



ENGAGING STUDENTS IN THE HVAC AND SOLAR TRADES

Karl Hilker, Charlie Willkomm, and Dexter Peirce

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Wisconsin utilities' statewide energy efficiency and renewable energy program.

- Helps Wisconsin residents and businesses manage rising energy costs.
- Provides education, information, and rebates.
- Promotes in-state economic development.
- Protects our environment.
- Controls Wisconsin's growing demand for electricity and natural gas.

FOCUS BY THE NUMBERS



Served more than 1.1 million residential participants



Served more than 6,000 business participants

Saved over \$3.7B on ratepayer utility bills since 2015



Achieved \$4+ in benefits for every \$1 invested

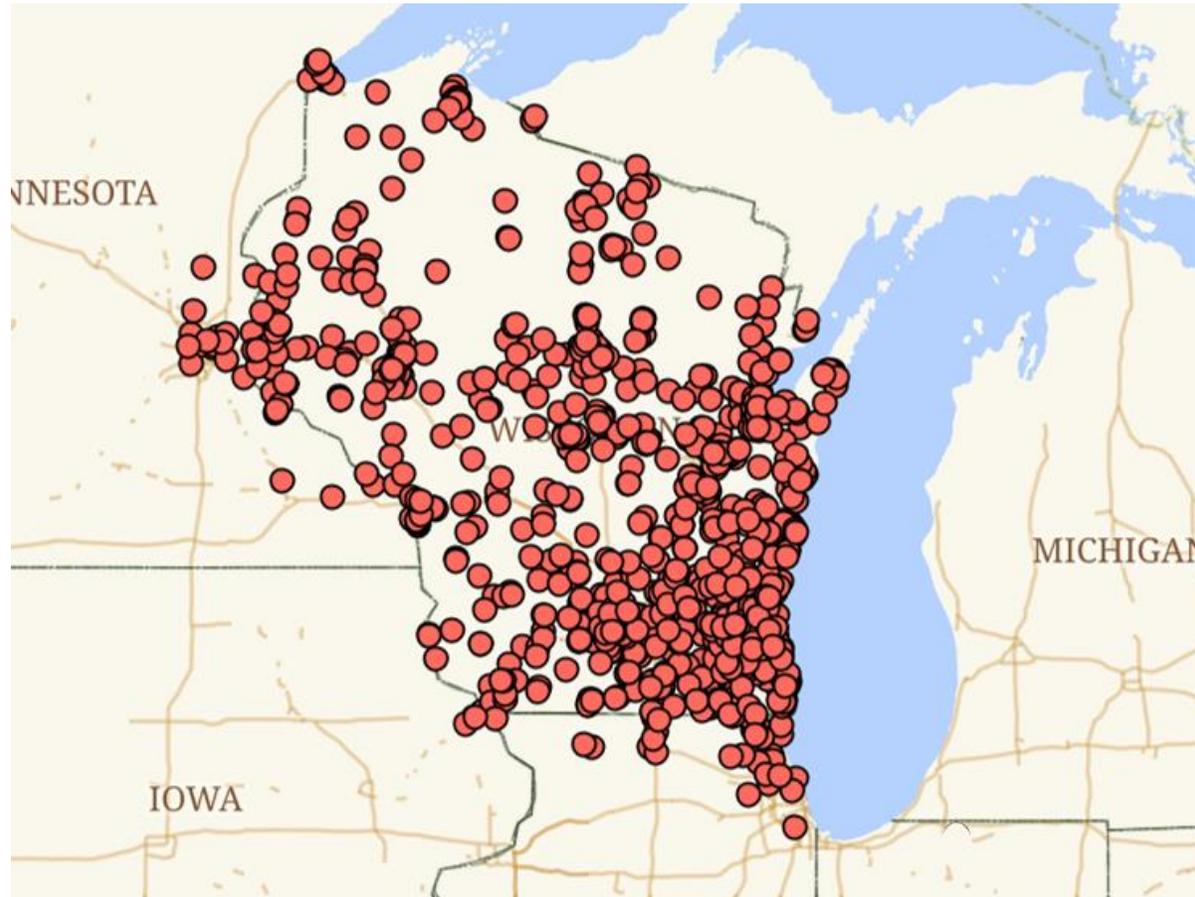
- Wisconsin's official resource for smart energy solutions.
- Works with residents and businesses to complete smart energy projects.
- Provides rebates, technical assistance, and smart energy resources.

WHY FOCUS ON ENERGY?



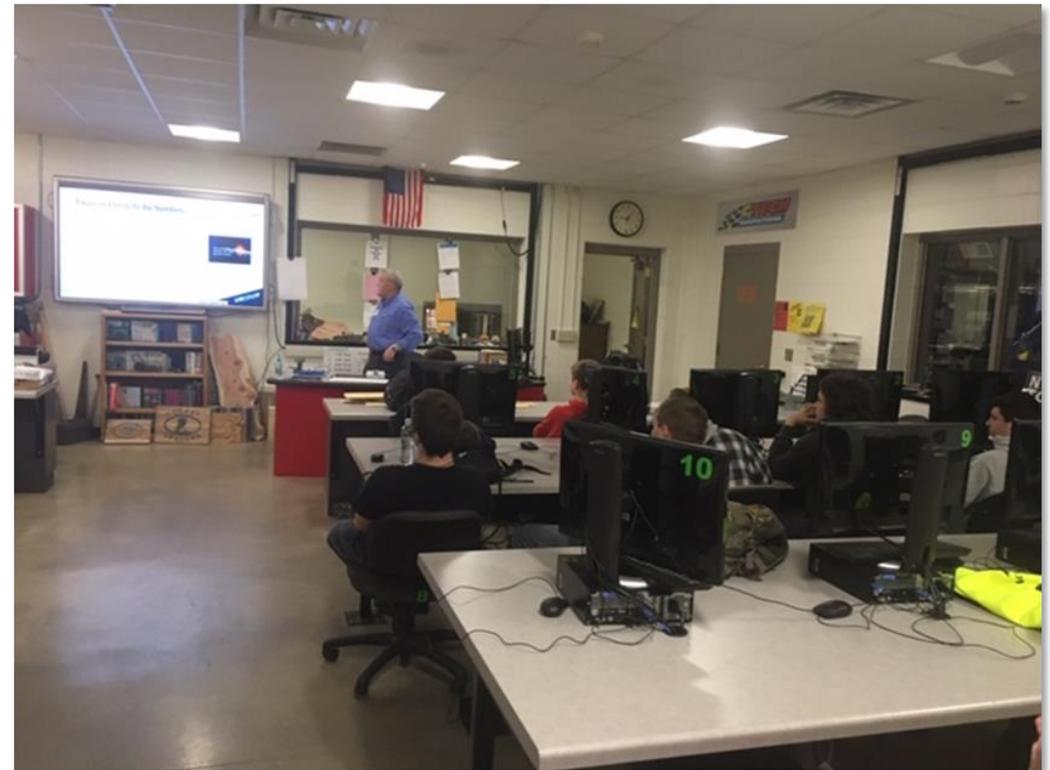
- Large network of participating HVAC and solar contractors (Trade Allies).
- Many of our Trade Ally partners are reporting challenges with recruiting and hiring staff.
- Focus on Energy works with schools across the state.
- A value-add for Focus on Energy and our partners.

STATEWIDE NETWORK OF TRADE ALLY CONTRACTORS



EFFORTS TO DATE

- Spring 2020 collaboration with Wausau East High School, Lennox Industries, and a local HVAC contractor.
 - Hosted a HVAC career exploration workshop.
 - Approximately 12 students were in attendance.
 - Shared an overview of career opportunities.



LESSONS LEARNED

- Strong value proposition for both high school instructors and Trade Ally contractors.
- Students are interested in receiving career information.
- Younger contractor connected well with the students.
- Hands-on demonstrations.
- Significant time and effort setting up the event.



PRESENTATIONS

- Advisory group input and feedback on the program
- Scalable program.
- Turnkey design.
- Minimal time commitment.



SKILLS TO BUILD A CAREER

Find Opportunity as a Skilled HVAC Tech

Young HVAC tradespeople are in high demand here in Wisconsin. This rewarding career path offers a strong starting salary, plenty of growth opportunity, and can give you the financial freedom to enjoy life while also saving for the future.

What's Life Like as an HVAC Technician?

HVAC technicians work to repair, install, and maintain heating, ventilation, and air conditioning systems. Every day is different. You get to work outside of the office environment, build your skills, and learn about innovative energy-efficient technologies.

Key Skills

- People Skills
- Math and Mechanical Skills
- Detail Oriented
- Time Management

Job Opportunities and Pay Scale

HVAC technicians in Wisconsin typically make between \$40,000 and \$80,000 annually. As your career grows, you can also pursue other roles within the industry.

Job Title	Sample Salary
HVAC Supervisor	\$88,000
HVAC Engineer	\$80,000
HVAC Refrigeration Technician	\$72,000
HVAC Service Manager	\$68,000
Service and Repair Technical Manager	\$65,000
HVAC Service Technician	\$55,000

Training and Getting Started

There are multiple paths to starting your HVAC career, and all are fast and affordable.

- Technical and trade school programs: Acquire a formal certificate, diploma, or degree. These programs can last anywhere from six months to two years.
- Job shadowing: On-the-job training with a working technician makes it possible to enter the industry right out of high school.
- Formal apprenticeships: Contractor groups often sponsor apprenticeship programs, and many are paid.

Take the First Step

Is HVAC the right career for you? Talk to your technical education teacher or guidance counselor, or reach out to a local HVAC contractor for more information.

"I like learning new things. Each job is a little different and I have to be creative in order to be successful."
— Ben, HVAC Technician



REDUCING ENERGY WASTE ACROSS WISCONSIN
Focus on Energy, Wisconsin's utility conservation program for energy efficiency and renewable energy, helps eligible residents and businesses save energy and money while protecting the environment. Focus on Energy's education, outreach, and financial rebates help to improve energy efficiency and renewable energy projects that otherwise would not be completed.
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Partnering with Wisconsin utilities

KEY PROGRAM ELEMENTS



- Email templates and best practices on how to contact schools and contractors.
- Focus on Energy program staff assistance in recruiting HVAC and solar contractors.
- Industry overview handouts.
- Presentation flyers.
- HVAC and solar industry overview videos.
- Presentation outline.
- Press release template.

EXPLORE A CAREER IN HVAC

New Workers Are in Demand. Join Us for an Interactive Workshop.

Learn the skills to work in the HVAC industry and start a rewarding career. In Wisconsin, there's a strong need for young tradespeople who repair, install, and maintain heating, ventilation, and air conditioning systems. Grow your expertise, start earning a solid income, and gain experience in an industry full of opportunity.

Career Benefits

- Training is flexible, fast, and affordable.
- Salaries typically range from \$40,000 to \$80,000.
- Every day is different. Work outside the office.
- Become an expert in energy-efficient technologies.
- Pursue new roles as you build experience.

Opportunity Starts Here

Check out our upcoming workshop to see if an HVAC career is right for you.

Event Information

School Name: _____
Address: _____
Date: _____ Time: _____

INCLUDES BANNER IMAGE: ALBION WISCONSIN
Focus on Energy, Wisconsin Electric Cooperative program to energy efficiency and renewable energy. Help eligible residential and business save energy and money while protecting the environment. Focus on Energy offers solar, weatherization, and financial solutions for energy efficiency, smart and renewable energy products that otherwise wouldn't be complete.
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HVAC INDUSTRY OVERVIEW VIDEO



SOLAR INDUSTRY OVERVIEW VIDEO



CHARLES SCHLESSINGER
Solar Install Technician

PRESENTATION OUTLINE

- Teacher to interview HVAC or solar contractor.
- Suggested questions and discussion items:
 - How did you get started in the industry?
 - What does typical day look like?
 - What is typical work schedule?
 - What types of equipment do you work on?
 - Perspective of a new employee.



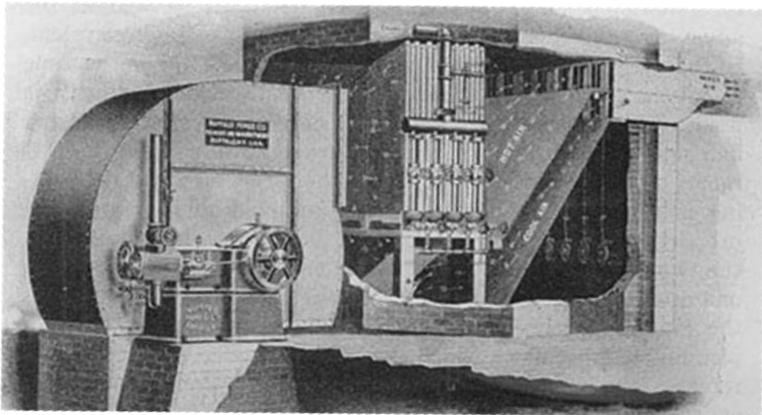
PRESENTATION OUTLINE

- Suggested questions and discussion items (continued):
 - What is a typical career ladder?
 - Key skill sets.
 - What does on the job training entail?
 - Average salary for various roles.
 - Education recommendations.
 - Job shadowing.
 - Hands-on demonstrations.
 - Next steps if there is interest from a student.
 - Potential advancement opportunities.



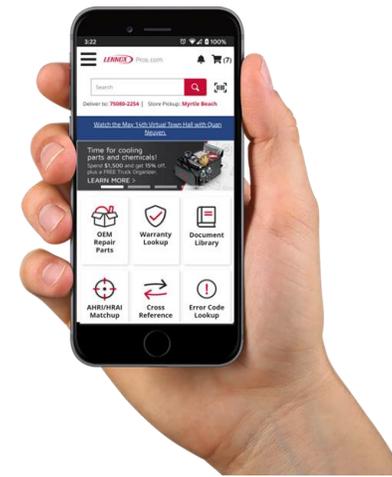
PAST PERCEPTION OF HVAC SYSTEMS

- Asbestos.
- Loud.
- Dirty.
- Large.



TODAY'S LOOK

- Much cleaner, in most cases.
- Easier diagnosing through technology, such as your phone or computer.
- Adapting to younger culture.
- More tools available and less effort.
- More work available and less layoffs.



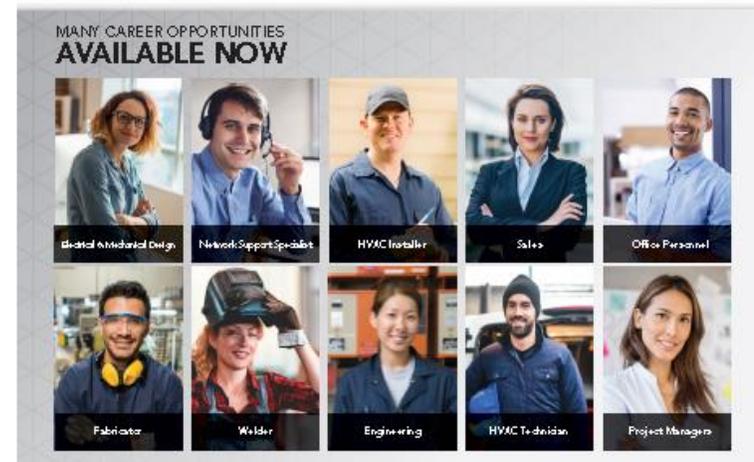
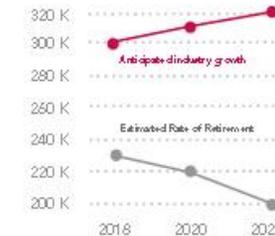
A WIDE RANGE OF OPPORTUNITIES

- Electrical and mechanical design.
- Network support specialist.
- Sales.
- Office personnel.
- Engineer.
- HVAC installer.
- Fabricator.
- Welder.
- Pipe fitter.
- Project manager.
- Human resources.
- And more!



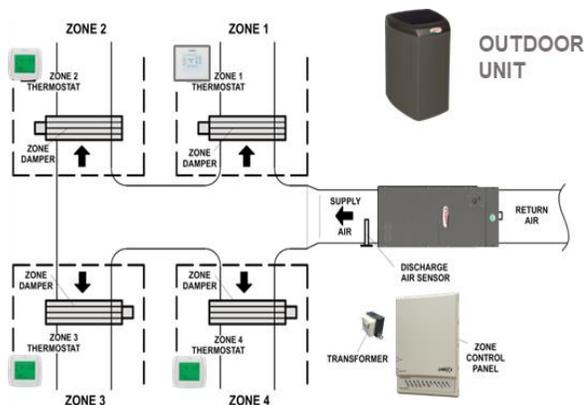
WHO SHOULD CONSIDER A HVACR CAREER? YOU!

The U.S. Bureau of Labor Statistics estimates there are currently 301,320 HVACR mechanics and installers in the U.S. A new study estimates 115,000 new HVACR workers must be trained by 2022 to meet the anticipated demand.



NOT JUST HEATING AND AIR CONDITIONING

- We prepare indoor air and conditioners.
 - Whether from hot to cool, or cold to warm.
 - Too dry with static in the winter to more comfortable humidity, too humid in the summer to less humidity.
 - Dirty air to filtered air.
 - Irritants and mold in the air to safe and clean air.
 - One condition in the building, to multiple conditions in different spaces through zoning or different types of equipment.



SKILLED TRADE SHORTAGE CHALLENGE AND OPPORTUNITY

- Employment in the industry is growing.
- Average technician age is 53.

Quick Facts: Heating, Air Conditioning, and Refrigeration Mechanics and Installers (national statistics)	
2021 Median Pay	\$55,590 per year \$26.73 per hour
Typical Entry-Level Education	Postsecondary nondegree award
Work Experience in a Related Occupation	None
On-the-Job Training	Long-term on-the-job training
2021 Number of Jobs	381,600
2020-2030 Job Outlook	5%
2020-2030 Employment Change	19,000

TECHNICIAN ACCESSIBILITY, ADAPTABILITY, AND EASE



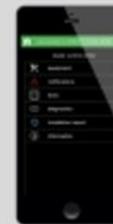
iComfort
Dealer
Setup App



SERVICE DASHBOARD

- Present and remove diagnostics.
- Remote setup.
- Remote alert notification.
- Scheduling to a technician.

FEWER TOOLS REQUIRED

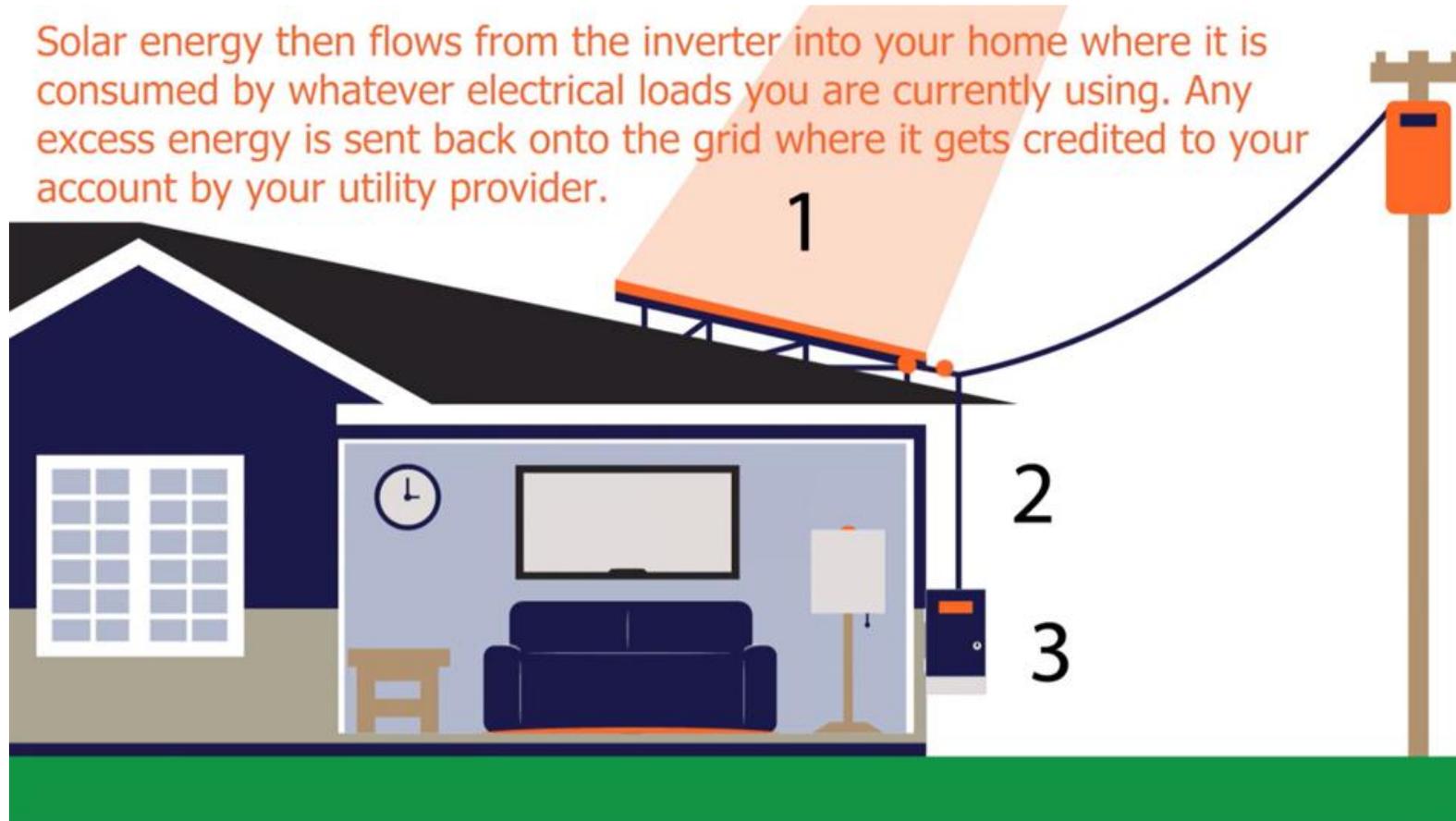


INSTALLATION REPORT

- Line voltage.
- CFM.
- Heat rise.
- Temperature drop.
- Superheat.
- Subcool.

SOLAR IN WISCONSIN

Solar energy then flows from the inverter into your home where it is consumed by whatever electrical loads you are currently using. Any excess energy is sent back onto the grid where it gets credited to your account by your utility provider.



SOLAR OF ALL SIZES



CAREERS IN SOLAR



- Trades:

- Solar Installers.
- Electricians.
- Equipment Operators.
- Site Leads/Project Managers.

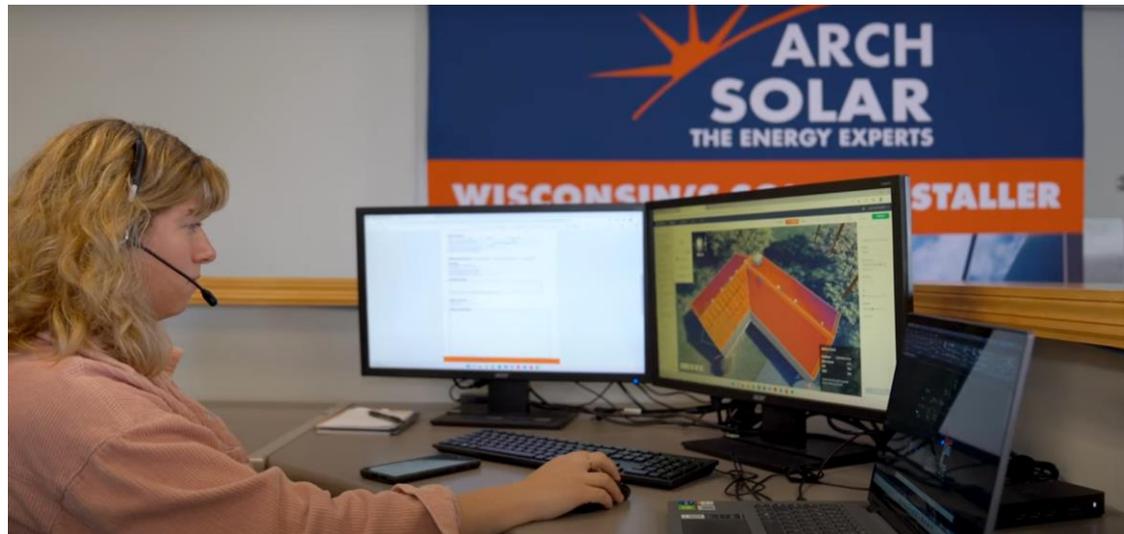


- Office:

- Sales.
- Marketing.
- Operations.

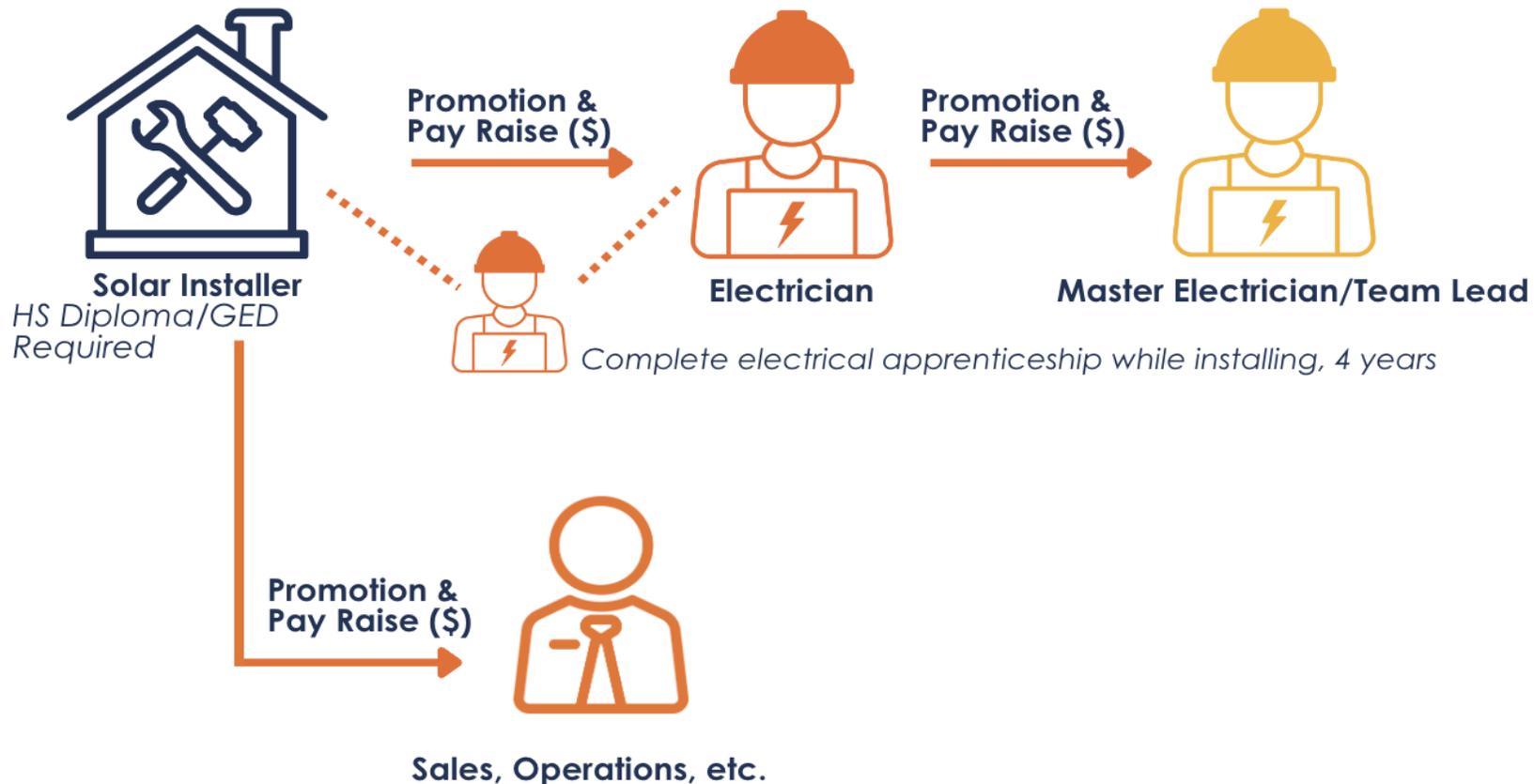
- Engineering:

- System Designer.
- System Engineer.



EXAMPLE CAREER PATH

Example Career Paths

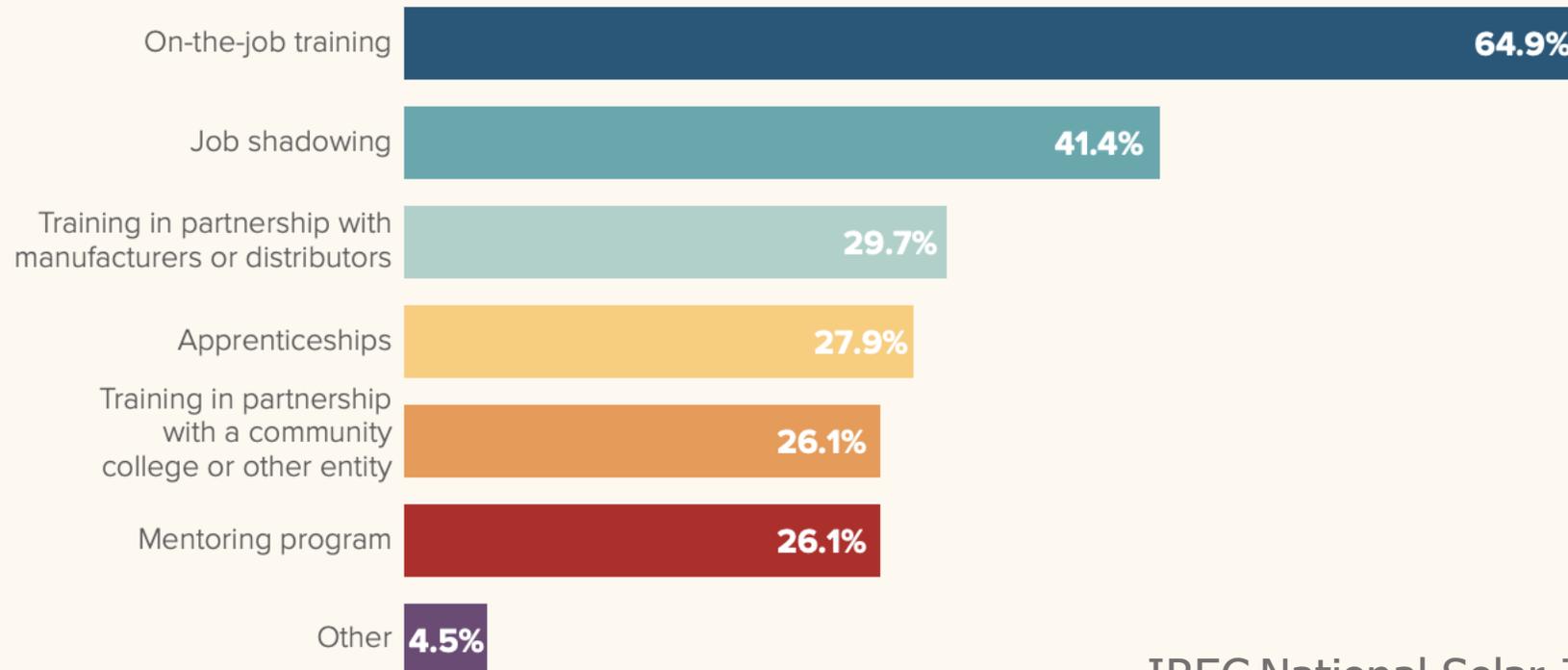


Dexter Peirce

- Solar Installer.
- Solar Facilitator.
- Energy Consultant.

NONLINEAR PATHWAYS

Figure 14
SOLAR WORKFORCE DEVELOPMENT METHODS

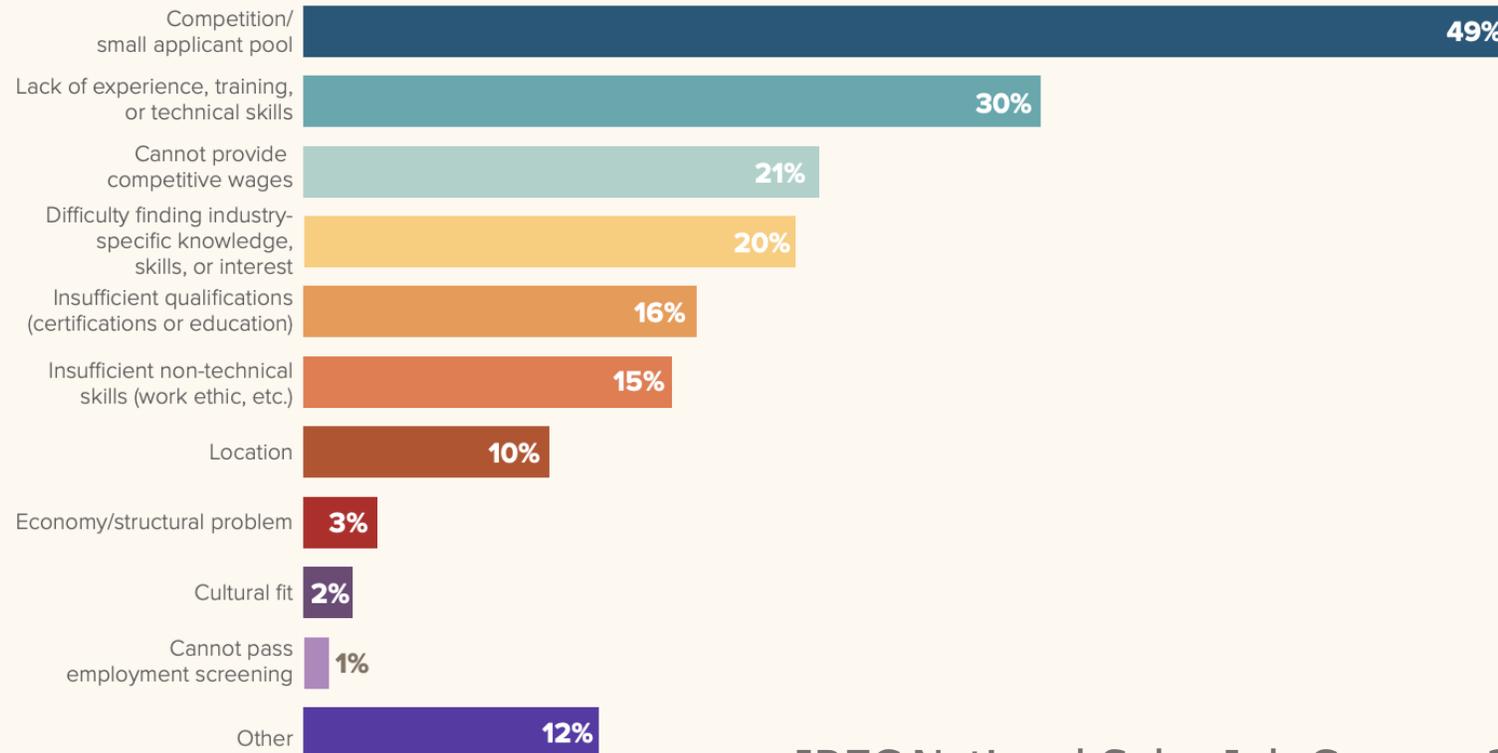


IREC National Solar Job Census, 2021

CONTINUING TO GROW



Figure 16
MOST SIGNIFICANT REASONS FOR DIFFICULTY HIRING AT SOLAR COMPANIES



IREC National Solar Job Census, 2021

Joining the solar industry is a great opportunity for students to want to learn something new and join a field with increasing demand.

KEEP PROGRAM

University of Wisconsin Stevens Point

Admissions Academics Athletics Alumni / Foundation Campus Life Community Diversity / Inclusion About Us Student Resources

Wisconsin K-12 Energy Education Program

University of Wisconsin-Stevens Point > CNR Associated Programs > Wisconsin K-12 Energy Education Program > Careers in Energy

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- Educational Videos
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- Lessons - By activity guide
- Lessons - By grade level
- Lessons - In Google

Energy Careers in Wisconsin



According to the 2020 [U.S. Energy and Employment Report](#) (USEER), deployment of new technologies (namely transition from coal-fired generation to natural gas, solar and wind) and the role of energy efficiency are both contributors to job growth at the core of the 21st century economy. "The Traditional Energy and Energy Efficiency sectors employed 6.8 million people at the end of 2019, adding over 120,300 new jobs in total, outperforming the rest of the economy in job creation."

To back that up, the U.S. Bureau of Labor Statistics [Occupational Outlook Handbook](#) (2019) projects renewable energy system installation and maintenance as two of the top three fastest growing careers between 2019-2029.

Notably, however, energy utility companies continue to face shortages due, in part to an aging workforce, in key career areas, such as line worker, power plant operator, generation technician, natural gas service technician and electrical/power engineer ([Get Into Energy/Get Into STEM](#), 2021).

On top of that, Wisconsin energy employers state the top three reasons for difficulty in hiring (USEER, 2020) as:

ROLLOUT STRATEGY

- Email announcement to network of participating Focus on Energy HVAC and solar Trade Ally contractors.
- Email announcement to Tech Ed Teachers via WTEA list serve.
- WTEA conference booth and presentation.

HOW TO PARTICIPATE

- Complete the participation request form.
- Focus on Energy will help recruit a local HVAC or Solar Contractor.
- Coordinate with participating HVAC or Solar Contractor to discuss presentation date, format, and length of presentation.
- Visit focusonenergy.com/career-resources.

CONTACT INFORMATION

- Karl Hilker, Senior Market Outreach Manager
 - karl.hilker@focusonenergy.com
 - 608.250.2365
- Charlie Willkomm, Field Technical Consultant Lennox Industries
 - Charlie.Willkomm@lennoxind.com
 - 262-206-8598
- Dexter Peirce, Solar Energy Consultant
 - dexter@archsolar.com
 - 920-838-5980