



BrightSource
Limitless



1999 Harrison St., Suite 2150 Oakland, CA 94612 510-550-8161 www.brightsourceenergy.com

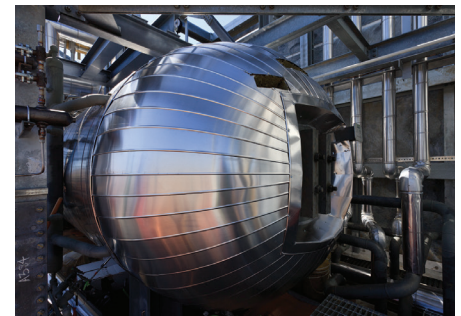
COALINGA PROJECT FACTS

A BRIGHTSOURCE ENERGY CONCENTRATING SOLAR POWER PROJECT



COALINGA AT A GLANCE

- **Location:** Coalinga, CA
- **Size:** 100 acres
- **Power Production:** 29 MW thermal
- **Customer:** Chevron
- **Project Operation:** 2011-2014



BrightSource's technology is able to match the specific heat requirements required by conventional boilers.

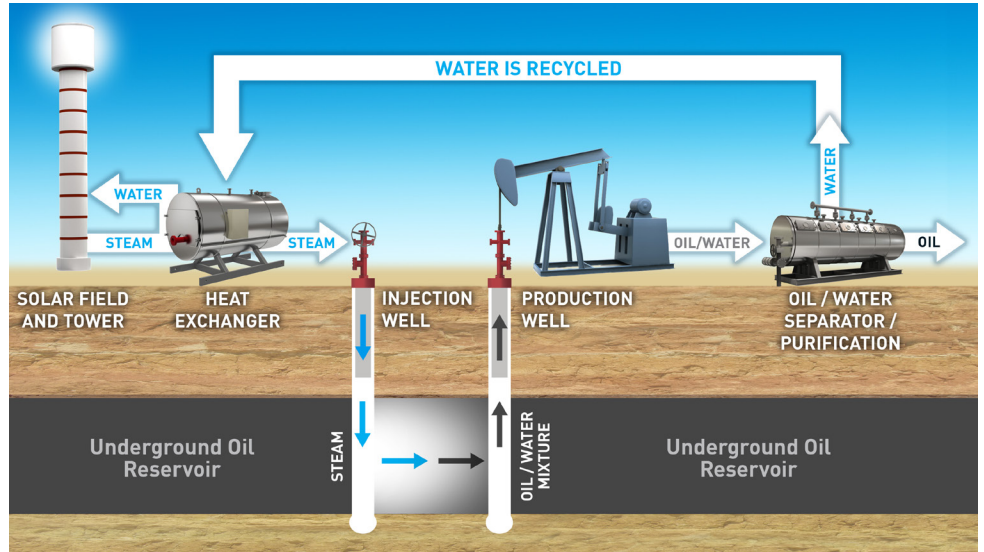
Chevron selected BrightSource to provide its proprietary solar technology for a solar thermal enhanced oil recovery (EOR) demonstration facility. The successful pilot project operated from 2011-2014, showing that solar thermal technology can be used effectively for thermal enhanced oil recovery applications.

USING SOLAR ENERGY FOR EOR YIELDS SIGNIFICANT BENEFITS:

- Increases oil production with zero emissions (and other particulates)
- Creates jobs and economic opportunities
- Extends natural gas supplies for use in other applications
- Provides a clean, abundant and economically-attractive fuel source for heavy-oil fields in remote locations where natural gas is not always available

HOW SOLAR THERMAL EOR WORKS

BrightSource's solar thermal energy system uses fields of tracking mirrors, known as heliostats, controlled by proprietary software to concentrate sunlight onto a solar boiler atop a tower. This boiler produces high-temperature, high-pressure steam, which is pumped deep into a sub-surface oil reservoir in order to heat the area. This increases the pressure of the reservoir and reduces the viscosity of the oil, making it easier to bring to the surface. To conserve water use, the steam is then cooled and recycled.



ABOUT ENHANCED OIL RECOVERY

The majority of the world's known oil reserves contain oil that is too viscous (thick) or the oil reservoir lacks pressure to freely flow oil to the surface. In fact, conventional oil recovery methods are only able to extract about 10% to 30% of oil from a reservoir. The remaining oil requires additional manipulation in order to be extracted. These extraction techniques are generally referred to as enhanced oil recovery, or EOR. EOR allows oil producers to recover significantly more of the reservoir's oil.



BrightSource's heliostats, consisting of two 12x7 foot, flat-glass mirrors and minimal steel, are individually controlled and optimized to accurately reflect the sun's energy onto the tower receiver.



Concentrated sunlight is focused on BrightSource's power receiver above a pumpjack at Chevron's Coalinga oil field.

PROVEN LEADERSHIP IN SOLAR ENERGY

BrightSource Energy is a leader in the design and development of concentrating solar thermal technology used to produce high-value electricity and steam for power, petroleum and process markets worldwide.

