Stirling Energy Systems
Tessera Solar

Calico – Solar One Project

June 2009

Company Overview

Company Overview

- Two Businesses: Manufacturing and Project Development.

SES Stirling Energy Systems

Manufacturer and supplier of solar power generating equipment.

- SunCatcher™ Design & Manufacture
- SunCatcher™ Commissioning
- SunCatcher™ O&M

Tessera Solar™
power from stirling energy systems

Developer of utility scale solar power projects in North America and Internationally.

- Engineering
- Procurement
- Plant Operations
- BOP O&M

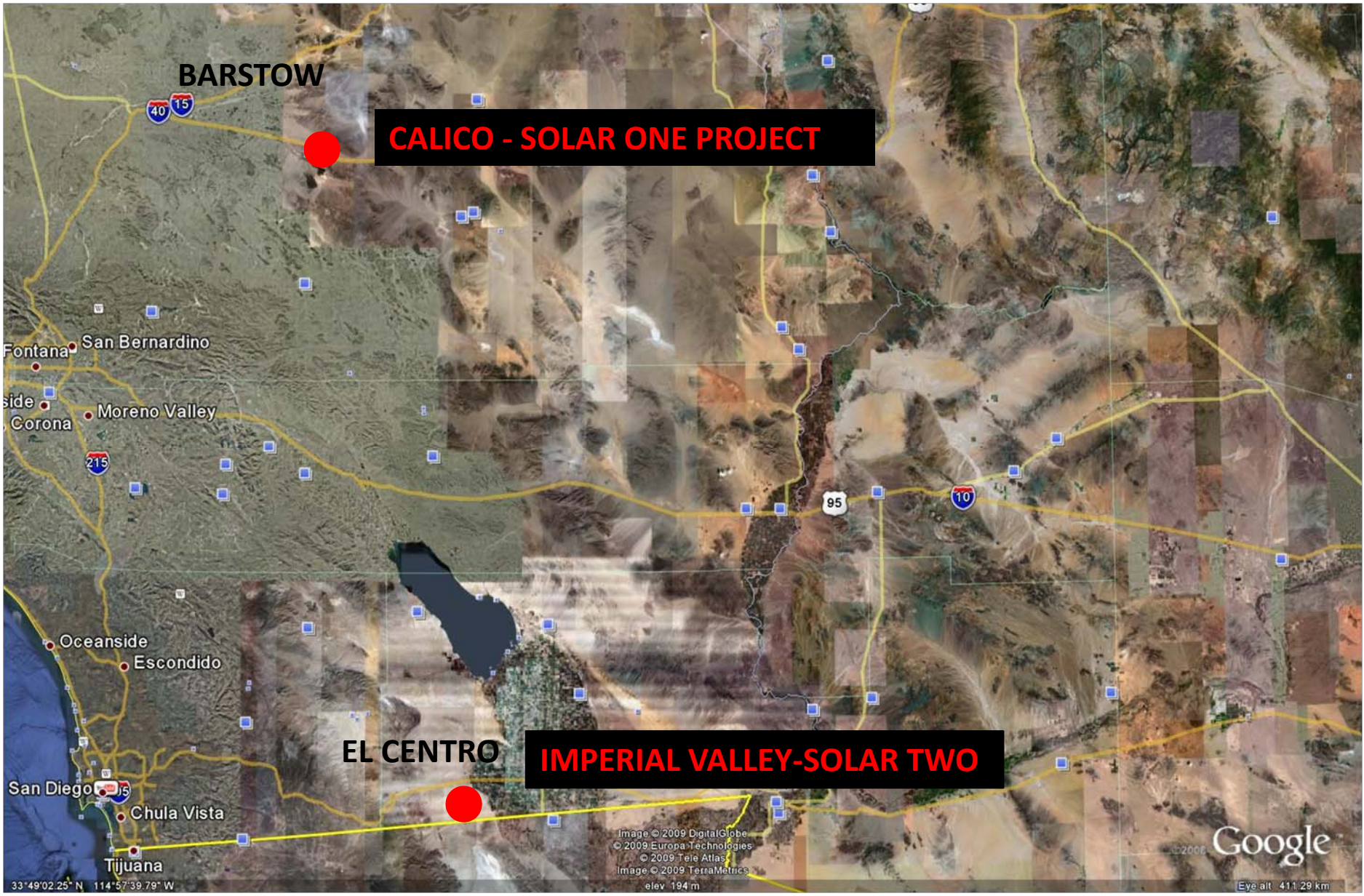
CALICO - SOLAR ONE PROJECT PURPOSE
WHY ARE WE HERE?

- Provide up to 850 MW of renewable electric capacity under a 20-year Power Purchase Agreement (PPA) to Southern California Edison (SCE) .

- Assist the State of California in meeting it's goal of reducing greenhouse gas emissions to 1990 levels by 2020 (Assembly Bill 32).

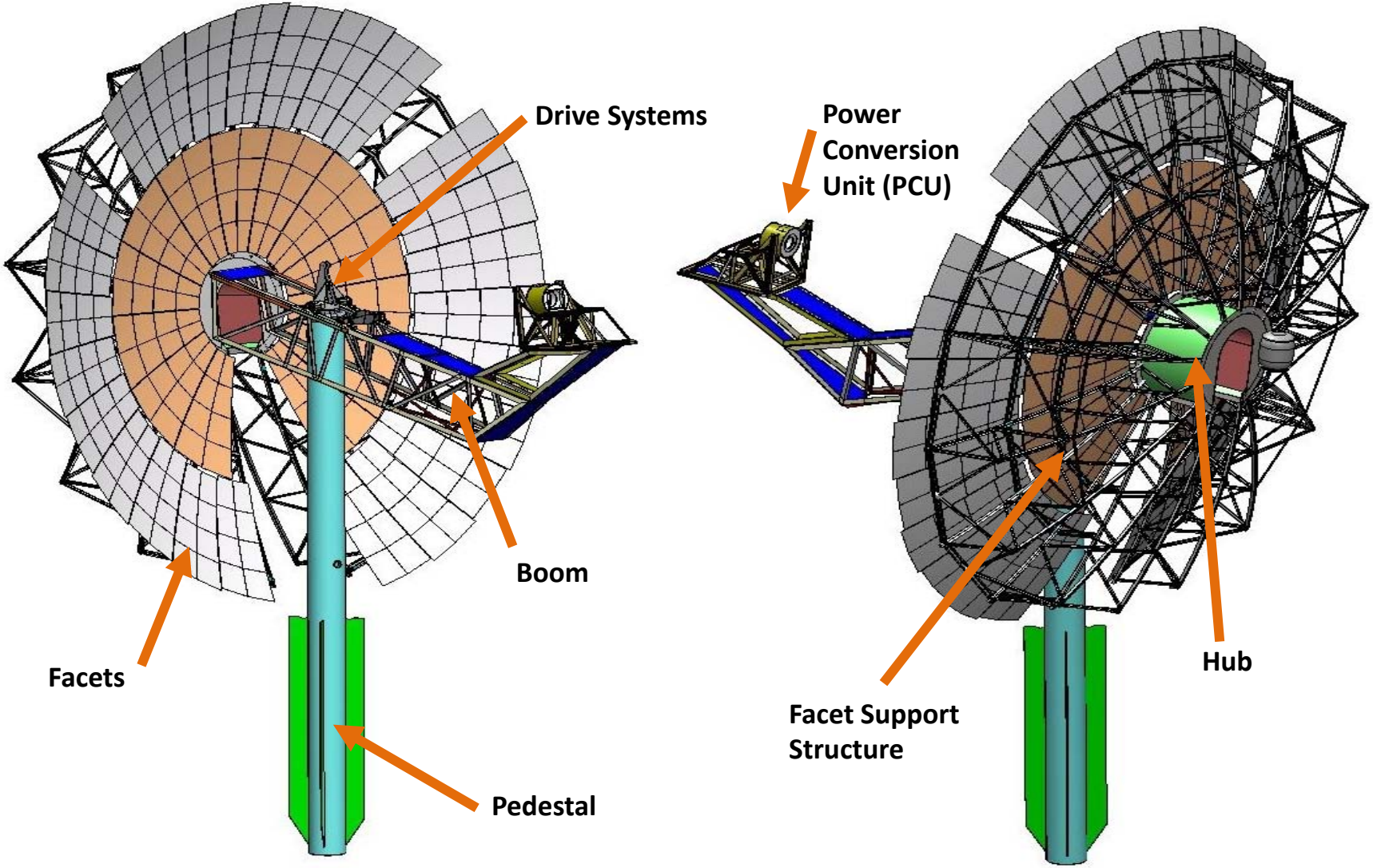
- Develop renewable solar energy to help California achieve its Renewable Portfolio Standard (RPS) requirement.

- Help protect the environment by delivering clean, renewable solar energy.


BARSTOW
CALICO - SOLAR ONE PROJECT
San Bernardino
Fontana
Moreno Valley
Corona
215
95
10
Oceanside
Escondido
EL CENTRO
IMPERIAL VALLEY-SOLAR TWO
San Diego
Chula Vista
Tijuana
Image © 2009 DigitalGlobe
© 2009 Europa Technologies
© 2009 Tele Atlas
Image © 2009 TerraMetrics
elev 194 m
Google
Eye alt 411.29 km

Technology

The SunCatcher™



Solar Dish Stirling Engine

- Dish Concentrator Focuses Sun's Energy on Receiver
- Stirling Engine Converts Thermal Energy to Electrical Energy

Click Image to Advance Video

New Dish Design

Sandia National Laboratories, Albuquerque New Mexico (May 2009)

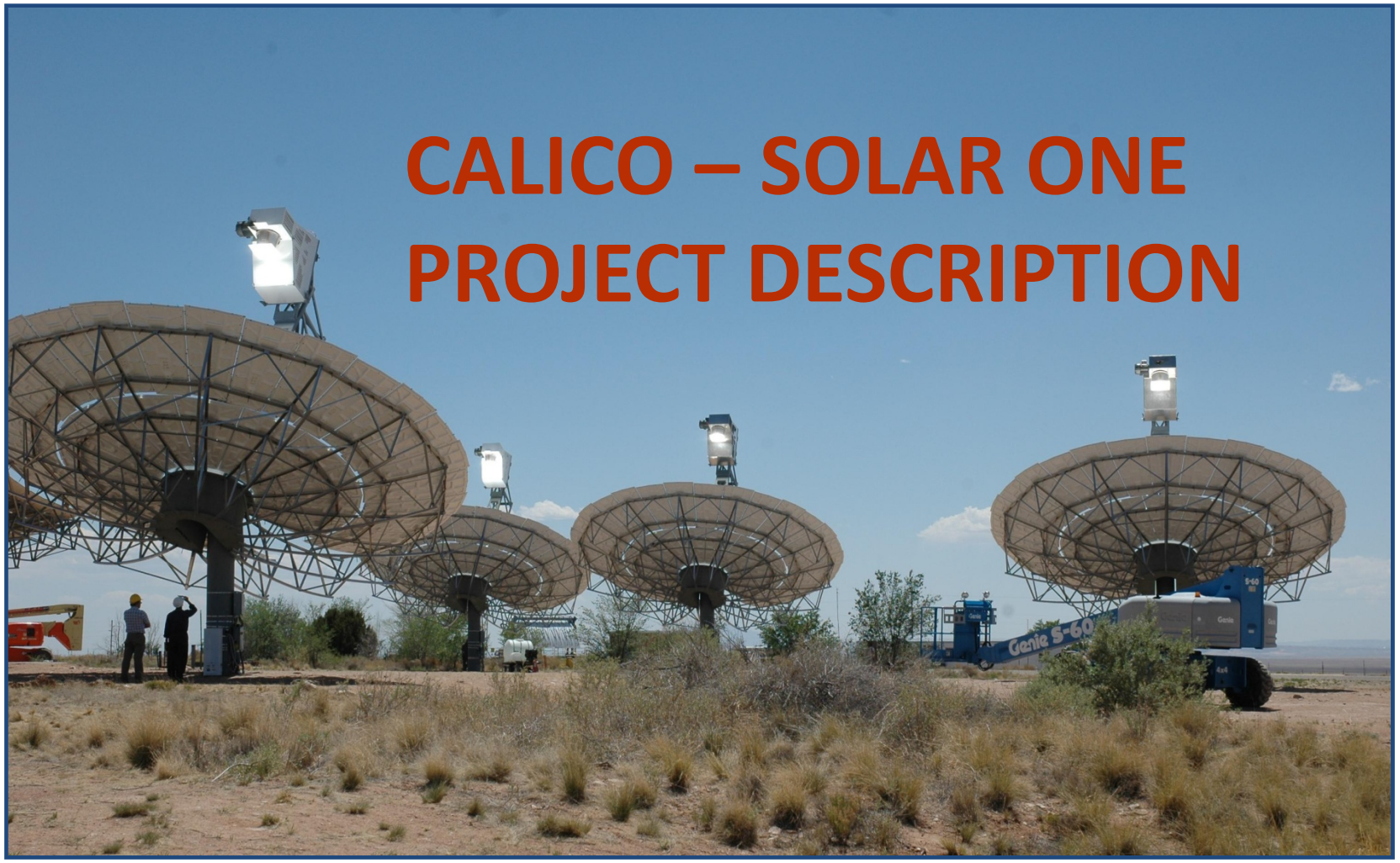
Installation & Assembly

Pedestal Installation for the SunCatcher™

Sandia National Laboratories, Albuquerque, New Mexico

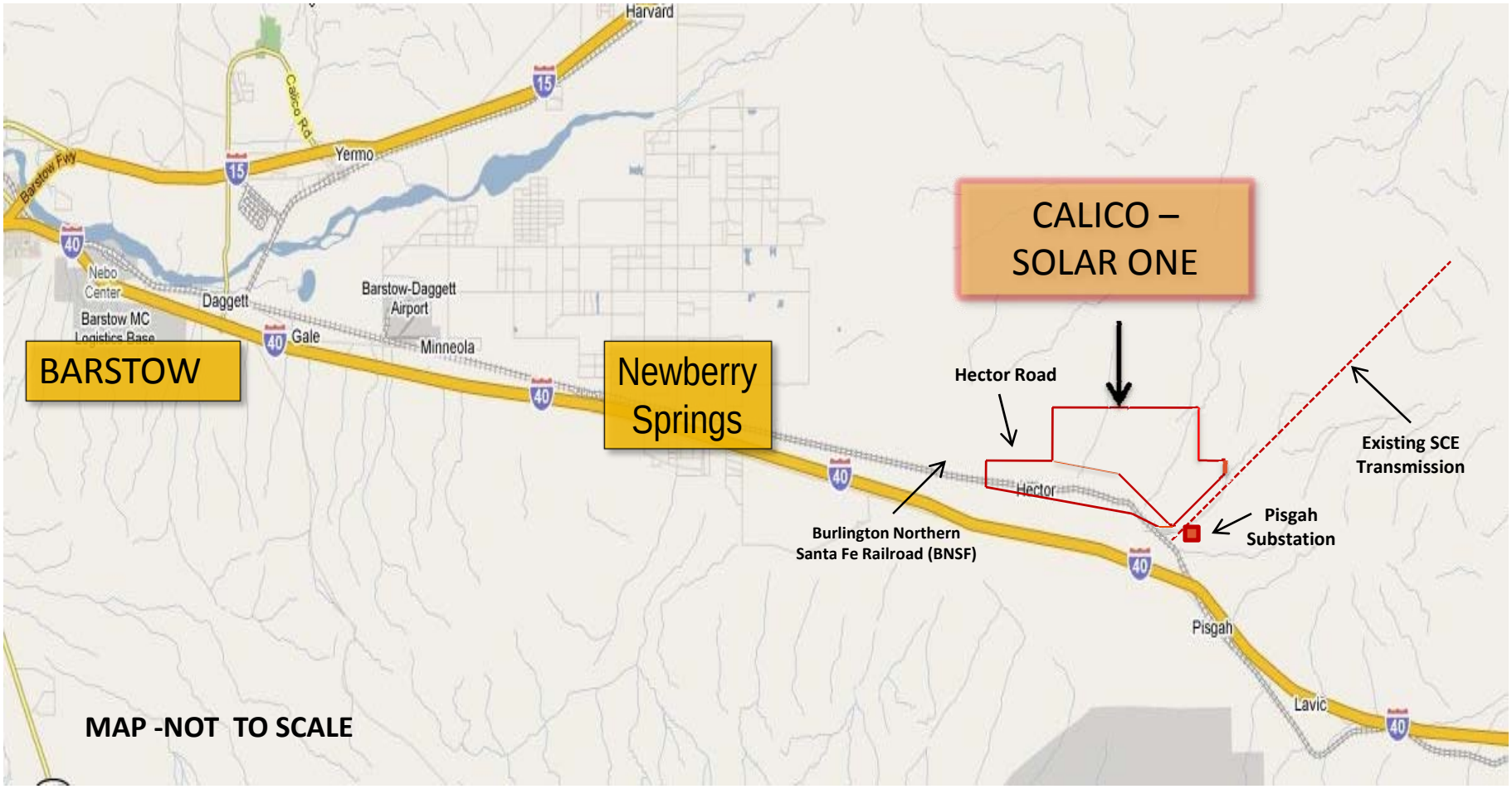
Tessera Solar
power from stirling energy systems
SES
Stirling Energy Systems

CALICO – SOLAR ONE PROJECT DESCRIPTION



General Location Map

- Calico - Solar One is located 155 miles east of Los Angeles, CA and 37 miles East of Barstow, CA ; North of Interstate 40



CALICO - SOLAR ONE PROJECT DESCRIPTION

Size/Location

- 850 MW solar power project located in San Bernardino County through PPA with SCE.
- Located on approximately 8,200 acres of public land managed by the Bureau of Land Management (BLM).
- Nearby communities include: Newberry Springs, Victorville, Barstow and Ludlow.
- The Project was sited to avoid or minimize impacts to recreation and environmentally-sensitive areas.

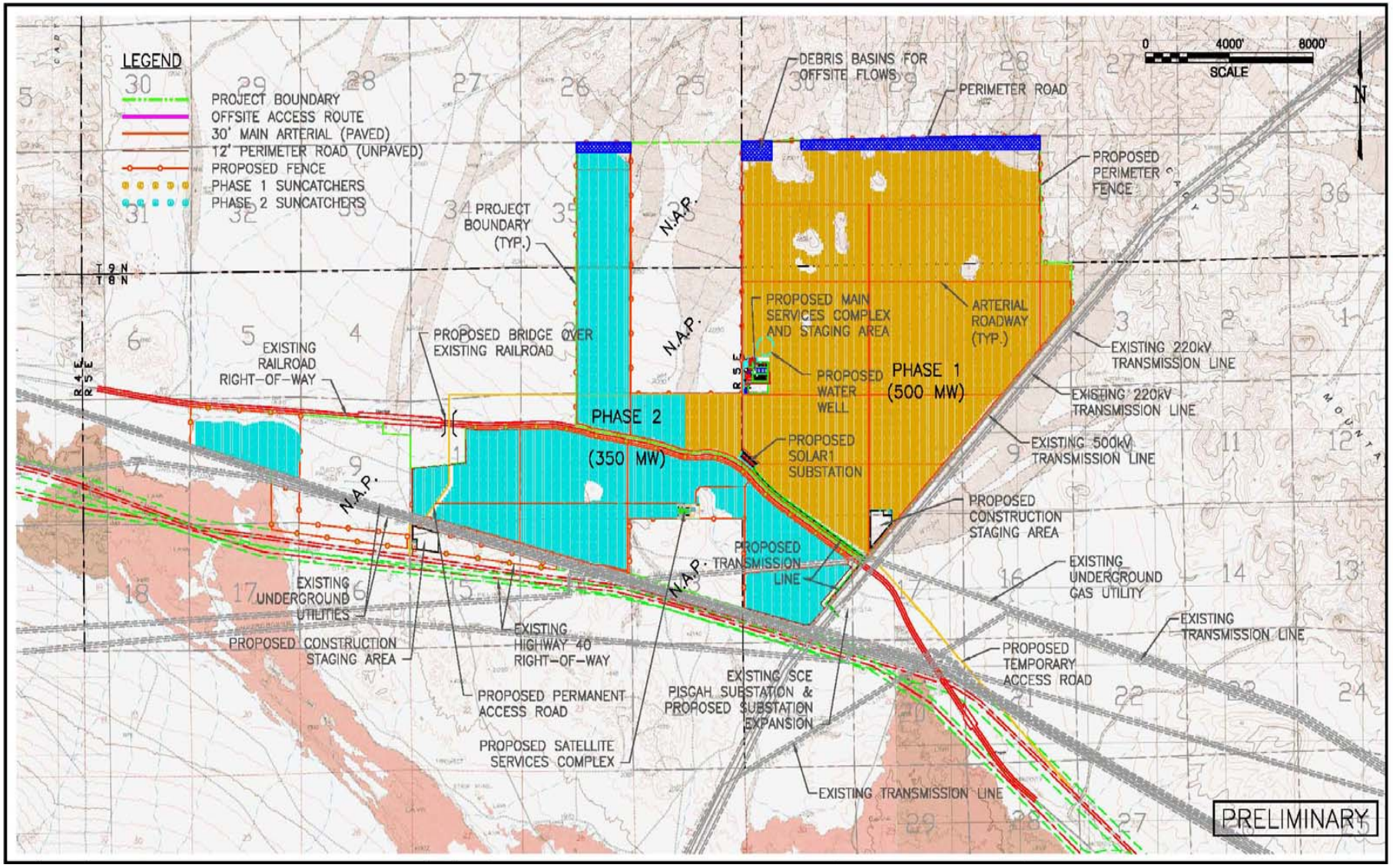
Construction/Transmission

Constructed in two phases:

- Phase I: 500MW
- Phase II: Option for additional 350MW

- Approximately 34,000 SunCatcher™ units.
  - Phase 1 = 20,000 units
  - Phase 2 = 14,000 units
- Scheduled for late 2010, with projected commercial operations beginning by mid 2011. *(Subject to receipt of all necessary approvals)*
- Interconnection of the Project to the SCE Pisgah Substation.

PROPOSED CONSTRUCTION SITE PLAN



View From Interstate 40 – Looking North

View From Cady Mountains – Looking South

PROJECT SCHEDULE

- **2008 –** 4th Quarter
  December 2008: Filed Application for Certification
- **2009-** May 2009:Deemed Data Adequate
- **2010 –** 3rd Quarter
  Receive Certification / Permit
- **2010 –** 4th Quarter
  Begin Construction
- **2011 –** 2nd Quarter
  Start producing power to the grid
- **2014 –** 4th Quarter
  Completion of 850MW Project Construction

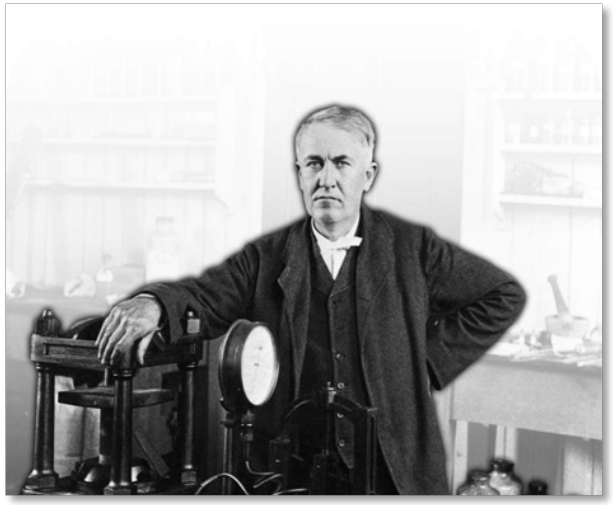
PROJECT BENEFITS

- Increased Revenue From Sales Taxes
- Construction and Permanent Jobs
- Low Water Use
- Minimal Land Disturbance

:: Low Cost :: Highest Solar-To-Grid Electric Efficiency :: Lowest Water Use :: Modular Design :: Peak Power Output ::
:: Production Ready In 2010 :: Minimal Land Disturbance :: Proven Engine Technology :: Highest On-Sun Availability ::

THANK YOU FOR YOUR TIME

QUESTIONS/COMMENTS



CONTACT INFORMATION:

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"I'd put my money on the sun and solar energy. What a source of power! I hope we don't have to wait 'til oil and coal run out before we tackle that."

Thomas Edison