



CEC IEPR Committee Workshop  
Transmission Needed to Meet State Renewable Policy  
Mandates and Goals

California Transmission Planning Group  
2010 Statewide Transmission Plan



Dr. Mohammed Beshir, CTPG TSC Chair, May 17, 2011

# CTPG: Who We Are

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- CTPG is a coalition comprised of all the entities within California responsible for transmission planning for the intrastate and interstate grids:
  - Publicly Owned Utilities: IID, TID, SMUD and LADWP
  - California ISO
  - Investor Owned Utilities: PG&E, SCE, and SDG&E
  - Other planning organizations: WAPA, TANC, and SCPPA
- CTPG's role is to coordinate transmission planning studies:
  - NOT a decision-making or approval authority, or development group
- CTPG study process is open and transparent:
  - Assumptions, methods, and results are documented and publicly available (<http://www.ctpg.us/public/index.php>)
  - Conduct stakeholder meetings, and solicits and responds to written comments

# Coordinating Transmission Planning for all of California

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- Identify transmission additions and upgrades needed to achieve 33% RPS for California by 2020
- Integrate the delivery of renewable energy to load centers with the reliability and operational needs of the grid
- Benefit from collaborative planning approach that could significantly reduce the economic and environmental costs of achieving a 33% RPS

# Study Objectives for the 2010 Statewide Transmission Plan

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- Complete a statewide conceptual transmission plan by the end of 2010 and vet results with stakeholders
- Conceptual plan based on results of multiple scenarios runs with consideration of how likely each is
- Goal was to identify “high-potential” transmission needs for consideration by state Balancing Authority Areas in early 2011
- Remaining 33% RPS transmission needs subject to further study in 2011

# CTPG 2010 Study Process



- Development of the CTPG membership

- Development of the CTPG 2010 Stakeholder and Study process

- Load Serving Entity Scenario

- Stakeholder recommended Generation Queue

- RETI recommended Heavy In State Scenario

- RETI Net Short

- Analysis of Stakeholder Alternatives

- Stakeholder recommended Northwest and Southwest Scenarios

- RETI Best CREZ Scenario

- Analysis of Stakeholder Alternatives

- Fall off-peak scenario

- Identification of High Ranked CREZs

- Identification of High and Medium Potential transmission elements

- Analysis of progress towards a 33% RPS

- Assess potential for increased out-of-state imports and potential impact on state-wide transmission plan

- Finalize 2010 Study High and Medium Potential transmission elements

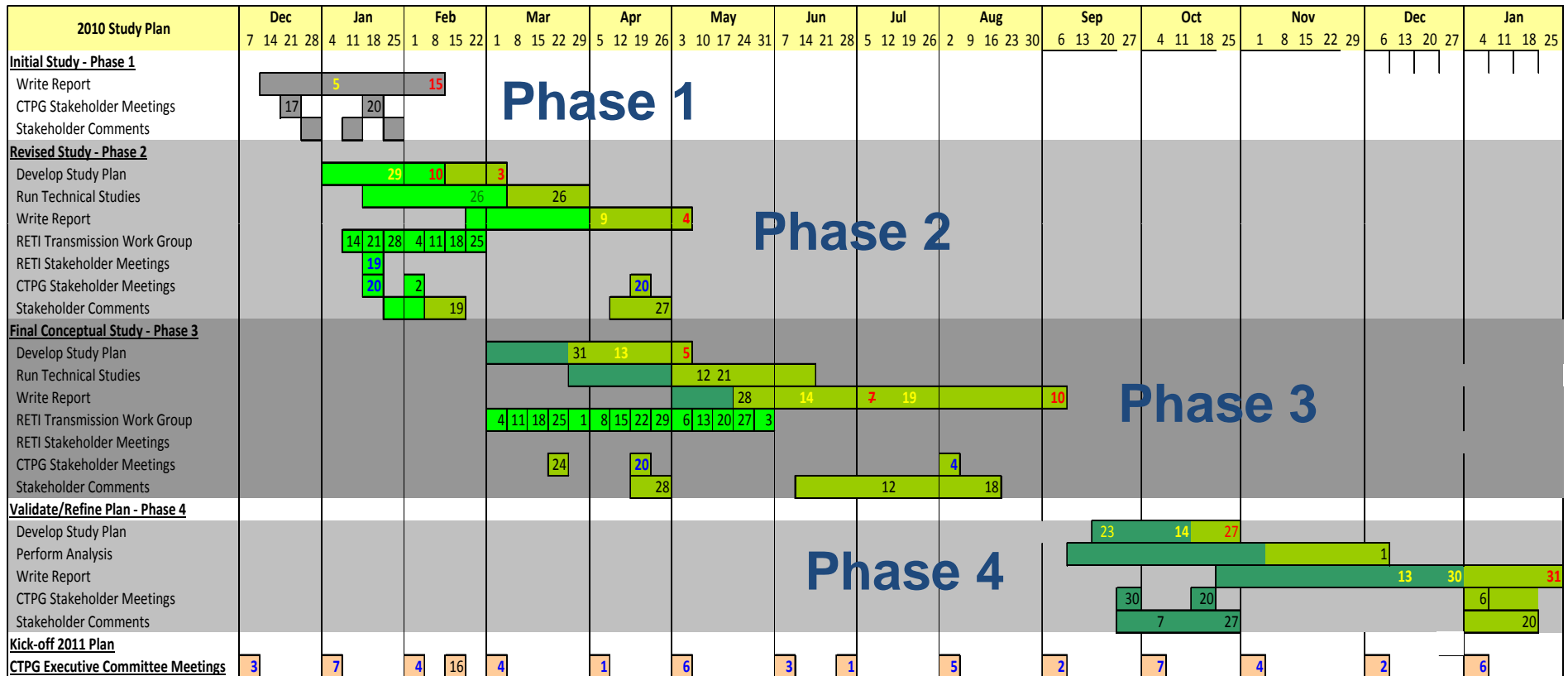
**2010 State-Wide Transmission Plan**

- Identification of state-wide transmission plan elements

- 2010 Lessons Learned

- Begin preparation of 2011 Study Plan

# CTPG 2010 Four-phase Timeline Supported Active Stakeholder Participation

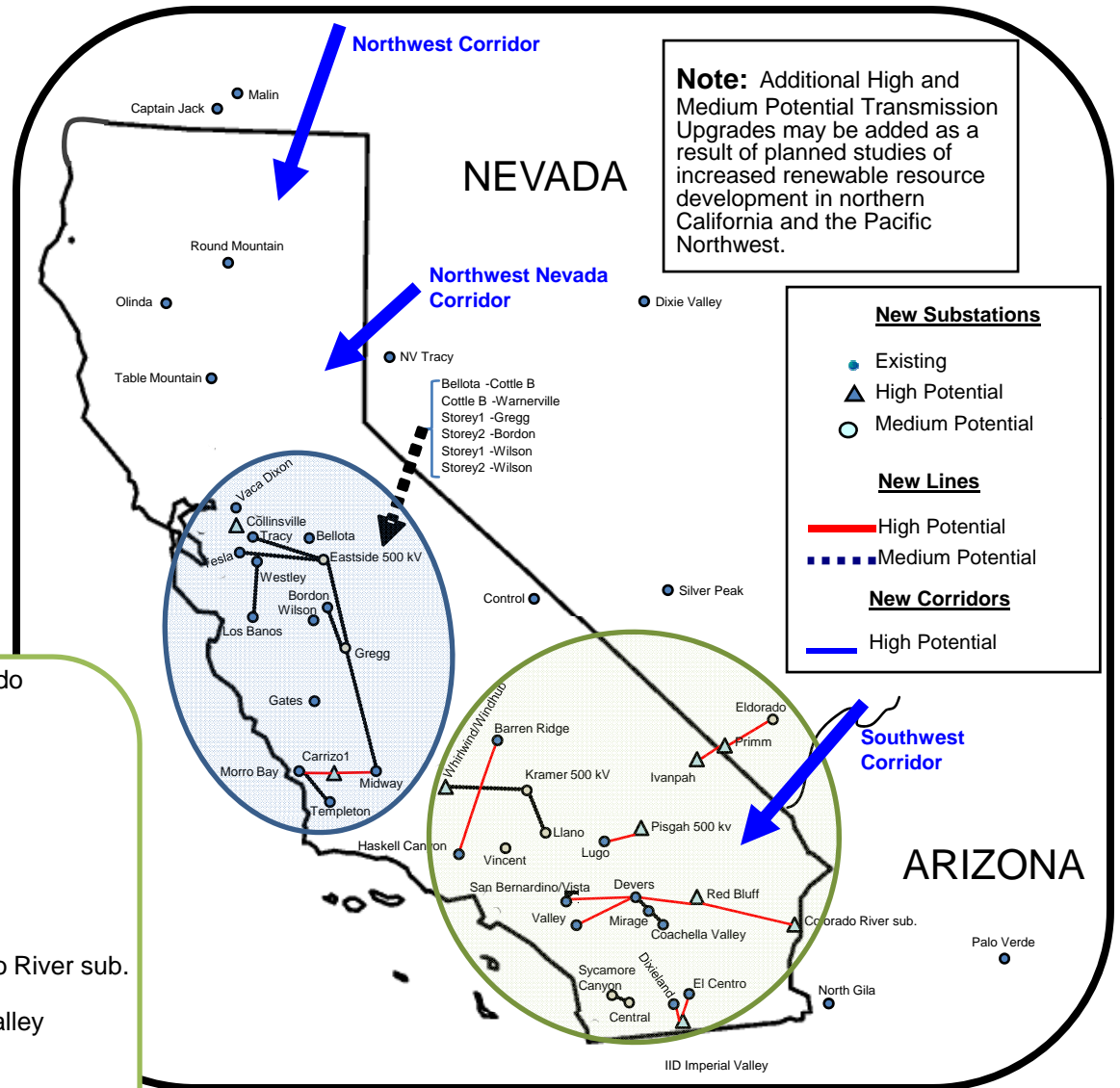
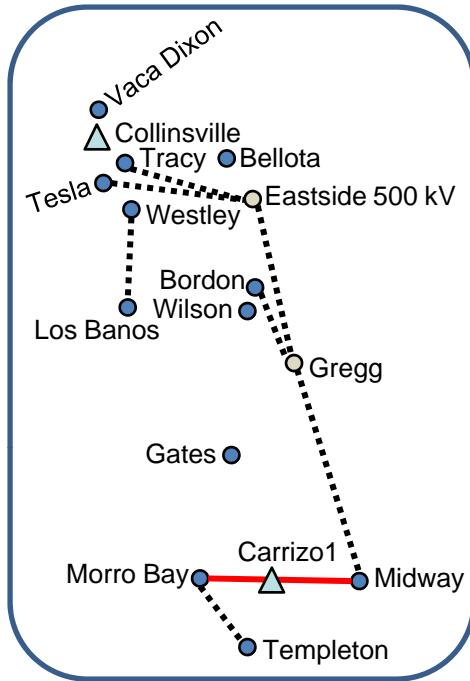


Yellow = Draft  
 Red = Final  
 Blue = In person

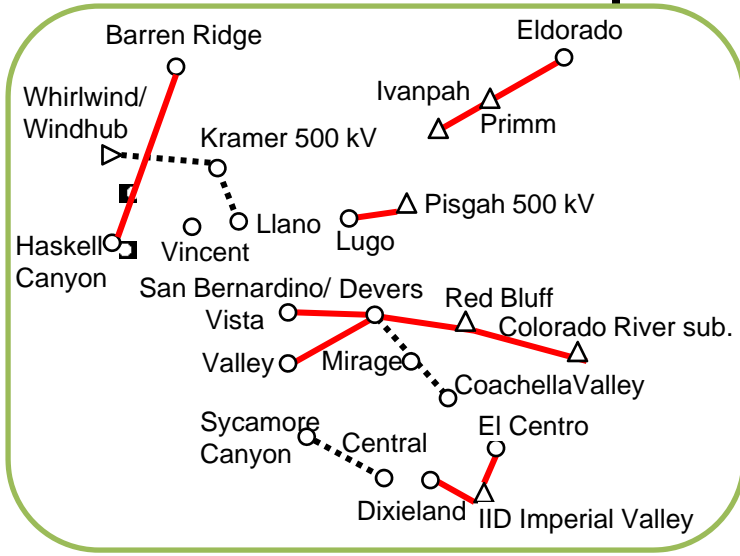


# 2010 CTPG Statewide Transmission Plan

## High and Medium Potential Transmission Upgrades and Corridors



**Note:** Additional High and Medium Potential Transmission Upgrades may be added as a result of planned studies of increased renewable resource development in northern California and the Pacific Northwest.



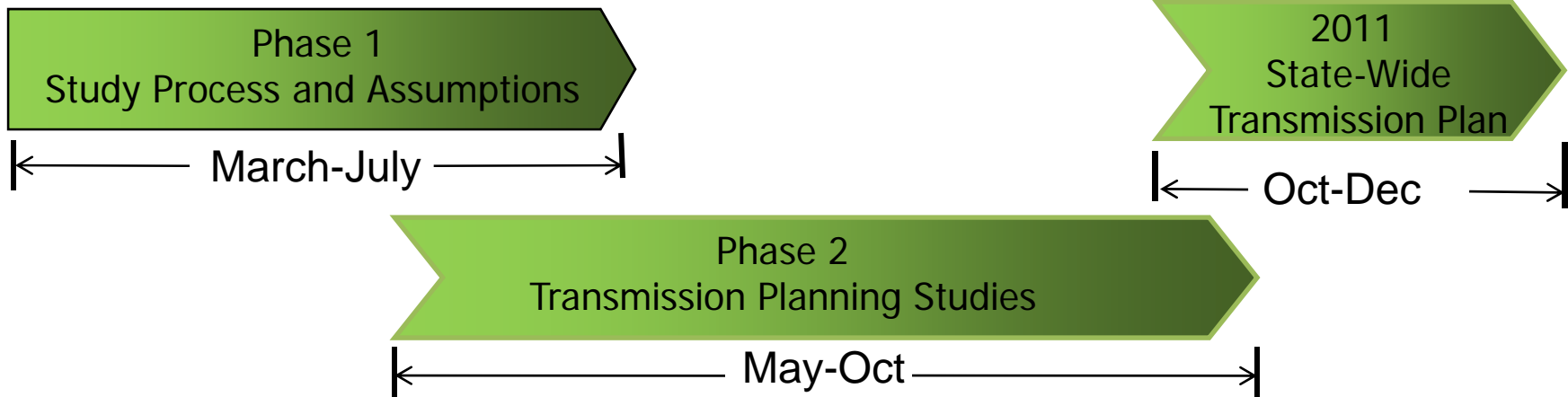
# CTPG 2010 Statewide Transmission Plan Recommendations

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- High Potential Transmission Needs:
  - 26 transmission items
  - Should be focus for transmission project developers, balancing authorities, regulatory bodies, and state agencies
  - Solutions to Needs should be submitted for regulatory approval and environmental authorizations
- Medium Potential Transmission Needs:
  - 34 transmission items
  - Study further in the ongoing transmission planning processes
- High Potential Transmission Corridors:
  - 3 transmission corridors identified
  - Warrant further study by the CTPG in 2011



# CTPG 2011 Work Plan



- Prepare Phase I Work Plan
- Determine Base Case Approach
- Verify Existing Renewables
- Incorporate OTC Assumptions
- Review Path Flow Assumptions Prior To Dispatch of Renewables

- Update Net Short
- Review Re-dispatch Methodology
- Review Dynamic Stability Study Approach
- Coordinate with TEPPC

- Prepare Phase II Work Plan
- Develop Renewable Portfolios/Scenarios
- Prepare Study Plan(s)
- Update Renewable Development Information
- Perform Studies
- Refine the Determination of the High and Medium Potential Transmission Needs and Corridors

- Identify 2011 State-Wide Transmission Plan Elements
- Identify 2011 Lessons Learned
- Begin Preparation of 2012 Work Plan



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**Thank you!**