

# Calico Solar

## **Information Hearing Presentation**

April 20, 2011



- 1. Ownership**
- 2. The Modified Project**
- 3. Necessity for Amendment**
- 4. Amendment Impacts**
- 5. Schedule**

# Ownership Update

- K Road Power purchased Calico Solar, LLC



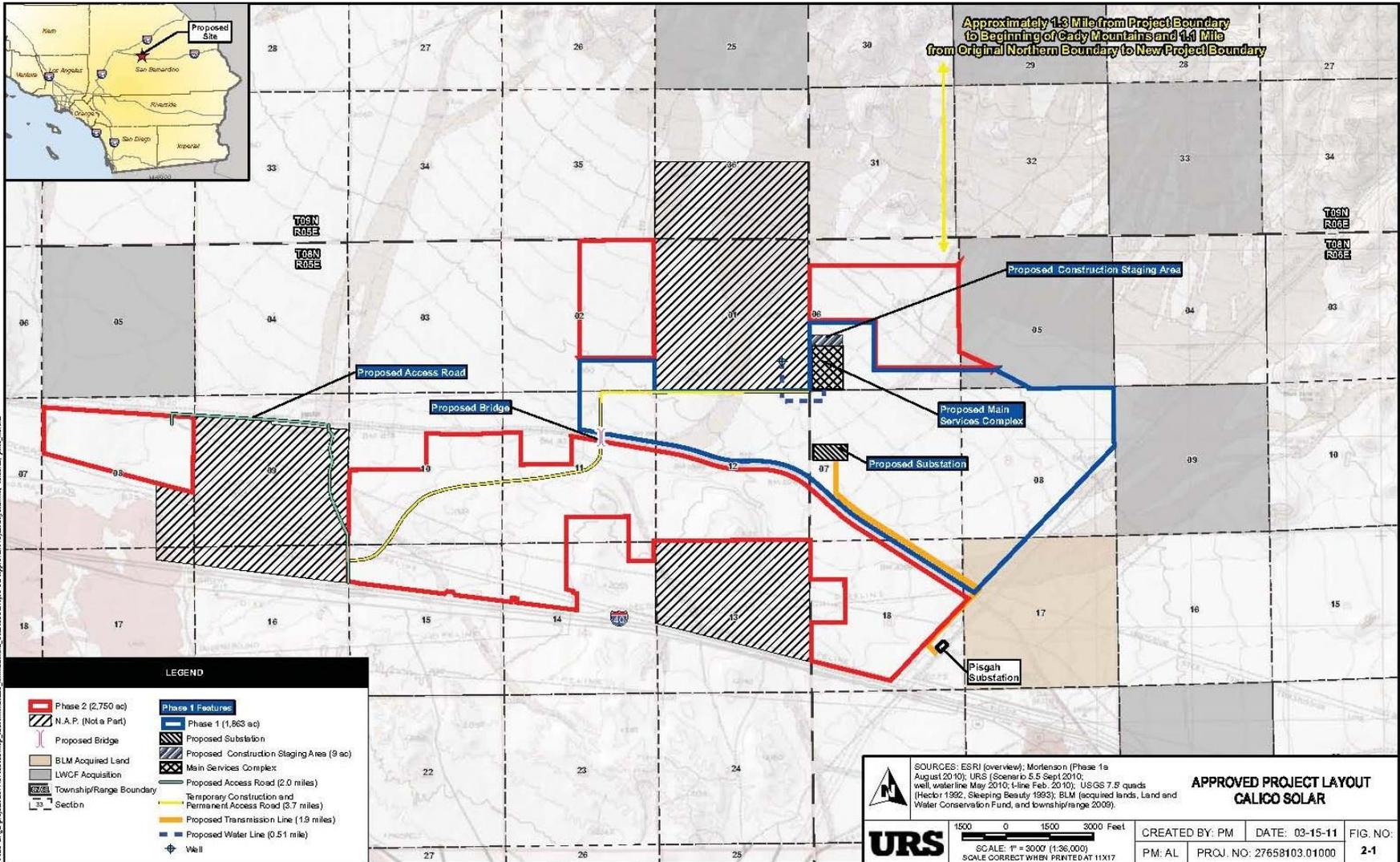
- Calico Solar, LLC still owns the Calico Solar Project

# K Road Overview

- Independent power developer
- Focused on utility-scale solar projects in the southwest United States
- 25-year history - over 15,000 MW of conventional and renewable power assets
- Promotes sustainable, renewable energy focused on reliability and efficiency in concert with environmental and social responsibility

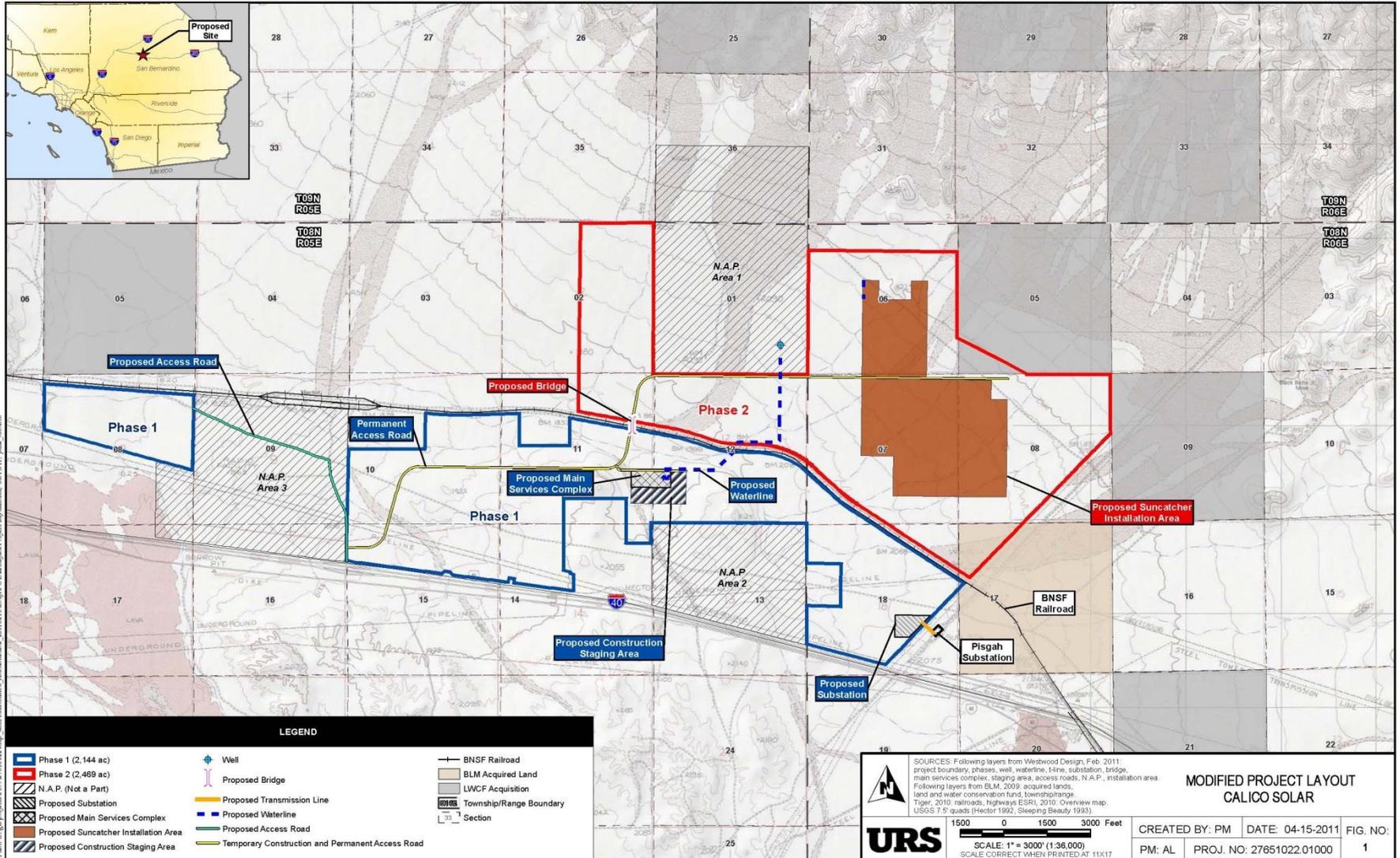
- Remain the same:
  - Construct a competitive 663.5 MW renewable power plant
  - Locate in area of high insolation and low slope
  - Support California's RPS mandate
  - Reduce greenhouse gas (GHG) emissions
  - Contribute to 33% renewable goal
  - Qualify for ARRA assistance

# Approved Project



Path: C:\p\proj\calico\1775161\02\map\_Archives\Calico\_Archives\20100315\02\approved\Approved Project Layout.mxd, 03/15/11, pmal\_morlenson

# Modified Project



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# Technology

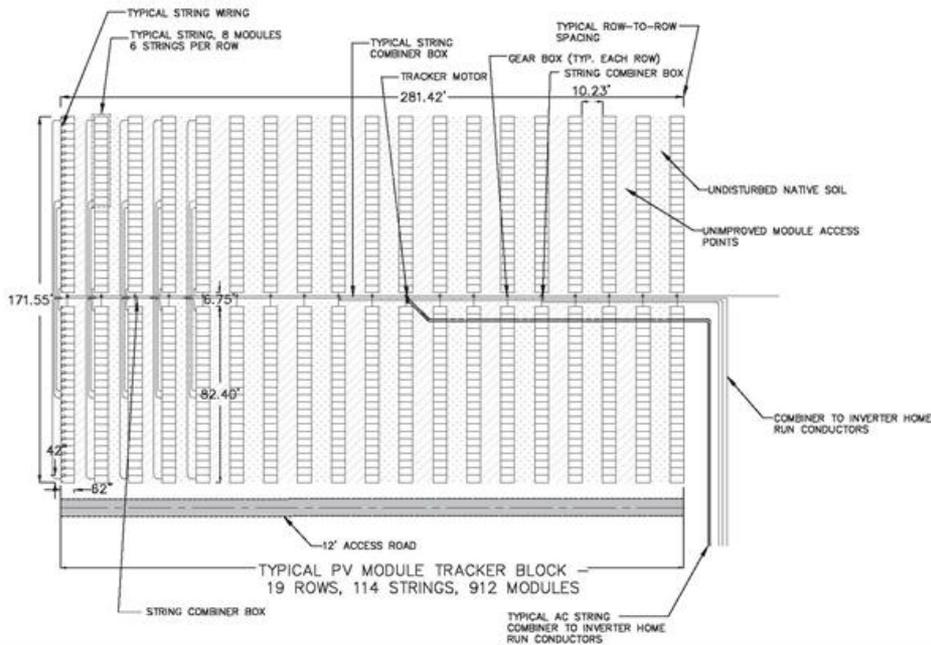
Calico Solar

## SunCatcher Technology

### Photovoltaic Technology

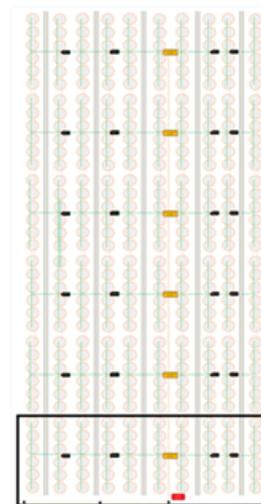


## Typical PV Tracker Blocks



## Typical SunCatcher Layout

### Scaleable and Modular Three Basic Building Blocks 9 MW / 360 Dishes



#### Dish

- Semi-autonomous control
- Self-contained except for:
  - Hydrogen supply
  - Back-feed Electric
  - AC collection
  - Remote SCADA
  - Fails independently
  - XN / UPS @ 12 dishes

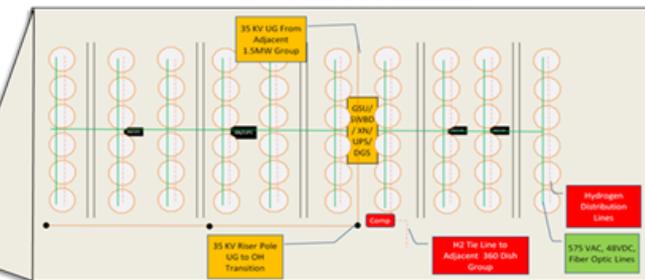
#### 1.5 MW / 60 Dishes

- Common 34.5 KV step-up
- 600 V Switchboard
- Dish Group Server

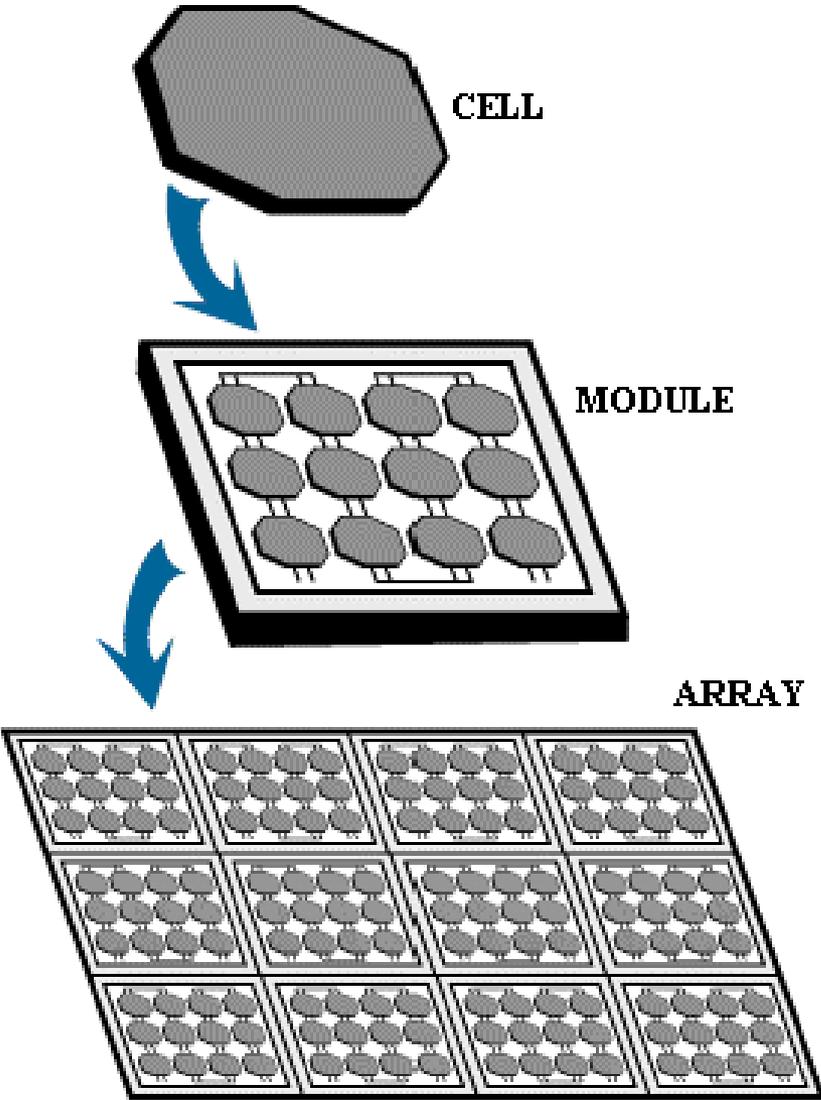
#### 9 MW / 360 Dishes

- Common H<sub>2</sub> compressor (cross-feed)
- Overhead riser
- Site supply for:
  - H<sub>2</sub> to tanks
  - Interruptible AC
  - Water treatment
  - Sub-station
  - SCADA

#### 1.5 MW / 60 Dishes

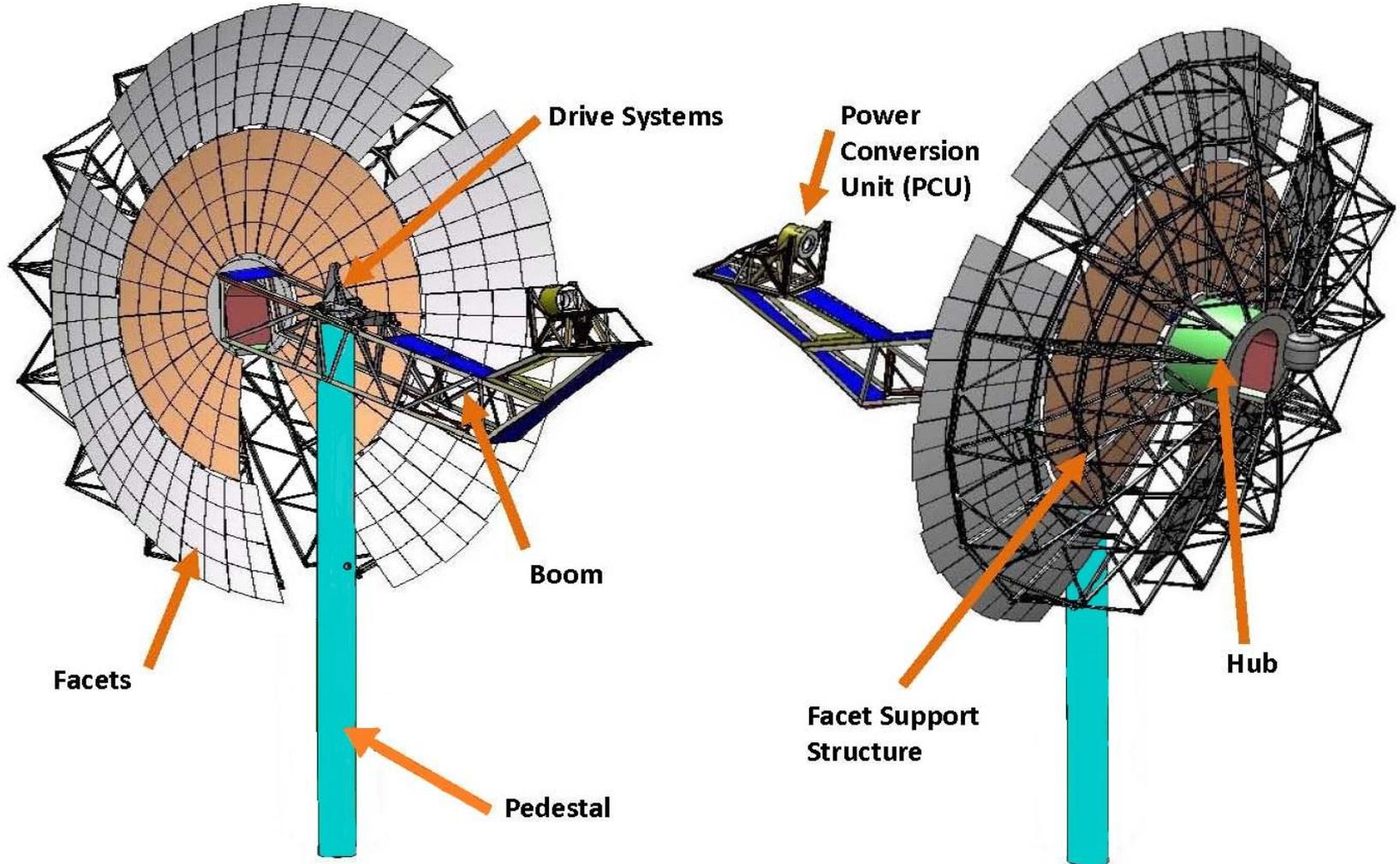


# Technology Details - PV

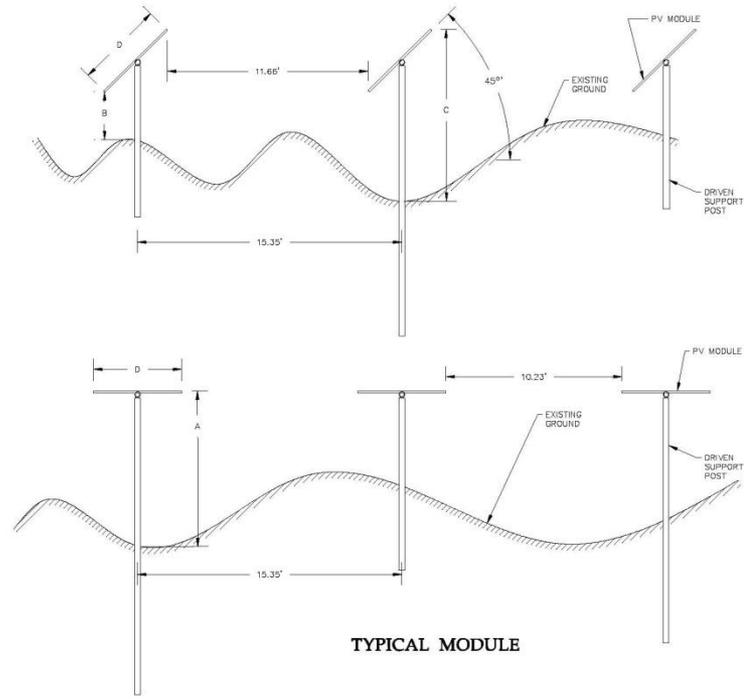


# Technology Details - SunCatcher

## The SunCatcher™



# Installation - PV



TYPICAL MODULE

Varying Post Heights			
A	B	C	D
5'	3.06'	6.75'	5.1'
6'	4.06'	7.75'	5.1'
7'	5.06'	8.75'	5.1'
8'	6.06'	9.75'	5.1'

**Westwood**  
 Westwood Professional Services, Inc.  
 2000 Amphlett Drive  
 San Francisco, CA 94040  
 PHONE 415-455-4150  
 FAX 415-455-9822  
 TOLL FREE 1-800-455-2150  
 www.westwoodps.com

Revised:	_____	Checked:	ADC
_____	_____	Drawn:	DDM
_____	_____	Scale:	ASX
_____	_____	Notes:	Refer to/See _____

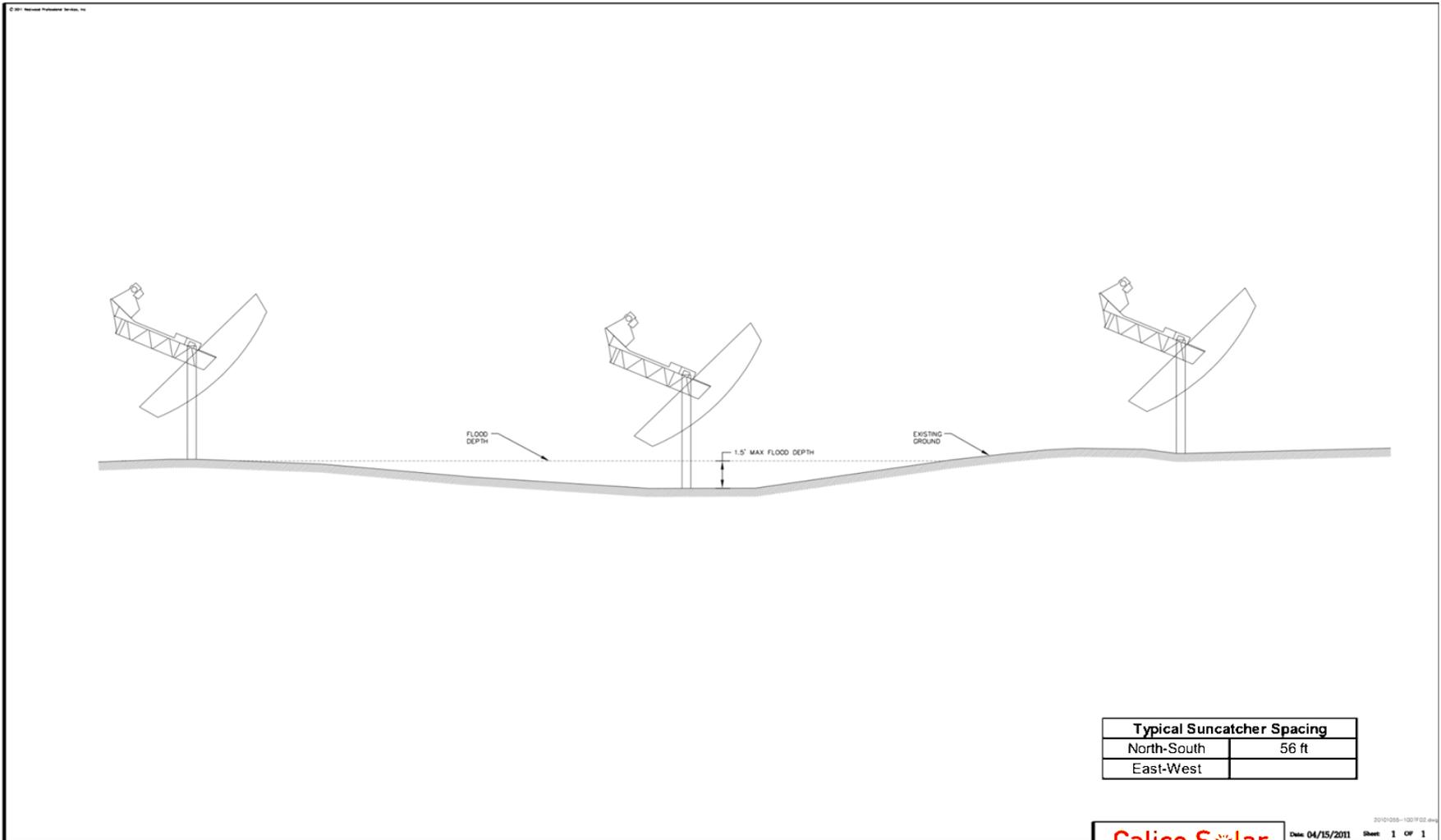
Prepared for:

**kRoad**  
 2405 18th Street  
 Suite 635  
 Berkeley, CA 94710

**Calico Solar**  
 San Bernardino County,  
 California

Date: 03/15/2011 Sheet: 1 OF 1  
 Construction Details

# Installation - SunCatcher



Westwood Professional Services, Inc.  
 2880 Arroyo Circle  
 San Francisco, CA 94134  
 PHONE: 415-881-6100  
 FAX: 415-881-9922  
 TOLL FREE: 1-800-891-9100  
 www.westwoodps.com

Revised:	Design:	ADC
	Checked:	DBR
	Drawn:	KAR
	Board Drawing System:	

Prepared for:

**kRoad**  
 2600 16th Street  
 Suite 435  
 Berkeley, CA 94710

**Calico Solar**  
 San Bernardino County,  
 California

Date: 04/15/2011 Sheet: 1 OF 1

Typical Suncatcher Spacing

- Phase 1 (primarily south of the railroad)
  - Main access road
  - Main services complex
  - Substation and shorter transmission line
  - Water well and pipeline
  - 275 MW of single-axis tracking PV modules
- Phase 2 (north of the railroad)
  - Bridge over railroad
  - 100.5 MW of SunCatchers
  - Hydrogen generation and delivery system
  - 288 MW of single-axis tracking PV modules

- Two issues require more time:
  - Commercial availability of the SunCatcher
    - SES financing difficulties
  - Access over the railroad
    - BNSF currently denying access over railroad
    - Need time to complete negotiations

- Same or fewer impacts:
  - Air quality
  - Biological resources
  - Cultural resources
  - Public health
  - Land Use
  - Traffic and transportation
  - Visual resources

# Visual Simulation

Calico Solar



# Visual Simulation



- Same benefits as the approved project\*:
  - 663.5 MW of renewable power
  - Contribution to meeting RPS and GHG goals
  - Reduced GHG emissions compared to fossil fuels
  - Improving local air quality and public health
  - Developing local energy sources
  - Diversifying energy supply
  - Reduce dependence on fossil fuels
  - Direct and indirect economic benefits
  - New construction and operation jobs

*\* Calico Solar Project, CEC Decision, page Override 6 and 7*

# Proposed Schedule

- 2011 - 1st Quarter - File Petition to Amend
- 2011 - 3<sup>rd</sup> Quarter
  - Approve Amendment
  - DT Clearance Surveys and Translocation
- 2011 - 4<sup>th</sup> Quarter - Begin Construction
- 2012 - 2<sup>nd</sup> Quarter - Start Producing Power
- 2016 - 3<sup>rd</sup> Quarter 2016 – Complete Construction

*Thank you for your time.*