



Market Driven to Market Driving

From Market Driven to *Market Driving*: Clean Energy Workforce Development in the Real World

Anjana Richards, Skyline College
Kif Scheuer, Strategic Energy Innovations
Aaron Wilcher, Skyline College

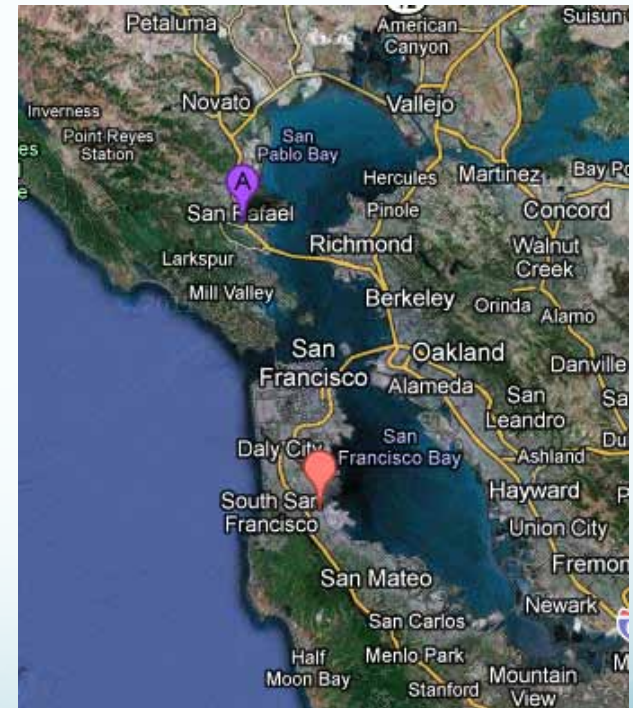
Green California Community College Summit
October 17, 2011



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Who We Are

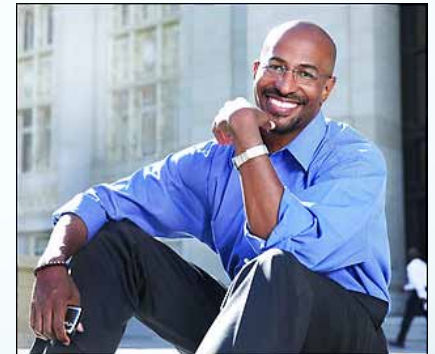
- Skyline College
 - Anjana Richards & Aaron Wilcher
 - Growing Environmental Technology/Clean Energy program
- Strategic Energy Innovations
 - Kif Scheuer
 - Nonprofit clean energy strategy and education consultancy



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Sunny Days

- California Public Utilities Commission
Goal: existing homes reduce energy use 20% by 2015, 40% by 2020
- 10 million retrofits a year by 2020
- Investments in California's Clean Tech industry projected to seed 52,000 to 114,000 new jobs.





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Grants: Building Capacity and Gaining Altitude

- With reward comes risk
- BayCEC \$1.9 million:
 - DOL CBJT 2009-2012
 - Solar, Energy Efficiency, HVAC
- HERO \$2.5 million with SMCWIB
 - DOL CBJT 2010 – 2013
 - Energy efficiency retrofitters, auditors, and rebate processors





And then ...





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Reality Sets in...

- We thought we were gearing up for a smooth ride of strong home performance industry growth
- Larger Forces conspired against us
 - The economy
 - Messy legislation
 - Sector specific challenges



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Recession Hit Home Performance Market Hard

- Falling home prices & tight credit market
 - Harder to get funds out of homes for improvements
- Municipal financing stagnant
 - 3% or lower participation rates seen
- Home Performance startups struggling
 - No capital to start and no base to sustain during a weak market



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Legislative antics undermine growth of clean energy sector

- Property Assessed Clean Energy (PACE)
 - Huge industry momentum killed by FHFA ruling
- HomeStar
 - Bipartisan support for comprehensive program, but kept slipping to bottom of legislative attention, finally dropped.
- Stimulus Bill
 - 20 fold increase in DOE funding built expectations, but program complexities limited impacts.
- California Energy Commission
 - Excessive delays and contracting confusion created significant contractor and public angst



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The Results: Needs smaller in some clean energy sectors

- Energy Upgrade California only 6-7% towards goal of 100,000 retrofits by mid 2012
- Year over year (July 10-July 11) Construction jobs down 4.2% in San Mateo, and down .5% region wide.
- However, solar PV saw a 66% year-over-year growth
- Energy efficiency sector projecting only 2300 new jobs by 2015, Building Performance 1.6% growth



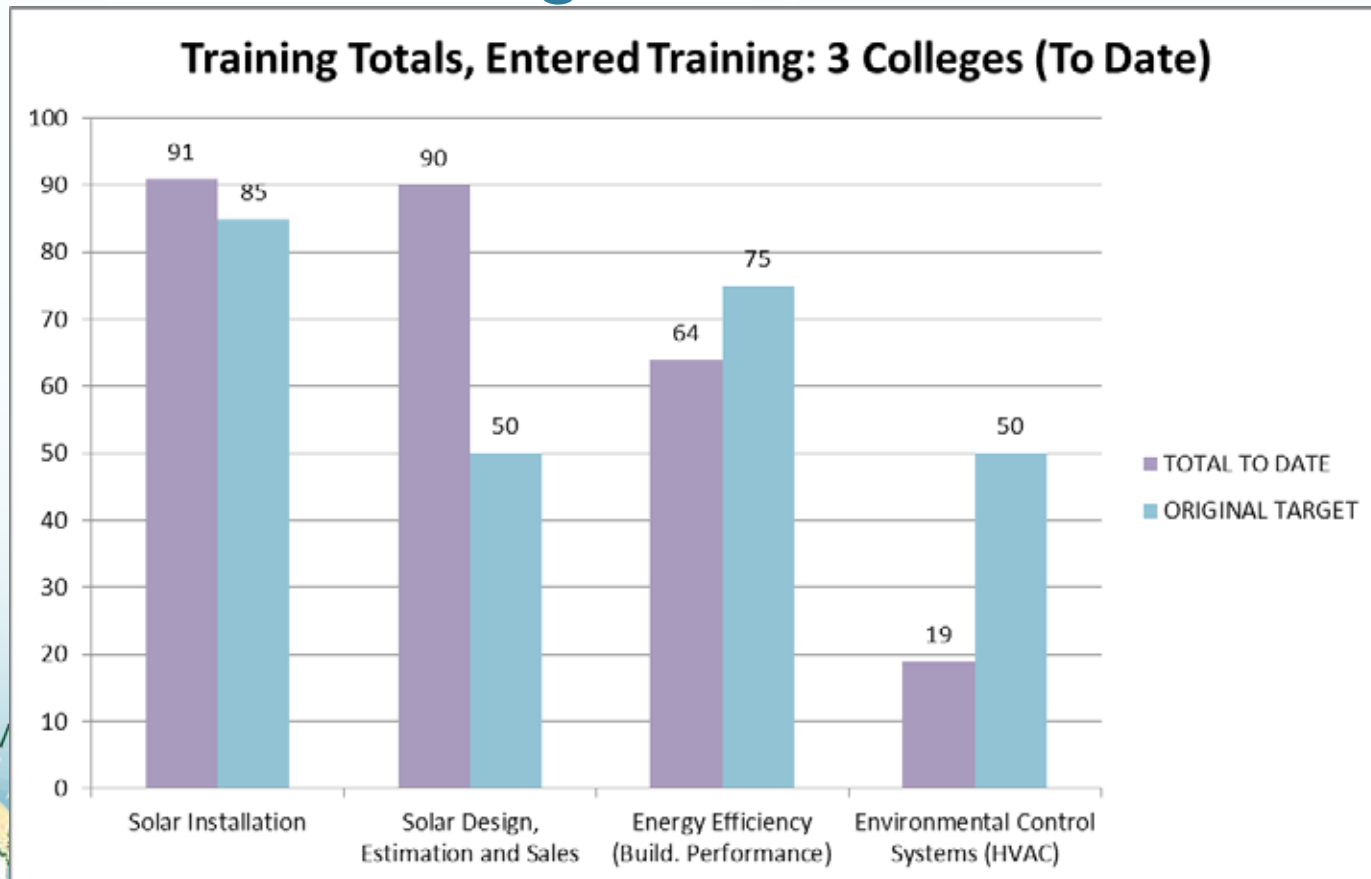
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A New Training Outlook

- Clean Tech is not one “industry”
 - Many discrete activities that each have workforce needs and latent momentums.
 - Parts don’t have uniform growth trajectory
 - There is a wide range of “scales” at play
- Current conditions are creating a Workforce Training Race to the Bottom

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Bay Area Clean Energy Careers Program Metrics



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Solar Design, Estimation, and Sales



- Integrates technical and market-making skills
- Opportunities for multiple career pathways



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Home Energy Retrofit Occupations Program Metrics (students entering training)

Educational Program	Original Plan	Current Plan
Retrofit Technician	280	100
Building Analyst	50	0
Building Analyst/Sales	100	180
Rebate Processor	50	0
Effective Green Business Marketing		100
Energy Efficiency for Realtors and Mortgage Brokers		100

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Building Performance Assessment and Sales

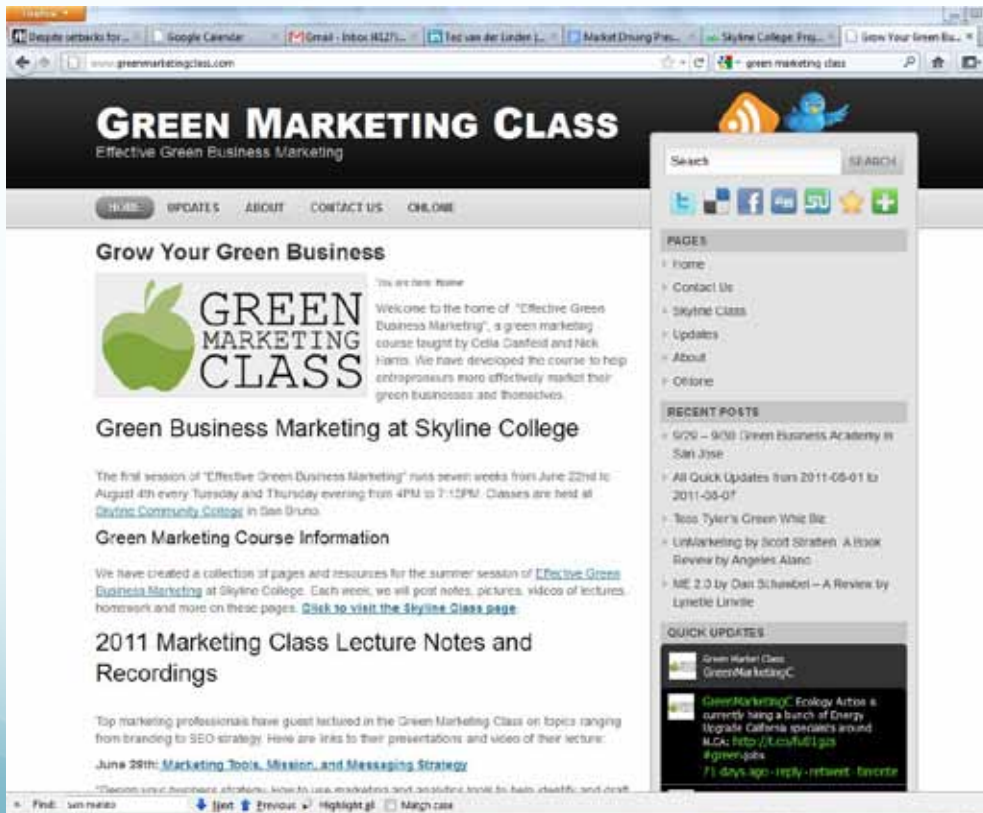


- Technical Home Energy Audit with Customer at Center
- BPI Certification



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Effective Green Business Marketing



The screenshot shows the homepage of the Green Marketing Class website. The header features the title "GREEN MARKETING CLASS" and the tagline "Effective Green Business Marketing". Below the header, there are navigation links for "HOME", "UPDATES", "ABOUT", "CONTACT US", and "CHRONICLE". The main content area includes a section titled "Grow Your Green Business" with a green apple logo and the text "GREEN MARKETING CLASS". Below this, there is a section for "Green Business Marketing at Skyline College" and another for "Green Marketing Course Information". A sidebar on the right contains a search bar, social media icons, and sections for "PAGES", "RECENT POSTS", and "QUICK UPDATES".

- Industry-driven design
- Growing businesses in 21st Century: CRM, Social Media, Website Development, Marketing Plan
- Value Add for Owners and Managers Currently in Green Industries



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Energy Efficiency Opportunities for Realtors and Mortgage Professionals

Trifecta: The Conversion of Distressed Homes to Eco-Efficient

irealestatepro 1 video

Trifecta All three to win big!

203K Renovation Loan
\$35,000 renovation funding included in first mortgage

energy upgrade CALIFORNIA Rebates Up to \$4,000

AND
AND
AND

Realtor \$250 credit towards energy audit

- Emphasis on education of consumers and allied professions to drive demand
- Packaging key financial products with rebate incentives



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Is it working?

- YES
 - Capacity and relationship building with industry partners/labor
 - Good job placement for technical classes that integrate sales
 - Eye towards sustainability – what emerging sector courses will be meaningful in open enrollment?
- MAYBE
 - Recruitment for specific market-making roles proves challenging (incumbents, managers/owners)
 - It will take time to see if our graduates affect the market



It's a long and winding road





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Key Takeaways

- Stay adaptable
 - Work with your funding agency or college administration to stay flexible
- Maintain close ties with industry
 - Give them reasons to come back
 - Establish yourself as a key economic development partner, not just a training provider
- Expand your industry outlook
 - Consider transferable skills
 - Consider allied industries





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Key Takeaways

- Integrate market creation elements into curriculum
- Create opportunities that can lead to future opportunities – internships, OJT
- Collaboration – what can other colleges offer?
- Student focus
 - Support skill set upgrades
 - Help with professional skills, and adapting to new workplace and new economy



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You gotta hold
on tight,
and let go

QUESTIONS?