

**SUBMITTAL TO THE BOARD OF SUPERVISORS  
COUNTY OF RIVERSIDE, STATE OF CALIFORNIA**



**FROM:** TLMA - Planning Department

**SUBMITTAL DATE:**  
**November 16, 2010**

**SUBJECT:** PLOT PLAN NO. 24616 – FAST TRACK AUTHORIZATION NO. 2010-06 –Mitigated Negative Declaration – Applicant: US Solar Holdings, LLC – Engineer: The Holt Group - Fourth Supervisorial District - Chuckwalla Zoning Area – Palo Verde Valley Area Plan: Community Development: Public Facilities (CD: PF) (.60 FAR) – 829 Gross Acres – Zoning: Manufacturing Heavy Zone (M-H)

**Location:** The site is located northeast of the community of Mesa Verde in the Palo Verde Valley Area Plan in Eastern Riverside County. Specifically, the project is proposed on previously disturbed land located on the northeast corner of the Blythe Airport, north of Interstate 10, south of 9<sup>th</sup> Avenue, and northwest of Riverside Drive and Butch Avenue.

**Description:** The applicant proposes to construct a 100 megawatt Photovoltaic (PV) Solar Power Plant on 640 acres of an 829 acre lease area in five (5) twenty (20) megawatt phases inclusive of: a single axis tracking system organized in 874 x 168-foot and 874 x 370-foot power blocks with a maximum height of ten feet; a perimeter 24-foot interior access road and 25-foot interior drive aisles for emergency access and maintenance purposes; a combination of inverters and transformers on concrete pads covered by three sided open shade covers within each power block; an 8-foot high chain link fence with three strand barbed-wire around the project perimeter boundary; a temporary construction area which includes a 12' X 60' portable construction trailer, five parking spaces and portable toilets on the southeast corner of the site; and, a temporary staging area in the center of proposed Phase II on an existing concrete pad. (See attached Board of Supervisor's Staff Report for a full project description.)

Initials:  
RJ:rj  
D.M.

*Carolyn Syme Luna*  
Carolyn Syme Luna  
Planning Director

CONTINUED ON ATTACHED PAGE

**MINUTES OF THE BOARD OF SUPERVISORS**

On motion of Supervisor Benoit, seconded by Supervisor Buster and duly carried, IT WAS ORDERED that the above matter is approved as recommended.

Ayes: Buster, Benoit and Ashley  
Nays: None  
Absent: Tavaglione and Stone  
Date: December 14, 2010  
xc: Planning, Applicant

Kecia Harper-Ihem  
Clerk of the Board  
By: *Kecia Harper-Ihem*  
Deputy

**Prev. Agn. Ref.**

**District:** Fourth

**Agenda Number:**

ATTACHMENTS FILED

WITH THE CLERK OF THE BOARD

16.1

REVIEWED BY EXECUTIVE OFFICE

DATE

Jennifer Sargent  
Departmental Concurrence

Policy

Consent

Dep't Recomm.:

Policy

Consent

Per Exec. Ofc.:

The Honorable Board of Supervisors

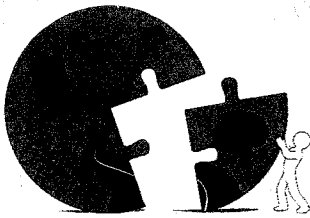
Re: PLOT PLAN No. 24616 – FAST TRACK AUTHORIZATION NO. 2010-06

Page 2 of 2

**RECOMMENDED MOTION:**

**ADOPTION** of a **MITIGATED NEGATIVE DECLARATION** for **ENVIRONMENTAL ASSESSMENT NO. 42340**, based on the findings incorporated in the initial study and the conclusion that the project will not have a significant effect on the environment; and,

**APPROVAL** of **PLOT PLAN NO. 24616**, subject to the attached conditions of approval, and based upon the findings and conclusions incorporated in the staff report.



Carolyn Syms Luna  
Director

# RIVERSIDE COUNTY PLANNING DEPARTMENT

Original Negative Declaration/Notice of  
Determination was routed to County  
Clerks for posting on.

12/15/10  
Date

KL  
Initial

## MITIGATED NEGATIVE DECLARATION

Project/Case Number: Plot Plan No. 24616, EA42340

Based on the Initial Study, it has been determined that the proposed project, subject to the proposed mitigation measures, will not have a significant effect upon the environment.

PROJECT DESCRIPTION, LOCATION, AND MITIGATION MEASURES REQUIRED TO AVOID POTENTIALLY SIGNIFICANT EFFECTS. (see Environmental Assessment and Conditions of Approval)

### COMPLETED/REVIEWED BY:

By: Raymond Juarez Title: Project Planner Date: November 4, 2010

Applicant/Project Sponsor: US Solar Holdings LLC Date Submitted: June 23, 2010

### ADOPTED BY: Riverside County Board of Supervisors

Person Verifying Adoption: Karen Barton Date: December 14, 2010

Karen Barton, Board Assistant to Kecia Harper-Ihem, Clerk of the Board of Supervisors

The Mitigated Negative Declaration may be examined, along with documents referenced in the initial study, if any, at:

Riverside County Planning Department 4080 Lemon Street, 12th Floor, Riverside, CA 92501

For additional information, please contact Raymond Juarez at [ruarez@rctlma.org](mailto:ruarez@rctlma.org) or at 951-955-9541.

Revised: 10/16/07

Y:\Planning Master Forms\CEQA Forms\Mitigated Negative Declaration.doc

Please charge deposit fee case#: ZEA42340 ZCFG5702 \$64.00 Posting Fee + \$2,010.25 CFG Fee  
FOR COUNTY CLERK'S USE ONLY

12.14.10 16.1



12.14.10 16.1



COUNTY OF RIVERSIDE  
SPECIALIZED DEPARTMENT RECEIPT  
Permit Assistance Center

\* REPRINTED \* R1007044

4080 Lemon Street  
Second Floor  
Riverside, CA 92502  
(951) 955-3200

39493 Los Alamos Road  
Suite A  
Murrieta, CA 92563  
(951) 600-6100

38686 El Cerrito Road  
Palm Desert, CA 92211  
(760) 863-8277

\*\*\*\*\*  
\*\*\*\*\*

Received from: US SOLAR HOLDINGS LLC \$64.00  
paid by: CK 1396  
paid towards: CFG05702 CALIF FISH & GAME: DOC FEE  
EA42340 FOR CA FISH AND GAME  
at parcel #: BLYTHE AIRPORT BLYT  
appl type: CFG3

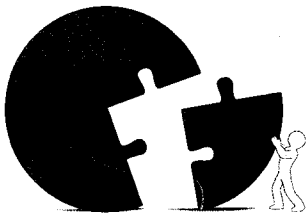
By SBROSTRO Jun 24, 2010 11:21  
posting date Jun 24, 2010

\*\*\*\*\*  
\*\*\*\*\*

Account Code	Description	Amount
658353120100208100	CF&G TRUST: RECORD FEES	\$64.00

Overpayments of less than \$5.00 will not be refunded!

Additional info at [www.rctlma.org](http://www.rctlma.org)



*Carolyn Syms Luna*  
*Director*

# **RIVERSIDE COUNTY**

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## **PLANNING DEPARTMENT**

### **Memorandum**

**DATE:** December 14, 2010

**TO:** Chairman Marion Ashley

**FROM:** Ray Juarez, Project Manager

**RE:** **Agenda Item No. 16.1 – Plot Plan No. 24616 – Blythe, US Solar 100 Mega Watt Solar Power Plant.**

Honorable Chairman,

The following conditions have been deleted, modified, or added since the writing of the staff report.

#### **DELETED**

##### **10.PLANNING.38 USE – CEASED OPERATIONS**

In the event the use hereby permitted ceases operation for a period of one (1) year or more, this approval shall become null and void.

#### **MODIFIED**

##### **10.PLANNING.29 USE – MAINTAIN LICENSING**

At all times during the ~~conduct~~operation of the permitted use the permittee shall maintain and keep in effect a valid Power Purchase Agreement with the Utility Purveyor. Should such agreement be denied, expire or lapse at any time in the future, this permit shall become null and void.

##### **20.PLANNING.09 GEN – LIFE OF THE PERMIT**

The life of Plot Plan No. 24616 shall terminate on July 1, ~~2030~~2036. This permit shall thereafter be null and void and of no effect whatsoever, and the approved use(s) shall cease. It is the permit holder's responsibility to file a revised permit prior to the termination date. The filing of a revised permit does not guarantee that said permit will ultimately be approved by the County.

Upon submittal, the developer/permit holder shall provide: 1) Adequate information to assist the County in developing a site remediation plan. 2) Adequate information to determine a new life/expiration date if technology has not rendered this use inadequate.

#### **ADDED**

##### **10.PLANNING.59 USE-PHASE BY NEW PERMIT**

Construction of this project may be done progressively in phases provided a plan is submitted with appropriate fees to the Planning Department and approved prior to issuance of any grading or building permits.

Phasing plans shall meet the requirements of County Agencies unless so indicated by the affected agency.

Y:\Planning Master Forms\Templates\Letterhead Memo 2008-Formatted.doc

Riverside Office · 4080 Lemon Street, 12th Floor  
P.O. Box 1409, Riverside, California 92502-1409  
(951) 955-3200 · Fax (951) 955-1811

Desert Office · 38686 El Cerrito Road  
Palm Desert, California 92211  
(760) 863-8277 · Fax (760) 863-7555

## Juarez, Raymond

---

**From:** Rector, Kimberly [KRECTOR@rcbos.org]  
**Sent:** Wednesday, November 10, 2010 4:53 PM  
**To:** Juarez, Raymond  
**Subject:** RE: 20 Day Advertisement for 12/14/10 BOS Hearing - Blythe Solar Power Plant - US Solar Project

Thank you.

Kimberly

**From:** Juarez, Raymond [mailto:RJUAREZ@rctlma.org]  
**Sent:** Wednesday, November 10, 2010 4:28 PM  
**To:** Rector, Kimberly  
**Cc:** Mares, David; Neal, Greg; Calderas, Vanessa; Lyman, Bob; Roush, Jana; Harper-Ihem, Kecia; Sargent, Jennifer  
**Subject:** RE: 20 Day Advertisement for 12/14/10 BOS Hearing - Blythe Solar Power Plant - US Solar Project

Kimberly:

As a follow up to our conversation, I will deliver the advertisement package directly to the Clerk of the Board's office by noon next Tuesday and provide a complete Board Package to the Executive Office next Wednesday.

Thanks,

**Raymond Juarez**  
Urban Regional Planner IV

Riverside County Planning Department  
County Administrative Center  
4080 Lemon Street, 12th Floor  
Riverside, CA 92502  
Phone (951) 955-9541  
Fax (951) 955-1811

Office Hours  
Monday thru Thursday  
7:00 a.m. to 5:30 p.m.

**From:** Rector, Kimberly [mailto:KRECTOR@rcbos.org]  
**Sent:** Wednesday, November 10, 2010 1:47 PM  
**To:** Juarez, Raymond; Harper-Ihem, Kecia; Sargent, Jennifer  
**Cc:** Mares, David; Neal, Greg; Calderas, Vanessa; Lyman, Bob; Roush, Jana  
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Ray,

Yes, we would need the packet before the 18<sup>th</sup> in order to meet the 20-day advertisement deadline.

Are you also handling CUP 3622 which is scheduled for a hearing on Nov. 30? We need the packet for that case by Monday.

Kimberly

2010-11-10 4:11 PM

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**Subject:** 20 Day Advertisement for 12/14/10 BOS Hearing - Blythe Solar Power Plant - US Solar Project

Greetings:

In coordination with the 4<sup>th</sup> District Supervisor's Office, the Planning Department will be requesting to schedule Plot Plan No. 24616 (FTA 2010-06) for a public hearing on December 14, 2010. In effort to see this project thru, the Planning Department is requesting to send an advertisement package down today, with a complete Board package to be delivered mid next week. This project will require a 20 day advertisement. The complete Board package and signed Form 11 will be delivered to the Executive Office for review by the end of business on November 17<sup>th</sup>.

Please advise if this will cause any concerns.

I will be at my desk till 12:55 today, and will be returning by 2:00 p.m. if you would like to call and discuss.

Regards,

**Raymond Juarez**  
Urban Regional Planner IV

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4080 Lemon Street, 12th Floor  
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**SUBMITTAL TO THE BOARD OF SUPERVISORS  
COUNTY OF RIVERSIDE, STATE OF CALIFORNIA**



**FROM:** TLMA - Planning Department

**SUBMITTAL DATE:**  
**November 16, 2010**

**SUBJECT: PLOT PLAN NO. 24616 – FAST TRACK AUTHORIZATION NO. 2010-06** –Mitigated Negative Declaration – Applicant: US Solar Holdings, LLC – Engineer: The Holt Group - Fourth Supervisorial District - Chuckwalla Zoning Area – Palo Verde Valley Area Plan: Community Development: Public Facilities (CD: PF) (.60 FAR) – 829 Gross Acres – Zoning: Manufacturing Heavy Zone (M-H)

**Location:** The site is located northeast of the community of Mesa Verde in the Palo Verde Valley Area Plan in Eastern Riverside County. Specifically, the project is proposed on previously disturbed land located on the northeast corner of the Blythe Airport, north of Interstate 10, south of 9<sup>th</sup> Avenue, and northwest of Riverside Drive and Butch Avenue.

**Description:** The applicant proposes to construct a 100 megawatt Photovoltaic (PV) Solar Power Plant on 640 acres of an 829 acre lease area in five (5) twenty (20) megawatt phases inclusive of: a single axis tracking system organized in 874 x 168-foot and 874 x 370-foot power blocks with a maximum height of ten feet; a perimeter 24-foot interior access road and 25-foot interior drive aisles for emergency access and maintenance purposes; a combination of inverters and transformers on concrete pads covered by three sided open shade covers within each power block; an 8-foot high chain link fence with three strand barbed-wire around the project perimeter boundary; a temporary construction area which includes a 12' X 60' portable construction trailer, five parking spaces and portable toilets on the southeast corner of the site; and, a temporary staging area in the center of proposed Phase II on an existing concrete pad. (See attached Board of Supervisor's Staff Report for a full project description.)

Initials:  
RJ:rj

Carolyn Syms Luna  
Planning Director

CONTINUED ON ATTACHED PAGE

REVIEWED BY EXECUTIVE OFFICE

DATE

Tina Grande

Departmental Concurrence

Dep't Recomm.:	<input type="checkbox"/>	Consent	<input checked="" type="checkbox"/>	Policy
Per Exec. Ofc.:	<input type="checkbox"/>	Consent	<input type="checkbox"/>	Policy

**Prev. Agn. Ref.**

**District:** Fourth

**Agenda Number:**

*REFERENCE FOR 11*

The Honorable Board of Supervisors

Re: PLOT PLAN No. 24616 – FAST TRACK AUTHORIZATION NO. 2010-06

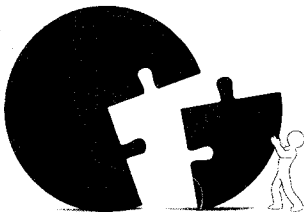
Page 2 of 2

**RECOMMENDED MOTION:**

**ADOPTION** of a **MITIGATED NEGATIVE DECLARATION** for **ENVIRONMENTAL ASSESSMENT NO. 42340**, based on the findings incorporated in the initial study and the conclusion that the project will not have a significant effect on the environment; and,

**APPROVAL** of **PLOT PLAN NO. 24616**, subject to the attached conditions of approval, and based upon the findings and conclusions incorporated in the staff report.





# RIVERSIDE COUNTY PLANNING DEPARTMENT

**Carolyn Syms Luna**  
**Director**

**DATE: November 16, 2010**

**TO: Clerk of the Board of Supervisors**

**FROM: Planning Department - Riverside Office**

**SUBJECT: Plot Plan No. 24616 – EA42340 – FTA 2010-06**

(Charge your time to these case numbers)

**The attached item(s) require the following action(s) by the Board of Supervisors:**

- |   |  |
|---|--|
| <input type="checkbox"/> Place on Administrative Action (Receive & File; EOT)                   | <input checked="" type="checkbox"/> Set for Hearing (Legislative Action Required; CZ, GPA, SP, SPA)        |
| <input type="checkbox"/> Labels provided If Set For Hearing                                     | <input checked="" type="checkbox"/> Publish in Newspaper:  |
| <input type="checkbox"/> 10 Day <input type="checkbox"/> 20 Day <input type="checkbox"/> 30 day |  |
| <input type="checkbox"/> Place on Consent Calendar  | (4th Dist) See Below for Advertisement Requirement   |
| <input type="checkbox"/> Place on Policy Calendar (Resolutions; Ordinances; PNC)                | <input checked="" type="checkbox"/> Mitigated Negative Declaration   |
| <input type="checkbox"/> Place on Section Initiation Proceeding (GPIP)                          | <input type="checkbox"/> 10 Day <input checked="" type="checkbox"/> 20 Day <input type="checkbox"/> 30 day |
|   | <input checked="" type="checkbox"/> Notify Property Owners (app/agencies/property owner labels provided)   |
|   | Controversial: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO                         |

**Designate Newspaper used by Planning Department for Notice of Hearing:**

4<sup>th</sup> District – Desert Sun, Press Enterprise, and Palo Verde Times

**The signed Form 11 and Board package will be delivered to the Executive Office for processing by noon on Wednesday, November 17.**

**This is an Advertisement Package only – please schedule on the December 14, 2010 BOS Agenda**

**See attached for project description**

Riverside Office · 4080 Lemon Street, 12th Floor  
P.O. Box 1409, Riverside, California 92502-1409  
(951) 955-3200 · Fax (951) 955-3157

Desert Office · 38686 El Cerrito Road  
Palm Desert, California 92211  
(760) 863-8277 · Fax (760) 863-7555

*"Planning Our Future... Preserving Our Past"*

**PLOT PLAN NO. 24616 – FAST TRACK AUTHORIZATION NO. 2010-06 – Mitigated Negative Declaration –**  
Applicant: US Solar Holdings, LLC – Engineer/Representative: The Holt Group - Fourth Supervisorial District -  
Chuckwalla Zoning Area – Palo Verde Valley Area Plan: Community Development: Public Facilities (CD: PF)  
(.60 FAR) – 829 Gross Acres – Zoning: Manufacturing Heavy Zone (M-H) - APN (s): 821-080-040 and 041,  
821-110-002 and 003.

**Location:** The site is located northeast of the community of Mesa Verde in the Palo Verde Valley Area Plan in Eastern Riverside County. Specifically, the project is proposed on previously disturbed land located on the northeast corner of the Blythe Airport, north of Interstate 10, south of 9<sup>th</sup> Avenue, and northwest of Riverside Drive and Butch Avenue.

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Water will be provided via a 6-inch diameter pipeline that will be extended from the Blythe Airport Water Production and Storage Facility to allow for a permanent source of water. The line will undergrounded and extend east to Butch Avenue then north to the project site for a total of approximately 4,800 feet to the project site. The water will be used for fire suppression, construction and operation dust control, and solar panel maintenance.

Power will be delivered via a 33 kV gen-tie line (minor transmission line extending from the point of power generation to the point of connection into the transmission & distribution line) from the site approximately 3,200 feet due south paralleling the western side of Butch Avenue and tie into the existing 33kV Southern California Edison line that runs parallel to Hobson Way. The line will be undergrounded approximately 1,500 feet as required by the Airport Land Use Commission, and then come above ground mounted on 19-foot high poles to the point of tie in for Phase I. Phases II thru V will require complete undergrounding of two additional 33 kV gen-tie lines along Butch Avenue adjacent to the Phase I line. The point of tie in has not been determined for Phases II thru V at this time. In the event that the Phase II thru V gen-tie lines extend beyond the scope of review conducted up to Hobson Way, then additional environmental review will be required.

Primary road access is proposed from the east via Buck Boulevard north, then west along Riverside Drive, and then north along Butch Avenue. Secondary access is proposed northerly along Butch Avenue from Hobson Way, and two 24-foot wide emergency access gates are proposed where 9<sup>th</sup> and 10<sup>th</sup> Avenue meet the project boundaries eastern fence line.

Full Project Description for Reference - Contact Ray Burrez for word file



OFFICE OF  
CLERK OF THE BOARD OF SUPERVISORS  
1st FLOOR, COUNTY ADMINISTRATIVE CENTER  
P.O. BOX 1147, 4080 LEMON STREET  
RIVERSIDE, CA 92502-1147  
PHONE: (951) 955-1060  
FAX: (951) 955-1071

KECIA HARPER-IHEM  
Clerk of the Board of Supervisors

KIMBERLY A. RECTOR  
Assistant Clerk of the Board

November 18, 2010

THE PRESS ENTERPRISE  
ATTN: LEGALS  
P.O. BOX 792  
RIVERSIDE, CA 92501

E-MAIL: [legals@pe.com](mailto:legals@pe.com)  
FAX: (951) 368-9018

RE: NOTICE OF PUBLIC HEARING: FAST TRACK PLOT PLAN NO. 24616  
(FTA 2010-06)

To Whom It May Concern:

Attached is a copy for publication in your newspaper for **One (1) Time on Wednesday, November 24, 2010.**

We require your affidavit of publication immediately upon completion of the last publication.

Your invoice must be submitted to this office in duplicate, WITH TWO CLIPPINGS OF THE PUBLICATION.

NOTE: PLEASE COMPOSE THIS PUBLICATION INTO A SINGLE COLUMN FORMAT.

Thank you in advance for your assistance and expertise.

Sincerely,

*Mcgil*

Cecilia Gil, Board Assistant to  
KECIA HARPER-IHEM, CLERK OF THE BOARD

**Gil, Cecilia**

---

**From:** PE Legals [legals@pe.com]  
**Sent:** Thursday, November 18, 2010 9:13 AM  
**To:** Gil, Cecilia  
**Subject:** RE: FOR PUBLICATION: PP 24616 FTA 2010-06

Received for publication on Nov. 24

Thank You!  
Maria

Maria G. Tinajero • Legal Advertising Department • 1-800-880-0345 • Fax: 951-368-9018

**enterprise@media**

Publisher of the Press-Enterprise

Please Note: Deadline is 10:30 AM two (2) business days prior to the date you would like to publish.  
\*\*Additional days required for larger ad sizes\*\*

---

**From:** Gil, Cecilia [<mailto:CCGIL@rcbos.org>]  
**Sent:** Thursday, November 18, 2010 9:12 AM  
**To:** PE Legals  
**Subject:** FOR PUBLICATION: PP 24616 FTA 2010-06

Hello! A Notice of Public Hearing for publication on Wednesday, Nov. 24, 2010. Please confirm. THANK YOU!

*Cecilia Gil*

Board Assistant to the  
Clerk of the Board of Supervisors  
951-955-8464

**THE COUNTY ADMINISTRATIVE CENTER IS CLOSED EVERY FRIDAY UNTIL FURTHER NOTICE.  
PLEASE CONSIDER THE ENVIRONMENT BEFORE PRINTING.**



OFFICE OF  
CLERK OF THE BOARD OF SUPERVISORS  
1st FLOOR, COUNTY ADMINISTRATIVE CENTER  
P.O. BOX 1147, 4080 LEMON STREET  
RIVERSIDE, CA 92502-1147  
PHONE: (951) 955-1060  
FAX: (951) 955-1071

KECIA HARPER-IHEM  
Clerk of the Board of Supervisors

KIMBERLY A. RECTOR  
Assistant Clerk of the Board

November 18, 2010

THE DESERT SUN  
ATTN: LEGALS  
P.O. BOX 2734  
PALM SPRINGS, CA 92263

E-MAIL: [legals@desertsun.com](mailto:legals@desertsun.com)  
FAX: (760) 778-4731

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(FTA 2010-06)

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Thank you in advance for your assistance and expertise.

Sincerely,

*Mcgil*

Cecilia Gil, Board Assistant to  
KECIA HARPER-IHEM, CLERK OF THE BOARD

**Gil, Cecilia**

---

**From:** Moeller, Charlene [CMOELLER@palmspri.gannett.com]  
**Sent:** Thursday, November 18, 2010 9:17 AM  
**To:** Gil, Cecilia  
**Subject:** RE: FOR PUBLICATION: PP 24616 FTA 2010-06

Ad received and will publish on date(s) requested.

Charlene Moeller  
Public Notice Customer Service Rep.  
**The Desert Sun Newspaper**  
**750 N. Gene Autry Trail, Palm Springs, CA 92262**  
**(760) 778-4578, Fax (760) 778-4731**  
**Desert Sun** [legals@thedesertsun.com](mailto:legals@thedesertsun.com)  
**& Desert Post Weekly** [dpwlegals@thedesertsun.com](mailto:dpwlegals@thedesertsun.com)  
The Coachella Valley's #1 Source in News & Advertising! Visit us at [mydesert.com](http://mydesert.com)  
Please Be Kind to the Environment; Think before you print.

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**From:** Gil, Cecilia [<mailto:CCGIL@rcbos.org>]  
**Sent:** Thursday, November 18, 2010 9:12 AM  
**To:** tds-legals  
**Subject:** FOR PUBLICATION: PP 24616 FTA 2010-06

Hello! A Notice of Public Hearing for publication on Wednesday, Nov. 24, 2010. Please confirm. THANK YOU!

*Cecilia Gil*  
Board Assistant to the  
Clerk of the Board of Supervisors  
951-955-8464

**THE COUNTY ADMINISTRATIVE CENTER IS CLOSED EVERY FRIDAY UNTIL FURTHER NOTICE.**  
**PLEASE CONSIDER THE ENVIRONMENT BEFORE PRINTING.**



OFFICE OF  
CLERK OF THE BOARD OF SUPERVISORS  
1st FLOOR, COUNTY ADMINISTRATIVE CENTER  
P.O. BOX 1147, 4080 LEMON STREET  
RIVERSIDE, CA 92502-1147  
PHONE: (951) 955-1060  
FAX: (951) 955-1071

KECIA HARPER-IHEM  
Clerk of the Board of Supervisors

KIMBERLY A. RECTOR  
Assistant Clerk of the Board

November 18, 2010

PALO VERDE VALLEY TIMES  
ATTN: LEGALS  
P.O. BOX 1159  
BLYTHE, CA 92226

TEL: (760) 922-3181 ext. 101  
E-MAIL: [classifieds@paloverdevalleytimes.com](mailto:classifieds@paloverdevalleytimes.com)

RE: NOTICE OF PUBLIC HEARING: FAST TRACK PLOT PLAN NO. 24616  
(FTA 2010-06)

To Whom It May Concern:

Attached is a copy for publication in your newspaper for **One (1) Time on Wednesday, November 24, 2010.**

We require your affidavit of publication immediately upon completion of the last publication.

Your invoice must be submitted to this office in duplicate, WITH TWO CLIPPINGS OF THE PUBLICATION.

NOTE: PLEASE COMPOSE THIS PUBLICATION INTO A SINGLE COLUMN FORMAT.

Thank you in advance for your assistance and expertise.

Sincerely,

*Mcgil*

Cecilia Gil, Board Assistant to  
KECIA HARPER-IHEM, CLERK OF THE BOARD

**Gil, Cecilia**

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**From:** PVVT Classifieds [classifieds@pvvt.com]  
**Sent:** Thursday, November 18, 2010 9:25 AM  
**To:** Gil, Cecilia  
**Subject:** RE: FOR PUBLICATION: PP 24616 FTA 2010-06

Hi Cecelia, will publish as you requested. Thanks.

*Lori M. Nelson*  
*Classifieds / Legals Clerk*  
760-922-3181 x101  
Fax: 760-922-3184  
153 S. Broadway, Blythe, CA 92225  
[classifieds@paloverdevalleytimes.com](mailto:classifieds@paloverdevalleytimes.com)  
Mailing Address: P.O. Box 1159, Blythe, CA 92226

---

**From:** Gil, Cecilia [<mailto:CCGIL@rcbos.org>]  
**Sent:** Thursday, November 18, 2010 9:13 AM  
**To:** PVVT Classifieds  
**Subject:** FOR PUBLICATION: PP 24616 FTA 2010-06

Hello! A Notice of Public Hearing for publication on Wednesday, Nov. 24, 2010. Please confirm. THANK YOU!

*Cecilia Gil*  
Board Assistant to the  
Clerk of the Board of Supervisors  
951-955-8464

**THE COUNTY ADMINISTRATIVE CENTER IS CLOSED EVERY FRIDAY UNTIL FURTHER NOTICE.**  
**PLEASE CONSIDER THE ENVIRONMENT BEFORE PRINTING.**

Important: This e-mail and any attachments are intended only for the use of the individual or entity to which it is addressed. It may contain confidential and privileged information for the use of the designated recipients named above. If the reader of this transmission is not the intended recipient or the employee or agent responsible for delivering the transmission to the intended recipient, you are hereby notified that any dissemination, distribution, copying, printing or use of this transmission or its contents is strictly prohibited. If you have received this transmission in error, please notify me by telephone at the number listed above, and delete the entire transmission from your "inbox" and also from your "trash", "deleted items", other equivalent email "folder" locations and computer hard drive.



**NOTICE OF PUBLIC HEARING BEFORE THE BOARD OF SUPERVISORS OF RIVERSIDE COUNTY ON A FAST TRACK PLOT PLAN IN THE CHUCKWALLA ZONING AREA – PALO VERDE VALLEY AREA PLAN, FOURTH SUPERVISORIAL DISTRICT AND NOTICE OF INTENT TO ADOPT A MITIGATED NEGATIVE DECLARATION**

NOTICE IS HEREBY GIVEN that a public hearing at which all interested persons will be heard, will be held before the Board of Supervisors of Riverside County, California, on the 1<sup>st</sup> Floor Board Chambers, County Administrative Center, 4080 Lemon Street, Riverside, on **Tuesday, December 14, 2010 at 1:30 P.M.** to consider the application submitted by US Solar Holdings, LLC – The Holt Group, on **Fast Track Plot Plan No. 24616 (FTA 2010-06)**, which proposes to construct a 100 megawatt Photovoltaic (PV) Solar Power Plant on 640 acres of an 829 acre lease area in five (5) twenty (20) megawatt phases inclusive of: a single axis tracking system organized in 874 x 168-foot and 874 x 370-foot power blocks with a maximum height of ten feet; a perimeter 24-foot interior access road and 25-foot interior drive aisles for emergency access and maintenance purposes; a combination of inverters and transformers on concrete pads covered by three sided open shade covers within each power block; an 8-foot high chain link fence with three strand barbed-wire around the project perimeter boundary; a temporary construction area which includes a 12' x 60' portable construction trailers, parking spaces and portable toilets on the southeast corner of the site; and, a temporary staging area in the center of proposed Phase II on an existing concrete pad ("the project"). The project is located northeast of the community of Mesa Verde in the Palo Verde Valley Area Plan in Eastern Riverside County. Specifically, the project is proposed on previously disturbed land located on the northeast corner of the Blythe Airport, north of Interstate 10, south of 9<sup>th</sup> Avenue, and northwest of Riverside Drive and Butch Avenue in the Chuckwalla Zoning Area – Palo Verde Valley Area Plan, Fourth Supervisorial District.

The project case file may be viewed from the date of this notice until the public hearing, Monday through Thursday, from 7:30 a.m. to 5:30 p.m. at the Clerk of the Board of Supervisors at 4080 Lemon Street, 1st Floor, Riverside, California 92501, and at the Riverside County Planning Department at 4080 Lemon Street, 9<sup>th</sup> Floor, Riverside, California 92501.

FOR FURTHER INFORMATION REGARDING THIS PROJECT, PLEASE CONTACT RAYMOND JUAREZ, PROJECT PLANNER, AT (951) 955-9541 OR EMAIL [rjuarez@rctlma.org](mailto:rjuarez@rctlma.org).

Any person wishing to testify in support of or in opposition to the project may do so in writing between the date of this notice and the public hearing, or may appear and be heard at the time and place noted above. All written comments received prior to the public hearing will be submitted to the Board of Supervisors and the Board of Supervisors will consider such comments, in addition to any oral testimony, before making a decision on the project.

If you challenge the above item in court, you may be limited to raising only those issues you or someone else raised at the public hearing described in this notice, or in written correspondence to the Planning Commission or Board of Supervisors at, or prior to, the public hearing. Be advised that as a result of the public hearing and the consideration of all public comment, written and oral, the Board of Supervisors may amend, in whole or in part, the project and/or the related environmental document. Accordingly, the designations, development standards, design or improvements, or any properties or lands within the boundaries of the project, may be changed in a way other than specifically proposed.

Please send all written correspondence to: Clerk of the Board, 4080 Lemon Street, 1st Floor, Post Office Box 1147, Riverside, CA 92502-1147

Dated: November 18, 2010

Kecia Harper-Ihem  
Clerk of the Board  
By: Cecilia Gil, Board Assistant

## **CERTIFICATE OF POSTING**

(Original copy, duly executed, must be attached to  
the original document at the time of filing)

I, Cecilia Gil, Board Assistant to Kecia Harper-Ihem, Clerk of the Board of Supervisors, for the County of Riverside, do hereby certify that I am not a party to the within action or proceeding; that on November 18, 2010, I forwarded to Riverside County Clerk & Recorder's Office a copy of the following document:

### **NOTICE OF PUBLIC HEARING**

Fast Track Plot Plan No. 24616 (FTA 2010-06)

to be posted, pursuant to Government Code Section 21092 et seq, in the office of the County Clerk at 2724 Gateway Drive, Riverside, California 92507. Upon completion of posting, the County Clerk will provide the required certification of posting.

**Board Agenda Date:** December 14, 2010 @ 1:30 PM

SIGNATURE: Mcgil      DATE: November 18, 2010  
Cecilia Gil

## Gil, Cecilia

---

**From:** Meyer, Mary Ann [MaMeyer@asrcrkrec.com]  
**Sent:** Thursday, November 18, 2010 10:09 AM  
**To:** Gil, Cecilia  
**Subject:** RE: PP 24616 FTA 2010-06 for POSTING

received and posted

---

**From:** Gil, Cecilia  
**Sent:** Thursday, November 18, 2010 10:08 AM  
**To:** Meyer, Mary Ann  
**Cc:** Marshall, Tammie  
**Subject:** PP 24616 FTA 2010-06 for POSTING

Mary Ann,

Can you please disregard the 1<sup>st</sup> Notice I sent you? This one (attached) is the Revised Notice for POSTING. Please confirm. THANK YOU!

*Cecilia Gil*

Board Assistant to the  
Clerk of the Board of Supervisors  
951-955-8464

**THE COUNTY ADMINISTRATIVE CENTER IS CLOSED EVERY FRIDAY UNTIL FURTHER NOTICE.  
PLEASE CONSIDER THE ENVIRONMENT BEFORE PRINTING.**

## **CERTIFICATE OF MAILING**

(Original copy, duly executed, must be attached to  
the original document at the time of filing)

I, Cecilia Gil, Board Assistant, for the  
(NAME and TITLE)

County of Riverside, do hereby certify that I am not a party to the within action or proceeding; that on November 18, 2010, I mailed a copy of the following document:

## **NOTICE OF PUBLIC HEARING**

Fast Track Plot Plan No. 24616 (FTA 2010-06)

to the parties listed in the attached labels, by depositing said copy with postage thereon fully prepaid, in the United States Post Office, 3890 Orange St., Riverside, California, 92501.

**Board Agenda Date:** December 14, 2010 @ 1:30 PM

SIGNATURE: McGil  
Cecilia Gil

DATE: November 18, 2010

## PROPERTY OWNERS CERTIFICATION FORM

I, VINNIE NGUYEN, certify that on 11/4/2010.

The attached property owners list was prepared by Riverside County GIS,

APN (s) or case numbers PP 24616 For

Company or Individual's Name Planning Department,

Distance buffered 2400'.

Pursuant to application requirements furnished by the Riverside County Planning Department, Said list is a complete and true compilation of the owners of the subject property and all other property owners within 600 feet of the property involved, or if that area yields less than 25 different owners, all property owners within a notification area expanded to yield a minimum of 25 different owners, to a maximum notification area of 2,400 feet from the project boundaries, based upon the latest equalized assessment rolls. If the project is a subdivision with identified off-site access/improvements, said list includes a complete and true compilation of the names and mailing addresses of the owners of all property that is adjacent to the proposed off-site improvement/alignment.

I further certify that the information filed is true and correct to the best of my knowledge. I understand that incorrect or incomplete information may be grounds for rejection or denial of the application.


NAME: Vinnie Nguyen

TITLE GIS Analyst

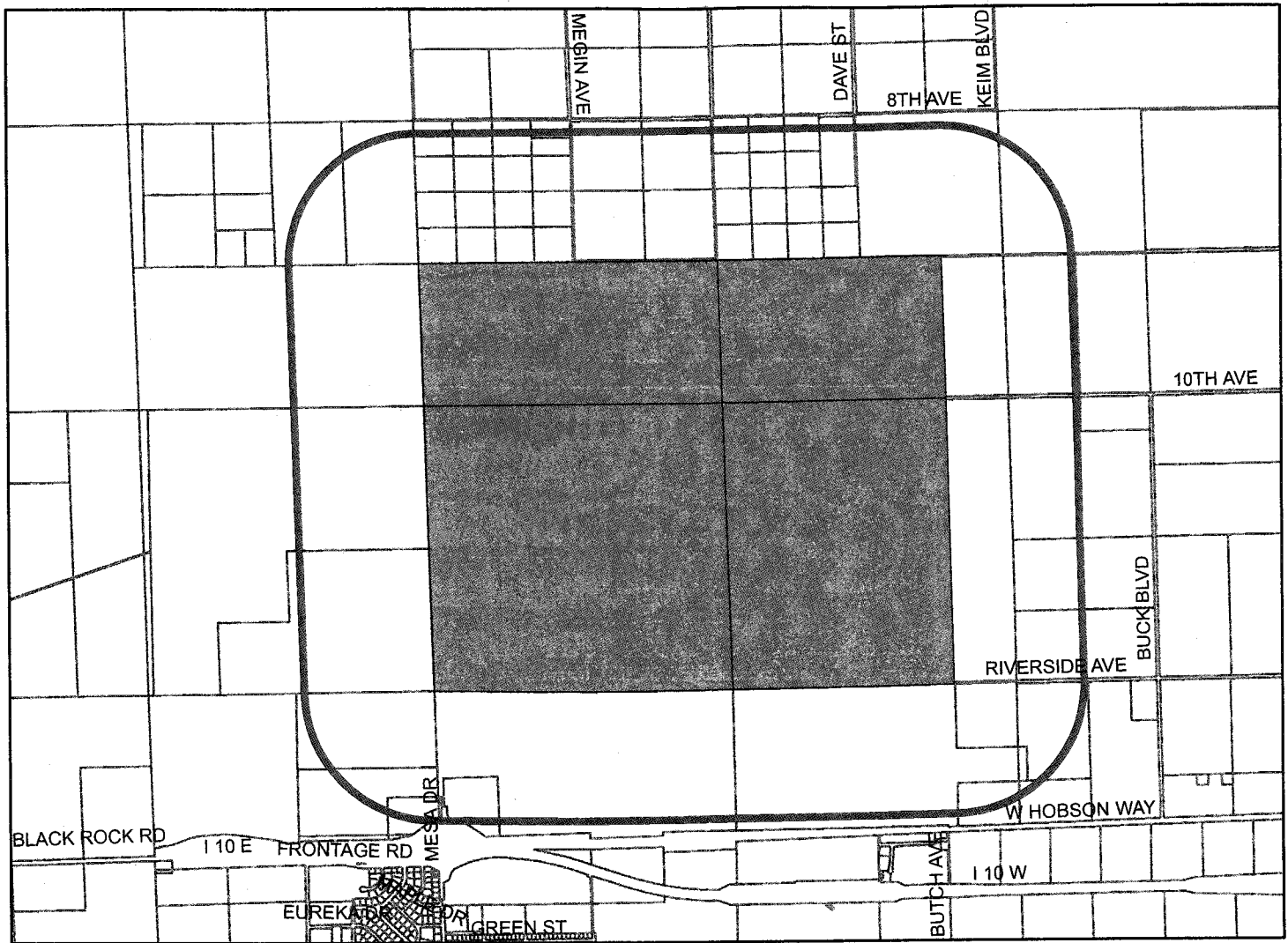
ADDRESS: 4080 Lemon Street 2<sup>nd</sup> Floor

Riverside, Ca. 92502

TELEPHONE NUMBER (8 a.m. – 5 p.m.): (951) 955-8158

✓ 11/4/10   
EXPIRES 5/4/2011

## 2400 feet buffer



### Selected Parcels

821-080-038	821-080-037	821-080-001	821-080-007	824-101-012	824-101-013	821-080-022	818-260-003	818-210-013	818-250-001
824-101-007	824-080-004	824-020-005	821-110-003	821-110-002	821-080-041	821-080-040	818-180-022	818-210-012	824-020-002
821-080-011	821-080-033	821-080-039	821-080-010	821-080-005	821-080-024	821-080-020	821-090-012	824-080-005	824-080-003
821-110-004	821-080-047	821-080-046	821-080-045	821-080-044	821-080-043	821-120-028	821-120-027	821-120-025	821-080-050
821-080-008	821-080-012	821-080-013	821-080-029	821-080-028	821-080-016	821-080-014	821-080-021	821-080-025	821-080-002
821-080-030	821-080-031	821-080-009	821-080-015	821-080-003	821-080-034	824-020-006	818-260-004	818-180-020	818-180-021
821-080-042	821-090-006	821-080-006	821-080-026	821-080-035					



3,600 1,800 0 3,600 Feet

Maps and data are to be used for reference purposes only. Map features are approximate, and are not necessarily accurate to surveying or engineering standards. The County of Riverside makes no warranty or guarantee as to the content (the source is often third party), accuracy, timeliness, or completeness of any of the data provided, and assumes no legal responsibility for the information contained on this map. Any use of this product with respect to accuracy and precision shall be the sole responsibility of the user.

ATTN: General Manager  
Blythe Airport  
17710 W. Hobson Way  
Blythe, CA 92225

ATTN: Nate Picket  
CALTRANS District #8  
464 W. 4th St., 6th Floor  
Mail Stop 728  
San Bernardino, CA 92401-1400

ATTN: Philip Crimmins  
CALTRANS Division of Aeronautics  
P.O. Box 942873  
Sacramento, CA 94273-0001

Centralized Correspondence,  
Southern California Gas Company  
P.O. Box 3150  
San Dimas, CA 91773

ATTN: Walt Honse  
Development Services Department,  
City of Blythe  
235 N. Broadway, Mail Stop 2611  
Blythe, CA 92225

East Sierra and Inland Deserts, Reg. 6  
California State Dept. of Fish & Game  
3602 Inland Empire Blvd., # C220  
Ontario, CA 91764

ATTN: Division Manager  
Ecological Service,  
U.S. Fish & Wildlife Service  
6010 Hidden Valley Rd.  
Carlsbad, CA 92011

Palo Verde Unified School District  
295 N. First St.  
Blythe, CA 92225-1824

Reg. Water Quality Control Board #7  
Colorado River Basin  
73-720 Fred Waring Dr., Suite 100  
Palm Desert, CA 92260-2564

Southern California Edison  
2244 Walnut Grove Ave., Rm 312  
P.O. Box 600  
Rosemead, CA 91770

ATTN: James W. Reede Jr., Ed. D  
Transmission Corridor Designation  
Program, Ca. Energy Commission  
1516 9<sup>th</sup> St. M/S 46  
Sacramento, CA 95814

Applicant:  
Solar Holdings LLC  
P.O. Box 44485  
c/o Tanya Martinez  
Pheonix, AZ 85084

Eng-Rep:  
The Holt Group  
201 E Hobson Way  
Blythe, CA 92225

Owner:  
County of Riverside  
3525 14<sup>th</sup> St.  
Riverside, CA 92501

PP24616 (49)

APN: 821080037, ASMT: 821080037  
ALICA E THOMAS  
3801 STANDARD ST  
BAKERSFIELD CA 93308

APN: 824020002, ASMT: 824020002  
COUNTY OF RIVERSIDE AIRPORT  
3525 14TH ST  
RIVERSIDE CA 92501

APN: 821080001, ASMT: 821080001  
ALLAN D BICKFORD, ETAL  
2675 MISHLER RD  
MIO MI 48647

APN: 821080011, ASMT: 821080011  
DARLENE LUCKETT  
301 S 4TH ST APT 3  
FARMINGTON IA 52626

APN: 821080007, ASMT: 821080007  
BEVERLY M SCHNESE  
1125 KITTIWAKE DR  
VENICE FL 34292

APN: 821080033, ASMT: 821080033  
DEBORAH MATSUZAWA  
12577 VIEW RIDGE  
BOISE ID 83709

APN: 824101013, ASMT: 824101013  
CAITHNESS BLYTHE II  
565 5TH AVE 29TH FL  
NEW YORK NY 10017

APN: 821080039, ASMT: 821080039  
DENISE ANNETTE MCCOY, ETAL  
7 S HWY 125  
LEMINGTON UT 84638

APN: 821080022, ASMT: 821080022  
CLIFFORD WRIGHT, ETAL  
5837 HALM AVE  
LOS ANGELES CA 90056

APN: 821080010, ASMT: 821080010  
DONALD J PETERSCHMIDT  
3172 223RD AVE  
MONTROSE IA 52639

APN: 818250001, ASMT: 818250001  
COUNTY OF RIVERSIDE  
DEPARTMENT OF BUILDING SERVICES  
3525 14TH ST  
RIVERSIDE CA 92501

APN: 821080005, ASMT: 821080005  
EVELYN M JOHNSON  
RR 1 BOX 1E  
BARING MO 63531

APN: 824101007, ASMT: 824101007  
COUNTY OF RIVERSIDE  
DEPARTMENT OF BUILDING SERVICES  
3133 7TH ST  
RIVERSIDE CA 92501

APN: 821080020, ASMT: 821080020  
FRED W STERLING, ETAL  
C/O STORM STERLING  
219 N SUNKIST ST  
ANAHEIM CA 92806





APN: 821080050, ASMT: 821080050  
GILA FARM LAND  
5700 WILSHIRE BLV NO 330  
LOS ANGELES CA 90036

APN: 821080014, ASMT: 821080014  
LOIS J HOLLAND, ETAL  
4204 W ELY RD  
HANNIBAL MO 63401

APN: 821080008, ASMT: 821080008  
GREGORIO F GAJE, ETAL  
1264 OAKHURST CT  
BEAUMONT CA 92223

APN: 821080025, ASMT: 821080025  
MARIA D DUARTE  
17625 GREEN ST  
BLYTHE CA 92225

APN: 821080012, ASMT: 821080012  
HARRIS AHMED  
5905 OLD WHEELER RD  
LA VERNE CA 91750

APN: 821080031, ASMT: 821080031  
MARIE M F BIRD  
290 N WATEKA ST  
SAN JACINTO CA 92583

APN: 821080013, ASMT: 821080013  
JERRY D FINE, ETAL  
3023 260TH AVE  
MONTROSE IA 52639

APN: 821080009, ASMT: 821080009  
MARJORIE RIPPENKROEGER  
2629 AVE J  
FT MADISON IA 52627

APN: 821080029, ASMT: 821080029  
JOAN E PEER  
1717 GATHE DR  
SAN LUIS OBISPO CA 93405

APN: 821080015, ASMT: 821080015  
MICHAEL J MADDOX  
P O BOX 476  
WALLACE CA 95254

APN: 821080028, ASMT: 821080028  
LEONARD W ESTES  
2900 E EVERETT  
ORANGE CA 92867

APN: 821080003, ASMT: 821080003  
N R L L INC  
P O BOX 50490  
15642 SAND CANYON AVE  
IRVINE CA 92619

APN: 821080016, ASMT: 821080016  
LISA M CASAVANT, ETAL  
29865 WHISPERING PALMS TR  
CATHEDRAL CY CA 92234

APN: 821080034, ASMT: 821080034  
RICHARD R MOORE, ETAL  
3722 MISSION WAY  
LAKE HAVASU CITY AZ 86406

APN: 824020006, ASMT: 824020006  
ROBERT L MEANS, ETAL  
13015 MESA DR  
BLYTHE CA 92225

APN: 818260004, ASMT: 818260004  
TERI OAT INC  
C/O AKWINDER SINGH  
17970 W HOBSON WAY  
BLYTHE CA 92225

APN: 818180021, ASMT: 818180021  
USA 818  
US DEPT OF INTERIOR  
WASHINGTON DC 21401

APN: 821090006, ASMT: 821090006  
USA 821  
NONE  
US DEPT OF THE INTERIOR  
WASHINGTON DC 21401

APN: 821080006, ASMT: 821080006  
VERLAMAE RIGBY  
5610 PIONEERS BLV 283  
LINCOLN NE 68506

APN: 821080026, ASMT: 821080026  
VICTOR J HOLCHAK  
P O BOX 46039  
LOS ANGELES CA 90046

APN: 821080035, ASMT: 821080035  
WAYNE M SMITH, ETAL  
465 WORCESTER DR  
CAMBRIA CA 93428

**Riverside County Board of Supervisors  
Request to Speak**

Submit request to Clerk of Board (right of podium),  
Speakers are entitled to three (3) minutes, subject  
Board Rules listed on the reverse side of this form.

**SPEAKER'S NAME:** JIM GREER

**Address:** \_\_\_\_\_  
(only if follow-up mail response requested)

**City:** BOISE **Zip:** 83712

**Phone #:** 208 841 3700

**Date:** DEC 14 **Agenda #** 16.1

**PLEASE STATE YOUR POSITION BELOW:**

**Position on "Regular" (non-appealed) Agenda Item:**

X **Support**        **Oppose**        **Neutral**

**Note:** If you are here for an agenda item that is filed  
for "Appeal", please state separately your position on  
the appeal below:

       **Support**        **Oppose**        **Neutral**

**I give my 3 minutes to:** \_\_\_\_\_

## **BOARD RULES**

### **Requests to Address Board on "Agenda" Items:**

You may request to be heard on a published agenda item. Requests to be heard must be submitted to the Clerk of the Board before the scheduled meeting time.

### **Requests to Address Board on items that are "NOT" on the Agenda:**

Notwithstanding any other provisions of these rules, member of the public shall have the right to address the Board during the mid-morning "Oral Communications" segment of the published agenda. Said purpose for address must pertain to issues which are under the direct jurisdiction of the Board of Supervisors. YOUR TIME WILL BE LIMITED TO THREE (3) MINUTES.

### **Power Point Presentations/Printed Material:**

Speakers who intend to conduct a formalized Power Point presentation or provide printed material must notify the Clerk of the Board's Office by 12 noon on the Monday preceding the Tuesday Board meeting, insuring that the Clerk's Office has sufficient copies of all printed materials and at least one (1) copy of the Power Point CD. Copies of printed material given to the Clerk (by Monday noon deadline) will be provided to each Supervisor. If you have the need to use the overhead "Elmo" projector at the Board meeting, please insure your material is clear and with proper contrast, notifying the Clerk well ahead of the meeting, of your intent to use the Elmo.

### **Individual Speaker Limits:**

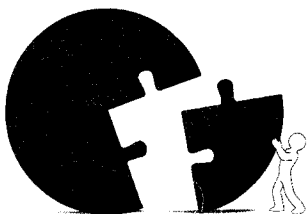
**Individual speakers are limited to a maximum of three (3) minutes.** Please step up to the podium when the Chairman calls your name and begin speaking immediately. Pull the microphone to your mouth so that the Board, audience, and audio recording system hear you clearly. Once you start speaking, the "green" podium light will light. The "yellow" light will come on when you have one (1) minute remaining. When you have 30 seconds remaining, the "yellow" light will begin flash, indicating you must quickly wrap up your comments. Your time is up when the "red" light flashes. The Chairman adheres to a strict three (3) minutes per speaker. ***Note: If you intend to give your time to a "Group/Organized Presentation", please state so clearly at the very bottom of the reverse side of this form.***

### **Group/Organized Presentations:**

Group/organized presentations with more than one (1) speaker will be limited to nine (9) minutes at the Chairman's discretion. The organizer of the presentation will automatically receive the first three (3) minutes, with the remaining six (6) minutes relinquished by other speakers, as requested by them on a completed "Request to Speak" form, and clearly indicated at the front bottom of the form.

### **Addressing the Board & Acknowledgement by Chairman:**

The Chairman will determine what order the speakers will address the Board, and will call on all speakers in pairs. The first speaker should immediately step to the podium and begin addressing the Board. The second speaker should take up a position in one of the chamber aisles in order to quickly step up to the podium after the preceding speaker. This is to afford an efficient and timely Board meeting, giving all attendees the opportunity to make their case. Speakers are prohibited from making personal attacks, and/or using coarse, crude, profane or vulgar language while speaking to the Board members, staff, the general public and/or meeting participants. Such behavior, at the discretion of the Board Chairman may result in removal from the Board Chambers by Sheriff Deputies.



# RIVERSIDE COUNTY PLANNING DEPARTMENT

Carolyn Syms Luna  
Director

DATE: November 16, 2010

TO: Clerk of the Board of Supervisors

FROM: Planning Department - Riverside Office

SUBJECT: Plot Plan No. 24616 – EA42340 – FTA 2010-06

(Charge your time to these case numbers)

**The attached item(s) require the following action(s) by the Board of Supervisors:**

- |   |  |
|---|--|
| <input type="checkbox"/> Place on Administrative Action (Receive & File; EOT)                   | <input checked="" type="checkbox"/> Set for Hearing (Legislative Action Required; CZ, GPA, SP, SPA)        |
| <input type="checkbox"/> Labels provided If Set For Hearing                                     | <input checked="" type="checkbox"/> Publish in Newspaper:  |
| <input type="checkbox"/> 10 Day <input type="checkbox"/> 20 Day <input type="checkbox"/> 30 day | (4th Dist) See Below for Advertisement Requirement   |
| <input type="checkbox"/> Place on Consent Calendar  | <input checked="" type="checkbox"/> Mitigated Negative Declaration   |
| <input type="checkbox"/> Place on Policy Calendar (Resolutions; Ordinances; PNC)                | <input type="checkbox"/> 10 Day <input checked="" type="checkbox"/> 20 Day <input type="checkbox"/> 30 day |
| <input type="checkbox"/> Place on Section Initiation Proceeding (GPIP)                          | <input checked="" type="checkbox"/> Notify Property Owners (app/agencies/property owner labels provided)   |
|   | Controversial: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO                         |

**Designate Newspaper used by Planning Department for Notice of Hearing:**

4<sup>th</sup> District – Desert Sun, Press Enterprise, and Palo Verde Times

An Advertisement Package has been delivered to the Clerk of the Board with a request to be scheduled on the December 14, 2010 BOS Agenda

**Documents to be sent to County Clerk's Office for Posting within five days:**

Notice of Determination and Mit Neg Dec Forms  
Fish & Game Receipts for (CFG5702) \$64.00 and \$2,010.25

Riverside Office · 4080 Lemon Street, 12th Floor  
P.O. Box 1409, Riverside, California 92502-1409  
(951) 955-3200 · Fax (951) 955-3157

Desert Office · 38686 El Cerrito Road  
Palm Desert, California 92211  
(760) 863-8277 · Fax (760) 863-7555

"Planning Our Future... Preserving Our Past"

**Agenda Item No.:**  
**Area Plan:** Palo Verde Valley  
**Zoning Area:** Chuckwalla  
**Supervisory District:** Fourth  
**Project Planner:** Raymond Juarez  
**Board of Supervisors:** December 14, 2010

**Plot Plan No.** 24616  
**Fast Track Authorization No.** 2010-06  
**Environmental Assessment No.** 42340  
**Applicant:** US Solar Holdings LLC  
**Engineer/Representative:** The Holt Group

## **COUNTY OF RIVERSIDE PLANNING DEPARTMENT STAFF REPORT**

### **PROJECT LOCATION AND DESCRIPTION:**

**Location:** The site is located northeast of the community of Mesa Verde in the Palo Verde Valley Area Plan in Eastern Riverside County. Specifically, the project is proposed on previously disturbed land located on the northeast corner of the Blythe Airport, north of Interstate 10, south of 9<sup>th</sup> Avenue, and northwest of Riverside Drive and Butch Avenue.

**Description:** The applicant proposes to construct a 100 megawatt Photovoltaic (PV) Solar Power Plant on 640 acres of an 829 acre lease area in five (5) twenty (20) megawatt phases inclusive of: a single axis tracking system organized in 874 x 168-foot and 874 x 370-foot power blocks with a maximum height of ten feet; a perimeter 24-foot interior access road and 25-foot interior drive aisles for emergency access and maintenance purposes; a combination of inverters and transformers on concrete pads covered by three sided open shade covers within each power block; an 8-foot high chain link fence with three strand barbed-wire around the project perimeter boundary; a temporary construction area which includes a 12' X 60' portable construction trailer, five parking spaces and portable toilets on the southeast corner of the site; and, a temporary staging area in the center of proposed Phase II on an existing concrete pad.

Water will be provided via a 6-inch diameter pipeline that will be extended from the Blythe Airport Water Production and Storage Facility to allow for a permanent source of water. The line will undergrounded and extend east to Butch Avenue then north to the project site for a total of approximately 4,800 feet to the project site. The water will be used for fire suppression, construction and operation dust control, and solar panel maintenance.

Power will be delivered via a 33 kV gen-tie line (minor transmission line extending from the point of power generation to the point of connection into the transmission & distribution line) from the site approximately 3,200 feet due south paralleling the western side of Butch Avenue and tie into the existing 33kV Southern California Edison line that runs parallel to Hobson Way. The line will be undergrounded approximately 1,500 feet as required by the Airport Land Use Commission, and then come above ground mounted on 19-foot high poles to the point of tie in for Phase I. Phases II thru V will require complete undergrounding of two additional 33 kV gen-tie lines along Butch Avenue adjacent to the Phase I line. The point of tie in has not been determined for Phases II thru V at this time. In the event that the Phase II thru V gen-tie lines extend beyond the scope of review conducted up to Hobson Way, then additional environmental review will be required.

Primary road access is proposed from the east via Buck Boulevard north, then west along Riverside Drive, and then north along Butch Avenue. Secondary access is proposed northerly along Butch Avenue from Hobson Way, and two 24-foot wide emergency access gates are proposed where 9<sup>th</sup> and 10<sup>th</sup> Avenue meet the project boundaries eastern fence line.

**SUMMARY OF FINDINGS:**

- |                                       |  |
|---------------------------------------|--|
| 1. Existing General Plan Land Use:    | Community Development: Public Facilities   |
| 2. Surrounding General Plan Land Use: | Community Development: Public Facilities to the south and west, and Agriculture: Agriculture to the north and east.  |
| 3. Existing Zoning:                   | Manufacturing-Heavy (M-H)  |
| 4. Surrounding Zoning:                | M-H Zone to the south and west, Controlled Development Areas – 10-Acre Minimum (W-2-10) to the north and east, and Natural Assets (N-A) to the north.  |
| 5. Existing Land Use:                 | The proposed Solar Power Plant will be sited on a vacant previously disturbed portion of the Blythe Airport.   |
| 6. Surrounding Land Use:              | The lands to the north, east and west of the site are primarily vacant with sparse residential and agricultural uses. The City of Blythe and the Southern California Edison Blythe Energy Plant are to the southeast, and scattered commercial and industrial uses exist to the south. |
| 7. Project Data:                      | Lease Area: 829 acres<br>Disturbed Area: 640 acres<br>100 Megawatt (MW) developed in five 20 MW Phases   |
| 8. Environmental Concerns:            | See attached Environmental Assessment No. 42340  |

**RECOMMENDATIONS:**

**ADOPTION** of a **MITIGATED NEGATIVE DECLARATION** for **ENVIRONMENTAL ASSESSMENT NO. 42340**, based on the findings incorporated in the initial study and the conclusion that the project will not have a significant effect on the environment; and,

**APPROVAL** of **PLOT PLAN NO. 24616**, subject to the attached conditions of approval, and based upon the findings and conclusions incorporated in the staff report.

**CONCLUSIONS:**

1. The proposed project is in conformance with the Community Development: Public Facilities Land Use Designation, and with all other elements of the Riverside County General Plan.
2. The proposed project is consistent with the Manufacturing Heavy (M-H) Zoning Classification of Ordinance No. 348, and with all other applicable provisions of Ordinance No. 348.
3. The public's health, safety, and general welfare are protected through project design and project specific mitigation measures.

4. The proposed project is conditionally compatible with the present and future logical development of the area.
5. The proposed project will not, as designed and conditioned, have a significant effect on the environment.

**FINDINGS:** The following findings are in addition to those incorporated in the summary of findings and in the attached environmental assessment, which is incorporated herein by reference.

1. The project site is designated Community Development: Public Facilities on the Palo Verde Valley Area Plan.
2. The project site is surrounded by properties which are designated Community Development: Public Facilities to the south and west, and Agriculture: Agriculture to the north and east.
3. The Public Facilities land use designation provides for the development of various public, quasi-public, and private uses with similar characteristics, such as governmental facilities, utility facilities including public and private electric generating stations and corridors, landfills, airports, educational facilities, and maintenance yards.
4. The proposed photovoltaic (PV) Solar Power Plant is a private electric generating station.
5. The proposed use, PV Solar Power Plant, is consistent with the Community Development: Public Facilities General Plan Land Use Designation.
6. The zoning for the subject site is Manufacturing-Heavy (M-H).
7. The subject site is surrounded by parcels which are zoned Manufacturing Heavy (M-H) to the south and west, Controlled Development Areas – 10 Acre Minimum (W-2-10) to the north and east, and Natural Assets (N-A) to the north.
8. M-H Zone Section 12.2 (Uses Permitted), subsection b. states that public utility substations and storage yards are allowed with an approved Plot Plan.
9. M-H Zone Section 12.2 (Uses Permitted), subsection h. states that any use that is not specifically listed in Subsections b. and c. may be considered a permitted or conditionally permitted use providing that the Planning Director finds that the proposed use is substantially the same in character and intensity as those listed in the designated subsections. Such a use is subject to the permit process which governs the category in which it falls.
10. The Planning Director finds that the proposed PV Solar Power Plant is substantially the same in character and intensity as other uses allowed with a Plot Plan in the Manufacturing Heavy Zone such as public utility substations.
11. The proposed PV Solar Power Plant will generate 100 MW of electricity to be sold to a public utility for distribution to the general public.
12. The proposed Solar Power Plant is in conformance with the development standards set forth in the Manufacturing Heavy zone.



13. The site is surrounded by the existing Blythe Power Plant, Substations, transmission and distribution lines, the Blythe Airport, and other industrial related uses.
14. This project is not located in a Conservation Area of the Coachella Valley Multi-Species Habitat Conservation Plan.
15. This project is within the City Sphere of Influence of Blythe.
16. Environmental Assessment No. 42340 identified the following potentially significant impacts:
  - a. Aesthetics
  - b. Air Quality
  - c. Biological Resources
  - d. Cultural Resources
  - e. Geology/Soils
  - f. Hazards & Hazardous Materials
  - g. Transportation/Traffic
  - h. Utilities/Service Systems

These listed impacts will be fully mitigated by the measures indicated in the environmental assessment, conditions of approval, and attached letters. No other significant impacts were identified.

**INFORMATIONAL ITEMS:**

1. As of this writing, no letters, in support or opposition have been received.
2. The Project site is located within:
  - a. City sphere of influence: Blythe
  - b. Chuckwalla Zoning Area
  - c. Area Plan: Palo Verde Valley
  - d. Supervisorial District: 4<sup>th</sup> District
  - e. General Plan Land Use Designation: Community Development: Public Facilities
  - f. Ordinance No. 348 Zoning Designation: Manufacturing – Heavy
  - g. Redevelopment Area: Blythe Airport
  - h. Airport Influence Area/Zone: Blythe
  - i. Ordinance No. 659 (DIF) Fee Area: Palo Verde Fee Area – Industrial
  - j. School District: Palo Verde Unified School District
  - k. Liquefaction Potential: Moderate
  - l. County Service Area: 152
  - m. Low Paleontological Sensitivity
2. The Project site is not located within:
  - a. General Policy Areas
  - b. General Plan Overlay
  - c. Specific Plan
  - d. Agricultural Preserve
  - e. WRCMSHCP Criteria Cell or CVMSHCP Conservation Area
  - f. Ordinance No. 810 (MSHCP) Fee area
  - g. Ordinance No. 824 (TUMF) Fee Area
  - h. Riverside County Flood Control District/zone
  - i. Water District

- j. Subsidence
- k. Lighting Ordinance No. 655 zone: 124.67 Miles from Mt. Palomar Observatory – not applicable
- l. Circulation Element Road:
- m. Stevens Kangaroo Rat fee area Ordinance No. 663.10
- n. Fringe Toe Lizard fee area Ordinance No. 457 & 460
- o. Fault zone: Within ½ mile
- p. High Fire Area

- 3. The subject site is currently designated as Assessor's Parcel Nos. 821-080-040 and 041, and 821-110-002 and 003.
- 4. This project was filed with the Planning Department on June 23, 2010.
- 5. This project was reviewed by the Land Development Committee (LDC) on July 15, 2010.
- 6. The applicant has been working with County Staff since the LDC date to provide site specific biological and cultural resource studies and analysis.
- 7. The environmental studies and their review were deemed complete on November 3, 2010.
- 8. Deposit Based Fees charged for this project, as of the time of staff report preparation, total \$40,774.68.

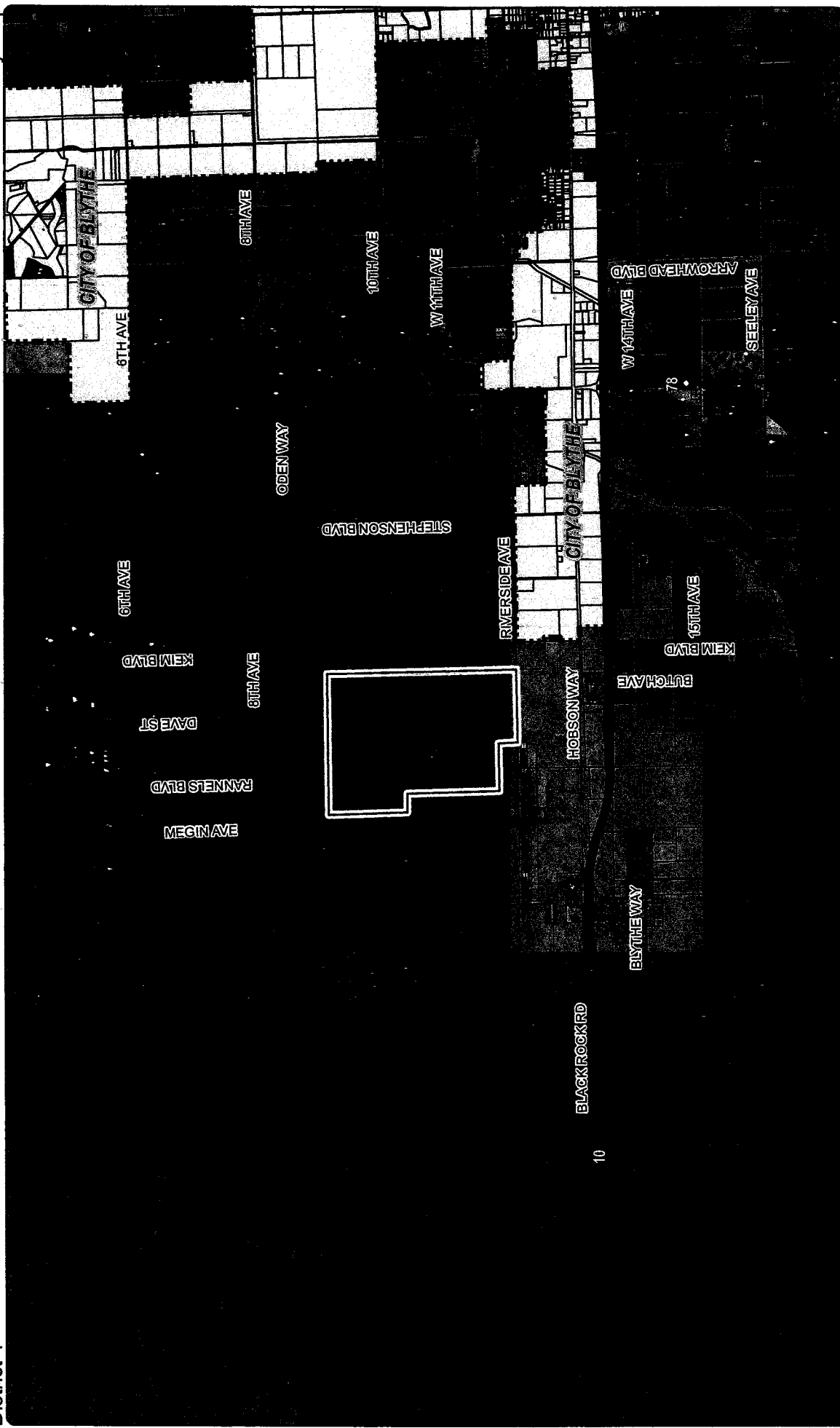
# RIVERSIDE COUNTY PLANNING DEPARTMENT

PP24616

## VICINITY/POLICY AREAS

Supervisor Benoit  
District 4

Date Drawn: 11/04/10  
Vicinity Map



Zoning Area: Chuckwalla  
Township/Range: T6SR22E  
Sections: 19, 20, 29, 30

DISCLAIMER: On October 7, 2003, the County of Riverside adopted a new General Plan providing new land use designations for unincorporated Riverside County parcels. The new General Plan may contain different types of land use than is provided for under existing zoning. For further information, please contact the Riverside County Planning Department offices in Riverside at (951) 955-3200 (Western County), or in Indio at (760) 863-8277 (Eastern County) or website at <http://www.lima.co.riverside.ca.us/index.html>

Assessors Bk. Pg. 927-28  
Thomas Bros. Pg. 5489 & 5490  
Edition 2009



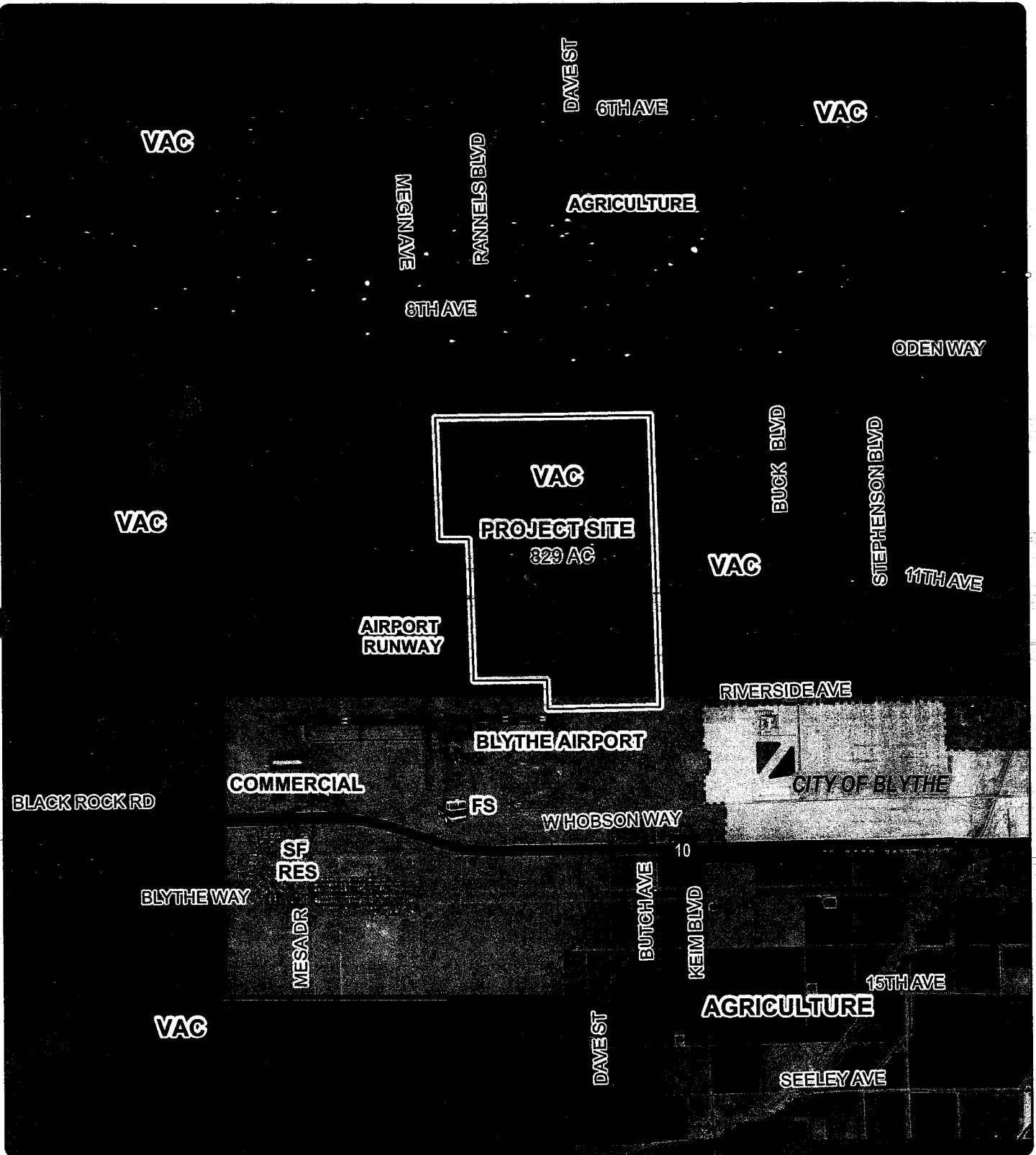
# RIVERSIDE COUNTY PLANNING DEPARTMENT

PP24616

LAND USE

Supervisor Benoit  
District 4

Date Drawn: 11/04/10  
Exhibit 1



Zoning Area: Chuckwalla  
Township/Range: T6SR22E  
Sections: 19, 20, 29, 30

Assessors Bk. Pg. 927-28  
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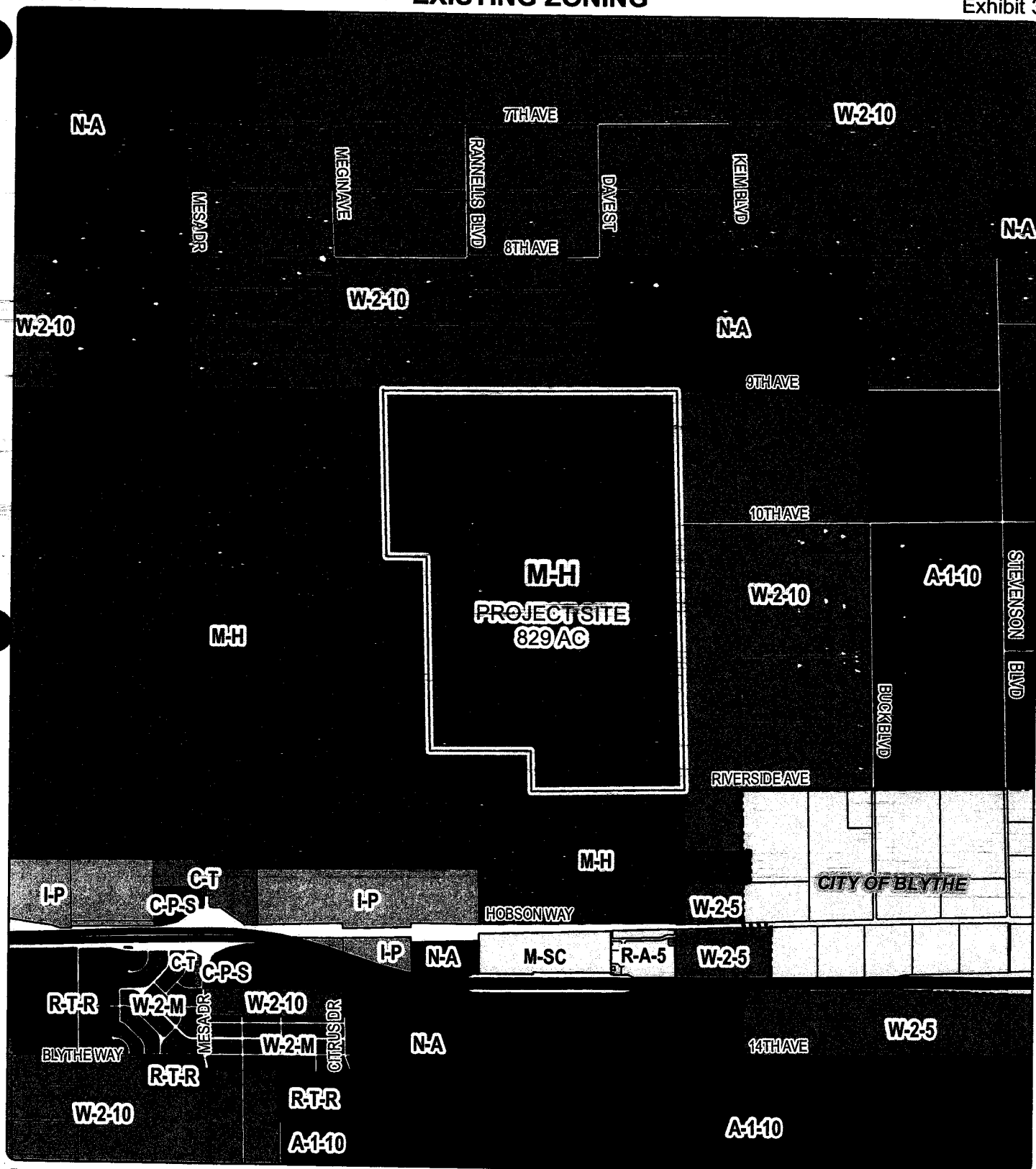
DISCLAIMER: On October 7, 2003, the County of Riverside adopted a new General Plan providing new land use designations for unincorporated Riverside County parcels. The new General Plan may contain different types of land use than is provided for under existing zoning. For further information, please contact the Riverside County Planning Department offices in Riverside at (951) 955-3200 (Western County), or in Indio at (760) 863-8277 (Eastern County) or website at <http://www.lmap.co.riverside.ca.us/index.html>

# RIVERSIDE COUNTY PLANNING DEPARTMENT

Supervisor Benoit  
District 4

## PP24616 EXISTING ZONING

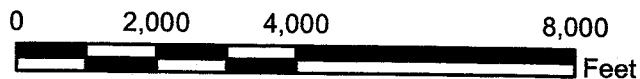
Date Drawn: 11/04/10  
Exhibit 3



Zoning Area: Chuckwalla  
Township/Range: T6SR22E  
Sections: 19, 20, 29, 30

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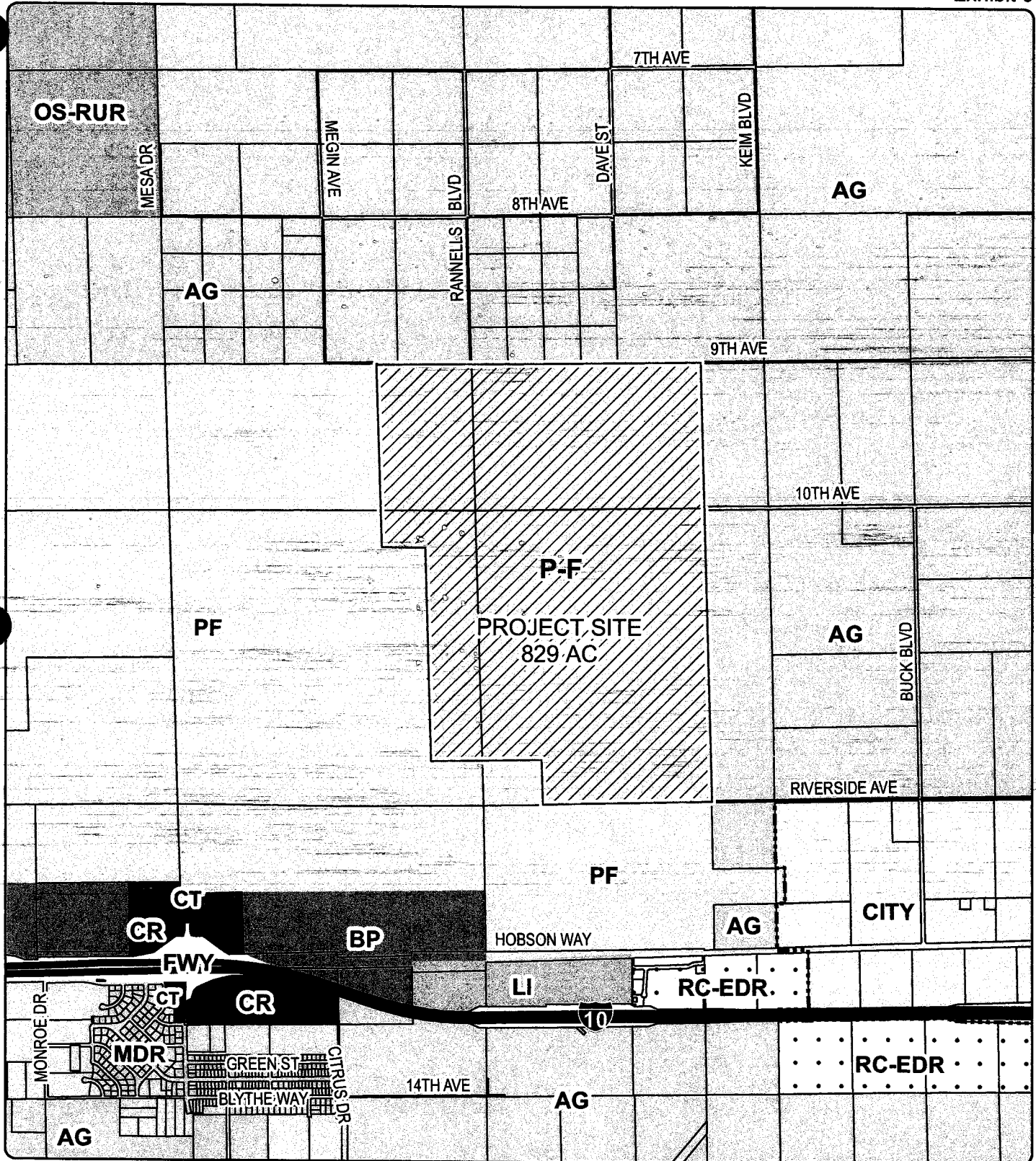
# RIVERSIDE COUNTY PLANNING DEPARTMENT

## PP24616

### EXISTING GENERAL PLAN

Supervisor Benoit  
District 4

Date Drawn: 11/04/10  
Exhibit 5

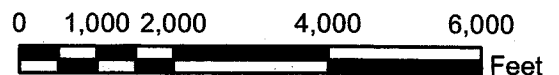


Zoning Area: Chuckwalla  
Township/Range: T6SR22E  
Sections: 19, 20, 29, 30

Assessors Bk. Pg. 927-28  
Thomas Bros. Pg. 5489 & 5490  
Edition 2009



DISCLAIMER: On October 7, 2003, the County of Riverside adopted a new General Plan providing new land use designations for unincorporated Riverside County parcels. The new General Plan may contain different types of land use than is provided for under existing zoning. For further information, please contact the Riverside County Planning Department offices in Riverside at (951) 955-3200 (Western County), or in Indio at (760) 863-8277 (Eastern County) or website at <http://www.tlma.co.riverside.ca.us/index.html>





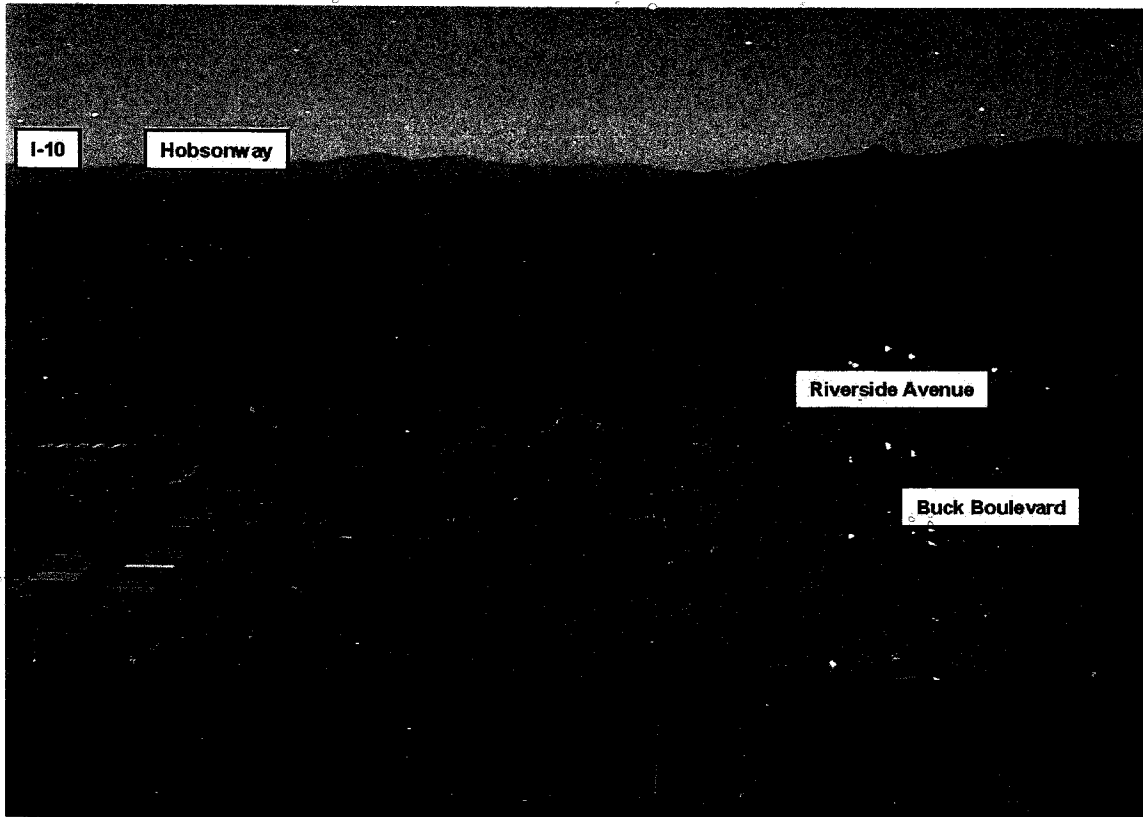




# BLYTHE AIRPORT SOLAR 1

## BUSINESS PLAN

November 17, 2010 (Revision 3)



1015 W. Hays  
Boise, ID 83702

**CASE: PP24616**  
**EXHIBIT: B (Sheets 1-8), AMD. #1**  
**DATED: 11/10/10**  
**PLANNER: R. JUAREZ**

# BLYTHE AIRPORT SOLAR 1

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## **1. Project Introduction & Location**

The proposed Blythe Airport Solar 1 Project (Project) is a multi-phased 100 MW solar power plant that would be located on lands on the northeast portion of the Blythe Airport. The project would use proven Photovoltaic (PV) technology, mounted on a single axis tracking system, and would sell electricity directly into the grid to California utilities. US Solar is currently entering into a lease with Riverside County on approximately 829 acres of an unused portion of Blythe Airport land (not including off-site easement acreage) directly northeast of the current runway. Options will be exercised to develop the site in phases. For the next year, US Solar will be focusing on the development, power purchase, interconnect plans, offsite improvements, and construction of Phase I, 20 MW that will be constructed on approximately 140 acres.

The project is planned to be constructed in 5 x 20 MW phases with plans to construct one phase per year. The actual construction schedule will vary depending on the ability of US Solar and its partner to secure power purchase and interconnect agreements.

This project does not have a PPA yet, but discussions are currently underway with multiple utilities to purchase power from the project.

## **2. Project Specifications**

The 20 MW PV project will consist of approximately 49,488 PV modules covering an area of 140 acres. Each panel is 6.4 ft x 3.3 ft and weighs 60 lbs. The entire PV system consists of modules, supports, inverters, foundations, and an underground gen-tie cable system. The Project site is relatively flat and the PV panels have a low profile with the highest point on the panels being less than 7 1/2 feet. As a result, the solar field would not be seen from any significant distance from the site. The panels will mount on a single axis tracking system that will track the sun in an east-west orientation.

The inverters convert the PV system's DC power to AC power while the transformers step up the system voltage to the local distribution voltage. For Phase I, there will be a total of 20 x 1 MW inverters throughout the project site and 20 x 1MVA transformers installed adjacent to the inverters. The transformers will be stepping up the onsite voltage of 200 V to 33 kV. The 200 V line will be direct buried approximately 3 ft below grade while the 3-phase 33 kV line, 477MCM conductor will be housed in 6 inch PVC conduit and buried 3 ft below grade and located within an easement provided for in the lease agreement.

The 33kV line required for Phase I will run due south from the site in an easement parallel to Butch Ave. and tie into the existing 33 kV Southern California Edison line that runs parallel to Hobsonway. No substation is required. This will be a direct tap. The line will be underground for 1500 feet as per the ALUC's request just outside the runway protection zone and then come above ground for the remaining distance (approximately

2,000 ft) to the connection point at the Hobsonway line. The 33 kV line will be housed in RGS conduit at the transition point from underground to overhead. The overhead line will be 19' above ground. An interconnection study on the Hobsonway 33 kV line for 20 MW is currently underway with Southern California Edison on this design. The study will indicate any network upgrade requirements and costs associated with the upgrades.

The 12'x60' portable construction trailer will be painted a neutral color that blends with the surrounding landscape with 5 parking spaces provided adjacent to it. This facility will be used by the general contractor during construction. Several other trailers may be temporarily installed at the same location for subcontractor office use during construction, in accordance with the "Typical" detail as shown on plot plan. The trailers will be located in the Southeast corner of the site. The construction staging area is proposed on the existing concrete pad. An 8' high chain link perimeter fence is proposed along the perimeter of the project.

The Project nighttime lighting during construction but would be limited and temporary. During operation, shielded nighttime lighting would be restricted to security lighting purposes around the main entrance and would not result in substantial light released from the site.

Arrangements will be made with a local refuse service provider in order to remove all trash, onsite debris and irrigation equipment, in accordance with County Waste Management Department standards. All wells will be permanently abandoned and sealed according to CA Division of Drinking Water Standards, and in accordance with the County Environmental Health procedures.

### 3. Site

The proposed Project site is located approximately 0.75 miles north of Interstate 10 (I-10). The parcel numbers of the site are as follows: 821-080-040, 821-080-041, 821-110-002, 821-110-003.

The majority of the site is abandoned agriculture with pivot circles and old runways associated with the Blythe Airport. These areas appear to have been fallow for a significant period of time; sparse creosote bush (*Larrea tridentata*), galleta grass (*Pleuraphis rigida*), and brittle bush (*Encelia farinosa*) have begun to reestablish. Development of the Blythe Airport Solar 1 Project would result in the removal of a portion of the non-native and native vegetation from the site in order to eliminate shading the solar modules.

No landscaping is planned for the site. A dust control agent such as Envirotach II will be sprayed on the property post construction. The site will allow for native grass growth and will maintain vegetation to minimal growth with herbicides to minimize module shading. Tackifiers and gravel may be used to control wind erosion as required.

The temporary construction trailer and parking will be graded; grading activities will consist of scarifying and moisture conditioning the top 12" of native subgrade and placing 4" of compacted Class 2 Base over the prepared subgrade.

There will be no disturbance of the existing natural drainage patterns, as the solar panels will be installed on the existing topography. There will be a nominal increase in storm water runoff due to the maintenance trailer.

No enclosed structures will be built on the project site. The permanent operations staff will rely on mobile vehicles, laptops, and other offsite equipment to control the solar site. Additionally, the inverters will be cooled by an open-air shade structure.

Water will drain off the panels and concentrate in a linear pattern along the edge of the panel like the roof of a house. Because the panels have a small area and will be evenly spaced, there will be adequate natural infiltration to minimize erosion. Tackifiers and gravel may be used to control erosion on some parts of the site as required. Technical review by County Flood Control has determined that no retention basins are required and therefore are not planned or designed for this project.

#### **4. Site Access**

Primary site access would be via Riverside Ave. to Butch Ave; these roads have 60 ft right of ways. Improvements to this access will be phased, in accordance with agreements in place with Riverside County transportation managers. Prior to start of construction, the section of Riverside Drive that is already improved will be widened to 26-feet with the additional 6-feet improved with asphalt grindings or Class 2 base. The unimproved section of Riverside Drive will be constructed to 26-feet and improved with asphalt grindings or Class 2 base. Similar improvements will be required from Riverside Drive north to the south project site boundary. Prior to occupancy, Riverside Drive will be additionally improved with 26 feet of pavement with an 8-foot wide, Class 2 Base shoulder on the north (County) side. In addition, a secondary access will be constructed and will run in an easement in a north-south orientation, parallel to Butch Avenue, from Hobsonway due north to the project site (follow same path as the primary access from Riverside Avenue north to the project site). This access will be improved with Class 2 base and will be 24-feet wide prior to occupancy.

The 20' east-west internal road in center of the site is proposed as a 4" Class 3 Base; 25' and 8' alternating east-west access roads are proposed between solar array rows and 20' north-south access roads are proposed between solar array blocks.

#### **5. Pile Driving**

Steel pile testing was recently conducted that resulted in design recommendations on support structure for the solar modules. In an effort to determine how deep wide flange

("W") steel piles need to be driven in the soil, full-scale load tests were performed. These tests consisted of driving four steel piles into the soil at five locations on the site; one near each corner and one near the center of the site.

The four steel piles at each test site were loaded as follows: steel pile 1 was driven 5 feet into the ground and then pulled out of the ground  $\frac{1}{2}$ "; steel pile 2 was driven 5 feet into the ground and then pulled over  $\frac{1}{2}$ "; steel pile 3 was driven 8 feet into the ground and then pulled out of the ground  $\frac{1}{2}$ "; and steel pile 4 was driven 8 feet into the ground and then pulled over  $\frac{1}{2}$ ".

The analysis used code required calculations for wind loads and full-scale test loads to predict the behavior of driven W6x9 steel piles supporting solar modules mounted on a solar tracker with the solar panels mounted in a portrait orientation. Wind loads were calculated using site-specific data, steel pile height was assumed to be 4 ft from the ground surface and steel pile supports were assumed to be spaced 13 ft. The maximum expected uplift is 1,609 pounds and the maximum expected horizontal load is 1,524 pounds.

The failure criteria for the full-scale load tests was  $\frac{1}{2}$ " of vertical or horizontal movement at the ground surface. Test loads to lift the steel piles out of the ground  $\frac{1}{2}$ " and the test loads required to push the steel pile over  $\frac{1}{2}$ " at the ground surface were analyzed. In all tests skin friction was the failure mode.

Based on test results, the design recommendations are to use W6x9 steel piles, direct drive 5'-0" minimum into the soil in order to support solar modules on a solar tracker. The steel pile should be galvanized or be up-sized up to a W6x15 in order to minimize corrosion.

## **6. Construction**

Construction and operation of the Project would require the use of existing and improved roadways. Primary access to the Project site would be from Buck Blvd, a paved road, to Riverside Ave. up Butch Ave.; both Butch and Riverside are existing dirt roads.

Short-term impacts to air quality would occur during construction of the project from construction equipment emissions and the potential increase of fugitive dust when the site is disturbed. Use of construction equipment (i.e., gasoline and diesel powered construction equipment, as well as delivery vehicles, employee vehicles, etc.) would emit CO, VOC, SOx, and NOx. Use of mobile equipment and earthwork activities including clearing, grubbing, and site grading would result in fugitive dust emissions. The amount of emissions at any one time during construction will be dependent on the schedule for the completion of the individual PV modules – either in sequence or in parallel.

5 days/week     The construction schedule is as follows:  
22 days/month  
9 months

The following table indicates the number of workers during construction:

195	Max # of Workers/Day
120	Avg # of Workers/Day
2	Avg Occupancy/Vehicle
60	Round Trips/Day
20	Avg Roundtrip Distance

The following is list of equipment that will be utilized during construction:

Bore/Drill Rigs/Pile Drivers  
Cement Mixers  
Industrial/Concrete Saws  
Cranes  
Crawler Tractors/Dozers  
Crushing/Processing Equipment  
Dump and Tender Trucks  
Excavators  
Forklifts/Aerial Lifts/Booms  
Generators/Compressors  
Graders  
Off Highway Tractors  
Off Highway Trucks  
Other Const. Eq.-Diesel  
Pavers  
Paving Eq./Surfacing Eq.  
Plate Compactors  
Rollers/Compactors  
Rough Terrain Forklifts  
Rubber Tired Dozers  
Rubber Tired Loaders  
Scrapers  
Signal Boards/Light Sets  
Skid Steer Loaders  
Tractors/Loaders/Backhoes  
Trenchers  
Welders

## **7. Greenhouse Gas Emissions**

Greenhouse gases allow sunlight to enter the atmosphere freely, but limit the amount of infrared radiation (heat) that bounces back into space after striking the Earth's surface. Gases exhibiting greenhouse properties come from both natural and human sources. Water vapor, CO<sub>2</sub>, methane (CH<sub>4</sub>), and nitrous oxide (N<sub>2</sub>O) are examples of greenhouse gases that have both natural and manmade sources, while other greenhouse gases such as chlorofluorocarbons are exclusively manmade. In the United States, greenhouse gas emissions come mostly from energy use. Such emissions result from combustion of fossil fuels used for electricity generation, transportation, industry, heating, and other needs. Energy-related carbon dioxide emissions represent 82 percent of total manmade greenhouse gas emissions in the United States (US Energy Information Administration 2009).

The Blythe Airport Solar Project would assist local utilities fulfill mandatory state renewable energy requirements. While comparable capacity in fossil-fuel-fired generation might produce enough electricity to meet California's rising electricity demand, the Blythe Airport Solar Project would produce electricity with far fewer greenhouse gas emissions. The Project would itself contribute to small cumulative increases in greenhouse gases resulting from slight increases in vehicular travel and temporary construction emissions, these greenhouse gas emissions from the Project would be minimal and limited to increases in carbon dioxide.

Photovoltaic panels generate electricity without producing significant carbon emissions (except for emissions associated with polycrystalline silicon (poly-silicon) or cadmium telluride, panel production from polycrystalline silicon or cadmium telluride, and installation). By displacing natural gas and other fossil fuels used to produce electricity, photovoltaic installations reduce generation of CO<sub>2</sub> and other greenhouse gasses. The 100 MW Blythe Airport Solar Project is expected to generate 227,760 gross megawatt hours per year (MWh) of output based on an expected 26 percent plant capacity factor. This would total about 6,833 gigawatt hours of electricity over the 30 year life of the Project.

The indirect GHG emissions decrease that would result from the expected 30-year operation of this proposed renewable energy project has been estimated using the eGRID estimate (USEPA 2007) of CO<sub>2</sub> emissions per MWh. Assuming that the capacity of the Blythe Airport Solar Project displaces electricity produced by conventional fossil-fueled power plants, the estimated Project-related reduction is 79,030 metric tons of GHG emissions annually or an estimated total displacement of 2,370,898 metric tons of GHG over 30-year Project life. This would have a beneficial impact to global climate change and would also be consistent with state and federal policies and regulations to promote greater reliance on renewable energy.

The total CO<sub>2</sub> generated during construction = 840 metric tons. The net total CO<sub>2</sub> emissions offset by the project is between 2,370,058 metric tons; see appendix 4 for



calculations.

The impacts from construction equipment would be mitigated by the use of emission controls on the construction equipment. Fugitive dust impacts during construction would be mitigated by the application of dust control measures on exposed soil.

Emissions during operation and construction will remain below the MDAQMD CEQA and Federal Conformity Guidelines.

There are no residences or other sensitive receptors near the Project Site and the Project would emit relatively small amounts of air emissions during construction and almost none during operation. Therefore, the Project would not expose sensitive receptors to substantial pollutant concentrations. Likewise, the Project does not create objectionable odors that could affect people.

#### **8. Job Creation**

The labor force will peak at 195 jobs during a 9 month to 1-year construction period for every 20 MW installed. The labor force to erect and install the panels will consist of approximately 110 electricians, 70 laborers, and 15 supervisors. The permanent on site employment during operation are forecasted to be 3-5 jobs. On site contract support will include environmental compliance, warranty maintenance on the panels and inverters, road maintenance, weed/dust control, panel cleaning, and site security. Off site support will include an asset manager, WECC compliance, and CAISO scheduling coordinator.

#### **9. Water Supply**

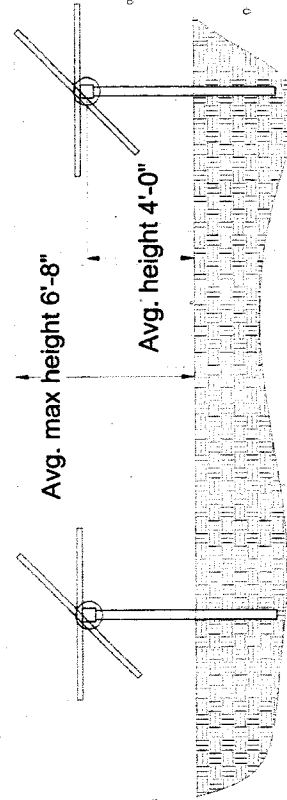
Water will be made available for the project (construction water and operations) via an additional 6" diameter water pipeline that will be extended from the Blythe Airport Water Production and Storage Facility to the site to allow for a permanent source of water.




Solar panels will be cleaned with water on an as-needed basis to remove dust that has accumulated. The source will be the water available on site via the water pipeline. De-ionized or mineral water is not necessary.

There will be no on-site sewer necessary. During construction, portable toilets will be provided on site.

# Single Axis Tracker "SAT" Elevation Profile - Typical

STANDARD BUILDING BLOCK SUMMARY	
TRACKER TYPE	WATTSUN
DRIVE MOTORES	4
PANEL MAKE/MODEL	SUNTECH 275
PANEL COUNT	4302
STC RATED DC POWER	1183 kW
ROWS / DRIVE MOTOR	20
PANELS / ROW	54
PANELS / STRING	18
ROW POSTS - 4"	1120
DRIVE POSTS - 6"	80
ROW SPACING	19.6FT



 A Division of 			
BLYTHE-640 ACRES BLYTHE AIRPORT, ARIZONA CUSTOMER: US SOLAR		IRONCO BID NO. 640 Layout DATE 11/08/10 SCALE NOT TO SCALE	
DETAILING SERVICE DR VS TCK	IRONCO BID NO. 640 Layout	DWG NO. 640 Layout	REV C SHEET 2 OF 2

CASE: PP24616  
 EXHIBIT: C (Sheets 1-22), AMD. #1  
 DATED: 11/10/10  
 PLANNER: R. JUAREZ



**Solar powering a green future™**

STP280 - 24/Vb-1  
STP270 - 24/Vb-1  
STP260 - 24/Vb-1

## 270 Watt POLY-CRYSTALLINE SOLAR PANEL

### Features

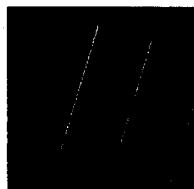
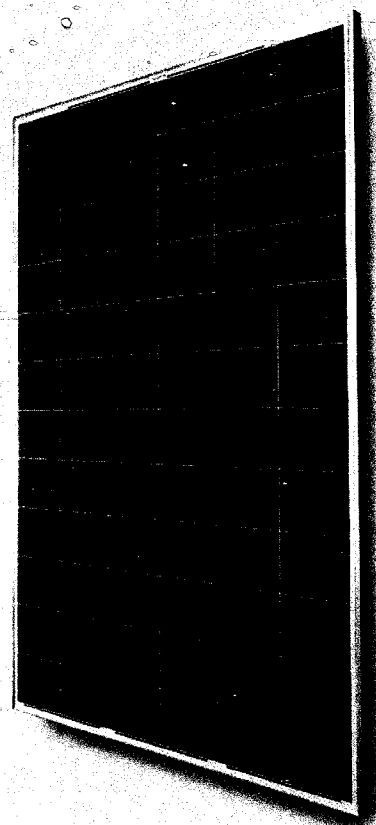
- High conversion efficiency based on innovative photovoltaic technologies
- High reliability with guaranteed +/-3% power output tolerance
- Withstands high wind-pressure and snow load, and extreme temperature variations

### Quality and Safety

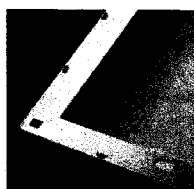
- Industry-leading, transferable 25-year power output warranty
- Rigorous quality control meeting the highest international standards
- ISO 9001:2000 (Quality Management System) and ISO 14001:2004 (Environmental Management System) certified factories deliver world class products
- UL listing:UL1703, CULus, Class C fire rating, conformity to CE

### Recommended Applications

- On-grid utility systems
- On-grid commercial systems
- Off-grid ground mounted systems



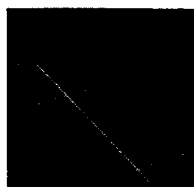
Suntech's technology yields improvements to BSF structure and anti-reflective coating to increase conversion efficiency



Unique design on drainage holes and rigid construction prevents frame from deforming or breaking due to freezing weather and other forces



Suntech was named Frost and Sullivan's 2008 Solar Energy Development Company of the Year



The panel provides more field power output through an advanced cell texturing and isolation process, which improves low irradiance performance

Reliathon 280  
Reliathon 275

Preliminary

**SUNTECH**  
Solar powering a green future™

PHOTOVOLTAIC MODULE

## 280 Watt RELIATHON SOLAR MODULE

Designed from the ground up for utility-scale solar



### High Efficiency Cells

High conversion efficiency and patented surface texturing increase cell sunlight absorption.



### Self-Aligning Frame

Interlocking frames align new, thicker modules with trackers or fixed-tilt mounting structures. No vertical stabilizers are required.



### Integrated Grounding

Built-in plates automatically ground frames to the mounting structure, saving both time and money.



### Fast-Installing U Bolts

U bolts fasten each module to the frame, reducing the number of small parts and fasteners—and reducing installation time.



### Withstands High Wind Loads

Module certified to withstand high wind loads (2400 Pascal).



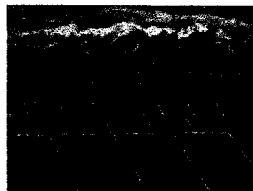
Certification Pending

## Backed by Suntech and the Reliathon Utility-Grade Warranty



### Gigawatt Manufacturing

Industry-leading manufacturing capacity, technology leadership, and financial strength make Suntech an ideal long-term partner for large-scale solar power plants.



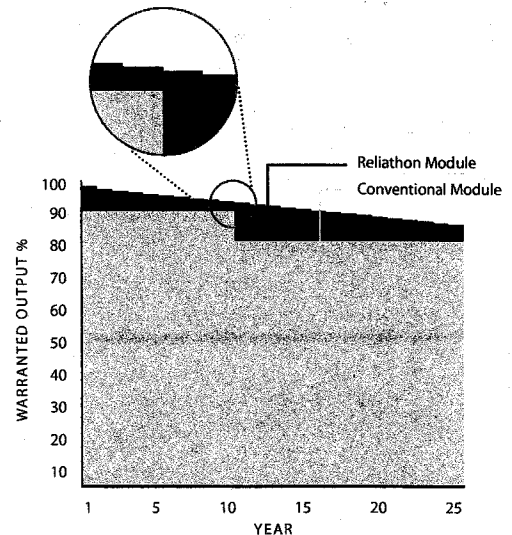
### Over 1.5 GW Shipped

Suntech modules power the world's largest solar power plants. Reliathon was designed with insight gained from over 1.5 gigawatts of solar module installations.



### Industry-Leading Partners

Suntech has carefully selected best-in-class partners to supply utility-grade inverters and tracking systems for Reliathon systems.



### 12.3% Better Power Warranty

In an industry first, the Reliathon 25-year utility-grade warranty includes an annual step-down feature that warrants module output at yearly intervals for more precise power output expectations.

**PVS-500 (MVT)**

**PVS-500 (480 V)**

**PVS-500 (265 V) CE**

**Peak Efficiency 97.6%**

**Power Efficiency**

Power Level	Output Power <sup>1</sup>	Efficiency <sup>2</sup>
10%	50 kW	92.2%
20%	100 kW	95.6%
30%	150 kW	96.2%
50%	250 kW	96.5%
75%	375 kW	96.4%
100%	500 kW	96.0%

<sup>1</sup> 320V minimum <sup>2</sup> 480V model

**Power Efficiency without Transformer**

Power Level	Output Power <sup>1</sup>	Efficiency
10%	50 kW	97.08%
20%	100 kW	97.52%
30%	150 kW	97.58%
50%	250 kW	97.46%
75%	375 kW	97.09%
100%	500 kW	96.52%

<sup>1</sup> 310V minimum

**Unparalleled Performance**

With their advanced system intelligence, next-generation Edge MPPT technology, and industrial-grade engineering, PowerGate Plus inverters maximize system uptime and power production, even in cloudy conditions.

**Edge MPPT**

Provides rapid and accurate control that boosts PV plant kilowatt yield

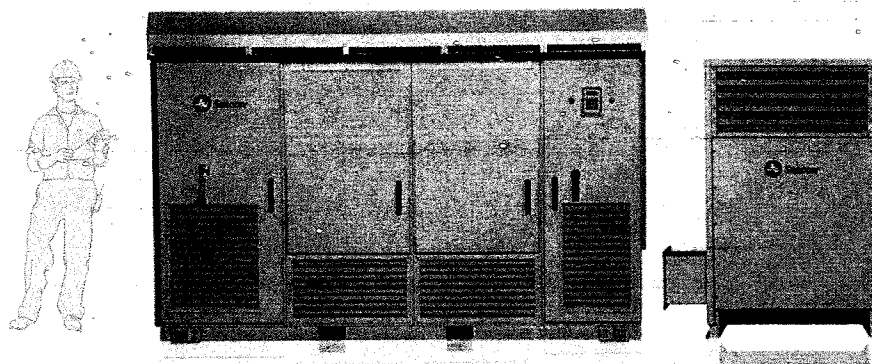
Provides a wide range of operation across all photovoltaic cell technologies

**Printed Circuit Board Durability**

Wide thermal operating range: -40° C (-40° F) to 85° C (185° F)

Conformal coated to withstand extreme humidity and air-pollution levels

**PV Inverters | PowerGate Plus 500 kW**



**Profitable PV Power**

The Satcon™ PowerGate® Plus 500 kW PV inverter has a significant impact on the profitability dynamic of large-scale solar PV systems. With its unparalleled system intelligence, next-generation Edge™ MPPT technology, and industrial-grade engineering, the PowerGate Plus 500 kW inverter maximizes system uptime and power production, even in the harshest environments.

**Commercial and Utility Scale**

The world's largest solar power installations depend on Satcon PowerGate Plus PV inverters to provide efficient and stable power—even in the harshest climates.

**Advanced, Rugged, and Reliable**

Engineered from the ground up to meet the demands of large-scale installations, Satcon PV inverters feature an outdoor-rated enclosure, advanced monitoring and control capabilities, and Edge, Satcon's next-generation MPPT solution.

**Proven Performance**

The proven leader in solar PV inverter solutions for commercial installations, Satcon sets the standards for efficient large-scale power conversion.

**Increased PV Plant Yield**

At the heart of PowerGate Plus is Edge, Satcon's next-generation power optimization solution. With rapid and accurate MPPT control, Edge increases PV plant kilowatt yield by extending the production window of arrays, enabling them to operate at optimal voltage and current levels for longer periods of time—even in varied sun conditions. To maximize efficiency, Edge improves the performance of all PV technologies, including fixed and tracking solar arrays, enabling you to get the most from your investment.

4

**Xantrex™ GT500 E Grid Tie Solar Inverter specifications**

## Electrical specifications

Nominal power range (AC)	300 Wp AC
Nominal AC voltage	315 Vac, three-phase (other voltage levels on request)
Nominal AC frequency	50 Hz (60 Hz optional)
Line power factor	> 0.99 above 20% rated power (or least 0.93 leading to 0.93 lagging with grid interactive feature)
AC current distortion	< 3% THD at rated power
Max AC line current	1400 A
Night consumption	100 W
Max DC voltage for feed-in	450 Vdc (405 Vdc for grid interactive option)
Max DC current	1120 Adc
Max open circuit voltage	920 Vdc
Power tracking window range	430 to 820 Vdc (405 to 880 Vdc for grid interactive option, reduced current above 820 Vdc)
Max efficiency	98.1% (98.3% for grid interactive option)
Component efficiency	97.6% (97.9% for grid interactive option)

## General specifications

Storage temperature range	-20°C to 45°C
IP2B	
Endocrine active ingredient	Rim 18 Series
Endocrine	
Weight	17.0 kg
Dimensions (L x W x D)	21 x 2 x 240.6 x 40.6 cm
Altitude	up to 1500 m without de-rating
Relative humidity	0 to 95% non-condensing

## Features and options

Forecast correction module	AC input, output voltage, AC over/under frequency, over temperature, AC and DC over current, DC over voltage
Contact method	LCD, two-line, 20-character with keypad
Protective functions	Integral to absorber assembly
Base products	Grain-based user interface software for real time communications and control
Display standard	Adjustable
Base effects (AC and DC)	Optional feature information on request
Communications software	Optional feature information on request
Data acquisition and logging	Optional feature information on request
Control boxes	Optional feature information on request
Control solution	Optional feature information on request

## Approvals and safety

GT600 E: companies with applicable European directives  
GT600 E: complies with the requirements of REDUC and VDE 0126  
GT600 E: complies with the requirements of REDUC and VDE 0126  
GT600 E: complies with the Royal Decree, Spain  
GT600 E: complies with the requirements of the ENEL (DGS6940)  
GT600 E: companies with the applicable French Directive

## Head office

35 rue Joseph Monier  
CS30323  
92506 Rueil-Malmaison  
Tel.: +33 (0)1 41 29 85 00  
France

Schneider Electric

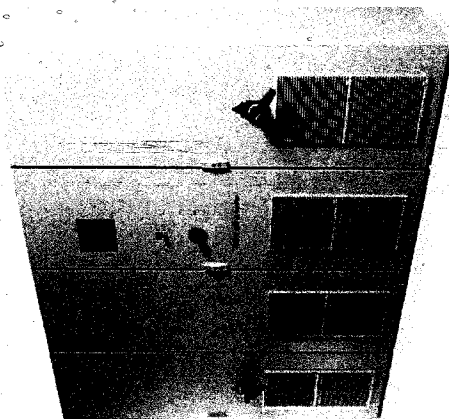
As a global specialist in energy management with operations in more than 100 countries, Schneider Electric offers integrated solutions across multiple market segments, including leadership positions in energy and infrastructure, industrial processes, building automation, and data centres/networks, as well as at a broad presence in residential applications. Focused on making energy safe, reliable, and efficient, the company's 114,000 employees achieved sales of more than 18.3 billion euros in 2008, through an active commitment to help individuals and organisations "Make the most of their energy."<sup>www.schneider-electric.com</sup>

[www.schneider-electric.com](http://www.schneider-electric.com)

renewableenergy@schneider-electric.com

**JSTOR** Digitized by Google

**Schneider**  
Electric



# Three Phase Xantrex™ GT500 E Grid Tie Solar Inverter



## 500 kilowatt three-phase power conversion system for grid-connected photovoltaic arrays

**Schneider**  
Electric

Our new Xantrex™ GT500 E Grid Tie Inverter is based on a test proven platform that is used in grid-connected photovoltaic and wind turbine applications in Europe and North America.

1MW INVERTER SKID - TYPICAL INVERTER DATA SHEET  
(2) GT500E INVERTERS PER 1MW SKID



**Springville solar array:**  
Our grid tie inverters are installed in one of the world's most productive grid-connected photovoltaic power systems in Springville, Arizona. Tucson Electric Power's giant solar field consists of 34,980 solar panels that generate up to 4.6 MW of power.



**Three Phase GT500 E Grid Tie Solar Inverter**

- High energy production due to direct conversion to medium voltage and master slave option
- Easy to install: flexible AC and DC connectivity
- Local service network
- Worldwide experience in large grid connected photovoltaic arrays
- Manufactured in Germany

#### Software and display

The Xantrex GT500 E has an onboard LCD display with a four-line, twenty-character display to show detailed operating status. The inverter comes with software that provides an overview of the status of the system in real time. The software's graphical user interface offers the option to provide real time communications directly with a PC or via a modem connection. It also has diagnostic and archive functionality.

#### European references

Schneider Electric is committed to the European solar market. Schneider Electric has installed and commissioned multiple grid tie inverters all over Europe.

#### Rigorous performance testing

During the design process the Xantrex GT500 E are extensively tested on a component level using an evaluation method called Highly Accelerated Life Testing (HALT). HALT combines powerful thermal and vibration technologies to stress a product beyond its specifications. This enables our engineers to find and fix product defects that may not be discovered by testing methods typically used by other inverter manufacturers.

#### Expandable and easy to operate

The Xantrex™ GT500 E is a 500 kilowatt three-phase power conversion system for grid-connected photovoltaic arrays. Designed to be easy to install and operate, it automates start-up, shutdown, and fault detection. With user-definable power tracking that matches the inverter to the array and adjustable delay periods, users are able to customize system start up and shut down sequences. Multiple inverters are easily paralleled for larger power installations. The design allows direct integration to a low voltage or medium voltage grid using one step voltage transformation to any required grid voltage.

The integrated combiner box/master slave configuration is designed to connect to two inverters, which allows an optimized energy harvest during periods of low irradiance.

#### Efficient and cost effective

The Xantrex GT500 E incorporates advanced Maximum Power Point Tracking Technology (MPPT) to maximize the energy harvested from a PV array. And to reduce power losses during the conversion process, the inverter's state-of-the-art switching technology uses insulated gate bi-polar transistors (IGBT). So you get the best results from your photovoltaic system.

#### Manufactured in Europe

The Xantrex GT500 E is designed to meet all CE requirements and produced by a manufacturing partner in Germany.

#### Built-in protection features

The Xantrex GT500 E offers applicable protection features including over and under voltage and frequency safeguards. Its anti-islanding protection prevents the inverter from feeding power to the grid in the event of a utility outage. It has an inverter shut off and reset toggle switch.

#### Service and warranty

The Xantrex GT500 E comes with a standard warranty that covers parts and labor. Our customer service network, based in Germany and Spain, will provide installation and commissioning support, product training, and a hotline and maintenance service across Europe. Schneider Electric offers extended warranty and performance guarantee packages.

Xantrex GT500 E installation at Almería, Spain.

## Attachment A – Detailed Bill of Materials

### Item 1: Skid Mount as indicated on drawing

#### Base Frame Dimensions

- 20 Length Feet (Separate 10 Foot Outdoor Platform with Transformer Mounted)
- 12 Width Feet

#### Estimated Shipping Dimensions

- 30 Length Feet
- 12 Width Feet

20,000 Equipment Weight Lbs.

24,000 Approx. Total Weight 2 Piece Lbs. with both PV SKID & Transformer Skid

#### Details

- 50 Area Classification- General Purpose Non-Hazardous  
Optional Canopy Type of Available for Shading of Skid

250 Floor Loading - DL + LL in psf

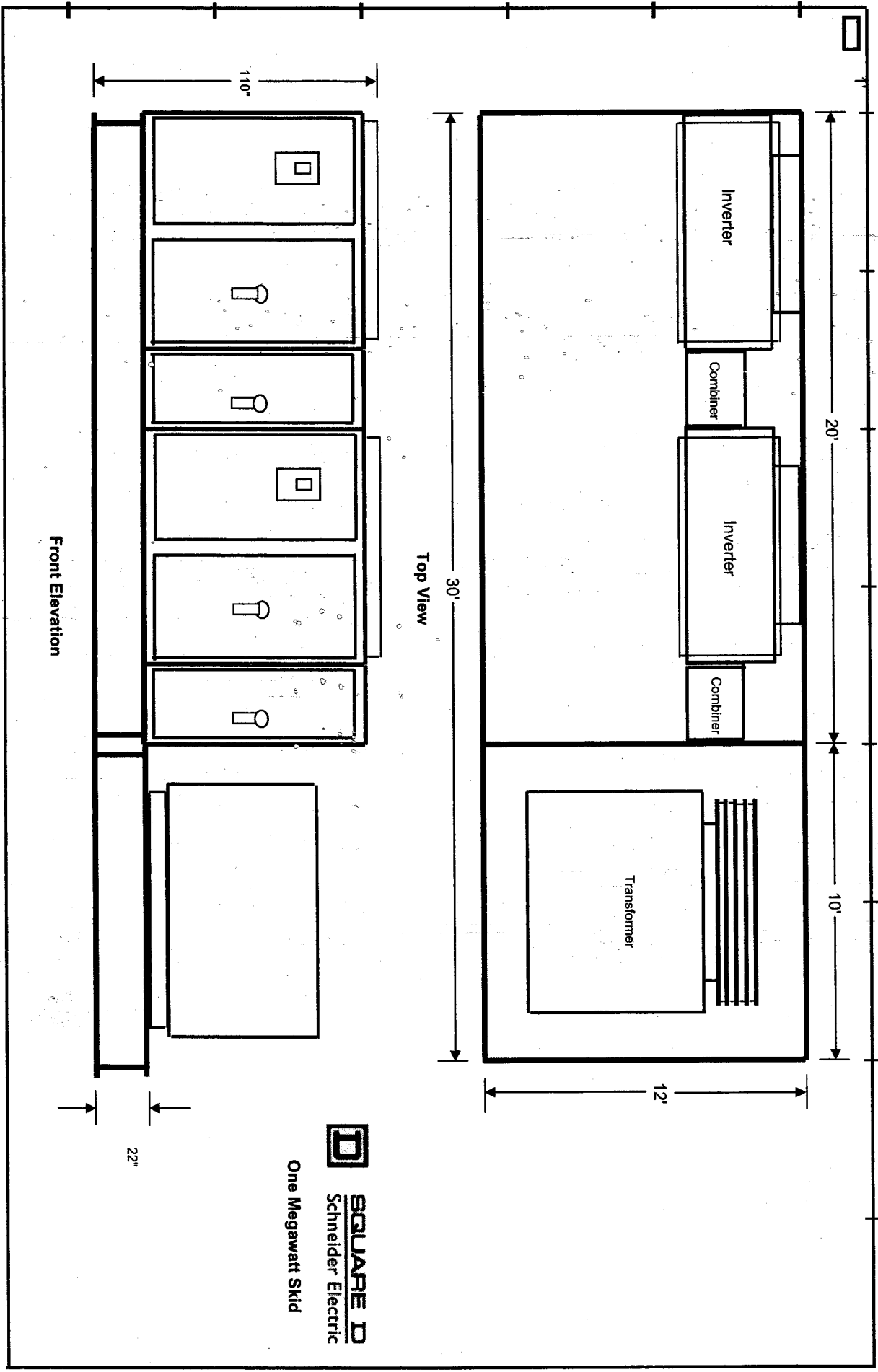
240 Base Deflection- (On Foundation)

- Seismic Zone - International Building Code (Latest Revision), Importance Factor =1
- This does not include site permitting or building inspector meetings.
- This does not include any Site review/data gathering.
- 
- Does not include skid foundation. Level concrete pad recommended.

- 1 Set of certified structural design calculations performed by a Professional Engineer registered in appropriate state or location.  
Note: The "APPROVAL" drawing package will reflect preliminary calculations. Calculations sealed by a professional engineer will be furnished only after customer's final approval and release for manufacture of the Equipment Center. Extra cost will result for any changes to the Equipment Center affecting the layout and/or design after the performance of these calculations.



1MW INVERTER SKID - WEIGHTS AND DIMENSIONS



**SQUARE D**  
Schneider Electric

One Megawatt Skid

# 38kV SWITCHGEAR LAYOUT

## Medium Voltage Assemblies General Information

### System Parameters

System Voltage:	34500	Phase Sequence:	123
Short Circuit Rating:	25 kA	System Grounding:	Solid
BIL:	150		

### Main Bus Specifications

Bus Insulation:	Fluidized Bed Epoxy	Amps:	1200
Bus Support Insulation:	Epoxy	Bus Plating:	Silver
Ground Bus:	0.25 x 2	Ground Bus Plating:	None
Neutral Bus:	None		

### Structure Specifications

Enclosure Type:	Indoor with N3R enclosure	Design Type:	VCPW
Front Door Latching:	1/4 Turn Knob	Interior Paint Color:	ANSI-61 Light Grey
Rear Door Access:	Covers	Exterior Paint Color:	ANSI-61 Light Grey
Dust Proof:	N	Rodent Proof:	N
Drip Proof Roof:	N	Base Channel:	N
Door Gaskets:	N	Outdoor House:	Y
Floor Plate:	None		

### Control Power Specifications

Breaker Control Power Source:	Customer Supplied	Charging Motor Voltage:	120 VAC
Close Coil Voltage:	125 VDC	1st Trip Coil Voltage:	125 VDC
2nd Trip Coil Voltage:	None	U/V Trip Coil Voltage:	None

### Wiring Specifications

General Wire Size:	Standard #14	Wiring Type:	Wire ID
CT Wire Size:	Standard #14	Marker Type:	Adhesive wrap-around
Terminal Type:	Insulated Lock-Fork	Type of Transfer:	None

### Applicable Standards

Seismic Zone:	IBC/CBC Seismic Qualified	California Code:	Y
3rd Party Certification:	None	Chicago Code:	N

### Shipping Split

Struct #	Width	Height	Depth	Description/Modifications
1	42.00	95.00	125.36	Breaker over
1	42.00	95.00	125.36	Auxilliary overAuxilliary
Shipping Split Totals:				
Structure Weight = 6800		Breaker Weight = 1080 for 1 Breakers Width = 84		
2	42.00	95.00	125.36	Breaker overAuxilliary
2	42.00	95.00	125.36	Breaker overAuxilliary
Shipping Split Totals:				
Structure Weight = 7200		Breaker Weight = 2160 for 2 Breakers Width = 84		

The information on this document is created by Eaton Corporation. It is disclosed in confidence and it is only to be used for the purpose in which it is supplied.

PREPARED BY <b>PXEA</b>	DATE <b>11/01/10</b>	<b>Eaton Corporation</b> Greenwood, SC	
APPROVED BY	DATE	JOB NAME <b>US Solar</b>	
		DESIGNATION <b>Blythe</b>	
VERSION <b>7.3</b>		TYPE <b>Medium Voltage Assemblies</b>	DRAWING TYPE <b>Customer Appr.</b>
NEG-ALT NUMBER <b>PXEA1020E001-0001</b>	REVISION <b>1</b>	DWG SIZE <b>A</b>	G.O. ITEM SHEET <b>1 OF 8</b>

# 38kV SWITCHGEAR LAYOUT

3 5 42.00 95.00 125.36 Auxilliary overAuxilliary

Shipping Split Totals:

Structure Weight = 3200 Breaker Weight = 0 for 0 Breakers Width = 42

4 6 42.00 95.00 125.36 Auxilliary overAuxilliary

Shipping Split Totals:

Structure Weight = 3200 Breaker Weight = 0 for 0 Breakers Width = 42

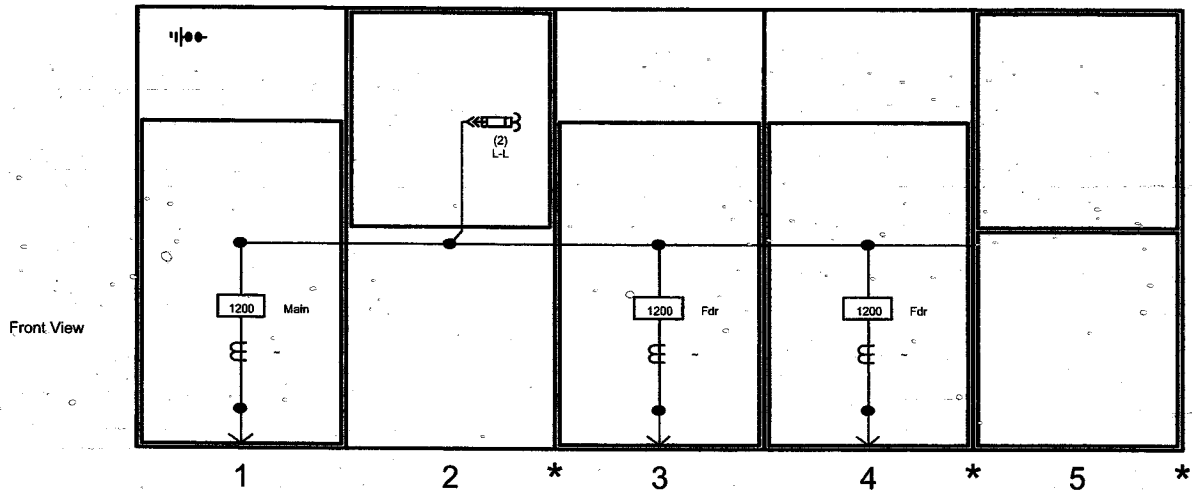
**Total of 6 Structures, Total Width of 252 Inches**

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PREPARED BY <b>PXEA</b>	DATE <b>11/01/10</b>	<b>Eaton Corporation</b> Greenwood, SC			
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VERSION <b>7.3</b>		TYPE <b>Medium Voltage Assemblies</b>	DRAWING TYPE <b>Customer Appr.</b>		
NEG-ALT NUMBER <b>PXEA1020E001-0001</b>	REVISION <b>1</b>	DWG SIZE <b>A</b>	G.O.	ITEM	SHEET <b>2 OF 8</b>

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# 38kV SWITCHGEAR LAYOUT

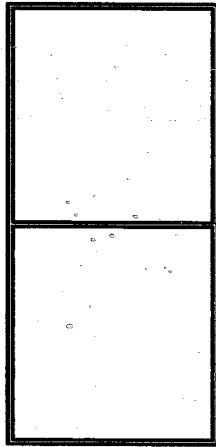


FloorPlan

Ship-Inches	84.00		84.00		42.00	
Ship-MM	2133		2133		1066	
Width-Inches	42.00	42.00	42.00	42.00	42.00	
Width-MM	1066	1066	1066	1066	1066	
Depth-Inches	125.36	125.36	125.36	125.36	125.36	
Depth-MM	3174	3174	3174	3174	3174	
Height-I	95.00	95.00	95.00	95.00	95.00	
Height-MM	2412	2412	2412	2412	2412	
Comb. Weight-Lbs	4680	3200	4680	4680	3200	
Comb. Weight-Kg	2122	1451	2122	2122	1451	
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		PXEA	11/01/10			
		APPROVED BY	DATE	JOB NAME	US Solar	
				DESIGNATION	Blythe	
		VERSION		TYPE	DRAWING TYPE	
		7.3		Medium Voltage Assemblies	Customer Appr.	
NEG-ALT NUMBER	REVISION	DWG SIZE		G.O.	ITEM	SHEET
PXEA1020E001-0001	1	A				3 OF 8

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# 38kV SWITCHGEAR LAYOUT



6

Ship-Inches	42.00				
Ship-MM	1066				
Width-Inches	42.00				
Width-MM	1066				
Depth-Inches	125.36				
Depth-MM	3174				
Height-I	95.00				
Height-MM	2412				
Comb. Weight-Lbs	3200				
Comb. Weight-Kg	1451				
<p>The information on this document is created by Eaton Corporation. It is disclosed in confidence and it is only to be used for the purpose in which it is supplied.</p>		PREPARED BY	DATE	Eaton Corporation	
		PXEA	11/01/10	Greenwood, SC	
		APPROVED BY	DATE	JOB NAME	US Solar
				DESIGNATION	Blythe
		VERSION	TYPE	DRAWING TYPE	
		7.3	Medium Voltage Assemblies	Customer Appr.	
NEG-ALT NUMBER	REVISION	DWG SIZE	G.O.	ITEM	SHEET
PXEA1020E001-0001	1	A			4 OF 8

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### Medium Voltage Assemblies Units Information

Str#	Unit	Description/Modifications
1	D	Breaker Compartment 380 VCP-W 25 1200A
2	B	Voltage transformer 38 kV
3	D	Breaker Compartment 380 VCP-W 25 1200A
4	D	Breaker Compartment 380 VCP-W 25 1200A
5	B	Blank
	D	Blank
6	B	Blank
	D	Blank

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PREPARED BY <b>PXEA</b>	DATE <b>11/01/10</b>	<b>Eaton Corporation</b> Greenwood, SC		
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NEG-ALT NUMBER <b>PXEA1020E001-0001</b>	REVISION <b>1</b>	DWG SIZE <b>A</b>	G.O. ITEM	SHEET <b>5 OF 8</b>

(3)

# Metal-Clad Switchgear — VacClad-W — Medium Voltage Drawout Vacuum Breakers — 38 kV (42-Inch Wide)

EATON

Cutler-Hammer

October 2008  
Sheet 05014

## General Description

### 38 kV Metal-Clad Switchgear

#### Application

Eaton's Cutler-Hammer VacClad switchgear family is designed for use in applications with distribution voltages up to 38 kV maximum. Typical applications include not only new construction but also replacement for older air-break, minimum oil or SF6 switchgear. The circuit breaker and switchgear will meet industry requirements for greater safety, quality, superior reliability and minimal maintenance while providing higher insulation levels in less space than other breaker types, thus reducing overall switchgear size for significant space savings.

#### Ratings

- Maximum rated voltage: 38 kV rms.
- BIL withstand: 150 and 170 kV peak.
- Maximum symmetrical interrupting with K = 1: 16 kA, 25 kA, 31.5 kA, 40 kA rms, and 35 kA rms (21 kA rating with K = 1.65).
- Continuous current:  
Circuit breakers — up to 2500 A  
Switchgear main bus — up to 3000 A.

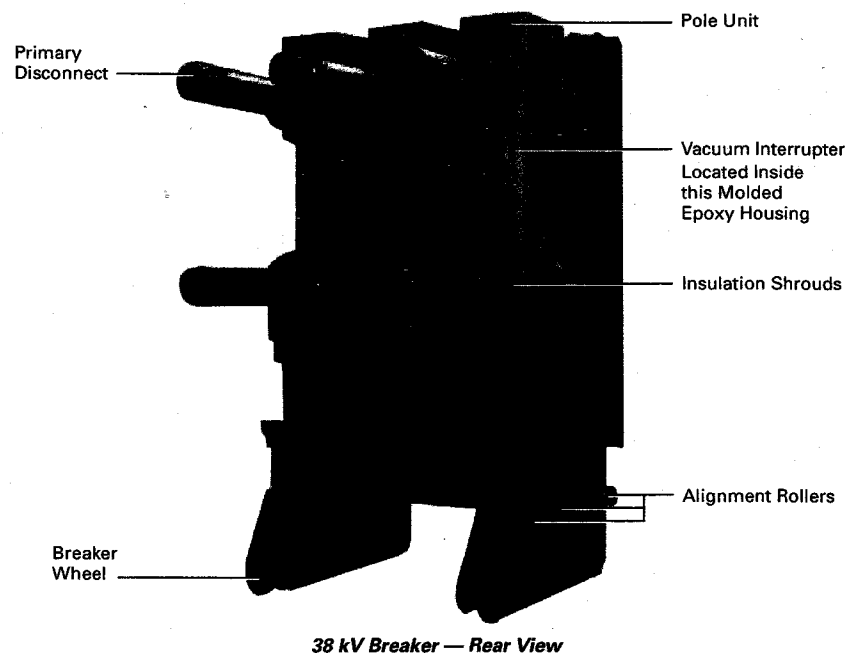
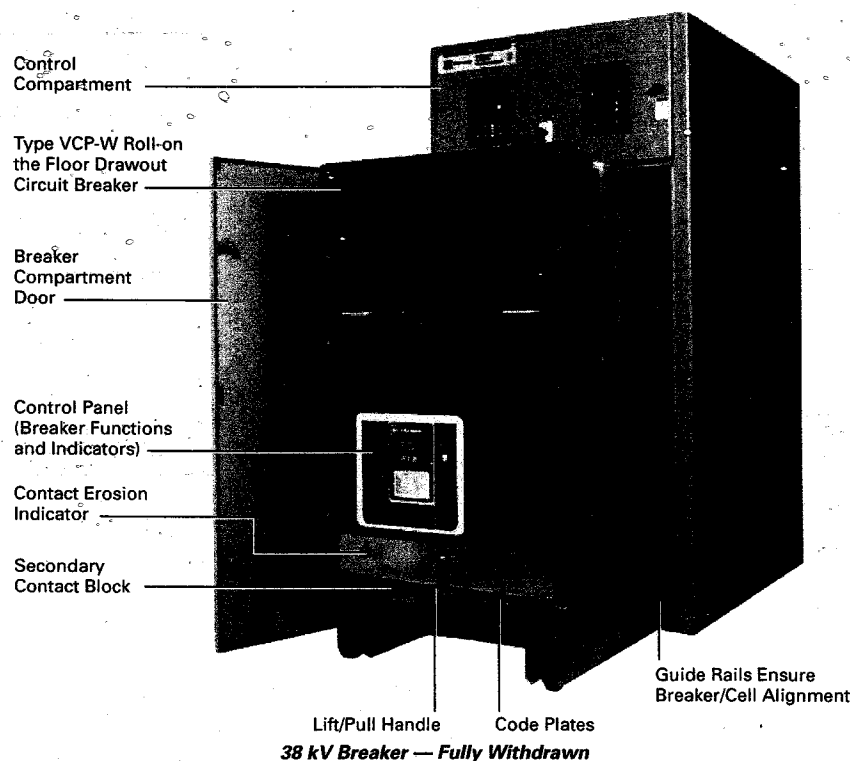
#### Features — 38 kV

##### Vacuum Circuit Breaker

- Corona-free design increases circuit breaker reliability and in-service life by maintaining insulation integrity.
- Superior cycloaliphatic epoxy insulation — a void-free insulating material with outstanding electrical and mechanical characteristics, such as track resistance, dielectric strength, and fungus resistance, even in harsh industrial environment — is used throughout the circuit breaker as primary phase-to-phase and phase-to-ground insulation.
- Axial-magnetic, copper-chrome contacts are used in 38 kV vacuum interrupters to provide superior dielectric strength, better performance characteristics, and lower chop current.
- High power laboratory tests prove VCP-W breakers are capable of 50 to 200 full fault current interruptions.
- Patented V-Flex (stiff-flexible) current transfer from the vacuum interrupter moving stem to the breaker primary disconnecting contact is a non-sliding/non-rolling design, which eliminates maintenance required with the sliding/rolling type transfer arrangements. The V-Flex system provides excellent electrical and thermal transfer, and long vacuum interrupter life.

- Easy inspection and accessibility is afforded by front mounted stored energy operating mechanism. The same basic mechanism is used on all ratings, which requires a minimum investment in spare parts.

- All 38 kV circuit breakers are horizontal drawout design, which provide connect, test and disconnect position. A latch secures the breaker in the connected and disconnected/test position. The circuit breaker is designed to roll directly on the floor.



14

**Metal-Clad Switchgear — VacClad-W — Medium Voltage  
Drawout Vacuum Breakers — 38 kV (42-Inch Wide)** 5.1-11**General Description — 38 kV Switchgear****Features — 38 kV Vacuum  
Circuit Breaker (Continued)**

- All breaker controls and indicators are functionally grouped on the front control panel and include: main contact status, closing spring status, port for manual spring charging, close and trip button, and mechanical operations counter.
- Clearly visible contact erosion indicator on the front of the breaker.
- Trip-free interlocks prevent moving a closed circuit breaker into or out of the connected position.
- Breaker cannot be electrically or mechanically closed when in the intermediate position.
- Closing springs automatically discharge before moving the circuit breaker into or out of the enclosure.
- Breaker frame remains grounded during levering and in the connected position.
- Coding plates are provided to ensure only correct breaker rating can be installed in cell.
- Quality Assurance Certificate is included with each circuit breaker.

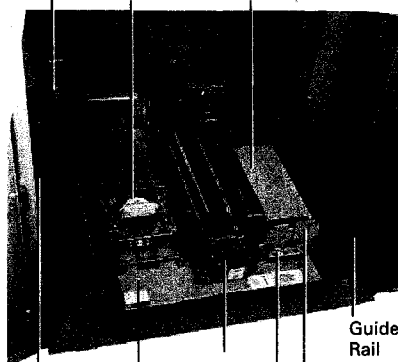
Provision for  
Padlocking Shutter  
in Closed PositionSteel  
ShuttersBreaker Levering  
Pan AssemblyTOC  
SwitchMOC  
Switch**38 kV Switchgear — Circuit Breaker  
Compartment****Features — 38 kV  
Switchgear Assembly**

Like the circuit breaker described above, the 38 kV switchgear assembly is a corona-free metal-clad design. It incorporates many features and advantages of 5, 15 and 27 kV VacClad design, with additional modifications required for 38 kV application.

- Industry-leading cycloaliphatic epoxy supports are used for primary phase-to-phase and phase-to-ground insulation throughout, providing 170 kV BIL and 80 kV (1 minute) power frequency withstand capability.
- All primary bus conductors are insulated for full 38 kV by fluidized epoxy coating. All buses are fabricated from 100% conductivity copper. Bus joints are silver- or tin-plated as required, and covered with Cutler-Hammer patented pre-formed insulating boots to maintain metal-clad integrity.

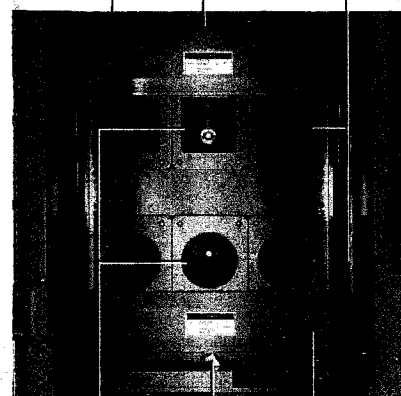
Control  
CompartmentControl  
Devices

Breaker Compartment

**38 kV Switchgear — Control Compartment**Ground  
Bus Secondary  
Disconnect MOC Switch  
Beneath this CoverGuide  
Rail  
Breaker Pan  
AssemblyRacking  
Screw and  
Moving  
Block  
AssemblyCode  
PlatesProvision for  
PadlockingGuide  
Rail**Breaker Levering Pan Assembly**

- Circuit breaker compartment is designed to interface with Type VCP-W 38 kV circuit breaker. It includes floor mounted breaker pan assembly (levering assembly) with all safety interlocks required by the metal-clad design. Cell mounted guide rails accurately guide the breaker into the cell during levering, and ensure correct alignment of the circuit breaker primary disconnects with the cell primary contacts when breaker reaches connected position.
- Coding plates are provided to ensure only correct breaker rating can be installed in the cell.
- Automatic steel shutters cover cell primary contacts when circuit breaker is withdrawn from its connected position, to prevent persons from accidentally touching the stationary primary cell contacts. Each shutter can be padlocked in the closed or open position. It can also be manually latched open as required for maintenance.

5

Steel  
Shutter Shutter  
Latch  
(Manual) Primary  
Contact  
HousingStationary  
Primary  
Contacts Shutter  
Latch  
(Manual) Steel  
Shutter**Breaker Compartment (Shutter Shown  
Open for Illustration)**



# Metal-Clad Switchgear — VacClad-W — Medium Voltage Drawout Vacuum Breakers — 38 kV (42-Inch Wide)

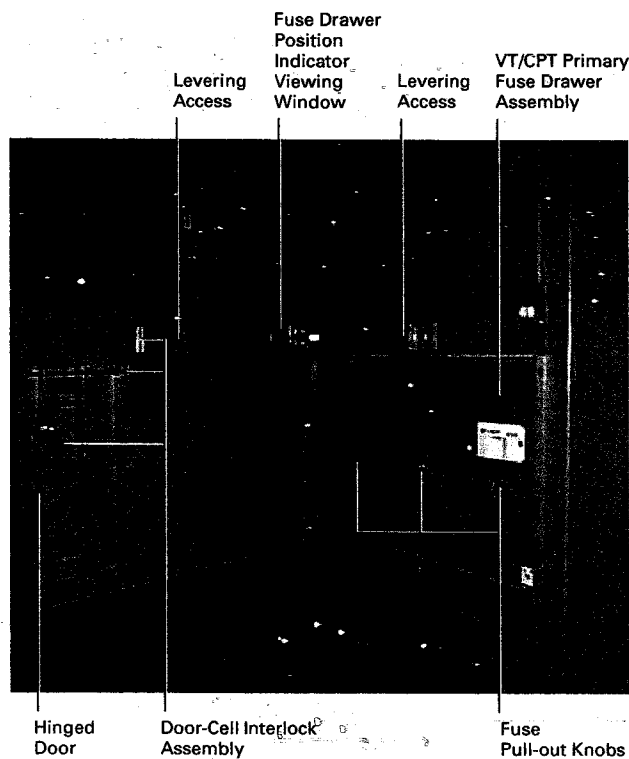
EATON

Cutler-Hammer

October 2008  
Sheet 05016

## General Description — 38 kV Switchgear

### Features — 38 kV Switchgear Assembly (Continued)



VT/CPT Primary Fuse Drawer (Shown with Door Open)

- A separate control compartment is provided for installation of protection, metering and control devices. No devices are located on circuit breaker compartment door.
- Rear of the switchgear is divided in main bus and cable compartments, isolated from each other by grounded metal barriers. Sufficient space is available for customer's top or bottom entry power cables. Bus duct terminations can also be supplied. A bare copper ground bus is provided along the entire lineup, with an extension in each cable compartment for termination of power cable shields.

### 38 kV, 170 kV BIL Design

- Line side current transformer bushings are included as standard. Bus side current transformer bushings are only included when bus side current transformers are supplied.
- Ring-type current transformers are installed over bus or line side primary insulating bushings as required. They are accessible from the rear of the unit. Maximum two sets of standard accuracy or one set of high accuracy current transformers can be installed on the bus side; and three sets of standard accuracy or one set of standard, and one set of high accuracy transformers can be installed on the line side.
- Voltage and Control Power Transformers, when required, are stationary mounted inside the cubicle, with their primary fuses installed in a drawout auxiliary drawer.
- Each primary fuse drawer is provided with a levering mechanism for moving the drawer within its compartment between connected and disconnected positions, with the compartment door closed. The levering mechanism is mechanically interlocked with the compartment

door such that the door cannot be opened, and access to the primary fuses cannot be gained, until the drawer is levered out to the disconnected position. A colored flag visible through a small viewing window on the compartment door indicates the position of the drawer inside the compartment as follows:

- Red Color — drawer is in the fully connected position
- Green Color — drawer is in the fully disconnected position
- Orange Color — drawer is in-between connected and disconnected position

Also provided are grounding straps to automatically discharge the fuses as they are pulled from the fuse holders.

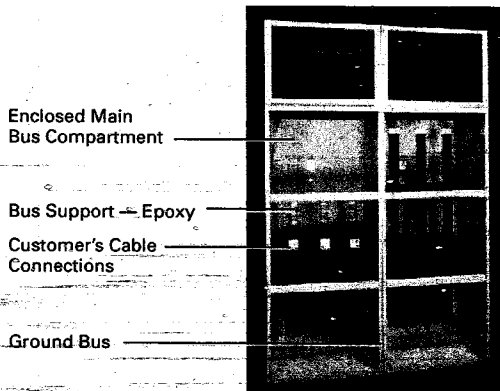
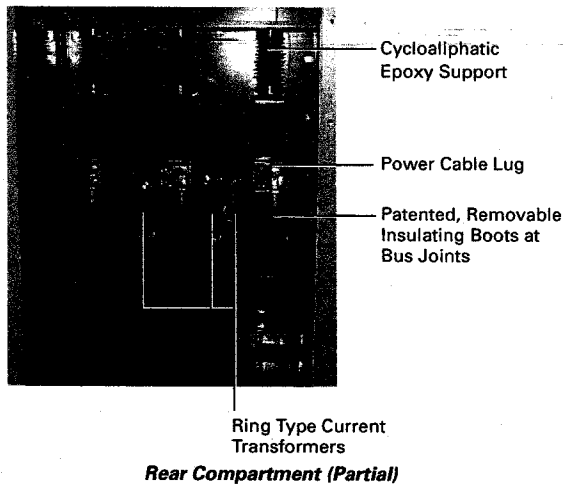
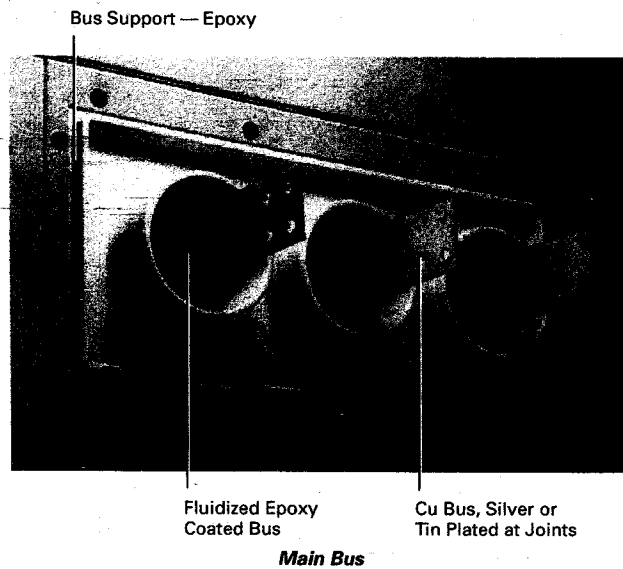
On VT fuse drawers, a cell switch automatically disconnects the secondary circuit before the primary fuses are disconnected as the drawer is withdrawn.

On CPT fuse drawers, the compartment door is key interlocked with the CPT main secondary circuit breaker such that the access to the drawer levering mechanism is blocked until the secondary main breaker is opened.

### 38 kV, 150 kV BIL Design

- This design is similar to 38 kV, 170 kV BIL design described previously, except main bus is oriented differently and the design is provided with drawout VT with integral fuses, and front accessible CTs. Each 38 kV 150 kV BIL indoor structure is 42-inch (1066.8 mm) wide x 95-inch (2413 mm) high x 124.36-inch (3158.8 mm) deep. The 150 kV BIL assembly uses the same 38 kV circuit breakers as in 170 kV BIL assemblies. The breakers are interchangeable between the two designs.
- Voltage transformers are equipped with integral top mounted primary fuses and installed in an auxiliary compartment. Two auxiliary compartments can be provided in one vertical section. Each auxiliary compartment can be supplied with 1, 2 or 3 VTs, and can be connected to bus or line, as required for a given application. The VTs assembly is located behind a fixed bolted panel, and provided with mechanism for moving it between connected and disconnected position. The VT assembly is interlocked with the fixed bolted panel such that the panel cannot be removed unless the VTs are withdrawn to disconnected position. A shutter assembly covers the primary stabs when VTs are withdrawn to disconnected position. A mechanism is also provided to automatically discharge VT primary fuses as the VTs are withdrawn from connected to disconnected position.
- Ring type current transformers are installed over bus or line side primary insulating bushings, located behind the steel shutters, in the breaker compartment. In this design, the CTs are easily accessible from the front, after removal of the circuit breaker. The front accessibility permits adding or changing the CTs when the equipment is de-energized, but without removal of high voltage joints or primary insulation. The design allows installations of two sets of standard or one set of high accuracy CTs on each side of the circuit breaker.
- As of this update, the 38 kV, 150 kV BIL design cannot be supplied for applications that require a CPT, or primary fuse drawer for a remote CPT. Contact Eaton for availability.

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**Features — 38 kV Switchgear Assembly (Continued)****38 kV Switchgear Assembly — Rear View****5**

17

DC COMBINER BOXES

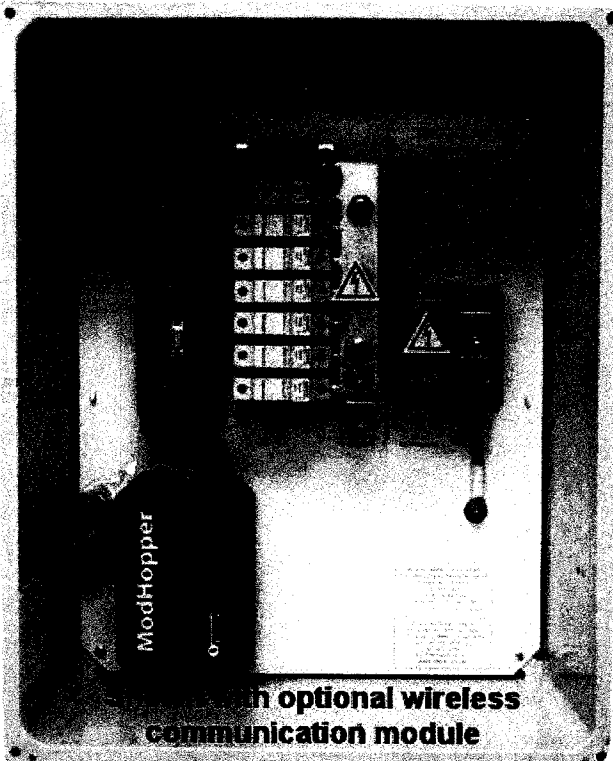
# AMTEC SOLAR

## PROMINENCE 8 & 16 With Monitoring NEW! Now Available in 24 & 32 String!

- Listed to UL1741
- Rated up to 1,000VDC!
- NEMA 4X Fiberglass enclosure standard; Stainless Steel and Metallic options available.
- Custom back pan with integrated wire management and silk-screening of all components
- Copper Positive busbar eliminates messy wiring to fuse blocks
- Complete Monitoring capabilities of up to 20A per string
- Mod-Bus Communication

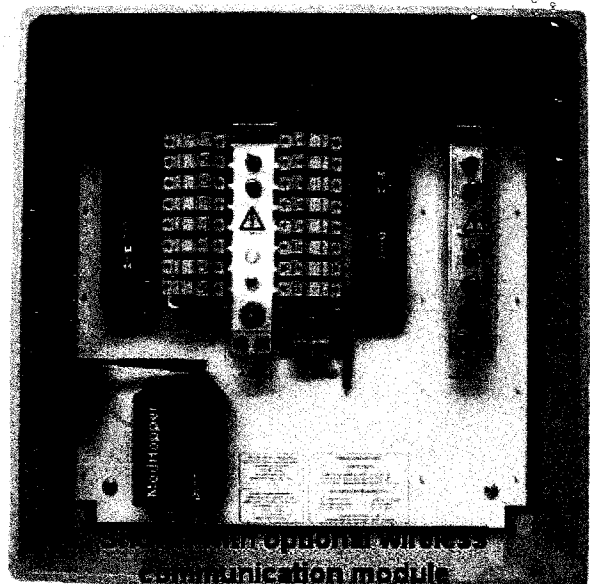
### PROMINENCE 16M

- Rated for up to 320A at 1000VDC
- 25.5"H x 25.5"W x 10"D (44 lbs)
- Positive and Negative Outputs: 2X 350MCM-6AWG



### PROMINENCE 8M

- Rated for up to 160A at 1000VDC
- 21.5"H x 17.75"W x 8.5"D (25 lbs)
- Positive and Negative Outputs: 1X 350MCM-6 AWG



We proudly use Obvius components in our monitoring combiner boxes.

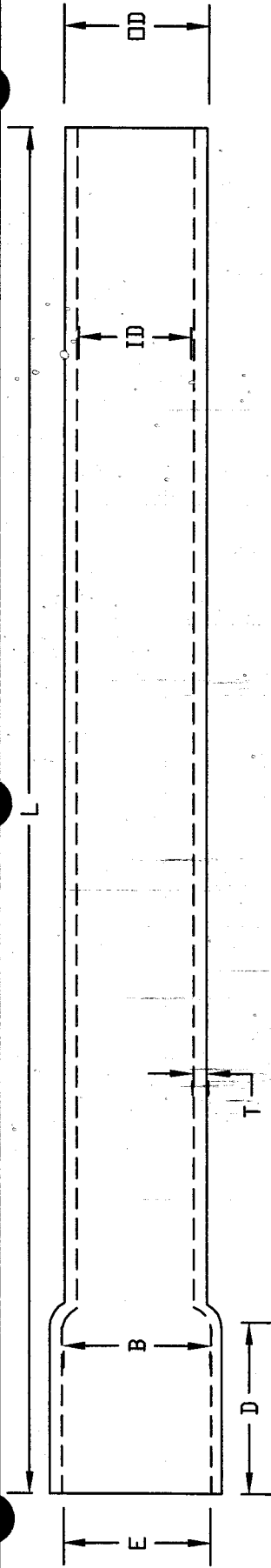


**AMtecSolar.com**

AMtec Solar, A Division of AMtec Industries, Inc.  
2501 Industrial Parkway West  
Hayward, CA 94545  
510.887.2289

10

SCHEDULE 40 CONDUIT



Part Number	Size	T Min.	OD	ID Min.	E	B	D Min.	L Min.
A52AE12	1/2"	0.109"	0.840"	0.578"	0.852"	0.836"	0.652"	120"
A52AG12	3/4"	0.113"	1.050"	0.780"	1.064"	1.046"	0.719"	120"
A52BA12	1"	0.133"	1.315"	1.004"	1.330"	1.310"	0.875"	120"
A52BC12	1 1/4"	0.140"	1.660"	1.335"	1.677"	1.655"	0.938"	120"
A52BE12	1 1/2"	0.145"	1.900"	1.564"	1.918"	1.894"	1.062"	120"
A52CA12	2"	0.154"	2.375"	2.021"	2.393"	2.369"	1.125"	120"
A52CE12	2 1/2"	0.203"	2.875"	2.414"	2.890"	2.868"	1.469"	120"
A52DA12	3"	0.216"	3.500"	3.008"	3.515"	3.492"	1.594"	120"
A52DE12	3 1/2"	0.226"	4.000"	3.486"	4.015"	3.992"	1.687"	120"
A52EA12	4"	0.237"	4.500"	3.961"	4.515"	4.491"	1.750"	120"
A52FA12	5"	0.258"	5.563"	4.975"	5.593"	5.553"	1.937"	120"
A52GA12	6"	0.280"	6.625"	5.986"	6.658"	6.614"	2.125"	120"
A52JA12 *	8"	0.322"	8.625"	7.853"	8.670"	8.610"	4.875"	120"

Dimensions are Nominal

\* 8 inch not UL Listed

UL Listed (UL651)  
 UL File # E34052  
 UL Category Code DZYR  
 UL Control Number 41UM  
 NEMA TC2 Compliant  
 See NEC Article 352 for use  
 Sunlight Resistant  
 Max 90° C Wire



**CANTEX**  
 INC.  
 Fort Worth, TEXAS

Schedule 40 Rigid PVC Conduit

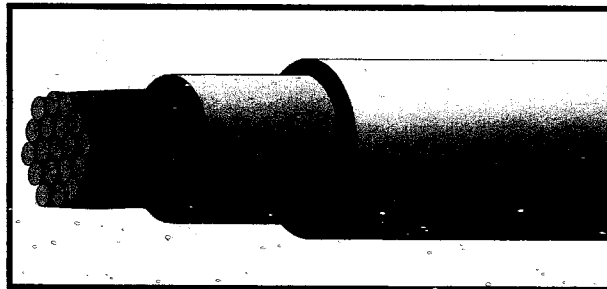
Complies with Federal Specification WC-1094

PV STRING WIRE AND  
DC HOMERUN CONDUCTOR  
- SIZE AS INDICATED ON PLANS



ENVIROPLUS<sup>®</sup>

Single Conductors



ENVIROPLUS<sup>®</sup>

## Photovoltaic Wire

### for use with Solar Panels

#### 1000 Volt Single Conductor Power Cable

#### USE-2 or RHH or RHW-2

#### Zero Halogen, Limited Smoke Jacket

#### Description:

Single conductor insulated with heat and moisture resistant, cross-linked polyethylene insulation, (Type USE-2), with an overall flame and sunlight-resistant, Zero Halogen, Limited Smoke, Zero Lead Jacket. Tinned conductors available.

#### Applications:

Photovoltaic wire (1,000 Volt) for use as interconnection wiring on solar panels in grounded or ungrounded systems as defined in applicable parts of the National Electrical Code (NEC) NFPA 70, such as article 690.31(A).

#### Standards:

UL 4703 (PV Wire)  
Conductors UL854 (#16 per UL 66)  
ICEA S-95-658/NEMA WC-70  
Flame Rated: VW-1 per UL 1685  
Temperature Rating: 90° C Wet and Dry  
Sunlight Resistant; Superior Water Resistance  
Excellent crush and abrasion resistance  
Zero Halogen, Limited Smoke Jacket

Part Number	Size AWG or MCM	Strand (no.)	Insulation Thickness (mils)	Jacket Thickness (mils)	Nominal Diameter Overall (inch)	Approx. Net Weight per 1000 feet (lbs.)	Ampacity* 30° C Ambient 90° C Wet/Dry
PVENV16	16	26	45	30	.210	27	8
PVENV14	14	7	45	30	.223	32	25 †
PVENV12	12	7	45	30	.242	42	30 †
PVENV10	10	7	45	30	.266	57	40 †
PVENV8	8	7	60	30	.326	87	55
PVENV6	6	7	60	45	0.394	134	75
PVENV4	4	7	60	45	0.442	190	95
PVENV3	3	7	60	45	0.470	228	110
PVENV2	2	7	60	45	0.502	276	130
PVENV1	1	19	80	60	0.601	369	150
PVENV1/0	1/0	19	80	60	0.640	446	170
PVENV2/0	2/0	19	80	60	0.684	541	195
PVENV3/0	3/0	19	80	60	0.734	660	225
PVENV4/0	4/0	19	80	60	0.790	808	260
PVENV250	250	37	95	80	0.925	998	290
PVENV300	300	37	95	80	0.979	1186	320
PVENV350	350	37	95	80	1.031	1338	350
PVENV400	400	37	95	80	1.078	1526	380
PVENV500	500	37	95	80	1.163	1840	430
PVENV600	600	61	110	80	1.271	2200	475
PVENV750	750	61	110	80	1.378	2696	535

\*Per NEC-Table 310-16.

† The overcurrent protection for items marked with an obelisk (†) shall not exceed 15 amps for 14 AWG, 20 amps for 12 AWG and 30 amps for 10

NOTE: The data shown is approximate and subject to standard industry tolerances.

2009



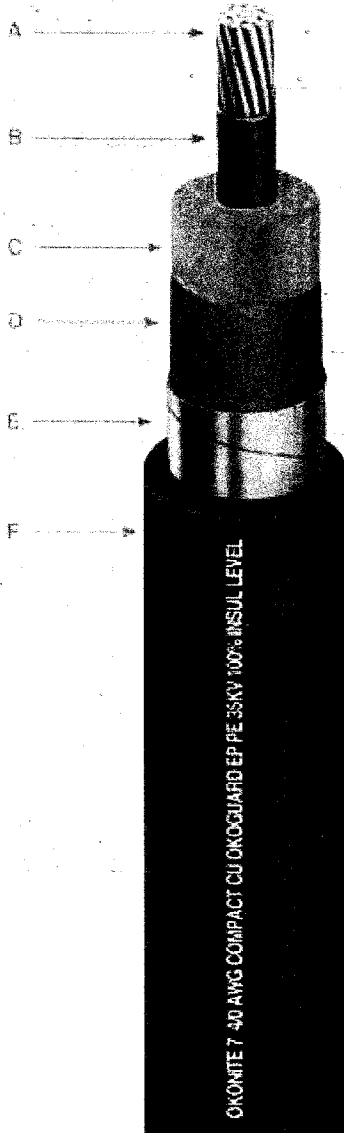
COMPACT STRAND  
CONSTRUCTIONProduct Data  
Section 2: Sheet 16

## Okoguard®-Okoseal® Type MV-105



## 35kV Shielded Power Cable

One Okopact® (Compact Stranded) Copper Conductor/105°C Rating  
100% and 133% Insulation Level



- A Uncoated, Okopact (Compact Stranded) Copper Conductor
- B Strand Screen- Extruded Semiconducting EPR
- C Insulation-Okoguard EPR
- D Insulation Screen -Extruded Semiconducting EPR
- E Shield-Copper Tape
- F Jacket-Okoseal

## Insulation

Okoguard Okonite's registered trade name for its-exclusive ethylene-propylene rubber (EPR) based, thermosetting compound, whose optimum balance of electrical and physical properties is unequalled in other solid dielectrics. Okoguard insulation, with the distinctive red color and a totally integrated EPR system, provides the optimum balance of electrical and physical properties for long, problem free service. The triple tandem extrusion of the screens with the insulation provides optimum electrical characteristics.

## Jacket

The Okoseal (PVC) jacket supplied with this cable is mechanically rugged and has excellent resistance to oil and most chemicals.

## Applications

Okoguard shielded Okoseal Type MV-105 power cables are recommended for distribution circuits, and for feeders or branch circuits in industrial and commercial installations.

Type MV cables may be installed in wet or dry locations, indoors or outdoors (exposed to sunlight), in any raceway or underground duct, directly buried if installed in a system with a grounding conductor in close proximity that conforms with NEC Section 250.4(A)(5), or messenger supported in industrial establishments and electric utilities.

## Specifications

**Conductor:** Annealed uncoated copper compact stranded per ASTM B-496.

**Strand Screen:** Extruded semiconducting EPR strand screen. Meets or exceeds electrical and physical requirements of ICEA S-93-639/NEMA WC7 & S-97-682, AEIC CS8 and UL 1072.

**Insulation:** Meets or exceeds electrical and physical requirements of ICEA S-93-639/NEMA WC74, & S-97-682 AEIC CS8 and UL 1072.

**Insulation Screen:** Extruded semiconducting EPR insulation screen. Meets or exceeds electrical and physical requirements of ICEA S-93-639/NEMA WC74 & S-97-682, AEIC CS8 and UL 1072.

**Shield:** 5 mil bare copper tape helically applied with 12.5% nominal overlap.

**Jacket:** Meets or exceeds electrical and physical requirements of ICEA S-93-639/NEMA WC74 & S-97-682 and UL 1072 for polyvinyl chloride jackets.

UL Listed as Type MV-105 and sunlight resistant, in accordance with UL 1072.

A flame retardant construction, size 1/0 AWG and larger, for installation in cable tray is available on special order. This construction is UL labeled "MV-105 FOR CT USE." Cables listed to CSA C68.3 and rated FT4 and -25°C are available on special orders.

## Product Features

- Triple tandem extruded all EPR system.
- Okoguard cables meet or exceed all recognized industry standards (UL, AEIC, NEMA/ICEA, IEEE).
- 105°C continuous operating temperature.
- 140°C emergency rating.
- 250°C short circuit rating.
- Excellent corona resistance.
- Screens are clean stripping.
- Exceptional resistance to "treeing."
- Moisture resistant.
- Resistant to most oils, acids, and alkalies.
- Sunlight resistant.
- Improved Temperature Rating

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**Okoguard-Okoseal Type MV-105****35kV Shielded Power Cable**

One Okopact (Compact Stranded)

Copper Conductor/105°C Rating

100% and 133% Insulation Level

**Product Data****Section 2: Sheet 16**

Catalog Number (1)	Conductor Size AWG or kcmil	Conductor Size -mm <sup>2</sup>	Approx. Dia. over Insulation (in.)	Approx. Dia. over Screen (in.)	Jacket Thickness - mils	Jacket Thickness - mm	Approx. O.D. - Inches	Approx. O.D. - mm	Approx. Net Weight lbs./1000'	Approx. Ship Weight lbs./1000'	Ampacities (2)	Conduit in Air Ampacities (3)	Direct Burial Ampacities (4)	Underground Duct Conduit Size Inches (5)*
<b>Okoguard Insulation: 345 mils (8.76mm), 100% Insulation Level</b>														
▲ 115-23-3516	1/0	53.5	1.09	1.17	80	2.03	1.34	34.0	1150	1275	215	295	215	4
115-23-3517	2/0	67.4	1.12	1.19	80	2.03	1.38	35.0	1270	1380	255	335	245	4
115-23-3519	3/0	85.0	1.16	1.24	80	2.03	1.43	36.2	1420	1605	290	380	275	4
▲ 115-23-3521	4/0	107.0	1.23	1.31	80	2.03	1.49	37.7	1615	1800	330	435	315	5
115-23-3523	250	127.0	1.26	1.34	80	2.03	1.52	38.7	1770	1950	365	475	345	5
115-23-3527	350	177.0	1.36	1.44	80	2.03	1.62	41.2	2170	2420	440	575	415	5
▲ 115-23-3531	500	253.0	1.49	1.57	80	2.03	1.75	44.4	2764	3014	535	700	500	5
115-23-3535	750	380.0	1.66	1.76	110	2.79	2.00	50.9	3840	4240	655	865	610	6
115-23-3537	1000	507.0	1.82	2.16	110	2.79	2.16	54.9	4765	5300	755	1005	690	6

**Okoguard Insulation: 420 mils (10.7mm), 133% Insulation Level**

▲ 115-23-3656	1/0	53.5	1.25	1.33	80	2.03	1.51	38.4	1355	1535	215	295	215	5
115-23-3657	2/0	67.4	1.27	1.35	80	2.03	1.54	39.0	1485	1665	255	335	245	5
115-23-3659	3/0	85.0	1.32	1.40	80	2.03	1.58	40.2	1645	1825	290	380	275	5
▲ 115-23-3661	4/0	107.0	1.39	1.47	80	2.03	1.65	41.9	1835	2085	330	435	315	5
115-23-3663	250	127.0	1.42	1.49	80	2.03	1.72	43.7	2000	2250	365	475	345	5
115-23-3667	350	177.0	1.52	1.59	110	2.79	1.84	46.7	2520	2770	440	575	415	5
115-23-3671	500	253.0	1.63	1.73	110	2.79	1.98	50.3	3155	3555	535	700	500	6
115-23-3675	750	380.0	1.81	1.91	110	2.79	2.16	54.9	4140	4680	655	865	610	6
115-23-3677	1000	507.0	1.97	2.07	110	2.79	2.32	58.9	5090	5630	755	1005	690	8

Visit Okonite's web site, [www.okonite.com](http://www.okonite.com) for the most up to date dimensions.

▲ Authorized stock item. Available from our Customer Service Centers.

**Aluminum Conductors**

(1) Aluminum Conductors are available on special orders.

**Ampacities**

(2) Ampacities are in accordance with Table 310.73 of the NEC for three single Type MV-105 conductors, or single conductors twisted together (triplexed) and installed in an isolated conduit in air at an ambient temperature of 40°C and a conductor temperature of 105°C.

(3) Ampacities are in accordance with Table 310.81 of the NEC for an insulated single conductor directly buried with a conductor temperature rating of 105°C, ambient earth temperature of 20°C, 100% Load Factor, thermal resistance (RHO) of 90, 7 1/2 inch spacing between conductor center lines, and 24 inch spacing between circuits.

(4) Ampacities are in accordance with Table 310.77 of the NEC for three single conductors or triplexed cable in one underground raceway, three feet deep with a conductor temperature of 105°C, 100% Load Factor, an ambient earth temperature of 20°C, and thermal resistance (RHO) of 90.

Refer to the NEC, IEEE/ICEA S-135 Power Cable Ampacities, or the Okonite Engineering Data Bulletin for installation in duct banks, multiple point grounded shields, other ambient temperatures, circuit configurations or installation requirements.

(5) Recommended size of rigid or nonmetallic conduit for three conductors based on 40% maximum fill.

\*The jam ratio conduit I.D. to cable O.D. should be checked to avoid possible jamming.

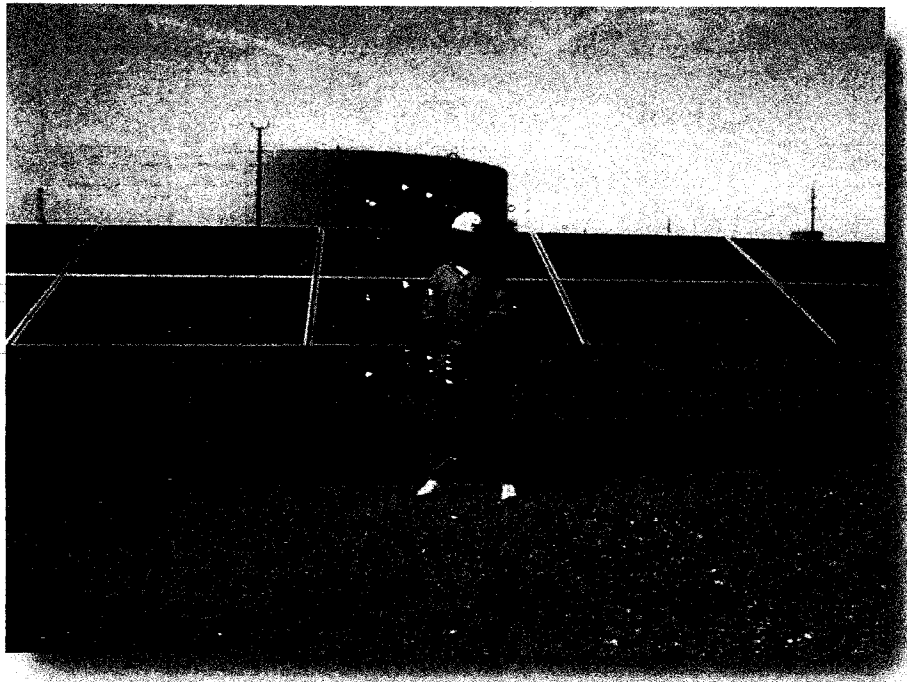
**THE OKONITE COMPANY**

Ramsey, New Jersey 07446

22

# Blythe Solar Airport Reflectivity Study

June 22, 2010



1015 W. Hays  
Boise, ID 83702

**CASE: PP24616**  
**EXHIBIT: R (Sheets 1-20)**  
**DATED: 11/10/10**  
**PLANNER: R. JUAREZ**



# BLYTHE AIRPORT SOLAR 1

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Appendix: Suntech Module Reflection

## 1. Introduction

US Solar Holdings has prepared this study to assess the impact of specular solar reflections from the photovoltaic panels relative to a pilot's flight path. There are concerns with impacts of glare to a pilot flying over 100+ acres of photovoltaic panels. This study:

- Measures actual reflection from a variety of photovoltaic modules and other solar technologies such as concentrating PV, and solar thermal
- Compares reflection values to common surfaces
- Predicts at what times and where a pilot at an elevation of 1,000 ft will be subject to glare/reflection

Please note the main focus of this study is on the PV technology.

Specular reflection is the mirror-like reflection of light (or of other kinds of wave) from a surface, in which light from a single incoming direction (a ray) is reflected into a single outgoing direction. Such behavior is described by Snell's Law of Reflection; see Figure 1. Snell's Law states the direction of incoming light (the incident ray), and the direction of outgoing light reflected (the reflected ray) make the same angle with respect to the surface normal, thus the angle of incidence equals the angle of reflection ( $\theta_i = \theta_r$ ), and that the incident, normal, and reflected directions are coplanar.

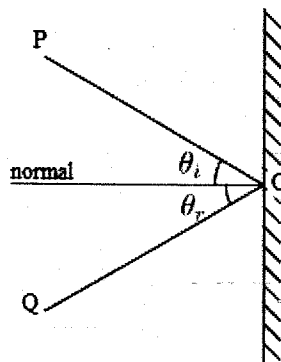


Figure 1: Angle of Reflection

Depending on the material properties of the surface, light may be transmitted through the surface. For most interfaces between materials, the fraction of light that is reflected increases with increasing angle of incidence  $\theta_i$ . For solar modules, the solar cells are light absorbing material that absorb the photons and generate electricity via the photovoltaic effect. The solar cells consist of materials that absorb a range of solar light wavelengths that reach the Earth's surface. However, for space solar applications, solar cells are designed to optimized light

absorption outside of Earth's atmosphere. The solar cells are designed to absorb as much incoming light as possible, thus minimizing reflection in order to maximize electricity production. For example, Suntech claims their solar modules reflect 6% of the incidence solar irradiance that hits the module; see Appendix for specifications.

## 2. Testing Procedures

Solar irradiance measurements were recorded at the APS Star Center in Phoenix, AZ, one of the world's premier solar test and research facilities.<sup>1</sup> It is at the APS STAR Center where APS tests and develops technologies for converting solar energy into electricity. This site was selected because there are a wide variety of PV, thin film and solar thermal technologies to take measurements from.

A *Daystar Irradiance Meter* was utilized for measuring solar irradiance in Watts per square meter ( $\text{W/m}^2$ ). The product claims an accuracy tolerance of  $\pm 3\%$ . Readings were recorded in the following order:

1. Measurement 1: the first measurement was taken parallel to the plane of array facing the sun to record total irradiance hitting the panel; see Figure 2.
2. Measurement 2: the second measurement was taken parallel to the plane of array facing the array approximately 1ft away.

From these two measurements, the percentage of solar irradiance reflected was calculated:

$$\% \text{ Reflected} = \text{Measurement 2} / \text{Measurement 1}$$

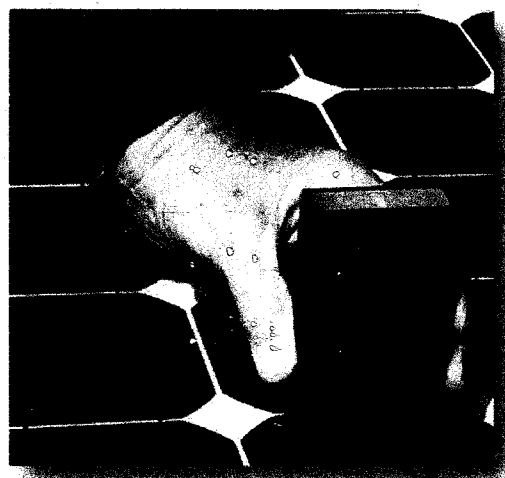


Figure 2: Measurement Parallel to the Array

Three readings were taken for each measurement; this report shows the worst case for reflection.

There were a variety of variables during the testing that impacts measurements:

- Dust levels on panels
- Technology age (50-150 W range for PV). Please note the solar thermal and concentrating systems are much older technologies and are not a true representation of what would be installed today.
- Measurement distance and angle from panels

<sup>1</sup> [http://www.aps.com/my\\_community/STARTour/default.html?seq=1](http://www.aps.com/my_community/STARTour/default.html?seq=1)

- Array tilt
- Manufacturer
- Solar irradiance varies with time (tests began @ 11am and ended at 12pm)

### 3. Solar Module Tests

#### 3.1. Single Axis Tracking

Measurements recorded for the single axis tracking system shown in Figure 3 are displayed in Table 1. Solar irradiance striking the array was  $1,000 \text{ W/m}^2$ , while  $106 \text{ W/m}^2$  was reflected. This equates to a total reflection of 11%.

Module	Solar Irradiance $\text{W/m}^2$	Reflected $\text{W/m}^2$	% Reflected
Siemens 75 W (Poly-Si)	1,000	106	11%

Table 1: Single Axis Tracking System

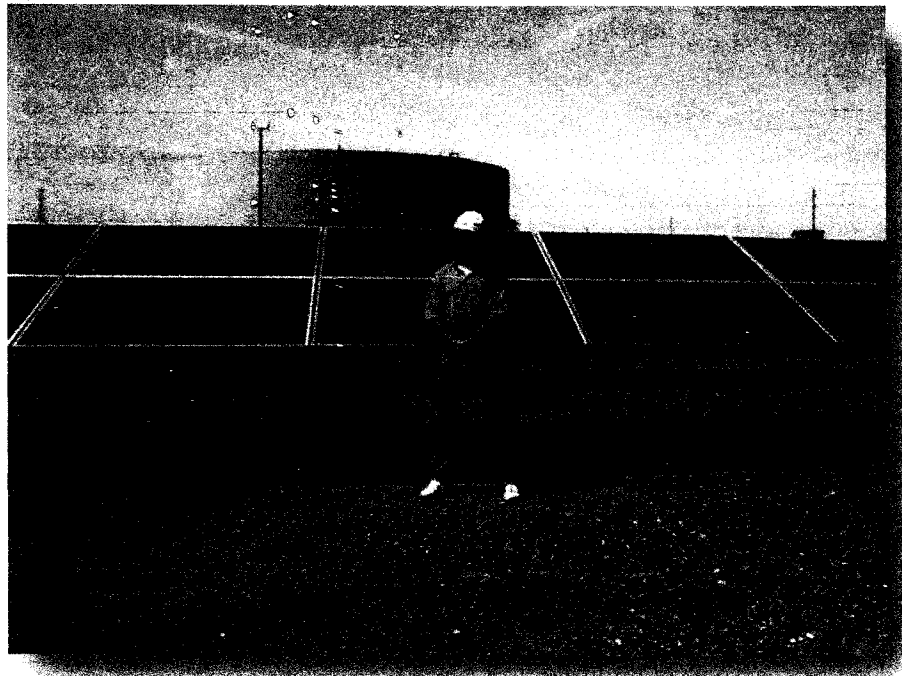


Figure 3: Single Axis Tracking PV System

#### 3.2. Poly-Silicon & Mono-Silicon on 2-Axis Tracker

Measurements recorded for the dual axis tracking system for both mono-Silicon modules and poly-Silicon modules are shown in Figure 4; see Table 2 for results. Solar irradiance striking the panel was  $1,033 \text{ W/m}^2$ . For the poly-Si modules,  $47 \text{ W/m}^2$  was reflected, thus displaying

a 5% reflectance. For the mono-Si modules, 67 W/m<sup>2</sup> was reflected, thus displaying a 6% reflectance.

Module Type	Module Mfg. & Size	Solar Irradiance W/m <sup>2</sup>	Reflected W/m <sup>2</sup>	% Reflected
Poly-Si	ASE 50W	1033	47	5%
Mono-Si	Siemens 55 W	1033	67	6%

Table 2: Double Axis Tracking System

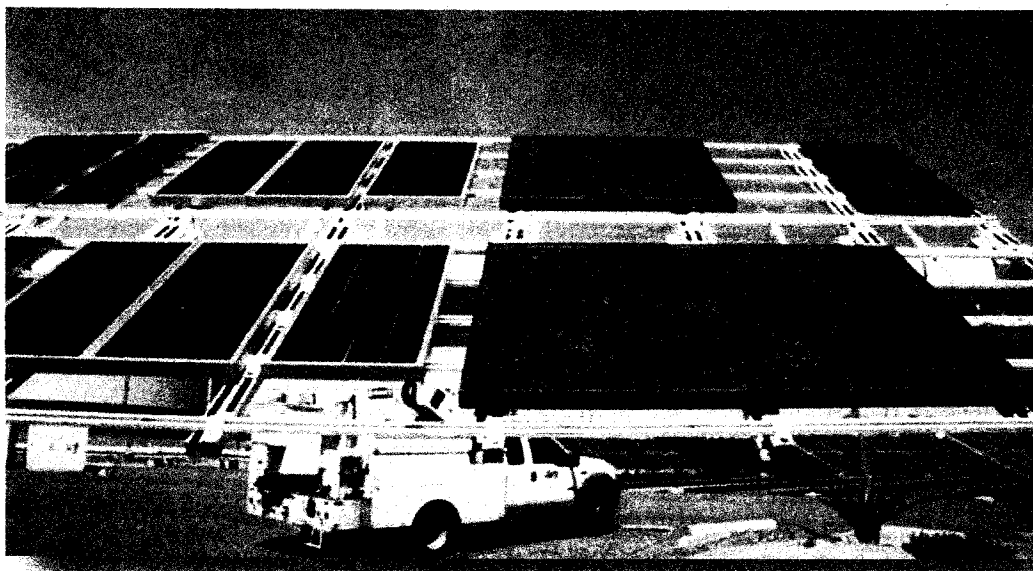


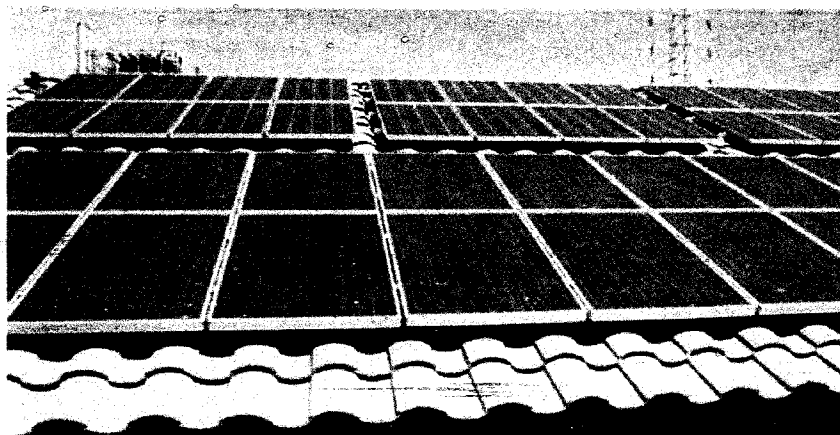
Figure 4: Dual Axis Tracking PV System

### 3.3. Fixed Poly Silicon

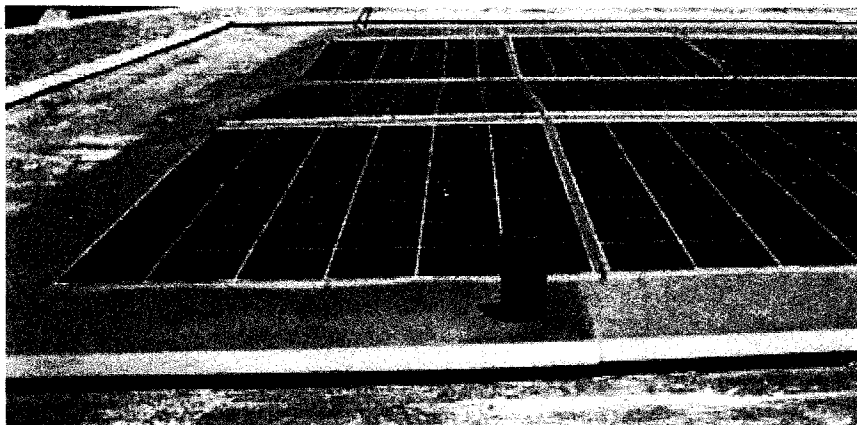
Measurements were recorded for the fixed PV modules at a 22° tilt and modules installed flat; see Figures 5 & 6. Solar irradiance striking the tilted modules was 858 W/m<sup>2</sup>, while the irradiance reflected was 143 W/m<sup>2</sup>, thus equating to 17% reflectance. Solar irradiance striking the flat modules was 761 W/m<sup>2</sup>, while the irradiance reflected was 146 W/m<sup>2</sup>, equating to 19% reflected.

Tilt	Module Mfg. & Size	Solar Irradiance W/m <sup>2</sup>	Reflected W/m <sup>2</sup>	% Reflected
Tilt = 22°	Kyocera 120 W	858	143	17%
Tilt = Flat	Kyocera 120 W	761	146	19%

**Table 3: Fixed PV**



**Figure 5: Fixed Tilt PV System**



**Figure 6: Flat PV System**

### 3.4. Single Axis Tracking

Measurements recorded for another single axis tracking system shown in Figure 7; see Table 4 for results. Solar irradiance striking the array was  $1,029 \text{ W/m}^2$ , while  $120 \text{ W/m}^2$  was reflected. This equates to a total reflection of 12%.

Module Mfc & Size	Solar Irradiance $\text{W/m}^2$	Reflected $\text{W/m}^2$	% Reflected
Photowatt 100 W	1029	120	12%

Table 4: Photowatt Single Axis Tracker

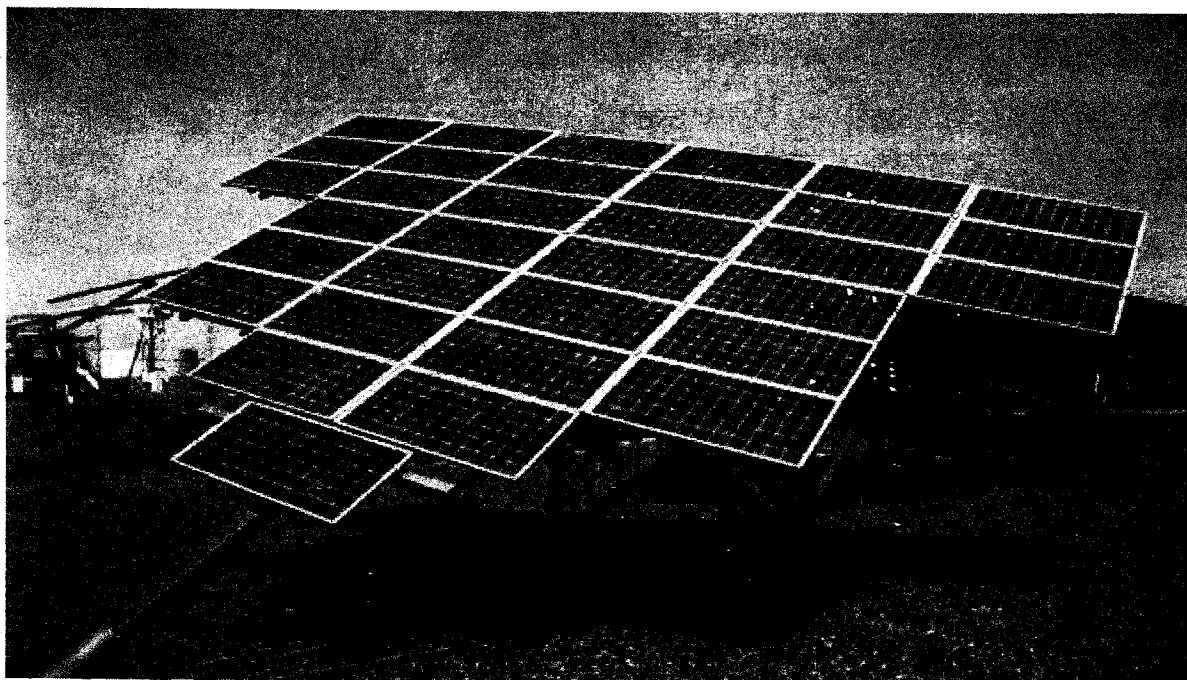


Figure 7: Single Axis Tracking PV System

### 3.5. Thin Film

Measurements were recorded for thin film modules shown in Figure 8. Solar irradiance striking the modules was  $1067 \text{ W/m}^2$ , while  $77 \text{ W/m}^2$  was reflected; see Table 5. This equates to a total reflection of 7%.

Module Mfg. & Size	Solar Irradiance $\text{W/m}^2$	Reflected $\text{W/m}^2$	% Reflected
EPV	1067	77	7%

Table 5: Thin Film

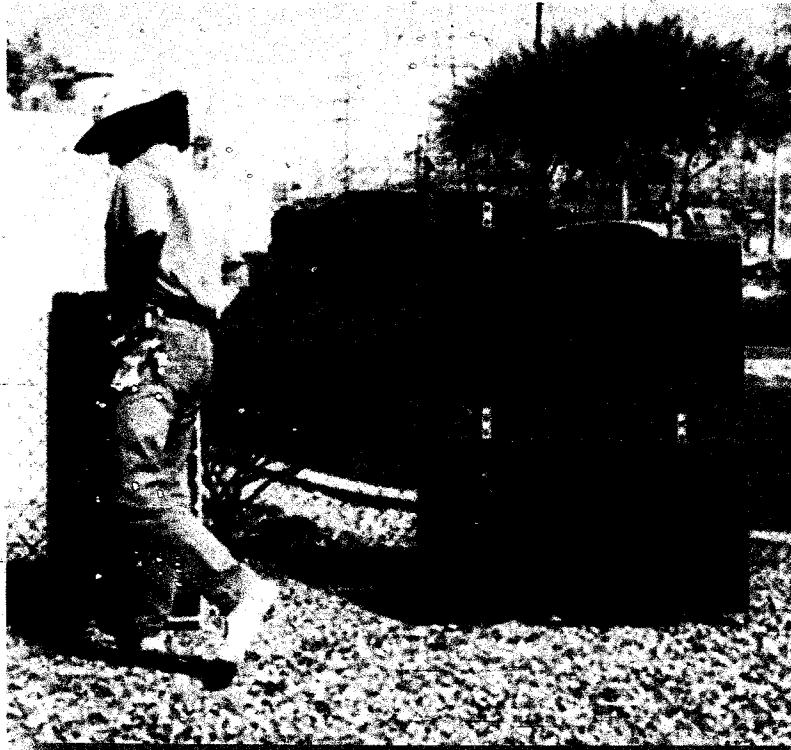


Figure 8: Thin Film Modules

### 3.6. Concentrating PV

Measurements were recorded for an old Concentrating PV array shown in Figure 9. Solar irradiance striking the system was  $1,022 \text{ W/m}^2$ , while  $450 \text{ W/m}^2$  was reflected; see Table 6. This equates to a total reflection of 44%. This is expected for a concentrating system that has highly reflective mirrors that serve to focus solar irradiance thus increasing energy production.



Module Mfg. & Size	Solar Irradiance $\text{W/m}^2$	Reflected $\text{W/m}^2$	% Reflected
Martin Marietta (1970)	1022	450	44%

Table 6: Concentrating PV

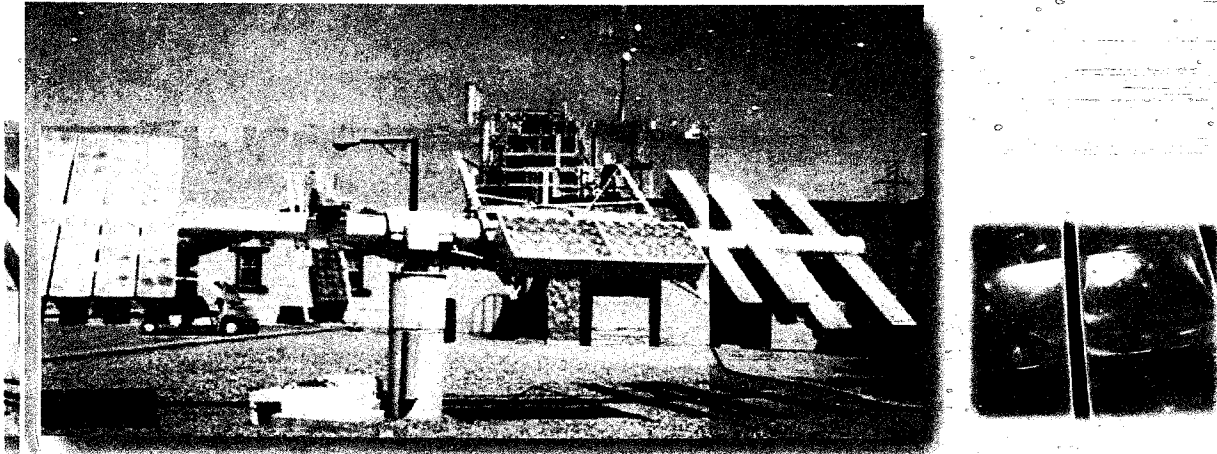


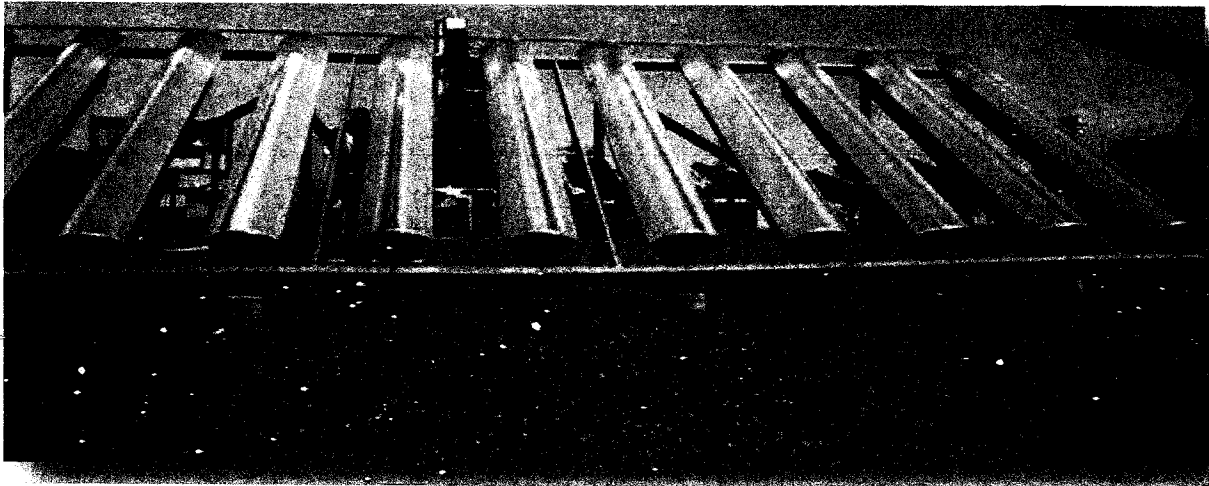
Figure 9: Concentrating PV System

### 3.7. Linear Concentrator

Measurements were recorded for an old Linear Concentrator shown in Figure 10. Solar irradiance striking the system was  $1021 \text{ W/m}^2$ , while  $222 \text{ W/m}^2$  was reflected; see Table 7. This equates to a total reflection of 22%. Again, this more reflection is expected for a concentrating system with mirrors compared to a PV array without mirrors.

Module Mfg. & Size	Solar Irradiance $\text{W/m}^2$	Reflected $\text{W/m}^2$	% Reflected
Photovoltaics International	1021	222	22%

Table 7: Single Axis Tracking System



**Figure 10: Linear Concentrator**

### **3.8. High Concentrating PV**

Measurements were recorded for a high concentrating PV system shown in Figure 11. Solar irradiance striking the system was  $1040 \text{ W/m}^2$ , while  $245 \text{ W/m}^2$  was reflected; see Table 8. This equates to a total reflection of 24%.

<b>Module Mfg. &amp; Size</b>	<b>Solar Irradiance <math>\text{W/m}^2</math></b>	<b>Reflected <math>\text{W/m}^2</math></b>	<b>% Reflected</b>
Spectrolab	1040	245	24%

**Table 8: High Concentrating PV**



**Figure 11: High Concentrating PV System**

### 3.9. Summary

Table 9 cross compares the reflectivity between the PV modules, concentrators and common surfaces. The PV arrays vary from 5% reflectance up to 17% while the concentrators vary from 22% up to 44%. Newer modules typically have a reflectance between 4-7%; solar modules are less reflective than glass, windows, and water; see Table 10.

	Solar Irradiance, $\text{W/m}^2$	Reflected, $\text{W/m}^2$	% Reflected
Single Axis Tracking	959	91	9%
Poly-Si	1033	47	5%
Mono-Si	1033	67	6%
Thin Film	1067	77	7%
Fixed	838	143	17%
Single Axis Tracking	858	103	12%
Linear Concentrator	1021	222	22%

High Concentrating PV	1040	245	24%
Concentrating PV	1022	450	44%
Rocks	858	115	15%
Dirt	858	174	23%
Shade	858	51	7%
Car Window	840	84	10%

**Table 9: Summary of Technologies**

Surface	Average reflectivity
Snow (freshly fallen or with ice film)	0.75
Water surfaces (relatively large incidence angles)	0.07
Soils (clay, loam, etc.)	0.14
Earth roads	0.04
Coniferous forest (winter)	0.07
Forests in autumn, ripe field crops, plants	0.26
Weathered blacktop	0.10
Weathered concrete	0.22
Dead leaves	0.30
Dry grass	0.20
Green grass	0.26
Bituminous and gravel roof	0.13
Crushed rock surface	0.20
Building surfaces, dark (red brick, dark paints, etc.)	0.27
Building surfaces, light (light brick, light paints, etc.)	0.60

**Table 10: Reflectivity Values for Characteristic Surfaces (integrated over solar spectrum and angle of incidence)<sup>2</sup>**

<sup>2</sup> Hunn, B.D., and D.O. Calafell, Determination of Average Ground Reflectivity for Solar Collectors, *Sol. Energy*, vol. 19, p. 87, 1977;

#### 4. Time of Day Reflectance Relative to Pilots

##### 4.1. Blythe Sunpath

In order to determine where glare/reflectance will be witnessed by the pilot, we must first look at the sunpath diagram for Blythe, CA; see Figure 12. The sunpath for Blythe, CA varies by month, notice the sun is lower in the sky in the winter months and higher in the sky in the summer. The y axis is the solar altitude angle and the x axis is the solar azimuth angle. The solar azimuth angle is defined as the angle between the line from the observer to the sun projected on the ground and the line from the observer to a point due south. The solar altitude angle is the elevation angle of the sun. Figure 12 shows the sun's average rising time and setting time for every month.

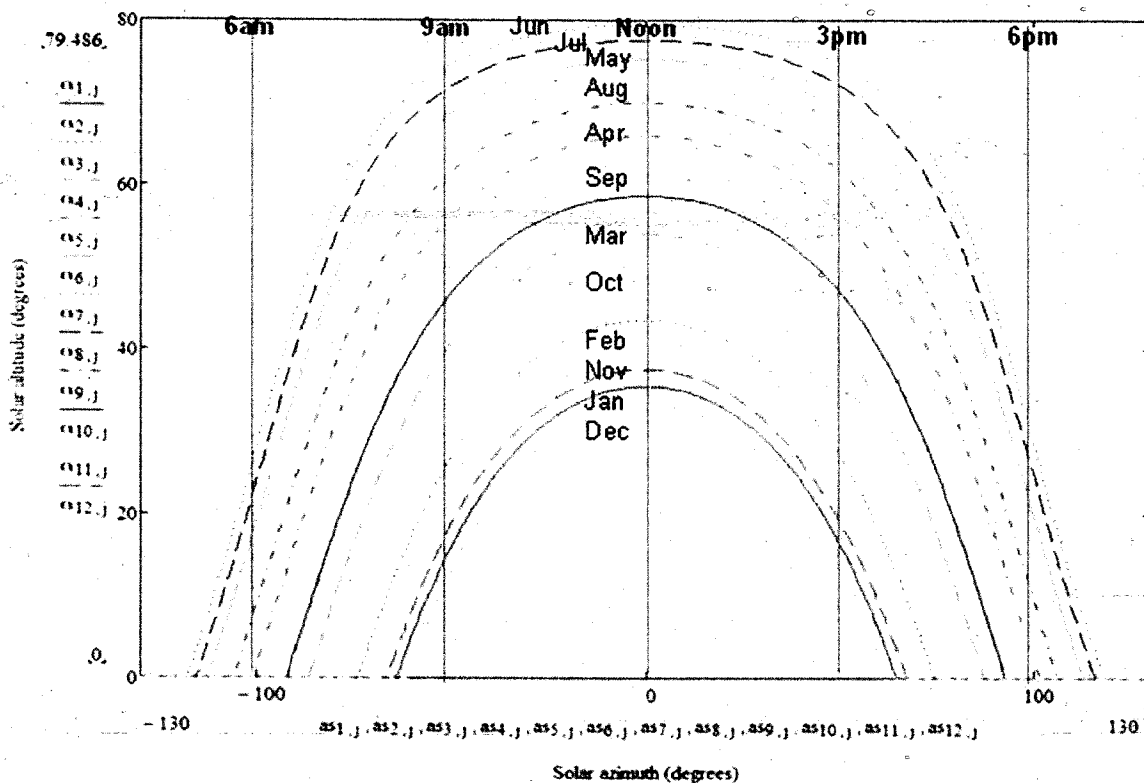


Figure 12: Single Axis Tracking PV System

##### 4.2. Time of Day Comparison – Fixed

Using the sunpath diagram for Blythe and Snell's law for reflection, the critical rays of reflection can be determined; see Figure 13. A plane elevation was assumed to be 1,000 ft and the array was assumed south facing at an angle of latitude + 15 degrees (this is a common angle to optimize winter time energy production). Table 11 indicates the distance from the array at which glare or reflectance will be seen by a pilot at a 1,000 ft. elevation and at what time of day for

each month. Reflection will vary throughout the day and will vary by month. For example, at 8:50am in January, if a pilot at an elevation of 1,000 ft were 176 ft North of the solar system, they witness glare from the system.

The % reflected will vary with each angle. The most reflectance will be seen in the morning hours when the sun begins to rise and the angle of incidence is nearly parallel to the plane of array and also around sunset; see highlighted cells. In this scenario, less irradiance will be absorbed by the array.

Figure 13 indicates the range relative to the array where glare will be witnessed by the pilot.

Solar Altitude Angle Degrees	Distance, ft	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0	0												
10	176 North	8:50am	8:15am	7:20am	6:30am	5:50am	5:40am	5:30am	6:10am	7:00am	7:50am	8:40am	9:00am
20	364 North	9:20am	8:40am	7:40am	6:50am	6:05am	5:50am	5:50am	6:30am	7:20am	8:20am	9:10am	9:40am
30	577 North	10:30am	9:25am	8:20am	7:15am	6:30am	6:10am	6:20am	7:00am	7:50am	9:00am	10:15am	10:50am
40	839 North		10:40am	9:05am	7:40am	6:50am	6:30am	6:50am	7:30am	8:35am	10:10am		
45	1,281 South		9:15am	9:45am	8:15am	7:15am	6:40am	7:00am	7:45am	9:10am	12:00pm		
55	1,881 South				9:10am	7:30am	7:15am	7:20am	8:30am	10:30am			
65	3,079 South				12:00pm	8:30am	7:45am	8:15am	10:15am				
75	7,120 South					12:00pm	9:30am	10:00am					

Table 11: Reflection Distances Relative to Solar Altitude Angle

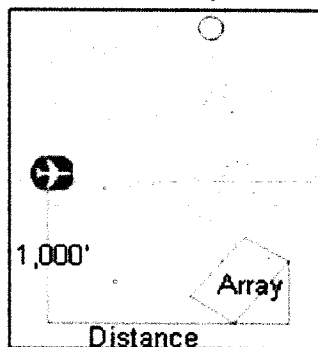


Figure 13: Fixed PV System

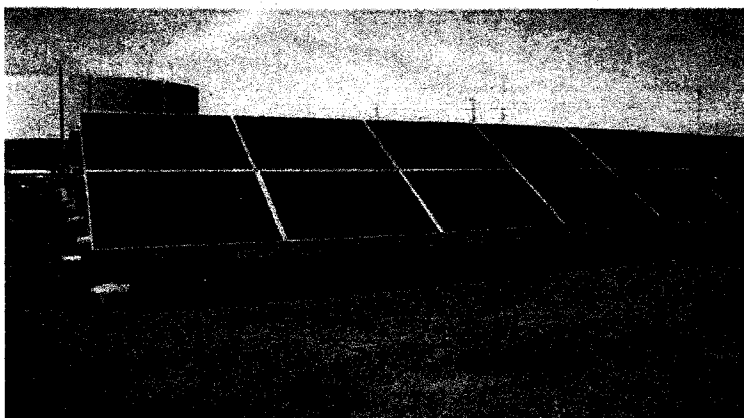
#### 4.3. Time of Day Comparison – Tracking

The same analysis was conducted for a tracking PV system; see Table 12 for results.

Solar Altitude Angle, Degrees	Distance, ft	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0	0												
10	5,671 East	8:50am	8:15am	7:20am	6:30am	5:50am	5:40am	5:30am	6:10am	7:00am	7:50am	8:40am	9:00am
20	2,747 East	9:20am	8:40am	7:40am	6:50am	6:05am	5:50am	5:50am	6:30am	7:20am	8:20am	9:10am	9:40am
30	1,732 East	10:30am	9:25am	8:20am	7:15am	6:30am	6:10am	6:20am	7:00am	7:50am	9:00am	10:15am	10:50am
40	1,192 East		10:40am	9:05am	7:40am	6:50am	6:30am	6:50am	7:30am	8:35am	10:10am		
50	839 East			10:40am	8:40am	7:30am	7:00am	7:15am	8:00am	9:40am			
60	577 East				9:40am	8:05am	7:30am	7:40am	9:00am				

70	364 East	9:50am 8:30am 9:00am											
80	176 East												
90	0												
100	5,671 West	3:30pm	4:00pm	4:50pm	5:40pm	6:20pm	6:40pm	6:30pm	6:00pm	5:10pm	4:10pm	3:30pm	3:15pm
110	2,747 West	2:40pm	3:30pm	4:30pm	5:20pm	6:00pm	6:15pm	6:10pm	5:40pm	4:40pm	3:50pm	3:00pm	2:40pm
120	1,732 West	1:30pm	2:45pm	3:40pm	4:50pm	5:40pm	6:00pm	5:50pm	5:15pm	4:15pm	3:00pm	1:50pm	1:15pm
130	1,192 West		1:15pm	3:00pm	4:20pm	5:15pm	5:40pm	5:30pm	4:40pm	3:40pm	2:00pm		
140	839 West			1:10pm	3:30pm	4:40pm	5:10pm	5:00pm	4:00pm	2:20pm			
150	577 West				2:15pm	4:00pm	4:40pm	4:20pm	3:15pm				
160	364 West						2:20pm	3:30pm	3:00pm				
170	176 West												

**Table 12: Time of Day Comparison**



**Figure 14: Single Axis Tracking PV System**

## 5. Reflectivity Summary

Tables were generated that predict the time of day for reflection at specific locations. In conclusion, actual glare witnessed by pilots from a solar PV system will be minimal and will be at a maximum in the morning and in the evening as the sun rises and sets.



## 6. SOLAR AIRPORTS

### 6.1. Love Field Airport, Prescott, AZ

APS and the City of Prescott partnered together to build a solar power plant near the Prescott Airport; see Figure 1. This system currently produces 3.5 MW and incorporates high concentration photovoltaics (HCPV) and single axis tracking solar panels. The 1.5 MW of the HCPV system use plastic lenses to concentrate the sunlight 250 times onto much smaller, high efficiency solar cells. This reduces the area of PV material by 250 times, which results in a low cost solar electric generation technology. The long term goal for Prescott is to install 5 MW, covering 55 acres. APS owns the solar plant and takes delivery of all electricity for delivery to its customers.

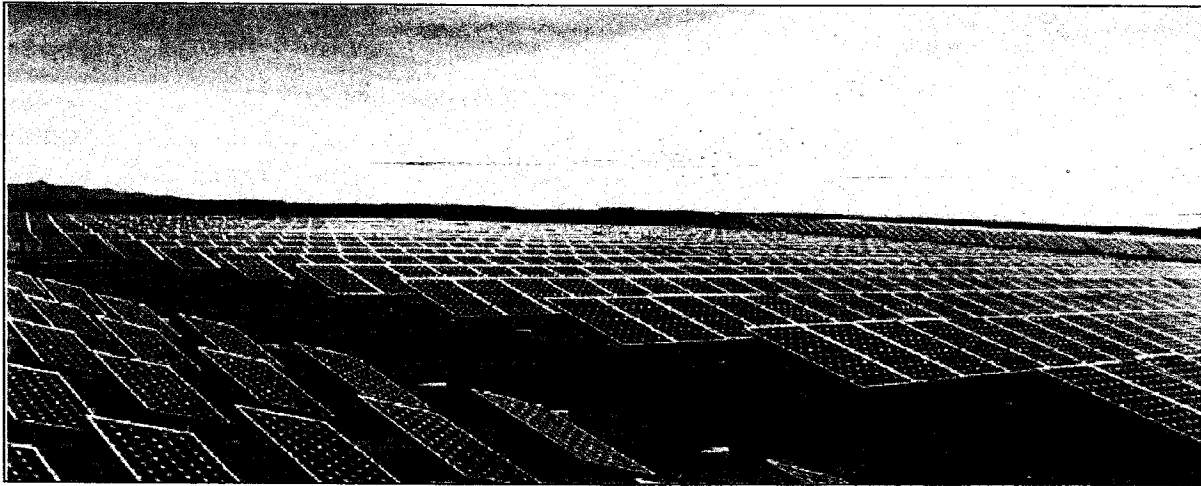


Figure 15: Prescott Airport Single Axis Tracking Solar Panels

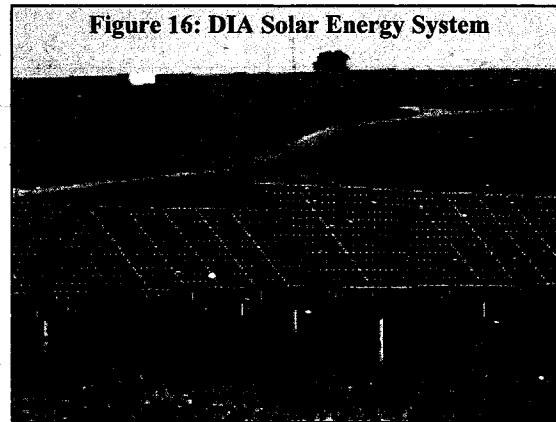
### 6.2. Fresno Yosemite International Airport

In July 2008, the Fresno Yosemite International Airport (FYI) celebrated the opening of their solar energy system at the airport. The solar system provides 40% of the airport power requirements such as: lighting, air conditioning, controls and tower communications. Their solar energy system will decrease overhead costs and improve the financial performance of operations. Fresno installed a 2 MW ground-mounted solar system on 9.5 acres, or the equivalent of seven football fields. The project is expected to save the airport about \$13 million dollars over the next 20 years against an estimated annual spend of \$13-18 million. In addition, the solar system was constructed near runways that were previously considered unusable.

Fresno Yosemite International Airport covers 2,150 acres and has two runways and one helipad; it is the major air transportation center for the San Joaquin Valley, with major air carrier service to airline hubs throughout the Western United States. Currently, nine carriers offer Valley passengers nearly 48 daily non-stop departures from Fresno.

### **6.3. Denver International Airport (DIA)**

A 2 MW solar energy system was dedicated in August 2008 at Denver International Airport (DIA). The system incorporates single-axis tracking and utilizes more than 9,200 Sharp solar panels. This solar photovoltaic system spans seven and a half acres at the airport's entrance. This system serves as a symbol of Denver's commitment to environmental sustainability and will reduce carbon emissions into the atmosphere by more than 6.3 million pounds each year. This is one of three U.S. airports that will be accepted into the Environmental Protection Agency's National Performance Track Program.



The City of Denver and DIA purchase energy from the project under a long-term contract (Power Purchase Agreement).

### **6.4. Thunder Bay Airport**

Thunder Bay Airport is currently developing a 10 MW solar plant. The airport has signed a 20-year power purchase agreement under the Ontario Power Authority's Standard Offer Program to build five solar projects across Ontario for a combined 50 MW.

The developers will build on a 100-acre property southwest of the airport for their proposed Bowlker solar park. The joint venture development will tie into Thunder Bay Hydro's transmission line and provide 3% of the city's energy needs. Some minor upgrades will be needed to the utility's power lines along Broadway Avenue to accommodate the development. The company is currently planning a job fair to recruit 50 electricians and construction trades people.

### **6.5. Palmdale Airport**

After buying 17,750 acres in Palmdale for an intercontinental jetport, Los Angeles airport officials are planning on developing a solar energy system capable of generating up to 100 MW. The Los Angeles Department of Water and Power is looking at 4,000 largely undeveloped acres of Palmdale airport property.

#### **6.6. San Francisco International Airport**

In 2007, San Francisco International Airport installed more than 2,800 solar panels on the rooftop of Terminal 3. The solar panels generate a small percentage of the airport's overall electrical needs, but enough to power all the daytime lighting needs in Terminal 3. Pleased with the success of this first foray into solar power, airport officials plan to integrate solar, and possibly wind, power into Terminal 2, which is being remodeled.

#### **6.7. Long Beach Airport<sup>3</sup>**

In 2008, a highly visible "solar forest" sprouted up just outside the south baggage claim area at California's Long Beach Airport. The six solar "trees" are steel poles topped with photovoltaic (PV) arrays that measure about 9 feet by 9 feet each and shift and tilt throughout the day to track the sun. While the forest is a test project that generates less than 10% of the airport's overall energy needs, airport spokesperson Sharon Diggs-Jackson says there are plenty of educational rewards being harvested. "Next year, when the airport breaks ground for a new parking structure," Diggs-Jackson says, "solar technology will be an integral part of the project."

#### **6.8. Oakland International Airport**

In 2007, a 756-kW solar power system was installed at the Oakland International Airport. The idea was sparked in 2004, when FedEx, the airport's largest cargo operator, installed a 904-kW solar power system on the roof of its Oakland airport facility.

#### **6.9. Austin-Bergstrom International Airport**

Two sets of solar panel arrays have been installed at the Austin-Bergstrom International Airport in Texas. One was installed back in 1998 near the airport's cargo facilities. The other was installed in 2000 at the airport's taxi cab staging area, and the panels also provide shading for the cabs. Discussions are currently underway to set aside 20 acres of airport property as a testing site for various photovoltaic technologies.

#### **6.10. Meadows Field Airport**

The Kern County Department of Airports in conjunction with the Kern County Board of Supervisors and Regenes Power, LLC broke ground on a \$6 million solar array at Meadows Field (BFL) on July 31, 2008. The solar array field covers six acres and consists of 4,704 solar modules. Regenes Power, LLC will finance, own, operate, and maintain the facility.

#### **6.11. Los Angeles World Airport**

The Los Angeles World Airports is currently exploring what to do with more than 17,000 acres of land it owns in Palmdale. One option on the table is to use several thousand acres to develop solar or wind energy-producing plants.

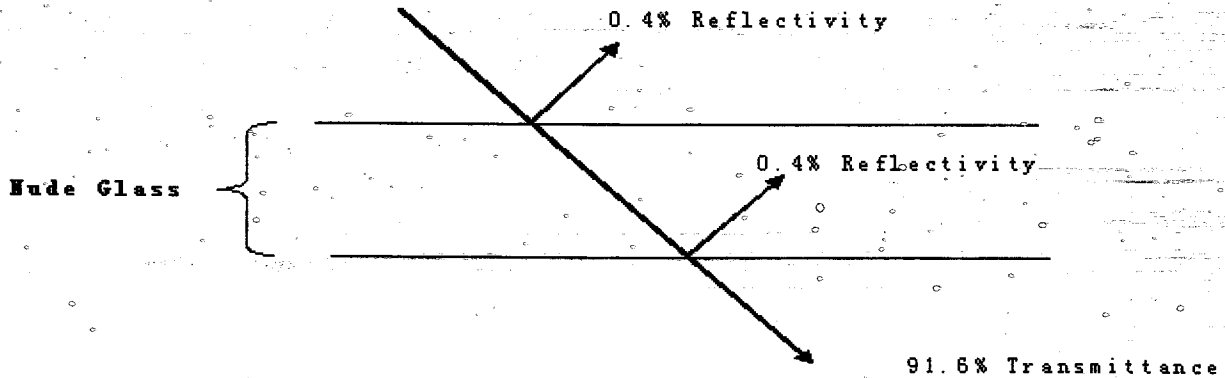
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<sup>3</sup> USA Today. "Solar Powered Airports". April 2009.

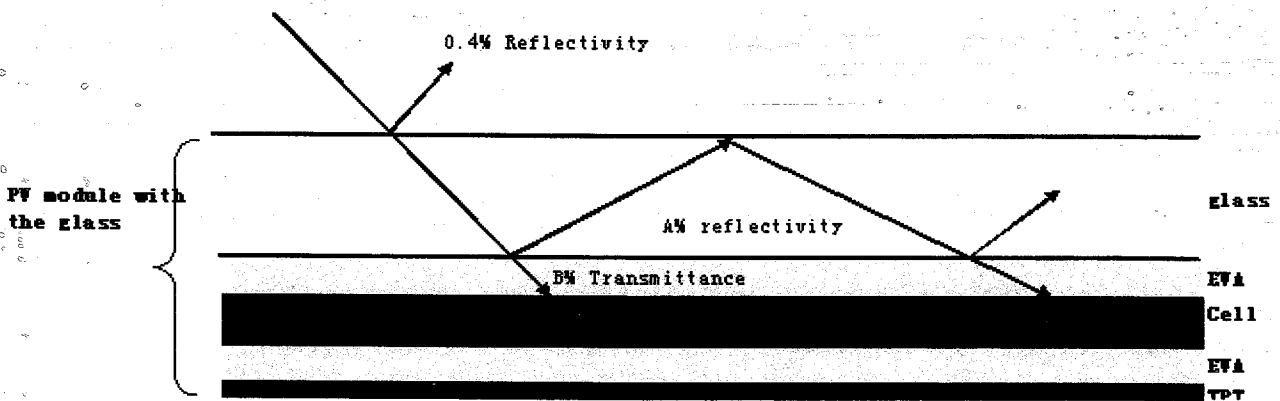
# APPENDIX

## PV Module Reflectivity – Standard Suntech Solar Modules

(1) Suntech is using textured glass and can confirm the visible light reflectance of the glass to be 4% per surface, giving a total figure of 8%.



(2) After lamination process with PV cells:



(3) Theoretically, after the glass is laminated, A% should actually be less than 4% and B% should be higher than 91.6%.

The EVA and glass have the same refractive index and A% reflective light is continuous refraction. Therefore, the actual reflectivity of total PV module should be less than 8%.

(4) Suntech has conducted a test in-house and has found the actual total reflectivity to be about "6%".

# **COUNTY OF RIVERSIDE**

## **ENVIRONMENTAL ASSESSMENT FORM: INITIAL STUDY**

**Environmental Assessment (E.A.) Number:** 42340  
**Project Case Type and Number(s):** Plot Plan No. 24616 – Fast Track Authorization No. 2010-06  
**Lead Agency Name:** County of Riverside Planning Department  
**Address:** 4080 Lemon Street, 12<sup>th</sup> Floor, Riverside CA 92502  
**Contact Person:** Raymond Juarez  
**Telephone Number:** (951) 955-9541  
**Applicant's Name:** US Solar Holdings, LLC  
**Applicant's Address:** 1015 W. Hays, Boise, ID 83702

### **I. PROJECT INFORMATION**

#### **A. Project Location:**

The site is located northeast of the community of Mesa Verde in the Palo Verde Valley Area Plan in Eastern Riverside County. Specifically, the project is proposed on previously disturbed land located on the northeast corner of the Blythe Airport, north of Interstate 10, south of 9<sup>th</sup> Avenue, and northwest of Riverside Drive and Butch Avenue.

#### **B. Project Description:**

The applicant proposes to construct a 100 megawatt Photovoltaic (PV) Solar Power Plant on 640 acres of an 829 acre lease area in five (5) twenty (20) megawatt phases inclusive of: a single axis tracking system organized in 874 x 168-foot and 874 x 370-foot power blocks with a maximum height of ten feet; a perimeter 24-foot interior access road and 25-foot interior drive aisles for emergency access and maintenance purposes; a combination of inverters and transformers on concrete pads covered by three sided open shade covers within each power block; an 8-foot high chain link fence with three strand barbed-wire around the project perimeter boundary; a temporary construction area which includes a 12' X 60' portable construction trailer, five parking spaces and portable toilets on the southeast corner of the site; and, a temporary staging area in the center of proposed Phase II on an existing concrete pad.

Water will be provided via a 6-inch diameter pipeline that will be extended from the Blythe Airport Water Production and Storage Facility to allow for a permanent source of water. The line will undergrounded and extend east to Butch Avenue then north to the project site for a total of approximately 4,800 feet to the project site. The water will be used for fire suppression, construction and operation dust control, and solar panel maintenance.

Power will be delivered via a 33 kV gen-tie line (minor transmission line extending from the point of power generation to the point of connection into the transmission & distribution line) from the site approximately 3,200 feet due south paralleling the western side of Butch Avenue and tie into the existing 33kV Southern California Edison line that runs parallel to Hobson Way. The line will be undergrounded approximately 1,500 feet as required by the Airport Land Use Commission, and then come above ground mounted on 19-foot high poles to the point of tie in for Phase I. Phases II thru V will require complete undergrounding of two additional 33 kV gen-tie lines along Butch Avenue adjacent to the Phase I line. The point of tie in has not been determined for Phases II thru V at this time. In the event that the Phase II thru V gen-tie lines extend beyond the scope of review conducted up to Hobson Way, then additional environmental review will be required.

Primary road access is proposed from the east via Buck Boulevard north, then west along Riverside Drive, and then north along Butch Avenue. Secondary access is proposed northerly

along Butch Avenue from Hobson Way, and two 24-foot wide emergency access gates are proposed where 9<sup>th</sup> and 10<sup>th</sup> Avenue meet the project boundaries eastern fence line.

As part of the implementation and operation of the project, the applicant, US Solar Holdings, LLC, proposes to lease 829 acres on the Blythe Airport from the County of Riverside for an initial thirty (30) year lease term. This initial lease term may be extended for up to an additional twenty (20) years. In no event will the entire lease term exceed fifty (50) years. Also, there is an Option Agreement, proposed to be entered into between the County of Riverside and the applicant, whereby the applicant may exercise the right to lease portions of the real property up to the 829 acres in phased portions that coincide with the development phases of the project. The right to exercise the option to lease would only be for a term up to five years. The Lease Agreement and Option Agreement are discretionary actions to be taken by the Board of Supervisors.

**C. Type of Project:** Site Specific ☒; Countywide ☐; Community ☐; Policy ☐.

**D. Total Project Area:** 829 acre site

<b>Residential Acres:</b>	<b>Lots:</b>	<b>Units:</b>	<b>Projected No. of Residents:</b>
<b>Commercial Acres:</b>	<b>Lots:</b>	<b>Sq. Ft. of Bldg. Area:</b>	<b>Est. No. of Employees:</b>
<b>Industrial Acres:</b> 829	<b>Lots:</b> 4	<b>Sq. Ft. of Bldg. Area:</b>	<b>Est. No. of Employees:</b>

**E. Assessor's Parcel No(s):** 821-080-040, 821-080-041, 821-110-002, 821-110-003

**F. Street References:** West of Butch Avenue, North of Riverside Avenue

**G. Section, Township & Range Description or reference/attach a Legal Description:**  
Portions of Sections 19, 20, 29, and 30 - Township 6 South, Range 22 East

**H. Brief description of the existing environmental setting of the project site and its surroundings:**

The 640 acre site for the Blythe Airport Solar 1 Project is within an 829-acre lease area on the Blythe Airport property. The majority of the site has been previously disturbed both by past airport operations and by agriculture. This section of the airport has been designated for non-aeronautical uses in the Airport Master Plan; see airport superpad map in the Appendix, the parcel of interest is parcel B in green titled "Non Aeronautical". The existing slope at the site is relatively flat with an overall slight gradient from the northwest to the southeast.

The majority of the site is abandoned agriculture (pivot circles) and old runways associated with the Blythe Airport; see Appendix for satellite images and pictures of the site. These areas appear to have been fallow for a significant period of time and sparse creosote bush (*Larrea tridentata*), galleta grass (*Pleuraphis rigida*), and brittle bush (*Encelia farinosa*) have begun to reestablish. Approximately 789 acres of the 829-acre Project Site contain this vegetation type.

Several small areas between pivot circles support native vegetation. The native vegetation community is low diversity Sonoran Creosote Bush Scrub (after Holland 1986). Aspect-dominant shrub species are creosote bush and white bursage (*Ambrosia dumosa*); galleta grass is present in areas with the loosest sand.

Like the Site itself, the surrounding lands to the south and west of the Site are part of the Blythe Airport property. Some of these lands are previously farmed, fallow lands like the Site itself. The active portions of the airport property are used for general aviation and associated purposes. Active agriculture occurs about 0.5 miles north and east of the Site. Southeast of

the Site about 0.25 miles are the existing Blythe Energy Project and proposed Blythe Energy Project II, large combined-cycle, gas-fired power plants.

## **II. APPLICABLE GENERAL PLAN AND ZONING REGULATIONS**

### **A. General Plan Elements/Policies:**

1. **Land Use:** The Public Facilities (PF) General Plan land use designation allows for public/ quasi-public uses such as landfills, airports, utilities, and other civic uses. The proposed facility is consistent with the General Plan Land Use Policies listed in the Palo Verde Valley Area Plan.
2. **Circulation:** The proposed photovoltaic facility is consistent with the General Plan Circulation Element Policies listed in the Palo Verde Valley Area Plan relating to Vehicular Circulation, Trails and Bikeways, and Scenic Highways.
3. **Multipurpose Open Space:** The proposed photovoltaic facility is consistent with the General Plan Multipurpose Open Space Policies listed in the Palo Verde Valley Area Plan relating to watersheds, flood plains, watercourses and habitat conservation. The proposed is not within the conservation area of the Western Riverside County Multiple Species Habitat Conservation Plan or the Coachella Valley Multi Species Habitat Conservation Plan.
4. **Safety:** The proposed photovoltaic facility is consistent with the General Plan Safety Element Policies.
5. **Noise:** The proposed photovoltaic facility is consistent with the General Plan Noise Element Policies.
6. **Housing:** The proposed photovoltaic facility is consistent with the General Plan Housing Element Policies.
7. **Air Quality:** The proposed photovoltaic facility will not have any impacts on air quality.

**B. General Plan Area Plan(s):** Palo Verde Valley Area Plan

**C. Foundation Component(s):** Community Development

**D. Land Use Designation(s):** Public Facilities (PF) - Public/ quasi-public uses such as landfills, airports, utilities, and other civic uses.

**E. Overlay(s), if any:** N/A

**F. Policy Area(s), if any:** N/A

**G. Adjacent and Surrounding Area Plan(s), Foundation Component(s), Land Use Designation(s), and Overlay(s) and Policy Area(s), if any:** Community Development: Public Facilities to the south and west, and Agriculture: Agriculture to the north and east.

### **H. Adopted Specific Plan Information**

1. **Name and Number of Specific Plan, if any:** N/A

2. Specific Plan Planning Area, and Policies, if any: N/A

I. Existing Zoning: Manufacturing – Heavy (M-H)

J. Proposed Zoning, if any: N/A

K. Adjacent and Surrounding Zoning: Manufacturing-Heavy Zone (M-H) to the south and west, Controlled Development Areas – 10-Acre Minimum (W-2-10) to the north and east, and Natural Assets (N-A) to the north.

III. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below ( x ) would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" or "Less than Significant with Mitigation Incorporated" as indicated by the checklist on the following pages.

- |  |   |   |
|--|---|---|
| <input checked="" type="checkbox"/> Aesthetics           | <input checked="" type="checkbox"/> Hazards & Hazardous Materials | <input type="checkbox"/> Recreation                             |
| <input type="checkbox"/> Agriculture & Forest Resources  | <input type="checkbox"/> Hydrology / Water Quality                | <input checked="" type="checkbox"/> Transportation / Traffic    |
| <input checked="" type="checkbox"/> Air Quality          | <input type="checkbox"/> Land Use / Planning                      | <input checked="" type="checkbox"/> Utilities / Service Systems |
| <input checked="" type="checkbox"/> Biological Resources | <input type="checkbox"/> Mineral Resources                        | <input type="checkbox"/> Other:                                 |
| <input checked="" type="checkbox"/> Cultural Resources   | <input type="checkbox"/> Noise                                    | <input type="checkbox"/> Other:                                 |
| <input checked="" type="checkbox"/> Geology / Soils      | <input type="checkbox"/> Population / Housing                     | <input type="checkbox"/> Mandatory Findings of Significance     |
| <input type="checkbox"/> Greenhouse Gas Emissions        | <input type="checkbox"/> Public Services                          |   |

IV. DETERMINATION

On the basis of this initial evaluation:

**A PREVIOUS ENVIRONMENTAL IMPACT REPORT/NEGATIVE DECLARATION WAS NOT PREPARED**

- ☐ I find that the proposed project **COULD NOT** have a significant effect on the environment, and a **NEGATIVE DECLARATION** will be prepared.
- ☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project, described in this document, have been made or agreed to by the project proponent. **A MITIGATED NEGATIVE DECLARATION** will be prepared.
- ☐ I find that the proposed project **MAY** have a significant effect on the environment, and an **ENVIRONMENTAL IMPACT REPORT** is required.

**A PREVIOUS ENVIRONMENTAL IMPACT REPORT/NEGATIVE DECLARATION WAS PREPARED**

- ☐ I find that although the proposed project could have a significant effect on the environment, **NO NEW ENVIRONMENTAL DOCUMENTATION IS REQUIRED** because (a) all potentially significant effects of the proposed project have been adequately analyzed in an earlier EIR or Negative Declaration pursuant to applicable legal standards, (b) all potentially significant effects of the proposed project have been avoided or mitigated pursuant to that earlier EIR or Negative Declaration, (c) the proposed project will not result in any new significant environmental effects not identified in the earlier EIR or Negative Declaration, (d) the proposed project will not substantially increase the severity of the environmental effects identified in the earlier EIR or Negative Declaration, (e) no considerably different mitigation measures have been identified and (f) no mitigation measures found infeasible have become feasible.
- ☐ I find that although all potentially significant effects have been adequately analyzed in an earlier EIR or Negative Declaration pursuant to applicable legal standards, some changes or additions are necessary but none of the conditions described in California Code of Regulations, Section 15162