



**2012 Integrated Energy
Policy Report Update Proceeding**

**Jobs and Renewable Energy
in California**

California Energy Commission

May 30, 2012



Background

- 7 workshops on renewable issues: benefits, locations, interconnection, rates/costs, jobs, financing/R&D, integration
- CEC prepares IEPR every two years and update in intervening years
- Governor's Clean Energy Jobs Plan in 2010 directed CEC to prepare renewable plan
- *Renewable Status and Issues Report* in 2011 IEPR laid foundation for plan with 5 high-level strategies to address challenges
- Renewable Strategic Plan developed under 2012 IEPR Update



Strategy 4

“Promote incentives for renewable technologies and development projects that create in-state jobs and support in-state industries, including manufacturing and construction. In implementing this strategy, the state should evaluate how current renewable energy policies and programs are affecting in-state job growth and economic activity and identify which renewable technologies rely on supply chains that provide the best opportunities for California businesses.)”



Today's Agenda

- Presentation: Patrick McGuire, Governor's Office of Business and Economic Development
- Panel 1: Quantifying Jobs from Renewable Energy
- Public Comment
- ~ Lunch ~
- Panel 2: Job Training and Economic Development Programs: the Connection
- Panel 3: Local Economic Development with Renewable Energy: Case Studies/Lessons Learned
- Public Comment



Clean Energy Jobs

- California a national leader in attracting clean tech venture capital investment
- Next 10 “Many Shades of Green” (2011)
 - 1995-2009 – energy generation sector created most jobs in California green economy (20,000)
 - Since 1995, total state employment grew 18%, green economy employment by 56%
 - Manufacturing represents 26% of green employment, 11% of total employment



Clean Energy Jobs

- Brookings Institution: “Sizing the Clean Economy: A National and Regional Green Jobs Assessment” (July 2011)
 - Clean energy economy employs more workers than fossil fuel industry
 - California led U.S. in green jobs (~320,000)
 - Clean economy manufacturing intensive: 26% of clean jobs in manufacturing, 9% in broader economy
 - More opportunities/better pay for low and middle income workers



Clean Energy Jobs

- Center for Energy Efficiency and Renewable Technologies
 - Large-scale renewable facilities: thousands of jobs in construction trades to build proposed plants; hundreds of ongoing O&M jobs
 - DG-scale: construction jobs to build 2,000 PV projects (6,000 MW) over 10 years would create monthly average of 10,000 jobs
- Solar Foundation National Solar Jobs Census
 - Solar companies adding jobs at faster rate than general economy
- Solar Tech 2010 labor market analysis
 - California has >1,000 solar companies /36,000 employees; workforce training should focus on sales and system design



Workforce Development Challenges

- Employer willingness to hire
- Mismatch between training and actual jobs
- Need for better coordination of training programs with industry needs



Clean Energy Workforce Training Program (CEWTP)

- Green job training for new and incumbent workers
- Develop community college and other training curricula
- Examples include Kern Community College District and College of the Desert



Complementary Workforce Efforts

- Green Innovation Challenge Grant Program
- California Clean Energy Partnership Academies for grades 9-12
- PIER funding for smart grid training at CSUS and National Center for the Clean Energy Workforce
- SB 71 Sales and Use Tax Exemption
- Clean Energy Business Finance Program



Next Steps

- Written comments due COB June 6
- For instructions on submitting written comments, see May 30 heading at:
www.energy.ca.gov/2012_energy_policy/documents/index.html
- Upcoming Workshops:
 - 6/6: Financing and R&D
 - 6/11: Integration Costs and Requirements