Clean Energy Investing in America

August 2023


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cleanpower.org

One Year In: From Conception to Construction

Dear Friends and Colleagues,

Reflecting on the past year, I am filled with optimism over the pace of clean energy deployment. After decades of contentious political battles over energy taxation and regulation, we are coalescing around a national energy strategy anchored in private sector investment and innovation – a policy of abundance rather than deprivation. Recent Congressional actions have unleashed a wave of investment that is accelerating the transition to clean, secure, and affordable domestic energy led by the clean power developers that make up the American Clean Power Association (ACP) in concert with our partners from other clean power technologies, including hydropower, nuclear, and of course transmission, which is foundational for us all.

At the same time, even as we are moving faster than ever before to scale clean energy generation and build new domestic manufacturing facilities, we are still not on course to create a sustainable energy economy by mid-century. While celebrating tremendous progress, we must not lose sight of the challenges in infrastructure permitting, clean energy transmission and distribution, and the frailty of key global supply chains. We at ACP are committed to working with national, state, and local leaders to achieve our shared economic, climate, and security goals by mid-century.

The past year has sown the seeds of nothing short of a clean energy revolution. The domestic investments announced in the last twelve months exceed the combined clean energy investments made over the **previous eight years**.

In just one year, the utility-scale clean energy industry has announced:

- Over **$270 billion** in capital investments,
- **83** new or expanded manufacturing facilities,
- **29,780** new manufacturing jobs,
- **$4.5 billion** in customer savings, and
- **184,850 megawatts (MW)** of new project capacity.

This surge of investment is transforming our energy system into one that is cleaner, safer, and more reliable. New domestic energy production and manufacturing facilities are also creating family-sustaining careers across the country.

- In the coming year, a new manufacturing facility in Colorado will employ nearly a thousand people to make wind turbines for use across the country. These jobs will support families and contribute to the economy throughout the region.
- Previously a symbol of American manufacturing decline, the site of a former steel mill will be rebuilt to manufacture offshore wind foundation components, investing $115 million in the community and creating nearly 300 family-sustaining local jobs while anchoring a new growth industry for the entire eastern U.S.
- Driven by newly-coherent energy policy and belief in the American workforce, several international firms have announced manufacturing expansion plans in the U.S., including for solar cell and panel manufacturing, wind turbines and components, and transformers.

The clean energy sector is open for business. To achieve the full potential of these federal incentives, we will need to hire 550,000 Americans by 2030. Sustaining this incredible growth will not be easy and requires that we invest significant time and resources to locate, train, and support a talented and diverse American workforce.

As we continue to transform our nation's energy landscape, I could not be more excited to see the role our industry is playing rebuilding communities and providing affordable, reliable, and clean American power. Here's to another year of growth, innovation, and progress.

With gratitude,

Jason Grumet
Chief Executive Officer
American Clean Power Association

In the last 12 months...

83 new clean energy manufacturing facilities (or facility expansions) have been announced:

- **52 solar** manufacturing facilities
- **14 utility-scale battery storage** manufacturing facilities
- **11 wind power** manufacturing facilities
- **6 offshore wind power** manufacturing facilities

$4.5 billion
in savings announced for over 24 million utility customers

Over $270 billion of capital investment announced for clean energy projects and manufacturing facilities

184,850 MW of new clean energy capacity announced

$22+ billion
in manufacturing investment

29,780 new manufacturing jobs associated with new facility announcements

Photo credit: AES (bottom)

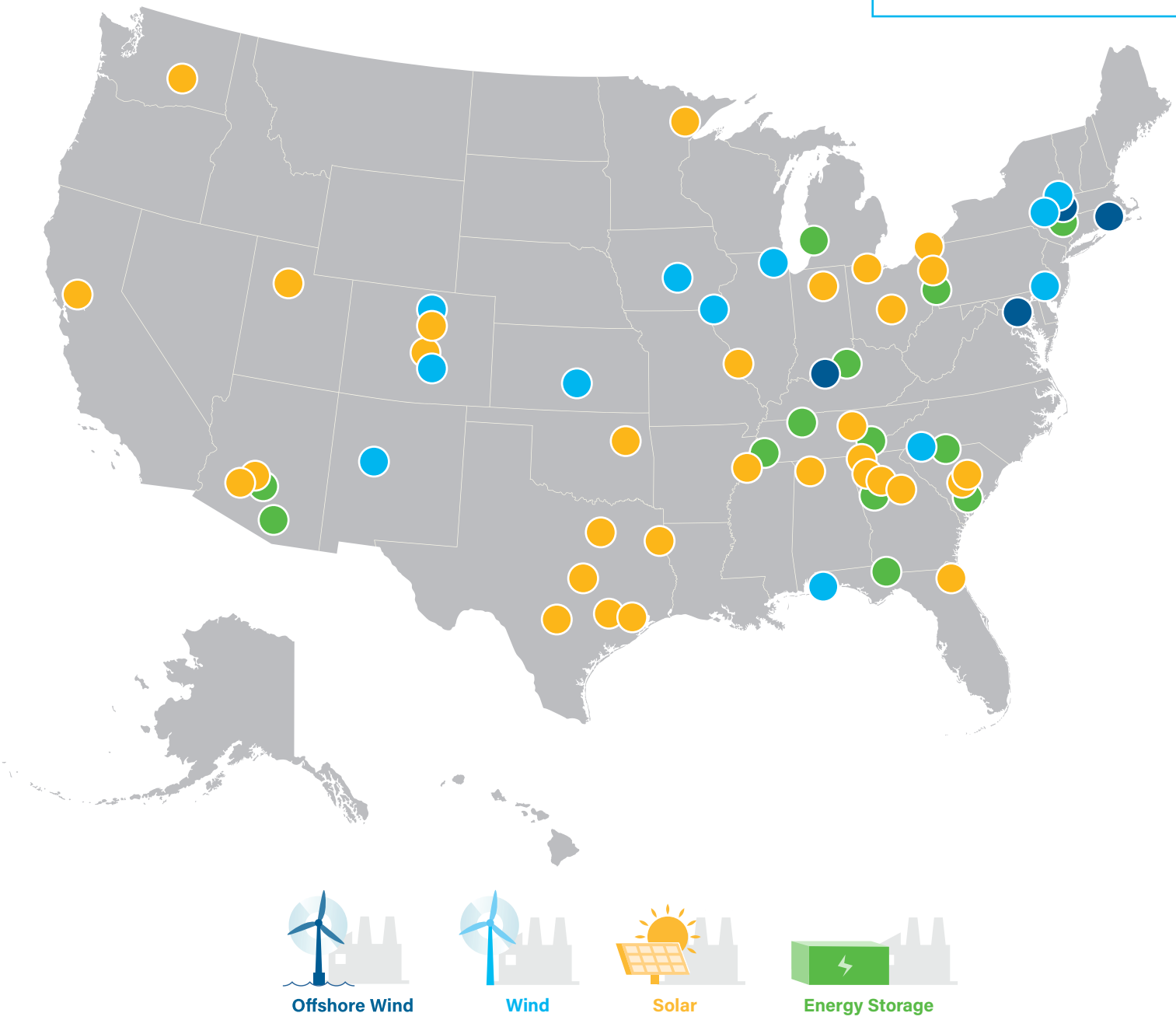
METHODOLOGY: The information in this analysis was collected from ACP members and public sources. The report contains announcements made following enactment of the Inflation Reduction Act on August 16, 2022 and before July 31, 2023. Investments are calculated from announcements by utility and independent power producers. Capital investment amounts for planned capacity announcements, when not provided, are estimated using NREL ATB data.

Manufacturing Facilities

83 facilities announced since August 16, 2022.

83

New Facilities
(or facility expansions) for utility-scale clean energy announced



14 additional facilities have not yet announced locations.

Facilities without location information include: PV Hardware (Solar), SolarEdge (Solar), CubicPV (Solar), GameChange Solar (Solar), Hanwha & LG Energy Solutions (Battery), Linton Crystal Technologies (Solar), Trading Philadelphia & Translucent Energy (Solar), Mitrex (Solar), Powin Energy (Battery), Polar Racking (Solar), Polar Racking (Solar), VSK Energy (Solar), Energy America (Solar), First Solar (Solar)

Manufacturing Facilities

Technology	Company	Expected Online Date	Jobs	Note	State	Congressional District
Energy Storage	**6K Energy**	TBD	230	6K Energy's PlusCAM factory will be the world's first UniMelt plasma cathode plant, providing low cost, ultra-sustainable production of battery material for localized supply chains in the U.S. This site was originally announced in October 2022 and the site selection for Jackson was concluded in April 2023. **Read more.**	TN	TN-8
	Albemarle Corporation	4Q 2024	300	Albemarle expects the facility to annually produce approximately 50,000 metric tons of battery-grade lithium hydroxide from multiple sources (rock & recycled batteries), with the potential to expand up to 100,000 metric tons. **Read more.**	SC	SC-5
	American Battery Factory	4Q 2024	1,000	The American Battery Factory would create 1,000 jobs once all phases of the project are completed. The facility would manufacture lithium-iron-phosphate battery cells for home and commercial energy-storage systems. Construction is expected to start in June with completion in late 2024. Factory will have a $3.1 billion economic impact on the county over the next decade. **Read more.**	AZ	TBD
	Anovion Technologies	4Q 2025	400	Anovion Technologies (Anovion), a supplier of premium synthetic graphite anode materials for lithium-ion batteries, will build a new manufacturing facility in Bainbridge. The project will create more than 400 jobs and over $800 million in investment in Decatur County. The facility will produce synthetic graphite for use in batteries that power EVs, electric storage systems, electronics, military applications, and other products. **Read more.**	GA	GA-2
	EnerVenue	4Q 2023	450	EnerVenue will open a 1 million square foot battery manufacturing facility in Shelby County. The facility is expected to begin operations by late 2023 and will produce the company's metal-hydrogen Energy Storage Vessels. EnerVenue is projected to have an annual production of 1 GWh and create 450 jobs in the region. **Read more.**	KY	KY-4
	Form Energy	2024	750	Form Energy is an American energy storage technology and manufacturing company that is developing and commercializing an iron-air battery capable of storing electricity for 100 hours at system costs competitive with legacy power plants. The company expects to start construction of its Weirton factory in 2023 and begin manufacturing iron-air battery systems in 2024 for broad commercialization. **Read more.**	WV	WV-1
	FREYR	2025	720	FREYR announced the development of the Giga America clean battery manufacturing facility based on the next-generation SemiSolid™ Lithium-Ion Battery Technology platform developed by 24M Technologies Inc. The facility will be developed in multiple phases beginning with an initial battery cell production module of approximately 34 GWh at a preliminarily estimated capital investment of $1.7 billion. **Read more.**	GA	GA-3
	Hanwha & LG Energy Solutions	TBD	TBD	Hanwha & LG aim to establish battery storage-specific manufacturing facilities in the U.S. They will develop energy storage system products for the commercial and industrial (C&I) and utility markets. **Read more.**	TBD	TBD
	LG Energy	2026	TBD	LG Energy will invest about $2.3 billion in a facility to manufacture lithium-iron phosphate pouch-type batteries (LFP) for energy-storage systems. Located in Queen Creek, AZ, the facility is expected to begin delivery in 2026 and is expected to have an annual output of 16 GWh. **Read more.**	AZ	AZ-5

Technology	Company	Expected Online Date	Jobs	Note	State	Congressional District
Energy Storage (continued)	**Microvast Holdings, Inc**	4Q 2023	700	Microvast will build a separator facility capable of supplying 19 gigawatt-hour (GWh) of EV batteries, including their existing 2 GWh battery plant in Clarkesville, TN. Per the press release, the technology can be used for EVs and stationary storage systems. This project was also highlighted by the DOE in their BIL factsheets, and noted total investment at approximately $500 M. **Read more.**	AZ	AZ-5
	Piedmont Lithium	2025	120	The TN Lithium project, located in Etowah, TN, has a planned production of 30,000 metric tons per year of lithium hydroxide. First production is targeted for 2025. **Read more.**	TN	TN-3
	Pomega Energy Storage Technologies (Kontrolmatik Technologies)	2H 2024	575	Pomega Energy Storage Technologies broke ground on its Colleton County, SC facility in February. The facility will require a capital investment of $279 million, create 575 new jobs, and is expected to begin production in mid-2024. The facility will manufacture lithium-ion battery cells, but will also produce the modules and other elements of the company's containerized energy storage solutions. **Read more.**	SC	SC-6
	Powin Energy	4Q 2023	TBD	Powin has selected Jabil as its manufacturing solutions provider to produce Stack™750 (LFP stack) energy storage systems. Starting in the fourth quarter of 2023, Jabil is expected to produce an initial annual capacity of 2 GWh, with plans to ramp up to 4 GWh per year. **Read more.**	TBD	TBD
	Zinc8 Energy Solutions	TBD	500	Zinc8 Energy Solutions makes a zinc-air battery that can store and discharge energy durations from 4 to 100 hours. The company's inaugural commercial production facility will be based in Ulster County in New York. **Read more.**	NY	NY-19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Manufacturing Facilities (continued)

Technology	Company	Expected Online Date	Jobs	Note	State	Congressional District
Offshore Wind	**GE Vernova** (GE)	TBD	220	GE Vernova, GE's portfolio of energy businesses, proposed building a state-of-the-art facility to build nacelles, which house the generating components of a wind turbine. This facility would create approximately 220 direct jobs, with approximately 35% of those jobs coming from disadvantaged communities. **Read more.**	NY	NY-20
	LM Wind Power (GE)	TBD	650	Should GE receive sufficient order volume, LM Wind Power, a GE subsidiary, is ready to build a state-of-the-art facility to manufacture offshore wind turbine blades—creating approximately 650 direct jobs, with approximately 35% of those jobs coming from disadvantaged communities. **Read more.**	NY	NY-20
	Nucor Steel	December 31, 2022	400	Nucor broke ground on this facility back in October 2020, creating 400 jobs with a $1.7 billion investment. In January 2023 Nucor introduced the Elcyon product for the offshore wind industry. **Read more.**	KY	KY-2
	Ørsted	TBD	145	The $14 million Advanced Foundation Component (AFC) Center brings Ørsted's total investments at Tradepoint Atlantic to nearly $30 million. AFC will construct and assemble advanced foundation components to be used on wind turbines, such as boat landings, ladders, internal and exterior platforms, railings, grating, and other items for Ørsted's offshore wind projects. **Read more.**	MD	MD-2
	Ørsted & Eversource	TBD	125	Ørsted and Eversource are investing $100 million+ in new construction at Assembly Hall. This is the largest investment in the Rhode Island offshore wind supply chain. 125+ local union workers are launching fabrication on foundation components for Revolution Wind. **Read more.**	RI	RI-1
	Port of Albany	TBD	500	Port of Albany will host a new manufacturing facility to make towers for offshore wind power. The new facility is expected to invest between $600 and $700 million. **Read more.**	NY	TBD
	Siemens Gamesa	TBD	TBD	Siemens Gamesa intends to build a major offshore nacelle manufacturing facility at Port of Coeymans in New York, subject to the company's wind turbines being selected by the New York authorities in their third offshore wind solicitation. The facility will create approximately 420 direct jobs and represents a $500 million investment in the region. **Read more.**	NY	NY-20

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Manufacturing Facilities (continued)

Technology	Company	Expected Online Date	Jobs	Note	State	Congressional District
Solar	**Adion Solar**	2H 2023	NA	Adion Solar has purchased equipment from Italian assembly line manufacturer Ecoprogetti and expects to move into its new-build factory in late summer 2023. The factory will initially have a 500-MW annual capacity with the room to grow to 1 GW. Adion is planning on manufacturing a mix of mono- and bifacial solar panels focused on the commercial market and potentially the utility-scale market. **Read more.**	GA	GA-10
	Alpha Steel (JV of FTC Solar & Taihua New Energy)	2H 2023	TBD	The Alpha Steel facility, a FTC Solar and Taihua New Energy joint venture, will produce steel components, including torque tubes, for utility-scale solar projects. **Read more.**	TX	TX-10
	BCI Steel	September 2022	230	This is a reopening of the historic Bethlehem Steel manufacturing factory. The restart of the Leetsdale factory will create 230 jobs over three phases. Solar tracker products produced at the factory will serve solar markets in Pennsylvania, Indiana, New York, and Ohio. BCI Steel will make solar tracker parts for Nextracker. **Read more.**	PA	PA-44
	Canadian Solar	4Q 2023	1,500	Solar module supplier Canadian Solar announced a new manufacturing facility located in Mesquite, Texas, marking the company's first U.S. manufacturing facility. The module manufacturing plant has a planned output of 20,000 modules per day, totaling 5 GW of annual production capacity. Production is expected to begin in late 2023. The facility represents $250M in capital investment. **Read more.**	TX	TX-5
	CubicPV	2025	1,500	CubicPV plans to start a 10 GW silicon wafer manufacturing facility in the U.S. The company expects the factory to create 1,500 new direct jobs. **Read more.**	TBD	TBD
	Enel	2024	1,000	In May, Enel announced that Inola, Oklahoma would serve as the location for its new solar panel manufacturing facility. Enel expects to invest more than $1 billion in the new factory and create 1,000 permanent jobs. Initial production capacity will be 3 GW but may ramp up to 6 GW in later expansions. **Read more.**	OK	OK-2
	Energy America	TBD	TBD	Energy America will construct a 1.2 GW solar module manufacturing facility in Texas. The facility will produce modules based on TOPCon and Mono Perc technology. An exact location in Texas for facility setup has not yet been announced. **Read more.**	TX	TBD
	Enphase Energy	3Q 2023	TBD	Enphase and Flex have formed a contract manufacturing partnership in West Columbia, South Carolina. The West Columbia facility will produce microinverters for solar use. Enphase plans three U.S. manufacturing hubs to begin production in 2023, with the Flex facility as the first. Once all three start operations, expected capacity is 4.8-7.2GWac of U.S. microinverters per year. **Read more.**	SC	SC-2
	First Solar	2025	700	First Solar will build its fourth, fully vertically integrated domestic factory, with an annual capacity of 3.5 GWdc, in the U.S. Southeast. The facility will manufacture thin-film solar panels. **Read more.**	AL	AL-4
	First Solar	TBD	850	First Solar is expanding the company's existing Northwest OH footprint to be expanded by 0.9 GWdc with a $185 million upgrade. **Read more.**	OH	TBD
	First Solar	1H 2023	TBD	In August 2021 First Solar broke ground on its third OH manufacturing facility. The facility was initially expected to have a capacity of 3.3 GWdc. In August 2022, First Solar announced plans to expand the manufacturing capacity of the facility to 3.5 GWdc. The facility is expected online in the first half of 2023. **Read more.**	OH	TBD
	First Solar	2024	100	First Solar will create a dedicated research and development innovation center to advance thin film technologies. The new facility in Perrysburg will also host a pilot manufacturing line for thin film PV modules. The new facility is expected to be completed in 2024 and will be co-located near First Solar's existing manufacturing plant. **Read more.**	OH	TBD

Manufacturing Facilities (continued)

Technology	Company	Expected Online Date	Jobs	Note	State	Congressional District
Solar (continued)	**First Solar**	TBD	TBD	First Solar has announced an investment of $1.1 billion to build their fifth U.S. solar module factory. Early manufacturing capacity for the fifth facility is expected to be 3.5 GW, but there may be later expansions. While determination of a site location is still ongoing, production is expected to begin in the first half of 2026. The newest facility will manufacture First Solar's Series 7 modules, which are typically used for utility-scale solar projects. **Read more.**	TBD	TBD
	GameChange Solar	TBD	TBD	GameChange Solar, a fixed-tilt racking and tracker equipment manufacturer, is increasing domestic manufacturing capacity to 24 GW annual capacity. The company has both expanded existing facilities and established new factories, and reports that it now has manufacturing facilities in MI, OH, NY, NJ, LA, IN, IL, and KY. **Read more.**	Multiple	TBD
	Hanwha Advanced Materials GA (HAGA)	June 1, 2024	160	HAGA will supply Qcells with encapsulant film ethyl vinyl acetate (EVA), which is the front "foil" on solar modules sandwiching the cells against the backsheet and front glass. The investment of $147 million by HAGA is expected to create more than 160 full-time jobs, with production beginning in June 2024. **Read more.**	GA	GA-11
	Hanwha Qcells	2024	2,500	Qcells will invest $2.5 billion to expand its manufacturing capacity in the U.S., creating as many as 2,500 jobs in GA. The new facility in Cartersville, GA will begin production in 2024. The new factory will make solar panel components including silicon ingots, wafers and cells, as well as the modules themselves. **Read more.**	GA	GA-11
	Hanwha Qcells	4Q 2023	500	Qcells will expand its existing Dalton solar panel plant to 5.1 GW from its current annual production of 1.7 GW. The expansion will add 500 jobs to the Dalton plant. **Read more.**	GA	GA-14
	Heliene	3Q 2023	60	Heliene will expand its original 150 MW facility to 300 MW, doubling capacity. The expansion is the result of a $7 million investment and is expected to be completed by July 2023. **Read more.**	MN	MN-8
	Heliene	3Q 2023	TBD	In addition to the original factory, Heliene will construct a new solar panel assembly line for mono and bifacial panels. The new factory has a capacity of 420 MW. Across the expansion of the original factory and the set up of the new facility, 60 jobs have been added. **Read more.**	MN	MN-8
	Hounen Solar	TBD	200	Hounen Solar will lease a plant in Orangeburg, SC, which will "allow the company to develop, manufacture and sell one gigawatt crystalline silicon PV panels in the U.S." The company plans to make a $33 million investment and bring in 200 new jobs. **Read more.**	SC	SC-6
	Illuminate USA	4Q 2023	850	Illuminate USA, a joint venture between Invenergy and Longi, will invest $600 million in a 1.1 million square foot factory in Pataskala, OH. Construction will begin in 4Q 2023 and is set to be operational by the end of the year. The project will create 850 jobs (which includes 150 construction jobs) and can deliver up to 5 GW of solar module capacity. **Read more.**	OH	OH-12
	JA Solar	4Q 2023	600	JA Solar will invest $60.5 million in a 2 GW PV panel manufacturing facility in AZ. The factory is expected to start commercial operations in the fourth quarter of this year, creating 600 new jobs. **Read more.**	AZ	TBD
	Jinko Solar	TBD	250	Jinko Solar is seeking to expand its PV manufacturing facility in Jacksonville, Florida. The company will invest up to $52 million and create 250 new manufacturing jobs. While current production capacity of the Jacksonville facility is 400 MW, it is unknown how much production capacity the expansion will add. **Read more.**	FL	FL-4

Manufacturing Facilities (continued)

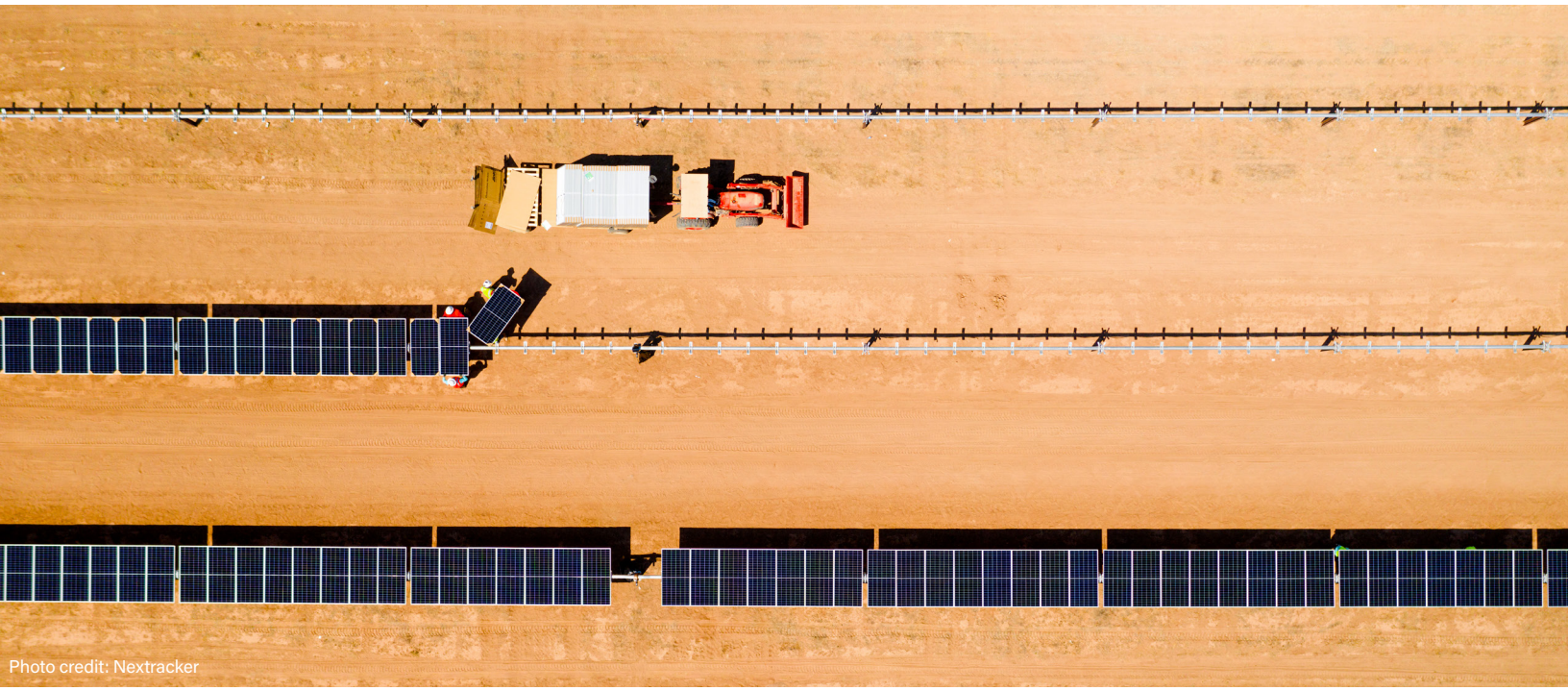
Technology	Company	Expected Online Date	Jobs	Note	State	Congressional District
Solar (continued)	**Linton Crystal Technologies**	4Q 2023	75	Linton Crystal Technologies plans to manufacture semiconductor and solar manufacturing equipment in the U.S. Efforts are underway to secure a site to house the plant, which will produce furnaces for making silicon, as well as wire saws and solar manufacturing machinery, according to the release. **Read more.**	TBD	TBD
	Mateis Solar Corp	TBD	154	Mateis Solar Corp will build a solar panel manufacturing facility in Greenville County, South Carolina. Initial investment for the facility is projected at $11.25 million. The facility is expected to create 154 jobs. **Read more.**	SC	SC-4
	Mersen	3Q 2023	100	Mersen has opened a new $70 million graphite manufacturing facility in Maury County, Tennessee. The new facility will process extruded graphite, insulation felt, and isostatic graphite, which are intended for green technology platforms in solar and electric vehicles. Annual capacity is expected to be 4,000 tons of extruded graphite, 120 tons of insulation felt, and 2,000 tons of isostatic graphite. The plant currently employs 100 employees, but may later bring on 50 additional hires as Mersen explores expansion plans. Graphite manufactured in this facility may be used in processing polysilicon production. **Read more.**	TN	TN-5
	Meyer Burger	TBD	500	Meyer Burger is expanding a previously announced facility that had stalled. Initial annual production capacity is expected to be 2,000 MW by the end of 2023. Meyer Burger has also announced purchasing agreements with BayWa r.e. procuring modules from the Goodyear facility. **Read more.**	AZ	AZ-9
	Meyer Burger	TBD	350	Meyer Burger announced the intent to build a 2 GW solar cell manufacturing facility in Colorado Springs, CO to exclusively supply its previously announced solar module plant in Goodyear, AZ. Production of the solar cells will start in Q4 2024. In order to meet the timeline, Meyer Burger is redirecting manufacturing equipment originally slated for its Germany expansion plans to the U.S. facility. The plant will create more than 350 direct jobs. **Read more.**	CO	CO-5
	Mission Solar	2024	150	Mission Solar Energy will expand its manufacturing capacity in TX to 1 GW. The company currently operates a 200 MW annual capacity plant in San Antonio. **Read more.**	TX	TBD
	Mitrex	1Q 2024	250	Mitrex is expected to announce the site of its planned U.S. solar panel facility soon. The facility will manufacture colored solar panels, BPIV cladding, and traditional panels. The facility will have an output of 2.5 GW annually and create 250 manufacturing jobs. **Read more.**	TBD	TBD
	MSS Steel	3Q 2023	129	Nextracker has partnered with MSS Steel Tubes USA to open a steel tube manufacturing facility in Memphis, Tennessee. Steel tubes built in the facility will support hardware components needed for its tracker systems. The steel torque tubes enable rotation of PV modules to optimize energy capture. Following the facility's opening, Nextracker and Silicon Ranch entered a supply agreement of 3GW, where tubes from the Memphis facility will integrate with Silicon Ranch PV project sites. **Read more.**	TN	TN-9
	NewCo. Manufacturing	2024	250	NewCo. Manufacturing aims to open a $100 million solar panel production facility in the St. Louis area. The new facility is expected to create 250 full time jobs. Exact panel production specifications are still to be determined. **Read more.**	MO	MO-1
	OMCO Solar	3Q 2023	50	OMCO Solar has announced they will open a new manufacturing facility in Warsaw, Indiana. The new facility will produce torque tubes, critical components to their tracker technology. **Read more.**	IN	IN-3

Manufacturing Facilities (continued)

Technology	Company	Expected Online Date	Jobs	Note	State	Congressional District
Solar (continued)	**Polar Racking**	2Q 2023	10	Polar Racking will add two U.S. solar mount manufacturing facilities in Michigan and Florida (one per state). The company said the sites will add over 1 GW of capacity from the new solar components. Each site will add 10 jobs. **Read more.**	MI	TBD
	Polar Racking	3Q 2023	10	Polar Racking will add two U.S .solar mount manufacturing facilities in Michigan and Florida (one per state). The company said the sites will add over 1 GW of capacity from the new solar components. Each site will add 10 jobs. **Read more.**	FL	TBD
	Prolec GE USA	1H 2024	153	On April 25th, Prolec GE USA announced that it will invest $28.5 million for the expansion of its facility located in Caddo Parish, Louisiana. The expansion would create 153 new manufacturing jobs and allow the company to increase the output of its transformers, which are used in clean energy production. Prolec GE is expected to begin production in March 2024. Prolec GE is a joint venture between General Electric and Xignux. **Read more.**	LA	LA-4
	PV Hardware	May 30, 2023	TBD	PV Hardware will open a 6 GW U.S. solar tracker manufacturing facility and is expected to begin operations in 2023. **Read more.**	TX	TBD
	Rayzon Solar	June 2024	TBD	Rayzon Solar will expand its module manufacturing operations to the United States. The company said it plans to set up a 500 MW TOPCon module manufacturing facility in Atlanta, Georgia. It said it expects the factory to start production by June 2024. **Read more.**	GA	GA-5
	REC Silicon & Mississippi Silicon	2023	TBD	In June 2022 REC Silicon announced it would re-start production at its idle Moses Lake facility, which was shut down in July 2019. In August, the company announced an MOU with Mississippi Silicon to expand production at its Moses Lake Facility. **Read more.**	WA	WA-4
	Revkor & H2 Gemini	TBD	2,500	Revkor Energy Holdings and H2 Gemini Technology Consulting are partnering in a joint effort to develop heterojunction (HJT) solar cell and module manufacturing and have secured 1 million square feet of building space in Salt Lake City, Utah. The first phase will focus on a 5 GW annual facility with production announced for Q2 2024. There are plans for an expansion to a total of 20 GW by 2026. **Read more.**	UT	TBD
	Seraphim Energy Group (SEG)	1Q 2024	500	SEG Solar plans to set up a PV module manufacturing plant in Houston, TX with an anticipated annual capacity of more than 2 GW. The facility is expected to be fully operational by early 2024. **Read more.**	TX	TBD
	SolarEdge	2023	NA	SolarEdge is aiming to establish U.S. manufacturing capability for inverters and optimizers in 2023. They are in active planning and site selection process. **Read more.**	TBD	TBD
	SolarEdge	2023	NA	SolarEdge is aiming to establish U.S. manufacturing capability for inverters and optimizers in 2023. They are in active planning and site selection process. **Read more.**	TBD	TBD
	SPI Energy Co.	4Q 2023	NA	On April 26th, SPI Energy Co. announced that it will invest $65.9 million to establish a manufacturing facility at an existing building in Sumter, South Carolina. The facility, which would produce solar wafers, would be jointly operated by SPI Energy's subsidiaries, SEM Wafertech and Solar4America. The facility is expected to create 300 new manufacturing jobs and begin production by the end of 2023. SPI Energy has signed a letter of intent to secure 1.5 GW of solar wafer manufacturing equipment for a U.S. production facility. **Read more.**	TBD	TBD
	Terabase Energy	3Q 2023	NA	The Woodland facility will manufacture Terafabs. Terafabs are systems that automate solar power plant construction. Terafab constructions have modular designs which enable rapid ramp-ups and broader system efficiencies. **Read more.**	CA	CA-4

Manufacturing Facilities (continued)

Technology	Company	Expected Online Date	Jobs	Note	State	Congressional District
Solar (continued)	**TerrePower**	3Q 2023	NA	TerrePower has opened a 20,000 square foot facility in Sparta, Tennessee to produce second-life solar panels. The new facility has an expected annual capacity of 125,000 panels. TerrePower will remanufacture used solar panels, typically for the commercial or residential markets. **Read more.**	TN	TN-6
	Trading Philadelphia & Translucent Energy	2023, full operation in 2024	TBD	This module manufacturing facility will produce 400- and 530-watt mono-PERC solar modules for residential and utility-scale markets, with plans to move into heterojunction technology in 2025. Trading Philadelphia initially announced the facility as a 1 GW facility in July 2021, but then in November 2022 announced a partnership with Translucent Energy and expanded the capacity to 1.2 GW. **Read more.**	TBD	TBD
	Vitro Architectural Glass	2Q 2025	130	Vitro Architectural Glass has announced that it will invest $93.6 million to rebuild and modernize its facility in Cochranton, Pennsylvania. The announcement follows an agreement with First Solar to supply glass to manufacture First Solar's thin-film solar panels. Vitro is expected to create 130 new jobs and begin production at the facility in the second quarter of 2025. **Read more.**	PA	PA-6
	VSK Energy	2024	900	Vikram Solar has entered a joint venture with investment firms Phalanx Impact Partners and Das & Co., forming VSK Energy, to invest $1.5 billion in U.S. solar panel manufacturing. The first $250 million phase will go toward starting a 2 GW solar module assembly factory in Brighton, Colorado. The new factory should create 900 direct jobs. VSK Energy expects to open the facility in 2024 and eventually scale to 4 GW of annual production. **Read more.**	CO	CO-8
	VSK Energy	2025	1,500	The second phase of a $1.5 billion investment would use the remaining $1.25 billion to establish a 4 GW solar ingot, wafer and cell manufacturing facility somewhere in the South. The factory should commence operations in 2025 and create over 1,500 direct jobs. **Read more.**	TBD	TBD



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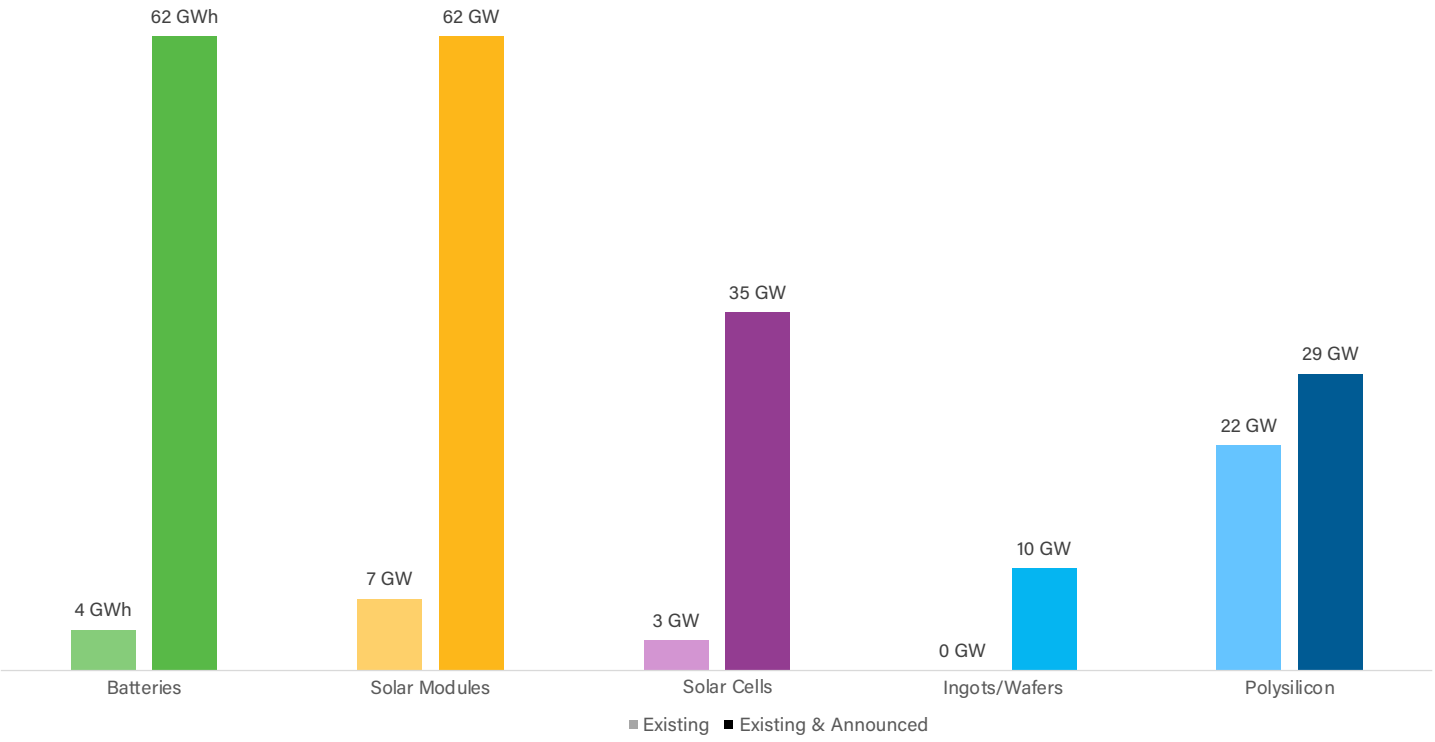
Manufacturing Facilities (continued)

Technology	Company	Expected Online Date	Jobs	Note	State	Congressional District
Wind	**Arcosa**	3Q 2024	250	Arcosa will invest between $55 and $60 million to open a wind tower production facility in Belen, NM. The announcement comes as the company has received $750 million in wind-tower orders. The investment will help the company procure equipment as well as purchase and modify the existing facility on the site. The facility is expected to begin operations in mid-2024 and will create around 250 jobs in the area. **Read more.**	NM	NM-2
	CS Wind	2024	850	CS Wind announced plans to expand its Pueblo, CO wind turbine tower manufacturing plant in September 2022. CS Wind would double its output to 10,000 turbine towers per year, creating over 850 new jobs. The facility will be expanded in three phases, with the first to be completed in summer 2024. **Read more.**	CO	CO-3
	Flender Corporation	TBD	50	Flender Corp. will expand its gearbox manufacturing facility in Elgin, IL. The expansion will create 50 new full-time jobs and retain 140 existing jobs. The facility has been in operation since 1976. **Read more.**	IL	IL-8
	GE Vernova (GE)	TBD	TBD	GE is investing $20 million in expanding nacelle manufacturing facilities in Pensacola, FL to expand production capacity and bring new products to market. **Read more.**	FL	FL-1
	GE Vernova (GE)	4Q 2023	200	GE Vernova announced that it will invest $50 million at its Schenectady, NY, facility and hire approximately 200 new full-time employees including skilled union operators, manufacturing engineers, and front line leadership to establish a new manufacturing assembly line for its onshore wind business. The site will assemble three key components for GE Vernova's 6.1 MW turbine. **Read more.**	NY	NY-20
	Prolec GE USA	March 2024	153	On April 25th, Prolec GE USA announced that it will invest $28.5 million for the expansion of its facility located in Caddo Parish, Louisiana. The expansion would create 153 new manufacturing jobs and allow the company to increase the output of its transformers, which are used in clean energy production. Prolec GE is expected to break ground on the facility in June 2023 and begin production in March 2024. Prolec GE is a joint venture between General Electric and Xignux. **Read more.**	LA	LA-4
	Siemens Gamesa	January 1, 2023	250	A recently shuttered (in May) wind turbine manufacturing plant will reopen in southeast Iowa. "Newly passed federal legislation is helping the wind turbine industry compete after past federal regulations and tariffs tied to wind energy forced recent layoffs." **Read more.**	IA	IA-2
	Siemens Gamesa	Apri 2023	TBD	The Siemens Gamesa nacelle facility in KS is now reopening and expects to be ramping up production by April. **Read more.**	KS	KS-1
	TPI Composites	2024	700	Facility closed in 2021 and cut 700 jobs, but thanks to the IRA, the facility is able to reopen. TPI Composites and GE announced a 10-year agreement to supply turbine blades. Production is expected to begin again in 2024. TPI hopes to restore staffing levels to around 700-800 staff. **Read more.**	IA	IA-2
	Vestas	2025	400	Vestas will invest $40 million to expand its Windsor and Brighton factories in Colorado. The expansions will likely take place in 2024. The planned expansion will bring on a new line of wind turbines and require the additional hire of 800 to 1,000 employees in the northern Colorado region. The investment dollars and job hires will be split across the Windsor and Brighton sites. **Read more.**	CO	CO-4
	Vestas	2025	400	Vestas will invest $40 million to expand its Windsor and Brighton factories in Colorado. The expansions will likely take place in 2024. The planned expansion will bring on a new line of wind turbines and require the additional hire of 800 to 1,000 employees in the northern Colorado region. The investment dollars and job hires will be split across the Windsor and Brighton sites. **Read more.**	CO	CO-8

Component Manufacturing Capability

Clean Power Component Manufacturing Capability on the Rise

Existing and Announced Component Manufacturing Capacity



The 83 newly announced manufacturing facilities are anticipated to deliver a significant increase in America's capacity to manufacture major components for clean power projects. In coming years, manufacturers anticipate building production capacity across all major components for land-based wind, offshore wind, battery storage, and utility solar applications. Consider solar module production plans. Today, there is just 7 GW of domestic solar model production capacity. Should the currently announced manufacturing facilities reach operation, U.S. solar module production will surge to 62 GW. Importantly, production capacity of upstream components is also expected to increase, including solar cells, ingots and wafers, and polysilicon. Similarly, companies have announced a 15x increase in domestic grid battery storage manufacturing capacity. Further, while not shown here, wind manufacturing companies have announced plans to expand existing factories and add new ones to build nacelles, towers, and blades for both land-based and offshore projects.

Annual production capacity figures based on publicly available company announcements (nameplate). Ingot/wafer, cell, and module announcements are considered based on prior manufacturing involvement for any type of component relevant to the solar value chain. Wind manufacturing data not available.

Consumer Savings

CMS Energy Corp estimates $60 million in consumer savings

"The extension of tax credits for both wind and solar provide economic certainty and lowers costs for our robust renewable backlog," said Garrick Rochow, CEO of Jackson, MI-based CMS Energy. CMS Energy estimated the new PTC will reduce solar deployment costs by 15%, compared to the original estimated cost of the deployment plan. The plan includes 8 GW of new solar development. **Read more.**

Duke Energy Florida plans to decrease rates, saving customers $56 million annually

As a result of the federal incentives, there is an immediate impact to Duke Energy Florida involving changes to the production tax credits (PTCs) associated with solar investments. "We understand our customers need some relief, and this is an opportunity for Duke Energy to pass tax savings to our customers," said Duke Energy Florida State President Melissa Seixas. **Read more.**

El Paso Electric New Mexico customers to see $18 monthly savings in June bills

El Paso Electric announced in May 2023 that its customers in Texas can expect to see monthly savings of $11 on their utility bills from June to September while customers in New Mexico will see a reduction of $18 for the month of June. This is due to EPE's participation in the Western Energy Imbalance Market, which has allowed the utility to achieve lower electricity costs. EPE serves 460,000 customers across both states. **Read more.**

Florida Power & Light proposes $256 million rate reduction

In May, the Florida utility proposed reducing the fuel portion of customer bills by $256 million starting in July, reflecting continued downward revisions in projected natural gas costs for 2023 after last year's high levels. **Read more.**

WEC Energy Group projects customer savings of $2 billion

WEC Energy Group added $2.4 billion to its five-year capital plan, targeting nearly 3,300 MW in new renewable resources for regulated utility customers – including roughly 1,900 MW of solar, 720 MW of storage, and 670 MW of wind. WEC is now projecting long-term customer savings of nearly $2 billion. **Read more.**

MidAmerican to deliver Wind PRIME at no net cost to customers

The Wind PRIME project will allow MidAmerican to deliver renewable energy that exceeds 100% of its Iowa customers' usage annually. The project will be delivered at no net cost to customers and has the potential to provide an immediate decrease in bills. **Read more.**

Michigan utility switches to more renewables, saves customers $500 million over two decades

DTE Energy remodeled its 20-year plan. "The IRA just makes the plan so much more affordable for our customers," said President and COO Trevor Lauer. "If you take the 20-year plan with the renewables, the IRA lowers the cost of the plan by about $500 million." **Read more.**

$4.5 billion announced

Offshore Wind energy price drops again from previous record

The Massachusetts Department of Public Utilities (DPU) approved amendments to the 2020 power purchase agreements (PPAs) for the Shell-Ocean Winds-owned Mayflower Wind that cut its rate from $77.76/MWh to $70.26/MWh, making it the lowest price of U.S. offshore wind to date. The rate reduction was made possible by the 30% ITC for offshore wind projects. **Read more.**

Xcel Energy to save customers over $1.4 billion over next decade

Xcel Energy aims to save Minnesota customers over $1.4 billion in costs over the next 10 years and accelerate the transition to clean energy through recent federal incentives. Savings on projects in wind, solar, energy storage, electric vehicle chargers and more will help the company reach its goal of reducing carbon emissions from electricity 85% by 2030 in Minnesota.

Xcel Energy outlined how it intends to leverage new and extended tax credits and grant programs to pass savings on to customers in a filing to the Minnesota Public Utilities Commission. The company estimates $490 million in incremental savings for existing projects through 2027 and an estimated $1 billion in additional savings for new projects through 2034. Many of the anticipated savings were made possible by the PUC's recent approval of the company's 2020-2034 Upper Midwest Energy Plan. **Read more.**

Photo credit: AES

Photo credit (top to bottom): ADP Renewables North America LLC, Enel, Nextracker

This report covers public announcements made between August 16, 2022 – July 31, 2023. 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 750 utility-scale solar, wind, energy storage, green 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.

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