy science and technology through research, development, and demonstration programs.

# California Energy Commission Public Interest Energy Research (PIER) Program

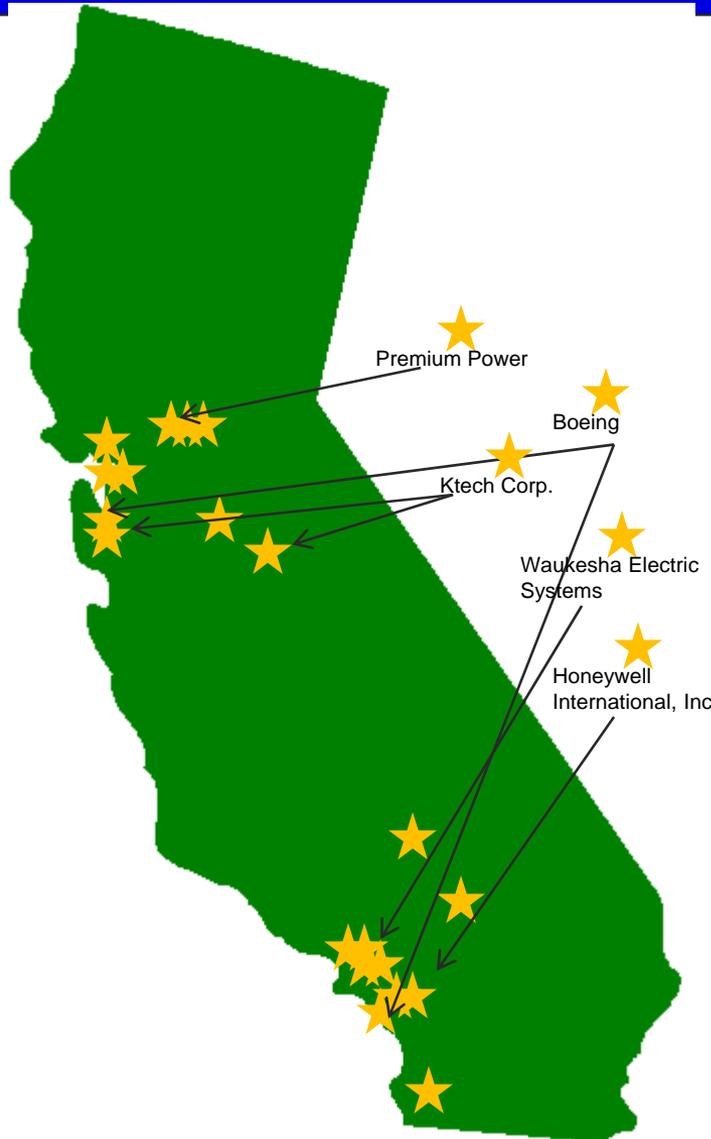


- IOU Ratepayer-funded program launched in 1997 by AB1890
- Addresses electricity, natural gas, and transportation sectors
- Over \$80 M annual budget; over \$400M in active projects
- A leader in no/low-carbon science and technology programs
- Strong emphasis on collaborations

# California Smart Grid Related Energy Policy



# ARRA Smart Grid in California



## Total Project Value to CA - \$1.3 Billion

- City of Glendale Water & Power
- Modesto Irrigation District
- Burbank Water & Power
- City of Anaheim
- Electric Power Group (WECC sub-contractor)
- Pacific Gas & Electric (WECC sub-contractor)
- Sacramento Municipal Utility District
- San Diego Gas & Electric
- Honeywell International, Inc. (Headquarters in MA, work being done in Southern CA)
- Los Angeles Department of Water & Power
- Southern California Edison
- Boeing (Headquarters in MO, work being done in Sunnyvale and Huntington Beach, CA)
- Waukesha Electric Systems (Headquarters in WI, work being done in Irvine, CA)
- Primus Power
- SEEO Inc.
- Southern California Edison
- Pacific Gas & Electric
- Amber Kinetics
- Ktech Corp. (Headquarters in NM, work being done in Sunnyvale and Snelling, CA)
- Sacramento Municipal Utility District (sub-contractor to Premium Power, Headquarters in MA)

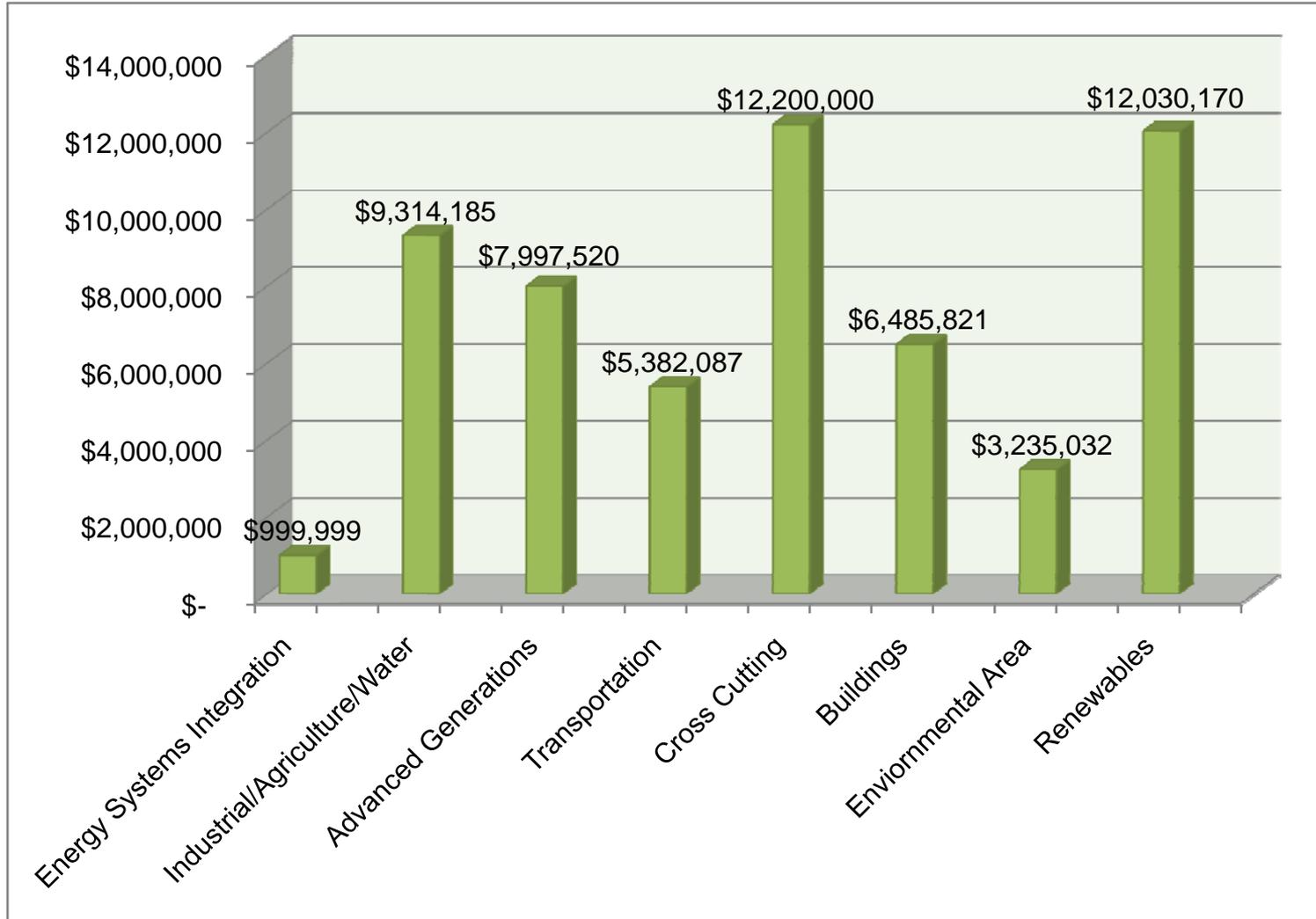
# PIER Funds Provide Financial Benefits in California



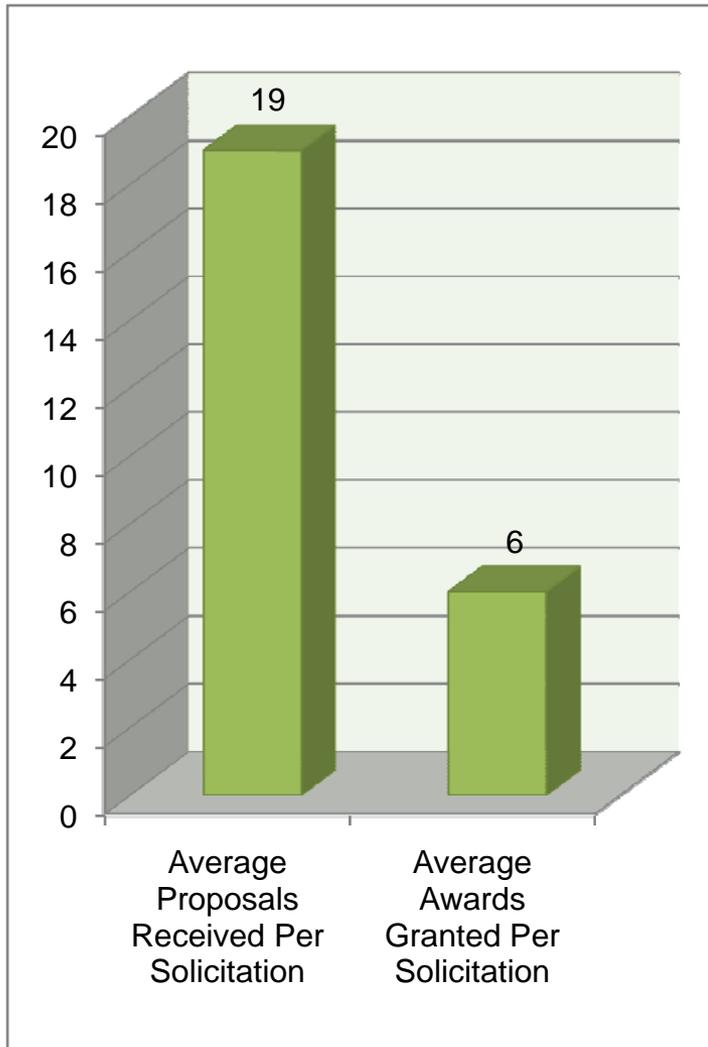
Research Stage	Total		
	Total	California	%
Basic Research	\$11,740,821	\$8,273,253	70.5%
Technology Development	\$37,769,414	\$30,749,881	81.4%
Technology Demonstration	\$23,768,826	\$22,197,757	93.4%
Market Support	\$13,846,394	\$11,110,615	80.2%
Policy/Regulation Support	\$8,358,030	\$7,489,028	89.6%
<b>Totals</b>	<b>\$95,483,485</b>	<b>\$79,820,534</b>	<b>83.6%</b>

<sup>1</sup> Based on 2-year sample period of activity (July 1, 2004 and June 30, 2006).

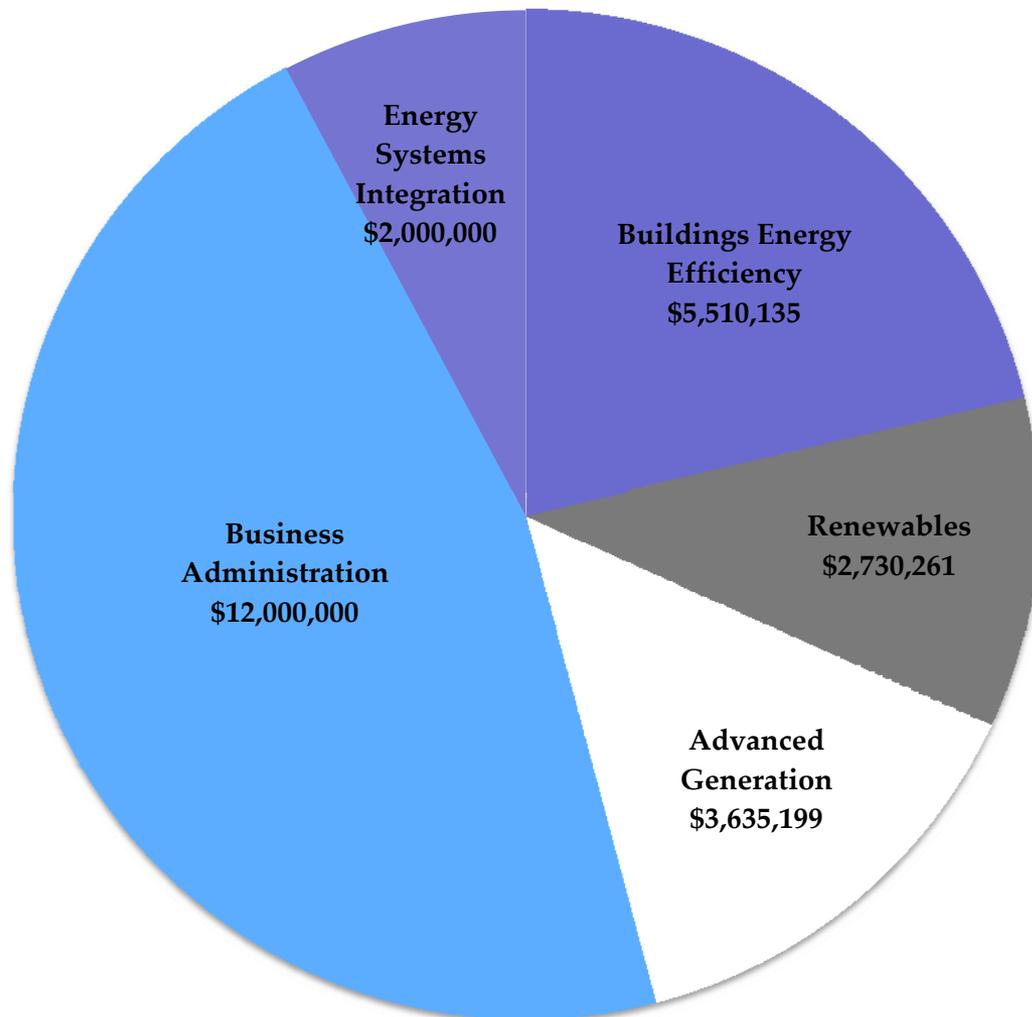
# Research Opportunity by Technical Area



# Summary of Recent Funding Actions



# 2009 PIER Contracting Opportunities for DVBE Participants



## Examples of DVBE Tasks

### Energy Systems Integration

- Disseminate research to stakeholders
- Demonstrate emerging Smart Grid technology

### Buildings Energy Efficiency

- Data collection from test sites
- Consumer research

### Renewables

- Coordinate design teams

### Advanced Generation

- Assist with new industrial generation field testing
- Develop new hardware and engine controls

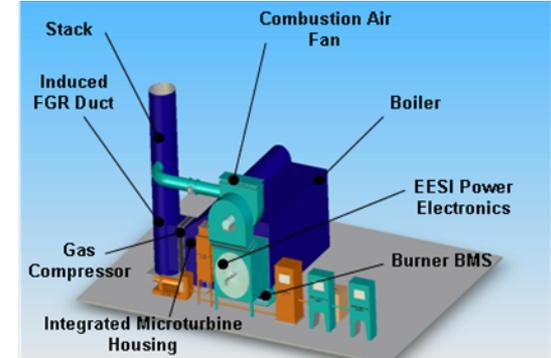
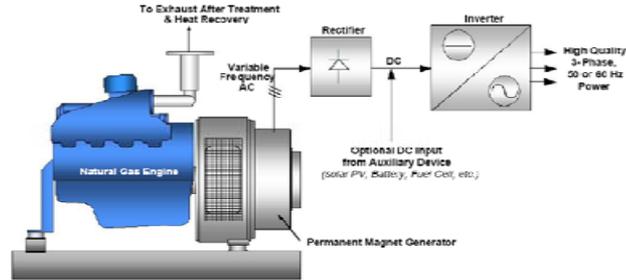
### Business Administration

- Report generation
- Project presentations
- Equipment rental

# Efficiency Research



# Clean Generation Research



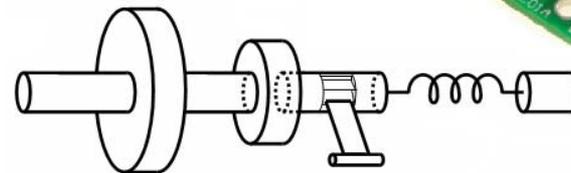
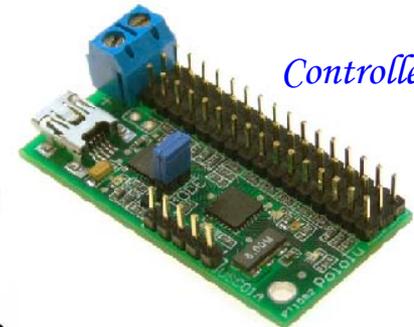
# Transportation Research



Battery

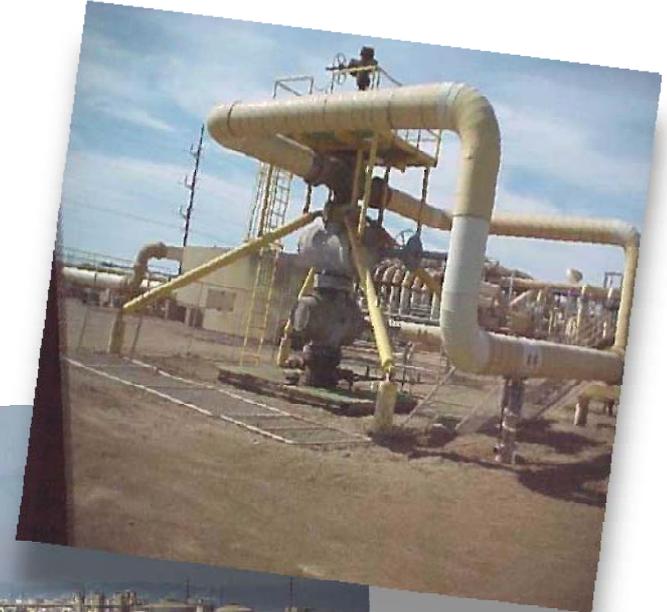


Controller

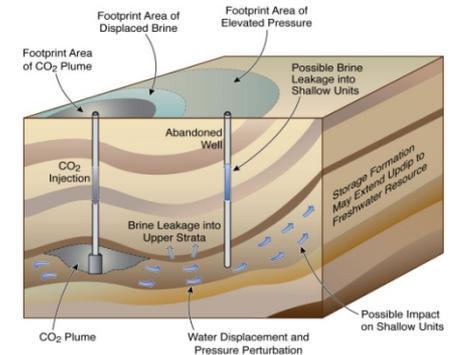
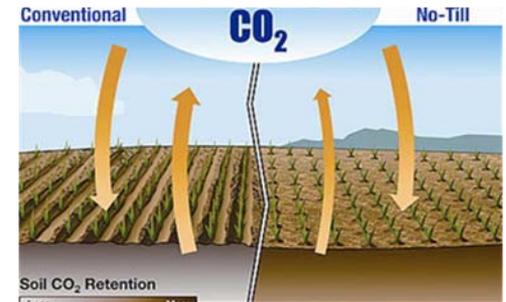
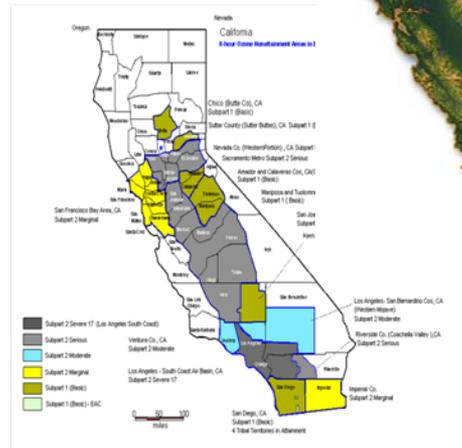
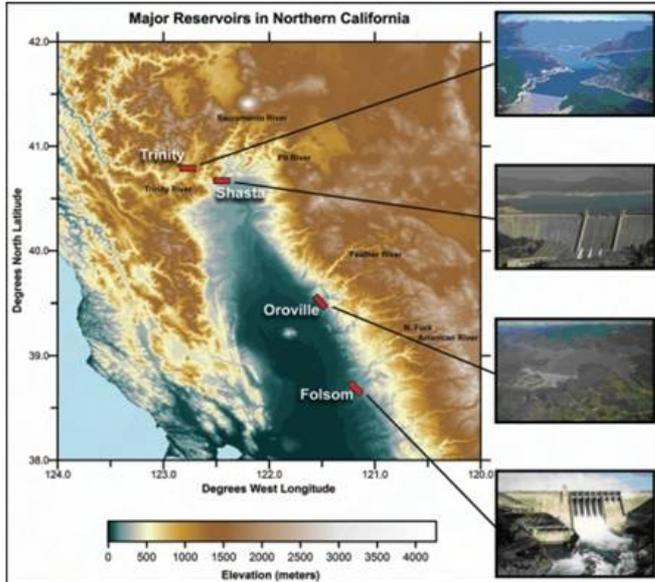


Flywheel

# Renewables



# Environmental



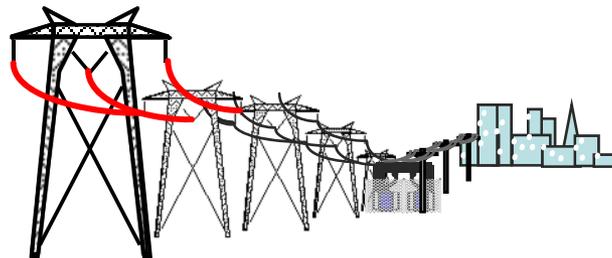
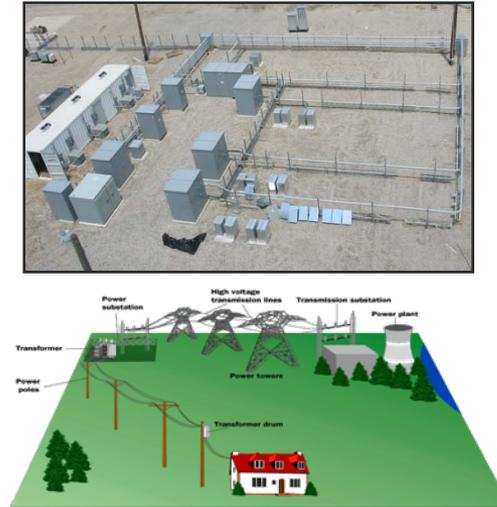
# Energy Systems Integration



## Grid Elements R&D

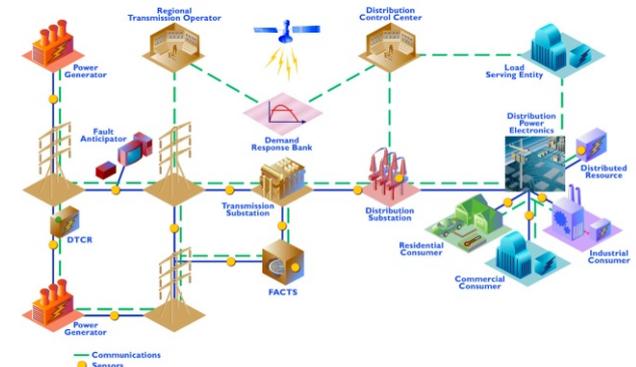
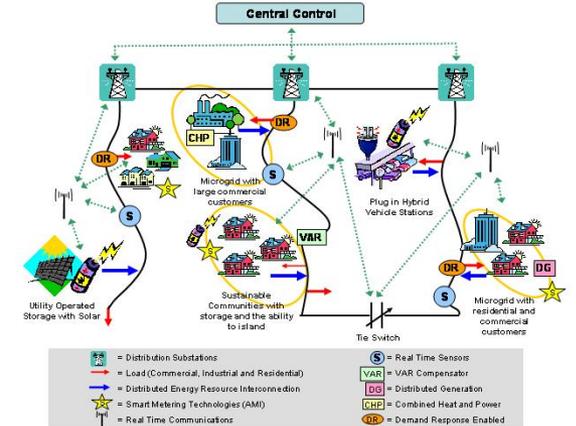


## Grid Integration



Typical 3 Year Funding  
\$35M PIER / \$50M Match

## Smart Grid



3 Year Funding with ARRA  
\$40M PIER / \$800M Match

Typical 3 Year Funding  
\$30M PIER / \$20M Match



# Open Discussion



# The PIER Program Technical Areas of Interest

Philip Misemer

# PIER Uses Many Professions and Skillsets



## Building Energy Efficiency

- Building Envelope Technologies
- Lighting Technologies
- Space Conditioning Technologies
- Water Heating Technologies
- Appliance and Office Technologies
- Building Energy Efficiency Standards
- Appliance Energy Efficiency Standards
- Building Energy Simulation Modeling
- Whole Building Energy Benchmarking

## Energy Systems Integration

- Demand Responsive Technologies and Systems
- Evolving Electric and Natural Gas Markets
- Strategic Electricity System Research
- Quantification of Benefits for Distributed Generation, Storage, Renewables and other End Use Energy Technologies
- Transmission/Distribution Technologies and Power Electronics
- Power Quality Technologies
- Energy Metering Technologies and Pricing Strategies
- Electricity and Natural Gas Utility Planning, Business and Management
- Security Vulnerabilities Analysis and Mitigation and Security Technology.

# ...More Professions and Skillsets



## Environmentally-Related Energy Research

- Energy-Related Environmental Research
- Pollution Abatement/Regulations
- Air Quality Issues
- Global Climate Change
- California Environmental Quality Act (CEQA)

## Industry, Agriculture and Water

- Industrial Refrigeration
- Industrial Fluid Separation Technologies
- Industrial Heat Transfer
- Industrial Electrical Energy Efficiency & Demand Reduction
- Industrial Process Heat

## Industry, Agriculture and Water, cont.

- Energy use in High-Tech Buildings
- Agricultural End-Use Technologies
- Water Treatment
- Water Management
- Solar Industrial Process Heat Technologies
- Industrial Thermal Energy Use Efficiency
- Industrial Power Quality Applications
- Industrial Energy Audits
- Industrial Energy Storage Applications

# ...Still More Professions and Skillsets



## Renewables

- Geothermal
- Biomass Electric Generation and Municipal Solid Waste (MSW) Technologies
- Wind Technologies
- Solar Thermal Electric and Photovoltaic Technologies
- Low Impact Hydroelectric and Ocean Energy Technologies
- Alternative Fuels and Conventional Fuels from Non-Conventional Sources
- Storage Technologies

## Renewables, cont.

- Renewable Natural Gas Replacement Alternatives
- Water Heating Alternatives
- Process Heating Alternatives for Industry
- Combined Cooling, Heating and Power (CCHP) Technologies and Applications
- Computer Modeling and Analysis
- Central Station Power Plant Alternatives.

...and Finally....



## Transportation Energy R&D

- Advanced Transportation Fuels and Infrastructure
- Advanced Transportation Technology and Infrastructure
- Urban and Land Use Planning

## Technology Transfer

- Technical Writing
- Graphics/Design/Printing
- Management Information Systems (MIS)
- Web Site
- Facilitate Dissemination of Project and Program Results
- Organize Conferences

## RD&D Program Planning and Evaluation

- Current Energy RD&D and Trends
- RD&D Strategic Planning
- RD&D Program Evaluation
- Economic Issues of Energy – Analysis
- Market Assessment
- Public Policy Analysis for RD&D and Technology Transfer
- RD&D Project Proposal Evaluating, Rating, and/or Ranking
- Nanotechnology
- Technology Assessment.

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