Red Mountain Bar
Pumped Storage Project

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Red Mountain Bar

• Located 10 miles south of Sonora in Tuolumne County

• Utilizes Don Pedro Reservoir as a lower pool

• Primary Components
  – Upper Reservoir
  – Water Conveyance System
  – Underground Power Complex
  – Transmission Lines
Red Mountain Bar

Main Dam Site

Footprint of the Main Dam Site
Upper Reservoir

- **Main Dam**
  - Concrete Faced Rockfill Dam (CFRD)
  - 430 ft Max Height
  - 1,800 ft long across the crest

- **Four Saddle Dikes**
  - Roller Compacted Concrete (RCC)
  - Ranging in size:
    - 30 ft – 70 ft Max Height
    - 200 ft – 600 ft Length

- **Storage 42,144 AF**
Lower Reservoir
“New” Don Pedro

- Owned by TID and MID
- Operated by TID
- Storage 2,030,000 AF
  - 830 ft Elevation
- For Planned Pumped Storage Operations
  - Max Elevation 830 ft
  - Min Elevation 750 ft
- 50% Exceedance Elevation 796 ft
Powerhouse

• Single Speed
  – 900 MW total capacity
    • 232 MW – 288 MW Capacity/Unit
    • 303 MW Pump Input Power
  – Average Energy Storage Capacity of 15,000 MWh to 18,800 MWh depending on Don Pedro Elevation
  – $1.7 Billion

• Variable Speed
  – 1,000 MW total capacity
    • 260 MW Capacity/Unit
    • 310 MW Pump Input Power
  – Average Energy Storage Capacity of 19,000 MWh to 22,000 MWh depending on Don Pedro Elevation
  – $2.1 Billion
Why Pumped Storage?

• Renewable Integration
  – Renewable Portfolio Standard Requirements
  – Green House Gas Legislation

• Direct Energy Transfer
  – 75% to 82% Turnaround Efficiency

• Capacity Benefit

• Operational Efficiency Enhancements

• Grid Stability
Process

• Feasibility Study
  – Completed August 2008
• Economic Analysis
  – Spring 2009
• Pilot Tunnel
• License Application
Questions?

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