



**INTERCONNECTION
INNOVATION e-XCHANGE**
U.S. DEPARTMENT OF ENERGY

Interconnection Workforce and Training

08/15/23

An initiative spearheaded by the Solar Energy Technologies Office and the Wind Energy Technologies Office

The first half of this Teams call is being recorded and may be posted on DOE's website or used internally. If you do not wish to have your voice recorded, please do not speak during the call. If you do not wish to have your image recorded, please turn off your camera or participate by phone. If you speak during the call or use a video connection, you are presumed consent to recording and use of your voice or image.

Meeting Notes

Notes synthesizing keys points, insights and questions from the meeting can be found here: [Box Link](#)

Agenda

- Introduction to i2X Solution e-Xchanges
- Prioritizing Interconnection Workforce Solutions
- Panel Discussion



Interconnection Innovation e-Xchange (i2X)

Mission: To enable a simpler, faster, and fairer interconnection of clean energy resources while enhancing the reliability, resiliency, and security of our distribution and bulk-power electric grids



Stakeholder Engagement

Nation-wide engagement platform and collaborative working groups



Data & Analytics

Collect and analyze interconnection data to inform solutions development



Strategic Roadmap

Create roadmap to inform interconnection process improvements



Technical Assistance

Leverage DOE laboratory expertise to support stakeholder roadmap implementation



Key Outcomes from Our e-Xchange Meetings



- Inform and formulate a **publicly available**, strategic roadmap for interconnection
 - Topical challenges and issues
 - Practical solutions to implement and scale
 - Knowledge and data gaps and new solutions to pilot
 - Success goals and measures of success
- Summary documentation for each meeting regarding ideas discussed and opportunities for targeted stakeholder action
- Provide platform for ongoing engagement before and after meetings
- **Longer term vision** → Solution e-Xchanges to continue building a national forum for all stakeholders as a community of practice, excellence, and innovation



i2X Solution e-Xchange Topic Areas



- **Queue Management and Cost Allocation**
 - Technology, regulation, administration, and organizational change focus
 - *What innovative interconnection solutions exist?*
- **Grid Engineering Practices and Standards**
 - Engineering and technology focus
 - *How can proposed solutions be executed?*
- **Equity and Energy Justice**
 - Multidisciplinary
 - *Who is impacted by and benefits from proposed solutions?*
- **Data Transparency**
 - Multidisciplinary
 - *What transparency concerns must be addressed?*
- **Interconnection Workforce and Training**
 - Multidisciplinary

Additional subjects, like capacity maps, cross these topics and will be addressed from these different perspectives. Follow the schedule of events on the i2X website.



Join i2X at RE+!

1. The i2X leadership team will be hosting a workshop at RE+!
2. When: Monday, September 13 8am-12pm.
3. What: The i2X leadership team will share highlights of a draft of the 5-year Strategic Roadmap arising out of the i2X process for feedback and comments before releasing the final version in the coming months.
4. To register, please visit:
<https://www.xpressreg.net/register/repl0923/landing.asp?sc=&aban=&iq=&vip=&smt=&ingo=>

Virtual Meetings Code of Conduct



- 1. Assume good faith and respect differences*
- 2. Listen actively and respectfully*
- 3. Use "Yes and" to build on others' ideas*
- 4. Please self-edit and encourage others to speak up*
- 5. Seek to learn from others*



Mutual Respect . Collaboration . Openness

Speaker Introductions



Introductions

- Radina Valova: Interstate Renewable Energy Council, Regulatory Program Vice President
- Cynthia Finley: Interstate Renewable Energy Council, Workforce Program Vice President
- Ian Hiskens, Faculty, University of Michigan, Electrical Engineering & Computer Science
- James Lester, Colorado Energy Office, Senior Policy Lead, Transportation, Climate and Energy
- Kate Tohme: New Leaf Energy, Director of Interconnection Policy

Prioritizing Interconnection Workforce Solutions



Working Definition of the “Interconnection Workforce”

The variety of professions engaged in distribution and transmission interconnection, including, but not limited to, **engineers, policy specialists, clean energy project developers and managers, attorneys, financing experts, and others**, who engage in interconnection through a variety of modes, such as:

- Administering and making decisions on interconnection regulations (regulatory commissioners and affiliated staff)
- Reviewing and processing interconnection applications (utility stakeholders)
- Preparing and submitting interconnection applications (interconnection customers and clean energy developers)
- Engaging in regulatory processes related to interconnection (various stakeholders)
- Those responsible for maintaining the interconnection throughout the life of the installed system (various stakeholders)



Solutions Insights

Automation

- Near-term solution
- Existing best practices to pull from
- Should be addressed as part of IX rule development (not a separate workforce issue)

Make IX a More Attractive Profession

- Near-term solution
- Improve messaging about IX (e.g., job postings)
- Emphasize the link between IX and clean energy, energy justice, and climate policy

Increase Internships & Fellowships

- Near-term solution
- Ramp up existing programs
- Increase and improve outreach to attract more candidates

Improve Compensation & Benefits

- Medium-term solution
- Particularly important for PUCs and utilities
- Leverage lessons learned from clean energy workforce development

Upskilling the Workforce

- Near-term solution
- Leverage existing training resources
- Coordinate with educational, continuing education, and licensing and accreditation institutions

Grow the IX Workforce Pipeline

- Long-term solution
- Requires partnerships between multiple stakeholders
- Leverage best practices from clean energy workforce development

Potentially Applicable Solutions from Clean Energy Workforce Development



Considerations for Developing Solutions

Who is our audience?

- Gen Z: 18-22 still in school
- Millennials: 23-38 students and employed
- Gen X: 39-54 employed

Job Market Trend

60% of job seekers feel they can ask for a higher salary due to the current job market climate

What is the process?

- Application process- outdated
- Start to finish- the timing of the process
- Screening and transparency
- Website content

54% of Gen Z won't even submit if they think the process is outdated

Be clear about what you offer: company culture, training, advancement.

Over 80% of all groups think the process should take 2 weeks

Considerations for Developing Solutions

Sector Updates

- Engineering is on the rise; the number of majors have doubled from Gen X to Gen Z
- Government work is on the rise
- Utility jobs are still low compared to healthcare, education, IT, finance, and manufacturing

Gen Z want to work in the federal government at 2x the rate of current Gen X

Timing

- Gen Z is starting to look much earlier for work
- 18% of Gen Z beginning looking freshman and junior years
- Lapse between interview and actual hire is a concern

Only 10% of Gen Z wait until graduation to look for work

70% use social media and are looking at your social media

Considerations for Developing Solutions

Trends

- Retention- younger generation plans to move
- Priorities are changing
 - #1 Salary
 - #2 Work-Life Balance (close second)
 - #3 Location
 - #4 Career Growth

55% Gen Z plan to change jobs in 3 years
60% plan to change jobs within the company within 2 years

Compared to 72% of Gen X who plan to stay 7+ years

Best Practices

- Quality content on websites
- Workplace flexibility
- Determine what job seekers are interested in during the process
- Prepare for short tenure trend – changes in job projections
- Create a campus pipeline to make critical connections, not just fill vacancies

60% of referrals come from networks not job sites

Considerations for Developing Solutions

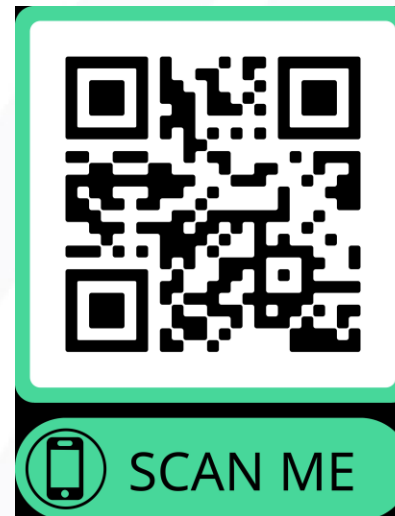
Best Practices

- Campus brand ambassador program
- Scholarships & Paid Internships
- Highlight work-life balance, job flexibility, and other prioritized benefits
- Establish a pathway for growth

National Clean Energy Workforce Alliance



energy.gov/i2x



Questions?



Panel Discussion



Discussion Questions





Questions for You!