



# Green Programs of Study @ Los Angeles Trade-Technical College

NRCCTE Webinar October 26, 2010

# Los Angeles Trade-Technical College

## Green College Initiative

Launched in Fall, 2006  
the LA Trade-Tech Green College Initiative  
Consists of 4 Primary Objectives

### Green Built Environment

- Green Buildings

### Green Practices

- Clean & “Green” Practices
- **Green** Certified Business Standards

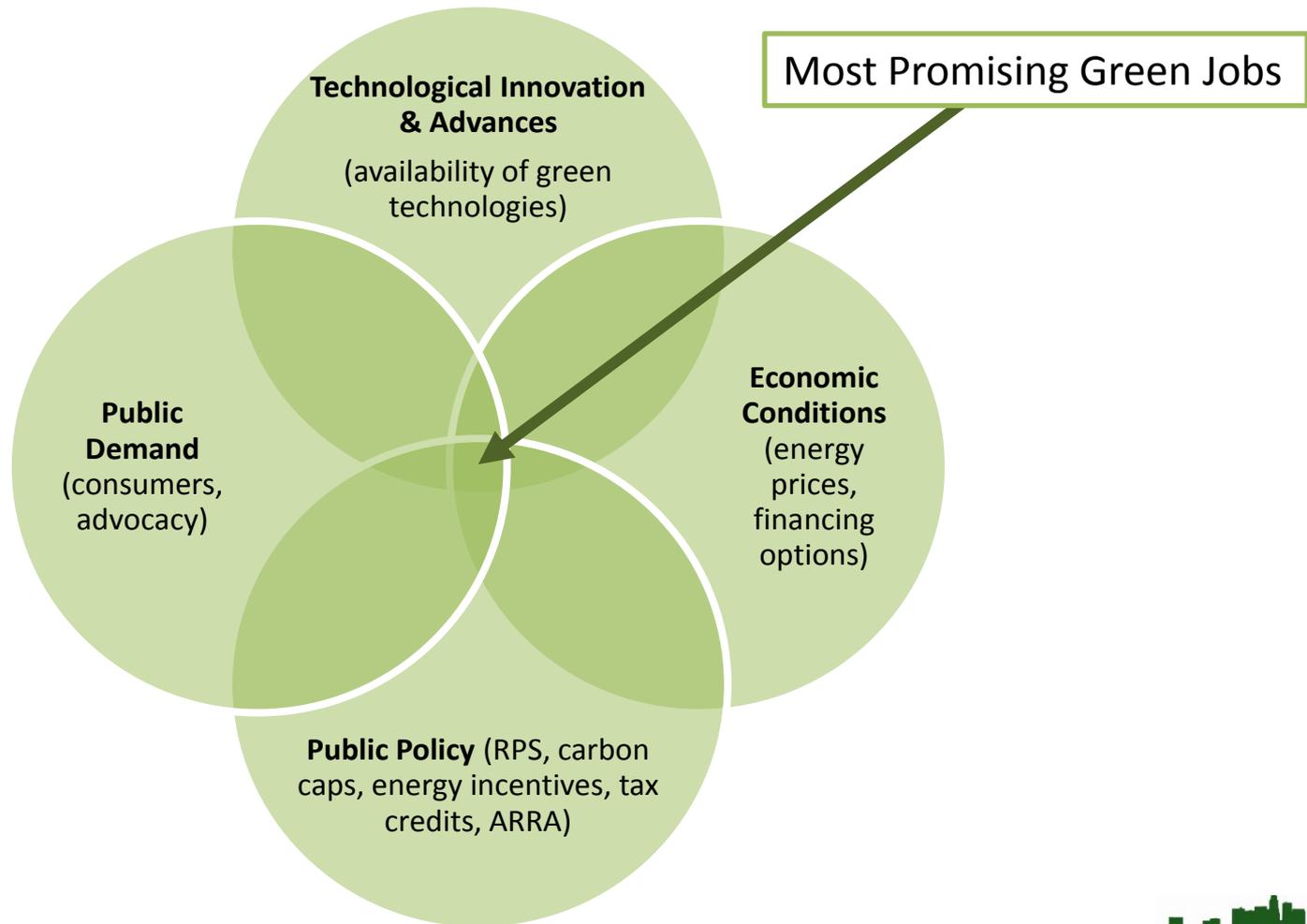
### Green Awareness

- Green Advocates
  - Students
  - Community Members

### Green Education & Training

- Infusing Sustainability as Theme Throughout Curriculum
- Green Workforce Development

# What Propels the Green Economy and Demand for Green Jobs?



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## California Policy

[AB 3](#) - Energy: Renewable Energy Workforce Readiness Program  
[AB 19](#) - Greenhouse Gas Emissions: Consumer Product Labeling  
[AB 32](#) - California Global Warming Solutions Act of 2006  
[AB 64](#) - Energy: renewable energy resources: generation and transmission  
[AB 118](#) - Alternative fuels and vehicle technologies: funding programs  
[AB 177](#) - Energy: Green Economy Inclusion Act of 2009  
[AB 210](#) - Green building standards  
[AB 212](#) - Energy: building standards: zero net energy buildings  
[AB 231](#) - California Global Warming Solutions Act of 2006: Climate Protection Trust Fund  
[AB 234](#) - Energy: efficiency  
[AB 238](#) - Renewable energy resources  
[AB 262](#) - American Recovery and Reinvestment Plan: energy activities, programs, or projects  
[AB 289](#) - Public resources: geothermal resources: disposition  
[AB 290](#) - Neighborhood Stabilization Program grants: funding priorities and criteria  
[AB 758](#) - Energy/Energy Auditing  
[AB 811](#) - Contractual assessments: energy efficiency improvements  
[AB 2006](#) - California Community Colleges Economic and Workforce Development Program: Center of Innovation for Green Technology  
[AB 2224](#) - California Clean Energy Curriculum and Training Initiative of 2008  
[AB 2267](#) - California-based entities: self-generation incentive  
[AB 2477](#) - California Green Jobs Act of 2008  
[AB 2622](#) - Employment Training Programs: Clean Technology Industry  
[AB 2855](#) - Career Technical Education: Partnership Academies: Green Technology and Goods Movement  
[AB 2864](#) - School facilities: energy efficiency  
[AB 2868](#) - Redevelopment agencies: affordable housing  
[AB 3001](#) - Global warming: California Voluntary Carbon Offset  
[AB 3018](#) - California Green Collar Jobs Act of 2008  
[Executive Order S-14-08](#) - Governor Streamlines California's Renewable Energy Project Approval Process and Increases the State's Renewable Energy Standard to 33 Percent Renewable Power by 2020  
[SB 7](#) - Renewable Energy Sources: Net Metering  
[SB 14](#) - Utilities: Public Utilities Commission: Energy: Renewable Energy Resources: Rates  
[SB 17](#) - Electricity: Smart Grids Systems  
[SB 31](#) - California Global Warming Solutions Act of 2006: Revenue Allocations  
[SB 32](#) - Renewable Electric Generation Facilities  
[SB 104](#) - California Global Warming Solutions Act of 2006: designation of greenhouse gases  
[SB 128](#) - California Climate Change Institute  
[SB 375](#) - Redesigning Communities to Reduce Greenhouse Gases  
[SB 1672](#) - Renewable Energy, Climate change, Career Technical Education, and Clean Technology Job Creation Bond Act of 2010  
[SB 1754](#) - Energy: California Alternative Energy and Advanced Transportation Financing Authority  
[SB 1760](#) - Energy: greenhouse gas emissions

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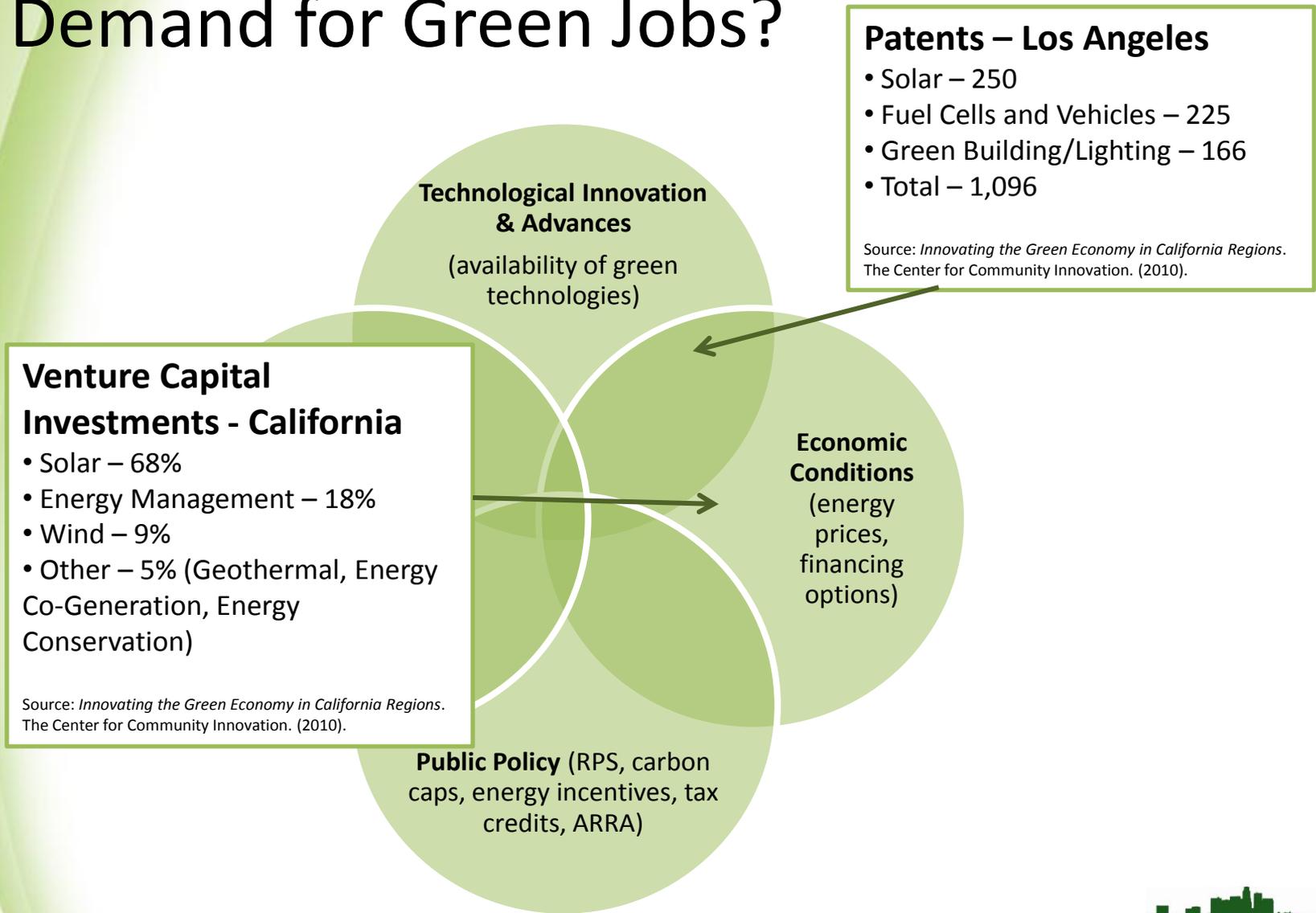
## Federal Policy

- Energy Independence and Security Act of 2007, Green Jobs Act of 2007 (H.R. 6)
- S. 1733 Clean Energy Jobs and American Power Act of 2009
- H.R. 2336 The Green Act of 2009
- S. 320 Clean Energy Stimulus and Investment of 2009
- **American Recovery & Reinvestment Act (e.g., the "stimulus bill")**

financing  
options)

Public Policy (RPS, carbon caps, energy incentives, tax credits, ARRA)

# What Propels the Green Economy and Demand for Green Jobs?

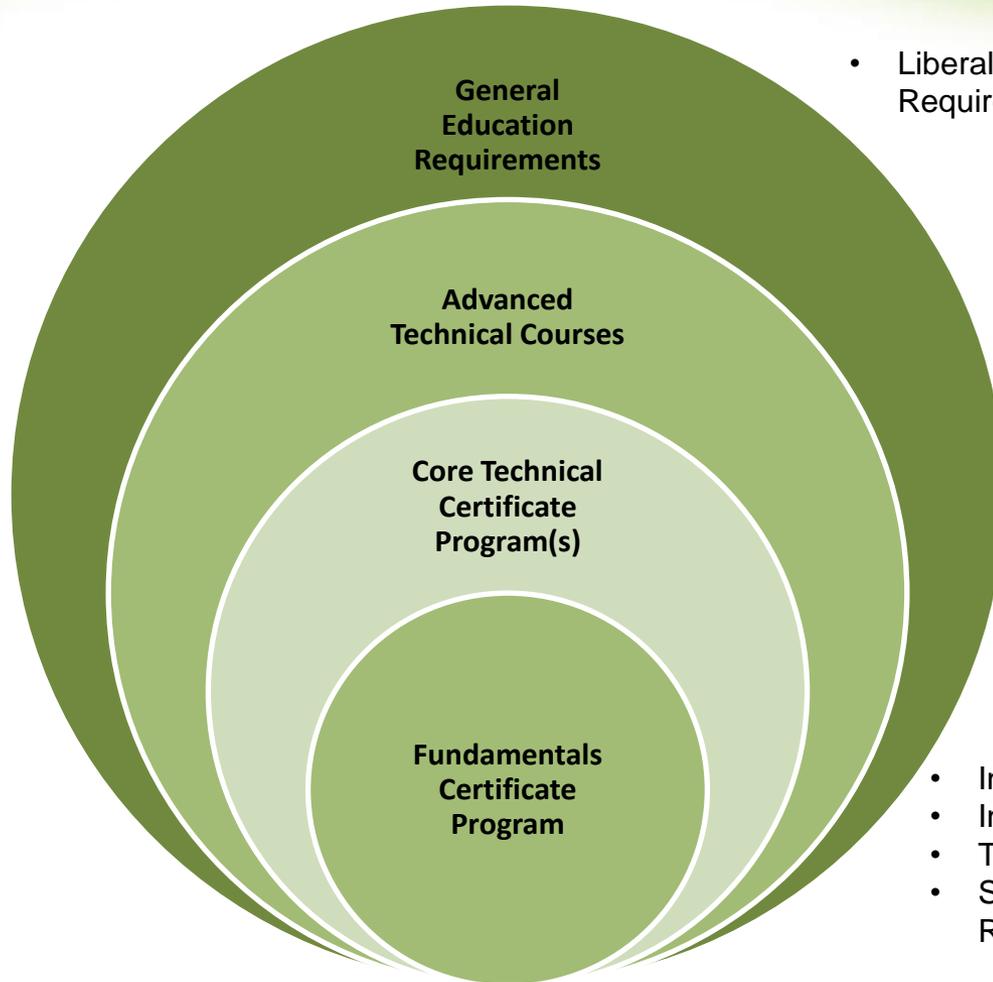


# Developing Green Workforce Programs

- Approach: Integrate components as much as possible into core/existing programs
  - Over 55 Green Programs ranging from Environmental Science to Wastewater Technology
  - Created new programs where necessary and revised exiting programs to integrate “green” aspects
- Establish and Strengthen existing partnership with Industry and Community Based Organizations
  - Non-profit partners key establishment and leveraging of program resources
  - Rely on industry partners for immediate feedback on recent graduates
- Follow Labor Market Demands and Faculty “Readiness” Index to select industries or sectors
  - Select based on faculty potential not necessary current expertise
    - Electrical Construction faculty with intense professional development led development of Solar Program
    - Creative Carpentry faculty led work in Energy Efficiency
    - Build and support faculty who are at “tipping point”
- Examples of Strategy Success
  - Transportation Training Facility – Hybrid, Alternative Fuels and Electric Vehicles as well as Transit
    - Energy Efficiency & Retrofit Leader and Training for New & Incumbent Workers
  - Building Performance Institute (BPI); North American Technician Excellence (NATE) ; North American Board of Certified Energy Practitioners (NABCEP); Green Plumber



# Stackable Certificate Programs and AS Degree



- Liberal Arts Courses to Satisfy AA/AS Degree Requirements or for Transfer to 4-Year University
  - Occupation-Specific & Management Skills and Competencies
  - Includes Competencies to Pursue Other Career Options
  - Tiers 8-9 of Competency Model Framework
  - Standards, Competencies for Occupation-Specific or Management Industry-Recognized Certifications
- Occupation-Specific Skills and Competencies
  - Tiers 6-8 of Competency Model Framework
  - Standards, Competencies for Occupation-Specific, Industry-Recognized Certifications
- Industry-Wide Skills and Competencies
  - Includes Applied Mathematics/ Algebra
  - Tiers 5-6 of Competency Model Framework
  - Standards, Competencies for General Industry-Recognized Certifications

# New Role of Administrators

- Find the resources for faculty to dream, create and implement
  - Changed faculty perception of what is possible
- Change approach from “rules” or “past practice” to “pilot”
- Review approach on exiting funding revenues to reward innovation and modernization
  - LATTTC Perkins Plan focuses on activities to support these activities through competitive process
- Since 2008 created and launched Solar Program, Electrical Lineman Program (including all female class)
- Tenacity and determination.....learn to hear “no” several times
  - US Department of Energy National Weatherization Center & California Certified Weatherization Training Facility

# Alternative Fuels/Diesel Technology Program

- Trains workforce in heavy-duty vehicle repair
- Program includes Alternative fuels/green transportation technologies
- Students participate in a 7 week internship at Santa Monica's Big Blue Bus



# Training for today's and tomorrow's needs

- Technology is infused into curriculum-
  - All classes are set up as on-line classes
  - All students must create an e-portfolio
- Basic skills:
  - Contextualized English and math
  - Workplace success workshops

## Ramon's Experience, Education, Achievements, Skills and Awards!

**Diesel Mechanic**

**Fuel Injector Tester**



**Career Goals**

1. Graduate from Los Angeles Trade-Technical College with an A.S. Degree in Diesel Related Technology
2. Become a fleet mechanic at a Trucking Company or a Transit Company.
3. Become a Supervisor at a Trucking Company or a Transit Company.
4. Graduate from California State University Los Angeles with a B.A. Degree in Business Administration.
5. Become a Manager at a Trucking Company or Transit Company.

**Academic Skills**

1. 3 semesters on the Full-Time Student Dean's List Award
2. President's Award
3. 4 in class

**Interests**

**I love working on engines (gas or diesel) and trying to fix them.**

**10 Speed Transmission**



**Employment History**

Start date	End date	Position
September 2009	Current	Student Worker: LATTC
March 2009	current	Substitute Cuelbotan: Temple City Unified School District
October 2008	May 2008	Car Detailer: R.M. Bodyshop
January 2006	October 2006	Paint Prep Man: Drasco's Body And Fender Works
May 2005	January 2006	Warehouse Worker: J.R. Macias Transportation Company
September 2004	May 2005	Quality and Assurance: Kelly Services
October 2003	July 2004	Delivery Driver: Joseph Elettio Transfer

**Work Skills**

I can perform and I have learned many diesel mechanic tasks at LATTC. I know the theory and operation of diesel engine components, shop safety, basic employment information, fastening devices, mechanical procedures, use of measuring instruments, and the diesel electrical system. I know how fuel injection systems work. I can properly disassemble, diagnose,

**L.A. Trade Tech**



**Ramon S. Gutierrez Jr.**



**Ramon S. Gutierrez Jr.**

Diesel Technology Student

- Postal Address: 5379 Cogswell Rd. El Monte, CA 91732
- Occupation: Diesel Mechanic
- Industry: All Diesel Related Fields
- Email Address: guierrezramon79@yahoo.com

**Certifications, Accreditations, and Awards**

# Piloting New Program Approach

- 10 month Accelerated Diesel Mechanic Program
- Training of incumbent workers in new technologies
  - CNG/LNG
  - Hybrid and plug-in electric vehicle
  - Biodiesel
  - CARB Diesel Retrofit Certification



# Industry Partners/lessons learned

- Industry partnerships are essential to keeping at the forefront of new technology training- both industry and academia benefit
- Private and public trucking/agencies include:
  - CARB, Santa Monica Big Blue Bus, Inland Kenworth, Eaton Corporation, Cummins Cal Pacific

# Overview: Solar Program @ LATTC

- Interdisciplinary – Includes Electrical and aspects of Carpentry
- Tremendous student variation – skill ad employment background
- Integrating aspects of Solar technology to K-12 students and other disciplines (Solar Go-Kart)



# Overview: Architecture Program

## Architecture and Environmental Design Discipline

- A.A Degree in Architecture Technology
- Certificate Architecture Technology
- A.S. Degree MAPS/GIS (Urban Planning)
- Certificate GIS (Urban Planning)
- CAD Skill Certificate
- Digital Design Skill Certificate
- Historic Preservation Skill Certificate



# Example of Strategy Change: Trainee Outreach and Recruitment – Role of College

- Work with City/County WIB and WorkSource Providers
- Direct Outreach through LATTTC Job training Portal  
<http://college.lattc.edu/jobtraining>

The image displays three screenshots of the LATTTC Job Training website. The first screenshot shows the homepage with navigation links (Home, Students, Faculty & Staff, Community) and a 'Job Training' section. The second screenshot shows a 'Job Training Listing' page with details for three programs: Accelerated Diesel Mechanic Program, Weatherization Installer, and Weatherization Outreach Specialist. The third screenshot shows a 'Training Interest Questionnaire' form with fields for Name, Address, Phone, Email, and Age.

# Lessons Learned

- Faculty are key to program success
- Practices require constant monitoring, evaluation and adjustment
- Most elements require organizational culture change

