

Growing and Diversifying the Energy Efficiency Workforce: Pandemic Edition

October 1, 2020



SEDAC

SMART ENERGY DESIGN ASSISTANCE CENTER

Providing effective energy strategies for buildings and communities

Who we are

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- Workforce Development & Diversification Project Manager

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Who we are

We are an applied research program at University of Illinois.

Our mission: Reduce the energy footprint of Illinois.



Workforce Development & Diversification

SEDAC's Workforce Development & Diversification Project will identify the major issues and potential solutions to:

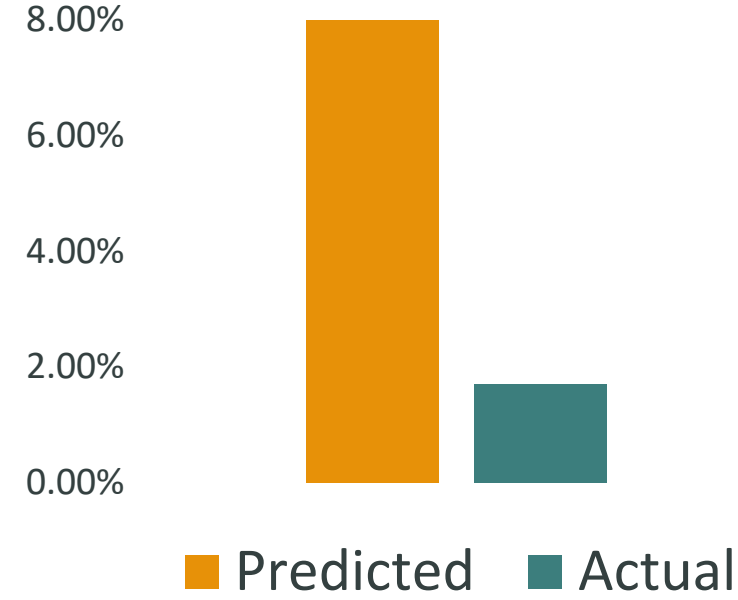
- 1) Develop a larger and more diverse pool of qualified EE workers.
- 2) Increase vendor participation in underserved areas.
- 3) Help the energy efficiency workforce become more resilient.

**Where were we
before the
pandemic hit?**

Illinois Energy Efficiency Jobs in 2019

Tepid but steady growth in 2019, compared to past years

Percent EE job growth in 2019



EE workforce at end of 2019: **91,000 workers**

[2020 USEER Jobs Report
https://www.usenergyjobs.org/](https://www.usenergyjobs.org/)



Hiring Difficulty

More EE employers are finding it
“very difficult” to fill jobs

	Very Difficult		Somewhat Difficult	
	State	National	State	National
2018	32%	21%	63%	48%
2019	61%	45%	29%	46%

Lack of diversity

- Existing EE workforce is older, male, and lacks racial diversity
- Women severely underrepresented in EE
- Black workers make up much smaller share of EE jobs than of the overall national workforce



Underserved populations

- Rural areas, distressed communities struggle to train, attract, and retain EE workers
- Formerly incarcerated individuals have few opportunities in EE workforce (27% unemployment rate pre-pandemic)



Rosy outlook for 2020

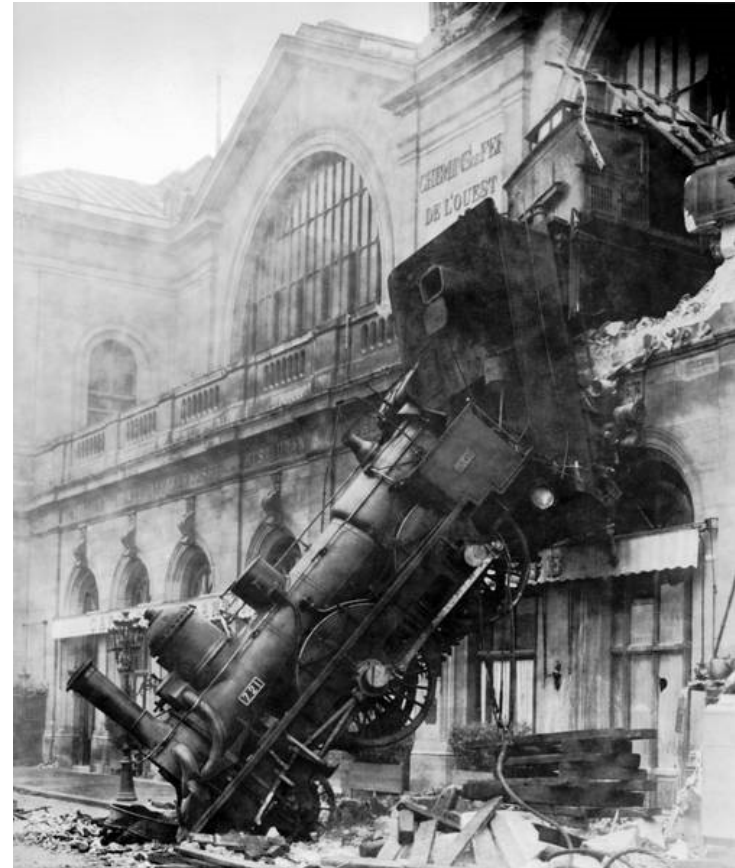
EE employers predicted
3.7% growth in 2020



[2020 USEER Jobs Report](https://www.usenergyjobs.org/)
<https://www.usenergyjobs.org/>



What's
actually
happening



~10% Decline in EE Jobs since pre-COVID-19

Illinois EE Jobs Since Beginning of Pandemic



<https://e2.org/wp-content/uploads/2020/09/Clean-Energy-Jobs-August-COVID-19-Memo-Final.pdf>

Impact of Illinois economic reopening

- With phased reopening, there are now few state restrictions in place for most EE jobs
- Modest job growth in June and nearly flat job growth in July and August indicate that ***most EE workers who lost their jobs are not back to work***
- Much of the earlier stimulus funds have been exhausted.

Other troubling signs

March

Majority of job losses
reported as temporary

August

More job losses
reported as permanent

- Long-term unemployment rate has risen sharply
- “Permanent” unemployment now represents $\frac{1}{4}$ of total unemployed.

Which energy efficiency workers are hardest hit?

Demographic groups

- Racial and ethnic minorities
- Young workers
- Those with less educational attainment

Sectors

- Small businesses
- Residential EE services

“Black and Hispanic workers continue to feel disproportionately high levels of unemployment, and while white workers have seen slight job growth in July, Black workers saw no change.”

<https://e2.org/wp-content/uploads/2020/08/Clean-Energy-Jobs-July-COVID-19-Memo-Final.pdf>

Which energy efficiency customers are hardest hit?

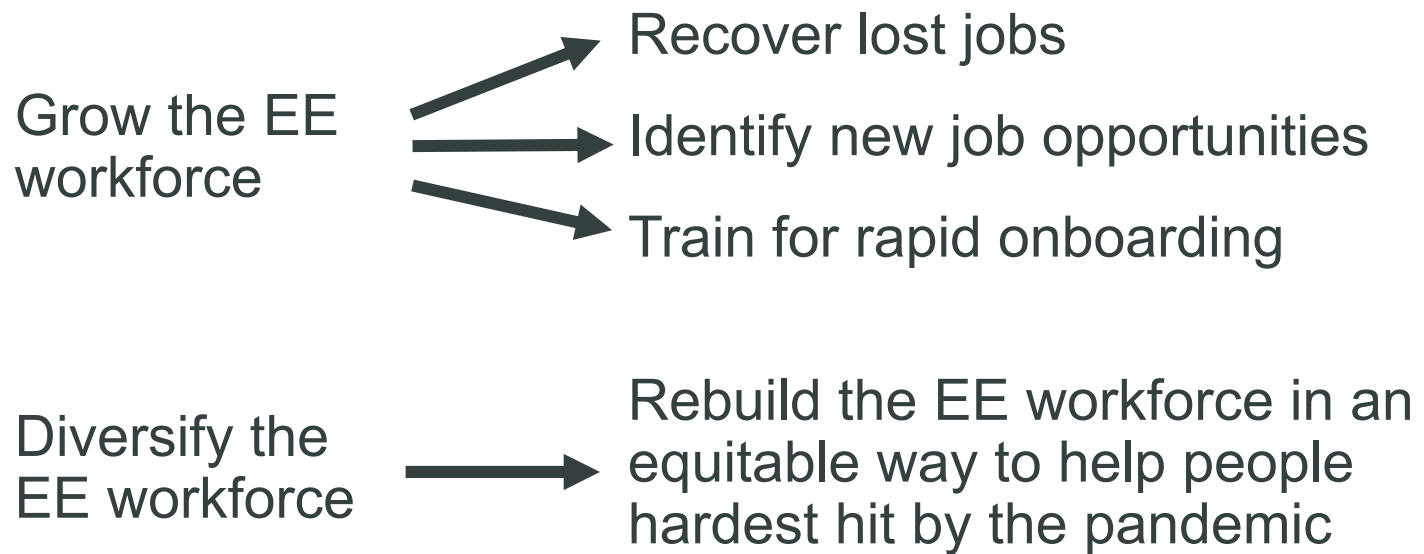
Communities with already high energy burden are also the hardest hit by COVID-19 and unemployment.

- Racial and ethnic minorities
- Seniors
- Those with less educational attainment
- Low-income households
- Formerly incarcerated

Income cuts + higher home energy bills = increased energy burden

<https://www.aceee.org/blog-post/2020/05/perfect-storm-covid-19-cuts-incomes-and-hikes-home-energy-bills>

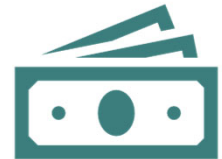
Shifting priorities



**Why energy
efficiency is more
important than ever**

Energy efficiency as a pandemic response

Energy efficiency saves people money for times like this when they need it most



Energy efficiency stimulates direct and indirect job growth



Energy efficiency as a pandemic response

Energy efficiency promotes health and safety



Energy efficiency combats climate change
and builds resilience



Energy efficiency as a pandemic response

Energy efficiency services and jobs can mitigate disparities in access to quality housing, clean air, education, and employment



The need for federal and state funding

The consensus:
Congress needs to act now to boost clean energy jobs.

“We sputtered back a bit, at least temporarily, but Congress really needs to put some gas in the tank if we’re going to make it over the high hill to real economic recovery. The best way to stimulate a robust and lasting economic recovery, we know, is by focusing on clean energy in any forthcoming economic stimulus. But we’re running on fumes and running out of time. Congress must act now.”

--Bob Keefe, Executive Director of E2

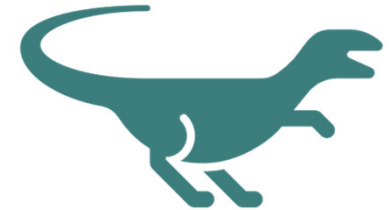
EE workforce resilience

What is resilience?

The ability to **resist damage, recover from, and adjust more quickly** after stress.

To not only “**bounce back but bounce forward,**” enhancing ability to withstand future stress.

The “general persistency of **service dependability** in the face of faults”



What makes a system resilient?

Redundancy: Intentional duplication of system components

Example: Online and in-person training options so training can continue when one option fails



Efficiency: Minimize waste of resources, directing resources to more important priorities

Example: Virtual site visits to reduce transportation costs and time, improve safety



What makes a system resilient?

Autonomy: Capable of operating independently, against outside forces

Example: Ability to produce EE products locally, rather than relying on global supply chains



Interdependence: Components are interconnected, bolstering the system's ability to respond to crises.

Example: Employees can step in and perform work when colleagues get sick.



What makes a system resilient?

Collaboration: Working with others both inside and outside system

Example: Partner with health professionals to make buildings healthy & energy efficient



Positive feedback loops: Responsive feedback loops that transmit learning throughout the system

Example: SAG meetings



What makes a system resilient?

Flexibility: Learning from experience and adapting to changing situations

Example: Developing no-touch programs, online marketplaces, virtual audits



Strength: All components are healthy; the system is only as strong as its most vulnerable components.

Example: Prioritizing health and wellness of employees, addressing childcare needs, finding ways to reduce burden on communities of color.



What makes a system resilient?

Diversity: Multiple components that are different from each other and can resist diverse threats.

Diverse jobs



Diverse services



Diverse training



Diverse funding sources




Diverse staff



How resilient are we?

Before closing, we donated all Tyvek suits, PPE, N95 masks, and respirators to local hospitals.



Mark Tajima,
Energia,
Holyoke, MA

Energy efficiency: **Faces of EE JOBS**
America's Job-creation powerhouse

We found ways to offer businesses, non-profits and public agencies assistance, remotely.



Rachel Norton,
MACED,
Lexington, KY

Energy efficiency: **Faces of EE JOBS**
America's Job-creation powerhouse


We are rethinking ...how we can best serve the people who need us.



Derrick Blue,
Tampa Hillsborough Action
Plan, Plant City, FL

Energy efficiency: **Faces of EE JOBS**
America's Job-creation powerhouse

We help buildings perform better, for energy, safety, durability and resilience benefits.



Ken Neuhauser,
Building Evolution Corp.,
Maynard, MA

Energy efficiency: **Faces of EE JOBS**
America's Job-creation powerhouse

Energy efficiency pros are masters at:

- Assessing facts on the ground
- Making adjustments based on unforeseen circumstances
- Finding innovative solutions to new challenges

<https://e4thefuture.org/blog/faces-of-ee-to-covid-you-might-break-our-stride-but-you-cant-break-our-spirit/>

**What can we learn
from past crises?**

Lessons learned

Lesson 1: Develop shovel-ready programs to tap into stimulus funds when they become available



What happened: During the recession, “shovel ready” projects were able to take advantage of American Recovery & Reinvestment Act funding, while projects that weren’t ready could not.

Lessons learned

Lesson 2: Prioritize limited funds according to current needs and market value (protected, created).



What happened: In response to natural disasters, the Urban Land Institute developed criteria to prioritize programs based on criticality of need, market value protected, potential market value to be created, and performance considerations.

Lessons learned

Lesson 3: Pay attention to the winners and losers and develop programs to help the losers.



What happened: The economic recession of 2008/2009 had a disproportionate impact on communities of color and young people. Young workers experienced lower earnings and fewer opportunities long after the recession ended.

Lessons learned

Lesson 4: Leverage EE workforce development channels to support rapid development of training and service programs.



What happened: Because of strong investment in regional workforce development and training infrastructure, Illinois was able to invest \$4.4 billion in energy efficiency initiatives in response to the 2008 recession.

Lessons learned

Lesson 5: Emphasize the secondary benefits of energy efficiency



What happened: In response to the recession, some states invested in green jobs despite low energy prices because they understood the “secondary benefits” of green jobs—more competitive market; safer, comfortable, healthier buildings.

Lessons learned

Lesson 6: Spur job growth through government mandates



What happened: In New York (2009), legislation mandating annual benchmarking and energy audits every 10 years for large buildings, energy code compliance, and energy efficient lighting created 17,800 construction jobs and generated \$700M in savings.

Lessons learned

Lesson 7: Ensure long-term sustainability of programs



What happened: ARRA weatherization funding generated 400 new jobs in Ohio, but most of those jobs disappeared when the funding was gone.

Lessons learned

Lesson 8: Don't neglect employee wellness



What happened: In the weeks and months after 9/11, a significant number of workers developed “worker’s block”—feelings of detachment and estrangement that reduced performance. Employers took steps to build employee morale and foster cooperation.

Lessons learned

Lesson 9: Provide opportunities to learn, in response to changing circumstances.



What happened: After an earthquake in Christchurch, subcontracting businesses were overwhelmed with the increasing demand for services. Learning opportunities to enhance their technical, managerial, and financial skills helped them develop more resilient business practices.

Lessons learned

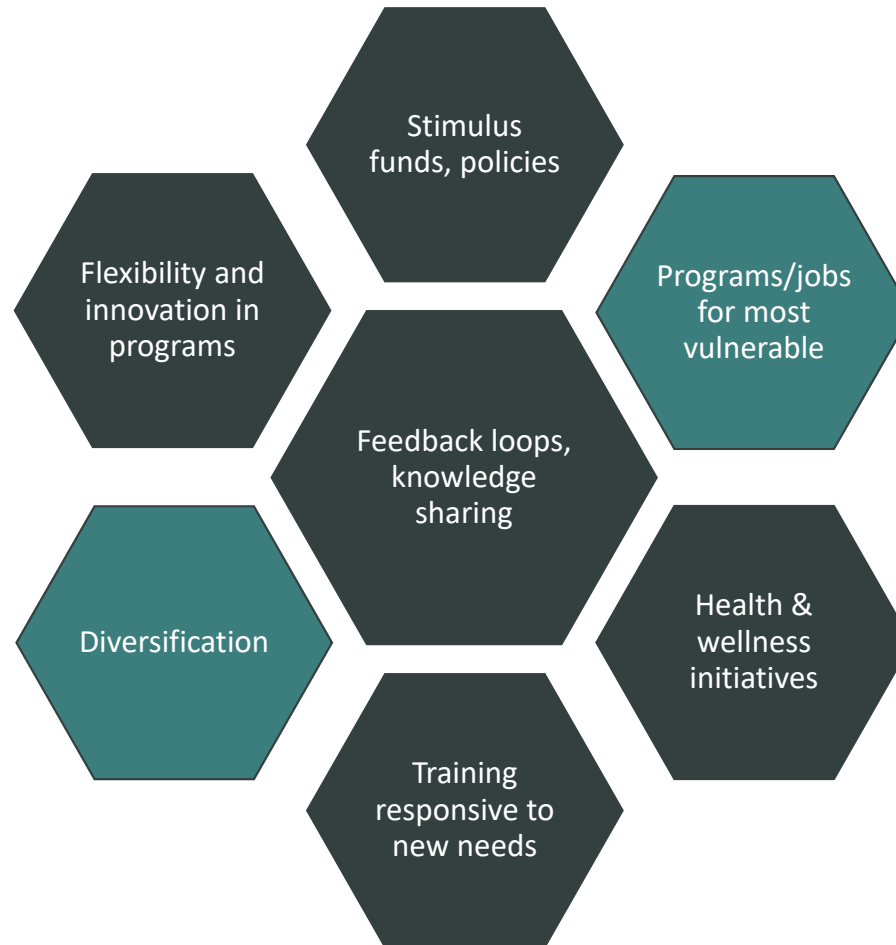
Lesson 10: Plan for the next crisis



What happened: Following 2013 wildfires in California, researchers reviewed disaster responses and recommended ways to plan for the next disaster.

Diversity, inclusion & equity

Building resilience



Building resilience



Increasing diversity, promoting equity: Hiring policies

Internal diversity throughout organization, especially in:

- Leadership
- Program management
- Training
- Outreach



External diversity (partners, vendors, program managers)

Hiring policies: Formerly incarcerated people

“I did have some issues with [training program]. I tell you, I had to pray about it. I had individuals that had some past drug issues. Some had battery. One individual was out two years from a 20-year prison sentence for murder. **None of those guys were approved to go through the training.** You know, I don’t look at them like they are. I look at them for what they could be. And I was discouraged.”

--Service Provider

Formerly incarcerated individuals: The law

Ban the box: Employers with 15+ employees cannot access criminal background checks until after an interview is conducted.

If you do a background check:

- Must get applicant's written consent ahead of time and let them know if you intend to disqualify them based on report
- Must notify the applicant about final decision



Formerly incarcerated individuals: The law

To deny employment based on a conviction, employers must consider:

- Nature/gravity of the criminal offense
- How much time has passed
- Nature of the job

If there isn't a direct relationship between the job and the offense, employers cannot legally use the offense to deny employment.

*Employers can still choose candidates with more or better experience, but **irrelevant criminal history should not be a deciding factor.***

Formerly incarcerated individuals: Needed reforms

Sealing expansion: Allow most nonviolent offenders to apply to have their criminal records sealed after sentences or parole

Business-liability reform: Protect businesses from lawsuits based solely on hiring an employee with a criminal record

Occupational-licensing reform: Remove legal barriers that prevent former offenders from working in most licensed occupations

Formerly incarcerated individuals: Needed reforms

What are the hiring policies regarding formerly incarcerated individuals among energy efficiency employers and utilities?

What reforms are needed?

Formerly incarcerated individuals: What about the risk?

Work Opportunity Tax Credit

Employers receive up to 40% tax credit of employee's yearly wages.

Fidelity Bonding

Insurance policy that protects employers from employee dishonesty or theft.



Success stories

Safer Foundation brings employers together and trains formerly incarcerated to become the skilled workers the employers need.

“We have a place where we can find some great people.”

“What strikes me most about the candidates is their dedication”



Beyond hiring/recruitment policies ...

Diversity training

Partnerships with diverse stakeholder groups

Make training feasible (scholarships, childcare, etc.)

Increase outreach to underserved populations

Provide comprehensive support

Connect training to good jobs





Questions?

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