Interconnection Workforce and Training
7/11/23

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

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Meeting Notes

Notes synthesizing keys points, insights and questions from the meeting can be found here: Box Link

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.

Agenda

- Introduction to i2X Solution e-Xchanges

- IREC Presentation

  - Introduction: Goals for the Interconnection Workforce and Training Solutions eXchanges

  - Clean Energy Workforce Development Best Practices

  - How Do We Define the "Interconnection Workforce"?

  - Benchmarking the Current State of the Interconnection Workforce

- Panel Discussion

- Discussion Questions

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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

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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

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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.

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Upcoming Solution e-Xchanges to Consider Joining

1. July 12, 2-4 p.m. ET: Improving interconnection study methodologies in the bulk power system

2. July 19, 2-4 p.m. ET: Collecting and considering feedback in public policy for equity

3. July 20, 12-2 p.m. ET: Challenges hiring, training and retaining the interconnection work force.

4. July 26, 2-4 p.m. ET: Implementing QM/CA reforms

Follow the schedule of events on the i2X website.

https://www.energy.gov/eere/i2x/i2x-solution-e-xchanges

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

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Speaker Introductions

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Introductions

o Cynthia Finley: Interstate Renewable Energy Council, Workforce Program Vice President

o Radina Valova: Interstate Renewable Energy Council, Regulatory Program Vice President

o Arthur O'Donnell: New Mexico Public Regulation Commission, Director of Policy Administration

o Meghan Nutting: Sunnova, Executive Vice President of Government and Regulatory Affairs

About the Interstate Renewable Energy Council

IREC builds the foundation for the rapid adoption of clean energy and energy efficiency to benefit people, the economy, and our planet.

Regulatory Reform

IREC develops best practices, provides technical assistance, and engages as a public interest intervenor on policies that advance the growth of distributed energy resources.

Workforce Development

IREC grows an equitable, diverse, and qualified clean energy workforce by uniting stakeholders to improve recruitment, education, training, and job placement outcomes.

Local Clean Energy Solutions

IREC helps cities, counties, and towns use policy tools and resources to drive the growth of clean energy, address climate change, and create new jobs.

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What Can We Learn from Clean Energy Workforce Development?

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Clean Energy Workforce Development Best Practices

- Workforce development initiatives aim to:

  - Educate and train individuals to meet the needs of current and future businesses and industries in order to maintain a sustainable competitive economic environment

  - Should prioritize developing an *equitable* and *accessible* workforce

  - Involve collaboration between a wide variety of partners across many different types of institutions that may not traditionally work together

- Clean energy workforce solutions have been developed over the course of many years of experience:

  - Collecting data on the current state of the clean energy workforce, including DEIA

  - Conducting gap analyses to determine workforce needs

  - Creating data-driven solutions to build out across diverse markets

  - Piloting programs across K-12, higher education, credentialing, and training institutions

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First Solutions eXchange:
- ✓ Define "interconnection workforce"
- ✓ Determine current state of workforce
- ✓ Begin identifying key challenges

Second Solutions eXchange:
- ✓ Identify IX workforce growth needs
- ✓ Identify challenges with hiring, retention, and training

Third Solutions eXchange:
- ✓ Identify and begin prioritizing solutions to interconnection workforce hiring, retention, and training

Fourth Solutions eXchange:
- ✓ Continue identifying and prioritizing solutions

Goals for i2X Interconnection Workforce & Training Solutions eXchanges

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Defining the "Interconnection Workforce"

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)
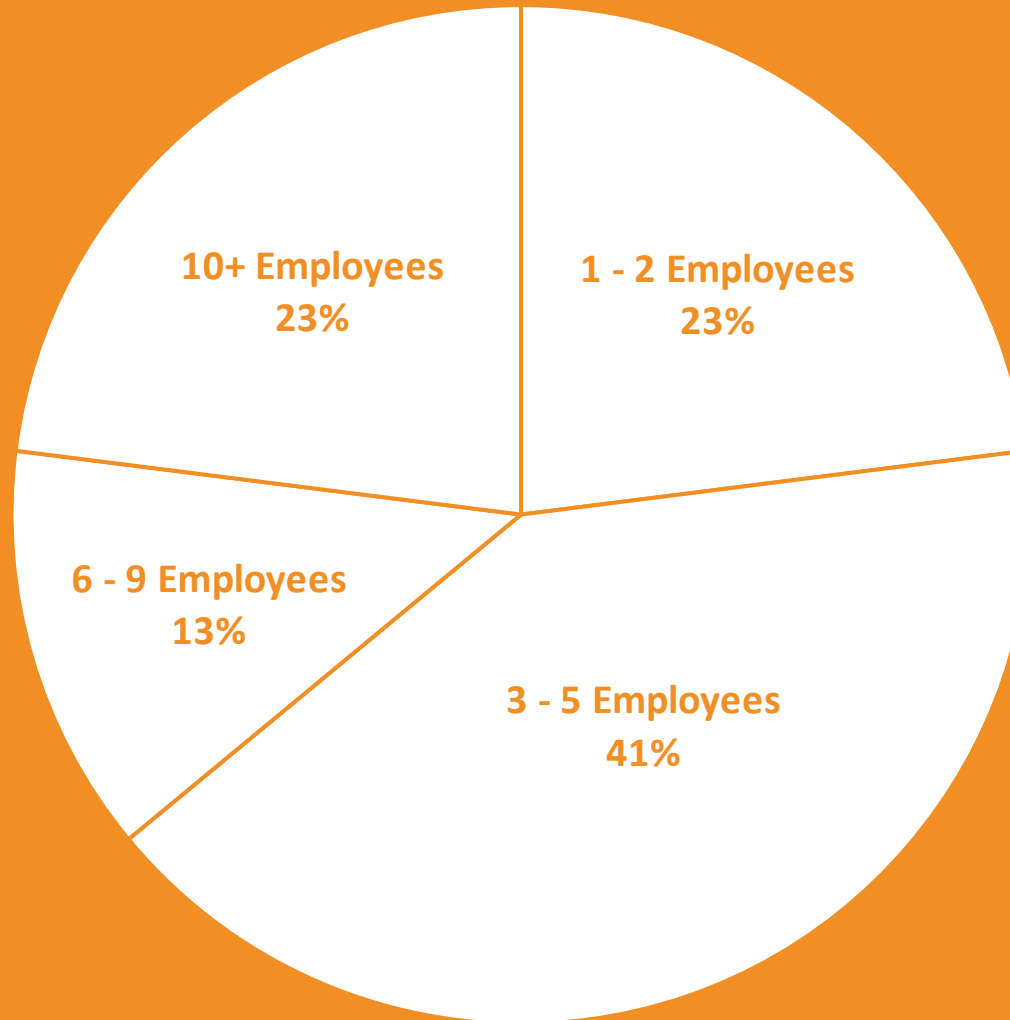
Are any professions or activities missing from the working definition of "Interconnection Workforce"?
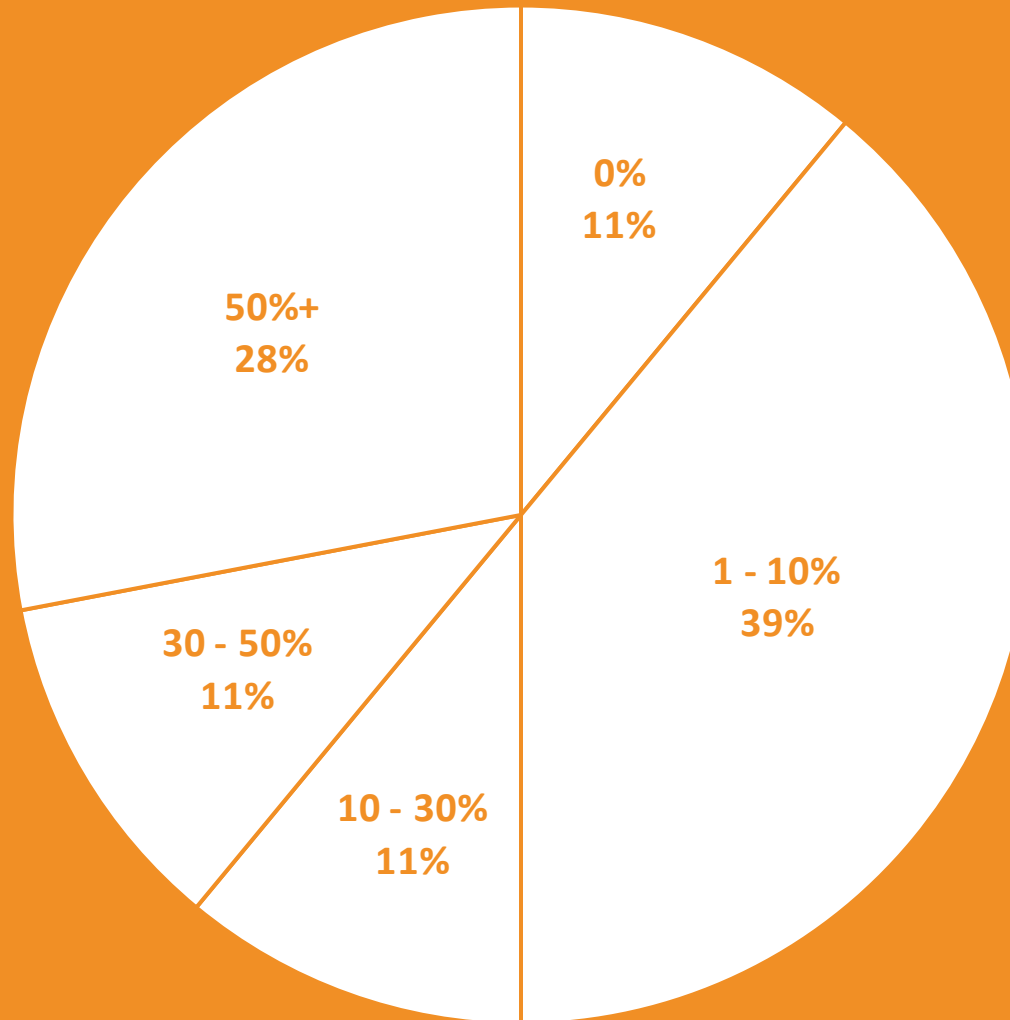
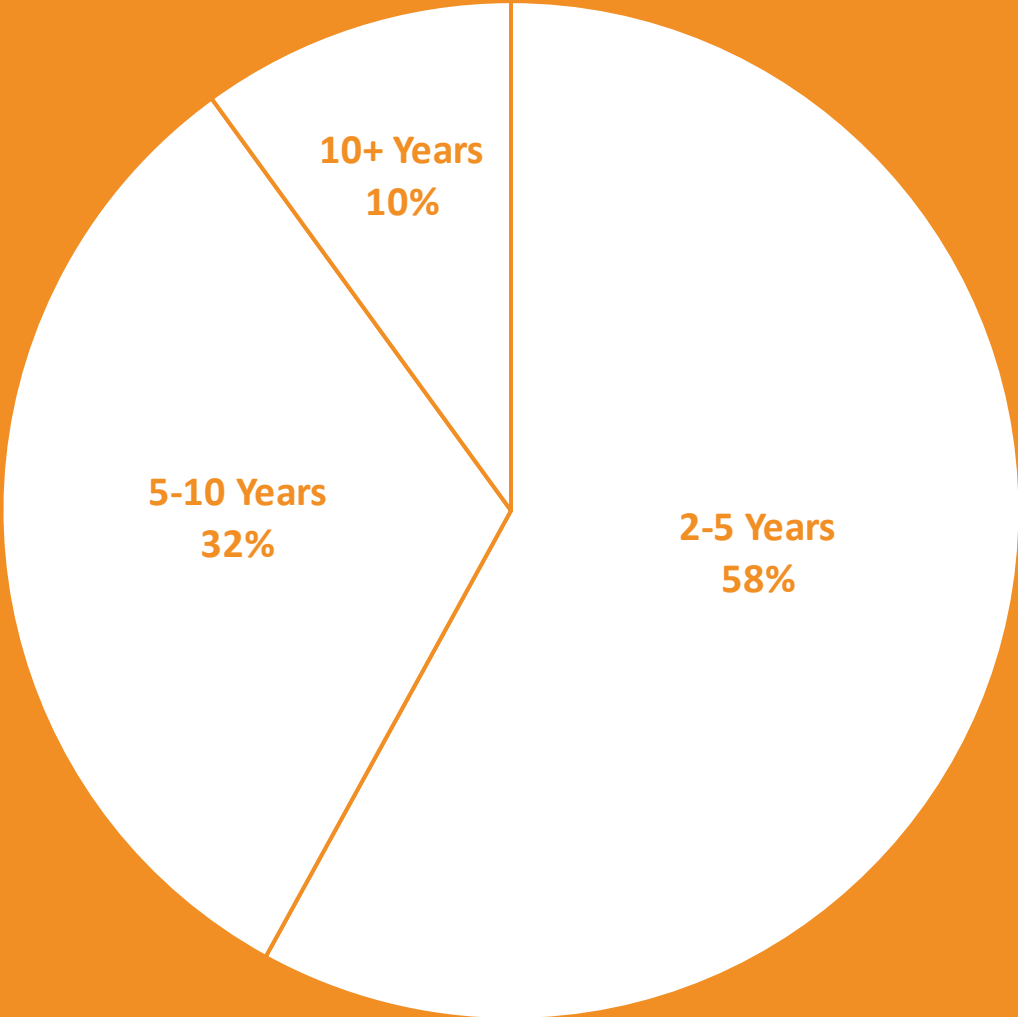# Gathering Data on the Current State of the Interconnection Workforce

NUMBER OF EMPLOYEES ENGAGED IN INTERCONNECTION

10+ Employees 23%

1 - 2 Employees 23%

6 - 9 Employees 13%

3 - 5 Employees 41%

NUMBER OF EMPLOYEES REPRESENTING WOMEN OR BLACK, INDIGENOUS, AND PEOPLE OF COLOR

0%
11%

50%+
28%

1 - 10%
39%

30 - 50%
11%

10 - 30%
11%

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RATE OF RETENTION

- 10+ Years: 10%
- 5-10 Years: 32%
- 2-5 Years: 58%

54% of respondents indicated that their institution hires external consultants to supplement their interconnection workload

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What are the most significant challenges with hiring and/or retaining staff engaged in interconnection?

"Engaging in interconnection requires a combination of skill sets that can be hard to find. Both policy *and* technical expertise is often required, for example."

"Interconnection process is bureaucratic, moves at a glacial pace, lacks excitement but requires high level engineering skills."

"Many tasks required for DER application review are very repetitive. They are important but monotonous, and require technical understanding to be performed."

"Competition with other employers."

"Inability to offer competitive salaries."

Overwork and burnout due to high volume of work.

Competition with other organizational departments for funding and staff.

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Questions?

Panel Discussion

Discussion Questions

What barriers are you facing with hiring, retaining, and training within the interconnection workforce?

Should we evaluate barriers and solutions to the interconnection workforce separately for distribution and transmission interconnection?

What is the current state of the interconnection workforce, both in terms of how many people are engaged in related work, as well as the diversity, equity, and inclusion of the interconnection workforce?

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