

Status and Technology of Solar Power Generation

May 26, 2011

El Dorado Energy

- 10 MW solar PV installation near Las Vegas
- Largest grid-connected PV plant in U.S. (at time of completion)
- Burns & McDonnell served as the owner's engineer responsible for:
 - Bid evaluation
 - Drawing review
 - Schedule review and monitoring
 - Commissioning oversight



Photo by First Solar



Top Plants Dec 2009

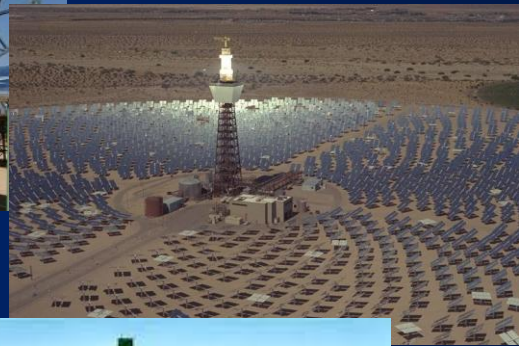
Copper Mountain Solar I

- 48 MW Solar PV near Las Vegas
- Burns & McDonnell served as the Owner's Engineer responsible for:
 - Project Development
 - Contract Negotiations
 - Design Review
 - Interconnection Design
 - Schedule Review and Monitoring
 - Commissioning Oversight
 - Performance Testing Oversight and Verification



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2011 Solar Project of the Year
















Ability to Finance

















Scalability



Project Attributes

| Attribute | PV | Solar Thermal |
|--------------|---|---|
| Land Use |  |  |
| Brown Fields |  |  |
| Topography |  |  |
| Permitting |  |   |
| Water Use |  |  |
| Cost |  |  |

Operational Attributes

| Attribute | PV | Solar Thermal |
|---------------------------|---|---|
| Solar Resource |  |  |
| Time to On-Line from Cold |  |  |
| Soiling |  |  |
| O&M |  |  |
| Efficiency |  |  |
| Cloud Ride-Through |  |  |
| Dispatchability |  |  |

Solar Thermal Integration

- Solar thermal system provides supplemental heat to an existing fossil power plant
- Offsets fossil fuel consumption
- Could be relatively “cheap” solar MWh (Power block already capitalized)
 - Repower of older units
 - Combined-cycle integration
 - Coal plant integration