

GREENTECH - PV Solar Cells

# Optisolar Large Scale Manufacturing Facility



## OVERVIEW

As the lead design firm, IES oversaw the entire design and construction process from inception to completion of a large scale Photo Voltaic Solar Panel Manufacturer in Northern California.

Planning and design included bulk silane and toxic gas pads for Sacramento facility.

## PROJECT DETAILS

- R&D Facility: 34,000 sq.ft. F-1 manufacturing facility, with integrated H-Occupancy for large scale Hazardous Materials storage.
- Pilot Plant: 60,000 sq.ft. scale-up process development area.
- Panel Manufacturing: 80,000 sq. ft. panel assembly and curing area with stringent humidity controlled requirements.
- Large Scale Manufacturing Plant: 680,000 sq.ft. main production facility
- Central Utility Plant: 20,000 sq.ft. central utility plant with, hazardous gas abatement; central PCW, DI Water, CDA, HVAC; bulk Silane distribution, as well as specialty and process gases
- Over 4 miles of high purity piping alone

## IES SOLUTIONS

- Met aggressive project time schedule
- R&D facility: Site selection to complete design and permitting - 6 months
- Pilot Plant: TI plan design and permitting – 8 months
- Large Scale Manufacturing: Site selection to initial design and permitting - 8 months
- Provided cost effective designs for all phases
- Secured approval for bulk silane distribution system

## LOCATION

Fremont, California  
Sacramento, California

## TEAM (PARTNERS)

Architect: CH&D Architects  
Structural: KPFF

## PROJECT DURATION

2006 - 2010

## PROJECT VALUATION

>\$100,000,000

## ABOUT IES

Integrated Engineering Services (IES) is an established firm providing innovative and cost-effective solutions to meet your complex engineering, design and operational needs.

**When experience, knowledge and innovation matter most.**

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