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Green Workforce Development

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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**

Green Workforce Development Challenges

- Dedicated Staff
- Equipment, Facilities
- Funding
- Expertise

Time & Resource Commitment

- So Many Options to Choose
 - Where to Begin?
 - Easy to Get Distracted

Difficult to Prioritize or Focus Efforts

Challenges

Insufficient Information

- Only a Few SOC Codes
- Skill Standards & Certifications Not Universal
- Data Not Available at Regional/Local Level

Everyone is Getting Into the “Green Game”

- Duplication of Efforts
 - Competition
- Risk of Oversaturation

Collaborative, Sector-Based Initiatives: Key Elements

Industry-Sector Driven

- Energy
- Construction
- Transportation
- Manufacturing
- Agriculture

Regional Partners

- Business & Industry
- Public Agencies
- K12, CCs, Universities
- Labor Organizations
- Community-Based Organizations (CBOs)
- WIA - WorkSource Centers

Remove Barriers, Address Gaps in Workforce System

- Education & Training – Articulation & Alignment
- Reducing Duplication
- Hiring Practices

Career-Pathways

- Entry-Level Occupations
- Incumbent (Career Ladder or Lattice) Occupations
- Technical/Professional Occupations

Intermediary

- **Coordinates & Facilitates Collaborative Activities**

Los Angeles Infrastructure and Sustainable Jobs Collaborative

Industry-Sector Driven

- **Energy/Utility**
 - Construction
 - Transportation

Regional Partners

- **Industry** - L.A. Department of Water and Power, Southern CA Gas Company (Sempra), Water District of Southern CA
- **Gov't** - LA Community Development Dept
- **K20** - LAUSD, LA Trade-Tech College, CSULA
- **Labor** - IBEW Local 18 and Local 11, CA Building & Construction Trades Council
- **CBOs** - Apollo Alliance, Urban League
- **WIA** - Southeast Crenshaw WorkSource Center

Intermediary

- **Regional Economic Development Institute (REDI) @ LA Trade-Tech**

Sector Research

Industry & Occupation Trends

- Retirements
- Aging Infrastructure
- Renewable Energy Policy & Standards

Workforce Challenges


- Employment Eligibility
- Basic & Workplace Skills
- Job Classifications – **Green**

Greening of the Sector

- Existing Occupations – **Green** Technologies & Practices
- Emerging **Green** Occupations – Solar, Wind

Priorities

- Vacancies
- Prep Programs (Pre-Apprenticeship)
- Most Promising **Green** Occupations



The Regional Economic Development Institute (REDI)
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Clean Technology Workforce Challenges and Opportunities

Presented to the
Los Angeles/Orange County Regional Consortium &

LA OC
Regional Consortium


Los Angeles Trade-Technical College
LATTC
Los Angeles Community College District

Partial Funding Provided by the Los Angeles Department of Water and Power

Utility Industry Sector Report: Los Angeles
July, 2008

REGIONAL ECONOMIC DEVELOPMENT INSTITUTE (REDI)


The
Strategic Opportunity
To Build a Green Workforce
In Los Angeles
(Working Copy)



A Regional Education and Training Action Plan
February 2008

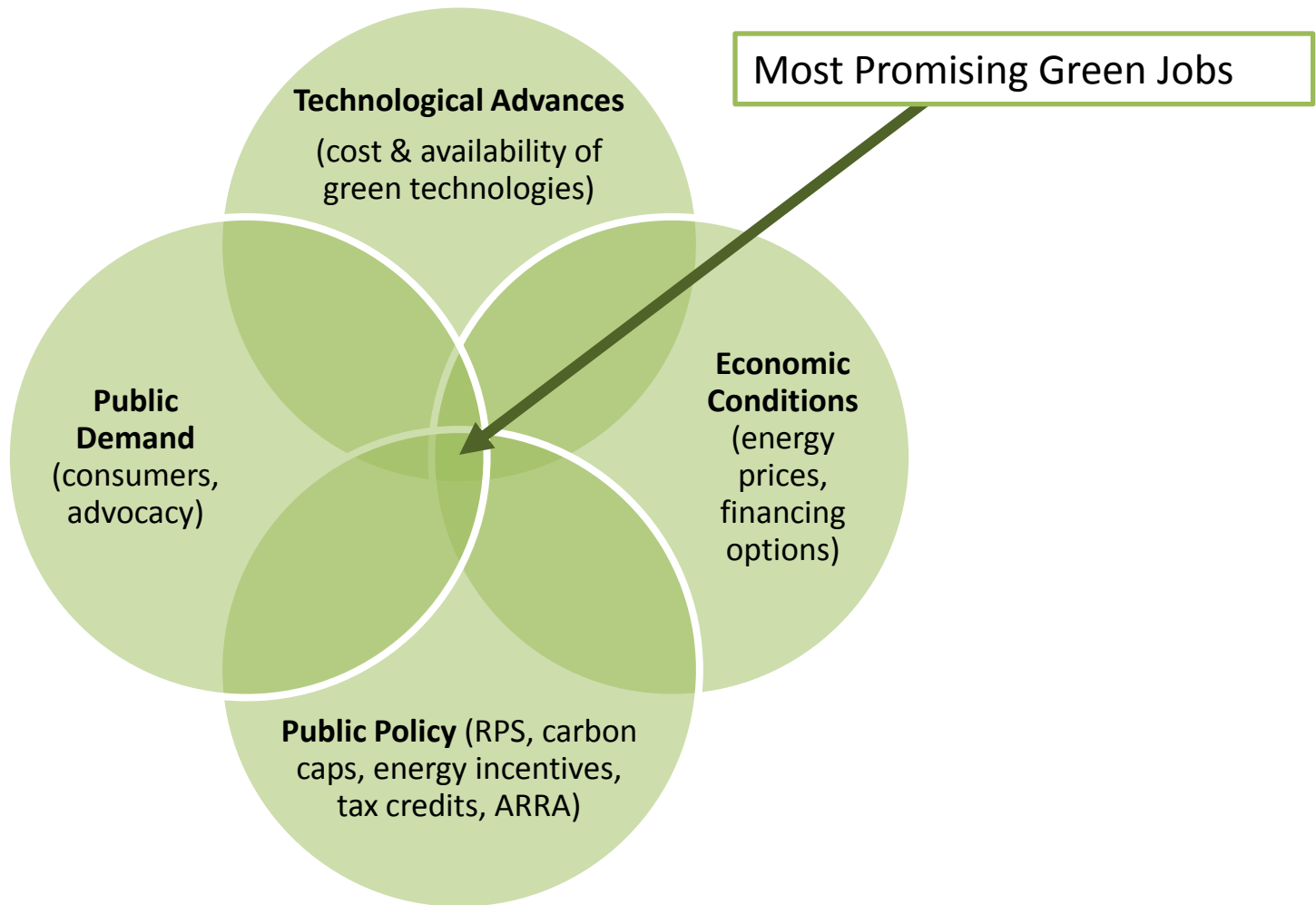
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<http://www.latc.edu/dept/latc/REDI/index.html>

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<http://www.latc.edu/dept/latc/REDI/Utility.html>



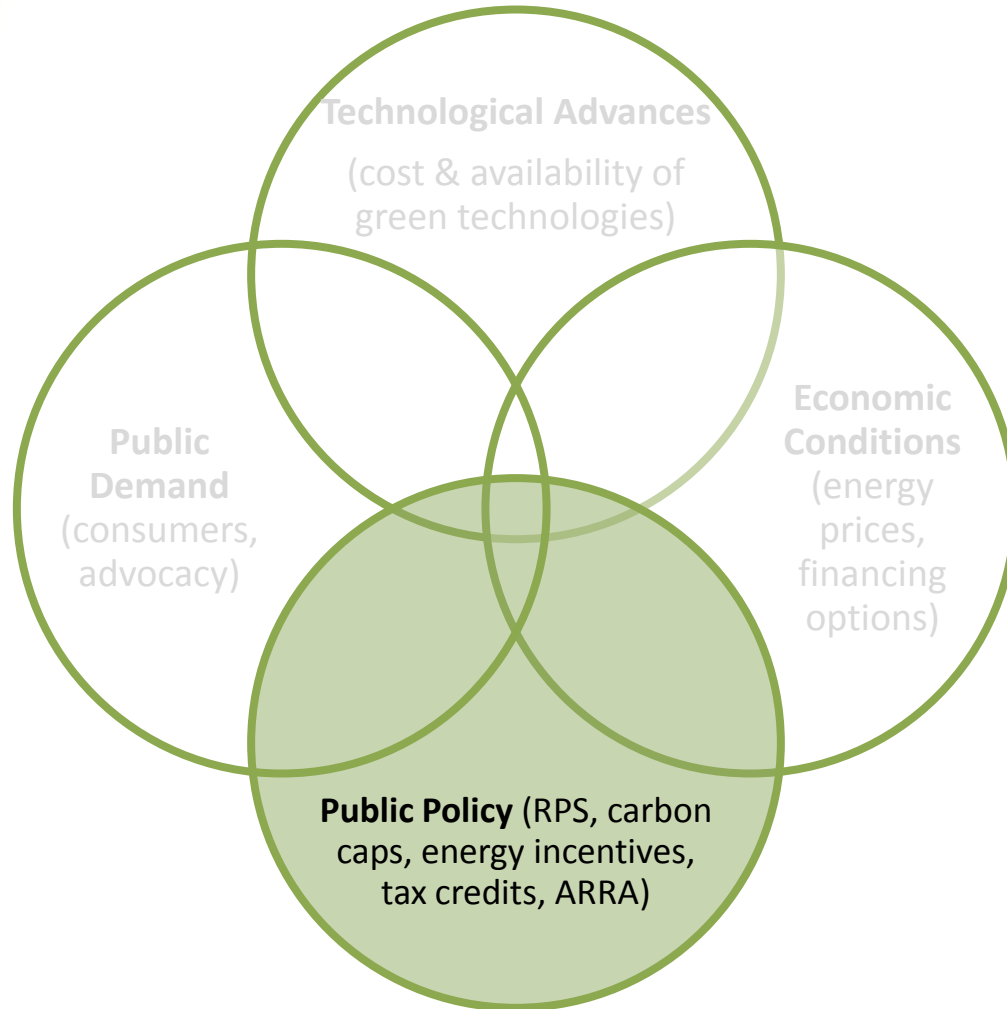
Green Workforce Research

What Drives Demand for Green Jobs?



Green Workforce Research

What Drives Demand for Green Jobs?



Public Policy

- American Recovery & Reinvestment Act
 - \$5 billion weatherization, low income homes
 - \$6.3 billion, energy-related grants to states
 - \$4.5 billion, federal building retrofits
 - \$11 billion, electrical grid modernization
 - \$4 billion WIA adult, dislocated, & youth job training & employment (emphasis on “green jobs”, renewable energy, infrastructure, energy efficiency, home retrofitting, biofuel development, vehicle development/manufacturing)
 - \$500 million DOL green jobs training competitive grant program (projects that prepare workers for careers in the energy efficiency and renewable energy sectors)
 - Labor Market Information
 - Energy Training Partnerships
 - Pathways Out of Poverty
 - State Sector Training
 - Green Capacity

Green Workforce Development

Priorities

Priorities

- Occupations with High Retirements
- Prep Programs (Pre-Apprenticeship)
- **Most Promising Green Occupations**

Workforce Challenges

- Employment Eligibility
- Basic & Workplace Skills
- Job Classifications – **Green**

Greening of the Sector

- Existing Occupations – **Green** Technologies & Practices
- Emerging **Green** Occupations – Solar, Wind

- Renewable Energy Technician
- Energy Auditor
- Compliance Specialist
- Resource Conservation/Efficiency Manager
- Energy Analyst
- Solar Installer Technician
- Energy & Indoor Air Quality Auditor
- Deconstruction Worker
- HVAC and PV Operations & Maintenance Technicians
- Diesel & Auto Technicians with alternative fuels and emissions controls competencies
- Water Supply, Distribution & Treatment Technicians/Operators

Utility & Construction Prep Program

Electrical Distribution Mechanic

Solar Installer & Maintenance Technician Program

Weatherization & Energy Efficiency Technician Program

Green Workforce Program Design

Employment Barriers - Gatekeepers

- Eligibility Requirements
 - Criminal Record
 - Right to Work
 - Driver's License
 - Automobile & Insurance
 - Drug-Free
- Civil Service Process
- Entry Occupations – Part-time; living wage

Career-Pathways

- Industry-Recognized Certifications & Standards
- US Department of Labor, Employment & Training Administration (DOLETA) Competency Framework
 - www.careeronestop.org/CompetencyModel
- Prep Programs – Workplace skills; math & English skills (contextualized)
- Pathway Mapping
 - Entry-level
 - Incumbent, career ladder
 - Professional, management

Competency Framework

Building Block Competencies for Utilities Careers

Tier 5: Industry-Sector Technical Competencies
Competencies Specified by Industry Sector Representatives

Tier 4: Industry-Wide Technical Competencies
Competencies Specified by Industry Sector Representatives

Tier 3: Workplace Competencies				
Teamwork	Customer Focus	Problem Solving & Decision-Making	Working with Tools & Technology	Checking, Examining, & Recording

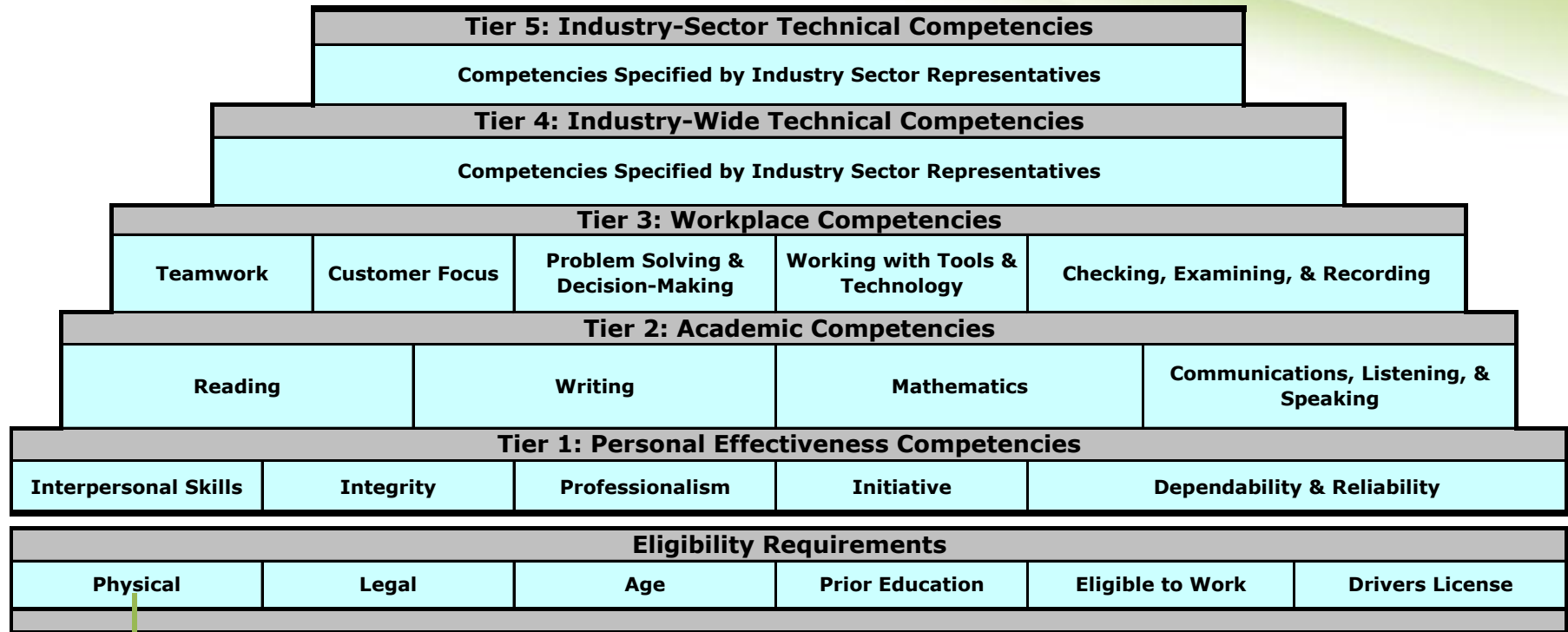
Tier 2: Academic Competencies			
Reading	Writing	Mathematics	Communications, Listening, & Speaking

Tier 1: Personal Effectiveness Competencies				
Interpersonal Skills	Integrity	Professionalism	Initiative	Dependability & Reliability

Eligibility Requirements					
Physical	Legal	Age	Prior Education	Eligible to Work	Drivers License

Competency Framework

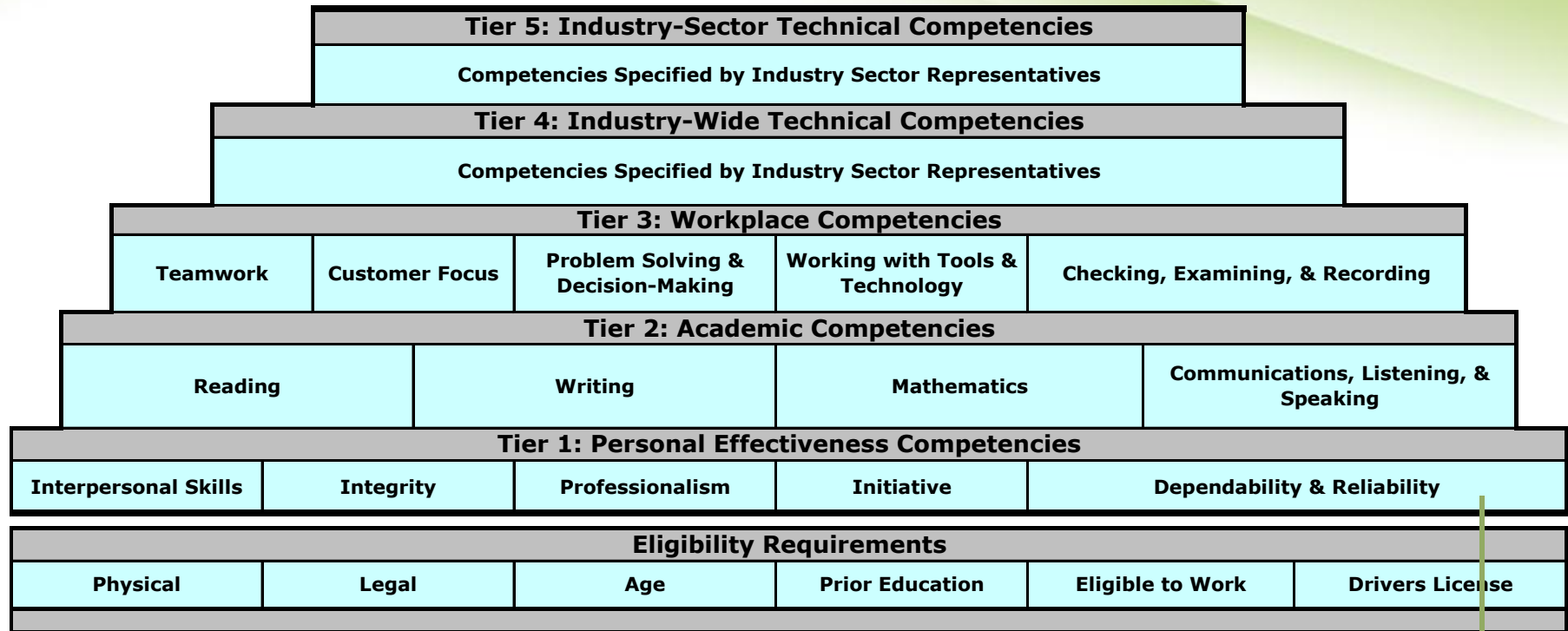
Building Block Competencies for Utilities Careers



- *Lifting capacity (50 lbs)* – Has physical capacity to lift 50 lbs above head
- *Stooping, crawling, squatting* – Has physical capacity to stoop, crawl, squat, and maneuver on hands and knees
- *Working in small/confined spaces* – Has capacity to work and maneuver in small and confined spaces
- *Walking and standing* – Has physical capacity to walk 5 to 7 miles per day and stand for extended periods of time
- *Agility* – Able to climb ladders (no fear of heights)

Competency Framework

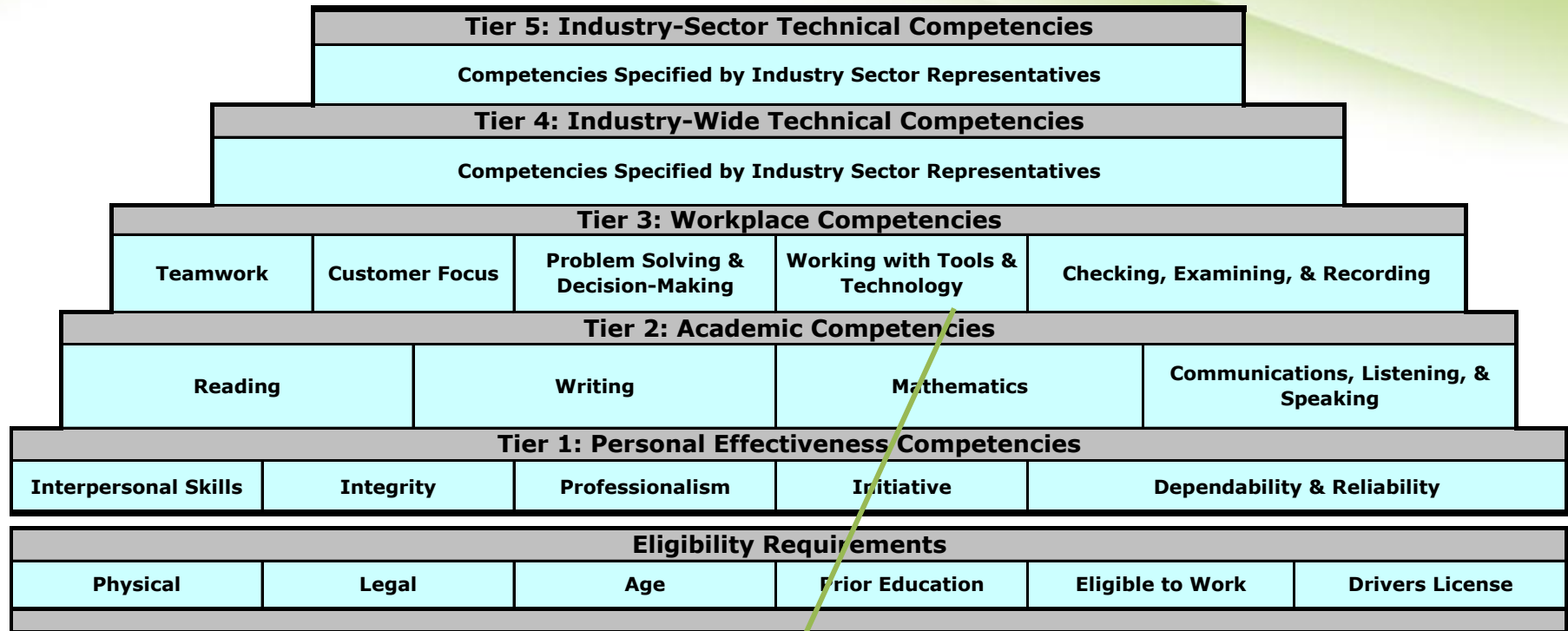
Building Block Competencies for Utilities Careers



- *Fulfilling obligations* – Behaves consistently and predictably; is reliable, responsible and dependable in fulfilling obligations; diligently follows through on commitments and consistently meets deadlines
- *Productivity and accountability*^{21c} – Demonstrates sense of accountability for producing products/services to required standards and beyond
- *Showing up on time* – Demonstrates regular and punctual attendance; rarely is late for work, meetings, or appointments
- *Complying with policies* – Follows written and verbal directions; complies with organizational rules, policies and procedures, ability to take and follow directions

Competency Framework

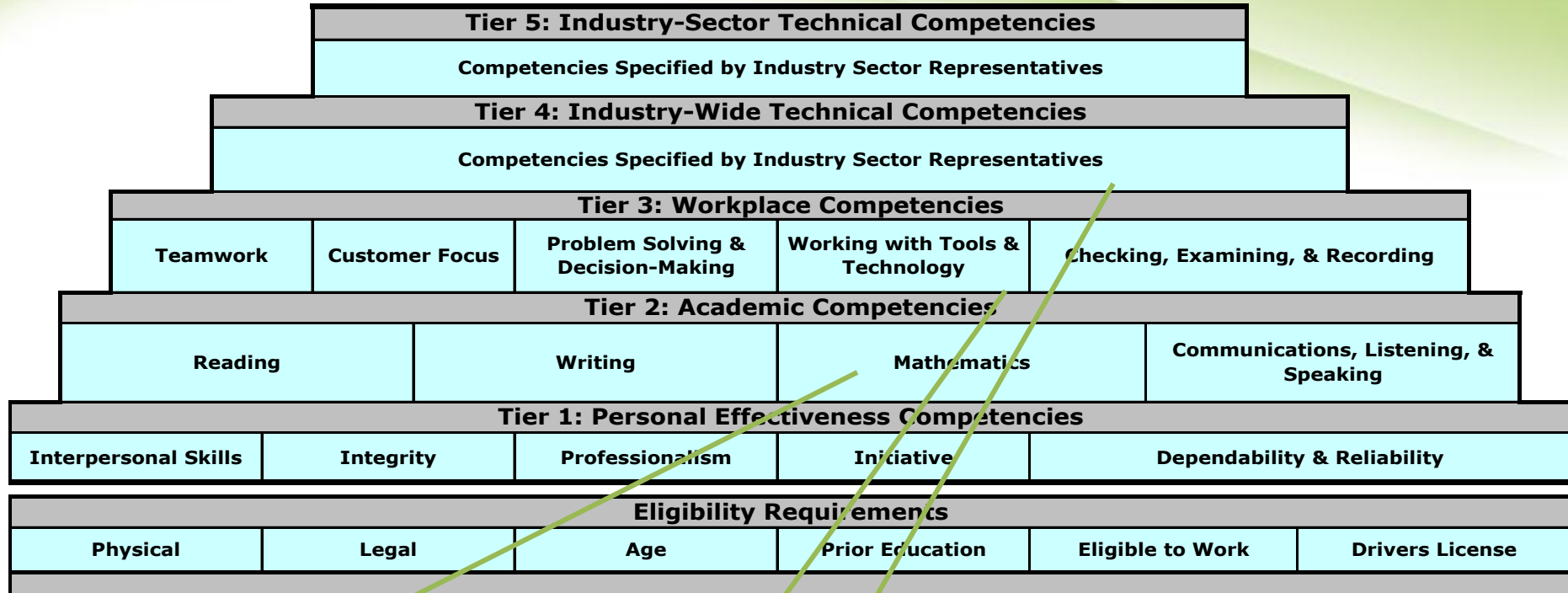
Building Block Competencies for Utilities Careers



•*Selecting tools* – Basic understanding and use of hand/portable power tools; selects and applies appropriate tools to frequently encountered problems; carefully considers which tools are appropriate for a given job and consistently chooses the best tool for the problem at hand; understanding of the clockwise and counter-clockwise principles (e.g., righty-tighty, lefty-loosey)

Competency Framework

Building Block Competencies for Weatherization Careers



• *Calculation* – Calculate minimum ventilation rates

• *Materials Selection* – Proper materials selection based on location of leakage areas

• *Air Sealing*– Use the blower door to locate leakage sites within the building; seal attic and floor bypass at penetrations for plumbing, electrical wiring, flue vents, ducts, dropped soffits, and balloon-framed walls; seal typical bypasses in kneewalls and finished attic spaces; seal basement band joists; properly apply caulk and spray foam insulation; identify, select, and install weatherstripping on doors, windows, and attic latches; cut glass, replace broken window panes; and apply glazing compound; repair plaster and sheetrock (drywall); and modify or install mechanical ventilation to ensure acceptable indoor air quality for post-air-sealing conditions.

Career Pathways (Weatherization)

Contractor

Field Supervisor

Program Manager

Energy Auditor

Training & Technical
Assistance
Coordinator

Outreach
Coordinator

Inspector

Weatherization
Eligibility Specialist

Weatherization
Quality Assurance
Inspector

Intake/Outreach
Specialist

Crew Chief

Enroller

Assessor

Weatherization
Installer

Green Workforce Program Design – Role of Partners

Entry-Level Programs

Tiers 1-3 Competency Framework

- **Industry:** Participate in Program Design, Hiring Barriers, Program Support, Mentorships, Instructors & Guest Lecturers
- **Gov't:** Policy, Funding
- **Labor:** Participate in Program Design, Transitions From Pre-apprenticeship to Apprenticeship Programs, Instructors & Guest Lecturers
- **K12 and CCs:** Personal Effectiveness, Academic & Workplace Skills Education Programs; Tech-Prep Articulation
- **CBOs & WorkSource Centers:** Outreach, Workplace Skills, Case Management, Placement

Career-Pathways

Tiers 4-6 Competency Framework

- **Industry:** Participate in Program Design, Hiring Barriers, Program Support, Internships
- **Gov't:** Policy, Hiring Barriers, Funding
- **Labor** – Apprenticeship Programs
- **CCs and Universities:** Technical & Professional Certificate/Degree Programs, Apprenticeship Programs, Standardizing Curriculum, Articulating Programs
- **CBOs & WorkSource Centers:** Case Management, Placement

Role of Community Colleges

- Serve as Collaborative Intermediary
- Conduct Research: **Green**-Related Research, Industry-Sector Studies, Environmental Scans
- **Green** Liberal Arts & Career-Technical Programs
- Develop New, Targeted **Green** Career-Technical & Professional Certificate/Degree Programs
- Articulate Programs with K12 & Universities
- **Green** Advocacy & Policy
- Facilitate Transitions to Apprenticeship Programs &/or Serve as LEA
- Partner with CBO's & WorkSource Centers for Outreach, Case Management, Joint Training Programs, & Placement
- Serve as Fiscal Agent for Collaborative Grants & Contracts