Catalyzing a Diverse Energy Efficiency Workforce

Thursday, July 11
11:00 AM – 12:30 PM
Speakers

- **Shelly Pottorf**, Prairie View A&M University
- **Renee McClure**, National Grid
- **Tracey Woods**, American Association of Blacks in Energy (AABE)
- Moderator: Nathaniel Allen, DOE
2019 Summit

Catalyzing a More Diverse Energy Efficiency Workforce

Shelly Pottorf, AIA, CPHC, LEED AP

Assistant Professor

School of Architecture

Principal

architend
The National Architectural Accrediting Board

Overall Enrollment in Accredited Programs by Ethnicity

- 24,109 total enrollment
- vs. 0.1% of population (Nonresident Alien)
- vs. 0.2% of population (Hispanic/Latino)
- vs. 13% of population (White)
- vs. 6% of population (Asian)
- vs. 18% of population (Black/African American)

- 9,887 White
- 4,774 Nonresident alien
- 4,005 Hispanic/Latino
- 2,066 Asian
- 1,254 Race/Ethnicity unknown
- 1,246 Black/African American
- 775 Two or more races
- 62 American Indian /Alaska Native
- 40 Native Hawaiian /Pacific Islander

- 53% Male Students
- 47% Female Students

© NAAB 2017 Annual Report
### The National Architectural Accrediting Board

#### Enrollment in Accredited Programs by Ethnicity at Minority Serving Institutions

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Total</th>
<th>MSIs ONLY</th>
<th>Percentage of Total at MSIs</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Indian or Alaska Native</td>
<td>62</td>
<td>3</td>
<td>4.8%</td>
</tr>
<tr>
<td>Asian</td>
<td>2,066</td>
<td>163</td>
<td>7.8%</td>
</tr>
<tr>
<td>Native Hawaiian or other Pacific Islander</td>
<td>40</td>
<td>10</td>
<td>25%</td>
</tr>
<tr>
<td>Black or African American</td>
<td>1,246</td>
<td>303</td>
<td>24.3%</td>
</tr>
<tr>
<td>Hispanic/Latino</td>
<td>4,005</td>
<td>803</td>
<td>20%</td>
</tr>
<tr>
<td>White</td>
<td>9,887</td>
<td>349</td>
<td>3.5%</td>
</tr>
<tr>
<td>Two or more races</td>
<td>775</td>
<td>10</td>
<td>1.2%</td>
</tr>
<tr>
<td>Nonresident alien</td>
<td>4,774</td>
<td>231</td>
<td>4.8%</td>
</tr>
<tr>
<td>Race and ethnicity unknown</td>
<td>1,254</td>
<td>43</td>
<td>3.4%</td>
</tr>
</tbody>
</table>

© NAAB 2017 MSI Report
American Institute of Architects

Women AIA and Associate Members
33% growth in 8 years

- 2006: 17.3%
- 2014: 21.7%

African American AIA and Associate Members
- 2006: 1.57%
- 2014: 1.89%

vs. 50% of population

vs. 13% of population
Figure 2: Perceived factors contributing to an underrepresentation of women in the field of architecture

- **Concerned about work-life balance**: 71% (Women), 50% (Men)
- **Long hours make it difficult to start a family so they leave the field**: 70% (Women), 47% (Men)
- **Lack of flexibility to work remotely, job share, or work flexible hours**: 64% (Women), 39% (Men)
- **If women take leave to start a family, they are not given significant opportunities when they return**: 64% (Women), 37% (Men)
- **Lack of women role models**: 61% (Women), 43% (Men)
- **Pay is lower for women than men**: 59% (Women), 30% (Men)
- **Women less likely to be promoted**: 56% (Women), 27% (Men)
- **If women take leave to start a family, it is hard to catch up when they return because technology changes quickly**: 51% (Women), 30% (Men)
- **Economy has resulted in fewer jobs, which usually go to men**: 24% (Women), 35% (Men)
- **Women have little knowledge of architecture as a career option**: 17% (Women), 18% (Men)
American Institute of Architects

Figure 4: Perceived factors contributing to an underrepresentation of people of color in the field of architecture

- Some people of color, particularly from inner cities, have difficulty affording architecture school and supplies needed for school

- Lack of role models for people of color

- First- or second-generation college students and their parents want to choose more financially beneficial careers to help them support their families

- Little knowledge of architecture as a career option

- Economy has resulted in fewer jobs, and people of color have not been absorbed into the workforce in comparable numbers

- People of color are less likely to be promoted

- Some people of color aren’t well-prepared in high school to manage the rigorous curricula in architecture school

© AIA Diversity in the Profession of Architecture Key Findings 2015
American Institute of Architects

Figure 9: Effective ways of attracting and retaining women in the field

- **Promote change in office culture that allows better work-life balance**
  - Women: 84%
  - Men: 63%

- **Increase job flexibility (working remotely, job sharing, and working flexible hours)**
  - Women: 81%
  - Men: 58%

- **Develop a mentorship program for women in firms**
  - Women: 63%
  - Men: 46%

- **Offer credentials for architects who wish to return to the profession after taking an extended leave of absence so that they are caught up when they return**
  - Women: 63%
  - Men: 41%

- **Provide clear, written criteria for promotion**
  - Women: 60%
  - Men: 46%

- **Offer industry-funded college scholarships for women interested in studying architecture**
  - Women: 0%
  - Men: 60%

- **Attract more women professors to teach in accredited architecture programs**
  - Women: 0%
  - Men: 40%

- **Increase community outreach into middle and high schools by university architectural programs**
  - Women: 55%
  - Men: 39%

- **Increase industry outreach to K-12 students through school curricula, extracurricular clubs and activities, weekend summer programs, etc.**
  - Women: 53%
  - Men: 53%
American Institute of Architects

Figure 10: Effective ways of attracting and retaining people of color in the field

- Offer industry-funded college scholarships for people of color interested in studying architecture
  - People of color: 71%
  - Whites: 58%
- Increase community outreach into middle and high schools by university architectural programs
  - People of color: 68%
  - Whites: 61%
- Attract more professors of color to teach in accredited architecture programs
  - People of color: 65%
  - Whites: 53%
- Expand industry support for National Organization of Minority Architects (NOMA)
  - People of color: 64%
  - Whites: 45%
- Increase industry outreach to K-12 students through school curricula, extracurricular clubs and activities, weekend summer programs, etc.
  - People of color: 63%
  - Whites: 57%
- Provide clear, written criteria for promotion
  - People of color: 59%
  - Whites: 43%
- Develop a mentorship program for people of color in firms
  - People of color: 58%
  - Whites: 48%
- Create support system for people of color at architecture schools
  - People of color: 58%
  - Whites: 43%
- More training/continuing education courses for firms in racial equity
  - People of color: 52%
  - Whites: 29%
- Perform routine performance reviews based upon written performance evaluations
  - People of color: 52%
  - Whites: 47%
# Sustainability Minor in SoA Curriculum

<table>
<thead>
<tr>
<th>Theoretical Sequence</th>
<th>Curriculum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sustainable Buildings</td>
<td>principles, metrics, rating systems</td>
</tr>
<tr>
<td></td>
<td>building science fundamentals</td>
</tr>
<tr>
<td></td>
<td>traditional passive design</td>
</tr>
<tr>
<td>Ecology and Man</td>
<td>systems thinking, environmental + social justice</td>
</tr>
<tr>
<td>Regenerative Design</td>
<td>premises, principles, process</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Technical Sequence</th>
<th>Curriculum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Zero Energy Design I</td>
<td>climate literacy</td>
</tr>
<tr>
<td></td>
<td>building science fundamentals</td>
</tr>
<tr>
<td></td>
<td>traditional passive design</td>
</tr>
<tr>
<td>Net Zero Energy Design II</td>
<td>Certified Passive House Consultant Training</td>
</tr>
<tr>
<td>Energy Modeling</td>
<td>Wufi-Passive, THERM, Sefaira, Energy-Plus</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Design Sequence</th>
<th>Curriculum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Architectural Design VII</td>
<td>net zero, affordable residential infill design</td>
</tr>
<tr>
<td>Architectural Design VIII</td>
<td>net zero, regenerative commercial design</td>
</tr>
<tr>
<td>Solar Decathlon Design Competition</td>
<td>above projects continued</td>
</tr>
</tbody>
</table>
Race to Zero Competition

Stilted Shotgun
2015 Race to Zero Design Excellence Award
Race to Zero Competition

Double Barrel
2016 Race to Zero Grand Award Winner
Race to Zero Competition

PRAIRIE VIEW A&M UNIVERSITY

FORTIFIED HOME

FEMA 499

LOW IMPACT DEVELOPMENT STRATEGIES

PASSIVE HOUSE
ZERO ENERGY READY HOME
ENERGY STAR
LEED FOR HOMES
WATERSENSE
INDOOR airPLUS

900 SF | 1 BED | 1 BATH
50% AMI

1,200 SF | 2 BED | 2 BATH
80% AMI

Dogtrot Duo
2017 ACSA Here+Now
2nd Place
Race to Zero Competition

The Fly Flat
2019 Race to Zero Grand Award Winner
2019 COTE Top 10
Existing Conditions

Vacant Lots in Independence Heights, TX
Total Vacant Residential Lots: 768
Total Lot Values: $202,306,218

Double lot selected for demonstration project:
Address:
509 E 41st Street, Houston, TX 77022

Community Engagement

Architecture | Constructability | Financial | Energy & Envelope | MEP & IAO | Innovation
## Resilience Goals

<table>
<thead>
<tr>
<th>Economic</th>
<th>Environmental</th>
<th>Social</th>
</tr>
</thead>
<tbody>
<tr>
<td>Affordability</td>
<td>Address flooding</td>
<td>Social Agency</td>
</tr>
<tr>
<td>Ownership</td>
<td>Surviving hurricanes and flooding events</td>
<td>Community connectivity/relationship development</td>
</tr>
<tr>
<td>Address vacancy</td>
<td>with minimal damage</td>
<td>Health</td>
</tr>
<tr>
<td>Economically healthy neighborhood</td>
<td>Man/Nature Connection</td>
<td>Health</td>
</tr>
<tr>
<td></td>
<td>Net zero residence</td>
<td>Health</td>
</tr>
</tbody>
</table>

### Categories
- **Economic**: Affordability, Ownership, Address vacancy, Economically healthy neighborhood
- **Environmental**: Address flooding, Surviving hurricanes and flooding events with minimal damage, Man/Nature Connection, Health, Net zero residence
- **Social**: Social Agency, Community connectivity/relationship development, Health

### Other Categories
- Architecture
- Constructability
- Financial
- Energy & Envelope
- MEP & IAQ
- Innovation
## CPHC Training Results

<table>
<thead>
<tr>
<th>Year</th>
<th># of NZ II Students*</th>
<th>#CPHC Passers</th>
<th>%</th>
<th>#NZ II Students on RtZ Team</th>
<th>#CPHC Passers on RtZ Team</th>
<th>#CPHC Passers who Took NZ I</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>16</td>
<td>1</td>
<td>6.25%</td>
<td>3</td>
<td>1 (100%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>2016</td>
<td>18</td>
<td>1</td>
<td>5.55%</td>
<td>3</td>
<td>1 (100%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>2017</td>
<td>13</td>
<td>2</td>
<td>15.38%</td>
<td>5</td>
<td>2 (100%)</td>
<td>1 (50%)</td>
</tr>
<tr>
<td>2018</td>
<td>12</td>
<td>2</td>
<td>16.67%</td>
<td>3</td>
<td>2 (100%)</td>
<td>3 (67%)</td>
</tr>
<tr>
<td>2019</td>
<td>15</td>
<td>2</td>
<td>13.33%</td>
<td>NA</td>
<td>NA</td>
<td>2 (13%)</td>
</tr>
</tbody>
</table>

**Where are they now?**

Nichole Thomas, CPHC: Building Science Consultant @ Morrison Hershfield  
Alexis Borman, CPHC: Intern Architect @ Heights Venture Architects  
Jabbar Cobbs, CPHC: Intern Architect @ PBK  
Shannen Martin, CPHC: Sustainability Specialist @ HOK; captained PVAMU 2018 Race to Zero Team  
Cynthia Suarez-Harris, CPHC: Captained PVAMU 2019 Solar Decathlon Team  
Ledell Thomas, CPHC: Project Architect PVAMU 2019 Solar Decathlon Team
Thank You!

Shelly Pottorf, AIA, CPHC, LEED AP
spottorf@architend.com
Renee McClure
National Grid
Catalyzing a Diverse EE Workforce

Renee McClure

July 11, 2019
Agenda

- Speaker Renee McClure
- About National Grid
- Inclusion and Diversity Moment
- Why is Diversity important?
- Diversity at National Grid
- Best Practices
- Challenges Facing Diversity
Renee McClure
Background
- Native New Yorker
- Entrepreneurial Spirit
- Motivational Speaker, Panelist, and Trainer

Education
- BS in Computer Science from NYIT
- Masters in Ministry – California School
- Dale Carnegie
- Coro Leadership
- The Partnership

Career
- Employee of National Grid for 36+ years
- Various roles in Information Technology
- Manager of Community and Customer Management
Roles
- BDPA National and Local President
- BLAK Founder and 1st Chairperson now ABP
- ABP Community Chairperson
- Brooklyn Chamber Exec. Board and Co-Chair MWBE
- Weeksville Heritage Society – Exec. Board member
- AABE – NYMAC – Exec. Board member

Awards
- City & State Corporate Social Responsibility
- AABE-NYMAC Chapter Support Award
- Women of Distinction Award
- Top Brooklyn Women in Business Award
- Role Model of the Year for Women’s Month
- United Way – NYC Women United in Philanthropy
- US Black/Hispanic IT Engineering – Women who Make a Difference

Personal Life
- Married for over 10 years
- 2 grandchildren
- Avid golfer
- Loves to travel
About National Grid
National Grid

- International energy company based in the northeast US and the UK
- One of the world’s largest investor owned utilities - 26,000 employees; and $52b in assets
- Major presence in the northeast:
  - Over 7 million retail customers in New York and New England
  - 15,000 employees
  - $18b rate base

National Grid | [Better Buildings, Better Plants] | [2019]
National Grid in the US

In the US, National Grid is primarily a distribution company with assets in New York, Massachusetts and Rhode Island. National Grid also has electricity transmission assets in those states as well as in New Hampshire and Vermont. On Long Island, NY, National Grid operates 12 generating units (with long-term contracts to LIPA).
Inclusion and Diversity Moment
What do you see?

3
Now what do you see?
Now what do you see?
Now what do you see?
Perspective is everything!
Why is Diversity Important?
Inclusion’s effect on talent.

80% of respondents say inclusion is an important factor in choosing an employer.

72% of respondents would leave or may consider leaving an organization for a more inclusive one.

30% of Millennials surveyed said they have already left a job for a more inclusive culture at another organization.

75% of senior management respondents said they would leave or may consider leaving jobs for more inclusive organizations.

Source: Copyright © 2017 Deloitte Development LLC. All rights reserved.
Inclusion’s Effect on Talent - Metrics

Leaders’ actions speak louder than programs.

71% of respondents said they would prefer an organization with leadership that consistently demonstrates inclusive behaviors over an organization that offers numerous inclusion initiatives but whose leaders did not demonstrate inclusive behaviors consistently.

32% believe senior leadership has the greatest impact on whether a workplace is inclusive.

34% everyone plays a role in impacting whether a workplace is inclusive.

Source: Copyright © 2017 Deloitte Development LLC. All rights reserved
Employee Turnover Costs - Metrics

When you consider all of the costs associated with employee turnover – including interviewing, hiring, training, reduced productivity, lost opportunity costs, etc. – here’s what it really costs an organization:

- Entry-level employees = between 30-50%
- Mid-level employees = upwards of 150%
- Highly specialized employees = 400%

Source: [https://www.tlnt.com/retaining-talent-is-more-cost-effective-than-hiring/](https://www.tlnt.com/retaining-talent-is-more-cost-effective-than-hiring/)
Prioritize and Practice Inclusive Leadership

Reminder of Inclusive Leadership Behaviors:

- **Build diverse teams and work groups that foster collaboration within and beyond members.**
- **Provide access to feedback, networks & developmental assignments.**
- **Empower all team members.**
- **Encourage participation in Employee Resource Groups and other I&D initiatives.**
- **Provide tangible (e.g., technology) and intangible (e.g., information) resources.**
- **Communicate & Lead through Ambiguity & Change.**
Inclusion & Diversity

Inclusive Culture

What Is Inclusive Culture?

- Employees feel connected and valued, and that they belong in the culture
- Employees can present their authentic selves
- Employees feel that work outcomes, processes, and communications are fair
- Employees feel they are treated with dignity and regard by others

- Leaders are open to “bad news”
- Asking questions is encouraged
- Leaders are open to new ideas and innovative approaches
- Employees have influence over job tasks
- Teams embrace change
- Employees are frequently given stretch opportunities
- Employees who learn new knowledge / skills are valued
Diversity at National Grid
Beyond the Metrics
What does Diversity mean to National Grid?

At National Grid, we are developing a more engaged and diverse workforce that believes:

- Fostering inclusion and acknowledging diversity is everyone's responsibility.
- Open, honest and respectful communication is the cornerstone of a successful business.
- Leveraging inclusion and diversity is a business imperative.
- Integrating supplier diversity in our supply chain.
- Recognized as one of the 2019 Top Utilities for Diversity - Diversity Inc
National Grid Programs

Graduate Development Program (GDP)

Energy Pipeline Program

Community College Programs
- National Grid Gas Certification programs
- Customer Service Program
- Internships (Summer/year round)
- Energy Tech High School

Sponsorships
- AABE Summer Energy Academy (SEA)
- NYC Mayors – Ladders for Leaders
- New York University - K-12 Program
- Brooklyn Tech High School STEM Program
- BAM Technopolis
College Utility Training Programs (US)

National Grid partnership with colleges

College programs create a resource pool for hiring

Programs leverage knowledge and skills of National Grid Academy instructors.
College Utility Training Programs (US)

Active college programs: 8 *
- Electric programs: 6
- Gas programs: 2 (DNY, NE)

* First program started in Fall 2006 in UNY (Erie CC)

Programs in development: 7
- Electric program: 1
- Gas programs: 3 (UNY)
- General Utility programs: 2
Employee Resource Groups (ERGs)

- Alliance of Black Professions (ABP)
- Asian Leadership Association (ALA)
- Enabling Disability Confidence
- Hispanic Professional Association
- Veterans
- Women In Networks (WiN)
- PRIDEUSA

And so much more....
Supplier Diversity

What is Supplier Diversity?

Supplier Diversity is the practice of including small and diverse-owned businesses into an organization’s supply chain. It is a business strategy to help create and inclusive and diverse supply chain.

Why is it Important?

- Access to new and creative ideas to enable innovation
- Drives competition between suppliers
- Showcases the company’s commitment to the economic growth of the communities
- Improves corporate culture, support social responsibility; retain and attract top talent
- Supplier diversity supports the communities in which we operate and represents National Grid’s core values
Best Practices
How to build an inclusive culture?

- Treat I&D as Business Critical, Not Compliance Necessary
- Move Beyond Diversity to Inclusion and Diversity
- Prioritize Inclusive Leadership
- Embed I&D into All Talent Practices
- Provide I&D Resources that Encourage Individuals to Take Action
- Drive Accountability, Not Metrics Tracking
- Implement Employee Resource Group

Inclusion & Diversity Best Practices

Attract / Recruit

10 Strategies for Attracting and Recruiting Diverse Talent

- Strategic Diversity Recruitment
- Employee Referral Program
- Multicultural Partnerships
- Diversity Career Fairs (Virtual)
- Establish a Diversity Brand
- Utilize ERG’s
- Philanthropic Activities
- Social Media
- Student Events
- Metrics
Inclusion & Diversity Best Practices

Develop

What employees need from you:

Understand the Individual
- Observe behaviors
- Ask Questions

Provide Perspective
- Reputation
- Reality

Create Connections
- Opportunities (Cross-functional projects, shadowing other departments, organizing events)
- People (Career Communities)

Areas of Opportunity
- ERG Mentoring Program
- Reverse Mentoring Program
- Leadership Development Programs
Challenges Facing Diversity
Key Takeaways: Inclusive Leadership

Self-Awareness
Leaders as Judges of Their Own Inclusiveness
Key Takeaways: Inclusive Leadership

Self-Awareness
Leaders as Judges of Their Own Inclusiveness

Changing Priorities
Moving Beyond the Metrics and Training
Key Takeaways: Inclusive Leadership

**Self-Awareness**
Leaders as Judges of Their Own Inclusiveness

**Changing Priorities**
Moving beyond training and metrics

**Inclusion Happens in Silos**
Sharing Internal Best Practices
Thank you for your time!

Any Questions?
AAABE HISTORY

Founded in 1977 during the Carter Administration

Preceded the US Department of Energy

Carter’s advisory councils lacked diversity (no people of color or women)
THE AABE MISSION

To provide direct input into the deliberations and developments of energy policies, regulations, emerging technologies, and environmental issues.
Organizational Structure

Board of Directors

Paula Glover, President & CEO

Tracey Woods, VP Operations

Felicia Kelly, Director Members Services & Events
# Membership

## 6 Regions
- Northeast
- Mid-Atlantic
- Southeast
- Southwest
- Midwest
- Western

## 2000 Members

| Energy company employees (Oil & Gas, Electric/Gas Utilities, Renewables) | Entrepreneurs | Services (legal, finance, engineering, land surveying) | Regulatory, government, legislative |
CATALYZING A MORE DIVERSE ENERGY EFFICIENCY WORKFORCE

- Helping America Navigate Opportunities for Jobs (HANOJ)
- Multiple sectors including Healthcare (CVS), IT (Cisco), Logistics (Amazon)
  - Energy Efficiency training in partnership with Johnson Controls (JCI)
- Adopted by PA Governor Tom Wolf for Workforce Development in Commonwealth
- Pilot model for other states to optimize Workforce Development
PROGRAM COMPONENTS

- Energy Efficiency projects for Philadelphia School District (Johnson Controls)
- Energy Efficiency technician training for students (various counties)
- HVAC Laboratory/Shops in conjunction with Johnson Controls (various counties)
<table>
<thead>
<tr>
<th>Increase</th>
<th>Increase candidate awareness of career opportunities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Define</td>
<td>Define Career Pathways more clearly by industry and/or business</td>
</tr>
<tr>
<td>Integrate</td>
<td>Integrate businesses in the workforce process to better clarify their workforce needs, from assessments through retention strategies</td>
</tr>
</tbody>
</table>
Increase retention and employment upward mobility

Provide tracking data to employers to show their ROI which will get more employers involved

Through our strategic alliances with trade and technical institutions, community colleges and universities, and K thru 12 schools, HANOJ is able to ensure “dual credit” opportunities, continuing education units (CEUs), certifications, badges, licenses and degrees
HANOJ, in an effort to broaden diversity and inclusion practices, partners with an array of organizations:

- Ethnic minorities
- Class qualified minorities (Veterans, Women, Disabled, LGBTQ)
- Human services organizations
- Law enforcement
- Subject Matter Experts and Thought Leaders
- Youth
- Qualified Seniors

As advisors, instructors, and mentors, these diverse supporters measure and value diversity practices of HANOJ.
The H2 portal is privately funded by many of the same employers that have open positions and need skilled workers.

These employers are able to dictate their requirements and desires thru the portal, so they can access the “right talent in real time”.

The H2 portal is the tool that brings workforce, suppliers & vendors, and corporations together and allows them, collectively, to drive and monitor the workforce process, from beginning thru retention.
EXPANDED SERVICES TO EXPANDED MARKETS

- **HANOJ** brings to the table a consortium of diverse businesses from across the country representing industries including:
  - Advanced Manufacturing
  - Healthcare
  - IT
  - Communication
  - Energy and Utilities
  - Transportation, Logistics and Distribution
  - Construction Facility Management
  - Retail
Thank You

Provide feedback on this session in the Summit App!

Download the app to your mobile device or go to event.crowdcompass.com/bbsummit19