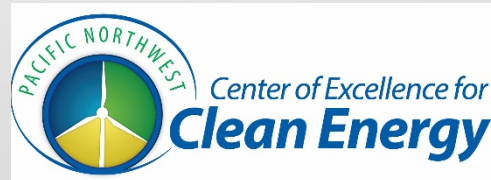


# SKILL STANDARDS FOR THE ENERGY INDUSTRY

Alan Hardcastle, PhD  
Senior Research Manager  
WSU-Social and Economic Sciences Research Center  
&  
Barbara Hins-Turner, MBA  
Executive Director  
Center of Excellence for Clean Energy, Centralia College

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# Centers of Excellence in Washington State

Centers are Economic Drivers for Industries that Grow the State's Economy

- Housed in Community and Technical Colleges – Home Campus
- Industry Sector Strategy – Codified into State Legislation
- Align with State Commerce Identified Sectors

What Centers Do

- **Convene** Industry partners to problem solve workforce needs
- Develop partnerships to create solutions and strategies
  - Industry, labor, education (K-20), workforce and economic development systems
- Disseminate information, lessons learned, and outcomes

<http://cleanenergyexcellence.org/>

# Grounded in the Research

## Labor Market Studies

- Workforce Challenges of the Electric Sector in the Pacific Northwest, 2013
- Workforce Challenges of the Electric Sector in Washington & Oregon, 2008

<http://cleanenergyexcellence.org/resources/>

## Occupational Skill Standards

- Plant Operator, Mechanic, & Electrician
- Wind Technician
- Customer Service Rep
- Bonneville Power Admin Transmission Standards

<http://cleanenergyexcellence.org/industry/skill-standards/>

# SKILLS GAP Between

**Industry  
Skill Needs**

**Employee  
Skill Sets**

- what industry needs for productive employees

- how well prepared potential employees are



# Underlying Reasons for the Skills Gap

- New jobs--and whole new industries--are emerging
- Workers change jobs more often
- Work is more knowledge-based
- Labor markets are international
- Skill demands are escalating:
  - foundation skills
  - technical skills
- Changing demographics and labor pool
- Need for continuous learning

# Why Skill Standards?

- Communicate workplace expectations
- Increase responsiveness of public education, workforce programs, service providers
- Enhance employability and portability of skills
- Match programs and curriculum to workplace requirements (Relevance)
- Goal: Close the skill gap

# Why Energy Occupations?

- Key positions in a changing industry
- Retirement-replacement concerns
  - Existing workforce
  - Future workforce
- New technologies and processes
- Knowledge and skill expectations changing
- Define and verify by local-regional companies
- Standards relevant to other industries, programs and certifications

# What are Skill Standards?

- Skill Standards are agreed upon, industry-defined knowledge, skills and abilities required to succeed in the workplace.
- Skill Standards include criteria for what people must know and be able to do to be successful, including the level of performance required.



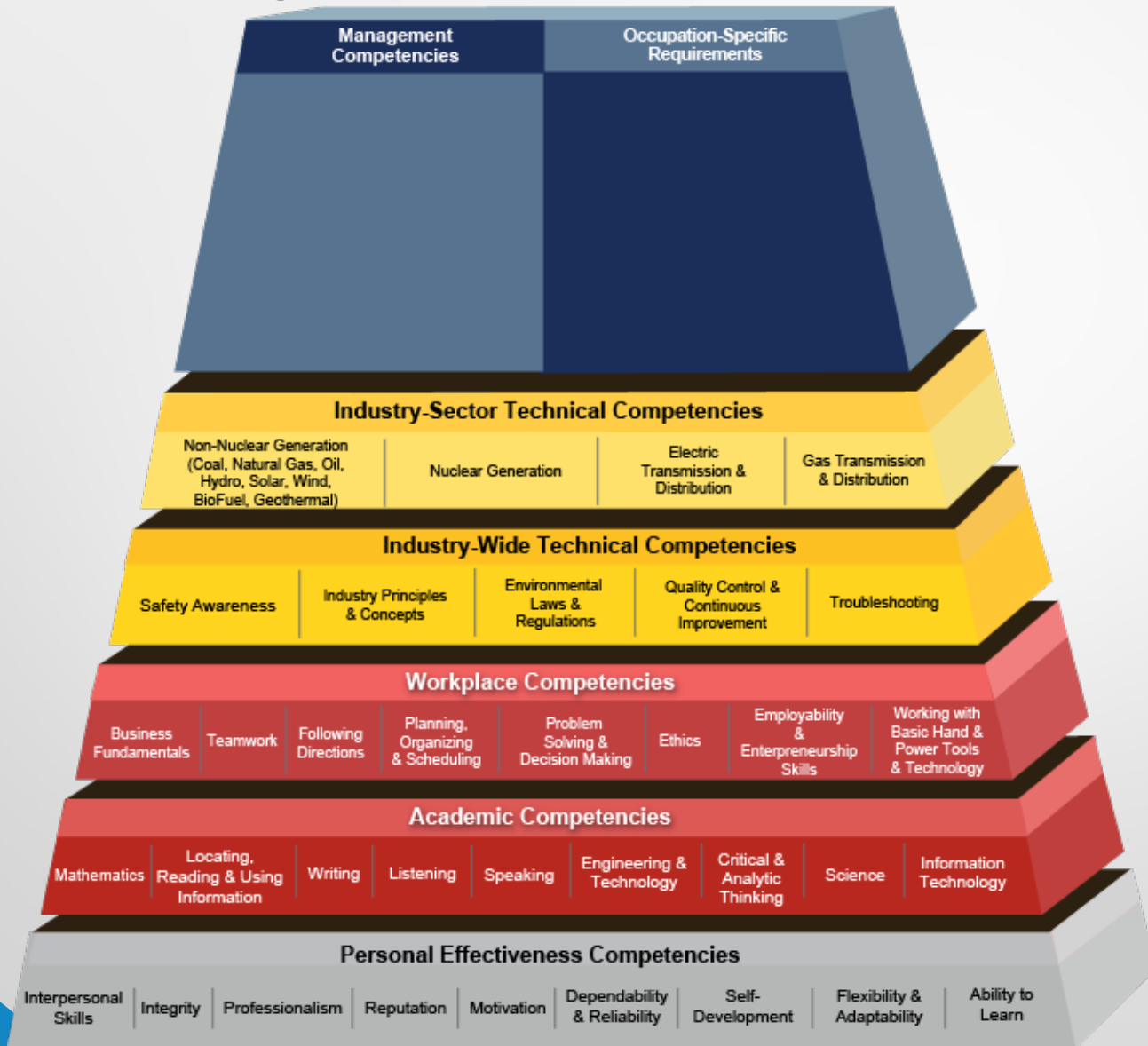
# Pyramid of Competencies

Industry Specific  
Skills

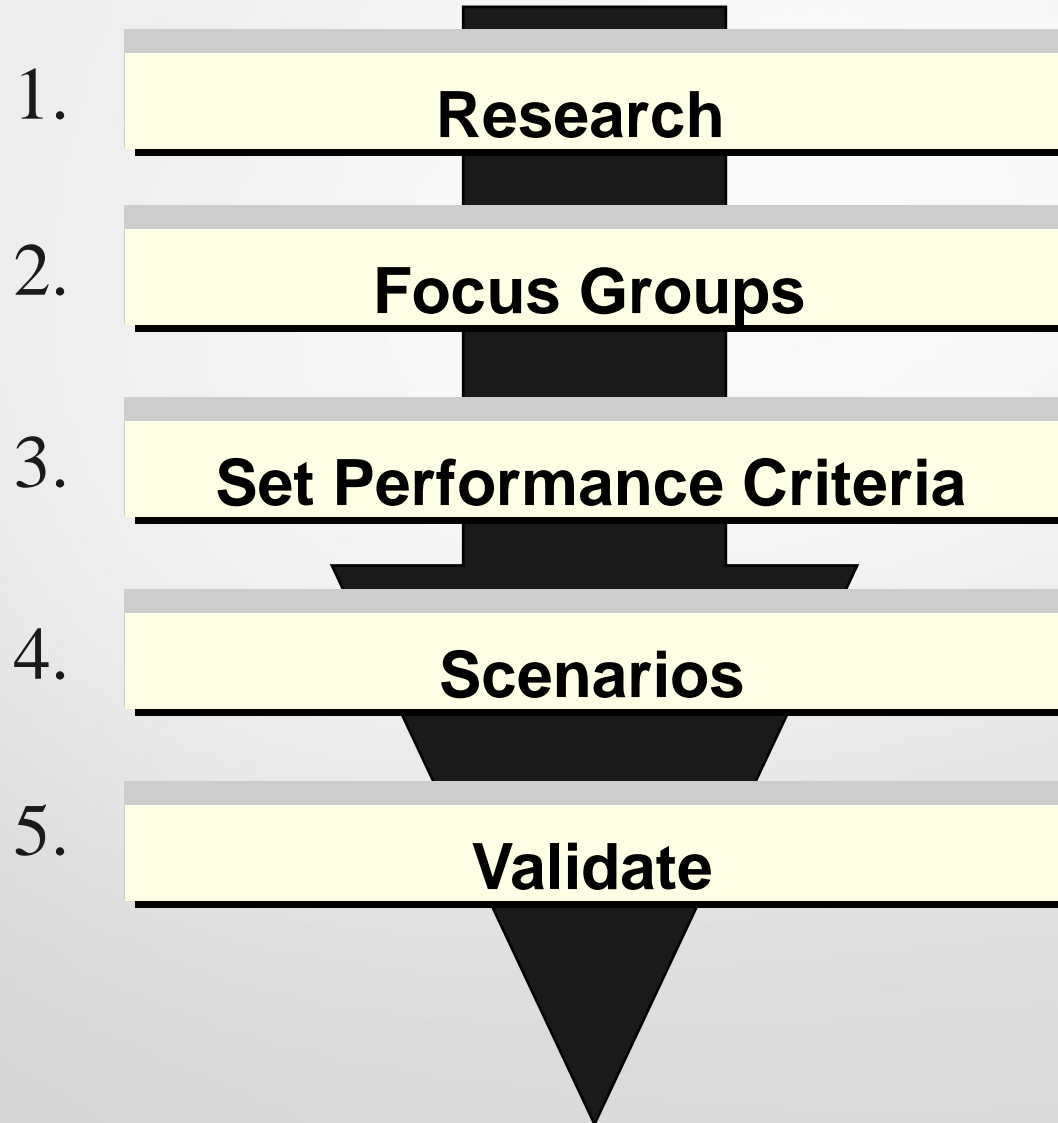
Technical Skills,  
Knowledge & Abilities

Foundation Academic and  
Employability Skills (SCANS)

# DOL Energy Sector Competency Model



# Process: Building Skill Standards



# Industry Leadership & Discussion

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## Industry Trends

- What's Changing? Key Drivers?
- Impact of Technology, Economy and Markets on Energy sector work?
  - Roles, Responsibilities and Skills
- Who is on the Leading Edge?
  - Technology, organization/production redesign, lean production, etc.

# Skill Standards Example and Components

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- Examples of skill standards (reports)
- Identify the components:
  1. Critical Work Functions
  2. Key Activities:
    - Performance indicators
    - Technical knowledge
    - Employability skills (SCANS)

# Critical Work Functions

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What are the major responsibilities at work?

(Big, broad; main roles)

# Key Activities

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What does a person in the occupation need to do to carryout these functions?

(Specific sets of tasks)

Most critical work functions can be described by 4 to 8 key activities.

# For Each Key Activity

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Define the following:

- Performance indicators
- Technical knowledge
- Employability skills (SCANS)



# Final Steps: Verification

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1. Review by Participants and Other SMEs
2. Verification by Industry (Survey)
3. Publication/Distribution

# Conclusions

- Centers are a vehicle and convener for effective industry-education relationship building
- Research helps drive collaboration, commitment and investment
- Skill standards provide a common foundation and tool for effective action
- Skill standards support workforce recruitment, education and training, and succession planning efforts

# Contacts

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Alan Hardcastle

360-586-2277

[Hardcast@wsu.edu](mailto:Hardcast@wsu.edu)

Barbara Hins-Turner

360-807-4087

[Barbara.hins-turner@centralia.edu](mailto:Barbara.hins-turner@centralia.edu)



*Thank You!*