



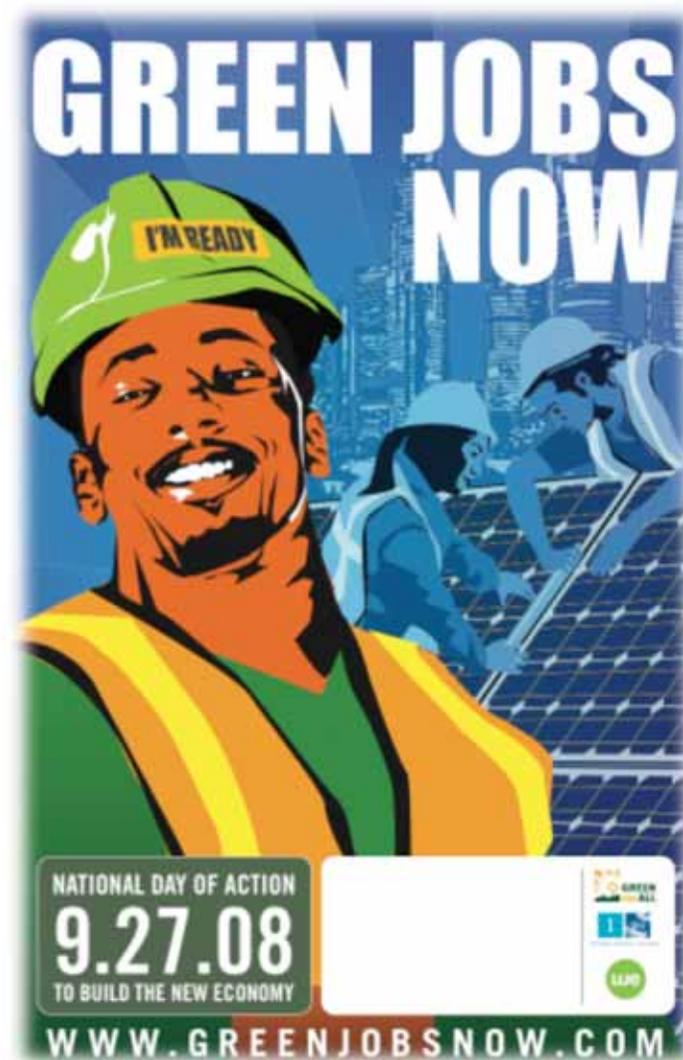
Clean Energy Workforce Training Program

Panama Bartholomy
Advisor to Chairman Douglas
California Energy Commission



CLEAN ENERGY WORKFORCE TRAINING PROGRAM

- \$90 million
- Multi-agency initiative to:
 - Identify clean energy workforce needs
 - Build regional capacity in clean energy sector development
 - Deliver industry relevant training for displaced workers and new workforce entrants





CLEAN ENERGY WORKFORCE TRAINING PROGRAM

■ Partnership

- ❑ Green Collar Jobs Council
- ❑ CA Workforce Investment Board
- ❑ CA Community Colleges
Chancellors Office
- ❑ Employment Development
Department
- ❑ Employment Training Panel
- ❑ CA Department of Education
- ❑ IBEW/NECA
- ❑ IOUs and POUs





CLEAN ENERGY WORKFORCE TRAINING PROGRAM

- Labor Market Information Development
 - EDD State-wide Employer Survey
 - Centers of Excellence





LABOR MARKET INFORMATION DEVELOPMENT

- ❑ EDD State-wide Employer Survey
 - In May 2009, EDD launched the Green Economy Survey in collaboration with:
 - ❑ Labor and Workforce Development Agency,
 - ❑ Economic Strategy Panel,
 - ❑ California Workforce Investment Board,
 - ❑ Air Resources Board,
 - ❑ Community Colleges Centers of Excellence, and
 - ❑ Energy Commission.
 - ❑ 51,100 California employers representing all industries, size classes, and counties.
 - ❑ Survey Objectives:
 - ❑ Obtain an estimate of the current number of green jobs in California
 - ❑ Identify the current and changing business practices
 - ❑ Identify emerging occupations
 - ❑ Identify resources and strategies



LABOR MARKET INFORMATION DEVELOPMENT

- California Community College's Center of Excellence



<http://www.coeccc.net/>



Energy Efficiency Occupations	2009 Employment Estimate	3-year Projected Growth	Growth Rate
Resource conservation or energy efficiency managers	1,400	450	32%
Project managers for construction or design	3,180	660	21%
HVAC mechanics, technicians or installers	1,370	260	19%
Energy auditors or home energy raters	1,130	650	58%
Compliance analyst or energy regulation specialists	770	350	46%
Building performance or retrofitting specialists	1,920	810	43%
Building operators or building engineers	760	170	23%
Building controls systems technician	720	170	24%
Total, All Occupations (totals may not add due to rounding)	11,250	3,530	31%

Figure 6: Difficulty in Hiring for Each Occupation

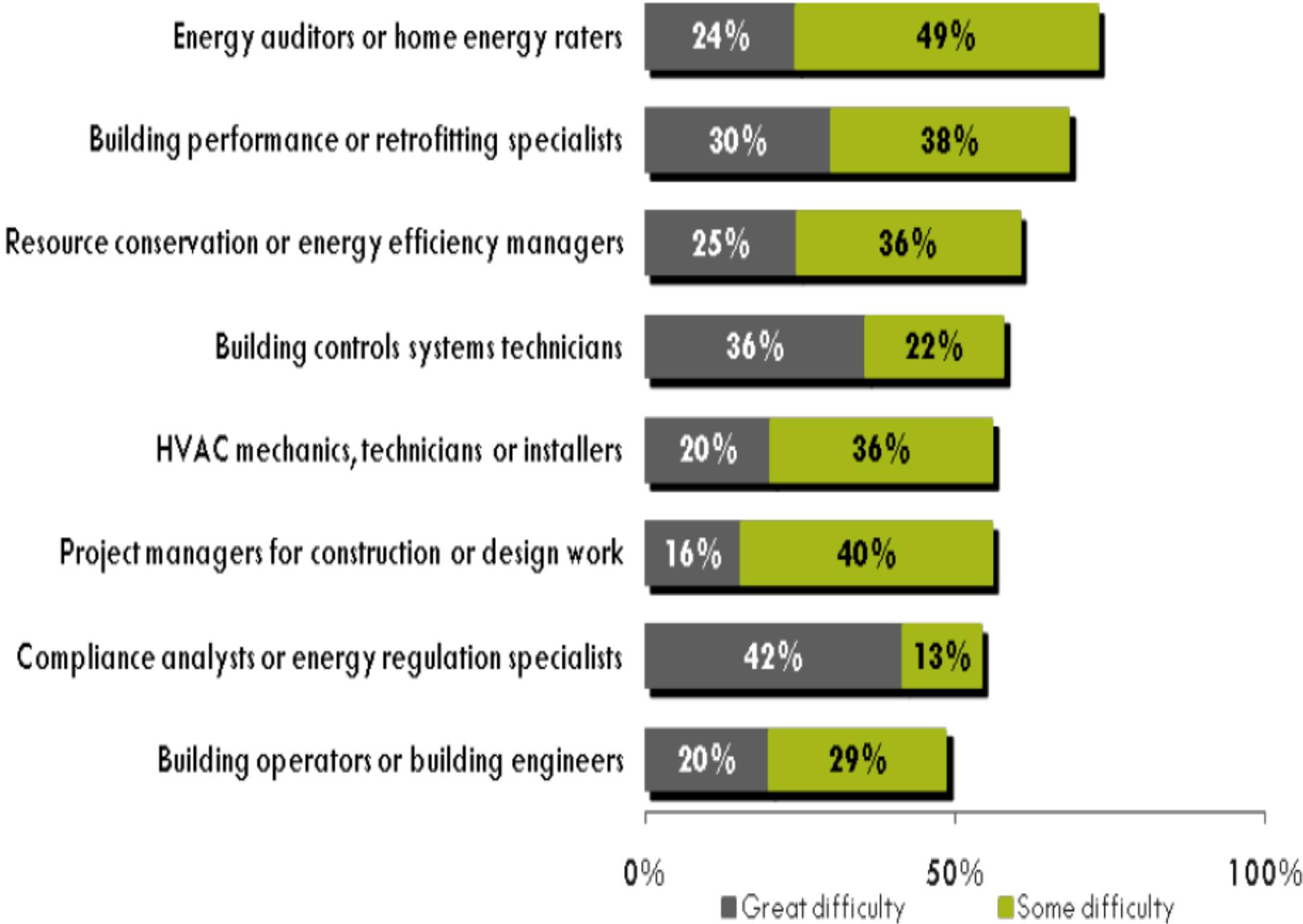


Figure 7: Difficulty in Hiring and Expected Growth for Each Occupation

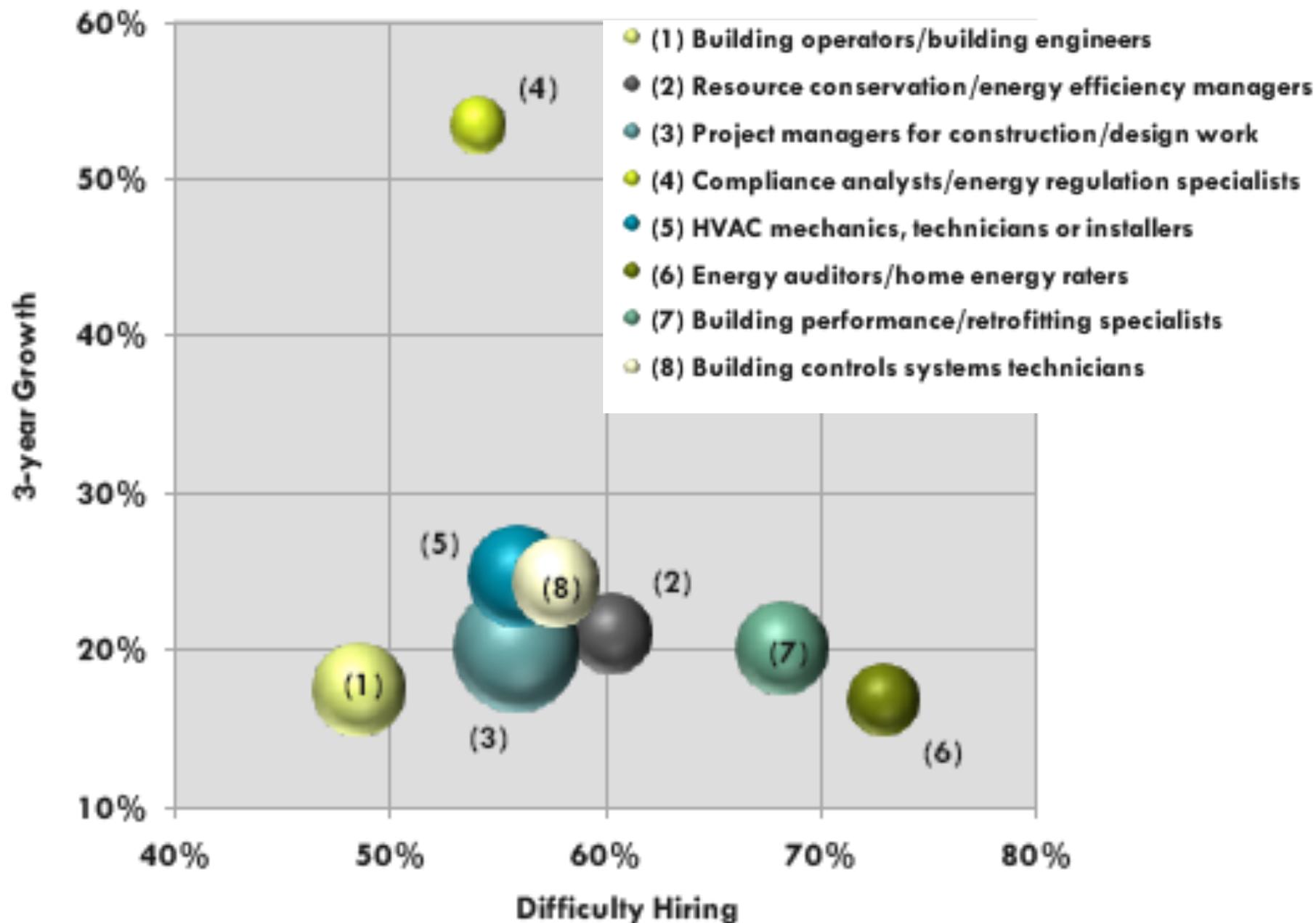
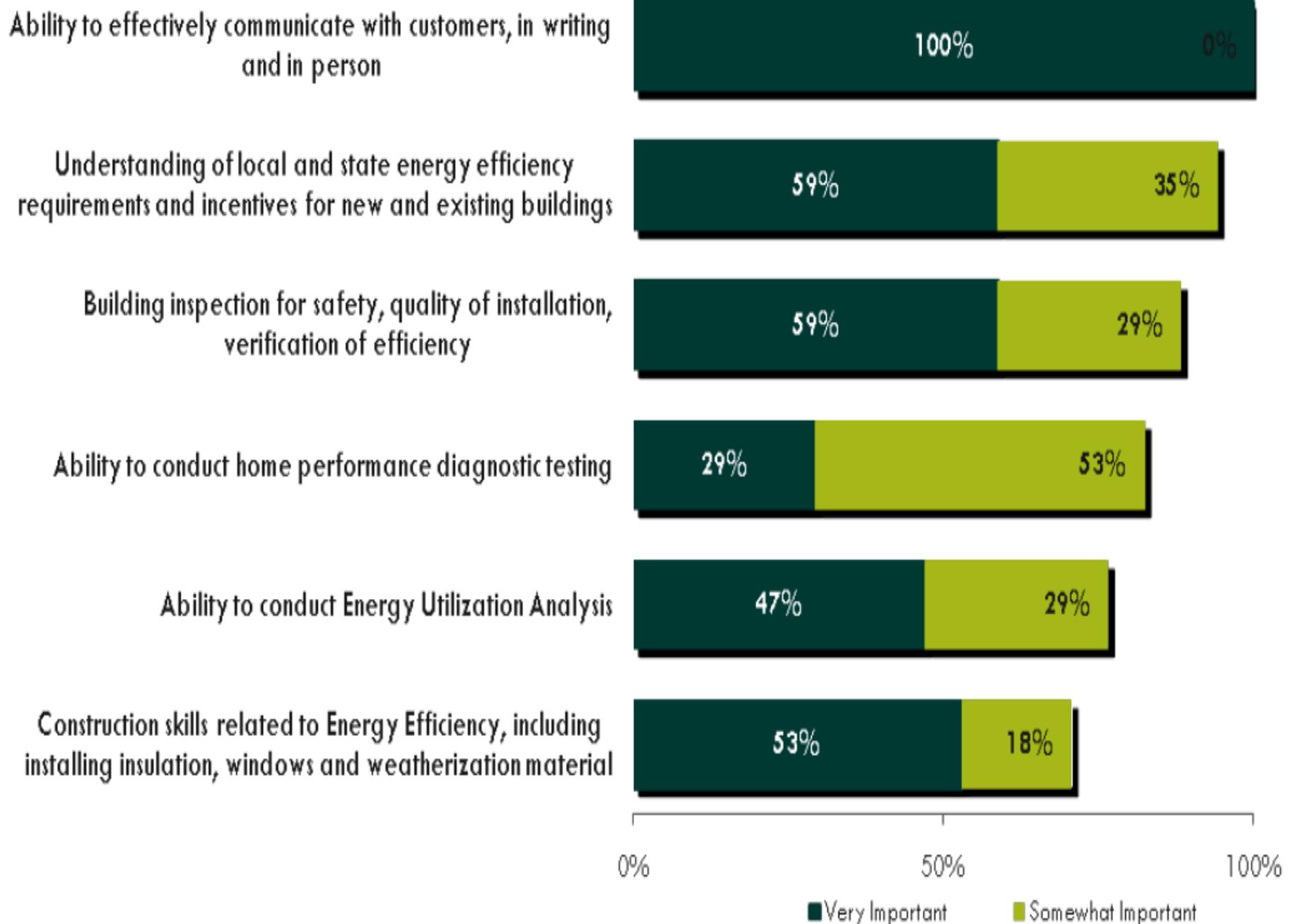


Figure 3: Improving Energy Efficiency in Homes (Retrofitting Homes)





REGIONAL INDUSTRY CLUSTERS OF OPPORTUNITY GRANT

- \$3 million partnership between:
 - CA Workforce Investment Board
 - California Energy Commission
 - California Economic Strategy Panel
- Grants for regions to identify and develop industry clusters
 - Diagnosis of economic trends and labor market needs;
 - Collaborative Priority-Setting;
 - Negotiated Cluster of Opportunity Investment Strategy;
 - Sustainable Implementation



CLEAN ENERGY WORKFORCE TRAINING PROGRAM

- Regional Partnerships
 - \$56 million Partnership between:
 - Energy Commission
 - EDD
 - CA Workforce Investment Board
 - Community college and workforce investment board-led regional partnerships
- Training for displaced construction workers or new workforce entrants in:
 - Energy and water efficiency
 - Renewable energy
 - Transmission and distribution
 - Clean transportation



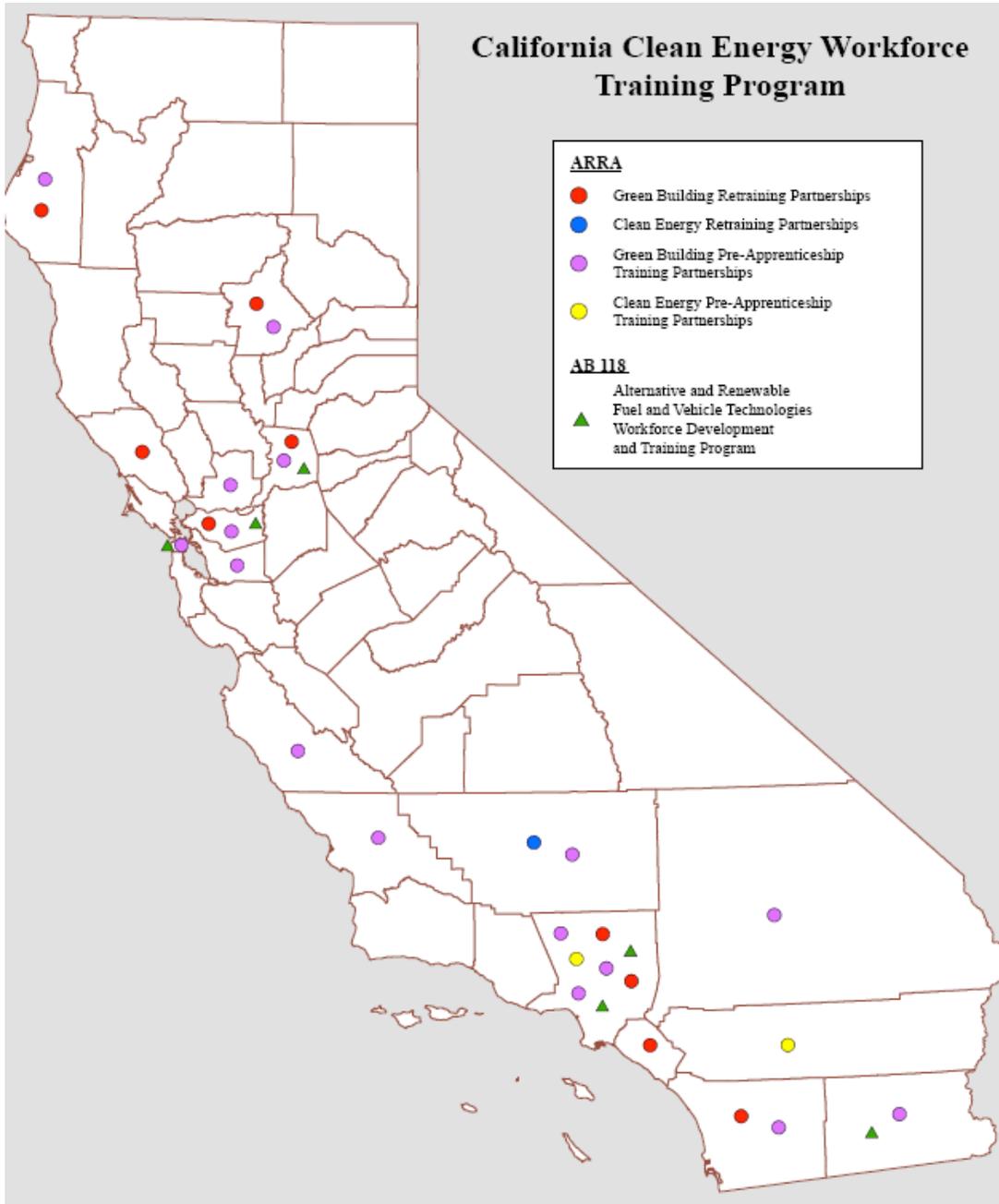
DEMAND DRIVEN AND INDUSTRY RELEVANT

- Preference given to partnerships that included local governments which are committing resources to deploying comprehensive building retrofit programs
- Oversight from Green Employers Council made up of representatives from each industry in which the partnership will provide training





California Clean Energy Workforce Training Program





SACRAMENTO REGIONAL GREEN BUILDING TRAINING PARTNERSHIP

- 2 WIBs, 2 community colleges, Union, 3 local governments, utility, community benefit organization, regional economic development corporation
 - Provides training for new workforce entrants



- Introductory Green Jobs/Energy Career Exploration Workshops
- Green Building and Weatherization Specialist
- Home Energy Auditors
- Green Plumber
- Certified Green Building Professional



LONG BEACH WATER/ENERGY EFFICIENCY PARTNERSHIP

- Long Beach Community College, City, Port, utility and private business
- Partnership will provide certificated training program for key job classifications:



- Building Performance or Retrofitting
- Water / Energy Auditor
- Certified Green Building Professionals



EMPLOYMENT TRAINING PANEL

- \$10 million partnership
 - Will provide funding to train incumbent workers for work in:
 - Energy and water efficiency installation and product manufacturing
 - Renewables energy installation and product manufacturing
 - Transmission and distribution installation and product manufacturing
 - Clean transportation





CALIFORNIA SOLAR WORKFORCE PARTNERSHIP

- \$3.5 million partnership:
 - Energy Commission
 - IBEW/NECA
 - Community Colleges
Chancellors Office
 - California Center for Sustainable Energy
- Partnership will develop comprehensive, State-wide curriculum and train-the-trainer program for:
 - Utility- and distributed-scale
 - Solar PV and Thermal
 - High school –college-union hall





CALIFORNIA SMART GRID WORKFORCE PARTNERSHIP

- PG&E, SCE, SMUD, Sempra Partnership has applied for
- CSU – Sacramento, Pomona, East Bay \$8.5 million in DOE funds to:
 - Develop comprehensive, State-wide smart grid installation curriculum
 - Pilot delivery of curriculum at colleges and union halls
- Community Colleges - LACCD, Los Rios (Sacramento), Evergreen (San Jose)
- IBEW
- Three-WIBs
- Energy Commission





CEC-CDE GREEN TECHNOLOGY PARTNERSHIP ACADEMY

- Partnership between State, school district and private industry
- Grade 10-12
- Student takes all their classes in field-related academy
- Internships in field





SUMMATION

- Partnerships
- Leverage
- Just the beginning

