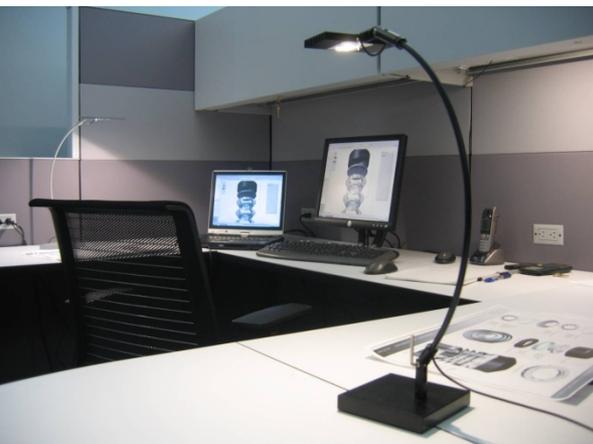




Energy Efficiency Research Office 2011/12 Proposed Research Initiatives



PIER Energy Efficiency Advisory Group Workshop

June 24, 2011

Workshop Summary



California Energy Commission – PIER

- Introductions
- Public Interest Research Program Overview
- Role of Participants
- About the Workshop
- Review Agenda

Public Interest Energy Research (PIER)

Program Overview



California Energy Commission – PIER

- **IOU Ratepayer Funded Program launched in 1997**
- **Purpose:** Fund public interest energy research that is not provided by the competitive or regulated markets, advances energy science and technology to the benefit of California ratepayers and will provide environmentally sound, safe, reliable and affordable energy services and products. Research areas:
 - Energy Efficiency and Demand Response
 - Renewable Energy and Advanced Electricity Generation
 - Transmission and Distribution
 - Climate and Environment
 - Transportation
- **Approximate \$86.5 Million Annual Budget**
 - \$62.5 million electric
 - \$24 million natural gas

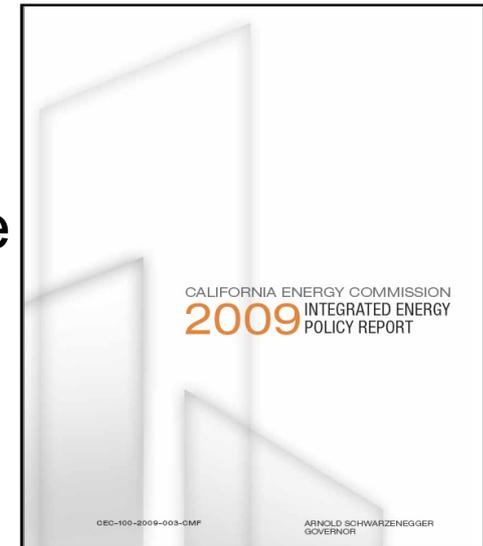
Energy Efficiency Policy Targets



California Energy Commission – PIER

■ Integrated Energy Policy Reports (IEPR)

- ▶ Adopt statewide energy efficiency targets
- ▶ Collaborate with publicly owned utilities
- ▶ Enact stronger California appliance and building efficiency standards and combine with on-site generation
- ▶ Investigate market-based incentives for energy efficiency
- ▶ Increase energy efficiency through electricity and natural gas research and development
- ▶ Conduct research to better understand the interaction of water and energy and identify new technologies for achieving energy savings.





■ Legislation

- ▶ AB 32: Reduce greenhouse gas emissions to 1990 levels by 2020
- ▶ AB 758: Achieve savings in residential and commercial buildings
- ▶ AB 1109: Reduce energy indoor/outdoor lighting energy use
- ▶ AB 2021: Establish statewide energy efficiency goals
- ▶ SB 1250: Develop and bring to market energy technologies that increase environmental benefits and system reliability, lower system cost and that provide tangible benefits to electric utility customers

■ Governor Brown’s Clean Energy Job Plan

- ▶ Zero net energy buildings; maximize energy efficiency; water efficiency/recycling, DG and combined heat and power

■ California Energy Efficiency Strategic Plan

- ▶ Energy efficiency and zero net energy building goals
- ▶ Heating, Ventilation and Air Conditioning (HVAC) to be transformed to ensure energy performance is optimal for California’s climate

Role of Advisory Board



California Energy Commission – PIER

- **PIER Advisory Board (PRC Section 25620.11):**
 - Make programmatic recommendations and priorities
 - Provide strategic advice on R&D priorities
 - Foster collaborations
 - Facilitate commercial introduction of new PIER funded technologies
- **Membership - composed of key stakeholders and research organizations**
 - Approx 22 members including representatives from governmental and non-governmental agencies, consumer/environmental organizations, academia, electrical corporations and members of the senate and assembly
- **March 2011 Board meeting**
 - 3 advisory subgroups created: Smart Infrastructure, Renewable Energy, Energy Efficiency
 - Purpose: to allow for more technical review and input on research initiatives

Role of Advisory Group and Public



California Energy Commission – PIER

■ PIER Advisory Group:

- Provide technical advice and input on research initiatives
- Share information on RD&D activities and identify synergies and opportunities for collaboration
- Facilitate technical transfer of PIER funded technologies
- Approx 20 members including governmental agencies, non governmental organizations, manufacturers, end users, public representatives, academia, consumer/environmental organizations, electrical corporations, industry consultants and public representatives

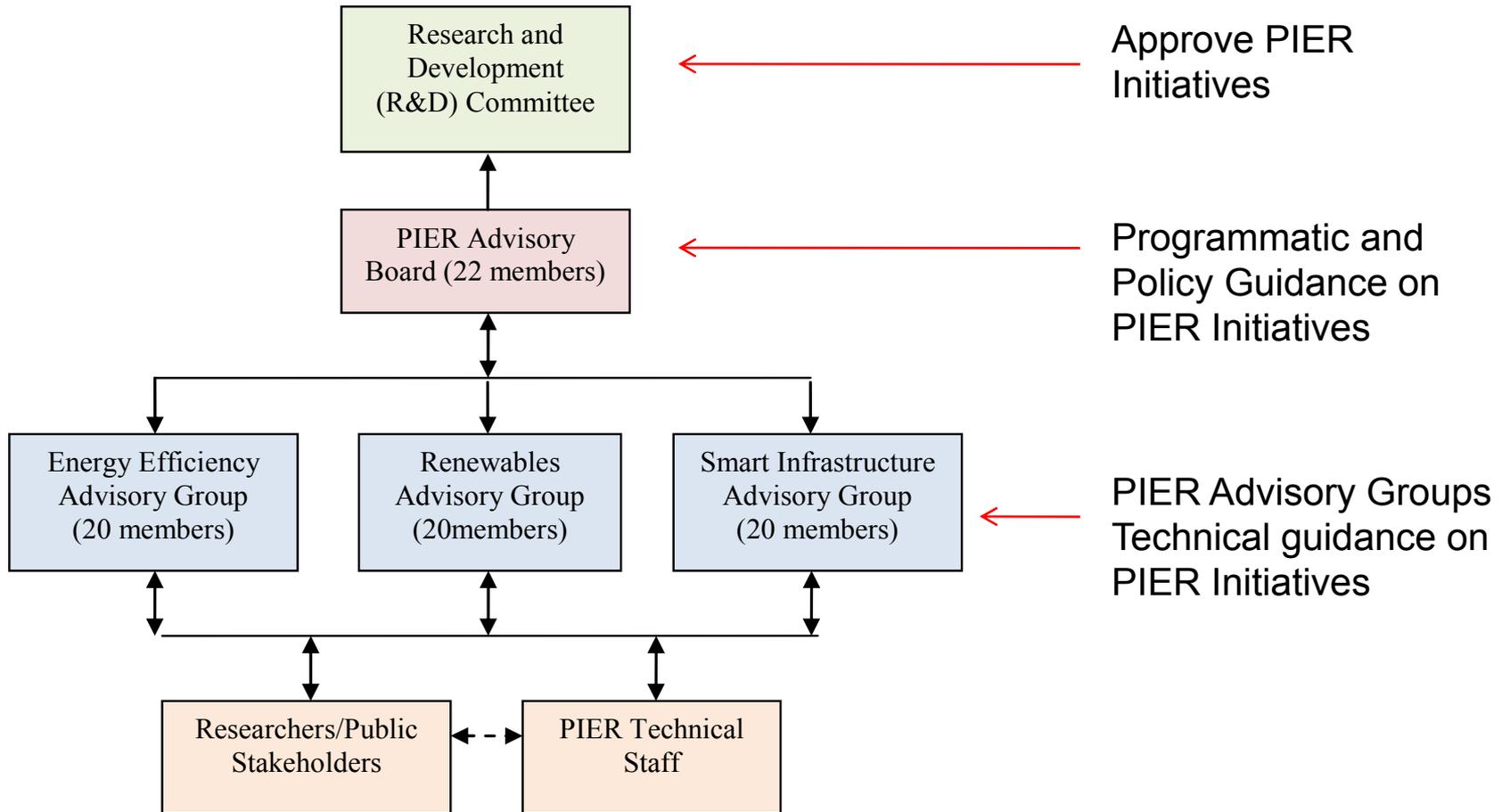
■ Researchers/Public

- Provide technical feedback on research initiatives
- Share information on RD&D activities and identify synergies and opportunities for collaboration

- Objective: Structure future public interest research efforts that maximizes electricity ratepayer benefits and eliminates duplication of efforts

- Receive comment on the proposed PIER research initiatives for fiscal year 2011/12 by having the Advisory Group and public:
 - Provide advice on the initiatives
 - Share information on other RD&D activities and identify possible duplications and synergies
 - Identify opportunities for collaboration
 - Assist in effective transfer and use of research results in the marketplace

Feedback Flow



Today's Agenda



California Energy Commission – PIER

■ Morning-Building End Use Efficiency:

Chris Scruton

- Program background and discussion of research initiatives
- Advisory Group Questions and Comments
- Invited Researchers
- Public Comment

■ Afternoon-Industrial, Agriculture and Water:

Beth Chambers

- Program background and discussion of research initiatives
- Advisory Group Questions and Comments
- Invited Researchers
- Public Comment

■ Additional Public Comment

■ Wrap Up

■ Public Interest Energy Research Program

- General Program information:

<http://www.energy.ca.gov/research/index.html>

- Energy Efficiency

<http://www.energy.ca.gov/research/efficiency/index.html>

- Buildings Program

<http://www.energy.ca.gov/research/buildings/index.html>

- Industrial, Agricultural and Water Efficiency Program:

<http://www.energy.ca.gov/research/iaw/index.html>

■ Energy Commission Mailing List Registration

<http://www.energy.ca.gov/listservers/index.html>

■ Send additional comments on research initiatives by July 1 to:

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