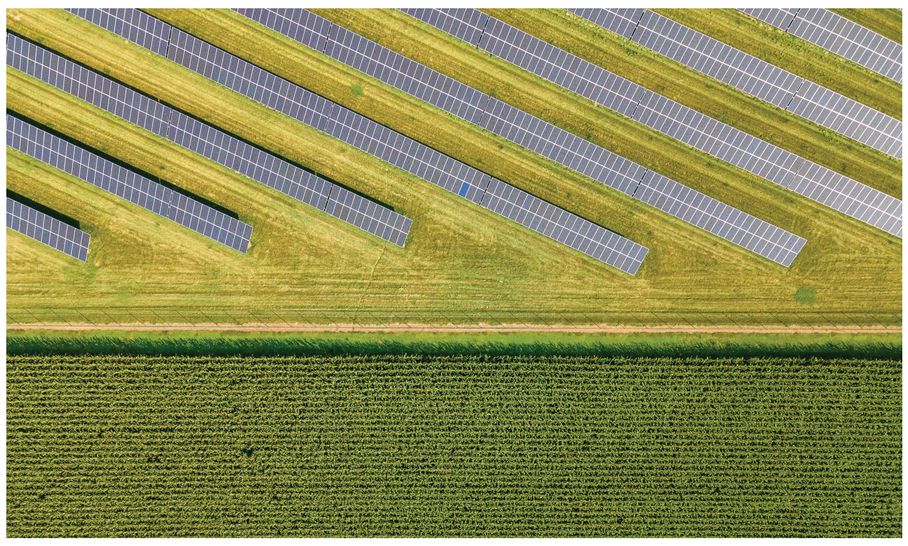
Solar 101



Corssvine Solar + Storage contact information

Email: crossvine@aes.com

Phone Number: (317)-261-8261

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AES is leading the clean energy transition in the US

About AES

Founded in 1981, The AES Corporation (AES) is a Fortune 500 global energy company accelerating the future of energy. Headquartered in Arlington, Virginia, AES delivers innovative clean energy solutions that are flexible and tailored to meet the specific needs and objectives of our customers.

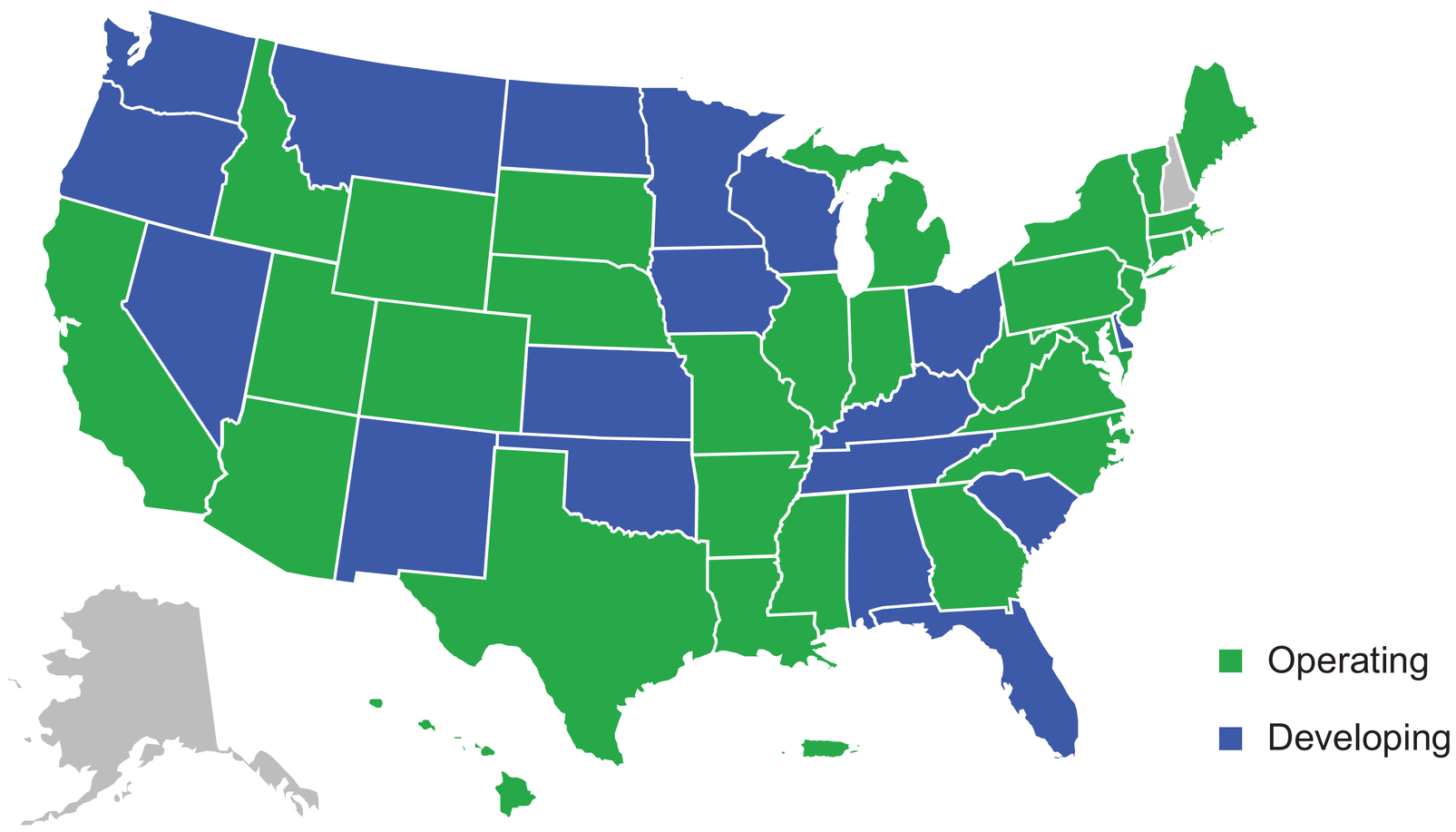
- Solar
- Wind
- Storage
- Hybrid
- Green Hydrogen

Our work

AES owns and operates more than 540 utility-scale and community solar, wind, energy storage and hybrid projects across 24 states in the US. We deliver cost-competitive clean energy to utilities, communities, corporations, and organizations to meet their clean energy and sustainability commitments both today and into the future.

5.1 GW
in operation

51 GW
in development



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Crossvine Solar + Storage

AES Indiana's Crossvine project is a proposed solar + storage project in Dubois County, Indiana. We are committed to responsible clean energy development that creates long-term value and positive impact for both the environment and local communities.

This project will advance the objectives of Indiana's Clean Energy Plan by moving the needle towards 65 percent carbon-free energy consumed by 2050, while also achieving the goals of creating clean energy jobs, economic development, reliable and affordable energy, and more.

Estimated project timeline

2023-2025
Development, Siting, Permitting

2026-2027
Construction and pre-operations

2027
Commencement of operations

About AES

The AES Corporation (NYSE: AES) is a Fortune 500 global energy company accelerating the future of energy. Together with our many stakeholders, we're improving lives by delivering the greener, smarter energy solutions the world needs.

For more information, visit aes.com/crossvine-solar

Email: crossvine@aes.com

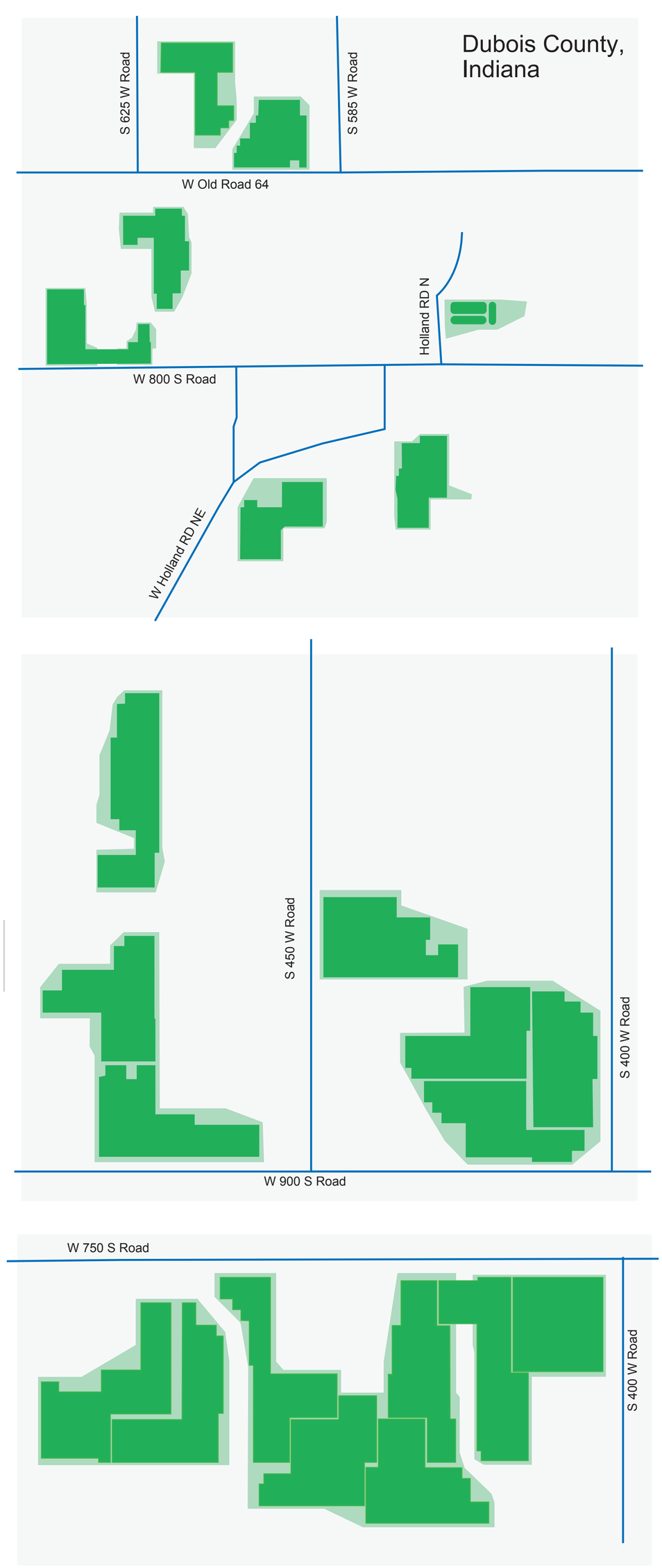
Phone: 317-261-8261

Project overview

85 MWac solar + 85 MWac storage

Enough renewable energy to power around nearly 14,250 Indiana homes annually

Nearly 300 jobs expected to be created during peak construction, and an estimated three long-term operations and maintenance jobs



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Project Timeline - Development

Pre-2024

Early Development Pre-AES:

→ Land Acquisition

2025

Mid. Development:

→ AES Indiana acquisition of Crossvine Solar + Storage Project

→ Advanced Engineering Design

→ County Briefing & Community Open House

→ EPC Selection

2026

Late Development & Construction:

→ Grid Interconnection Approval

→ Engineering Design

→ Construction

→ Site mobilization - Spring 2026

→ Equipment deliveries - Summer - Fall 2026

→ Civil works - Spring - Summer 2026

→ Substation completed - Fall 2026

Mid 2027

→ Commercial Operation - Late 2027

→ Mechanical completion - Winter 2027

→ Testing - Spring 2027

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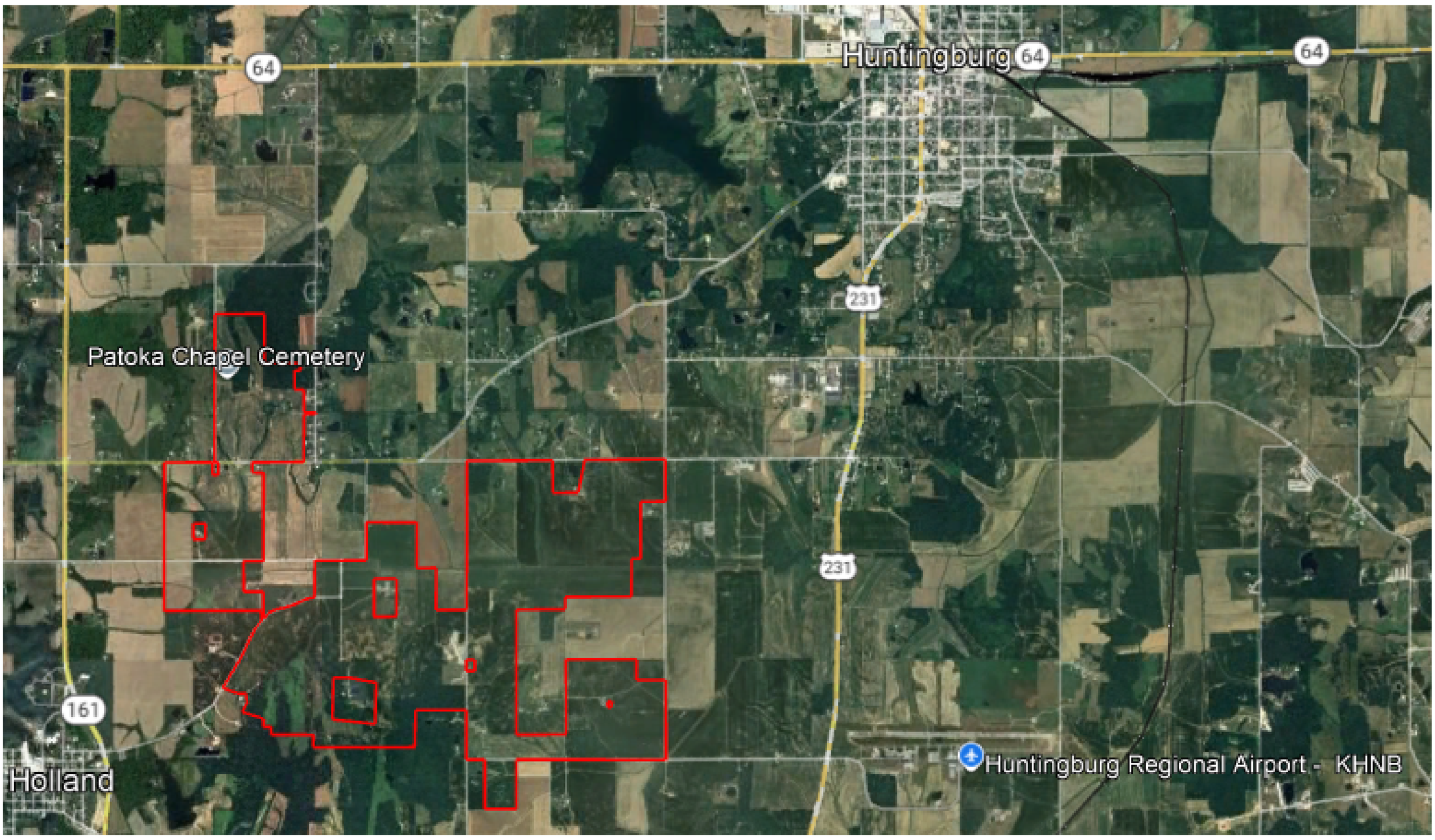
Crossvine solar + storage project



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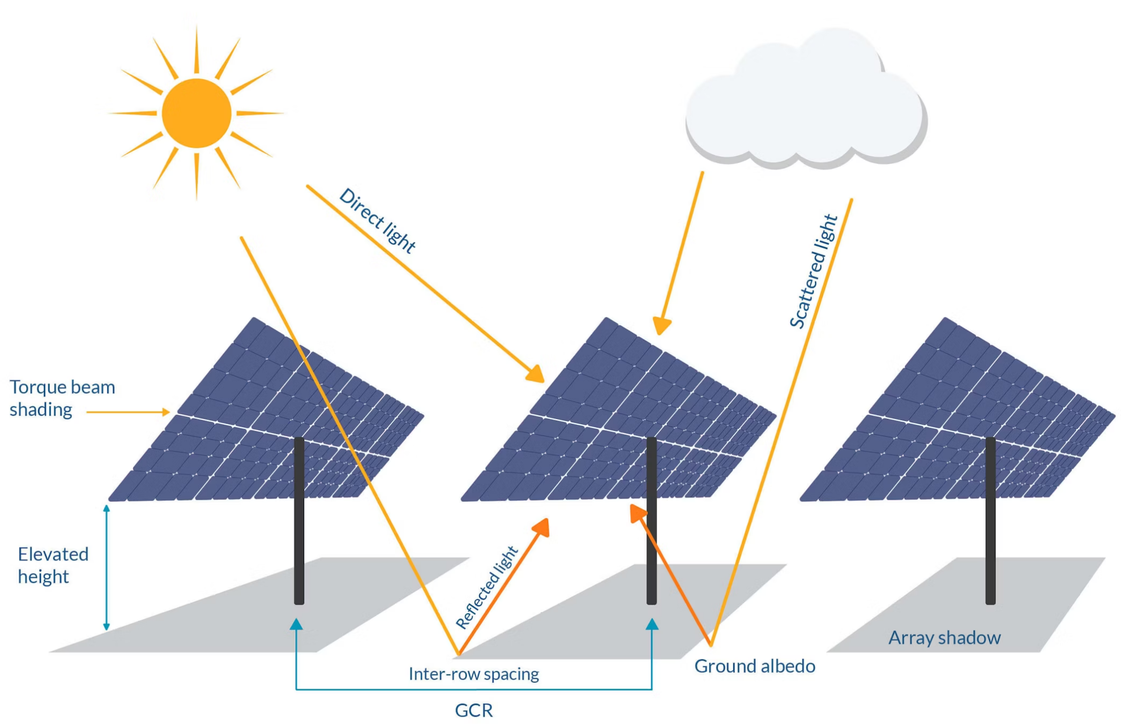
Construction Overview

Safety

- → At AES, safety is our top core value.
- → Conduct field studies in early planning stages to minimize impacts to the environment.
- → Install erosion and sediment controls to limit stormwater runoff outside of the project area.
- → AES will regularly inspect project site.
- → 24-7 / 365 days a year remote monitoring with on-call operations and maintenance team.
- → Project sites will be fenced off with security access gates.
- → Securely installed enclosed electrical equipment will be on-site.

Project Overview - Solar Photovoltaic Modules



Structure Dimensions

- → ~8’ max height at full 52° tilt in early morning/late evening.
- → 5’ 4” clearance at central rack and at flat tilt, or stow mode.
- → 14’ 6” aisles between modules / 22’ post to post

*Example may not be exact specifications of system used in project

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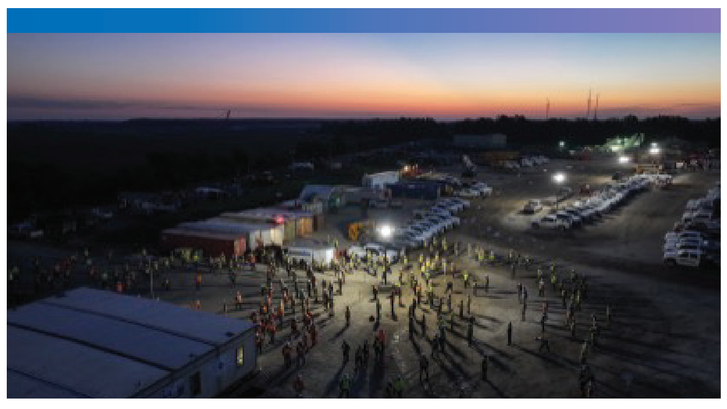
Construction of a Solar Facility



1. Mobilize & Site Preparation

→ Mobilization: Equipment, personnel, and materials are brought to the site, including heavy machinery and temporary facilities.

→ Land Clearing: Vegetation and obstacles are removed to make way for the installation of solar infrastructure.

→ Survey & Staking: The site is surveyed, and key points are staked to mark boundaries, access roads, and placement of solar arrays.

→ Erosion Control: Temporary measures, such as silt fences or drainage systems, are installed to prevent soil erosion during construction.

2. Civil Works

→ Grading & Excavation: The land is leveled, and trenches are dug for cabling and foundations.

→ Access Roads: Roads are constructed to ensure that equipment and vehicles can move easily across the site.

→ Drainage Systems: Infrastructure is put in place to manage water flow and prevent flooding or erosion on the site.

→ Foundation Installation: Foundations are laid, either in the form of concrete pads or driven piles, for supporting solar panel racks.

3. Racking/Mechanical Install

→ Racking Assembly: The metal frames that hold the solar panels are assembled and installed on the pre-built foundations or piles.

→ Alignment: Racking systems are aligned for optimal sun exposure, often using GPS-guided tools.

→ Mounting Hardware: Components like brackets and fasteners are secured to the racking system to hold the solar panels in place.

→ Structural Inspections: Inspections ensure that the racking systems meet safety and design specifications before panels are installed.

4. Construction of a Solar Facility

→ Panel Installation: Solar panels are mounted on the racking system and secured with brackets.

→ DC Wiring: Panels are wired in series or parallel to form arrays, which are connected to DC combiner boxes.

→ Inverter Setup: Inverters, which convert DC power from the panels to AC power, are installed at designated locations.

→ Cabling & Trenching: Trenches are dug for electrical conduits, and cables are laid to connect solar arrays to the inverters and then to the substation.

5. Substation & Interconnection

→ Substation Construction: A substation is built or upgraded on-site to manage voltage changes and connect the solar farm to the grid.

→ Transformer Installation: Transformers are installed to step up or step down the voltage as needed for grid compatibility.

→ Interconnection to Grid: The solar farm is connected to the local electrical grid, involving collaboration with utility companies for safe integration.

→ Testing & Inspection: The interconnection system undergoes rigorous testing to ensure that it complies with safety standards and grid requirements.

6. Restoration & Commissioning

→ Site Restoration: Disturbed areas, such as access roads and land around the arrays, are restored with topsoil, vegetation, or gravel to prevent erosion.

→ System Testing: Each component of the solar farm, from panels to electrical systems, undergoes commissioning tests to verify proper operation and efficiency.

→ Permitting & Approval: Final inspections are conducted by local authorities and utility providers to ensure all regulations are met.

→ Commissioning & Handover: Once fully operational, the system is commissioned, and the site is handed over to the operations and maintenance team for ongoing management.

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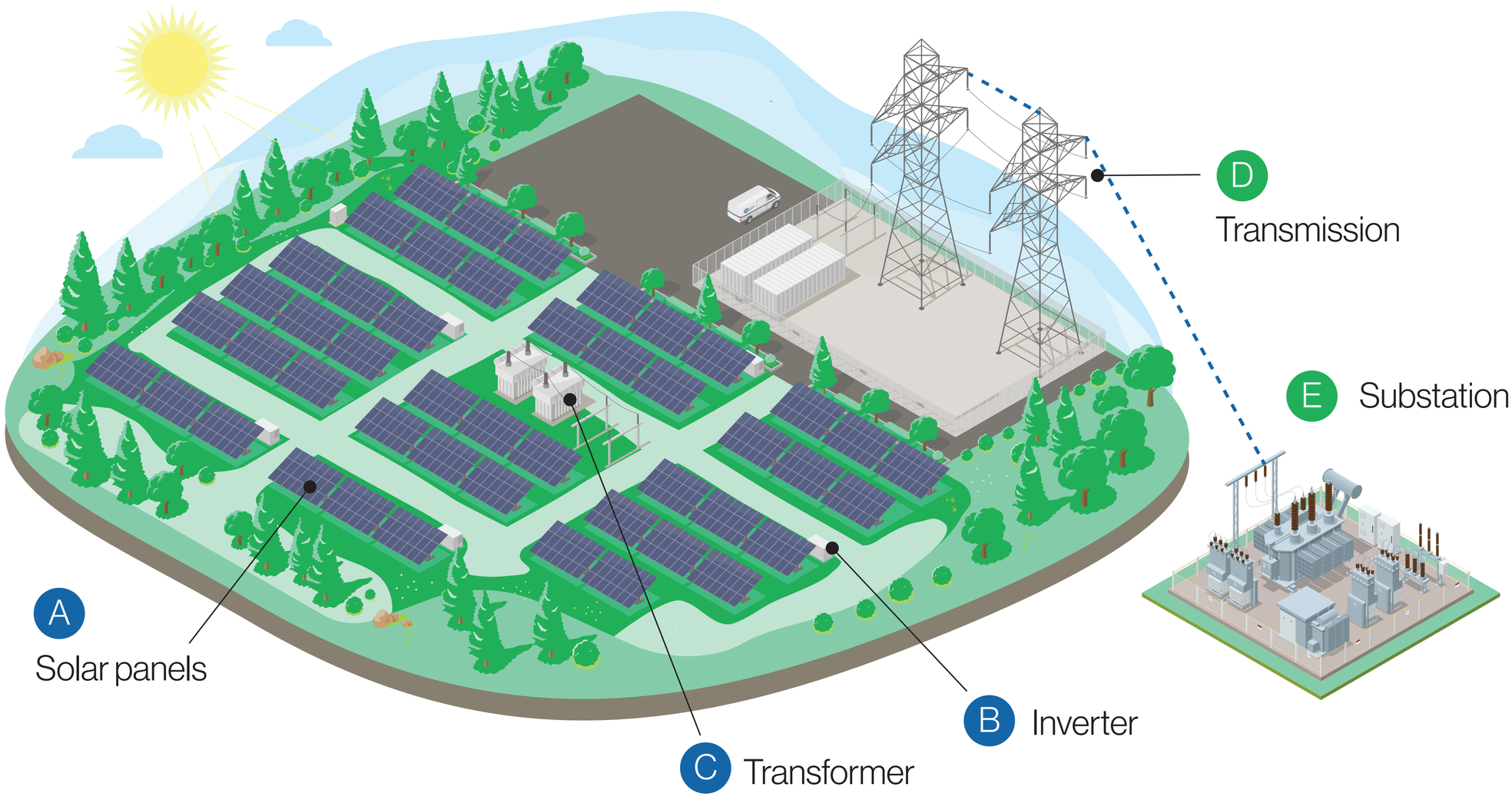
Crossvine solar + storage project

How does solar power work?



A The sun shines on the solar modules, which are made up of photovoltaic cells. These cells harness the sunlight and turn it into direct current (DC) electricity.

This project's solar panels have a tracking system and follow the path of the sun to maximize solar energy production.

B An inverter converts DC electricity into alternating current (AC) electricity.

AC electricity is what standard household appliances use.

C The AC electricity is gathered in a large switchgear called a transformer. It "steps up" the power to match the high voltage of the utility grid.

D The AC electricity travels through the utility transmission lines to the regional power grid.

E The AC electricity reaches the nearby substation where it is converted to a lower voltage. This "step down" is required to adjust the voltage to appropriate levels to power neighborhoods and businesses.

Blue = Project equipment
Green = Existing infrastructure

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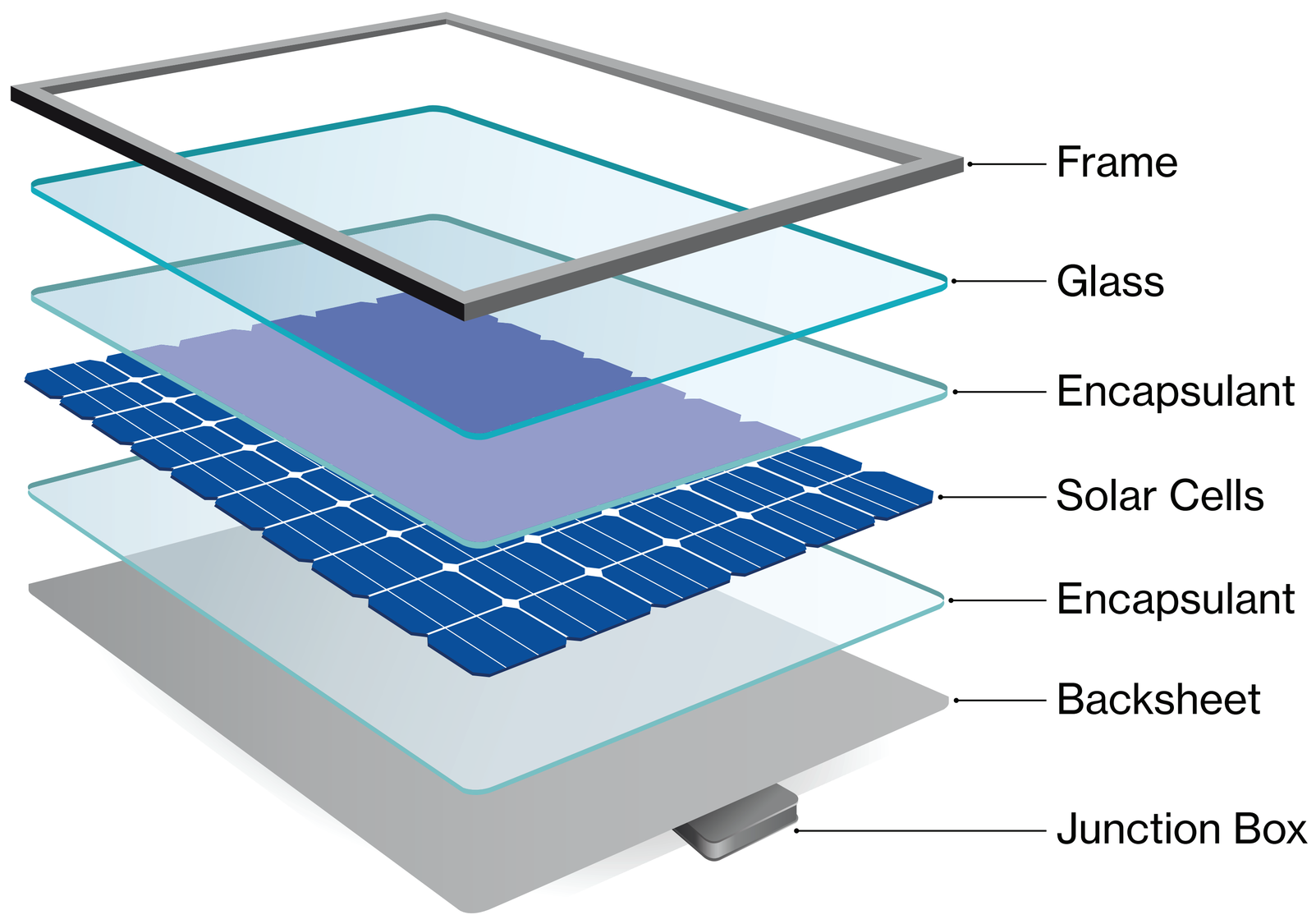
What's in a solar panel?

More than 95% of the materials used in solar panels are commonly recyclable materials. This recyclable percentage is significantly higher than other electronic waste from consumer products like cell phones, television screend and computers.

Recyclable materials in a solar panel (panel percentage range):



76-97%
Glass

7-10%
Aluminum

5-7%
Silicon

2-10%
Polymer (coatings)

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BESS Storage & Safety

Our Commitment

→ Safety is AES' highest priority — every system is designed, tested, and operated to meet or exceed national safety standards.

→ AES has over 15 years of leadership in battery storage innovation and safe operations worldwide.

Built to the Highest Standards

→ NFPA 855: Governs safe design, installation, and operation of BESS.

→ UL 9540 & UL 9540A: Require equipment testing, certification, and evaluation of fire and thermal safety.

→ AES facilities incorporate targeted fire suppression, gas detection, and deflagration panels for advanced protection.

Proven Safety Record

→ According to the Electric Power Research Institute (EPRI), BESS failure incidents have fallen 97% since 2018, even as deployments have grown twentyfold.

→ Fewer than ten incidents occurred nationwide in 2023, demonstrating a strong and improving safety record.

Prepared and Coordinated

→ AES will partner with local fire departments and emergency responders to develop Hazard Mitigation and Emergency Response Plans for every facility.

Advancements in BESS design and safety standards

	Earlier BESS Design	Current, Advanced BESS Design
Enclosure Type	Walk-in design	Non-walk-in (electrical equipment)
Battery Management System Protection	Yes	Yes
Gas Detection & Explosion Prevention	No	Gas detection, ventilation, deflagration panels
Smoke & Heat Detection	Yes	Yes
UL9540A Tested	No	Yes
NFPA 855 Compliant No Yes	No	Yes

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