

WHY SOLAR?

Solar is a passive form of technology, generating emissions - free electricity that adds security to America's energy mix. This, combined with its affordability and correlation to peak electricity demand periods, makes it an ideal energy source for our country.

Solar offers several advantages to the community:

- Solar arrays are only about 10 feet tall. With proper planning and land management, solar farm site topography and vegetation can be designed to limit project visibility from neighbors and nearby roads.
- Solar farms do not emit any noise beyond the site boundaries.
- With a long-term land management plan, studies have shown that solar farms can meaningfully increase wildlife populations and biodiversity.
- Solar farms can help strengthen rural economies by creating local jobs, contributing significant property tax revenue, providing dependable revenue to landowners in order to supplement farm income, and bringing multi-million dollar annual operations budgets that are primarily spent in the region.





We recycle all solar panels.

At Lightsource bp, we're committed to managing our solar farms with the best interests of the community – and the land – in mind. This includes responsible end-of-life management of solar photovoltaic (PV) panels.

We recycle *all* solar panels that are damaged or nonfunctioning during construction and operations, as well as panels that are decommissioned.

- Life of a solar panel will be about 35 years
- 95% of the total solar panel is recyclable material
- By weight, more than 80 percent of a typical solar panel is glass and aluminum – both common and easy-to-recycle materials



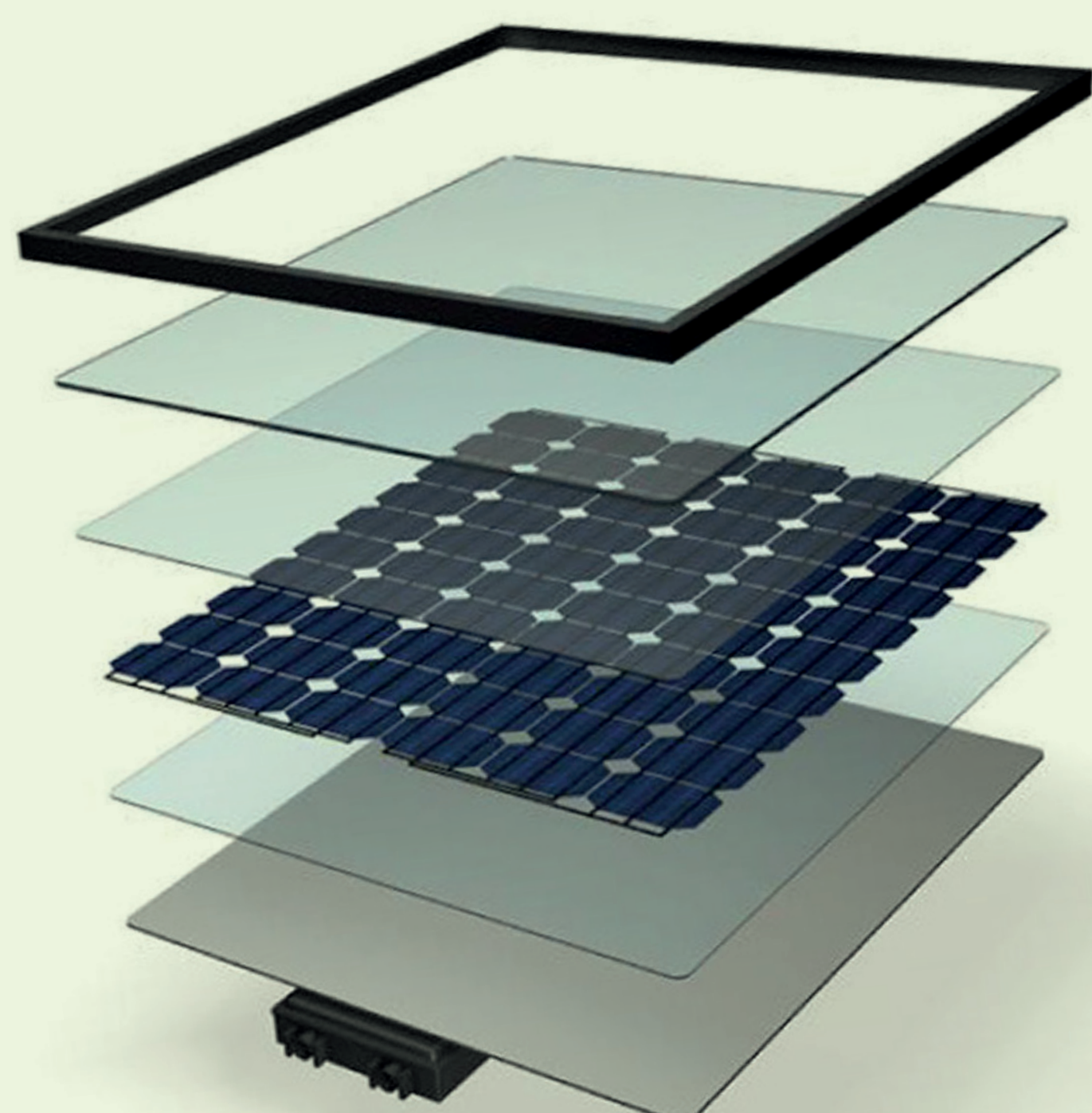
Additionally, Lightsource bp is a board member of the Solar Energy Industries Association (SEIA), an organization that is helping with the responsible end-of-life management of solar PV panels. SEIA started the National Recycling Program to help the industry responsibly recycle PV panels and proactively develop collection and recycling processes and policies for the solar industry.

The PV recycling facilities we use are SEIA-vetted – with the assurance that the panels will be processed at U.S. facilities that strive for maximum material recovery. We are proud to support this growing industry and create jobs for Americans when they're needed most.

To learn more about SEIA, please visit www.seia.org



Safe. EPA-Regulated.



Lightsource bp requires solar panels to pass testing regulated by the Environmental Protection Agency (EPA) to ensure they are not hazardous to people or the environment. It's a part of every supplier contract. **We will not buy solar panels from any manufacturers who have not passed this testing.**

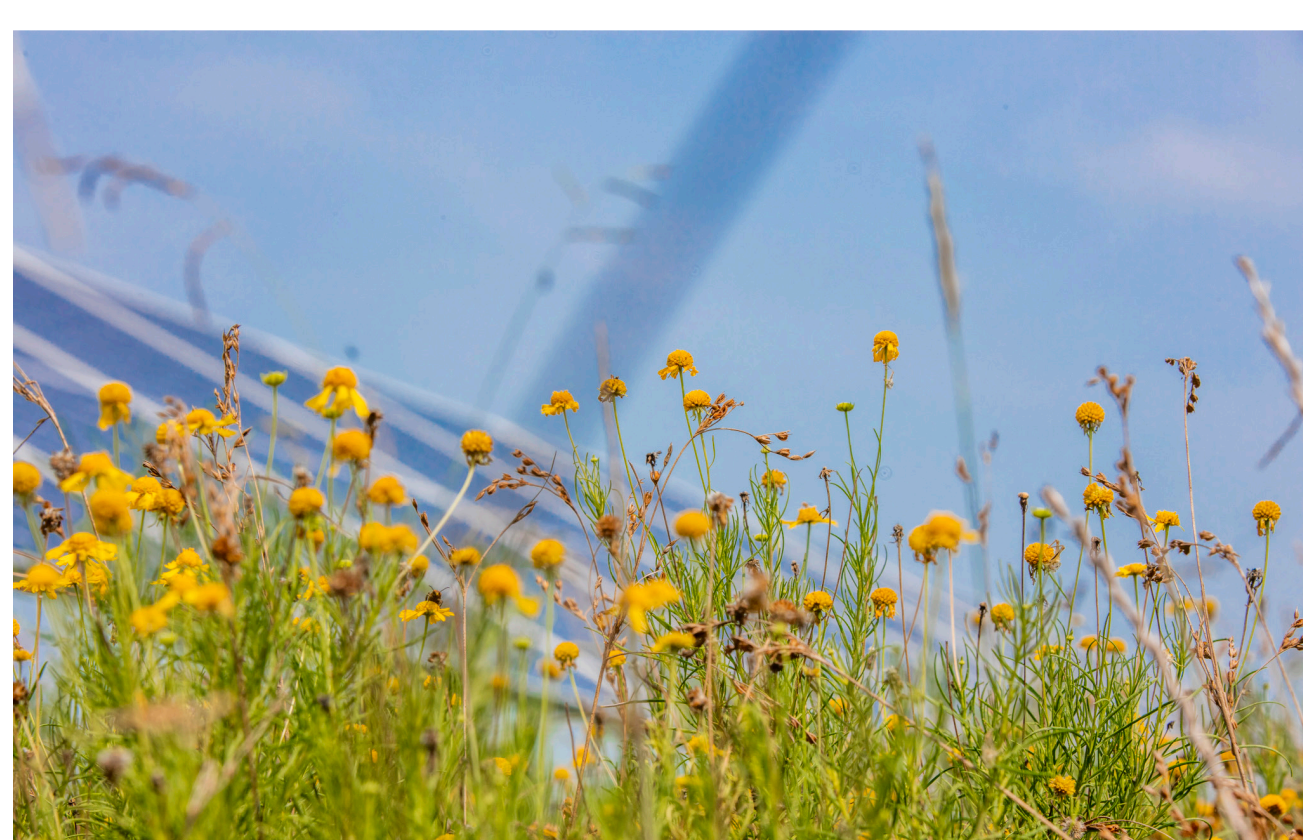
Prevent: Solar panels are made to last for decades in harsh environments. The layers of a solar panel are strongly laminated and all materials are sealed inside tempered glass, the same material as car windshields and hurricane windows, preventing exposure to the environment.

Test: We require all solar PV panels used in our projects to pass testing protocols established by the U.S. Environmental Protection Agency (EPA) under Federal Law, to ensure that even if broken into pieces the panels will *not release harmful amounts of any hazardous materials into the environment*. The EPA testing protocol is called the Toxicity Characteristic Leaching Procedure (TCLP).

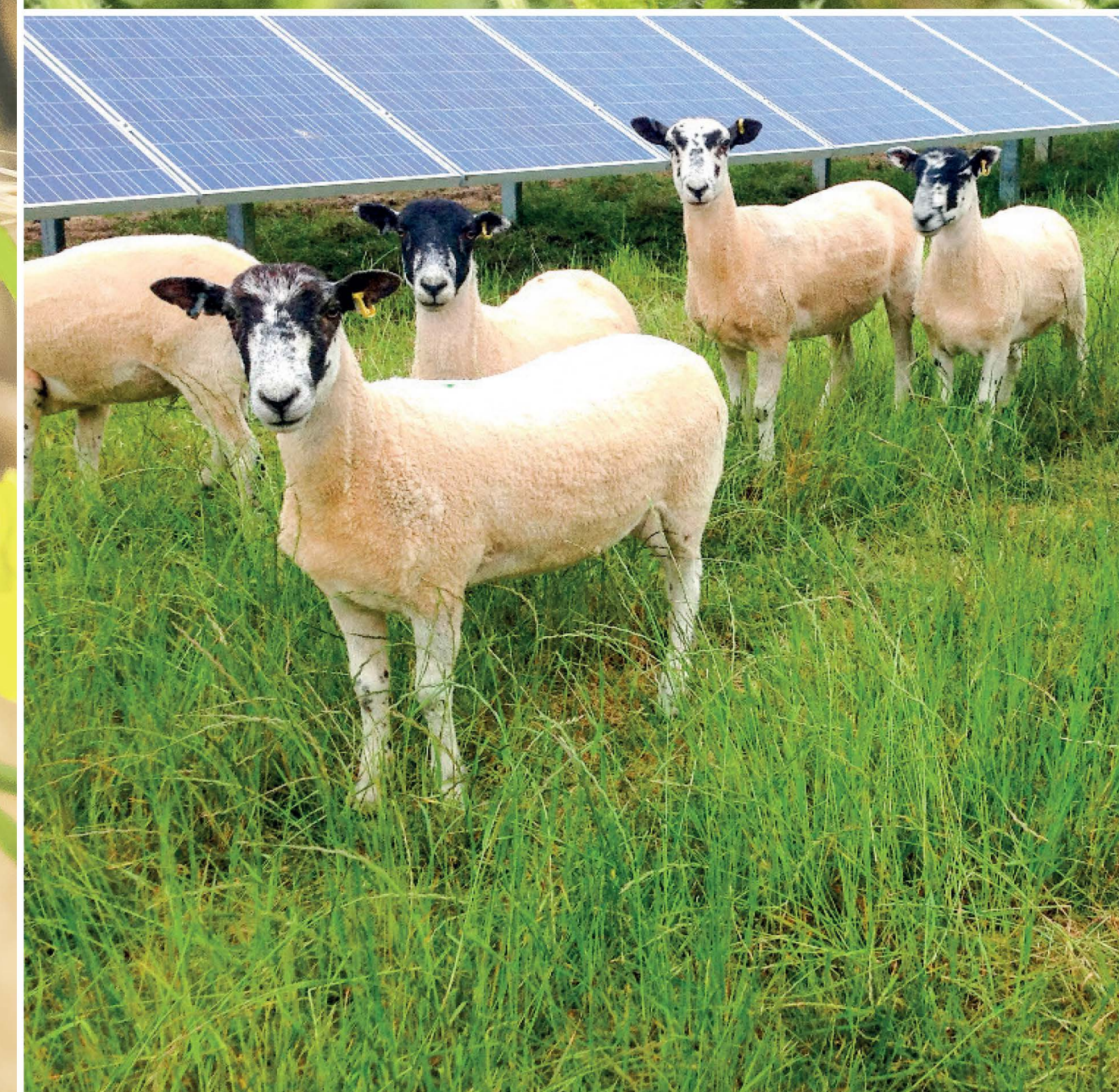
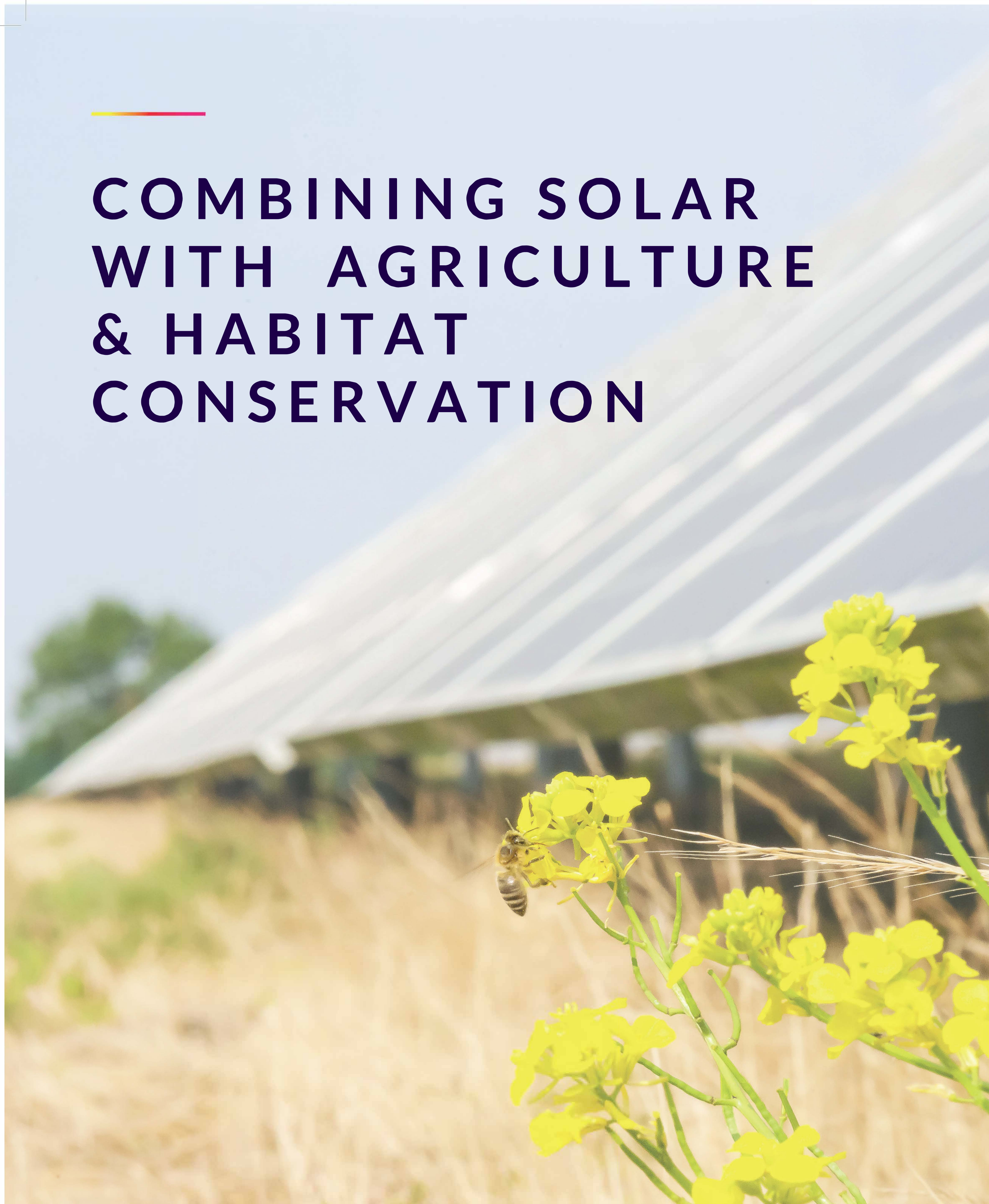
Pass: The solar panels provided by our suppliers have successfully passed TCLP testing for potentially hazardous materials, including the eight metals listed by the Federal Resource Conservation and Recovery Act as toxic at small concentrations. This means that the solar panels in our solar farms – during normal operations as well in the event a solar panel is damaged – *are confirmed to be non hazardous under Federal Law*.

Solar & Wildlife

Images from Lightsoure bp solar farms



COMBINING SOLAR WITH AGRICULTURE & HABITAT CONSERVATION



Lightsource bp is a member of the American Solar Grazing Association (ASGA), a non-profit founded by farmers dedicated to agrivoltaics: the combination of agriculture and solar photovoltaics through sheep grazing on solar sites to maintain the land and provide a diversified source of income to America's local farmers.

Working in partnership with ASGA, local farmers, grazing and ecology experts, we're actively working to introduce solar grazing programs at several projects in our U.S. portfolio. As we further integrate solar energy into the rural landscape, we believe our unique approach to responsible solar will provide a win-win for our environment, industry, and rural communities.

Healthy ecosystems are built from the ground up. Through solar grazing, livestock become natural partners to nurture thriving ecosystems at solar project sites.

Sheep grazing will keep the farmland in farm production and can also improve soil health by increasing the cycling of nutrients, carbon, and water. Grazing is ideal as it can also be co-located with native vegetation to restore pollinator habitat as well as offer nature lovers a place to view wildlife.

Grazing also promotes biodiversity, a greater variety of plant and animal species on the land.



Responsible Solar

Lightsource bp implements strategies to boost biodiversity and promote a healthy natural environment on project sites. Protecting the natural environment is an important part of our Responsible Solar ethos.

These environmental management strategies are examples of “dual land use,” meaning the solar project shares land with another initiative.

Dual land use increases efficiency

We create long-term, adaptive Land Management and Biodiversity Plans for each project in order to maximize the local sustainability benefits of our solar farms. For example, at two other solar farms we designed environmental plans to serve a dual purpose: delivering renewable energy to lower carbon emissions from electricity generation while sharing the land with conserved shortgrass prairie habitat. In all, 3,051 acres of shortgrass prairie will grow on and surrounding the projects. Lightsource bp and partners designed a site-specific seed mix, suited to the local climate, ecosystem, and soil. The mix contained staple short grasses like western wheatgrass, buffalograss and little bluestem, as well as a low concentration of purple prairie clover to provide nectar for pollinating insects. This is all part of Lightsource bp’s commitment to increase net biodiversity on its project sites.

Pollinator habitat preservation

Studies have shown that with proper planning and land management, solar farms can increase biodiversity, helping local ecosystems. Pollinator-friendly solar can increase nearby crop yields, in addition to providing more groundwater recharge and a greater reduction in soil erosion than either conventional solar or farming. Solar farms can be an ideal habitat for bees and butterflies. They sit largely undisturbed throughout the year and can help foster the growth of wildflowers and vegetation. Since these ecosystems are shrinking at alarming rates worldwide, Lightsource bp works closely with communities to understand species native to our solar sites to help increase the bee population thus boost surrounding farmland pollination and biodiversity.

Agrivoltaics strengthens rural economies

Agrivoltaics, the combination of agriculture and solar photovoltaics on solar sites, is a key part of Lightsource bp’s work as long-term stewards of our projects. This innovative approach allows developed land to generate clean power and farm products simultaneously. For example, small livestock grazing is common at Lightsource bp solar sites around the world.

Our grazing partners can count on regular payments for their grazing services, provided through contracts with Lightsource bp’s Operations & Maintenance provider. This gives farmers a reliable source of new income, on top of what they earn via products they produce. Increased, diversified revenue and access to productive land may help a farm increase its resilience, or even grow.

Solar grazing cultivates biodiversity, healthier soil

Through solar grazing, livestock become natural partners in Lightsource bp’s commitment to nurture thriving ecosystems at project sites.

Healthy ecosystems are built from the ground up. As livestock digest vegetation, they spread manure, cycling nutrients, carbon and water back into the soil. As the flock forages from place to place, it “mows” back vegetation, pruning grasses and other plants. Rotational grazing—moving the flock around the site over time in contained “paddocks” — provides a healthy amount of disturbance with ample recovery time.

Grazing also promotes biodiversity, a greater variety of plant and animal species on the land. As they forage, sheep naturally combat invasive plant species and strengthen native populations. As they chomp on vegetation, the sheep introduce helpful bacteria and attract beneficial insects as well.

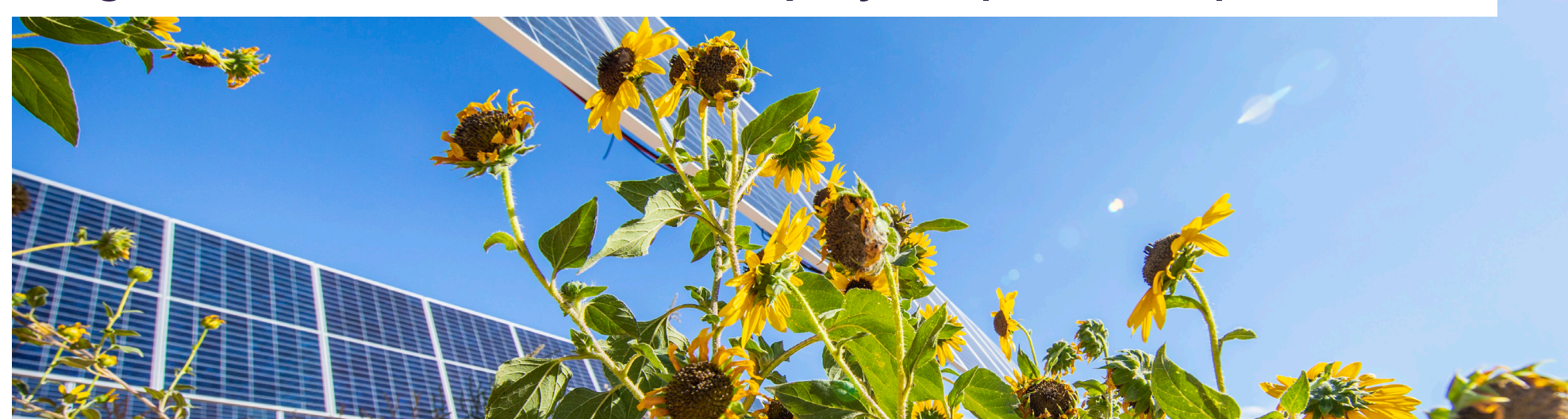




Case studies

Shortgrass prairie conservation & carbon sequestration

Bighorn and Sun Mountain solar projects | 593 MW | Colorado



Conservation of shortgrass prairie on >3,000 acres

- Site-specific seed mix of characteristic prairie grasses and pollinator plants
- Utilizing seeding and inter-seeding methods
- Provides habitat for local wildlife in an imperiled native ecosystem

Prairie is an ideal carbon sink and provides habitat

- Vegetation absorbs CO₂ during photosynthesis and stores it underground in deep roots, which decompose into carbon-rich soil
- We will be monitoring soil carbon levels throughout the project lifetime

Learn more: <https://www.lightsourcebp.com/us/2021/10/carbon-prairie-colorado>

Agrivoltaics and pollinator habitat:

Nittany 1-3 | 70 MW | Pennsylvania



“Fuzz & Buzz” seed mix

- Neighboring Amish farmer earns income grazing 500 sheep at Nittany 1
- Rotational grazing to provides natural “mowing”, spreads manure and cycles nutrients, increasing soil health
- Sheep naturally combat invasive species and attract beneficial insects
- Planted with pollinator-friendly seed mix to provide nutritious forage for sheep and promote biodiversity

Researching the benefits of solar grazing

- Our Pennsylvania solar grazing site will contribute soil samples and other data to several research projects studying the environmental impacts of sheep grazing on solar developments.

Learn more: <https://www.lightsourcebp.com/us/2021/08/livestock-grazing-at-solar-farms-a-win-win-win>

Wildlife, agriculture and solar

Impact Solar | 260MW | Lamar County, Texas



Providing wildlife habitat

- Two high-density pollinator gardens over 12 acres
- Five underground shelters for mammals, reptiles and amphibians, designed to mimic natural *hibernacula*
- Bird and bat boxes placed thoughtfully throughout the site

Riparian woodland protection

- “Riparian” ecosystems adjacent to streams provide high-value habitat and ecosystem services
- Preserving 50 acres of this habitat onsite, to remain undisturbed over project life

Solar grazing

- Hundreds of sheep managing vegetation onsite
- Rotational grazing to provides natural “mowing”, spreads manure and cycles nutrients, increasing soil health
- Sheep naturally combat invasive species and attract beneficial insects

Learn more: <https://www.lightsourcebp.com/us/2022/01/preserving-habitat-integrating-agriculture-impact-solar>

Agrivoltaics and native vegetation:

Elm Branch and Briar Creek solar projects | 316 MW | Texas



Solar grazing

- Three grazing partners earning income with hundreds of sheep across both sites
- Rotational grazing provides natural “mowing”, spreads manure, and cycles nutrients, increasing soil health
- Sheep naturally combat invasive species and attract beneficial insects

Native grasses and pollinator-friendly flowering plants

- Graded areas planted with specialized seed mix designed to provide pollinator habitat and nutritious sheep forage
- Native grasses resilient to local conditions
- Pollinator-friendly clover flowers for bees and butterflies

Learn more: <https://www.lightsourcebp.com/us/2021/11/supporting-sheep-and-local-biodiversity-at-elm-branch-and-briar-creek>