AMERICAN CLEAN POWER

# Clean Energy Powers
# Colorado

## REPORT

Photo credit: Nextera

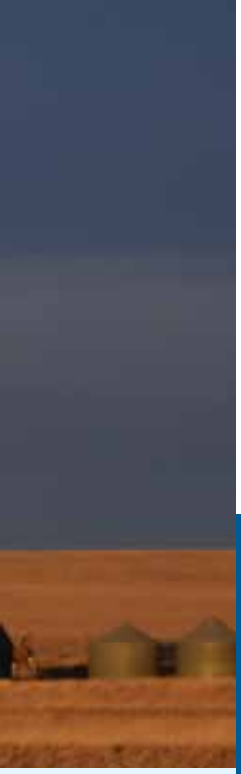
## Executive Summary

Colorado is making significant strides in the clean energy sector. The wind, solar and storage sectors are powered by $14 billion in private sector investments to date, and wind and solar currently provide over 33% of the state's electricity.

**That's enough clean energy to power the equivalent of nearly every home in Colorado.**

The state's utility-scale clean energy capacity, currently at nearly 7,000 MW, generates nearly $50 million annually in tax and land lease revenue for Colorado's communities. The wind, solar and storage sectors currently employ over 15,000 Coloradans.

By 2030, the state is expected to add an additional 4,000 MW of utility solar, 4,250 MW of wind power, and 1,200 MW of battery storage, representing a 136% increase in total clean power investment. That makes up much of the $12 billion in private sector investment expected into Colorado's clean energy economy by 2030. This growth will drive job creation, increase tax payments, and generate substantial land lease payments.



# Today...

Over

**33%**

of CO's electricity provided by wind and solar

Colorado ranks

**Top 10**

for wind and solar deployed

Over

**15,000**

Coloradans work in wind, solar and storage

Nearly

**$14 billion**

of total private investment made into clean energy

Colorado's

# Clean Energy Economy

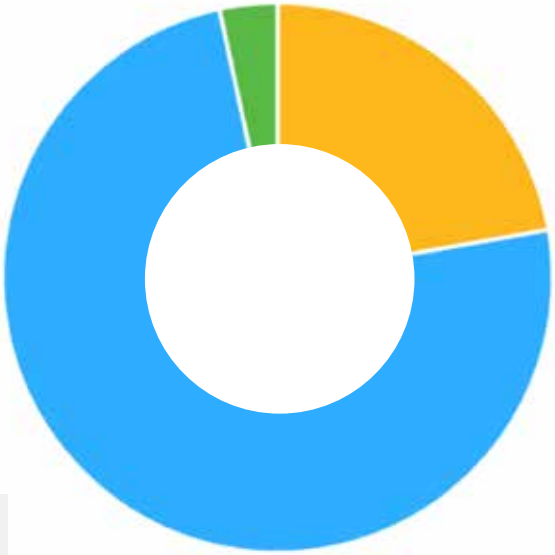
As of July 2023, Colorado's total clean energy capacity stands at **6,982 MW**. That is enough electricity to power the equivalent of **2.5 million** homes – or nearly all the homes in Colorado.[1]

## Clean Energy Capacity *as of Q2 2023*

**Solar** 1,551 MW

**Storage** 237 MW

**Wind** 5,194 MW



**Total Clean Energy Capacity** 6,982 MW

Today, 33.7% of the state's electricity comes from wind and solar. This is enough electricity to power almost **2.5 million homes** – in a state with 2.6 million housing units.

In total, the utility-scale solar, wind, and storage sectors provide over 15,000 jobs to Coloradans across the state.

The private sector has invested nearly **$14 billion** in utility-scale solar, wind, and storage projects, helping drive economic growth in the state. Colorado also hosts **12 operating clean energy manufacturing facilities** – with more on the way.

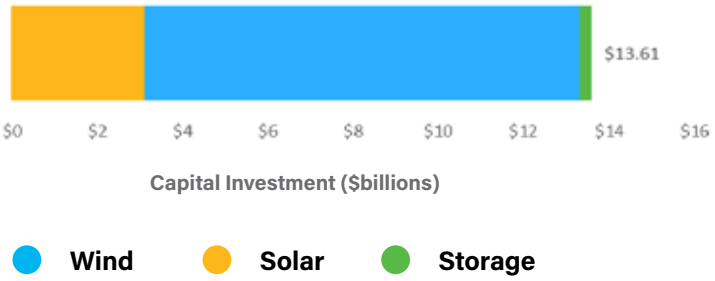
1 https://www.census.gov/quickfacts/fact/table/CO/BZA110221

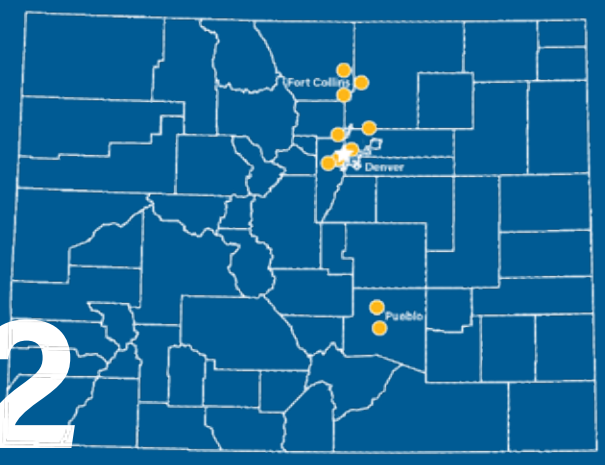
# Clean Energy Investment

As of Q2 2023

## Utility-Scale Clean Energy Capital Investment *as of Q2 2023*

Investments in Coloradan clean power total **$13.6 billion dollars**, with the majority invested into wind energy. As more projects and manufacturing facilities are planned, total capital investment is expected to grow.



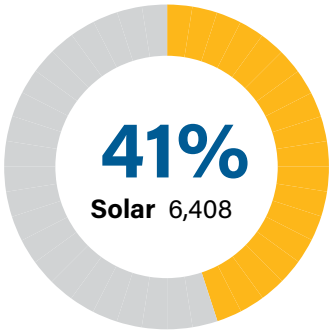

**12**

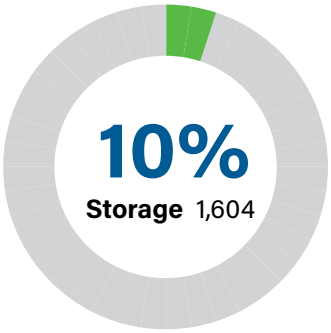
manufacturing facilities operating

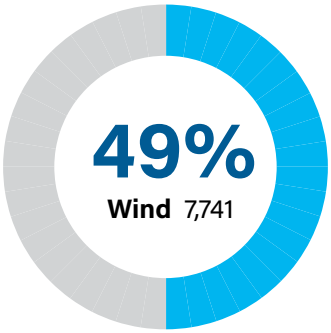
Photo credit: Nextera

# Clean Energy Jobs

As of Q4 2022




**Total Jobs** 15,753

The over 15,000 jobs supported in the solar, wind, and storage sectors span jobs in construction, development, operations, and manufacturing.[2] **Learn more** about the breadth of jobs available across the clean energy sectors.


Photo credit: Vestas

2 https://www.energy.gov/policy/us-energy-employment-jobs-report-useer

## How is clean energy benefiting Coloradans today?

*We needed to find new ways to sustain our land, and we came across the idea of solar. Now, we're able to generate power for our community and have money in our pockets."*

Byron Kominek
*Colorado landowner*

In Longmont, Byron Kominek transformed his family's underperforming hay farm into a solar farm that powers over 300 homes annually and serves as a research site for agrivoltaics, the practice of growing crops under solar panels. Through his efforts, which include starting a non-profit to educate people on agrivoltaics, Byron is preserving his family's legacy while pioneering new ways to combine clean energy and agriculture.[3]

3 https://cleanpower.org/fuel-for-thought/

# Local Economic Contributions

**Tax Payments (State & Local)**

**$20 million**
annually

**Land Lease Payments**

**$28 million**
annually

**Total** $48 million annually

Clean energy projects invest $48 million annually into Colorado's communities. These projects not only generate pollution-free American electricity but provide critical revenue on the state and local level that helps bridge budget shortfalls and allows communities to plan and invest in their future. This revenue can provide enough new income to repair roads, invest in schools, and fund essential services.

Landowners also benefit, receiving land lease payments from clean power located on their land. This allows families new avenues for income and opportunities to hold onto land passed down through generations.



## Clean Energy Drives Savings

Thanks to clean energy, Coloradans are saving money on their utility bills. The Public Service Company of Colorado, the utility for most customers in the state, relied on wind farms to save Colorado customers **$700 million** between 2017 and 2022. Those savings are expected to continue to grow in coming years.

The utility is pursuing a long-term Clean Energy Plan, which aims to build wind, solar, and energy storage projects to reduce carbon emissions 85% by 2030. These projects generate electricity without fuel costs, delivering savings that are passed directly to consumers.

# Future Projections

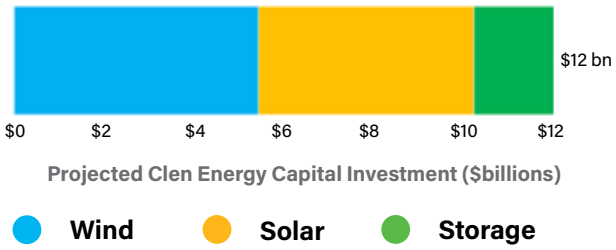
By 2030, Colorado anticipates adding to its grid **4,000 MW** of solar, **4,250 MW** of land-based wind power, and **1,250 MW** of battery storage.[4] This represents a 136% increase in clean power serving Colorado customers and represents an investment of $12 billion in electricity infrastructure.

The state's clean energy manufacturing sector is also expected to grow, with multiple Colorado facility openings and expansions announced by companies after the federal government passed the Inflation Reduction Act in late 2022.

This clean energy activity will spur job growth, increase estimated tax payments to $64 million annually, and generate $78 million in annual land lease payments.

## Expected Capital Investment by 2030

# $12 billion




4 Estimates based on consultant forecasts, public announcements, and ACP analysis

## How is clean energy benefiting Coloradans today?

*It's pretty amazing that I get to enjoy what I do, but it has a purpose. We're in the wind energy business, so we have a positive impact on the environment and the community. That is a really big reason why most of us are working here."*

Mika Sanchez
*Colorado resident*

In Brighton, Mika Sanchez works as a logistics team member at Vestas' Nacelles manufacturing facility, supplying the manufacturing line with material needed to build the nacelles for wind turbines.[5]

5 https://us.vestas.com/en-us/careers/Join-Vestas-Manufacturing-Team

# Manufacturing Facilities

## Recent Facility Announcements

### Solar

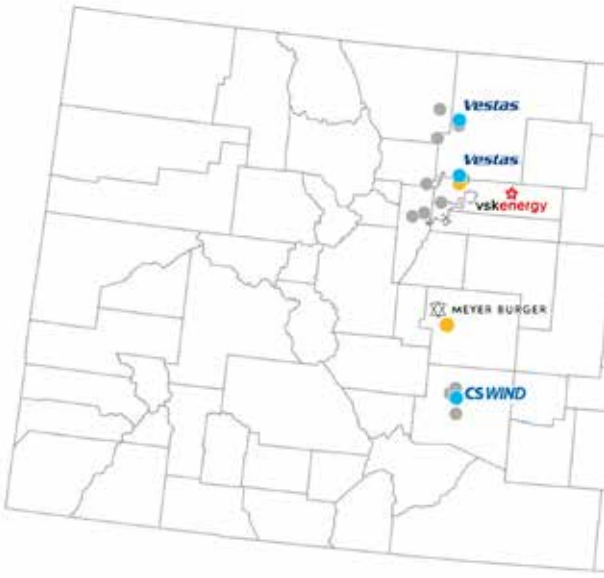
**Vikram Solar** has entered a joint venture (VSK Energy) with investment firms Phalanx Impact Partners and Das & Co. to invest $1.5 billion in U.S. solar panel manufacturing. The first $250 million phase will go toward starting a 2-GW solar module assembly factory in Brighton, Colorado. The new factory should create 900 direct jobs. VSK Energy expects to open the facility in 2024 and eventually scale to 4 GW of annual production.[6]

**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 US facility. The plant will create more than 350 direct jobs.[7]

### Wind

**CS Wind** announced plans to expand its Pueblo, CO wind turbine tower manufacturing plant in September 2022. CS Wind plans to double its output to 10,000 turbine towers per year, create at least 850 new jobs. The facility will be expanded in three phases, with the first to be completed in summer 2024.[8]

**Vestas** will invest $40 million to expand both its Windsor and Brighton factories in Colorado. Expansions will likely take place in 2024. The planned expansion will bring the V163-4.5 MW™ turbine to market and require the additional hire of 800 to 1,000 employees in the northern Colorado region.[9]




New Wind Facilities  New Solar Facilities  Existing Facilities

**Investing in Colorado: Vestas**

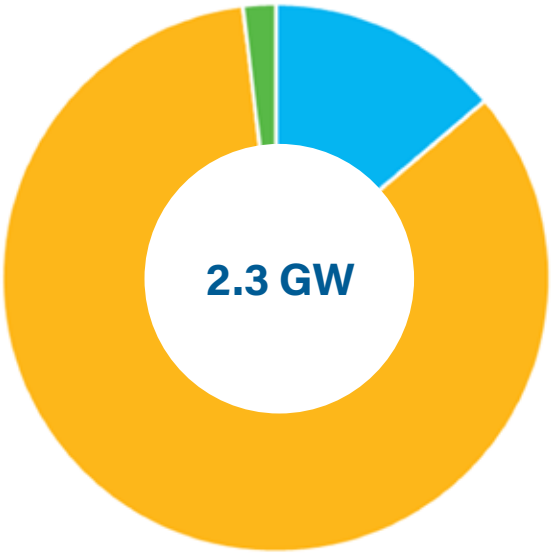
Vestas has been an active member of the Colorado community since 2007 when it first opened its factory doors. With **1.4 GW** of Vestas wind turbines currently operating across the state, Vestas has spent more than **$465 million across 182 local suppliers** last year. The expansion of its manufacturing facilities, in combination with its current operations, will continue to create local construction jobs and bring increased opportunities to the area.

6 https://www.solarpowerworldonline.com/2023/06/vikram-solar-picks-colorado-for-2-gw-solar-panel-factory/
7 https://www.meyerburger.com/en/newsroom/artikel/meyer-burger-announces-solar-cell-production-facility-in-colorado-usa
8 https://www.windpowerengineering.com/colorado-wind-turbine-tower-manufacturing-plant-to-increase-yearly-production-by-10000-towers/
9 https://us.vestas.com/en-us/careers/Colorado-Manufacturing-Investment

# Clean Energy Under Development (Pipeline)

As of Q2 2023

## Clean Energy Under Development




As of July 2023, there is nearly **2.3 GW** of utility-scale clean energy capacity under development. This is enough to power the equivalent of **600,000** homes in Colorado.

- **Solar** 1,956 MW
- **Storage** 45 MW
- **Wind** 321 MW

**Investing in Colorado: Xcel Energy**

Wind power is an essential carbon-free energy source for Xcel Energy-Colorado, supplying 35% of its electricity in 2022 and moving the company closer to its goal of reducing carbon emissions 80% by 2030. In addition to about 3,000 megawatts of purchased wind power, Xcel Energy owns two wind farms in eastern Colorado that are capable of powering nearly 600,000 homes and are expected to add more than 50 full-time jobs, $235 million in landowner payments and $81 million in local tax revenue during the life of the projects.

## Additional Utility-Scale Clean Power Capacity by 2030

**Expected Clean Power Capacity**

(by 2030)

**4,000 MW**

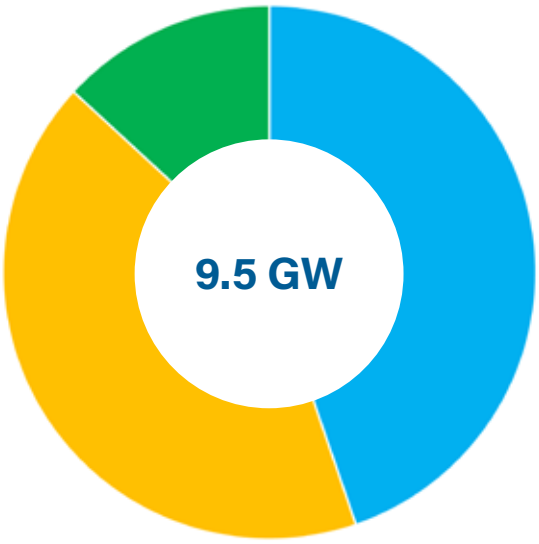
of additional solar

**4,250 MW**

of additional wind power

**1,250 MW**

of additional battery storage



# Clean Power Local Contributions by 2030

**Estimates based on projected pipeline*

**Tax Payments (State & Local)**

**$64 million**
**annually**

**Land Lease Payments**

**$78 million**
**annually**

## How is clean energy benefiting Coloradans today?

*I've been here 12 years, along with other colleagues that have been here 12+ years, and I just enjoy coming to work... The most rewarding part of working at Vestas is knowing that I help power my own community, as well as our volunteering efforts."*

Miguel Banuelos
*Colorado resident*

In Windsor, Miguel Banuelos works as a heavy machine operator at Vestas' Windsor Blades manufacturing facility in the shipping department, preparing the massive blades for transportation to the customers.[10]

10 https://us.vestas.com/en-us/careers/Join-Vestas-Manufacturing-Team

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.

Learn more at **www.cleanpower.org**.

***This report was compiled with all available data as of September 19, 2023.***

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