Mariposa Energy, LLC

California Energy Commission
Informational Hearing

October 1, 2009

Mariposa Energy, LLC

Mariposa Energy Project
Presentation Summary

- Ownership structure
- Design features
- Project justification
- Site selection process
- Environmental impacts

Mariposa Energy, LLC

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

Mariposa Energy, LLC

Larkspur Energy: Another DGC Project Similar to Mariposa, in San Diego

Mariposa Energy, LLC

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, LLC

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

Mariposa Energy, LLC

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

Mariposa Energy, LLC

Energy Action Plan – 2003-2006

05/03	Energy Action Plan adopted by CPUC and CEC
04/04	CPUC orders investor-owned utilities to file resource plans that implement EAP
12/04	CPUC approves PG&E's Long-Term Procurement Plan, which includes adding 2,200 MW of peaking power through 2010 concurrently with renewables
11/06	CPUC approves 3 PG&E PPAs with peaking projects, among others

4 plants subsequently not built

↓

Need remains unmet

Mariposa Energy, LLC

Regulatory Chronology of PPA Between Mariposa Energy and PG&E

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

Mariposa Energy, LLC

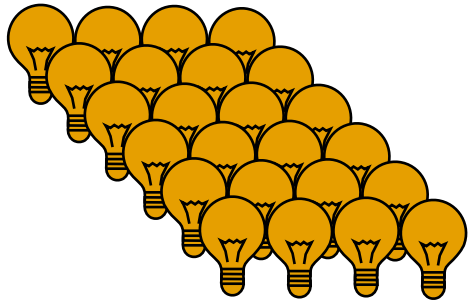
Rationale for Mariposa in PG&E's Application 09-04-001 for Approval

- 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

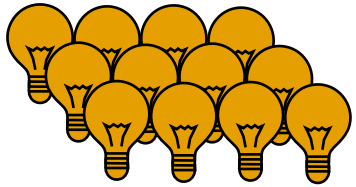
Mariposa Energy, LLC

Mariposa Energy Site Selection Process

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

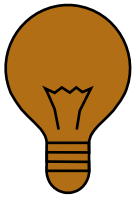


Identify sites that minimize laterals, have appropriate zoning



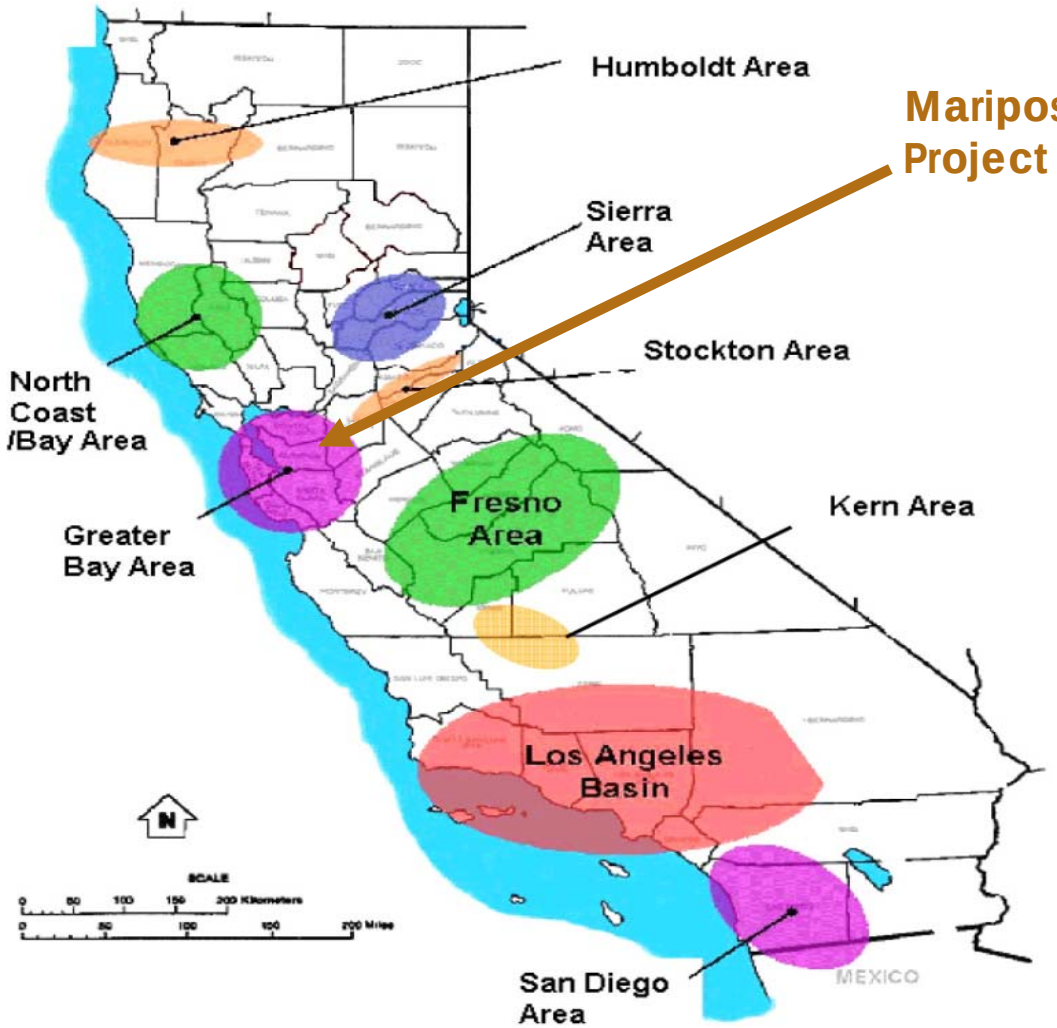
Then, address other environmental issues

Select Site



Mariposa Energy, LLC

The Greater Bay Area is a Load Pocket



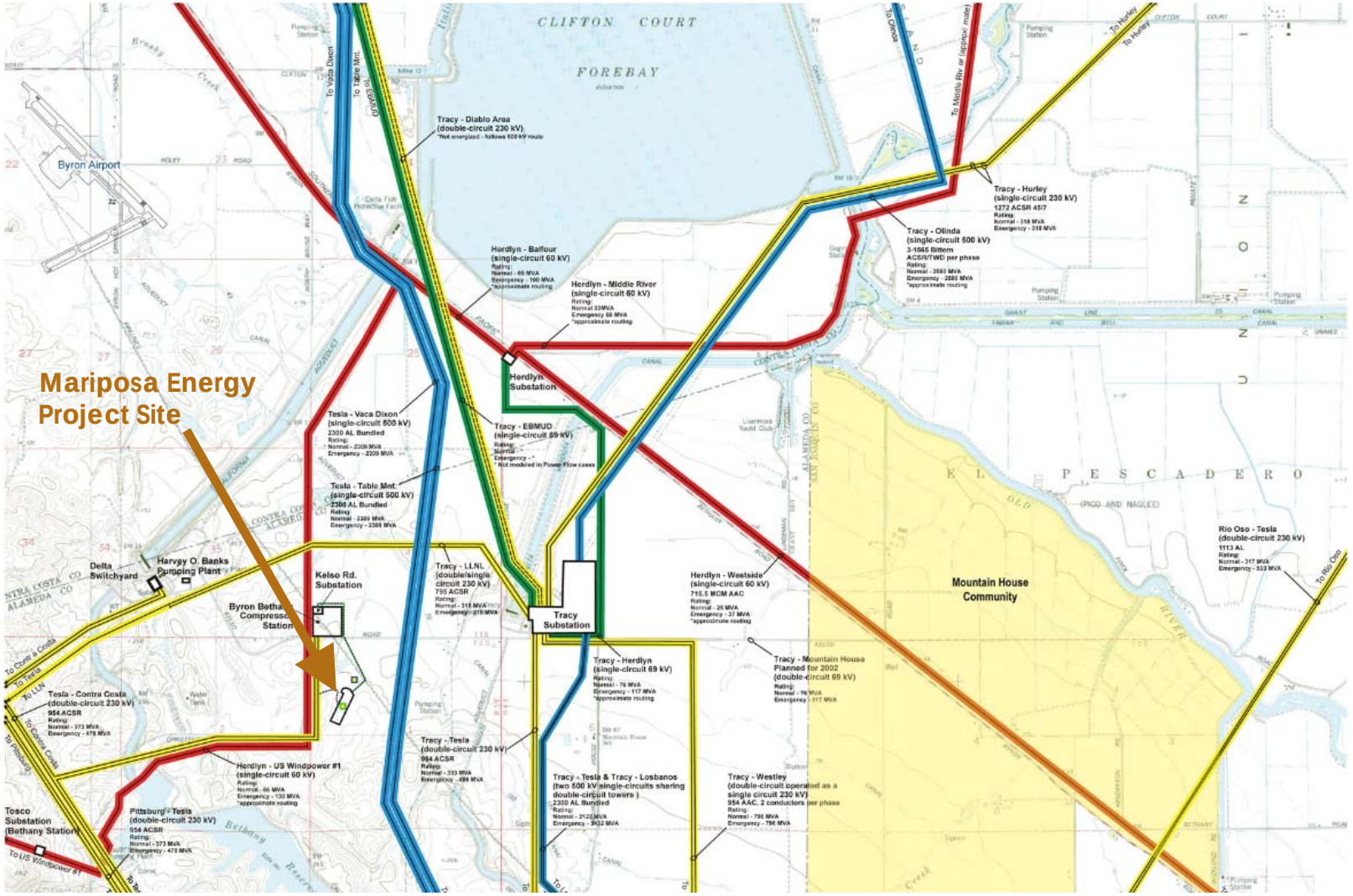
Mariposa Energy, LLC

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**

Mariposa Energy, LLC

Project Location Within the Local Area and Existing Infrastructure Facilities

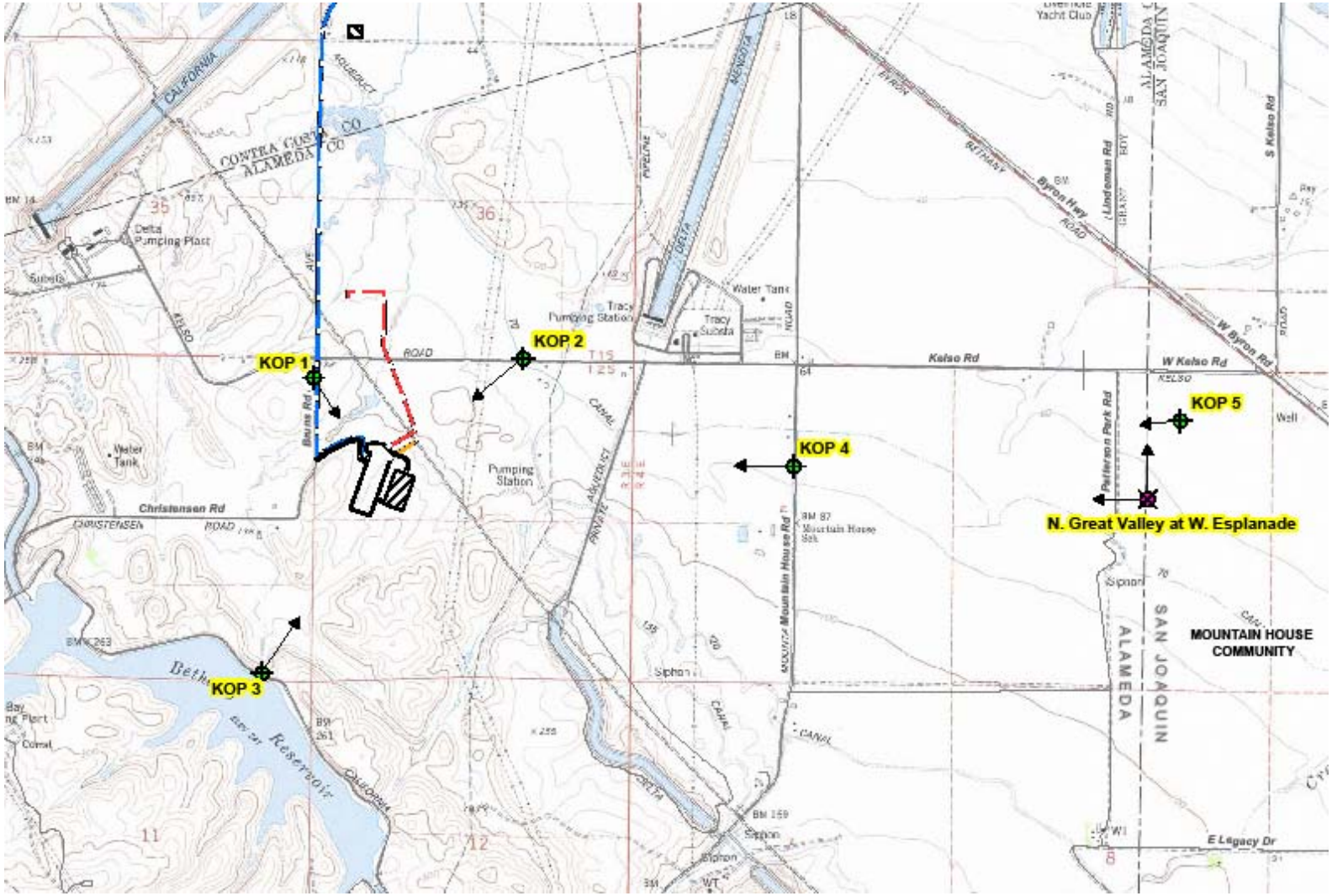


Mariposa Energy, LLC

Mariposa Energy Project Location

Mariposa Energy, LLC

Map of Key Observation Points



Mariposa Energy, LLC

Key Observation Point 1
Current View

Mariposa Energy, LLC

Key Observation Point 1
Simulated View

Mariposa Energy, LLC

Key Observation Point 2
Current View

Mariposa Energy, LLC

Key Observation Point 2
Simulated View

Mariposa Energy, LLC

Key Observation Point 3
Current View

Mariposa Energy, LLC

Key Observation Point 3
Simulated View

Mariposa Energy, LLC

Key Observation Point 4
Current View

Mariposa Energy, LLC

Key Observation Point 4
Simulated View

Mariposa Energy, LLC

Key Observation Point 5
Current View

Mariposa Energy, LLC

Key Observation Point 5
Simulated View

Mariposa Energy, LLC

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 Energy, LLC

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 Energy, LLC

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, LLC

Mariposa Energy Project Resources

Bo Buchynsky Executive Director	b.buchynsky@dgc-us.com
Paula Zagrecki Director, Finance	p.zagrecki@dgc-us.com
Application for Certification	http://www.energy.ca.gov/sitingcases/mariposa/index.html