Southern Illinois Clean Energy Jobs Outlook

Federal Disruptions and Paths Forward



School of Labor and Employment Relations

Climate Jobs Institute



Overview

Federal Policy Impacts

Current Jobs & Openings

Strategies for Moving Forward



Federal Policy Impacts



One Big Beautiful Bill: Solar and Wind

	Federal Clean Energy Tax Credit	Phaseout Date	Credits Remain for	Jobs at Risk
25D	Residential Clean Energy Credits (Solar, batteries, geothermal, etc.)	Purchases must be made by Dec. 31, 2025.	Third-party owned solar systems (PPAs and leases) through 2027 (see 48E below).	Residential solar, storage, and geothermal jobs, starting Jan. 2026
45Y & 48E	Clean Electricity Production Tax Credit, Investment Tax Credit (solar and wind)	Placed in Service by Dec. 31, 2027 OR begin construction by July 2026	Nuclear, geothermal, & battery storage projects	Large DG & utility solar, wind jobs, residential solar leases and PPAs, starting in 2028

OBBB: Manufacturing & Hydrogen

	Federal Clean Energy Tax Credit	Phaseout Date	Jobs at Risk
45X	Advanced Manufacturing Production Tax Credit	Dec. 31, 2027 for wind components. Phases out credits for critical mineral production, introduces domestic content rules.	Wind manufacturing jobs, other clean energy manufacturing jobs
45V	Clean Hydrogen Production Tax Credit	Must begin construction before Dec. 31, 2027	Hydrogen production jobs (construction, operations)



OBBB: Electric Vehicles

	Federal Clean Energy Tax Credit	Phaseout Date	Jobs at Risk
25E, 39D, 45W	Used and Clean Vehicle Tax Credits, Commercial Clean Vehicle Credit	Must purchase vehicles before Sept. 30, 2025	EV, battery manufacturing & sales jobs, maintenance jobs
30C	Alternative fuel vehicle refueling property credit (including EV chargers)	Placed in Service by June 30, 2026.	EV charging infrastructure jobs, starting July 2026



OBBB: Energy Efficiency

	Federal Clean Energy Tax Credit	Phaseout Date	Jobs at Risk
25C	Energy Efficient Home Improvement Credit (Appliance purchase, audits, weatherization)	Improvements made by Dec. 31, 2025	Energy Efficiency Jobs
45L	New Energy-Efficient Home Credit (for contractors, developers)	Homes must be purchased by June 30, 2026	Energy Efficiency Jobs
179D	Energy Efficient Commercial Buildings Deduction	Must begin construction by June 30, 2026	Energy Efficiency Jobs



How will these changes impact Illinois?

"The bill will reduce additions of new, cost-effective electricity capacity in Illinois, raising power prices for consumers and decreasing the state's GDP and job growth in the coming years." -Energy Innovation.



OBBB Impacts (Energy Innovation)

Less Clean Energy Investment

 Annual Losses of \$4.4 billion in GDP in IL in 2030 and 2035.

Less Clean Energy Generation

- 1.3 GW less IL solar capacity in 2035
- 2.7 GW less IL wind capacity in 2035



OBBB Impacts (Energy Innovation)

Fewer Jobs

- Illinois could lose 21,000 potential or existing jobs in 2030, 18,000 jobs in 2035 (Energy Innovation)
- Eliminate as many as 52,000 manufacturing and energy jobs (Illinois Environmental Council)
- Small residential solar businesses may be hardest hit in the immediate future.

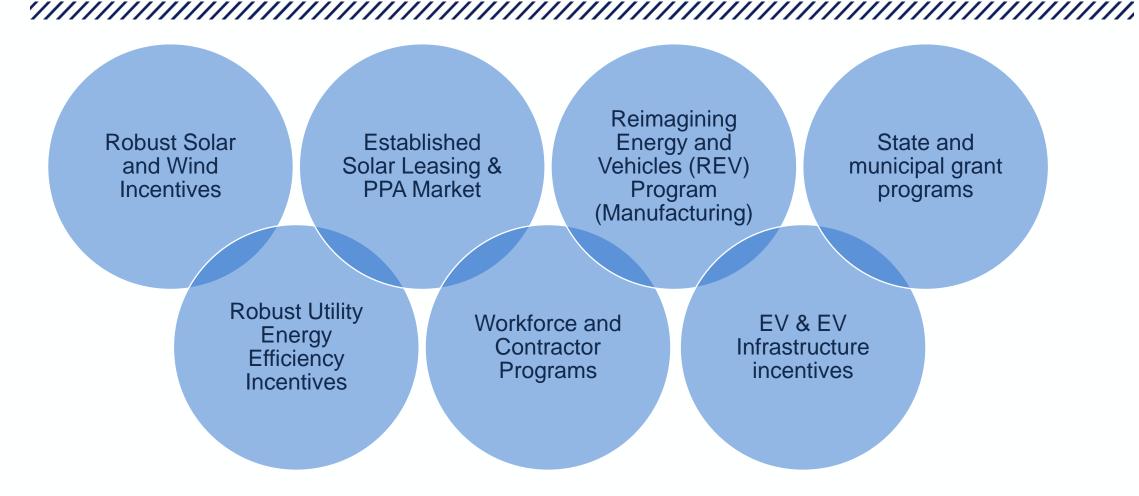
Increased Power Prices

- In Illinois, wholesale electricity costs would increase from \$3.3 billion to \$4.5 billion in 2035, a 38% increase.
- In Illinois, 6-10% increase in consumer electricity rates by 2035.
- Annual increases of \$180 in household energy bills by 2035.



https://energyinnovation.org/report/updated-economic-impacts-of-u-s-senate-passed-one-big-beautiful-bill-act-energy-provisions/
https://ilenviro.org/trump-big-beautiful-bill-illinois-impacts/

What Illinois Has Going for it



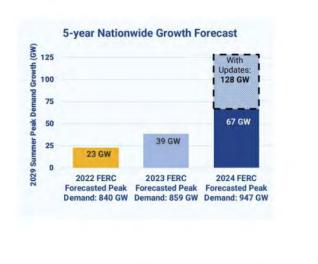


We Need More Electric Generation!

- Forecasted load growth from data centers, new manufacturing, and electrification
- Solar & wind are cheaper and easier to scale up quickly than fossil fuel alternatives
- Energy efficiency is more important than ever
- Electricity costs are already rising due to load growth



- 2000s-2020: decades of stable, flat electricity demand
- 2023: Forecast for cumulative 5year electricity load growth doubled.
- 2024: 5-year load growth forecast increased by 5X
- Electricity demand estimates have only increased since then.



Source: Strategic Industries Surging: Driving US Power Demand

<u>Illinois Power Hour: Load Growth: How is it Shaping Power</u> Markets?



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Questions and Uncertainty Abound

- Will we lose existing jobs?
 - Which jobs are most vulnerable?
 - Which businesses are most vulnerable?
- Will companies be hiring in 6 months? Two years?
- What jobs should we train people for? What's a safe bet?
- Will jobs increase in the next few years as we take advantage of sunsetting tax credits?
- What Illinois policies and programs could mitigate the negative impact?



Where are we at? Clean Energy Jobs and Job Openings in Southern Illinois



Building Trades do Work Across Multiple Clean Energy Sectors

				electric	ar	ic Vehicle tructure	mission, bution, age	ng energy ancy & ification	Emerging technologies*
					_		olar field nd as tha		Emerging technolog
Electrical workers		•		•		•	a lighting		Х
Carpenters	_			•		•	a high r		Χ
Iron and steel workers	and do	ning a	fire al				ctrician,	,	
Operating engineers & ope	Northe	ast II			,		· · · · · · · · · · · · · · · · · · ·		Х
Laborers	14011110	^	^	^	^	^		^	Х
Plumbers and pipe fitters					Χ			Χ	Х
Heat and frost insulators					Х			Χ	



Building Trades Strategies to Address Uncertainty

Managed Growth

- Close coordination with contractors to determine apprentice openings.
- Ensure that apprentices will have a long-term career, not just a job.

Diversification

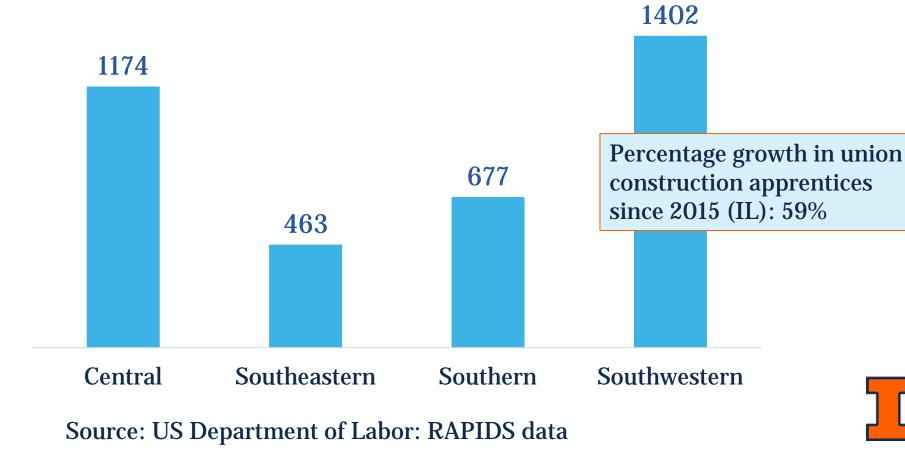
- If it will create hours for their members, they are for it.
- Actively seek out opportunities in many industries for their members.
- Train well-rounded craftspeople, not solar installers.



Apprentices in Union Programs

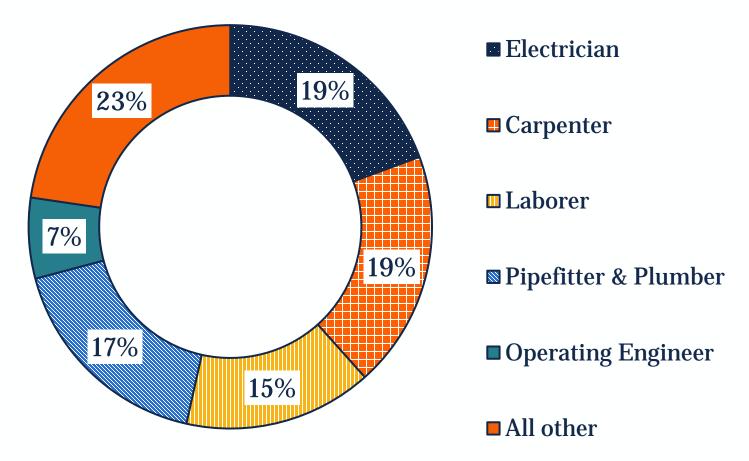


Construction Apprentices in Southern Illinois (2024)



Apprentices by Occupation (IL)

Share of Apprentices by Occupation (2024)



Source: US Department of Labor: RAPIDS data



Solar Jobs & Job Postings



	Solar Jobs 2023 (USEER)	Solar Job Postings 2023 (Lightcast)	Solar Job Postings 2024 (Lightcast)
Central Region	174	225	364
Southeast Region	150	48	32
Southwest Region	409	138	157
Southern Region	1420 (?)	45	63

Source: US Energy Employment Report 2024, Lightcast



Solar Job Postings

Sample Occupations

- Solar Installers
- Sales Representatives
- Electrical Engineers
- Maintenance and Repair Workers
- Electricians
- Project Managers
- Construction Laborers

Sample Companies

- Sunrun
- William Charles Construction Company
- Ameren
- Blue Sky Energy Solutions
- Lgcy Power
- Sun Solar
- Applied Materials
- Freedom Forever
- Aerotek



Source: Lightcast

Utility Solar Projects in the Pipeline

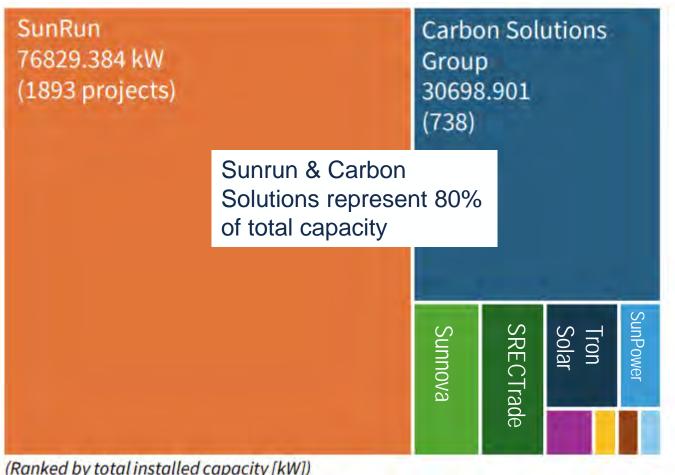
Company Name, Plant Name	County	Planned Operation Year	Nameplate capacity (MW)
Strata Clean Energy: Prairie Oak Solar	Shelby	2027	250
Strata Clean Energy: Austin Creek Solar	Adams	2027	140
Cooks Mill PV 1	Coles	2026	99
Vistra Corp: Newton Solar BESS LLC	Jasper	2025	52
Crooked Creek PV 1 LLC	Marion	2026	99
Flora Solar LLC	Clay	2026	125
Vesper Energy Development LLC: Meadow Springs Renewable Energy	White	2026	150

Source: US Energy Information Administration



Top Illinois Shines Vendors in Central IL

TOP VENDORS, by capacity (kW)



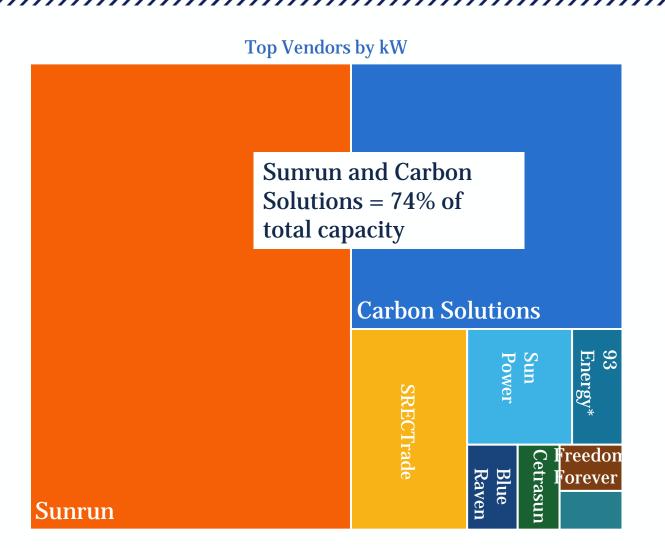
13 Equity Eligible Contractor *Vendors* operate in region, representing less than 1% of total project capacity

9 Equity Eligible Contractor *Installers* operate in region, representing 3% of total project capacity

Source: Illinois Shines Project Applications



Top Illinois Shines Vendors in Southwestern IL



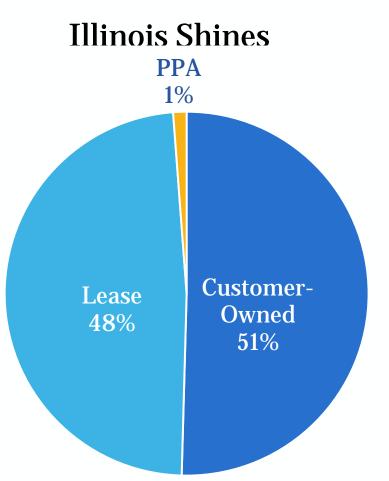
8 Equity Eligible *Installer* Contractors install 5% of total kW

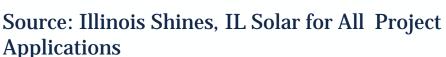
12 Equity Eligible *Vendor*Contractors have 2.5% of total kW

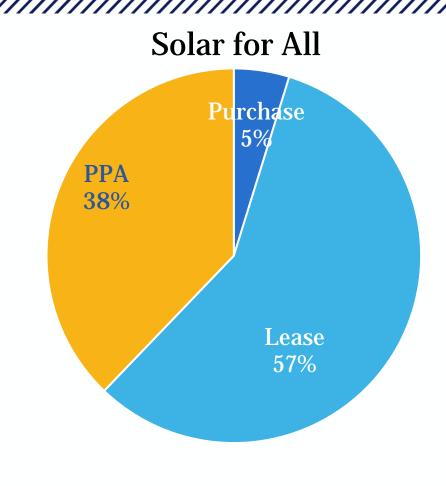
Source: Illinois Shines Project Applications



Lease vs. Customer Owned Small DG Solar







Equity eligible contractors are as likely as nonequity eligible contractors to offer solar leases, compared to customer-owned solar.



Transmission, Distribution, Storage Jobs



	TDS Jobs 2023 (USEER)	TDS Job Postings 2023 (Lightcast)	TDS Job Postings 2024 (Lightcast)
Central Region	1905	174	103
Southeast Region	1457	37	24
Southwest Region	2245	158	60
Southern Region	1366	38	23

Source: US Energy Employment Report 2024



Transmission, Distribution Storage Job Postings

- Sample occupations
 - Electrical Engineers
 - Engineering Managers
 - Project Managers
 - Electrical Linemen
 - Electrical Powerline Installers/Repairers
 - Software Developers
 - Substation Electrician
 - Solar Technicians

- Sample companies
 - Ameren IL
 - Applied Materials
 - Schweitzer Engineering
 - Invenergy
 - Prysmian Group
 - Liberty Utilities



Select TDS, Utility Occupations (IL)

	Average salary	Typical Entry level Education	2021 hires	2022 hires	2023 hires	2024 hires
Meter Readers	\$54,142	High school diploma	345	617	309	313
Electric Powerline Installers	\$106,537	High school diploma	1591	1309	1803	1829
Power Distributors and Dispatchers	\$75,316.80	High school diploma	139	115	85	85
Power Plant Operators	\$103,833.60	High school diploma	348	759	312	312

Source: Lightcast



Energy Efficiency Jobs & Openings



	EE Jobs 2023 (USEER)	EE Job Postings 2023 (Lightcast)	EE Job Postings 2024 (Lightcast)
Central Region	2710	656	606
Southeast Region	1201	160	126
Southwest Region	4027	639	465
Southern Region	1918	147	156

Source: US Energy Employment Report 2024, Lightcast



Energy Efficiency Job Postings

- Sample occupations
 - Maintenance Technicians
 - Installation Technicians
 - Laborers
 - HVAC Technician
 - Energy Efficiency Analysts
 - Construction Crew Leaders
 - Electricians

- Sample companies
 - State of Illinois
 - Leidos
 - Lots of small businesses....



Select Energy Efficiency Occupations

	Average salary	Employment (2022)	Projected employment (2032)	Projected annual job openings (2022-2032)
HVAC Mechanics & Installers	\$71,620	11,980	12,700	1,100
Insulation Workers (envelope)	\$49,840	980	1000	80
Energy Auditor	\$73,050	3320	3260	370

Source: ONET Online



MClean Energy Manufacturing Job Postings



	Manufacturing Job Postings 2023 (Lightcast)	Manufacturing Job Postings 2024 (Lightcast)
Central Region	107	46
Southeast Region	0	0
Southwest Region	35	56
Southern Region	0	0

Source: Lightcast



Clean Energy Manufacturing Job Postings 2023-2024

Sample Occupations

- Electrical & Mechanical Engineers
- Production Workers
- Inspectors, Testers, Sorters
- Accountants and Auditors
- Maintenance Technicians
- Automotive Service Technicians
- CNC Operators
- Welders, Cutters, Solderers

Companies

- Progress Rail Services
- Midwest Transit Equipment
- Wieland
- Owens Corning
- Voestalpine
- S&C Electric
- Rivian
- Henkel
- Fuyao Glass



REV Awardees in Southern Illinois

Company name	Product type	Location	New job target	Retained job target
Crysalis Biosciences	Sustainable Aviation Fuel Production Plant	Sauget	35	9
LaSalle Green Hydrogen	Sustainable Aviation Fuel Production	East St. Louis	157 by 2029	
Manner Polymers	PVC Compounds for EVs and Solar Panels	Mt. Vernon	32	
TCCI Manufacturing, LLC	EV Component parts	Decatur	52	103
Wieland	Copper Components used in EVs	East St. Louis		800



What's next?



Solar and Wind Jobs Outlook

Residential Solar

- We must shore up residential solar businesses IMMEDIATELY to minimize disruptions to workforce.
 - Credits continue for solar leases,
 Power Purchase Agreements through
 2027
 - Diversify services
 - Financing options or increased state incentives?

Note: Over 50% of solar jobs are in the residential sector.

Non-residential solar and wind

- We need to accelerate construction timelines, which could create hundreds of jobs in the next few years.
- We need to shore up businesses after tax credits expire.
 - Diversifying services: Energy storage credits continue.
 - Financing options or increased state incentives?



Good bets



Transmission, distribution, utilities

We'll need lots of these jobs to support load growth, grid improvements Energy efficiency

Expect to see steady, moderate growth.

Building trades

Diverse, managed growth across multiple sectors

Geothermal, battery storage

(Non-residential) still supported by federal tax credits



More uncertainty



Solar

Residential: focus on leases & PPAs

Commercial/ Utility: Accelerate construction timelines

Wind

Accelerate construction timelines

EVs & Infrastructure

As tax credits expire, expect sales to go down, less infrastructure built

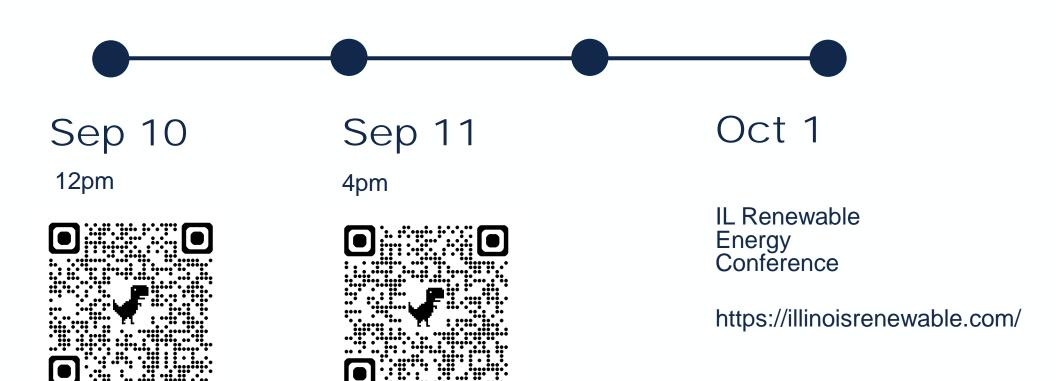
Clean energy manufacturing

Some manufacturers (particularly wind components, EV) could struggle.



Listening sessions

We want to hear from YOU about how the federal policies are impacting your business or community. Participate in an online listening session by registering at the link below.







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WORK IN SOLAR? We want to talk to you!

Our research explores job quality and working conditions in the Illinois solar industry. We want to hear directly from workers. Share your experience with us!

 Take a survey and receive a \$15 gift card.

 Participate in a 1-hour interview and receive a \$60 gift card.

Learn more and sign up here: go.illinois.edu/SolarWorkerStudy,



https://ler.illinois.edu/climate -jobs-institute/illinois-solarworkforce-study/



Thank you!

Questions? Contact Linda Larsen, Iflarsen@illinois.edu



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