

## BrightSource Energy and Southern California Edison (SCE) Power Purchasing Agreement FAQs

### SCE ANNOUNCEMENT

#### **What is the announcement?**

BrightSource Energy and Southern California Edison (SCE) have executed a series of contracts for 1,300 megawatts of solar thermal power. This is the largest solar power purchase agreement ever announced and solidifies solar thermal's position as a reliable large-scale source of clean renewable generation.

#### **What are the terms of the agreement?**

BrightSource and SCE have executed a series of seven (7) power purchase agreements (PPAs) for a total of 1,300 megawatts of solar produced electrical power. This power will come from several BrightSource Energy solar thermal power plants to be built in Southern California, with the first to be operational in early 2013.

#### **What is the commercial arrangement between BrightSource and SCE?**

BrightSource will develop, finance, construct, and operate these solar thermal electric projects. When the projects become commercially operable, SCE will purchase electric power from BrightSource on a long-term contractual basis.

#### **What is the length of the contract(s)? How long will SCE purchase power from BrightSource?**

Each contract is 20 years in duration.

#### **How much power will be provided by each plant?**

The first plant will be 100 megawatts, enough to produce 286,000 megawatt hours of renewable electricity per year. Under the terms of the agreement with SCE, the additional 1,200 megawatts of power will come from six 200 megawatt BrightSource solar power plants.

#### **Where will the plant(s) be located?**

The first 100 megawatt plant will be part of BrightSource's Ivanpah Solar Power Complex to be built in the Mojave Desert in Southern California. Pending regulatory approval, BrightSource anticipates beginning construction on the complex later this year. The additional 1,200 megawatts for SCE will come from other sites presently under development by BrightSource.

#### **What is the expected annual energy production?**

BrightSource expects to deliver 286,000 megawatt hours of renewable energy per year from its 100 megawatt plant at Ivanpah. When fully operational, the full 1,300 megawatts will produce 3.7 billion kilowatt-hours of clean, renewable energy annually.

#### **What is the equivalent carbon avoidance of these contracts/plants?**

The full 1,300 megawatts of clean energy will avoid more than two million tons of CO<sub>2</sub> emissions annually, the equivalent of removing more than 335,000 cars from the road.

**How large is the Ivanpah Complex?**

BrightSource's Ivanpah Complex will produce 400 megawatts of solar electricity once completed. The complex will be a 6-square mile facility (3,900 acres) within the 25,000-square mile Mojave Desert and will occupy federal land managed by the Bureau of Land Management.

**When will construction begin?**

BrightSource will build and place in commercial operation each of its plants as quickly as permitting and infrastructure allow. Construction on the overall Ivanpah Solar Power Complex is anticipated to begin later this year or early next year, pending completion of the CEC / BLM permitting review process. Additional plants will be built and placed into operation over the next seven years.

**How much land will the projects need?**

A typical 100 megawatt BrightSource solar thermal plant requires 850 acres of land or 1.25 square miles.

**When will the plant(s) be operational?**

The first 100 megawatt plant could be operational in early 2013, depending on timing of the permitting process. The other plants will be constructed and phased into operation as quickly as possible.

**How much will this power cost SCE? Is the price of this power fixed? What will this mean in terms of cost to the consumer?**

BrightSource Energy and SCE are not contractually permitted to discuss contract prices; however, SCE buys power at competitive rates on behalf of its customers. SCE seeks competitive offers annually and the BrightSource Energy proposal was selected from its 2008 solicitation.

**How much will it cost to build these plants?**

BrightSource Energy does not disclose its plant cost figures or details.

**How many jobs will be created through the construction of these plants? How many jobs for permanent operation?**

Based on NREL data and the BrightSource construction plan, the company estimates that the construction of its solar thermal energy plants will have a significant economic impact. For example, it's estimated that the Ivanpah Solar Power Complex will result in:

- Direct Investment: \$3 billion
- Union Construction Jobs: 1,700 (Job Years)
- Permanent Jobs: 3,500 (Job Years)
- Total Employee Earnings: \$800 million

**Is this the largest solar contract ever announced? What was the previous largest?**

We believe this is the largest solar contract ever announced, whether thermal or photovoltaic. Several companies have announced solar PPAs for nearly 900 megawatts, including BrightSource Energy's contract with PG&E, but none as large as 1,300 megawatts with one utility.

**How does BrightSource Energy's Technology Work?**

BrightSource Energy's proprietary Luz Power Tower 550 (LPT 550) energy system is built on proven "power tower" technology. The system uses thousands of small mirrors called heliostats to reflect

sunlight onto a boiler atop a tower to produce high temperature steam. The steam is then piped to a conventional turbine which generates electricity. In order to conserve precious desert water, the LPT 550 system uses air-cooling to convert the steam back into water. The water is then returned to the boiler in an environmentally-friendly closed cycle.

**What are the basic advantages of BrightSource’s power tower technology?**

BrightSource Energy’s power tower technology has greater thermal efficiency, due to lower heat losses; greater electrical efficiency, due to higher operating temperatures; and lower parasitic losses, due to reduced pumping power consumption.

**Have power towers been built before?**

The tower technology was first developed and made operational by the DOE, with an industry consortium, as Solar One in 1982.

BrightSource has also built a demonstration facility with tower technology in Israel – the Solar Energy Development Center – which was dedicated in June 2008. This pilot plant has been operational since June 2008 and has proven BrightSource’s power tower technology by consistently producing highly-efficient utility-grade steam of 525 degrees Celcius.