Mariposa Energy, LLC

California Energy Commission
Informational Hearing

October 1, 2009
Ownership structure
Design features
Project justification
Site selection process
Environmental impacts
Mariposa Energy Project Ownership

Owned by Mariposa Energy LLC

Subsidiary of Diamond Generating Corporation

DGC is a subsidiary of Mitsubishi Corporation

DGC headquartered in Los Angeles, CA

DGC owns/operates 9 power plants in the US, with about 2,000 MW of net equity

DGC owns 2 other peaking projects in CA

DGC developing both renewable and gas-fired projects
Larkspur Energy: Another DG C Project Similar to Mariposa, in San Diego
Mariposa Energy Project Design Features

194 MW (net) natural gas peaking project

4 GE LM6000 PC-Sprint combustion turbine generators and associated equipment

Water usage minimized by use of dry cooling and wastewater recycling

BACT for NOx and CO control
Mariposa Energy Project Laterals Are Minimized

- New 0.7-mile 230-kV transmission line from MEP to PG&E’s Kelso Substation
- 580-foot 4-inch gas pipeline connecting to PG&E Line 2, located within the parcel
- New 1.8-mile 6-inch water supply line from Byron Bethany Irrigation District
Need for Peaking Power in Region

- Peaking plants like Mariposa support installation of renewables and ensure integrity of transmission system.
- Peakers are designed to provide capacity and ancillary services, rather than baseload energy.
- Quick-start (<10 min start) needed to smooth load when wind dies down or demand surges.
- Provides energy during super-peak periods.
- Helps utility meet reserve margin requirements economically and efficiently.
- Provides energy during emergencies.
**Energy Action Plan - 2003-2006**

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
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<tbody>
<tr>
<td>05/03</td>
<td>Energy Action Plan adopted by CPUC and CEC</td>
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<tr>
<td>04/04</td>
<td>CPUC orders investor-owned utilities to file resource plans that implement EAP</td>
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<tr>
<td>12/04</td>
<td>CPUC approves PG&amp;E’s Long-Term Procurement Plan, which includes adding 2,200 MW of peaking power through 2010 concurrently with renewables</td>
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<td>11/06</td>
<td>CPUC approves 3 PG&amp;E PPAs with peaking projects, among others</td>
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- 4 plants subsequently not built
- Need remains unmet
Regulatory Chronology of PPA Between Mariposa Energy and PG&E

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<tr>
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<tbody>
<tr>
<td>09/05</td>
<td>Energy Action Plan II adopted by CPUC and CEC</td>
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<tr>
<td>12/07</td>
<td>CPUC approves PG&amp;E LTPP for 2007-16 to procure up to 1,200 MW of additional new resources, including:</td>
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<td>“DISPATCHABLE RAMPING RESOURCES THAT CAN BE USED TO ADJUST FOR THE MORNING AND EVENING RAMPS CREATED BY THE INTERMITTENT TYPES OF RENEWABLE RESOURCES.”</td>
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<tr>
<td>04/08</td>
<td>PG&amp;E issues 2008 Long Term Request for Offers to obtain up to 1,200 MW of new, dispatchable, and operationally flexible resources</td>
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<tr>
<td>10/08</td>
<td>Mariposa Energy Project is shortlisted</td>
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<tr>
<td>04/09</td>
<td>Contract signed, submitted to CPUC for approval</td>
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Rationale for Mariposa in PG&E’s Application 09-04-001 for Approval

- CPUC concluded PG&E needs 800-1,200 MW of new flexible, dispatchable resources by 2015.

- MEP, as a dispatchable and operationally flexible resource, critical to meet load variations and integrate intermittent resources into PG&E portfolio.

- Necessary to maintain 17% Planning Reserve Margin (PRM), especially given 4 unbuilt plants.
Mariposa Energy Site Selection Process

Identify electrical system locations indicating a need for reinforcement within PG&E’s service area

Identify sites that minimize laterals, have appropriate zoning

Then, address other environmental issues

Select Site
The Greater Bay Area is a Load Pocket

Mariposa Energy Project Site
Mariposa Energy Project Chosen Site
Best Met All Criteria

- In Greater Bay Area Load Pocket
- In Altamont Pass Wind Resource Area
  - Proximity to intermittent renewable energy, wind to the south and west, potential solar to the east
- Shortest laterals for interconnections
- Best met environmental criteria
- Not near, nor visible from densely populated areas
- Site already disturbed site - cogen, abandoned wind farm
- Land use compatible with existing utility and water infrastructure in the area
Project Location Within the Local Area and Existing Infrastructure Facilities
Mariposa Energy Project Location
Map of Key Observation Points
Key Observation Point 1
Current View
Key Observation Point 1
Simulated View
Key Observation Point 2
Current View
Key Observation Point 2
Simulated View
Key Observation Point 3
Current View
Key Observation Point 3
Simulated View
Key Observation Point 4
Current View
Key Observation Point 4
Simulated View
Key Observation Point 5
Current View
Key Observation Point 5
Simulated View
Mariposa Has No Significant Unmitigated Environmental Impacts

- Minimized visual and noise impacts
- Minimal water usage
- Zero liquid discharge
- Compatible land use
- Maximized open space and agricultural preservation
Mariposa Has No Significant Unmitigated Environmental Impacts

- No significant air quality impacts
- Minimized hazard materials use and storage
- Minimal use of local services
- No growth inducing effects
- Minimized construction and operational traffic
Mariposa Affords the Region Many Socio Economic Benefits

**During construction (2011-2012)**
- $12 million of local purchases
- $16.3 million of construction payroll, of which $14.7 million will remain in the area
- Average of 89, peak of 177 direct jobs
- 229 indirect and induced jobs created

**During operations (2012-2050)**
- Annual local spending on payroll, materials, and supplies of $2.47 million
- 8 direct jobs created
- 12 indirect and induced jobs created
- Approximately $2.5 million of property taxes annually
## Mariposa Energy Project Resources

<table>
<thead>
<tr>
<th>Name</th>
<th>Email</th>
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<tbody>
<tr>
<td>Bo Buchynsky Executive Director</td>
<td><a href="mailto:b.buchynsky@dgc-us.com">b.buchynsky@dgc-us.com</a></td>
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<tr>
<td>Paula Zagrecki Director, Finance</td>
<td><a href="mailto:p.zagrecki@dgc-us.com">p.zagrecki@dgc-us.com</a></td>
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**Application for Certification**

http://www.energy.ca.gov/sitingcases/mariposa/index.html