Equipping Contractors to Address the Workforce Shortage

This session is eligible for 2 Contact Hours.

To earn these hours you must:
- Have your badge scanned at the door
- Attend 90% of this presentation
- Fill out the online evaluation for this session

Joey Shorter  
Director of Workforce Development, NECA

Todd Stafford  
Executive Director of the IBEW-NECA Electrical Training ALLIANCE
AWAKENING

The Great Talent Shortage

ManPower Group’s Annual Talent Shortage Survey

- 35% (and rising dramatically) of employers report difficulty filling jobs due to a lack of available talent
- Highest shortage since the start of the global recession
- Complacency has set in with most employers
- Assumption is that competitors are also faced with it
- Employer agility is key
As the Talent Shortage Increases, the Perceived Impact Increases

John C. Maxwell

When opportunity knocks, it’s too late to prepare.
The Looming Talent Shortage

• "Talent shortage"—the disparity between what employers need and what available employees have to offer

• The "perfect storm" is brewing and is showing no signs of subsiding

• The demographics are both "old" and "young"

Japan: "an old problem"

• Shrinking population—record-low birthrate in proportion to citizens age 65 is world's highest

• 2009—55% employers reported difficulty filling jobs

• 2013—85%

• Dwindling number of workers can't support what was once a fast-growing economy
In Japan, and everywhere else, the most commonly cited cause of the talent shortage: SKILLS

- Hard technical competencies
- Veteran employees at retirement age
- Soft workplace skills
- Younger employees missing from apprenticeships

It’s not just Japan

<table>
<thead>
<tr>
<th>Canada</th>
<th>China</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retirees now outnumber youth for the first time in Canada’s history</td>
<td>The number of elderly = 40% of the labor force</td>
</tr>
<tr>
<td></td>
<td>Globally that # has doubled but is only to 25%</td>
</tr>
</tbody>
</table>
Guess Who’s Coming to Lunch?

Â Baha Mar is the largest single-phase, luxury resort project in development in the Western Hemisphere (Cable Beach, Nassau, Bahamas)
Â Projected to be $3.5B development
Â 1,000 acre, 3,450 rooms, just 500 less than Atlantis only 6 miles away
Â “the new address of glamour...a blend of Las Vegas and Monte Carlo, with a beautiful beach”

- Travel Weekly, January 29, 2013

Baha Mar – “boom?” – “for whom?”

Â Bahamian officials and developers boasted of jobs, 3,000+
Â Unemployment for young Bahamians is over 30%
Â When project is complete it is about 8,000 new jobs!!
Â 2010, Contract between Baha Mar and Export-Import Bank of China
Â At the same time, China State Construction Engineering Corp. named paved the way for 1000s of Chinese workers
Baha Mar today in August 2015?
(Cayman Island Business Journal, August 13, 2015)

- Worldwide, smiles turned to frowns, dreams turned to a nightmare
- Project is 97% complete and not open
- Chapter 11 bankruptcy in Delaware
- Nearly $1/2B over budget
- Bahamian Supreme Court Justice seized proceeding and has filed in London, Bahamian contractors and laborers (not Chinese)
- Prime Minister declares “Baha Mar must open!"

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Coach John Wooden

Do not let what you cannot do determine what you can do
Top 10 Jobs
Employers Find Difficulty Filling

1. Skilled Trade Workers
2. Engineers
3. Sales Representatives
4. Technicians
5. Accounting & Finance Staff
6. Management/Executives
7. IT Staff
8. Drivers
9. Secretaries, PAs, Admin Assistants & Office Support Staff
10. Laborers

Employers report skilled trades positions are the hardest to fill for second consecutive year (globally).

• In every country except one, employers felt that academic paths are more valued by society than vocational ones
• Germany is the exception
• Not coincidentally, Germany has high-quality, hands-on vocational education built into its public education system
Two Most Promising Untapped Talent Pools

- Most employers are waiting on governments to do something about labor shortages
- 13% are redoubling efforts to recruit from untapped talent pools
- Only 4% actively recruiting younger workers
- Only 2% actively recruiting women to work
- TWO of the most promising untapped pools

Young People are Missing (from the bottom)

- Youth unemployment rate = 2.8 higher than rate for adults
- 12.6% worldwide (low of 9.5% in East Asia, high of 28.1% in the Middle East)
- Since 1991, youth unemployment rate has risen 7.7%; youth inactivity rate has risen 28.5% during same period
- Many of the world's youth are simply on the sidelines of work!
Workforce should reflect varying levels of experience in full work-life

Experience workers mentor younger ones

Recent graduates are tomorrow’s leaders

When the economy stalled, companies cut back

Young people were first victims of cutbacks but, they are now being missed

2,000 senior HR execs in 14 countries cited a lack of future leaders as their foremost concern

Cannot afford to ignore future leaders

Women are Missing from the Top
(Women: 50% global population & 35% global workforce)

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<td>63% success at work means finding work/life balance</td>
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<td>65% flexible options are important</td>
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<td>Just 19% of board roles are held by women</td>
<td>Another 21% flexible options will be important in the future</td>
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Strategies for Workforce Shortage

- Commit to hire young people and develop their skills
- Commit to hire women and encourage their independent thinking
- Develop standardized cross-country approach to developing/using workers to full potential across their entire working lives
- Aggregate funding from major agencies to improve current, project-based funding of education and employability initiatives

Strategies (cont’d.)

- Governments maintain or increase total $$$ in practical skill development especially vocational training
- Support research into ongoing needs of competitiveness, especially related to current and future skills and competencies
- Better link education ministries/departments to the business sector
Apprenticeship and Workforce Development

• Apprenticeship Transformation
  - Traditional Instruction compared to Today’s Learning-Core Blended, LMS, Active Classroom
  - OJT to JATC & AJATC - A Shift in Skills Training
  - Curriculum Delivery - Technology & Learning

• Leveraging Technology
  - Expanding the Classroom - Improving Efficiency and Outcome, Adapting to present Generation

Workforce Development

• Skilled Worker Shortage
• Recession of 2008 effects:
  - (2015) 30,000 total apprentices
  - (2008) 45,000 total apprentices
Workforce Development

• Accessing Apprenticeship and Training
• New National Guideline Standards
  ï New Direct Entry Tools
  ï Position to Deliver Training
  ï Competency Based Programs
  ï Hybrid Based Programs
• Selection Process
  ï Reduce Drop Out Rate
• Electric Prep- Target Audience

www.electricprep.com
Core Curriculum

The Electrical Training ALLIANCE Senior Director Jim Boyd led an industry-wide effort to develop and implement a Core Curriculum model for our Inside Apprenticeship Program.
<table>
<thead>
<tr>
<th>1st YEAR</th>
<th>2nd YEAR</th>
<th>3rd YEAR</th>
<th>4th YEAR</th>
<th>5th YEAR</th>
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<tbody>
<tr>
<td>ORIENTATION 1</td>
<td>ORIENTATION 2</td>
<td>ACT THEOR 1</td>
<td>BLUEPRINTS 1</td>
<td>CODE 1</td>
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<tr>
<td>JOB INFO 1</td>
<td>JOB INFO 1</td>
<td>TRANSFORMERS 1</td>
<td>CODE 2</td>
<td>CODE 2</td>
</tr>
<tr>
<td>CONDUIT 1</td>
<td>CODEOLOGY 1</td>
<td>ESRWP 1</td>
<td>GROUNDING 1</td>
<td>MTR. CONTROL 1</td>
</tr>
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<td>DC THEOREY 1</td>
<td>ACT THEOR 1</td>
<td>CODE 3</td>
<td>MTR. CONTROL 2</td>
<td>CODE CALC 1</td>
</tr>
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<td>BLUEPRINTS 1</td>
<td>BLUEPRINTS 2</td>
<td>MTR. CONTROL 1</td>
<td>TORQUE 1</td>
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<tr>
<td>TRANSFORMERS 1</td>
<td>ESRWP 2</td>
<td>BLUEPRINTS 2</td>
<td>MTR. CONTROL 2</td>
<td>RIGGING 1</td>
</tr>
</tbody>
</table>

Optional Courses May Be Selected by the JATC

Minimum of 40 Credits of Advanced Courses

3rd – 5th Years - SELECTED BY THE JATC

ADVANCED 3-1 | ADVANCED 4-1 | ADVANCED 5-1
ADVANCED 3-2 | ADVANCED 4-2 | ADVANCED 5-2
ADVANCED 3-N | ADVANCED 4-N | ADVANCED 5-N
Blended Learning

A transition to a blended learning model for the Outside and Inside Programs

Blended Learning

Labs
(Physical & Virtualized)

Active Learning Classroom

Online LMS
Online LMS
(Learning Management System)

Lesson
Lesson 5: Conduit Threading Techniques

Reference
- Conduit Bending and Fabrication Textbook Chapter 8

Introductory Information

Many conduit installations will require you to have a knowledge of the various types of conduit threading equipment and the techniques that are used to thread conduit. Threading a rigid or intermediate metal conduit may seem simple, but if done poorly the electrical system can fail with destructive results. A simple task forgotten, such as failing to ream the conduit during the threading process, may cause the insulation of the conductors to be damaged. That damage can lead to insulation failure and a possible electrical explosion later on.

In this lesson you will learn some of the things that must be taken into account when using a variety of threader types. While small conduits may be threaded by hand, larger conduits will require power driven tools which are more complex in their operation and can be linked to one another in various combinations. While it may be some time before you encounter all of these types of threaders in the field, your careful study of the textbook and this lesson will acquaint you with nearly all of the types of threaders available.
Online LMS

Reports

<table>
<thead>
<tr>
<th>Time Spent by Course</th>
<th>Login</th>
<th>Logout</th>
<th>Quiz Start</th>
<th>Quiz End</th>
<th>Time Spent</th>
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<tbody>
<tr>
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<td>3:51pm</td>
<td>46s</td>
<td></td>
<td></td>
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<tr>
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<td>5:36pm</td>
<td>1h 44m 48s</td>
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<tr>
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<td>7:29pm</td>
<td>1h 52m 26s</td>
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<td></td>
</tr>
<tr>
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<td>8:39pm</td>
<td>1h 6m 46s</td>
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<td></td>
</tr>
<tr>
<td>AC Theory, Level II featuring...</td>
<td>8:30pm</td>
<td>9:23pm</td>
<td>47m 16s</td>
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<td></td>
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<tr>
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<td>9:40pm</td>
<td>22m 2s</td>
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<tr>
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<tr>
<td>Orientation, Level I</td>
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<td></td>
<td>Total session time 8h 56m 20s</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Labs (Physical)
Labs (Virtualized)

Electrical Training Alliance
IBEW - NECA

Active Learning Classroom
Blended Learning Expands the Classroom

A Blended Learning Model gives us an opportunity to expand the capabilities of each instructor to create what we call, an "Active Learning Classroom."
Craft Certification

Using written and hands-on assessments, this important program will be vital to ensuring that the virtual skills that are developed can be transformed into real-life & practical hands-on skills.
CRAFT CERTIFICATION

Online Written Examinations

Hands-On Performance Evaluations

electrical training
IBEW - NECA

ALLIANCE
CET

Â Newly organized and existing journey-level workers interested in taking up-skill or upgrade training.

CET (Continuing Electrical Training)
CET
(Continuing Electrical Training)

Journeymen

CW/CE Workers

IBEW/NECA Employees

Available CET Courses

BUILDING AUTOMATION - 1
BUILDING AUTOMATION - 2
CONDUIT BENDING & FABRICATION
WESTEX ELECTRICAL SAFETY SIMULATOR: LOW VOLTAGE (ESS-LV)
ELECTRICAL SYSTEMS 2011
ELECTRICAL THEORY SIMULATOR
HAZARDOUS LOCATIONS
KLEIN VIRTUAL BOOT CAMP
MOTORS
PHOTOVOLTAIC SYSTEMS, 3rd ed.
TEST INSTRUMENTS
TRANSFORMER PRINCIPLES & APPLICATIONS
TEST & MEASUREMENT ACADEMY

The Milwaukee Test and Measurement Academy is a first of its kind game style set of learning modules. These learning modules provide a “Virtual Hands-On” training environment. This Academy allows the learner to interact in a series of scenarios in a first-person environment. The scenario-based work orders present the learner with a problem to resolve. Through the
Available CET Courses

ACE THAT TEST
- Success In the Workplace - Something’s Fishy: Absenteeism
- Success In the Workplace - Crossing the Line: Professional Personal Conduct
- Success In the Workplace - Time is Money: Productivity
- Success In the Workplace - First Impressions: The Power
- Success In the Workplace - Every Hour Counts: Productivity Increases Employment
- Success in the Workplace - Fiscally Fit?: The Challenges
- Success in the Workplace - Glass Houses: Ethical
- Success in the Workplace - Press One for Service: Meeting the Customer’s Needs

This module focuses on the importance of delivering excellent customer service in order to gain new customers and retain customer loyalty.

Flexible Training

- Customized Training • Selected for the level of worker
- Immediate Training • Asynchronous JIT
- Distance Training • Working out of town
Training the Instructor

electrical training ALLIANCE

For Reference of NECA 2015 San Francisco Attendees Only
Emerging Technologies

ÂBIM, Lean Construction, Pre-fab and related supply chain logistics.

Blueprint Reading
Certifications

Third Party Certifications to demonstrate to our industry and customers the safety oriented, production driven and quality of the Organized Electrical Industry.
Questions?

Don’t forget
Â 10:15 -11:30 am Opening General Session
Â 11:30 am-5:00 pm NECA Show Hours