Construction Cost Estimate
Livermore Site Solar Generation Project

C. E. Quinly

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CONSTRUCTION COST ESTIMATE

SUMMARY SHEET

Project Title: Livermore Site Solar Electric Generation  Project Date: 22-Jul-2013
Rev-2  PFN: TBD
Facility ID: Site 200 NW  Work Order Number: TBD
Requestor: Crystal Quinl  Project Number: TBD
Estimator: Lee Phillips  Estimate Task Number: TBD

Estimate Class: Class 3 - Budget, with an accuracy range of -15% to +25%
Funding Source: DIR-MISC REV NONEX

SCOPE OF WORK

- Authorize a third party to finance, permit, design, engineer, procure and construct a 3MW AC ground-mounted, fixed tilt solar energy generation facility for a duration of 20 or 30 years.
- LFO has selected an Integrated Project Team (IPT) to define the project scope of work and insuring the work is executed safely and per contract requirements.
- LFO has engaged LLNS to help define and support this effort.
- The IPT consists of PMEC Design / Engineering Staff, PMEC Construction Management Staff and ES&H Staff.

DRAWINGS / SPECIFICATIONS / CRITERIA - As per LLNL standards and specifications

- Responsibilities and Interface Matrix developed by LFO and LLNS.

ESTIMATING ASSUMPTIONS

Support / Institutional Costs

- Support Costs are based on percentages & hours, reviewed by Project Management.
- Wage expense is based on a PR Burden of (61.1%) for LLNL employees.
- Institutional Burdens are based on an Funding Source of
- DIR-MISC REV NONEX
- Indirects charges include PMC (0.0%), Site Support (48.8%).
- Value Added charges include, G&A (21.4%), SMS (0.0%) and HWC (0.0%).
- Institutional Charges include MF (3.5%), LDRD (6.6%) and S_S - WFO (0.0%).

Levels / Duration / Escalation

- The estimate classification is a "Class 3 - Budget Cost Estimate", with an accuracy range of -15% to +25%.
- The estimate contains a 0% project contingency.
- The estimate contains a 0% bid package completion factor, based on design completness of 10% to 40%.
- The estimate contains a 0% limited / exclusion factor for construction work in these areas.
- The estimated construction duration is 0 calendar days with construction starting 21-Aug-2013.
- The project escalation rate is current dollars

LLNL Supplied Materials and Equipment

- None

Cost Exclusions / Comments

- Premium and / or overtime is not included.
- Escorts are not included.
## WBS SUMMARY SHEET

**Project Title:** Livermore Site Solar Electric Generation  
**Date:** 22-Jul-13  
**Rev:** 2  
**Facility ID:** Site 200 NW  
**Requestor:** Crystal Quinley  
**PFN:** TBD  
**Project Number:** TBD  
**Task Number:** TBD  
**Estimate Class:** Class 3 - Budget  
**Projects Lead:** Rich Shonfeld  
**Funding Source:** DIR-MISC REV NONEX

### WBS Description

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<tr>
<th>WBS</th>
<th>Description</th>
<th>Hourly Rates</th>
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| 1.1 | 1.1 PROJECT MANAGEMENT  
1.1.1 | Management | 242.22        |             |
| 1.2 | 1.2 DESIGN  
1.2.1 | Design (PMEC) | 219.45        |             |
| 1.3 | 1.3 CM & I  
1.3.1 | CM (LLNL) | 198.53        |             |
|     |             | 238.36        | 88.02       |
| 1.4 | 1.4 CONSTRUCTION, ACTIVATION & COMMISSIONING  
1.4.1 | ESTIMATED CONSTRUCTION COST (TECC) | 160.97 | 159.54 |
|     |             | 160.97 | 159.54 |
|     |             | 141.79 | 137.36 |
| 1.5 | 1.5 MISCELLANEOUS PROJECT SUPPORT  
1.5.1 | Hazards Control | 155.94        |             |
|     |             |          |             |
|     |             | 137.36 |             |
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### Performance Measurement Baseline (PMB)

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### Performance Baseline (PB)

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