Workforce Development Summit
Skilled Worker Shortage: Programs That Are Making a Difference

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Frank Werner
Director of Business Dev Americas
1 article

High-Paying Trade Jobs Sit Empty, While High School Grads Line Up For University

April 25, 2018 - 4:33 PM ET
Heard on All Things Considered

The construction industry work. It affects design and

Skilled workers have left the workforce, and insufficient shortage since there was a

Attending a White House event on workforce development, NAHB Chairman Randy Noel pledged that NAHB and the Home Builders Institute (HBI) will educate and train 50,000 new workers over the next five years for careers in the construction trades.

Trump Signs Order to Strengthen Workforce Skills S
Why an Honors Student Wants to Skip College and Go to Trade School

As worries about student debt rise, states and businesses increasingly push faster, cheaper paths to the workplace, parents are stumped.

This female contractor says #moveoverbob

Angela Cacace left a successful career in barbering to start her own construction business and enrolled in the Building Construction Technologies program at Central Carolina Community College (CCCC). On the first day of class, she was surprised to Casev Toth - ctoth@heraldsun.com

Women in Management Occupations

- Human Resources Managers: 74%
- Social and Community Service Managers: 71%
- Education Administrators: 65%
- Food Service Managers: 46%
- Marketing and Sales Managers: 45%
- Chief Executives: 27%
- Computer and Information Systems Managers: 26%
- Construction Managers: 7%

bla.gov
The North Carolina Energy Efficiency Potential Report

Quantifying the energy, economic and environmental benefits available to North Carolina through increased investment in energy efficiency.
People Who Save Energy
Our people: The key to EDF's impact

Laura Rodriguez, Senior Director, Mexico Oceans Program
• Lack of available skilled labor
• Lack of common, current and supported curricula
• Aging population of technical trades
• Lack of statewide resources for apprenticeships, internships, etc.
• Need for career pathways
• Questions on diversity and inclusion

• Elevate the awareness of industry jobs – they pay well – for students, parents
• Improve negative position of “trades” work
• Bring together resources so that we’re all better
• Support our industry’s current workforce with new career resources
Our Goals

- To inform and excite High School students about Architecture, Engineering and Construction Career Opportunities.

- Support the development of basic and technical skills and form positive relationships with industry professionals.

- Provide references for college admissions, internships, and full time employment, and give scholarships to students pursuing the ACE career fields.

- Attract and promote all students and especially minorities, women, and low-income populations in the community.
Offer industry professionals career planning, placement, development and continuing education opportunities and resources.

- Establish strong industry-supported credentialing, certification and licensing standards.
- Market career opportunities to high school, community college and university students.
- Improve the perception of career opportunities in our industry’s skilled trade positions.
- Offer and promote internship, co-op and apprenticeship programs across the state.
- Offer continuing education, networking and other workshops and events.

Read about our Strategic Plan at: http://buildingnc.org/strategic/
Member interviews at www.BuildingNC.org
Why Working Groups?

• What problems do we see in the marketplace that could be improved through greater attention to this topic area? Lack of skilled labor, retiring or aging workforce, lack of “respect” for trades work, etc.

• Identify useful benchmarks in other industries – home building, HVAC, plumbing, solar, etc. (Thank you Holly, Paul, Bill, Jim and others)

• How do students and parents find out about our industry? What resources are needed to help advertise them?

• What is the perception of jobs and careers in our industry?
9:30am: **Panel Session:** “Developing our future workforce”

9:55: **Panel Session:** “Industry insights and perspectives”

10:30 – 11:15: **Working group session one**

11:15 – Noon: **Working group session two**

11:45 / Noon – 1:00pm: **Networking lunch**

1:00 – 2:00: **General session**

2:15 – 3:00: **Working group session three**

3:00 – 3:45: **Working group session four (all upstairs)**

4:00 – 5:00: **Closing session**
Developing Our Future Workforce

J. Hackett  
Executive Director  
Green Opportunities  
Asheville, NC

Shannon Musselwhite  
Adjunct Instructor  
AB Tech  
Asheville, NC

Pinaki Acharya  
Recent Graduate  
NCSU Mech Engineering  
Raleigh, NC

Megan Berry  
Sr. Clean Energy Training Specialist  
NC Clean Energy Tech Center  
Raleigh, NC
WORKFORCE DEVELOPMENT
Improving energy efficiency education
Industry Insights and Perspectives

Bill Stricker
VP of Ops & Work Dev
Carolinas AGC
Charlotte, NC

Jordan Jones
Engagement & Equity Specialist
NC Sustainable Energy Association
Raleigh, NC

Tim Gasper
Energy Solutions Team Leader
Siemens
Raleigh, NC

Josh Hartness
Rating Field Inspector
Performance Point
Charlotte, NC
Facilitator: Nancy Kaplan, Manager of Workforce Development, Building Performance Institute, Inc. (BPI)

Problem Question: Do our current educational curricula match our industry’s needs?

What we hope to develop today: Identify curricula updates and faculty resources needed.

Target Participants: Faculty, students and industry pros.
Facilitator:
Curt Hurd, Residential Buildings Specialist, NCBPA

Problem Question:
What types of apprenticeship programs are needed to support our industry companies and professionals?

What we hope to develop today:
Details for one, four or more desired apprenticeship roles.

Target Participants:
Industry pros, faculty, students and job educators.
1. Commercial:
   a. Building Energy & Performance Contracting Technician
      i. Needed credentials: TBD
      ii. Field work: energy services performance contracting, insulation, green
      building, automation and controls, HVAC, building envelope, water
      efficiency, indoor air quality, etc.
      iii. Course work: TBD
      iv. Years: 3
      v. Benchmarks: TBD
   b. High Performance Building Design Professional
      i. Needed credentials: TBD
      ii. Field work: zero energy building, green building, Passive House, automation
      and controls, HVAC, building envelope, water efficiency, indoor air quality,
      etc.
      iii. Course work: TBD
      iv. Years: 3
      v. Benchmarks: TBD
2. Residential (single and multifamily):
   a. Home Energy & Performance Contracting Technician
      i. Needed credentials: BPI Building Analyst, Crawlspace Credential (NCBPA
      pending), Insulation Credential (NCBPA pending).
      ii. Field work: energy audits, weatherization, insulation, air sealing, building
      envelope, crawlspace, attic repair, HVAC, etc.
      iii. Course work: TBD
      iv. Years: 2
      v. Benchmarks:
         a. Alaska Building Energy Retrofit Technician
         b. Connecticut Energy Efficiency Technician
         c. DOL Energy Auditor & Analyst Apprenticeship Program
         d. National Association of Regional Councils Report
         e. Liuna Training
   b. High Performance Home Design Professional
      i. Needed credentials: BPI Building Analyst, RESNET Home Energy Rater, NAHB
      Certified Green Professional, USGBC LEED AP.
      ii. Field work: zero energy home, green building, Passive House, automation
      and controls, HVAC, building envelope, water efficiency, indoor air quality,
      etc.
      iii. Course work: TBD
      iv. Years: 2
      v. Benchmarks: TBD
Facilitator: Malinda Marsh, NCWorks Career Center Coordinator, Central Carolina Community College

Problem Question: How can we inform students, parents, young pros and experienced pros about our industry career opportunities?

What we hope to develop today: A “Career Lattice” from the top-down and side-to-side.

Target Participants: Industry pros, faculty, students and job educators.
Career Pathways Resources

Field-Based Roles

- **Owner/Operator**
  - Oversees all company operations

- **Manager/Executive**
  - 4 – 7 years experience with increasing business oversight

  - **Foreman**
    - 3 – 5 years with required licenses and certifications
  - **Journeyman**
    - 2 – 3 years in workplace environment

Office-Based Roles

- **Designer/Consultant**
  - 3 – 5 years with required certifications

- **Analyst/Specialist**
  - 2 – 3 years in workplace environment

Positions Include:
- **TBD**

- **Apprenticeship**
  - 2 – 3 years in workplace environment

- **Pre-Apprenticeship**
  - 12 months in workplace environment

- **Internship/Co-op**
  - 6 – 12 months in workplace environment

- **Student**
  - High school, GED, 2 or 4-year degree

Positions Include:
- **TBD**

1. **Student:**
   a. High school GED, 2-year or 4-year degree student learns about the industry and gains an interest.

2. **Internship/Co-op:**
   a. Gain basic understanding of industry opportunities and define career pathways interest for field-based or office-based work.

3. **Pre-Apprenticeship:**
   a. Gain soft and hard skills to prepare for Apprenticeship.

4. **Apprenticeship:**
   a. 2 – 3 years of experience with relevant course work, field work, certifications and credentials
   b. Pay and benefits ranges: TBD

5. **Journeyman (Field-based interest)**
   a. 2 – 3 years of full-time work experience as licensed/certified professional working underneath experienced professionals.
   b. Pay and benefits ranges: TBD

6. **Analyst/Professional (Office-based interest)**
   a. 2 – 3 years of full-time work experience as certified professional working underneath experienced professionals.
   b. Pay and benefits ranges: TBD

7. **Foreman (Field-based interest)**
   a. 3 – 5 years of full-time work experience leading field work, managing employees, working with customers and managing parts of a business.
   b. Pay and benefits ranges: TBD

8. **Designer/Consultant (Office-based interest)**
   a. 3 – 5 years of full-time work experience leading office work, managing employees, working with customers and managing parts of a business.
   b. Pay and benefits ranges: TBD

9. **Manager/Executive (Field or Office-based interest)**
   a. Manages all aspects of the business.
   b. Pay and benefits ranges: TBD

10. **Owner/Operator (Field or Office-based interest)**
    a. Oversees and leads all aspects of the business.
    b. Pay and benefits ranges: TBD
Internship and Co-op Programs

Facilitator:
Abby Coulter, Commercial Buildings & Member Services Specialist, NCBPA

Problem Question:
Can industry-coordinated internship and co-op programs help address some of our workforce challenges?

What we hope to develop today:
A framework for programs that many companies can effectively participate in.

Target Participants:
Faculty, students and industry pros.
State and Local Resources

Facilitator:
David Doctor, President & CEO, E4 Carolinas

Problem Question:
How can industry companies best work with resources available through state and local governments?

What we hope to develop today:
Actionable steps for industry companies and stakeholders to take with state and local government resources.

Target Participants:
Industry pros and government reps.
Facilitator:
Marilynn Marsh-Robinson, US Climate and Energy Partnerships and Alliances Manager, EDF

Problem Question:
How can our industry address challenges facing our companies and workers related to diversity and inclusion?

What we hope to develop today:
Recommendations for programs and resources that educate, inform and inspire action amongst industry pros.

Target Participants:
All!
Faculty Curricula
Apprenticeship Programs
Career Pathways
Internship and Co-op Programs
State and Local Resources
Diversity and Inclusion
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Workforce Development Summit
Residential Survey Results

How positive do you feel about workforce development?  Neutral 3/5
What concerns you the most about the future of our industry?  “Shortage of skilled workforce”
Is your company having difficulty finding and retaining workers?  Yes 3 to 1
Do you plan on hiring new employees?  Yes 75%
Where does your company have the most success finding qualified employees?  Employees: 44%  Colls/Univs: 25%  High Schools: 0%
What are the largest barriers you face in hiring entry-level workers?  Drug tests and background checks
What is your interest level in hiring an Apprentice for 1 – 3 year period?  Yes 2.8/4
<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
</tr>
</thead>
<tbody>
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<td>How positive do you feel about workforce development?</td>
<td>Neutral 3.1/5</td>
</tr>
<tr>
<td>What concerns you the most about the future of our industry?</td>
<td>Skilled workforce availability</td>
</tr>
<tr>
<td>Is your company having difficulty finding and retaining workers?</td>
<td>Yes 10 to 1</td>
</tr>
<tr>
<td>Do you plan on hiring new employees?</td>
<td>Yes 84%</td>
</tr>
<tr>
<td>Where does your company have the most success finding qualified employees?</td>
<td>Employees: 57% Colls/Univs: 35% High Schools: 1%</td>
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Michelle Muir

North Central Regional Operations Director

North Carolina Department of Commerce
Marilynn Marsh-Robinson

US Climate and Energy Partnerships and Alliances Manager

Environmental Defense Fund
The Value of Partnerships in Training and Workforce Development

September 20, 2018

Presenter:
Nancy Kaplan
nkaplan@bpi.org
Faculty Curricula
Apprenticeship Programs
Career Pathways
Internship and Co-op Programs
State and Local Resources
Diversity and Inclusion
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Apprenticeship Programs
Career Pathways
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State and Local Resources
Diversity and Inclusion
Holly Finley
Talent Acquisition Specialist
Brady
THANK YOU
Our people: The key to EDF's impact
NCBPA
North Carolina Building Performance Association

Workforce Development Summit

This female contractor says #moveoverbob

Angela Cacee left a successful career in barbering to start her own construction business and enrolled in the Building Construction Technologies program at Central Carolina Community College (CCCC). On the first day of class, she was surprised to Casey Toth - ctothlineandsun.com