

DOCKET

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How the National Center for the Clean Energy Workforce can meet Industry and Organization Needs in California

CALIFORNIA DEPARTMENT OF EDUCATION

Tom Torlakson, State Superintendent of Public Instruction



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State Superintendent
of Public Instruction

Could the center play a significant
role in curriculum development
of Career Technical Education
programs in K-12
and post-secondary?



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YES –

- Curriculum
- Teachers
- Training
- Information
- Advocacy



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Career Technical Education Sequence of Courses

Sequence of Courses	Grade 10	Grade 11	Work Experience	Grade 12
Career Technical Education	Foundation -Career options & basic skills	Concentrator -Focused Skills & knowledge		Capstone: Experience, choose, & prepare

Preparation for:
The Workforce
Post-secondary education



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Green Careers Academies

- AB 519 (2007– 2012) Appropriated \$12,000,000 from the Public Interest Research, Development, and Demonstration Fund to create California Partnership Academies to
- focus on *clean technology and energy businesses*
- and provide *skilled workforces* for the products and services for
 - Energy or water conservation or both
 - Renewable energy
 - Pollution reduction
 - Or other technologies that improve the environment in furtherance of state environmental laws.

FourEnergy

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Green Academy Curriculum

High School: Green Academy Curriculum

Curriculum Module Training Videos

Green Curriculum Modules

- [Introduction to Energy](#)
- [Energy Auditing](#)
- [Green Construction](#)
- [Introduction to Alternative Fuels](#)
- [Green Jobs Internship Manual](#)

**All curriculum posted to this site is under copyright. Duplication of any materials, without express written permission from the property owner, is protected under law.*

To share High School/College energy curriculum please download and complete the form below. When completed email the form to ntransue@attei.com.

- [High Energy Academy: Curriculum Form](#)



Produced by the Advanced
Transportation Technology
and Energy Initiative

www.attecolleges.org

<http://www.fourenergy.org/html/curriculum1.html>

<http://www.attecolleges.org/index.html>

[TRAINING/REGISTRATION](#)[MY NCCER](#)[SCORE RETRIEVAL](#)[CONSTRUCTION CAREERS](#)[ONLINE CATALOG](#)[eSTORE](#)[ANR](#)[DOWNLOADS](#)[CONTACT US](#)**NATIONAL CENTER FOR CONSTRUCTION EDUCATION AND RESEARCH**

Affiliated with the University of Florida



**BUILDING A SAFE, PRODUCTIVE,
AND SUSTAINABLE WORKFORCE
OF CRAFT PROFESSIONALS**

[HOME](#)[ABOUT](#)[ACADEMIES](#)[ACCREDITATION PROCESS](#)[ASSESSMENTS](#)[MOBILE CRANE
CERTIFICATION](#)[RIGGER/SIGNAL PERSON
CERTIFICATION](#)[CREDENTIALS](#)[CURRICULUM](#)**The National Center for Construction Education and Research (NCCER)**

is a not-for-profit education foundation created to develop industry-driven standardized craft training programs with portable credentials and help address the critical workforce shortage facing the construction industry.

Our mission is to build a safe, productive, and sustainable workforce of craft professionals.

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Trustees/li>](#)[NCCER Announces 2011
Board of Trustees](#)

<http://www.nccer.org/>



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Resources for CTE Sequence of Courses:

- CA State Center Consortium:
<http://statecenter.com/industrysectors/programsofstudy>
- States' Career Clusters:
<https://www.careerclusters.org/resources/web/pos.cfm>
- Maryland State CTE Programs of Study:
<http://www.marylandpublicschools.org/NR/rdonlyres/E4BE30EF-C723-4A04-9D6E-DFDBEF67DE7F/18555/CTEBook101509.pdf>
- States' CTE websites:
<http://www.khake.com/page36.html>
- [CTE Online:](#)



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CTE Course Sequence in Energy & Utilities Industry Sector

Grade/ CTE Focus	Green Energy (4 Energy)	Electronics Focus (NCCER)
Grade 10	Introduction to Energy	Your Role in the Green Environment & Green Labs
Grade 11	Energy Auditing	Electronics I & II
Grade 12	<ul style="list-style-type: none">•Introduction to Alternative Fuels•Green Construction	Power Industry Fundamentals



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How can the Center Help?

Access, Develop & Catalog Curriculum

- Research, Access, and Develop Curriculum with participation of industry, postsecondary, and secondary representatives
- Make it available on-line
- Provide teacher training on curriculum
 - Workshops
 - Conference
- Consider access to materials, supplies, equipment, and continued training



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- **Tie curriculum to industry-recognized certifications**
 - NCCER (National Center for Construction Education and Research Certifications)
<http://www.nccer.org/>
 - Community College Certificates and Degrees
 - Apprenticeship Levels of Achievement
 - CEWD (Center for Energy Workforce Development) stackable credentials (in development) <http://www.cewd.org/>
 - PG&E Power Pathways
<http://www.pge.com/about/careers/powerpathway/>



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Secondary Education Delivery Methods for Career Technical Education in California

- Regional Occupational Centers and Programs (ROCPs)
- California Partnership Academies
- California Community Colleges





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How can the Center Help?

Recruit, train & catalog TEACHERS

- Recruit potential teachers from industry
- Prepare industry representatives for teacher credentialing
 - Develop CTE credentialing program for energy-related industries and offer required training workshops throughout the year in different locations
- Develop cadre of industry representatives to serve as “visiting” educators
- Provide summer training and externships for existing teachers
- Maintain roster of qualified teachers
- Maintain list of training programs



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- **Identify existing providers of needed career technical education (CTE)**
 - Community Colleges and Workforce Training Centers
 - Technical Colleges
 - Universities and other Baccalaureate Colleges
 - Regional Occupation Centers and Programs
 - Apprenticeship Programs
 - California Partnership Academies
 - Industry-Based Training
 - Other community-based adult education
- **Determine gaps in Career Technical Education**
 - Program locations and availability vs. interest and need
 - Populations served vs. populations that need to be served
 - Career/job focus vs. industry needs
- **Identify strategies for creating & supporting CTE**
 - Pre-Apprenticeship programs
 - Industry-based training
 - Community –based training programs
 - Recruit and train teachers
 - Out of the box strategies



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California's Green Economy

Summary of Survey Results

A Report Prepared by
State of California
Employment Development Department
Labor Market Information Division



October 2010

EDD Employment
Development
Department
State of California

LaborMarketInfo
www.labormarketinfo.edd.ca.gov

<http://www.labormarketinfo.edd.ca.gov/contentpub/GreenDigest/CA-Green-Economy-SummarySurveyResults.pdf>

(This site requires registration)



State Plans and Reports

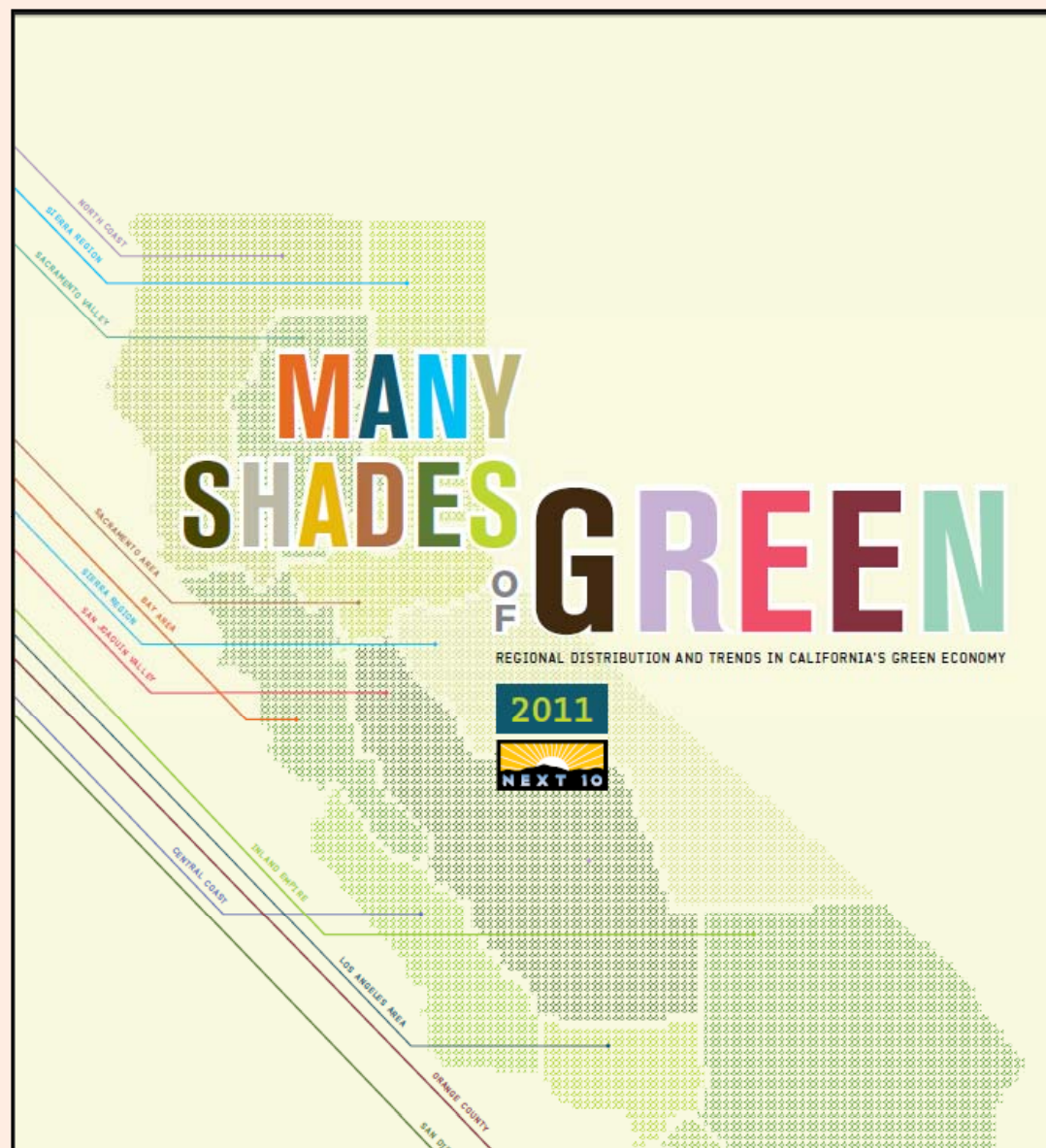
U.S. Dept. of Labor, Employment and Training Administration:

- Career Pathways
- Individual Assessment
- Adult Learning
- Job Training
- Skills Acquisition
- Industry-Recognized Certifications
- Job Placement
- State Plans & Reports
- Research, Laws and Regulations
- Technical Assistance Resources
- Closing the Gap between Business & Workers

<http://www.doleta.gov/usworkforce/>



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California State Assembly Select Committee on California's Green Economy

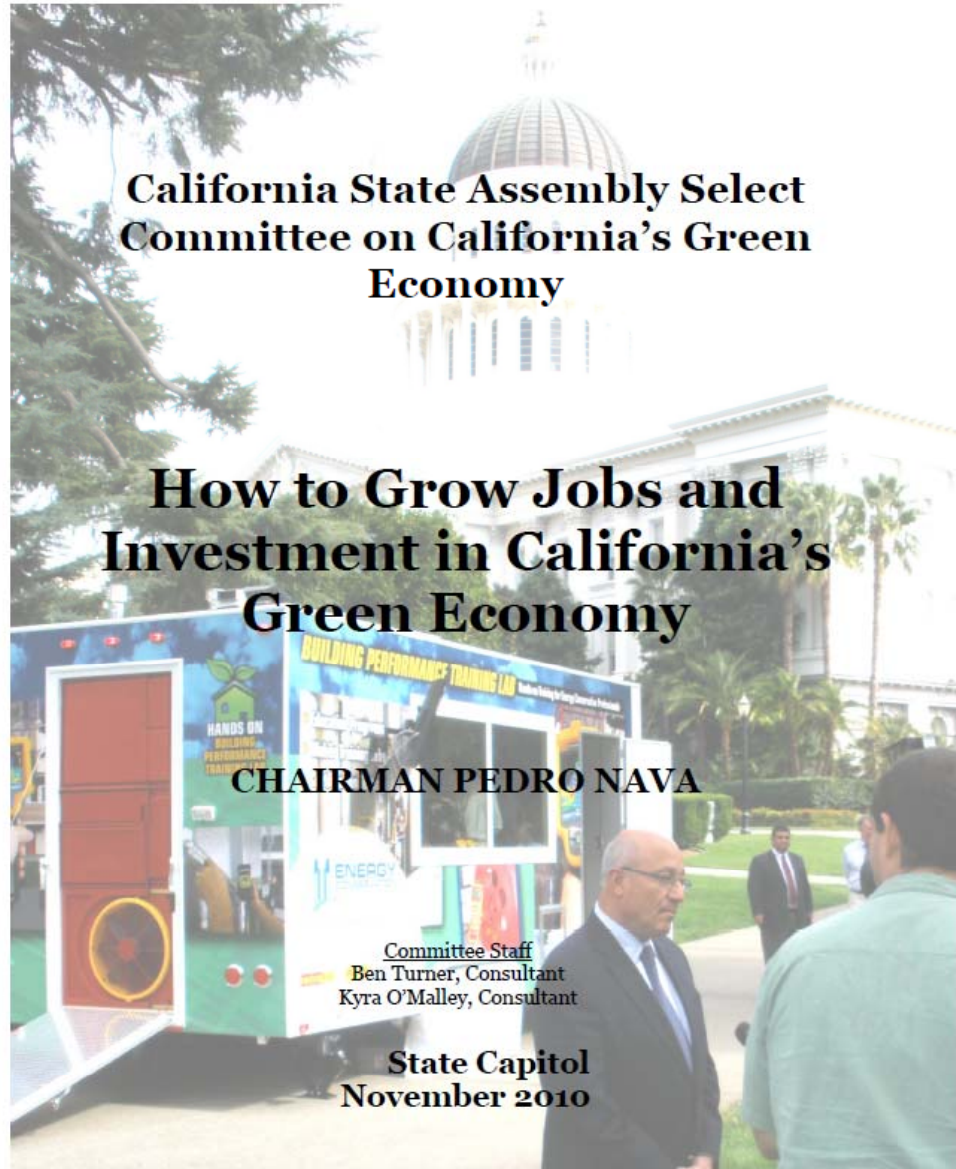
How to Grow Jobs and Investment in California's Green Economy

CHAIRMAN PEDRO NAVA

Committee Staff

Ben Turner, Consultant
Kyra O'Malley, Consultant

**State Capitol
November 2010**





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**THE OPPORTUNITIES
FOR OUR YOUTH
ARE DIMISHING**



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How could a center help California develop strategies to for a high road green economy, one that values quality, good wages & career pathways?

- Research: State, National, International
 - Trends in industry and education
 - Model education programs – secondary, postsecondary, industry-generated
- Recommendations for continued and new directions for industry and education
- **Proclaim the NEED FOR Career Technical Education in our high schools and colleges**
 - Legislative Awareness and Advocacy
 - Public Awareness and Public Relations



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Thank You



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California Department of Education
High School Transformation Unit

