Soitec

Presentation to:

San Diego County Board of Supervisors

February 4, 2015

AB 900 Certified: Environmental Leadership Project

- **In 2013** Governor Brown and the California Joint Legislative Budget Committee granted these projects **Environmental Leadership status**.
- **AB 900** was developed to spur California economy – **expedite** innovative projects and keep **investments and jobs** in the State.
- As required by AB 900, **the projects will:**
  - Result in an investment exceeding $100 Million
  - Create high-wage, highly skilled jobs
  - Prevailing wage construction jobs
  - Offset all GHG emissions

Why Boulevard?

- **Excellent solar resource,** best in the County of San Diego
  - –Outside of marine layer
  - –More direct sunlight
  - –High elevation
- **Large parcels of land** with **low residential density** where solar resource is located
- **Close** proximity **to new utility infrastructure** and SDG&E Boulevard East Substation
- **Local** source of generation – will make up for the **loss of** capacity from **San Onofre**

Comprehensive Community Outreach 2011-2015

- Attended **>60** separate **Planning Group** meetings
- Held >**250** community **meetings**
  - One-on-one with residents and neighbors
  - EIR workshops
  - Roundtable discussions
  - Electronic and mail communications
  - Sponsored Mountain Health/Clover Flats Elementary Christmas toy drive (2012-2014)
  - Sponsored Mountain Health Back to School Drive
  - Sponsored booth at various community festivals and events
  - Held personal meetings with individuals and agencies who commented on the EIR

Conservative Groundwater Plan

Groundwater Impacts- Water from a variety of sources – onsite and offsite:

- **All onsite groundwater wells:** Have been tested to County Standards & conservatively capped at a cost of **>$700,000**

- **Additional Water Arrangements Secured:**
  - Jacumba Community Services District,
  - Pine Valley Mutual Water Company,
  - Padre Dam Municipal Water District

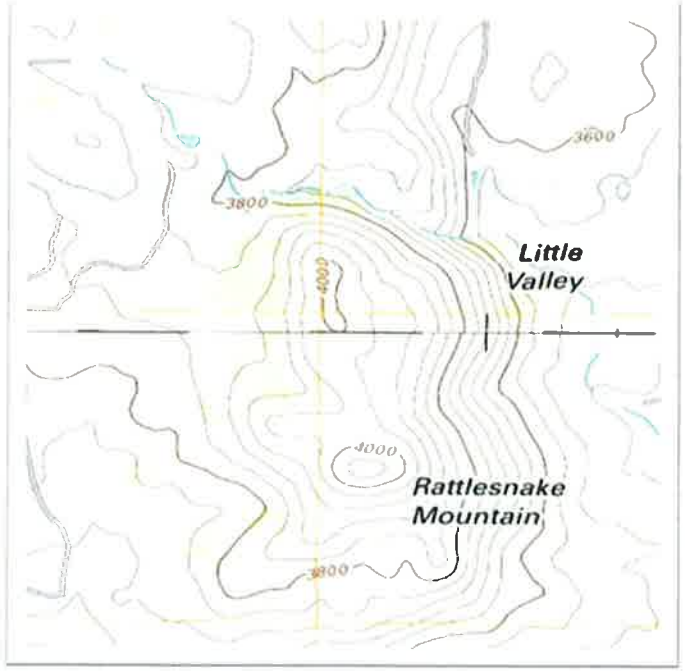
Economic and Environmental costs to import all water from Padre Dam:

- **Economic Costs:**
  - Status Quo: $971,040.
  - All Water From Padre Dam: **$4,083,500**
- **Environmental Costs:**
  - Increased Air Quality & Traffic Impacts
  - Not Analyzed in EIR
  - **Would delay project**

Current Transmission Line as Proposed

- **Current TDS Transmission**
  - **Voluntarily** put three miles **underground** to reduce visual impacts.
  - Remaining three miles above ground over tough terrain with low visual impacts.
  - **Estimated Cost $7.1 Million**

- **Economic and Environmental Costs Underground Entire Route.**
  - **All six miles** Underground **$12 Million**
  - More Environmental Impacts
  - Not Analyzed in the EIR
  - **Would Delay project**



Community Organization Support

- **San Diego Regional EDC**
- **San Diego Regional Chamber of Commerce**
- **East County Economic Development Council**
- **East County Chamber of Commerce**
- **CleanTech San Diego**
- **SDG&E**
- **North County Business Chamber of Commerce**
- **North County EDC**
- **Mountain Empire and Alpine Chamber of Commerce**
- **Poway Chamber of Commerce**
- **CONNECT**
- **El Cajon Chamber of Commerce**
- **The Desert Museum**
- **Port of San Diego**

Economic & Community Benefits

$7.5M Community Benefits Package:

- Mountain Health $100,000 Annually
- Mountain Empire School Foundation $100,000 Annually
- County Fire: $209,000
- County Groundwater Program one time $50,000
- Desert Museum $7,000 Annually

Estimated 300 Prevailing Wage Construction Jobs & 20- 30 Permanent Jobs

Use and Sales Tax an estimated $24 Million (SDC Portion)

High skilled wage jobs & Offset all project GHG emissions

Elected Official Leader Support

- **Congressman Scott Peters**
- **Mayor Kevin Faulconer**
- **Councilmember Mark Kersey**
- **Councilmember Todd Gloria**
- **Assemblyman Brian Maienschein**
- **Senator Joel Anderson**
- **Assemblyman Brian Jones**

CEQA Comment Letters Received

- **Reiterate prior comments**
- **Technical disputes regarding potential impacts**
- **Assumptions & misunderstandings that can be clarified**
- **Questions about the projects**
- **Call for recirculation of the EIR**

Closing

Request the Board's approval for:

- EIR certification
- Major Use Permit Rugged
- Major Use Permit Tierra del Sol
- Rezone for Tierra del Sol Property
- Agricultural Preserve Disestablishment for Tierra del Sol property
- Franchise Agreement Ordinance (Tierra Del Sol Only)

Soitec

Thank you

LG EQUIPMENT WATER SHIPPING BIDS

13465 Camino Canada
#106-446
El Cajon Ca 92021

Bid

Date	Bid #
1/30/2015	560

Name / Address	Job Address
Soitec 16650 Via Esprillo San Diego, Ca 92127	Rugged and TDS

Phone #	Fax #
619 988 0924	619 749 4150
lg.kathy@yahoo.com	

Item	Description	Qty	Cost	Total
Bid	Haul 49 million gallons of water from Padre Dam Municipal to Rugged and TDS. Exclusions: Water Not Included	8.167	500.00	4,083,500.00
By signing this you agree to the above			**Total**	$4,083,500.00

Project

Signature _____

13465 Camino Canada
#106-446
El Cajon Ca 92021

Bid

Date	Bid #
1/30/2015	559

Name / Address	Job Address
Soitec 16650 Via Esprillo San Diego, Ca 92127	TDS

Phone #	Fax #
619 988 0924	619 749 4150
lg.kathy@yahoo.com	

Item	Description	Qty	Cost	Total
Bid	Haul 80,000 gallons of water per day from Jacumba to TDS x 60 days	800	166.00	132,800.00
Bid	Haul 80,000 gallons of water per day from Padre Dam Municipal to TDS x 60 days Exclusions: Water Not Included	800	500.00	400,000.00
By signing this you agree to the above			**Total**	$532,800.00

Project

Signature _____

TDS GEN-TIE COST ESTIMATE

TriAxis Engineering, Inc.

1600 SW Western Blvd, Suite 100
Corvallis, OR 97333
(541) 766-4634

July 29, 2013

Brison R. Ellinghaus
Project Development Manager
Soitec Solar, Inc.
4250 Executive Square, Ste. 770
La Jolla, CA 92037

Brison.Ellinghaus@Soitec.com

Subject: Transmission Line Cost Estimates for the Soitec Facility at Tierra Del Sol

Mr. Ellinghaus,

This letter lists the results for several transmission line cost estimates that we performed pursuant to our July 9 proposed scope of work and your July 24 authorization.

Understanding of the Project and the Use of these Estimates: Soitec requires engineering cost estimates for the Tierra del Sol project's transmission line located near Boulevard, CA. The project is intended to utillze a 138-kV transmission line, but it is yet to be determined whether the 138-kV line will be overhead, underground, or a combination thereof.

The following estimates are completed without the benefit of design of any type and thus must be considered to be Order-of-Magnitude cost/mile estimates based only on TriAxis experience and judgment. In order to develop per-mile costs, TriAxis has assumed a basic 5-mile-length and divided the cost by 5.

Order-of-Magnitude Cost Estimates:

a. Per-Mile construction cost estimate of a Single-Circuit 138-kV Overhead transmission line using guyed steel poles and designed for a 60-MW solar project: **$559,000/mile**
b. Per-Mile construction cost estimate of a 138-kV Underground transmission circuit for a 60-MW solar project: **$2,000,000/mile**
c. Discussion of the implications/ concerns with direct-bury method of installing an underground transmission line as compared with installing cables within duct-banks:

   Underground transmission cable systems of 69 kV and higher operate with insulation voltage stresses of about two times the voltage stress of cables rated 35-kV and lower. This is done to allow practical cable weights, diameters, cost, and packaging. This cable design standard requires a higher level of insulation purity and special attention to limiting exposure to water vapor both during manufacture and in operation. Water vapor causes long-term degradation of the insulation.

   Because the transmission cable cost is so high, conduit systems are seen throughout the industry as a means to protect the investment. Compared to the direct-bury method, duct banks create a cable environment that is drier and more mechanically protected from accidental dig-ins or vandalism. Conduits also allow the removal and replacement of a faulted cable.

   Transmission splices are not as water-vapor-tight as the cables, and are consequently never directly buried. If a direct-buried transmission cable fails for any reason, a new splice vault must be installed at the fault location to repair it.

   Where transmission cable must be directly buried, utilities protect the cable with removable sidewalk-size concrete slabs placed 12 inches, or so, below grade and 12 inches above the cables.

If acceptable, I believe that this submittal completes our mutually agreed scope of work. If you require our backup estimate spreadsheets for review, or if you need further discussion, please contact Gordon Ormsby at gormsby@triaxiseng.com. Gordon is retired, but generally available to assist on this type of project. Also, call me if you have any questions.

Sincerely,

TriAxis Engineering, Inc.

Paul H. Vigansky, P.E.
Transmission & Distribution Division Manager

Benefit of CPV:
Soitec CPV System versus flat panel