California Energy Commission

Informational Hearing

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1 Abengoa Solar
2 Project Description
3 Site Location and Characteristics
4 Community Benefits
### Five business units, one of which is Abengoa Solar

<table>
<thead>
<tr>
<th>Business Unit</th>
<th>Industry Focus</th>
<th>Key Achievements</th>
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<tbody>
<tr>
<td>Abengoa Solar</td>
<td>Solar energy</td>
<td>International leader on solar power plants solar</td>
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<td></td>
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<td>• 12 MW in operation</td>
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<td>• 300 MW under construction</td>
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<td>• Hundreds of MW under development</td>
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<td>Abengoa Bioenergy</td>
<td>Bioenergy</td>
<td>Only bioethanol producer on the three key geographies</td>
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<td>• First European producer</td>
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<td>• Fifth largest producer in USA</td>
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<td>• One of the largest producer in Brazil</td>
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<td>Befesa</td>
<td>Environmental services</td>
<td>International leader on industrial waste treatment, as well as in the water</td>
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<td>management field</td>
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<td>Telvent</td>
<td>Information technologies</td>
<td>International leader in IT for the energy, traffic, transport and environmental</td>
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<td>sectors</td>
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<td>Abeinsa</td>
<td>Engineering and construction</td>
<td>Leader in Spain and South America in engineering and construction projects and</td>
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<td>EPC</td>
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<td>• Ranked as the third largest international power contractor (ENR)</td>
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Some examples…

- **Solucar platform**
  - 300 MW (Spain)

- **Solnova 1 and 3**
  - 100 MW (Spain)

- **PS10 and PS20**
  - 31 MW (Spain)

- **Solana**
  - 280 MW (US)

- **ISCCs**
  - 150/480 MW (Algeria/Morocco)

- **Steam and water heating installations**
  - MWt (US)
• 250 MW net production – electricity to supply approx. 70,000 homes
• Proven solar technology
• 100% power generation from the solar resource
• Minimized visual and noise impacts
• Layout minimizes biological impacts
• Compatible land use (next door to same technology)
1. Abengoa Solar
2. Project Description
3. Site Location and Characteristics
4. Community Benefits
• Excellent solar resource
• Already disturbed land – fallow agricultural land
• Land use compatible with existing area – near existing large-scale solar facilities (SEGS VIII and IX)
• SCE’s Kramer-Cool Water 230 kV transmission line adjacent to southern property boundary
• Natural gas (for ancillary purposes) available from Southwest Gas Corporation natural gas pipeline adjacent to site
• Property enables layout of solar field and power plant to minimize biological impacts
• Adjudicicated ground (well) water available for Project use is not otherwise suitable for potable water
• Nearby available and skilled workforce
ABENGOA SOLAR

Existing Site

Solar Power for a Sustainable World
ABENGOA SOLAR

Mojave Solar Project
280 MW Parabolic Trough Plant
### Site Characteristics Summary

- **Topography:**
  - Slope <1% (very flat)

- **Solar Resource:**
  - >7.7 kWh/m²/day (extremely high)

- **Land:**
  - Approximately 1765 acres total development
  - Privately owned and/or under option by Abengoa Solar
  - Previously disturbed/fallow agricultural land
  - One ¼ section (160 acres) of land still actively farmed

- **Transmission Interconnection:**
  - CAISO/SCE 230 kV Kramer-Cool Water line

- **Land Use:**
  - Previous Solar Developments in Area
    - Property previously proposed as SEGS XI & XII in 1990s
    - SEGS VIII & IX (80 MW each) are located just NW of the site
Regional Visibility of the Project

15-mile radius
Solar Power for a Sustainable World

Map of Key Observation Points

ABENGOA SOLAR

FIGURE 5.15-2a
KEY OBSERVATION POINTS MAP

MOJAVE SOLAR PROJECT
MOJAVE SOLAR LLC

MAP LOCATION

M"
Pre-Project View

On Harper Lake Road Looking North – 2.5 miles from site
Key Observation Point 1

Post-Project Simulated View

On Harper Lake Road Looking North – 2.5 miles from site
Pre-Project View

On Harper Lake Road Looking North – 0.75 miles from site
Post-Project Simulated View

On Harper Lake Road Looking North – 0.75 miles from site
Looking East on Roy Road East of Edie Road – 250 yards from site
Looking East on Roy Road East of Edie Road – 250 yards from site
Looking ESE on Edie Road (South of Lockhart Ranch Road) – 0.25 mile from site
Looking ESE on Edie Road (South of Lockhart Ranch Road) – 0.25 mile from site
Looking East on Lockhart Ranch Road – with site directly north and 1,000 feet east
Post-Project Simulated View

Looking East on Lockhart Ranch Road – with site directly north and 1,000 feet east
Looking SSW from BLM Watchable Wildlife Area – 250 yards from site
Post-Project Simulated View

Looking SSW from BLM Watchable Wildlife Area – 250 yards from site
Pre-Project View

Looking ENE from BLM Watchable Wildlife Area – 0.40 mile from site
Looking ENE from BLM Watchable Wildlife Area – 0.40 mile from site
Key Observation Point 8

Pre-Project View

Looking Southeast from Fossil Bed Road Near Black Canyon Road – 6 miles from site
Looking Southeast from Fossil Bed Road Near Black Canyon Road – 6 miles from site
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• An input-output model (IMPLAN Professional) was used to estimate economic impacts based on the Project construction-phase expenditures that would benefit the local economies.

• The total estimated annual beneficial economic impacts from the 26-month construction phase:
  
  Direct economic output: $158,158,387  
  Indirect economic output: $39,285,000  
  Induced economic output: $107,728,086  
  Total impact: $305,171,473

• Also, during the construction phase, the Project’s estimated annual employment creation within the study area would be:
  
  Direct employment: 830 (1162 @ peak)  
  Indirect employment: 666  
  Induced employment: 1,045  
  Total employment creation: 2,541
• Direct Employment
  – 73 seasonal, 63 permanent employees for operations

• Per input-output model (IMPLAN Professional), the impacts from the operation of the Project within the local economies would be
  Direct economic output: $12,632,021
  Indirect economic output: $3,512,846
  Induced economic output: $2,806,602
  Total impact: $18,951,469

• During the operations phase, the Project’s estimated annual employment creation within the study area would be:
  Direct employment: 68 (avg.)
  Indirect employment: 52
  Induced employment: 40
  Total employment creation: 160
Contacts

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Application for Certification
Docket No. 09-AFC-5
http://www.energy.ca.gov/sitingcases/abengoa/index.html