



Clean Energy Investing in America

August 2024



Photo credit: Cedar Creek Wind

“If you want to
know where
American
manufacturing
is happening,
it’s right here.”

Miguel Banelos
Heavy Equipment Operator, Vestas
Windsor, Colorado



In the past **two years**, the U.S. clean energy industry has:

GROWN THE U.S. **ECONOMY**

ANNOUNCED

\$500 billion
in investment

INVESTED

\$75 billion
invested in clean power built

STARTED A **MANUFACTURING** RENAISSANCE

ANNOUNCED

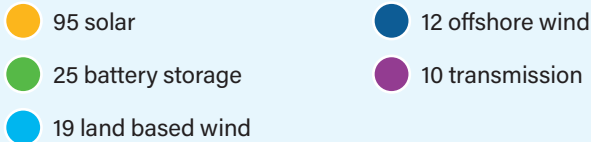
160+
manufacturing facilities

ONLINE AND OPERATING

42
facilities built or expanded,
20,000 new manufacturing jobs

UNDER DEVELOPMENT

AT LEAST
119
facilities
80,000 new manufacturing jobs*



CREATED NEW, GOOD-PAYING **JOBS**

ANNOUNCED

100,000+
manufacturing jobs

TODAY

460,000+
Americans employed by the clean energy industry**

BUILT MORE **CLEAN POWER**

ANNOUNCED

300+ GW
of clean power capacity

INSTALLED

55+ GW
of clean power capacity

* Information and data in this report is current as of June 30, 2024. Data on clean power projects, manufacturing, and investment was sourced from public announcements, company outreach, government documents, and third-party information providers.

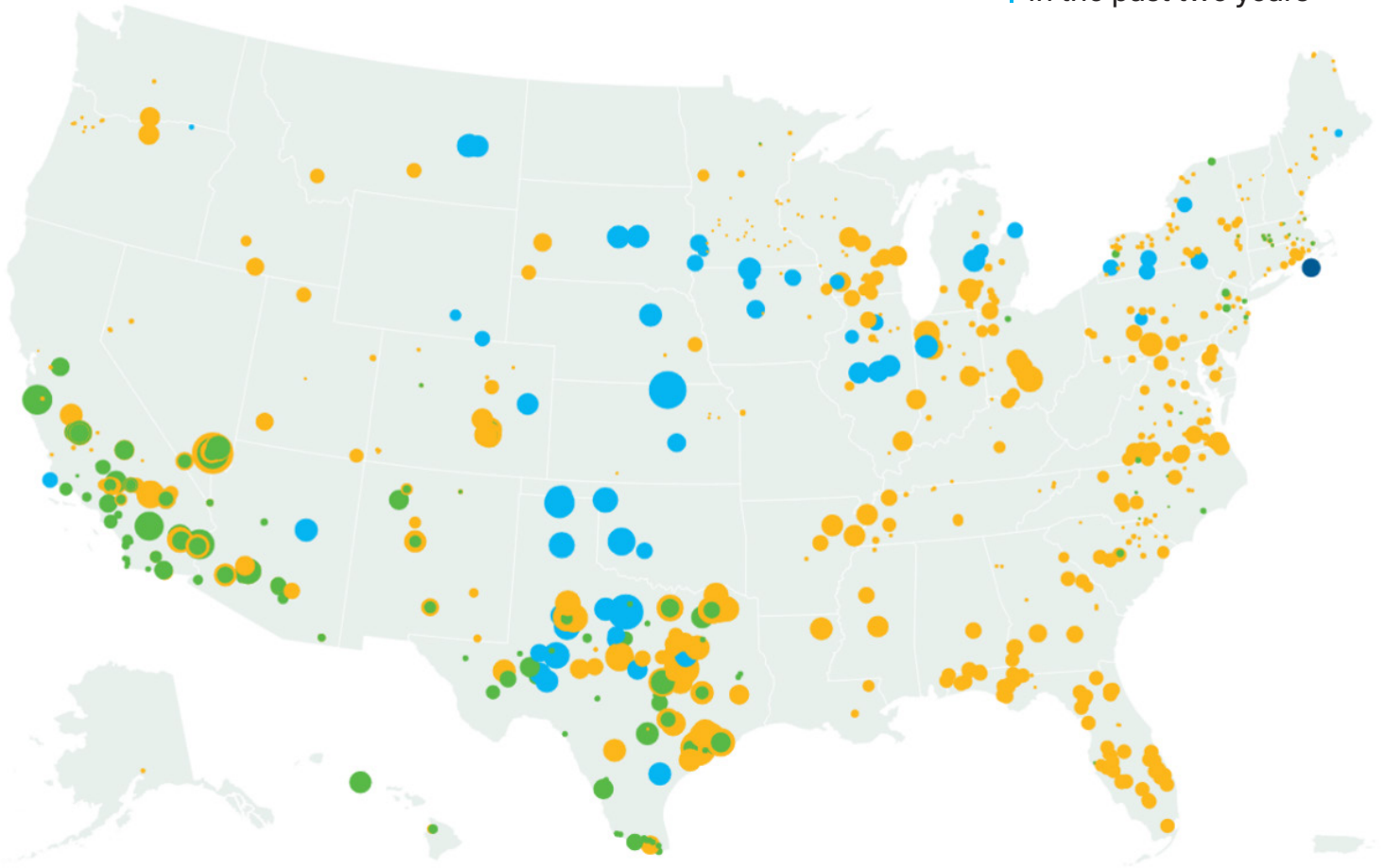
** Data from the Department of Energy's 2023 U.S. Energy & Employment Jobs Report (USEER)



Projects Built

These projects represent **\$75 billion of new investment** from the private sector, and provide enough electricity to power **10+ million homes**.

Installed
55+ GW
of **clean power capacity**
in the past two years



Solar



Energy Storage



Wind



Offshore Wind

This map shows the clean power projects that became operational between **September 2022 and March 2024**.



Investment Realized

Solar

⚡ 33 GW built

💰 \$42 billion invested

Energy Storage

⚡ 10 GW built

💰 \$12 billion invested

Land-Based Wind

⚡ 11.6 GW built

💰 Nearly \$20 billion invested

Offshore Wind

⚡ 132 MW built

💰 \$590 million invested



\$75 billion

in investment realized

Investment Announced



\$500 billion

in announced investment

Manufacturing

💰 \$61 billion

Supply Agreements

💰 \$47 billion

Other Investment

💰 \$28 billion

New Projects

⚡ \$363 billion



The New U.S. Manufacturing Renaissance

Restoring Pride, Purpose, and Local Economies

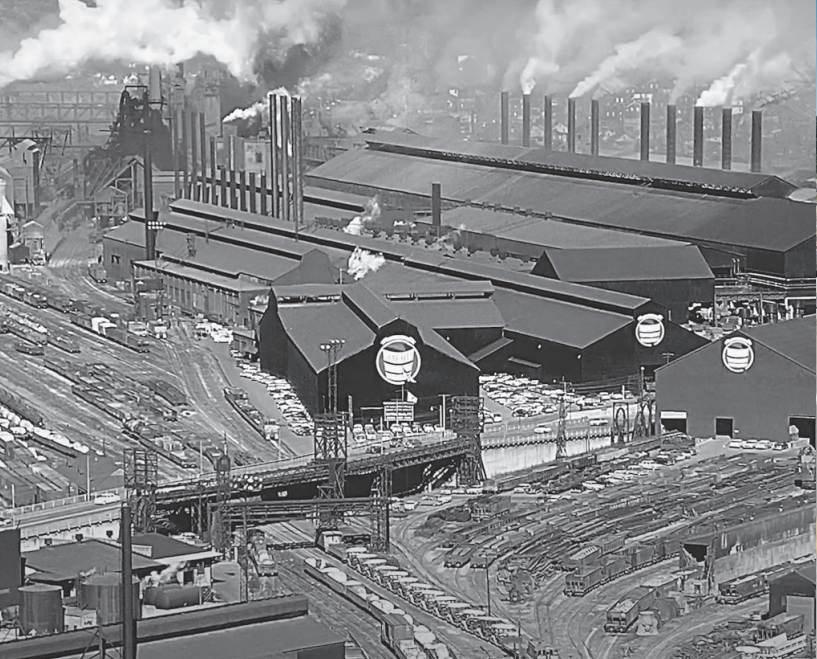
Manufacturing was once the backbone of the American economy. In rural areas, manufacturing provided more jobs and higher earnings than other sectors.

But U.S. manufacturing is not the driver of local economies it once was. Between 2001 and 2015—a period that included two recessions—manufacturing employment fell nearly 30 percent. In addition, 71 percent of U.S. counties experienced a decline in manufacturing employment.

Today, we are experiencing a U.S. manufacturing renaissance, driven by a new wave of scalable, clean energy technologies, federal tax credits, and innovative U.S. companies.

The revitalization of communities from this renaissance has already begun.





[Watch Form Energy's Groundbreaking Event recap video](#)

Building Multi-Day Battery Systems at Former Steel Site

West Virginia | Form Energy

In the 1960s, steel manufacturing was at its peak in the Rust Belt. People flocked to bustling Weirton, West Virginia for the decent pay offered by the steel industry. Today, the town is much quieter.

But this old steel town is now embracing manufacturing for a clean energy technology.

Located at the site of the former Weirton Steel plant, U.S.-based Form Energy recently built its first high-volume battery manufacturing facility.

Form Factory 1 is producing a new class of affordable multi-day energy storage systems that can store energy for 100 hours using innovative iron-air technology. Form Energy is the first company to commercialize and scale this new made-in-America technology.

Within 36 hours of posting job openings online, 200 interview slots were filled. **The positions offer a minimum average salary of \$63,000, which is approximately \$10,000 higher than the average earnings of men in the area and twice the average income for women.**

Form Factory 1 will ultimately employ more than 750 people and will have an annual production capacity of 500 MW of batteries when operating at full capacity.

"I grew up in Weirton, I have an aunt that lives right up the road. She's seen it come up, and unfortunately, she's seen it fall.

But she's getting ready to see another legacy start."

Dot Gillam, Equipment Maintenance Technician, Form Energy

"I've seen Weirton in its heyday and I've seen Weirton when it was on its knees. And right now we're starting to get off our knees."

Enzo Fracasso, Weirton City Councilman and former steelworker

Construction of the first phase of the factory began in May 2023 and is already substantially complete. Next, Form Energy will begin high-volume production of its battery systems and start construction on the next phase of the factory, which will result in a total of ~1 million square feet of manufacturing space.

For the people of Weirton, manufacturing for the clean energy industry means a new chapter of hope and opportunity in their storied town.

"To quote my kids, Weirton is economically on fire. It's going to be the tide that rises all of us."

Mike Adams, Weirton City Manager

"We're connecting the old and the new. For us, what it means is bringing manufacturing back to Weirton."

Soufiane Halily, VP of Form Factory at Form Energy



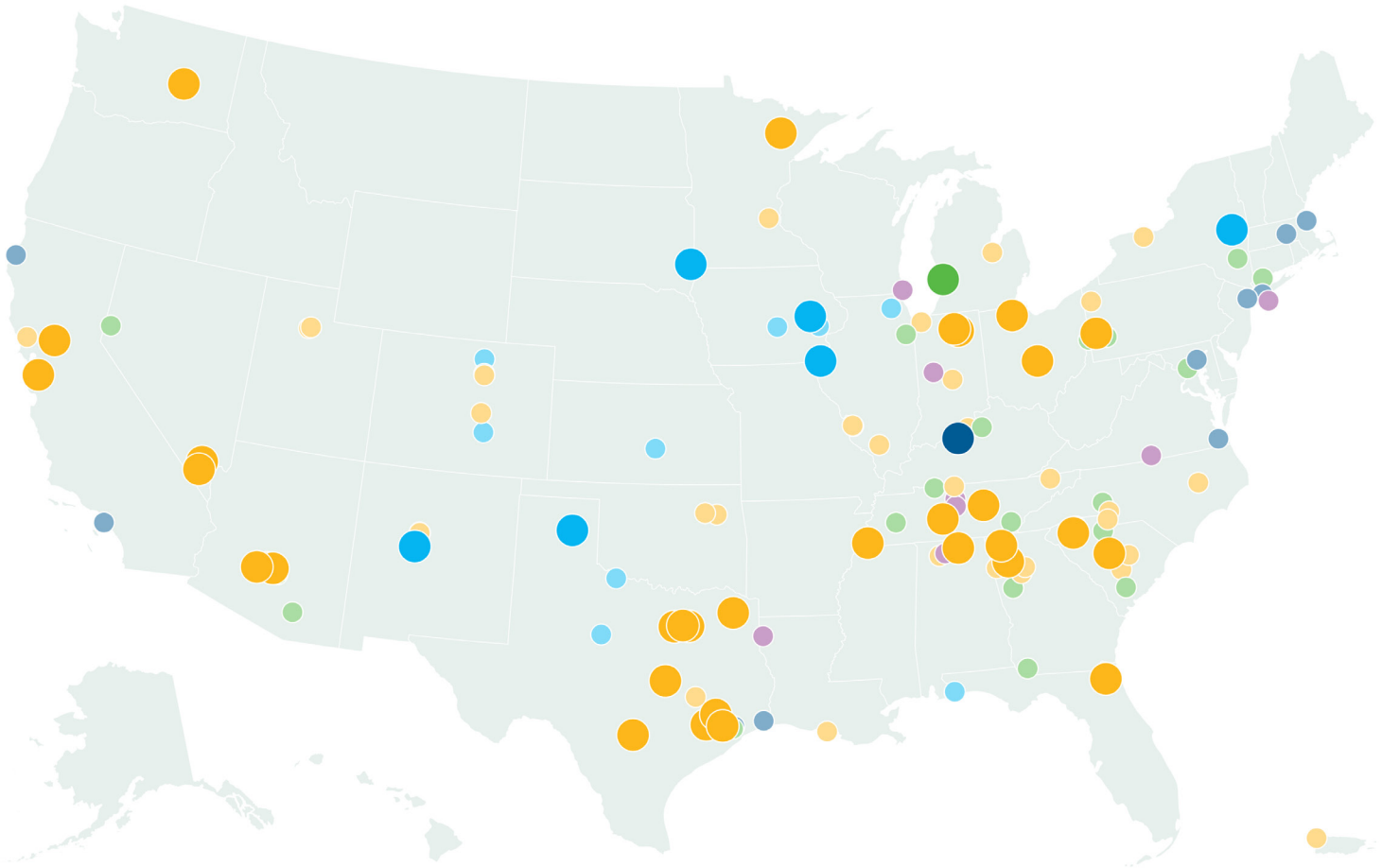
Manufacturing Facilities Online and Announced

Online and Operating

42 facilities

Under Development

119+ facilities



Online

- Solar
- Energy Storage
- Wind
- Offshore Wind
- Transmission

Announced/Under Construction

- Solar
- Energy Storage
- Wind
- Offshore Wind
- Transmission

14 additional facilities have not yet announced locations: Energy America, GameChange Solar, Hanwha & LG Energy Solutions, MP Assets Corporation, Navitas Solar, NexWafe, Powin Energy and Jabil, SMA Solar Technology, SolarEdge, Talon PV, Thornova Solar, Trading Philadelphia & Translucent Energy, US Forged Rings, and VSK Energy.



Manufacturing Facilities Online & Operating

New or expanded U.S. clean power manufacturing facilities announced and starting operations since August 2022

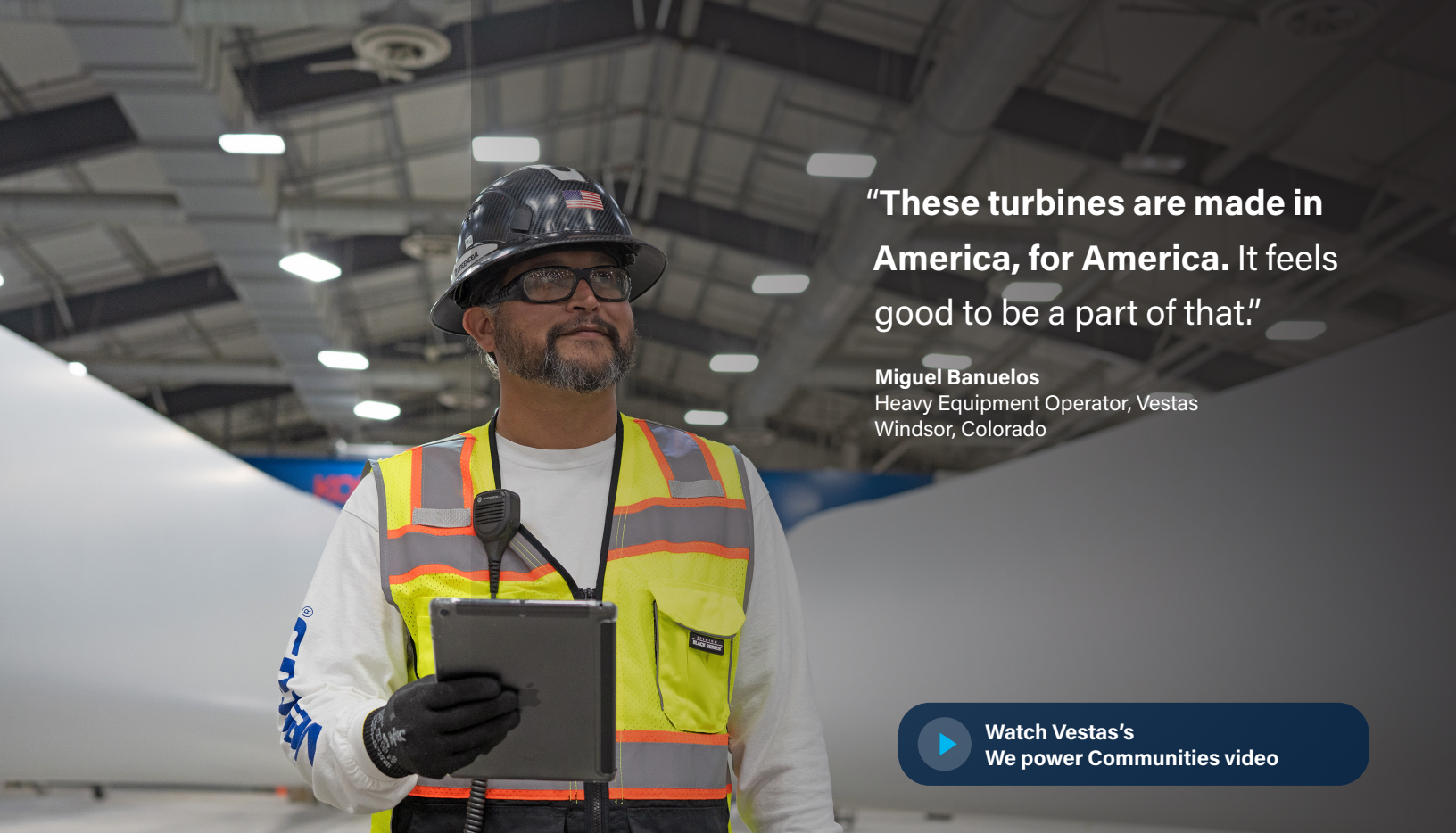
Technology	OEM	State	Congressional District	Online Quarter
Battery	Natron Energy	MI	MI-4	Q2 2024
Offshore Wind	Nucor Steel	KY	KY-02	Q4 2022
 Land Based Wind	Arcosa	NM	NM-2	Q2 2024
	GE Vernova (GE)	NY	NY-20	Q4 2023
	Keystone Tower Systems	TX	TX-13	Q1 2023
	Marmen	SD	SD-00	Q4 2023
	Regen Fiber	IA	IA-2	Q2 2024
	Siemens Gamesa	IA	IA-1	Q1 2023
	 Solar	Amphenol Industrial Operations (AIO)	AZ	AZ-4
Array Technologies / Lock Joint Tube		TX	TX-31	Q3 2023
Canadian Solar		TX	TX-32	Q4 2023
Elin Energy		TX	TX-10	Q1 2024
Enphase		SC	SC-2	Q3 2023
Enphase		TX	TX-25	Q3 2023
EPC Power		SC	SC-04	Q4 2022
First Solar		OH	OH-6	Q1 2024
Hanwha Qcells		GA	GA-11	Q2 2024
Hanwha Qcells		GA	GA-14	Q4 2023
Heliene		MN	MN-8	Q4 2023
Heliene		MN	MN-8	Q4 2022
Illuminate USA	OH	OH-12	Q1 2024	



Manufacturing Facilities Online & Operating (continued)

Technology	OEM	State	Congressional District	Online Quarter
 Solar	Imperial Star Solar	TX	TX-38	Q2 2024
	Jinko Solar	FL	FL-4	Q1 2024
	Mersen	TN	TN-05	Q3 2023
	Meyer Burger	AZ	AZ-09	Q2 2024
	Mission Solar	TX	TX-28	Q2 2024
	Nevados	TX	TX-1	Q4 2023
	Nextracker Inc. / Asteelflash (USI)	CA	CA-14	Q3 2023
	Nextracker Inc. / JM Steel	PA	PA-17	Q2 2024
	Nextracker Inc. / MSS Steel	TN	TN-9	Q2 2023
	Nextracker Inc. / Unimacts	NV	NV-3	Q3 2023
	Nextracker Inc. / Unimacts	NV	NV-3	Q2 2024
	OMCO Solar	IN	IN-3	Q2 2023
	OMCO Solar	IN	IN-2	Q1 2024
	OMCO Solar	AL	AL-5	Q1 2024
	Polar Racking	MI	Unknown	Q2 2023
	Polar Racking	FL	Unknown	Q4 2023
	PV Hardware	TX	TX-9	Q2 2024
	REC Silicon	WA	WA-04	Q4 2023
	SC Solar	TX	Unknown	Q2 2024
	Terabase Energy	CA	CA-4	Q2 2023
TERREPOWER	TN	TN-6	Q2 2023	





"These turbines are made in America, for America. It feels good to be a part of that."

Miguel Banuelos
Heavy Equipment Operator, Vestas
Windsor, Colorado

[▶ Watch Vestas's We power Communities video](#)

Reviving American Pride through Wind Manufacturing

Colorado | Vestas

In Colorado, Vestas has invested more than \$1 billion to establish two manufacturing facilities that serve the North American market.

Since 2010, the Blades Factory in Windsor has been producing blades in a 666,000 ft² facility, while the Nacelles Factory in Brighton proudly manufactures wind turbine components (nacelles and hubs) in a 265,000 ft² facility.

In 2023, Vestas announced plans to invest \$40 million to expand both facilities, including hiring upwards of 1,000 additional Coloradans to support the manufacturing efforts.

Miguel Banuelos, a heavy equipment operator and Coloradan, spends his workday loading giant wind turbine blades onto trucks and trains at the Windsor facility.


After the birth of his first child, Miguel applied to the role in search of better benefits to support his expanding family—but quickly came to understand that this was his intended place of employment.

"I take pride to be the one that last sees these blades before they go out."

Miguel now works as a global safety trainer for new hires and oversees a group of eighteen heavy equipment and logistics operators.

For Miguel Banuelos, working at the Vestas manufacturing plant isn't just a job—it's a source of pride, knowing he's helping power America's future with clean energy.

"I love the fact that we're moving large products, you know, just fabricating. Building something, from nothing."



“Increasing clean energy demand, coupled with policy advancements, has created intensity in the US market and a demand for this machine.

“This is our biggest onshore wind turbine in the world, and we’re bringing that here to the United States.”

Gary Weisner, Onshore Wind Manufacturing & Lean Leader, GE Vernova

“We know that this generational build out cycle, this idea of building more wind, and deploying more clean energy, we know we’re doing it for our customers, our communities, for our friends and our family, our kids, their kids, and all the generations to come.”

Morgan Terrill, Global Supply Chain Development Leader, GE Vernova



**Watch GE Vernova's
The Winds of Change video**





Building the Biggest Onshore Turbines in America

New York | GE Vernova

General Electric has a long history in New York.

After Thomas Edison unveiled the modern lightbulb, he moved his Edison Electric Company—now General Electric—to Schenectady, New York in 1886.

Like other manufacturing cities in upstate New York, Schenectady—once dubbed “The City that Lights and Hauls the World” because of its ties to General Electric and a prominent locomotive manufacturer—encountered substantial job losses and economic hardship in the late 20th century.

But in the 21st century, GE has played a part in revitalizing the city, bringing pride back to its century-old hometown through clean energy manufacturing.

In May 2023, [GE Vernova](#) announced a \$50 million expansion of its turbine manufacturing facility in the city, hiring 200 jobs that included skilled union operators, manufacturing engineers, and frontline leadership.

“Schenectady is famous for inventing the ability to generate and transmit electricity, which made modern civilization possible.”

Ray Gillen, Chair, Schenectady Metroplex Development Authority

GE Vernova’s Schenectady facility now produces the largest land-based turbine in the U.S. A single turbine generates the energy equivalent needed to power 2,000 homes.

And it’s taller than the Statue of Liberty.

The company said that passage of clean energy tax credits that incentivize domestic manufacturing played an important role in the decision to expand the facility while revitalizing the market, increasing demand for renewable energy, and enabling energy security and competitiveness.

GE’s investment in manufacturing in Schenectady preserves and expands GE’s 130-year legacy, giving the community pride and hope for the future of the city, and the future of our world.

“I’m third generation GE-Schenectady. There’s been a Carlson here since 1952. And I work down the hall from someone who is a fifth generation GE-Schenectady.

“So there’s a lot of pride in the area, and to see a big reinvestment into the site and know that we’re gonna be here another hundred years is really exciting for a lifelong Schenectady GE employee.”

Brian Carlson, Schenectady Plant Manager, GE Vernova



Manufacturing Facilities Under Development + Announced

Technology	OEM	State	Congressional District	Expected Online Date	Announcement Status
 Battery	6K Energy	TN	TN-8	Unknown	Announced
	Albemarle Corporation	SC	SC-05	2H 2024	Announced
	American Battery Factory	AZ	AZ-7	Q4 2025	Under Construction
	Anovion Technologies	GA	GA-2	Q4 2025	Under Construction
	EnerSys	SC	SC-4	Q4 2027	Announced
	EnerVenue	KY	KY-04	2H 2023	Announced
	EOS Energy Enterprises, Inc.	PA	PA-12	Q3 2024	Under Construction (online as of Q3 2024)
	Form Energy	WV	WV-1	2H 2024	Under Construction
	FREYR	GA	GA-3	2025	Announced
	Gotion	IL	IL-1	2024	Announced
	Green New Energy Materials	NC	NC-10	2025	Announced
	Hanwha & LG Energy Solutions	Unknown	Unknown	Unknown	Announced
	ICL	MO	MO-1	2025	Under Construction
	ION Storage Systems	MD	MD-4	2025	Announced
	LG Energy	AZ	AZ-05	2026	Under Construction
Microvast Holdings, Inc	TN	TN-7	2025	Under Construction (*Development stalled, pending additional financing)	





Manufacturing Facilities Under Development + Announced (continued)

Technology	OEM	State	Congressional District	Expected Online Date	Announcement Status
 Battery	MP Assets Corporation	VA	Unknown	Unknown	Announced
	Nanoramic	CT	CT-4	Q2 2025	Announced
	Orion S.A.	TX	TX-36	Q2 2025	Under Construction
	Piedmont Lithium	TN	TN-3	2026	Announced
	Pomega Energy Storage Technologies (Kontrolmatik Technologies)	SC	SC-6	2024	Under Construction
	Powin Energy and Jabil	Unknown	Unknown	Q4 2023	Announced
	Tesla	NV	NV-2	2H 2025	Under construction
	Zinc8	NY	NY-18	Unknown	Announced
 Offshore Wind	Diligence Offshore Wind Services, LLC	TX	TX-14	2026	Announced
	Humboldt Bay Harbor	CA	CA-2	Unknown	Announced
	JSW Steel USA	TX	TX-36	2026	Announced
	LS Cable & System	VA	VA-2	Unknown	Announced
	Ørsted	MD	MD-7	Unknown	Under Construction
	Port of Long Beach	CA	CA-42	Unknown	Announced
	Red Ironworks	NY	NY-2	Unknown	Announced
	Salem Offshore Wind Terminal	MA	MA-6	Unknown	Announced



Manufacturing Facilities Under Development + Announced (continued)

Technology	OEM	State	Congressional District	Expected Online Date	Announcement Status	
 Offshore Wind	Skanska	NY	NY-9	2026	Under Construction	
	State of Maine	ME	ME-2	Unknown	Announced	
	US Forged Rings	Unknown	Unknown	Q2 2026	Announced	
 Land Based Wind	BlueWind Technology	FL	FL-1	2024	Announced	
	Broadwind Heavy Fabrications	TX	TX-19	2024	Announced	
	Carter Wind Turbines	TX	TX-13	Unknown	Announced	
	CS Wind	CO	CO-3	Q3 2024	Under Construction	
	Flender Corporation	IL	IL-08	Unknown	Announced	
	GE Vernova (GE)	FL	FL-01	Unknown	Announced	
	Jupiter Bach	NY	NY-20	Unknown	Announced	
	Nordex	IA	Unknown	Q2 2025	Announced	
	Renewable Parts	TX	TX-2	Unknown	Announced	
	Siemens Gamesa	KS	KS-01	Q3 2024	Announced	
	TPI Composites	IA	IA-1	2024	Announced	
	Vestas	CO	CO-04	2025	Announced	
	Vestas	CO	CO-08	2025	Announced	
	Solar	Alpha Steel (JV of FTC Solar & Taihua New Energy)	TX	TX-10	Unknown	Announced
		Array Technologies	NM	NM-1	Unknown	Under Construction



Manufacturing Facilities Under Development + Announced (continued)

Technology	OEM	State	Congressional District	Expected Online Date	Announcement Status
 <p>Solar</p>	Bila Solar	IN	IN-7	Q3 2024	Announced
	Boviet Solar	NC	NC-1	Q1 2025	Announced
	Canadian Solar	IN	IN-9	Q4 2025	Under Construction
	Corning	MI	MI-2	2028	Under Construction
	Enel	OK	OK-2	2H 2024	Announced
	Energate	UT	UT-2	2024	Under Construction
	Energy America	TX	Unknown	Unknown	Announced
	First Solar	OH	OH-9	Q3 2024	Under Construction
	First Solar	OH	OH-9	Q3 2024	Under Construction
	First Solar	AL	AL-5	Q3 2024	Under Construction
	First Solar	LA	LA-3	2H 2025	Under Construction
	First Solar	OH	OH-9	Q3 2024	Under Construction (online as of Q3 2024)
	Fronius USA	IN	IN-1	Q4 2024	Announced
	GameChange Solar	Multiple	Unknown	2024	Announced
	Great Lakes Solex	PR	PR-At Large	2024	Announced
	Hanwha Advanced Materials Georgia (HAGA)	GA	GA-11	Unknown	Announced
	Heliene	MN	MN-5 or MN-4	2024-2025	Announced
	Highland Materials	TN	TN-1	2026-2027	Announced



Manufacturing Facilities Under Development + Announced (continued)

Technology	OEM	State	Congressional District	Expected Online Date	Announcement Status
 Solar	Hounen	SC	SC-06	Unknown	Announced
	JA Solar	AZ	AZ-3	Unknown	Announced
	Mateis Solar Corp	SC	SC-4	Unknown	Announced
	Maxeon Solar Technologies	NM	NM-1	2025	Announced
	Meyer Burger	CO	CO-05	Q4 2024	Announced
	Mitrex	NY	NY-25	2024	Announced
	Navitas Solar	Unknown	Unknown	Unknown	Announced
	New East Solar	AZ	Unknown	2024	Announced
	NewCo. Manufacturing	MO	MO-1	2024	Announced
	NexWafe	Unknown	Unknown	Unknown	Announced
	Norsun	OK	OK-1	2026	Announced
	NSG Group	OH	OH-9	Q1 2025	Announced
	Panasol	TX	TX-10	2024	Announced
	Power Electronics	TX	TX-18	Unknown	Announced
	Prysmian Group	IL	IL-12	H2 2025	Under Construction
	Rayzon Solar	GA	GA-5	Unknown	Announced
	ReCreate Renewables	TN	TN-6	Unknown	Announced



Manufacturing Facilities Under Development + Announced (continued)

Technology	OEM	State	Congressional District	Expected Online Date	Announcement Status
 Solar	Revkor & H2 Gemini	UT	UT-2	Q2 2024	Announced
	Runergy	AL	AL-5	Q2 2024	Under Construction
	SEG Solar	TX	Unknown	Q3 2024	Under Construction
	SEG Solar & UKT Energy	TX	Unknown	Unknown	Announced
	Shoals Technologies	TN	TN-6	Unknown	Announced
	Siemens	WI	WI-1	2024	Announced
	Silfab	SC	SC-5	2024	Announced
	SMA Solar Technology	Unknown	Unknown	2025	Announced
	SOLARCYCLE	GA	GA-14	2026	Announced
	SolarEdge	Unknown	Unknown	2023	Announced
	SolarLink	NV	NV-4	Q2 2024	Under Construction
	SPI Energy Co.	SC	SC-6	Q2 2024	Announced
	Stäubli	SC	SC-4	Unknown	Announced
	Stäubli	CA	CA-2	Unknown	Announced
	Suniva	GA	GA-7	Q3 2024	Under Construction
Sunmax	GA	GA-11	Q2 2025	Under construction	
Talon PV	Unknown	Unknown	Q4 2025	Announced	



Manufacturing Facilities Under Development + Announced (continued)

Technology	OEM	State	Congressional District	Expected Online Date	Announcement Status
 <p>Solar</p>	Thornova Solar	Unknown	Unknown	Q4 2024	Announced
	Trading Philadelphia & Translucent Energy	Unknown	Unknown	2024	Announced
	Trina	TX	TX-30	Q4 2024	Announced
	Vitro Architectural Glass	PA	PA-16	Q2 2025	Announced
	VSK Energy	CO	CO-8	2024	Announced
	VSK Energy	Unknown	Unknown	2025	Announced
	Waaree Energies	TX	TX-10	Q4 2024	Announced
 <p>Transmission</p>	ABB Installation Products	NM	NM-1	Q4 2024	Announced
	CorePower Magnetics	PA	PA-12	Unknown	Announced
	Hitachi Energy	VA	VA-5	Unknown	Announced
	Nucor Steel	AL	AL-05	Q2 2025	Under construction
	Nucor Steel	IN	IN-04	Q2 2025	Under construction
	Prolec GE USA	LA	LA-4	2024	Announced
	Schneider Electric	TN	TN-5	Q2 2024	Announced
	Schneider Electric	TN	TN-4	Unknown	Announced
	Siemens	NC	NC-14	2026	Under Construction
	State of New York	NY	NY-2	Unknown	Announced





[▶ Watch Illuminate USA's Investing in Ohio video](#)

Shining a Bright Light for Ohio's Future

Ohio | Illuminate USA

The first and largest U.S. plant to produce high quality (550w) solar panels is providing residents in and around Pataskala, Ohio with new, good-paying jobs.

"All Ohioans should be proud of the work we're doing here, it's so forward-thinking, it's the future."
Justin Barnhart, Equipment Engineer

Over 800 employees—or "Illuminators"—go to work each day at the massive new facility, which was announced in March 2023 and started production less than a year later.

Soon, there will be more than 1,000 Ohioans working at the

facility, producing nearly 10 million solar panels each year. That's enough to produce 5 GW of solar energy and power 1 million homes. Many of these jobs didn't exist in the U.S. before the facility started production.

When the facility did open, the jobs were filled immediately—and the facility had a solid wait list for future hiring.

"It's a great opportunity for people of all ages, honestly. We have people here in their sixties, and people who are eighteen years old."
Jason Adams, Packaging

IlluminateUSA plans to have over 1,200 Illuminators by the end of the year.

"People can actually support their families from the money they make here.."
Lisa Rawson, Production Operator

In Pataskala, Ohio, the workers at the new solar panel facility are not only building renewable energy solutions in and for the USA but also creating lasting legacies for the next generation.

"I'm trying to leave a legacy for my children. This is the new energy, so why wouldn't it be a generational opportunity for family?"
*Deon White
Night Shift Manager, Illuminate USA*



This report covers public announcements made between August 16, 2022 – June 30, 2024. ACP continues to track project and investment announcements, keeping up-to-date data on our website.

The American Clean Power Association (ACP) is the leading voice of today's multi-tech clean energy industry, representing over 800 energy storage, wind, utility-scale solar, clean hydrogen, and transmission companies. ACP is committed to meeting America's national security, economic and climate goals with fast-growing, low-cost, and reliable domestic power.

Learn more at www.cleanpower.org.



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