



CASE STUDY

BRIGHTSOURCE ENERGY

**RESPECT. PROTECT. PRESERVE.**

CLIENT

BrightSource Energy
Oakland, CA

PROJECT

To brand the company's comprehensive, broad-spectrum environmental initiative

CHALLENGE

To believably reconcile two competing thoughts, i.e., energy exploration and environmental commitment. BrightSource's all-encompassing approach has developed comprehensive best practices and methods to positively address site selection, low-impact design, water usage, air quality and species protection. Our job was to ensure that the company received appropriate credit for setting the environmental bar by which all competing projects would be judged.

SOLUTION

SustainOne. The branding, naming and tagline-ing – "Respect. Protect. Preserve." – let all interested parties know that BrightSource was serious about advancing the science of sustainability, and leaving behind a better place for posterity. It further conferred visibility, tangibility and "own-ability" to the company's laudable efforts.

RESULTS

SustainOne rapidly achieved recognition industry-wide as the standard for an environmental approach. The brand made it clear that BrightSource "walks the walk" when it comes to safeguarding the environment. Its concentrating solar power technology exists to produce clean energy, address climate change, improve air quality and reduce dependence on fossil fuels.



CASE STUDY

SUSTAIN ONE OVERVIEW BROCHURE



Thoughtful site selection.

BrightSource focuses its selection process on areas of high insulation, or solar radiation, for project sites to maximize land efficiency and minimize a project's footprint. Whenever possible, we choose areas that are near roads and existing electric transmission lines, emphasizing development in spaces where human activity has already occurred and environmental impacts can be avoided or minimized. Additionally, unlike other solar thermal technologies, ours does not require completely level ground or wide open space. Such flexibility in design is inherently more adaptable and environmentally friendly.



ACTIVELY AVOIDING NEARBY WILDLIFE
BrightSource uses its landscape footprint, such as its, as a heat exchanger. Heat during the active operating hours. Similarly, the natural wind in our plants are captured at ground level, allowing the landscape to remain as a natural habitat of solar power.



Minimal water usage.

Operating at high temperatures and efficiency levels, BrightSource technology can use air rather than water to condense steam, conserving one of the most precious resources in the desert. Once the water is condensed, it is re-circulated to the boiler to be heated into steam, continuing the closed-loop cycle. The dry-cooling method consumes 90% less water than a solar thermal plant using wet-cooling. It is not a low-cost option, but we believe that the additional costs incurred by this method are more than merited by its environmental benefits.



Pro-active species protection.

BrightSource is proving beyond doubt that breakthroughs in renewable energy and local species of plants and animals can co-exist. For example, habitat placement is avoided completely in areas of solar fields featuring high concentrations of rare plants. Smaller areas, surrounded with a "hail" fence, are marked off and never disturbed. Other flora is relocated to a plant nursery and maintained for the life of the project. Best practices such as these also govern our programs for indigenous animal species. For example, in addition to moving the desert tortoise out of harm's way during plant construction at our largest project in the California desert, our Head Start Program is enabling tortoise eggs to be hatched, young tortoises to be cared for, and adults to be reintegrated within protected areas. These areas are watched over and managed by a dedicated team of biologists to ensure tortoises are more likely to survive, and ultimately be released into their natural environment to further repopulate. For the desert tortoise, which has a 90% mortality rate in the wild, this level of protection is contributing to the future survival of the species.

LIMITED ON THE LAND
With its solar towers and concentrated solar field design, BrightSource's solar tower technology requires less land than competing solar technologies. When competing impacts associated with agriculture, infrastructure, transportation and conservation of land need a power source, BrightSource's technology is one of the most land-efficient available today.



Accountability beyond the life of the project.

Following site construction, BrightSource begins restoration work on areas impacted during the construction phase. Soil is de-compacted, topsoil replaced during construction is spread and vegetation disturbed during construction is restored.

Decommissioning of BrightSource projects, although decades away, is also meticulously detailed. Comprehensive site restoration includes removal of all structures from the project area. Access roads are re-vegetated and all fencing removed. Materials from concrete to steel are recycled to maximize re-use of resources. In all stages of restoration, our objective is the same - to preserve the natural state of BrightSource sites as completely and comprehensively as possible.



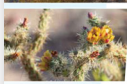
RESPECT. PROTECT. PRESERVE.

LEADING THE WAY IN ENVIRONMENTAL STEWARDSHIP

BrightSource Energy is actively raising the bar in terms of environmental commitment, responsibility, education and accountability. Wherever best practices exist, we will absorb them. If they haven't yet been formulated, we will create them. BrightSource is in effect forging a contract with posterity, and it is non-negotiable. To learn more about our corporate and environmental approach, we invite you to visit us at brightsourceenergy.com.

Designed for the environment.

BrightSource's proprietary technology minimizes grading and leveling while maximizing retention of existing vegetation and natural features. Pylons are set into the ground with a low-impact "tylon drive". Helicostats, or mirrors, are then mounted on the pylons. This allows the helicostats in the field to correspond to the area's natural contours and eliminates the need for foundations and concrete pads in the field. Vegetation in the solar field on-axis below the mirrors, trimmed as mirrors can track the sun. By reducing the need for concrete foundations, our technology promotes natural draining and run-off to avoid corrosion and preserve to the greatest extent possible a site's natural hydrologic cycle.



Safeguarding air quality.

BrightSource observes best practices designed to minimize and avoid CO2 and criteria air pollutants. In fact, over the lifecycle of a BrightSource plant, millions of tons of CO2 are avoided. Our technology also helps improve air quality by displacing hundreds of tons of other criteria pollutants each year, including carbon monoxide, nitrogen oxides, and volatile organic compounds. Additionally, our highly reliable energy output minimizes the need for conventional backup power required by other intermittent renewable technologies - helping to make our energy system cleaner and more climate-friendly.

Engaging with stakeholders.

BrightSource carefully considers environmental concerns, impact mitigation and cultural ramifications as we work with all stakeholders - including governmental agencies, consumers, utilities and environmentalists. We actively engage with local communities through numerous outreach efforts, keeping them fully informed of our approach and our progress. Similarly, we work closely with the staff of environmental agencies on a consultative basis to ensure that BrightSource projects comply with - and in many cases exceed - all appropriate environmental guidelines and regulations.





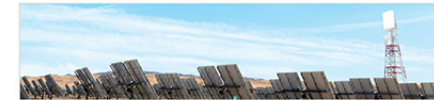
CASE STUDY

SUSTAIN ONE POWERPOINT MODULE



Consistent with Our Business Model

- Advancing technology as limitless as the sun
- Producing clean, high-value steam for electric power, petroleum and process markets worldwide
 - as reliable as it is renewable
 - as cost-competitive as it is carbon-free
- Addressing climate change
- Safeguarding air quality



Land Use Comparison: Associated Infrastructure



- Eliminates impacts associated with fossil fuels used to power most electrical energy sources
 - Exploration, extraction, processing, transportation, fuel conversion of fuels
 - Fuel Storage
 - Tanks, Stockpiles, etc.
 - Non-renewable fuel disposal
 - Coal ash containment areas
 - Transportation
 - Railroads, pipelines, tanker fleets

Project Accountability Over Time. A Long Time.

- During – and beyond – the life of the project
 - After construction
 - Restoring areas affected during construction
 - De-compacting soil
 - Spreading of topsoil salvaged during construction
 - Restoring disturbed vegetation
 - Decommissioning
 - Though decades away, detailed plan already in place
 - Comprehensive site restoration
 - Removal of all structures
 - Re-vegetation of access roads
 - Removal of all fencing
 - Recycling of steel, concrete, etc.