

# California Transmission Planning Group Response to Specific Requests from May 17, 2011 IEPR Committee Workshop

## (Dockets 11-IEP-1E and 11-IEP-1G)

Mohammed Beshir, CTPG Technical Steering Committee Chair, May 24, 2011

### Request:

The Chairman requested a list of CTPG high-priority transmission projects that are not in the CA ISO plan.

### Request:

Commissioner Peterman requested that CTPG identify which of these are publicly owned utility projects.

### CTPG Response:

The table below compares (i) the transmission infrastructure projects characterized by the California Transmission Planning Group (CTPG) as “high potential” in CTPG’s Phase 3 final study report,<sup>1</sup> with (ii) the transmission upgrades included in the CAISO Board-approved 2010-2011 Transmission Plan.<sup>2</sup> Those transmission infrastructure projects characterized by CTPG as “high potential” which are not in the CAISO Board-approved 2010-2011 Transmission Plan, are highlighted in red. While the table lists the Balancing Authority operator who is likely to be most directly affected by each upgrade, CTPG has made no assumptions as to the ownership of any transmission upgrade and no assumptions as to which Balancing Authority(ies) will have operational control over any specific upgrade. Furthermore, the purpose of the CTPG study work is to identify transmission needs using the methodologies and assumptions described in those studies. However, the member-balancing authorities where the transmission needs reside would be the entities that ultimately determine whether those transmission upgrades are actually needed.

**11-IEP-1E**

**DOCKET**

**11-IEP-1G**

DATE May 24 2011

RECD. June 02 2011

<sup>1</sup> See Appendix C of the final Phase 3 study report posted on the CTPG website at [www.ctpg.us](http://www.ctpg.us).

<sup>2</sup> The CAISO Board-approved 2010-2011 Transmission Plan is available on the CAISO website at [www.caiso.com/2b7b/2b7bbc9972ad0.pdf](http://www.caiso.com/2b7b/2b7bbc9972ad0.pdf).

**Comparison of  
CTPG’s “High Potential” Transmission Upgrades with the  
Transmission Upgrades Included in the CAISO’s 2010-2011 Transmission Plan**

“High Potential” Transmission Upgrades in CTPG’s Final Phase 3 Study Report	Transmission Upgrades Approved by the CAISO Board in the CAISO’s 2010-2011 Transmission Plan	Directly Affected Balancing Authority Areas
Build new Collinsville 500/230 kV substation looping in existing 500 kV Vaca Dixon-Tesla #1 line. (Collinsville substation serves the same function as a new Solano 500 kV substation.)	“...determined not to be needed...” (page 113)	CAISO
Build new Carrizo1 230 kV substation looping in existing 230 kV Morro Bay-Midway #1 and #2 lines.	“...new substations are needed for...transmission projects...and for interconnecting new generation projects...New Carrizo 230 kV” (page 223)	CAISO
Reconductor 230 kV Morro Bay-Midway #1 and #2 lines.	“...transmission projects [previously] approved by the ISO, including those approved by the ISO Board and management,...Carrizo – Midway” (pages 237- 238) <b>The portion of the reconductor between Morro Bay and Carrizo1 substations was determined by the CAISO not to be needed.</b>	CAISO
Add 500/230 kV transformer #2 at Whirlwind substation.	“...transmission projects [previously] approved by the ISO, including those approved by the ISO Board and management,...2 <sup>nd</sup> and 3 <sup>rd</sup> 500 kV transformers at Whirlwind Substation” (pages 237- 238)	CAISO
Add 500/230 kV transformer #3 at Whirlwind substation.		CAISO
Build new Ivanpah (“Mountain Pass”) 230/115 kV substation looping-in existing 115 kV Coolwater-Dunn Siding-Baker-Mountain Pass-El Dorado line. Creates an existing 115 kV Coolwater-Dunn Siding-Baker-Ivanpah (“Mountain Pass”) line.	“...new substations are needed for...transmission projects...and for interconnecting new generation projects...Conversion of Ivanpah 115 kV to Ivanpah 230 kV” (pages 222-223)	CAISO
Build new Primm 230 kV substation (just into western Nevada along I-15).	“...the Primm substation ...is modeled to interconnect some of the renewable generation.” (page 344)	CAISO
230 kV rebuild (double circuit towers) of existing 115 kV Coolwater-Dunn Siding-Baker-Mountain Pass-Eldorado line between Mountain Pass and Eldorado creating new 230 kV Ivanpah-Primm #1 line and new 230 kV Primm-Eldorado #1 line.	“...transmission projects [previously] approved by the ISO, including those approved by the ISO Board and management,...Eldorado – Ivanpah 230 kV lines” (pages 237- 238)	CAISO
230 kV Ivanpah-Primm #2 line on open side of towers.		CAISO
230 kV Primm-Eldorado #2 line on open side of towers.		CAISO
Build new 500 kV Pisgah substation looping in existing 500 kV Eldorado-Lugo #1 line creating an existing 500 kV Eldorado-Pisgah #1 line and an existing 500 kV Pisgah-Lugo #1 line.	“...new substations are needed for...transmission projects...and for interconnecting new generation projects...Pisgah 230 kV to 500 kV” (pages 222-223)	CAISO
500 kV rebuild of existing 230 kV Pisgah-Lugo #2 line creating a new 500 kV Pisgah-Lugo #2 line.	“...transmission projects [previously] approved by the ISO, including those approved by the ISO Board and management,...Pisgah –Lugo” (pages 237- 238)	CAISO
230 kV Barren Ridge-Haskell Canyon upgrade project. (The reconductoring of the existing 230 kV Gorge-Rinaldi line between Barren Ridge and Haskell Canyon substations is renamed 230 kV Barren Ridge-Haskell Canyon #3 line.)	Not addressed by CAISO.	LADWP
New 230 kV Barren Ridge-Haskell Canyon #1 line on double circuit towers.	Not addressed by CAISO.	LADWP
230 kV Barren Ridge-Haskell Canyon #2 line on open side of towers.	Not addressed by CAISO.	LADWP
230 kV Barren Ridge-Haskell Canyon #4 line (single circuit line).	Not addressed by CAISO.	LADWP
Build new Colorado River 500 kV substation looping-in existing 500 kV Palo Verde-Devers #1 line creating an existing 500 kV Palo Verde-Colorado River #1 line and an existing 500 kV Colorado River-Red Bluff #1 line. Add two 500/230 kV transformers at new Colorado River substation.	Previously conditionally approved by the CAISO.	CAISO
Build new Red Bluff 500 kV substation looping-in (i) existing 500 kV Palo Verde-Devers #1 line creating an existing 500 kV Colorado River-Red Bluff #1 line and an existing 500 kV Red Bluff-Devers #1 line, and (ii) planned 500 kV Colorado River-Devers-Valley #2 line creating a 500 kV Colorado River-Red	“...new substations are needed for...transmission projects...and for interconnecting new generation projects...New RedBluff 500 kV” (page 222)	CAISO

Bluff #2 line and a 500 kV Red Bluff-Devers #2 line.		
500 kV Colorado River-Red Bluff (“Desert Center”) #2 line (single circuit towers).	“...transmission projects [previously conditionally] approved by the ISO, including those approved by the ISO Board and management,...Valley – Colorado River” (pages 237- 238)	CAISO
500 kV Red Bluff (“Desert Center”)-Devers #2 line (single circuit towers).		CAISO
Build new IID Imperial Valley 230 kV substation looping in (i) the existing 230 kV Imperial Valley-El Centro #1 line (creating an existing 230 kV IID Imperial Valley-El Centro #1 line and an existing 230 kV Imperial Valley-IID Imperial Valley #1 line), and (ii) the planned 230 kV Imperial Valley-Dixieland #1 line (creating a 230 kV IID Imperial Valley-Dixieland #1 line and a 230 kV Imperial Valley-IID Imperial Valley #2 line).	Not addressed by CAISO.	IID
Rebuild 230 kV IID Imperial Valley-El Centro #1 line with double circuit towers and string new circuit to create a new 230 kV IID Imperial Valley-El Centro #2 line.	Not addressed by CAISO.	IID
Add a second 230 kV circuit on planned double circuit towers between new IID Imperial Valley switching station and planned Dixieland substation creating new 230 kV IID Imperial Valley-Dixieland #2 line.	Not addressed by CAISO.	IID
West of Devers Upgrades (Part 1): Reconductor (i) planned 230 kV Devers-El Casco #1 line and existing 230 kV Devers-Vista #1 line between Devers and El Casco (currently on double circuit towers), and (ii) planned 230 kV El Casco-San Bernardino #1 line and existing 230 kV Devers-Vista #1 line between El Casco and San Bernardino (currently on double circuit towers).	“...all transmission projects [previously] approved by the ISO, including those approved by the ISO Board and management,...West of Devers Upgrade” (pages 237- 238)	CAISO
West of Devers Upgrades (Part 2): Tear down two single circuit structures carrying existing 230 kV Devers-San Bernardino #1 and 230 kV Devers-Vista #2 lines, and replace with double circuit structures carrying two bundled 1033 KCM circuits.		CAISO
500 kV Devers-Valley #2 line (on single circuit towers).	Previously conditionally approved by the CAISO.	CAISO