

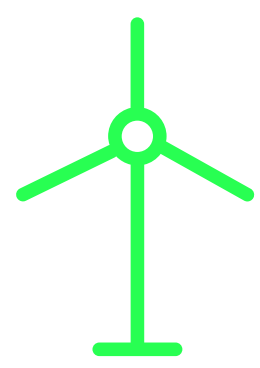
# WELCOME



[cypresskneesolarpark.com](http://cypresskneesolarpark.com)

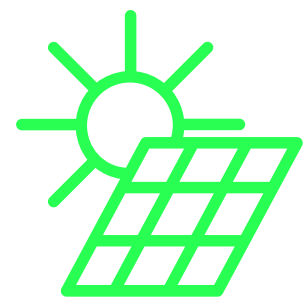
# ABOUT EDP RENEWABLES NORTH AMERICA

## OPERATIONAL PROJECTS



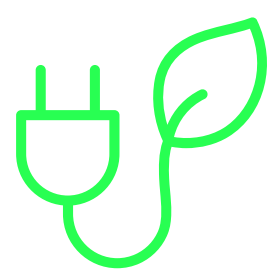
**60**

WIND FARMS

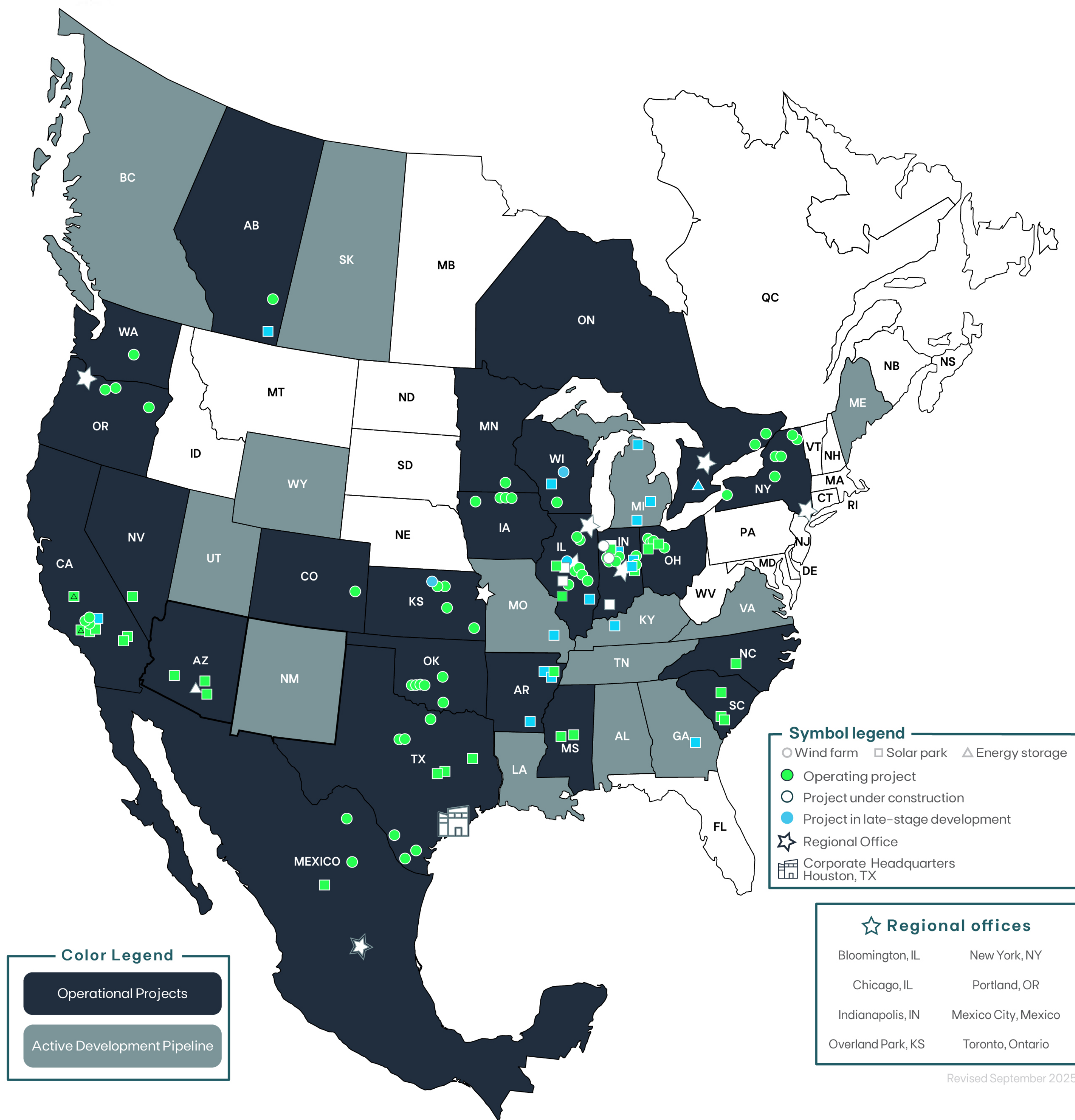


**27**

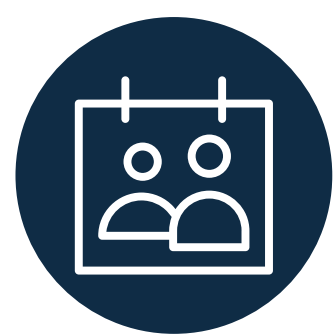
SOLAR PARKS



**11,600+**  
MEGAWATTS



## Economic & Environmental Benefits OF EDPR NA'S OPERATIONAL PROJECTS



CREATED  
**710+** permanent jobs<sup>1</sup>  
**11,910+** construction jobs<sup>1</sup>



PAID  
**\$606+** million to landowners<sup>4</sup>  
**\$564+** million to local governments<sup>4</sup>



GENERATED  
the equivalent of  
**3.2+ million homes'**  
energy consumption<sup>2</sup>



SAVED  
**18.3 billion gallons** of water<sup>5</sup>  
AVOIDED  
**17+ billion pounds** of CO<sub>2</sub><sup>6</sup>



MAINTAINED  
**278+ million hours**  
of operational history<sup>3</sup>



INVESTED  
**\$16.8+ billion** (approximately)  
in capital<sup>7</sup>

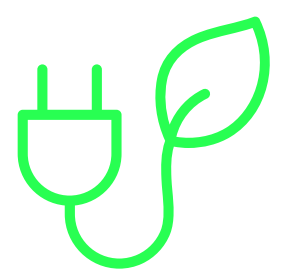
<sup>1</sup>Full-time equivalent jobs calculated by dividing number of contractor hours worked during construction by 2080.  
<sup>2</sup>Power generation calculated using a 25% capacity factor for wind based on 2019 AWEA Wind Powers America Annual Report. Solar power generation is based on power generation calculated using a 25% capacity factor. Household consumption based on the 2022 EIA Household Data monthly average consumption by state.  
<sup>3</sup>Calculated based on each turbine in EDP Renewables North America's fleet and the hours of operation from 2007 to 2019.  
<sup>4</sup>Cumulative landowner payments and local government payments through 2023.  
<sup>5</sup>Assumes 0.58 gallons of water consumed per kWh of conventional electricity from a coal-fired power plant.  
<sup>6</sup>Based on the U.S. Environmental Protection Agency (EPA) Greenhouse Gas Equivalencies Calculator, January 2024.  
<sup>7</sup>Assumes the average cost of an installed wind farm is \$1.7 million/MW for projects built between 2012 and 2016 and \$1.4 million/MW for projects built after 2016. Based on U.S. DOE 2016 and 2019 Wind Technologies Market Report. Utility fixed-tilt solar projects are at \$1.02/Wdc, and single-axis tracking projects are at \$1.11/Wdc, based on Q4 2023 SEIA U.S. Solar Market Insight.



# Cypress Knee Solar Park

Chicot County, AR

Cypress Knee Solar Park would be located close to the city of Lake Village, in the Mississippi River Delta region of Arkansas, on flat terrain. The project is named after the cypress trees that are common in the area. Cypress Knee Solar has an anticipated lifespan of 30 years.



## 250 MW

ESTIMATED COMMERCIAL OPERATION DATE **2027**



Cypress Knee Solar's generation would be equivalent to the consumption of more than 43,400 Arkansas homes.<sup>1</sup>



Cypress Knee Solar would save more than 317 million gallons of water each year and strengthen the immediate area's electric grid with local, American power that doesn't pollute.<sup>2</sup>

## Economic Benefits

All economic data reflects the estimated amount throughout the life of the project.



CAPITAL INVESTMENT

**Approximately \$400+ million**



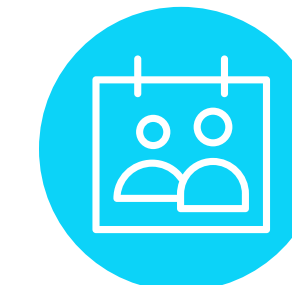
**\$25+ million**

WOULD BE PAID TO THE LOCAL GOVERNMENT



**Millions of dollars**

WOULD BE SPENT LOCALLY<sup>4</sup>



PERMANENT JOBS<sup>5</sup>

**Multiple jobs would be created**



CONSTRUCTION JOBS<sup>5</sup>

**Hundreds of jobs would be created**

<sup>1</sup>Power generation calculated using a 25% capacity factor. Household consumption based on the 2020 EIA Household Data monthly average consumption by state.

<sup>2</sup>Assumes 0.58 gallons of water consumed per kWh of conventional electricity from Lee, Han, & Elgowainy, 2016.

<sup>3</sup>American Clean Power, Clean Power Illinois Fact Sheet, 2022

<sup>4</sup>Includes vendor spending, property taxes, landowner payments and wages from site jobs. These numbers are presented for example purposes only, and actual payments may vary.

<sup>5</sup>Full-time equivalent jobs calculated by dividing number of contractor hours worked during construction by 2080.



Power generated at Cypress Knee Solar would support the state of Arkansas' electric grid. Cypress Knee would also **contribute to the national energy security of the United States**, helping to diversify domestic supply.



Electrons generated at Cypress Knee Solar would travel on the grid, through the path of least resistance, to the nearest place that the power is needed.

# STRENGTHENING THE LOCAL COMMUNITY

Cypress Knee Solar is expected to contribute more than \$25 million in additional funding to Chicot County over the project's 30-year life through an Industrial Revenue Bond agreement with the County.

## ESTIMATED PAYMENTS TO CHICOT COUNTY BY CYPRESS KNEE SOLAR:

	HOSPITAL	LIBRARY	COUNTY ROADS	CHICOT COUNTY GENERAL	CHICOT COUNTY DISCRETIONARY	LAKESIDE SCHOOL DISTRICT	TOTAL
YEAR 1	\$14,181	\$14,181	\$42,543	\$ 70,905	\$250,000	\$510,513	\$902,323
TOTAL BY YEAR 30	\$425,428	\$425,428	\$1,276,283	\$2,127,138	\$5,238,100	\$15,315,394	\$24,807,771

\*Tax chart is calculated using a low capital investment estimate. Final totals are likely to increase to \$25+ million in the project's lifetime.

## ADDITIONAL BENEFITS TO CHICOT COUNTY

### ATTRACTING ECONOMIC GROWTH

Companies are increasingly interested in powering their operations with clean energy at a fixed price. The availability of **clean power generated by the solar park can help attract further business development** to the project area.

### SUPPORTING LOCAL BUSINESSES

**Solar construction generates an economic boost for the project area**, with hundreds of workers relying on local businesses for food, lodging, materials, and contractor services for the duration of construction, which is typically about one year. **Once the project is in operation, the solar park continues to count on local businesses for ongoing maintenance needs**, such as vegetation management, panel washing, and equipment.

### REINVESTING IN THE COMMUNITY

**Cypress Knee Solar Park will be a long-term partner of the surrounding community for decades to come.** Our commitment extends beyond generating renewable energy—we aim to build strong, supportive relationships in the community through thoughtful donations and educational outreach initiatives.

## COMMITTED TO BEING A GOOD NEIGHBOR

Cypress Knee Solar Park will be a long-term member of the community for decades to come. EDPR's commitment extends beyond generating renewable energy—our development and operations teams aim to build strong, supportive relationships in the community through thoughtful donations and educational outreach.

EDPR and Cypress Knee Solar have donated money to local organizations such as the Lakeside School District, the Lake Village Food Pantry, and the Chicot Fall Festival. Cypress Knee Solar is also an active member of the Lake Village Chamber of Commerce.

**Do you know of an organization, event, or fundraising effort that could use EDPR support? Let us know!**





Cypress Knee Solar will be made up of multiple smaller, islanded sections of panels that are individually fenced off, rather than a single block of panels. **This leaves plenty of corridors open for wildlife, vegetation, and existing wetlands.**

- Transmission Route
- Fence Line
- Panels
- Solar Project Land
- Substation
- Neighbor Setback

Map indicates most updated estimated locations of project infrastructure. Exact locations may vary.

## Project Timeline

### 2025

- ✓ Interconnection agreement signed with grid operator MISO
- ✓ Public open house
- ✓ Preliminary design completed
- ✓ Detailed permitting matrix completed

### 2026

- Seeking offtaker agreement
- Final design
- Obtain all building permits
- Community construction kickoff event
- Commencement of construction

### 2027

- Complete construction
- Commercial operation begins

**Community engagement efforts will take place throughout the entire development of the project.**

\*Schedule is subject to change.

# Solar Park Construction

Building a solar park is a major construction project that takes approximately a year to complete and employs hundreds of people. Here are some of the goods and services we can typically source locally:

## TECHNICAL & CONSTRUCTION EMPLOYMENT

- Civil contractors
- Concrete supply and delivery
- General laborers
- Safety staff
- Excavation and restoration
- Gravel supply and delivery
- Heavy equipment operators

## SERVICES

- Accommodations and catering
- Vehicle and equipment maintenance
- Vehicle and equipment rentals
- Security
- Fuel supply

Throughout the construction process, we work closely with local stakeholders and officials to ensure everyone is informed and construction activities are minimally disruptive.

## 1 SITE PREPARATION

To prepare a site for a new solar project, any remaining crops and large rocks are first removed. In some cases, a grading technique is employed to provide a level foundation for the construction of the solar modules. Great care is taken to salvage topsoil, prevent erosion, and maintain natural drainage patterns.

## 2 SECURITY FENCE

To protect the public during construction activities, as well as to prevent trespassing and vandalism, a fence is installed around the perimeter of the project location.

## 3 DRIVING & DRILLING PILES

Following site preparation, metal beams (typically steel or aluminum) are spaced out and inserted into the ground using pile-drivers to serve as the foundation for the solar modules.

## 4 INSTALLING TABLES, TRACKERS, & PANELS

A typical solar park is comprised of thousands of photovoltaic (PV) panels that are mounted to tables and affixed to the foundation to form a solar array.

## 5 LAYING UNDERGROUND CABLES

Buried electrical collection cables are installed to connect the solar arrays, inverters, and transformer. The buried lines are contained within the project location and buried to a minimum depth of three feet.

## 6 INSTALLING INVERTERS & TRANSFORMERS

The electricity generated by the PV panels is in the form of direct current (DC). Inverters are installed to convert the DC output of the PV cells into alternating current (AC) suitable for supplying the electrical grid. The AC power then goes through a transformer to increase the voltage before connecting to the electrical grid.

## 7 INTERCONNECTION

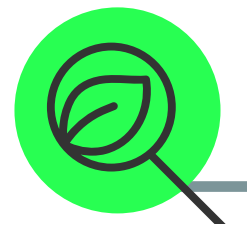
The power then passes from the project substation, where the voltage was increased, to a substation owned by the utility. From the utility's substation, the renewable electricity will be sent to homes, businesses, and utilities.

## 8 FULLY OPERATIONAL

Once the solar project is complete, it will be monitored by a local operations team as well as a 24/7 remote facility to ensure all components of the system are operating properly. Vegetation within the project area will also be maintained.



# Caretaking the Land, Wildlife, & Environment

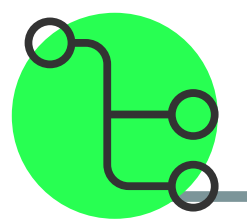


## PRE-PROJECT: SITE DESIGN & ENVIRONMENTAL DUE DILIGENCE

- **The development of Cypress Knee Solar Park has been in accordance with local, state, and federal permitting standards and industry best practices.** Numerous surveys and studies are conducted to minimize or avoid impacts to wildlife, wetlands, natural vegetation, and cultural resources. Cypress Knee Solar has coordinated with the relevant state and federal agencies, including the U.S. Fish & Wildlife Service and the Arkansas Game & Fish Commission.

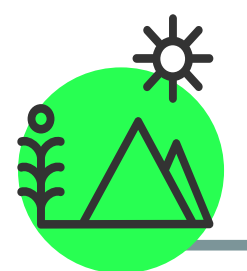
### FIELD SURVEYS COMPLETED:

- Biological and Wildlife Survey and Assessment
- Geotechnical (Soil Sampling) Study
- Phase I Environmental Site Assessment
- Hydrologic and Hydraulic Study
- Wetlands & Waters Delineation
- Cultural Resources Survey
- Aerial Studies



## OPERATIONS: EQUIPMENT & LAND MAINTENANCE

- **The land under and around the solar park will be planted with a locally suitable seed mix.** This mix will be designed for the local climate and soil type and will aid in keeping ground temperatures cool. EDPR is responsible for managing the project area's vegetative ground cover, and often employs local services to assist.
- **During the 30-year lifespan of the project, the land is able to rest.** The soil will be replenished with nutrients by increasing the biodiversity of plants, boosting soil fertility for its life after solar.
- **The project is monitored 24/7 and is maintained by a local operations team.** Additionally, our Remote Operations Control Center is staffed around the clock at our Houston Headquarters, receiving real-time performance data on every solar site in our fleet, allowing for immediate awareness and response for any abnormalities that arise.



## DECOMMISSIONING: REMOVING & RESTORING

- **EDP Renewables is committed to being a good neighbor and steward of the land. At the end of the solar park's useful life, the solar park will be decommissioned or repowered. During decommissioning, the solar panels, inverters, and other related equipment will be safely removed, and recycled as much as possible.** Once the infrastructure is removed, EDPR will restore the land to as close to its pre-solar state as possible. The decommissioning process will follow all regulatory guidelines, ensuring safe disposal or recycling of equipment, in compliance with environmental standards.
- Prior to decommissioning, a bond covering the cost of decommissioning (determined by a 3rd party estimate) will be put in place beginning in year 15 of the project's life.

“My land is very important to me.

EDPR hasn't done anything that can't be removed off the land.

They've planted grass on it to keep it from eroding. They really respect the land and the landowners.”

– Walt P., South Carolina landowner



# Environmental Due Diligence Research, Studies, & Surveys

## SENSITIVE SPECIES & HABITATS

**Cypress Knee Solar has been conducting desktop and field-based studies, and consulting with resource agencies since 2023.**

Biologists have completed numerous rare, threatened, and endangered (RTE) wildlife studies for the project and the results of these surveys have been shared with the U.S. Fish and Wildlife Service and the Arkansas Game and Fish Commission. In consultation with these agencies, Cypress Knee Solar is designed to avoid impacts to any sensitive species and protect the local environment.



## WETLANDS & SURFACE WATERS

**Professional wetland scientists and qualified external staff have conducted wetland and surface water delineation surveys throughout the project area.**

Project engineers have incorporated wetland and stream data into the design to ensure impacts are avoided and minimized to the extent practicable. The project team is consulting with the U.S. Army Corps of Engineers and the Arkansas Division of Environmental Quality to ensure water resources are appropriately managed.



## CULTURAL RESOURCES

**Since 2021, EDPR has been conducting a thorough evaluation (desktop research & field surveys) to evaluate the extent of culturally significant resources on-site and will implement avoidance measures as necessary.**

Field surveys include pedestrian surveys and shovel testing to identify previously unrecorded sites. The results of archaeological surveys have been used to determine siting constraints and the design of the project.



# Solar as a neighbor

Solar energy powers millions of businesses, schools, and households every day with clean electricity safely produced on American soil.

## PANEL RESILIENCY

**Solar panels are built to withstand extreme weather and are very resilient against high winds, hail, and heavy snow loads.**

EDPR projects are designed to withstand 11 strikes of hailstones 2.2 inches in diameter. The solar panels are also bifacial, meaning they have solar cells on both sides, which increases energy generation especially when snow beneath the panels reflects the sunlight. If an extreme weather event harms the solar park, EDPR will quickly clean up any damaged equipment and the surrounding area, and replace broken components as needed.

**Projects are monitored 24/7.** The local Operations team is on-site during the day, and our continuously staffed Remote Operations Control Center inside our Houston headquarters monitors at all times including throughout the night, receiving nearly real-time data for the entire operating fleet, allowing them to identify issues and respond appropriately.

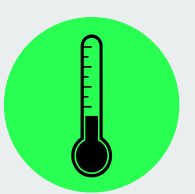
## AREA EFFECTS



**Solar panels are nearly silent neighbors.** Inverters are typically at least 100 feet from the nearest dwelling, and the sound of inverters from this distance is quieter than a refrigerator hum. As inverters only make sound when they are working, no noise is typically emitted at night.<sup>1</sup>



**Solar panels are designed to capture light, not reflect it.** Most solar panels have anti-reflective coatings and are less reflective than water or windows. Any reflected light would be wasted potential energy!<sup>2</sup>



**The ground beneath and around EDPR solar projects is maintained with a vegetative ground cover suitable to the local environment, which helps mitigate the possibility of heat increases.**<sup>3</sup> Any heat increases that do occur are very small and dissipate completely as you leave the solar park's immediate area.

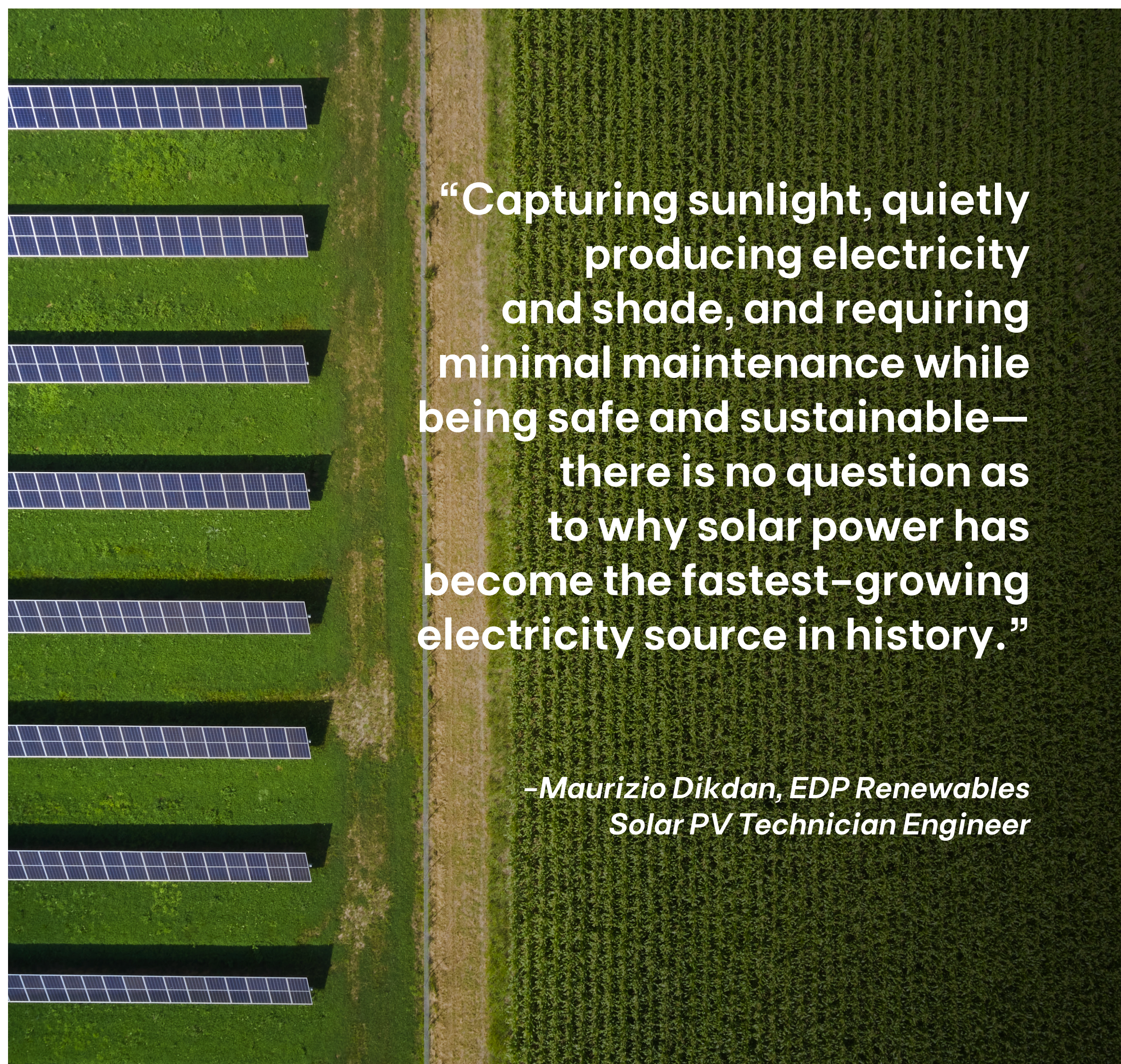
## PROPERTY VALUES

Research from multiple academic institutions and project-specific assessments **have shown little to no negative property value impacts from solar parks on surrounding homes.**<sup>4</sup>

Property value experts agree upon the criteria that typically correlate with decreases in property value — increased noise, odor, and traffic—none of which result from having a solar park as a neighbor. Solar parks are very quiet facilities that do not emit odor or pollution, and once construction is complete, they have minimal impact on traffic in the area.<sup>4</sup>

**What helps improve property values – quality schools, roads, and local services – are further strengthened by projects' contributions into the local tax base, funding those very services.**

Visual appearance also plays a role. This is one area where solar parks could have an impact, depending on neighbors preferences, as we are visually changing the landscape. To account for this impact, we have voluntarily incorporated significant setbacks from neighboring residences into our design, ensuring that all residences will be located over 500 feet away from the solar project's perimeter.



**“Capturing sunlight, quietly producing electricity and shade, and requiring minimal maintenance while being safe and sustainable—there is no question as to why solar power has become the fastest-growing electricity source in history.”**

**–Maurizio Dikdan, EDP Renewables Solar PV Technician Engineer**

<sup>1</sup> American Clean Power Association. “Solar as a Neighbor: Living Near a Solar Project.” July 2024.  
<sup>2</sup> National Renewable Energy Laboratory. “Research and Analysis Demonstrate the Lack of Impacts of Glare from Photovoltaic Modules.” July 2018.  
<sup>3</sup> V. Fthenakis and Y. Yu. IEEE 39th Photovoltaic Specialists Conference. “Analysis of the potential for a heat island effect in large solar farms.” 2013.  
<sup>4</sup> Gaur, V. and C. Lang. (2020). Property Value Impacts of Commercial-Scale Solar Energy in Massachusetts and Rhode Island. Submitted to University of Rhode Island Cooperative Extension, September 29, 2020.  
The University of Rhode Island study's conclusion that there may be an impact to non-rural communities is surmised is that “land is abundant in rural areas, so the development of some land into solar does little to impact scarcity, whereas in non-rural areas it makes a noticeable impact.”

# Solar Panel Contents & Durability

## Photovoltaic cells | PANEL COMPOSITION

**Modern commercial solar panels do not pose a danger to the environment or human health when in operation or at their disposal.**

Some panels, most commonly the panels manufactured in America, are made from cadmium telluride (CdTe), while other panels may be made from crystalline silicon. Both technologies are equally safe and thoroughly tested.

 **By mass, 90% of a solar panel is made up of glass and aluminum.**

The thin layer of solar cells is sealed on both sides and covered with glass and an aluminum frame. Solar panels are designed and manufactured to withstand extreme weather conditions and events. **Panels use a fully sealed technology that blocks trace metals from entering surrounding soils, even if cracked, similar to phone screens.** Solar panels do not contain any liquid, so nothing is able to leak out.<sup>1</sup>

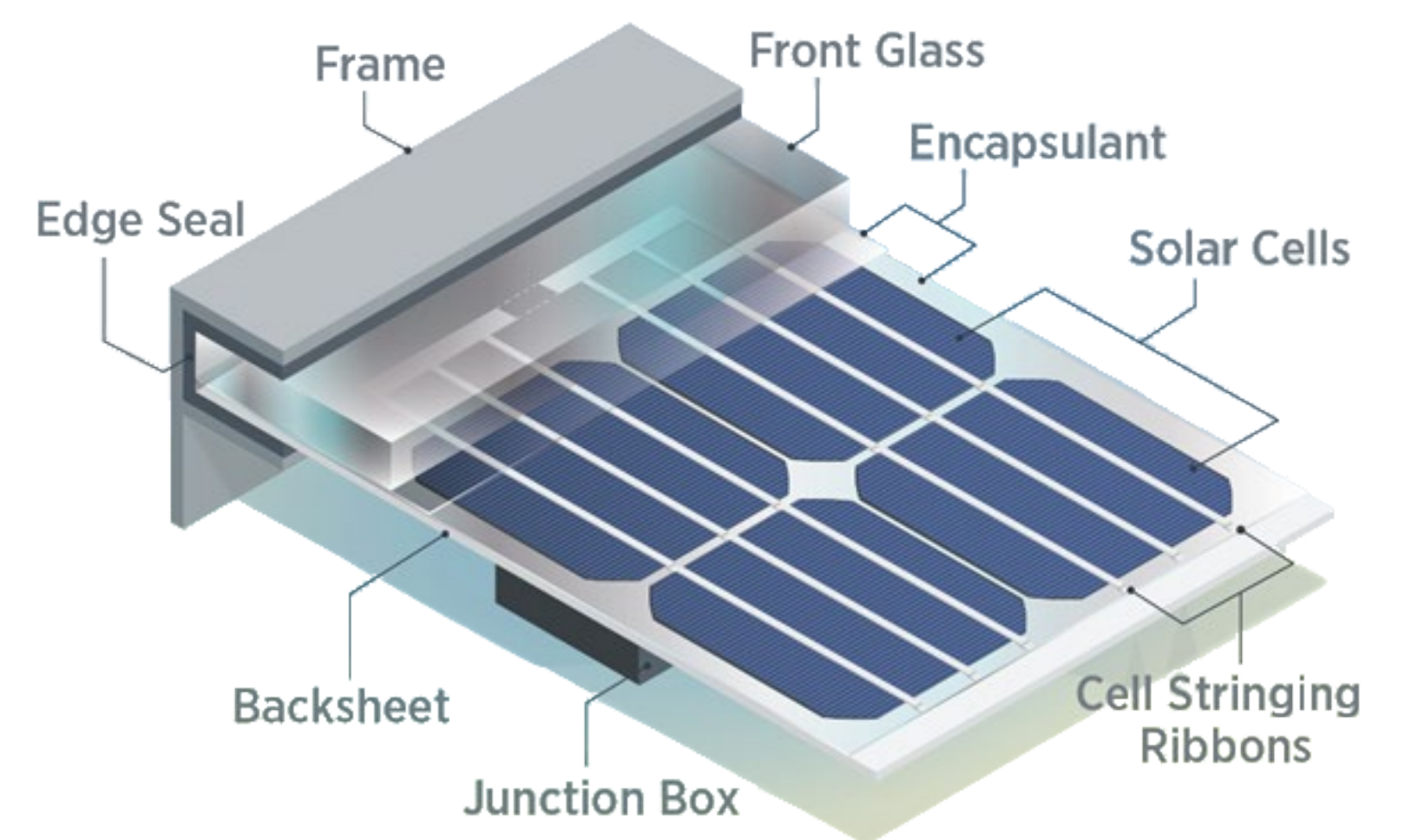


Image from U.S. Department of Energy.

### 20 MW PV Plant Component Materials by Weight (kg/kW)

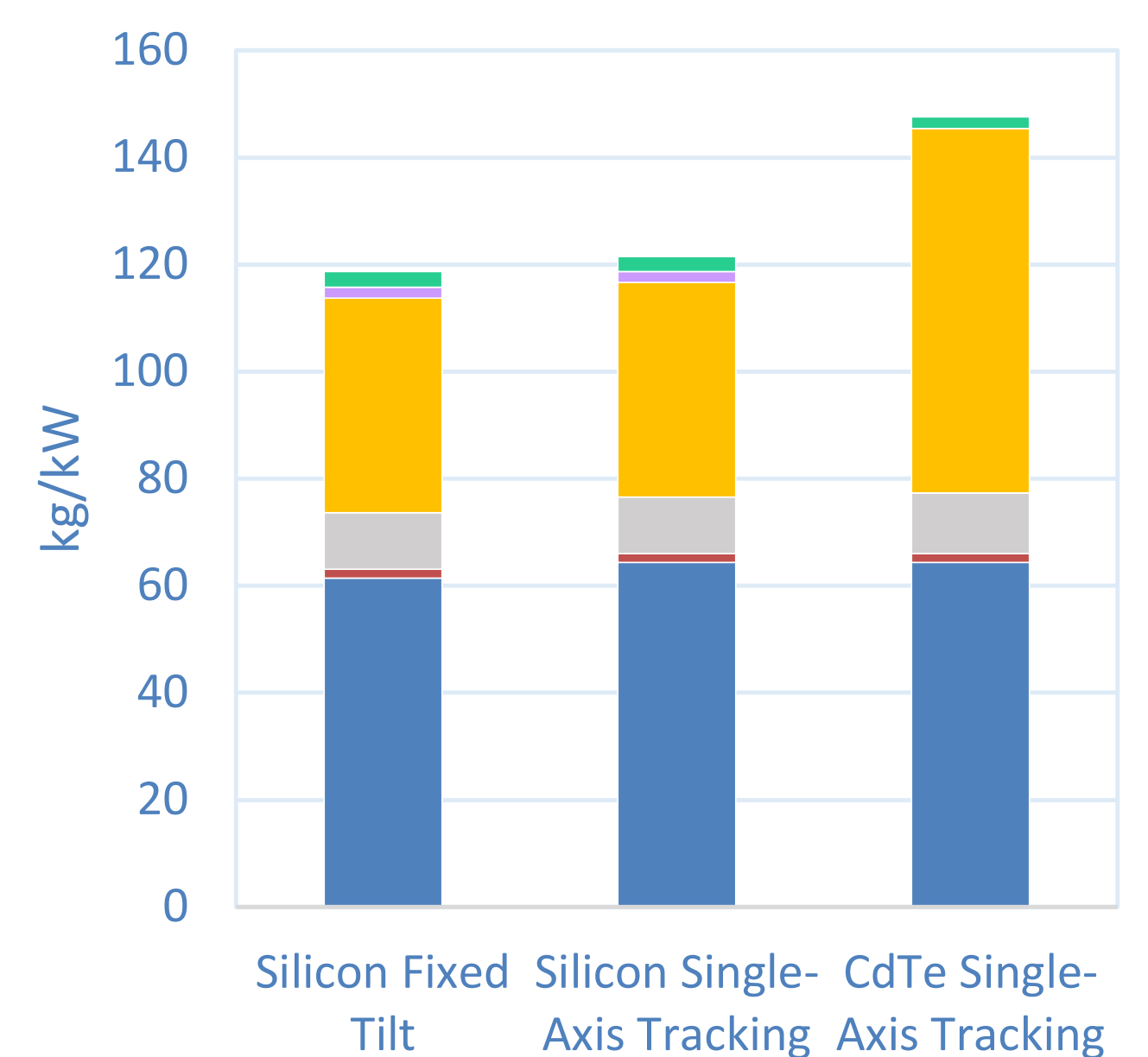
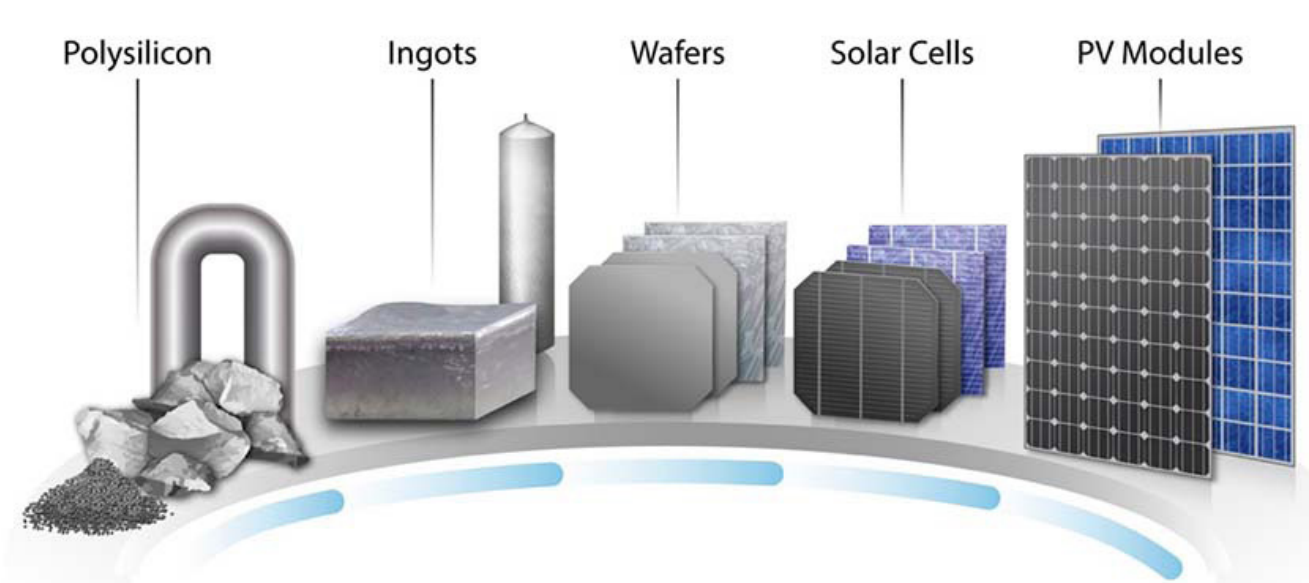


Image from U.S. Department of Energy

## FROM RAW SILICON TO PV MODULES

The extraction of silicon from quartz and sand is followed by reduction into ingots, which are further refined into wafers. Fragments of silicon are melted together to form polysilicon wafers. Solar cells are fully sealed by encapsulants, then protected by tempered glass.



## WHAT ABOUT LEACHING?

In the rare case that a panel is damaged during construction or operation, EDPR would immediately clean up all residual materials and send the panel for disposal—in most cases, this means recycling. EDPR's solar panel suppliers have completed studies analyzing the potential for component materials to leach into the environment under extreme conditions—similar to being pulverized in a landfill—and have confirmed that no risk would be posed to the environment. These conditions are significantly harsher than what is typically experienced over the course of regular solar park operation.

# Solar Park FAQs



## WHAT WILL THE SOLAR PARK LOOK LIKE?

Solar parks cause the land to look different than it did before, which can take some getting used to. **Since solar panels are mounted on top of metal piles driven into the ground in rows typically about 10 feet apart or more, the vast majority of the ground within a solar park is covered in well-maintained vegetation, meaning plenty of green space.**



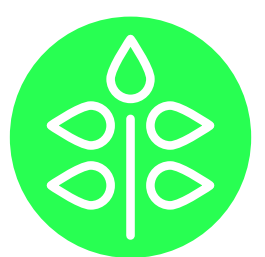
Scan the QR code with your phone's camera to learn more about EDPR and our renewable technologies.



## ARE SOLAR PARKS SAFE NEIGHBORS?

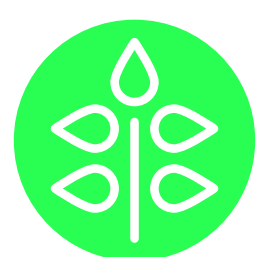
**Solar parks are very safe neighbors. PV panels are made of safe, well-tested materials thoroughly researched and vetted by national labs, American research universities, and industry scientists.** The panels are fully sealed, do not contain any liquids, and cannot leak. We work with local emergency service teams before a project becomes operational to ensure there is a plan in place should any unforeseen emergencies arise on-site.

People are surrounded by electronics, electromagnetic frequencies (EMF), and radio frequencies every day. Residents outside of the fenced perimeter of a solar facility, including sensitive populations like those with pacemakers, are not exposed to significant EMF from the solar facility as the EMF levels outside the fence are less than 1/1000<sup>th</sup> of the level at which manufacturers test these medical devices for EMF interface.<sup>1</sup> Therefore, there is no negative health impact from the EMF produced in a solar park.



## WHERE DOES THE POWER GO?

The power grid isn't like a pipeline that carries electrons from point A to point B — it's more like a bathtub, where water can be added and taken out, but it's impossible to know which exact water molecules those are. **The power itself will connect into the local grid, boosting the immediate area's electricity supply. The electrons will move along the path of least resistance to where they're needed first, typically closer to where they're generated, whether that be immediately in Chicot County, or to various parts of Arkansas and beyond.**



## ARE THE PANELS RECYCLABLE?

Yes, panels are recyclable and EDPR has committed to keeping panels out of the landfill through robust recycling initiatives. Close The Loop is EDPR's circular economy program, which aids in minimizing the use of natural resources, optimizing and efficiently managing products and services, maximizing the recovery of waste, and promoting a circular economy among our customers. EDPR is collaborating across the solar, wind, and energy storage sectors with over 19 recycling partners throughout North America to ensure solar panels, products, and components are managed responsibly both during and at the end of their useful life.

**Protecting our planet and contributing to its regeneration is one of EDPR's environmental, social, and corporate governance commitments. In order to achieve this ambition, EDPR aims for 85% waste recovery along the project value chain (including construction, operations, and dismantling of solar and wind farms) by 2026.**



## IS THIS PROJECT FUNDED BY THE GOVERNMENT?

The costs of the equipment and construction are funded from EDP's own balance sheets. We do receive some level of government incentive, as do all forms of energy generation. The energy industry—not just renewables—is incentivized by the U.S. and state governments because energy independence and energy security are so important for the country and its national security. **The tax incentives we receive for building projects drive down the overall cost of electricity, which is something that benefits everyone.**

<sup>1</sup>Tommy Cleveland, NC Clean Energy Technology Center & NC State University. "Health and Safety Impacts of Solar Photovoltaics."



“

I like that it's clean, renewable energy. We have to live with this environment, so we have to keep it up and keep it in good shape.

**In the long run, I'm sure this will help the environmental and energy situations of my grandkids.”**

Landowner & Farmer | Hampton, SC  
**Freddie Mixon**

edp

These quotes are from an interview with Freddie Mixon on November 27, 2018. They have been edited for clarity.

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“

In terms of what you can do with your land, I think clean power is a very attractive option.

**It's really neat to put something like food on the table for the American people, as well as power in the homes of people in these local communities.”**

Business Owner | Blue Harvest Solar, OH  
**Joe Recker Jr.**



edp

These quotes are from an interview with Joe Recker Jr. on March 14th, 2023. They have been edited for clarity.  
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“

The money that we receive from these projects lets us improve our roads and other infrastructure—the county, the school districts, libraries, emergency services, the hospital, the historical society, and more.

**This is money we're not getting from anywhere else. It's had a great impact on the whole community.”**

Township Trustee | Harrison Township, OH  
**Bob Young**

edp

These quotes are from an interview with Bob Young in 2020. They have been edited for clarity.

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**We are blessed to have this project in our school district.**

I'm proud to know that EDP is beside me in this. Their willingness to serve our students and meet their needs has gone way above expectations.”

Central ISD Superintendent | Pollock, TX  
**Justin Risner**



These quotes are from a speech in 2025. They have been edited for clarity.

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