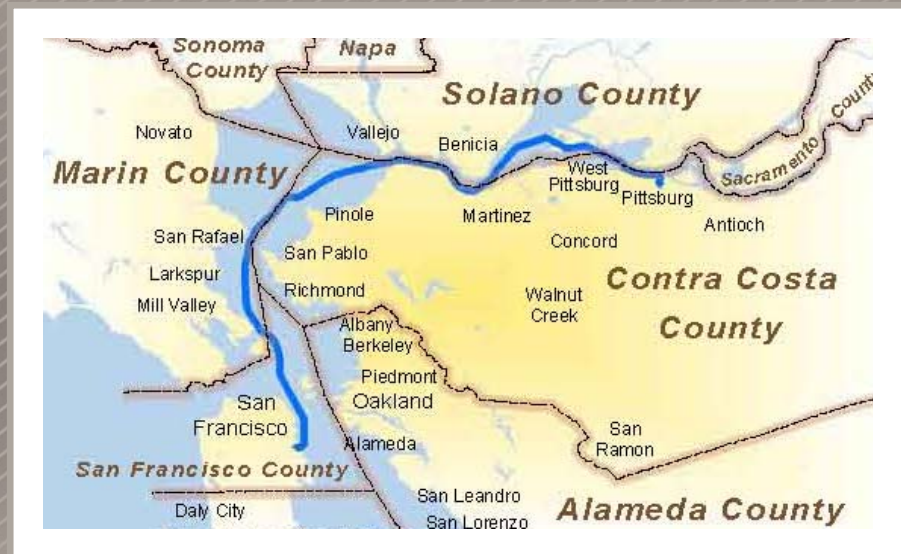


# Trans Bay Cable Project

Presentation  
to  
Board of Governors  
California Independent  
System Operator

April 19, 2007



# Trans Bay Cable Project – Key Milestones

**Considerable progress has been made, development of the Project is nearly complete**

- Development Agreements Executed with City of Pittsburg – January, 2004
- Project Introduced to California ISO's SF Stakeholder Group – February, 2004
- Federal Energy Regulatory Authority FERC Approval of TBC Rate Principals – July, 2005
- California ISO Approval of TBC Project (Reliability) Need at the Conclusion of the SF Stakeholder Study Group Efforts – September, 2005
- Draft Environmental Impact Report (DEIR) Issuance – May, 2006\*
- City of Pittsburg Certification of Final EIR – November, 2006\*
- City of Pittsburg Approval of Addendum of Final EIR – January, 2007\*
- Discretionary Acts (Permits, State Easements, etc.) Complete – [April 30, 2007 → June 30, 2007 due to San Francisco Approval Delay]
- Close Financing and Notice to Proceed to Contractors – [June, 2007]
  - URS - Demolition, site prep and remediation contractor
  - Siemens/Prysmian – EPC Contractor
- Commercial Operation of Line – [March, 2010]

\* See <http://www.ci.pittsburg.ca.us>

# Why the Trans Bay Cable is Important to San Francisco

- Per CAISO, the Trans Bay Cable Project is the only Project that can be Placed in Service Prior to the Summer, 2010, as Determined by the CAISO SF Action Plan Update of February 15, 2007
- CAISO Conducted a Multi-Year Stakeholder Study Process to Solve San Francisco's Electric Infrastructure Problems
  - Phase I resulted in the San Francisco Action Plan:
    - Jefferson to Martin transmission line allowed for shut down of Hunters Point Power Plant
    - SF CT's will allow CAISO to remove the RMR from the Potrero Power Plant
    - Action Plan noted that a new transmission line would be needed for reliability for the long term
  - Phase II Resulted in selection of TBC as the Preferred Long Term Reliability Solution
    - Studies showed TBC needed by 2012
    - CAISO Staff recommended and Board approved TBC for 2009 COD due to improved operating capabilities and economic benefits of the Project
    - Need date moved to Summer, 2010 per February 15, 2007 CAISO Action Plan Update
  - Five other Alternatives Were Considered and Rejected by the Stakeholder Process
    - Do Nothing
    - "Band-Aid"
    - PG&E Moraga-Potrero Transmission Line
    - PG&E Tesla (Tracy)-Potrero Transmission Line
    - Load Management, Distributed Generation, Renewables

# Project Status of Contracts, Agreements, and Discretionary Permits and Approvals

- All Contracts and Agreements are on Track to be Completed to Support a Financial Closing and Notice to Proceed to Contractors in June, 2007
  - Two Tenant Termination Agreements are being finalized
  - Land Cable Easements with One Counterparty are being finalized
  - Construction Contracts are being finalized
- All Discretionary Permits and Approvals Have Been Received, Except for two San Francisco Board of Supervisors Approvals and the BCDC Approval (Which by Law Must be the Last Discretionary Permit)

# The Basis for Change From HVDC “Classic” to PLUS Converter Technology

- **Availability of the HVDC PLUS (Voltage Source Converter) Technology**
  - Technology available through ongoing R&D efforts at Siemens and installation of the Active Filter Systems on the Neptune 600 MW HVDC project
  - Extensive Siemens experience with VSC technology
  - Significant, committed test program
- **Reduced Environmental Impact of HVDC PLUS Technology**
  - Reduced building height, footprint, lightning arrestor height, noise, construction traffic, etc.
- **System Benefits of the HVDC PLUS Technology**
  - +/- 170-300 MVAR support inherent in the new technology
  - Reduced system harmonics
  - Compatible with PG&E’s SF area SVC’s
- **Assured Project Schedule, Performance and Reliability**
  - Excellent EPC Contract: fixed price; guarantees for performance, schedule and availability; LD’s for missing guarantees (accommodated in rates); and many other features
  - Excellent TBC team: Owner’s Engineer and O&M Contractor very experienced and will be assigned to Pittsburgh Power Company

# The Basis for Change From HVDC “Classic” to PLUS Converter Technology, cont’d

- **Overall Cost Benefits to the Project:** Less Expensive Technology Allowed Project to Remain Within Approved Budget Range (\$300 MM +50%, -25%), Notwithstanding Significant Worldwide Pressures on Prices of Commodities and Large Electric Transmission and Other Infrastructure Projects

<b>Cost Components (\$MM)</b>	<b>Original Cost Estimate (\$MM)</b>	<b>Current Cost Estimate (\$MM)</b>
<b>Construction Costs</b>	\$200	\$317
<b>Non-Construction Costs*</b>	\$103	\$123
<b>Total Capital Cost Estimate</b>	\$303	\$440
<b>Estimated Value of Included VAR Support</b>	N/A	~\$40
<b>Net</b>		~\$400

\*Interconnection Costs, Land Costs During Construction, Mitigations, Development Costs, Financing Costs, Project and Construction Management, Reserves and contingency, etc.

# Next Steps

- Upon Receipt of the San Francisco and BCDC Approvals, Trans Bay Cable will be Poised to Finalize Construction Financing, Issue a Notice To Proceed to the Construction Contractors, Complete Final Design, Obtain Building and Other Construction Related Permits, and Commence Construction
- San Francisco has Requested that the CAISO Board of Governors Grant an Extension to TBC so that it can Complete its Review of the Project
- TBC is Requesting a Resolution From the CAISO Board of Governors Approving a [60 Day] Extension of Time to Receive the Final Discretionary Development Permits (SF and BCDC).
- Based on Information Available at the Time of Preparing this Presentation, the Delay May Not Impact the Commercial Operation Date of the Project, Now Scheduled for March, 2010.