# Real Property and Solar Power Development

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Picture: 300MW Bighorn Solar (Xcel Energy coal plant shown in background)



# About Lightsource bp

We're dedicated to a sustainable future

# **Global platform**

Global

Platform

17

active

operations

We're a global leader in the development and management of solar energy projects.

**Track Record** 



5.4GW

of projects developed countries with around the world



Full Lifecycle

Capabilities

700+ staff covering end-to-end projectlifecycle

Partnership Run

**bp Strategic** 



bp joint venture includes investment

9

into project development and funding

Under Construction

Under Development

Under Development with storage option

bp development pipeline

In Commercial Operation

Announced Power Contracts

**US** Headquarters

**Regional Offices** 

# Local track record

We have over 20GW of solar & storage projects at various stages of development in 22 states



Project Financing



х х

U.S. solar team with decades of experience in the U.S. solar and

raised by U.S. team in project financing

\$2.4B

3 projects

\* Numbers as of Feb 2022



# With over 100,000 acres leased in the U.S., our relationships with landowners form the foundation for our business





# Project Spotlight: Birch Solar, 375 MW in Ohio



CASE STUDY



#### HOW THIS SOLAR PROJECT IS HELPING MCDONALD'S & EBAY MEET THEIR CORPORATE GOALS

- Energy McDonald's Corporation and eBay Inc. executed agreements with Lightsource bp to purchase power from what will be Louisiana's largest solar project in order to power US operations with solar
- Environment Will abate 450,000 metric tons of CO2 each year, helping both McDonald's and eBay meet their sustainability goals
- Business Supports eBay's and McDonald's corporate renewable energy goals while powering their operations with competitively priced solar energy that also provides budget certainty
- Brand Helps promote McDonald's and eBay as leaders in renewable energy and in spurring material action around climate change

At eBay, investing in clean energy remains a focus of our business as we aim to attain 100 percent renewable energy by 2025. This project enables us to source the clean energy equivalent of our data center. Our collaboration with Lightsource bp and McDonald's uniquely propels our shared goal to accelerate the transition to a clean energy economy.

- Renee Morin, Chief Sustainability Officer, eBay





294,820MWh









Safety Integrity Respect Sustainability Drive



lightsource bp

# Impact Solar





- Energy Impact Solar is powering more than 41,000 homes in the Texas power market; the majority of the energy generated by the project will be traded through a long-term agreement with bp
- Environment Abates 450,000 metric tons of CO2e each year, comparable to taking 68,700 fuel burning cars off the road
- Business Adds diversity and a hedge against price variability to bp-IST's generation portfolio
- Brand Participation in the project reinforces bp's commitment to a low carbon future and continued investment in renewable energy

This project demonstrates that the competitiveness of solar energy means that power offtake structures widely and historically used for conventional generation are now gaining traction for solar energy projects. We see an exciting future from the increase in competitive renewable energy in the US power markets, and opportunities to integrate this with trading and customer capabilities.

- Dev Sanyal, EVP Gas and Low Carbon Energy, bp





450,000WWh



ABATED GREENHOUSE GAS EMISSIONS



CAPITAL INVESTMENT



LOCAL JOBS









# Solar Development: It all starts with real estate



## Land

- Ideal sites have flat terrain, proximity to transmission, and minimal environmental risks.
- We enter options to lease or purchase property from landowners.
- During development, we offer nominal payments as we de-risk the project and existing land use continues.
- We purchase property or increase payments when construction begins.
- Clean title is required for a buildable, financeable project.

### Interconnection

- With site control in hand, we start the process to connect with the grid.
- The transmission system owner and grid operator study the impact of our project and determine the cost for us to interconnect the project.

## Permits

- We seek permits with local governments and environmental agencies.
- Community engagement is a critical part of the permitting process and continues for the life of the project. Landowners often assist.

## Offtake

- We enter power purchase agreements with corporate customers or utilities. Lower cost projects enable us to offer more competitive pricing.
- Offtake agreements provide predictable returns for investors and support project financing and construction commencement.



# Our development approach

We are a long-term partner. Lightsource bp's model is to develop, own and operate our solar farms throughout their full life cycle. With solar farms having a life span of decades, it's important to us to be stewards of the land and long-term partners of local communities.



#### Preserving existing vegetation

Part of our planting plan involves an assessment of the vegetation already in place on each site. Where possible, we seek to preserve as much of the existing vegetation as we can.



#### **Empowered local participation**

community is informed of our plans. We offer transparency and the ability

#### Green open spaces

The installation will be designed to leave wide spaces around the site boundaries and between the row of panels to avoid shading the panels, which will leave the majority of the fenced solar array area as undisturbed or revegetated land.

#### New vegetation planting and natural screening

We work hard to make sure our solar farms have minimal impact on their local surroundings, and this includes shielding them from residents' views along with appropriate setbacks. We often use natural screening techniques such as planting hedgerows, shrubs and trees. We create a detailed planting plan, which will focus on screening the installation from view using vegetation and increasing the biodiversity values on the site.



#### Seeding

Our solar farms can be seeded with site-specific mix designed to feed and support local wildlife and boost biodiversity.

#### Customized landscape plans

Our plans are prepared by land management experts, who conduct a wide range of ecological assessments to create a customized plan for each site.



#### Continued agriculture use

Solar farm design provides multiple opportunities for complementary uses such as sheep grazing beneath and between the rows of elevated panels or the planting of pollinator friendly vegetation.

# *Environment*: Sustainable benefits beyond clean, affordable electricity

## Land Regeneration

- A solar farm is relatively undisturbed for decades once constructed
- Provides a haven for species-rich grass, herbs, wildflowers, butterflies, bees and other local wildlife
- Gives the land a recovery period, increasing future soil quality and land value

## **Co-located Agriculture (Agrivoltaics)**

- Sheep grazing keeps the land in agricultural production and provides farmers with additional revenue
- Grazing aids in low impact vegetation management and promotes healthier ground cover

## **Rural Resilience**

- Provides a diversified revenue stream for landowners and their families for 25-30 years
- Solar helps mitigate carbon emissions from energy generation and its affects on the land, wildlife, and people

## Increased Biodiversity & Pollinator Friendly Solar

- Fostering pollinator habitats can help boost nearby crop yields
- Native, pollinator-friendly seeding helps conserve declining pollinator habitat, providing healthy food source for beneficial insects





Lightsource bp has a deep commitment to delivering safe, clean and affordable energy, as well as maximizing the positive impacts of each of our projects. We pay attention to every detail. From the fencing we choose to the vegetation we plant. We want our solar farms to be great projects for communities.

# Customized long term land management plans

Once a solar farm is built, it becomes a nature haven that's undisturbed for many years. We have seen plant and wildlife habitats increase at our solar farms, and our goal is to create plans that will increase local biodiversity.

# Screening and setbacks from residential areas

We design setbacks from nearby property lines, and plant evergreen screening wherever needed to protect our neighbors' viewsheds.

#### **Pledge to recycling**

Lightsource bp is committed to recycling all panels at our solar farms in the US.

#### **Integrated Fencing**

Based on feedback from the local community, we select fencing that best integrates with the local landscape and wildlife.



# Case Study: 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
- Sheep naturally combat invasive species and attract beneficial insects



Native wildflowers bloom under the panels



*We've seen bird populations increase at our solar farms* 

Safety Integrity Respect Sustainability Drive

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

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