

SWAT Eldorado Valley Study Group– Status Update

August 16, 2011



EVSG Background

- ▶ Formed May 2010
- ▶ EVSG Purpose
 - “Coordinate the development of all projects coming into and leaving the Eldorado Valley” (geographic, path rating, electric) May 17, 2010 Agreement
- ✘ EVSG Tasks
 - ✘ Inventory of facilities and projects <<complete>>
 - ✘ Create a conceptual plan <<complete>>
 - ✘ Technical analysis <<pending>>

EVSG Area Projects

1. TransWest Express (TWE) (WECC Phase 2 - (Ph2))
2. Southwest Intertie Project (SWIP)/
Southern Nevada Intertie Project (SNIP)(LSP)
(Ph2)
3. Chinook (TransCanada) (Ph1)
4. Zephyr (TransCanada) (Ph1)
5. Gateway South (PacifiCorp) (Ph2)
6. Centennial West (Clean Line) (Pre-PCR)
7. Navajo Transmission Project (NTUA)(Ph2)
8. SMRT Elements, various (WAPA) (Pre-PCR)
9. ON Line Project (NV Energy) (Ph2)
10. TCP Project (NV Energy/WAPA.) (Pre-PCR)
11. Pony Express (Eldorado Valley to Devers)
(Pre-PCR)
12. Eldorado - Ivanpah 220 kV (Pre-PCR.)
13. Anova Project (Pre-PCR)
14. LV - LA Transmission Project (Energy Capital
Partners/PDS) (Pre-PCR)
15. Solar Express (RETCO)(Pre-PCR)
16. West Tie (NVE) Pre-PCR)

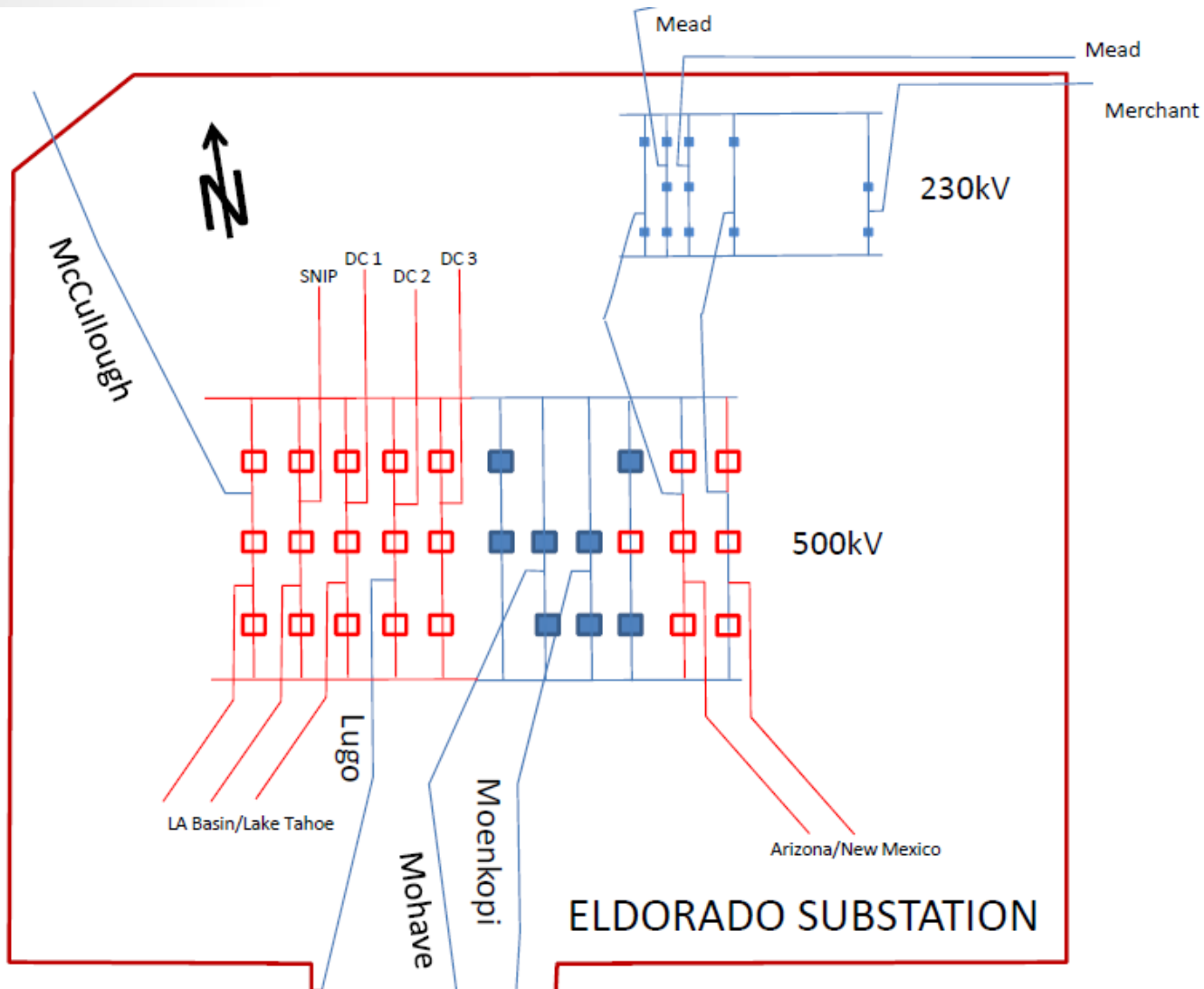
Source: SWAT-EVSG Work Plan V5 4.29.2011.



EVSG Existing Facilities

- ▶ Name plate breaker ratings at the four Eldorado Valley stations:
 - McCullough
 - Eldorado
 - Marketplace
 - Mead
- ▶ Google earth used to trace footprint of transmission facilities

Sample- Eldorado Station

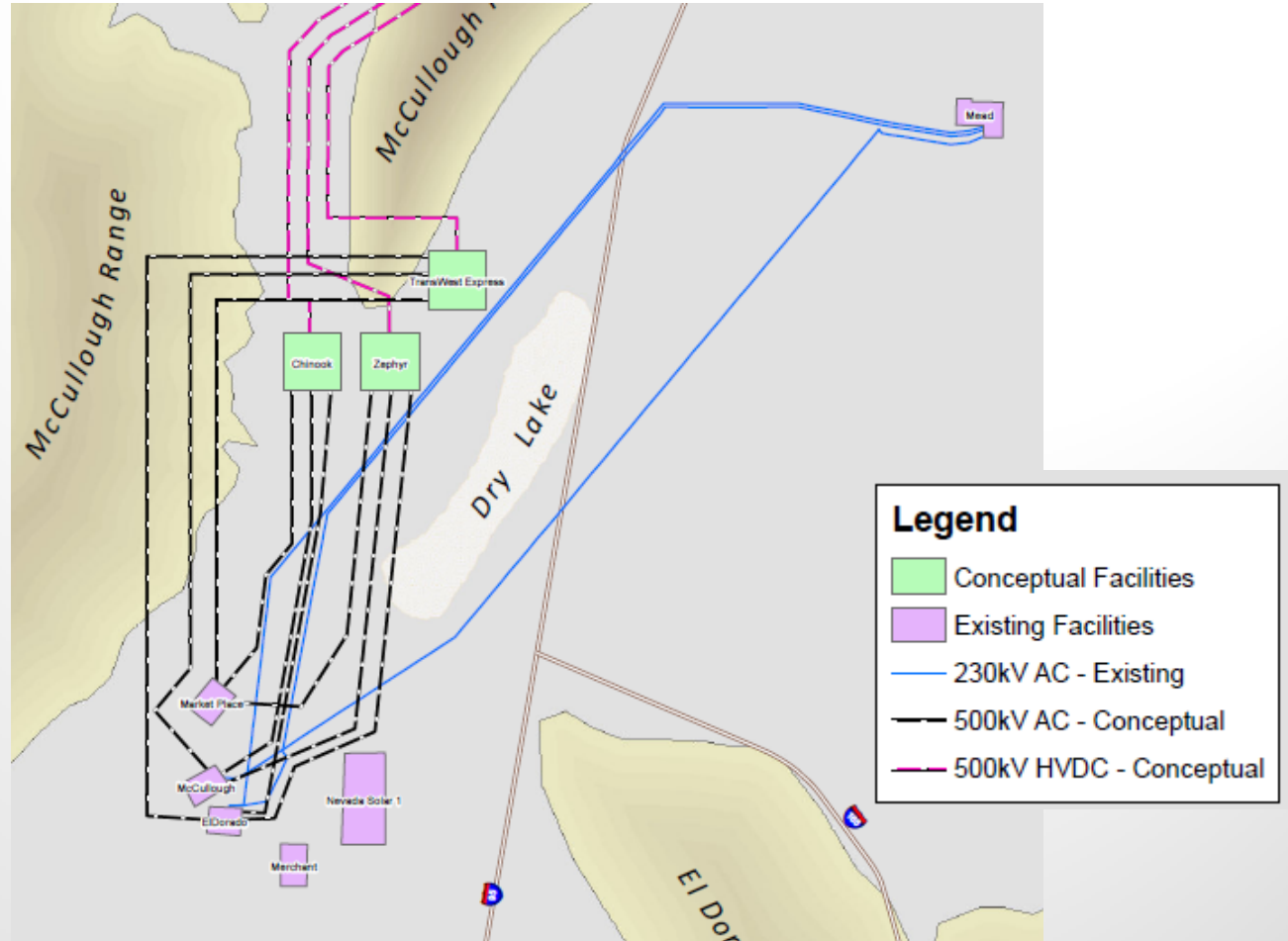


EVSG Conceptual Plan

- ▶ Can all the proposed projects physically be located in the area?
 - Does not address contractual, siting, permitting, or other necessary processes to physically connect the system.
- ▶ 6 options prepared
 - 3 options west of the interstates
 - 3 options east of the interstates
 - With and without a proposed new “Agora” DC/AC hub
 - Makes no decision on “preferred” or “optimal” solution

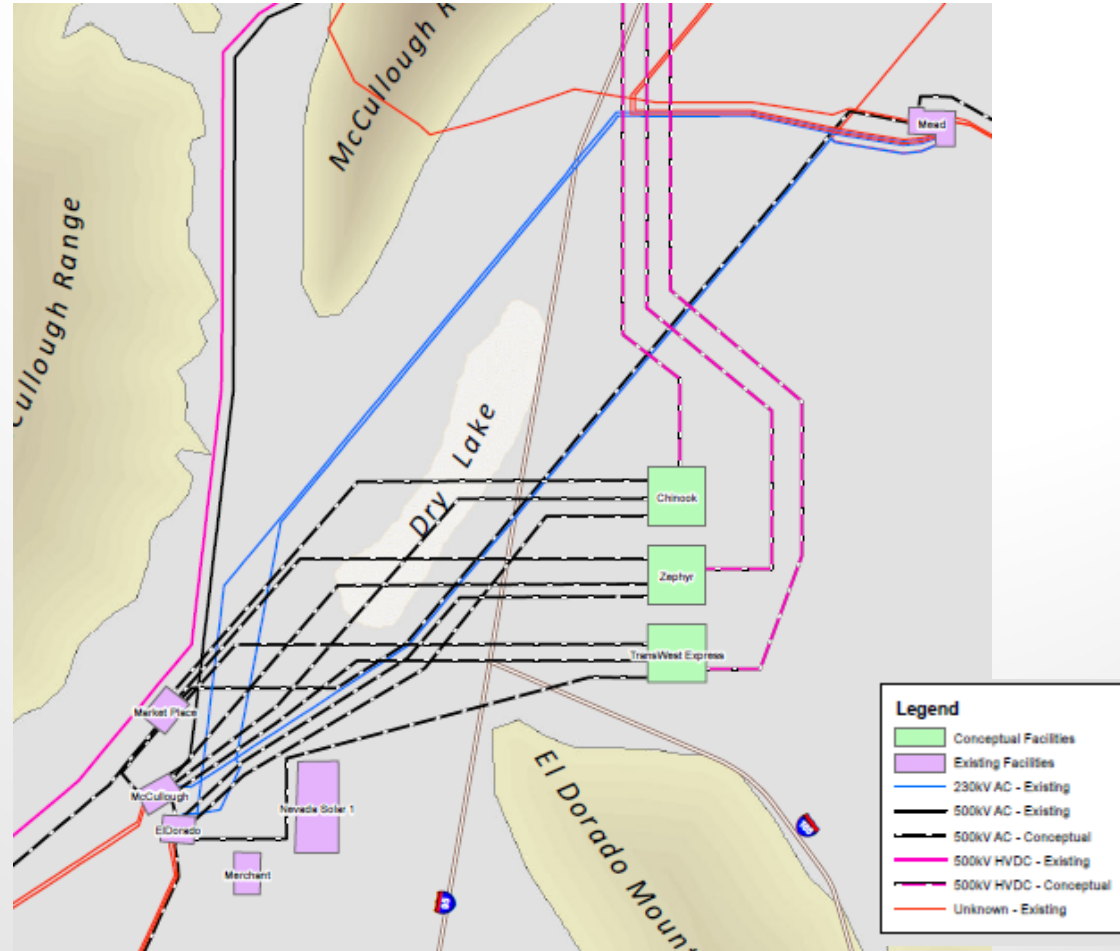
EVSG Concept 1a

- DC Stations west of the Interstates
- Each DC station connects to three different AC stations
- No DC-DC station ties



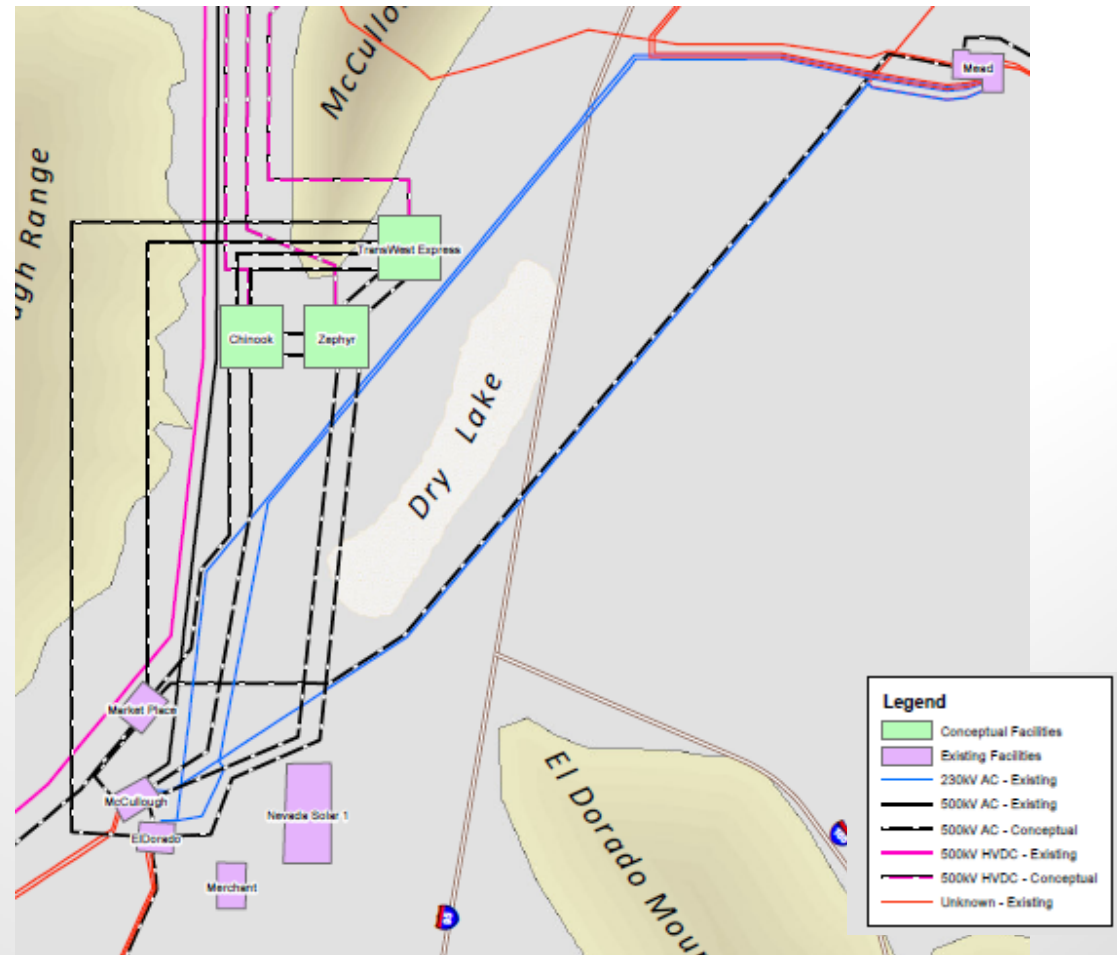
EVSG Concept 1B

- DC Stations east of the Interstates
- Each DC station connects to three different AC stations
- No DC-DC station ties



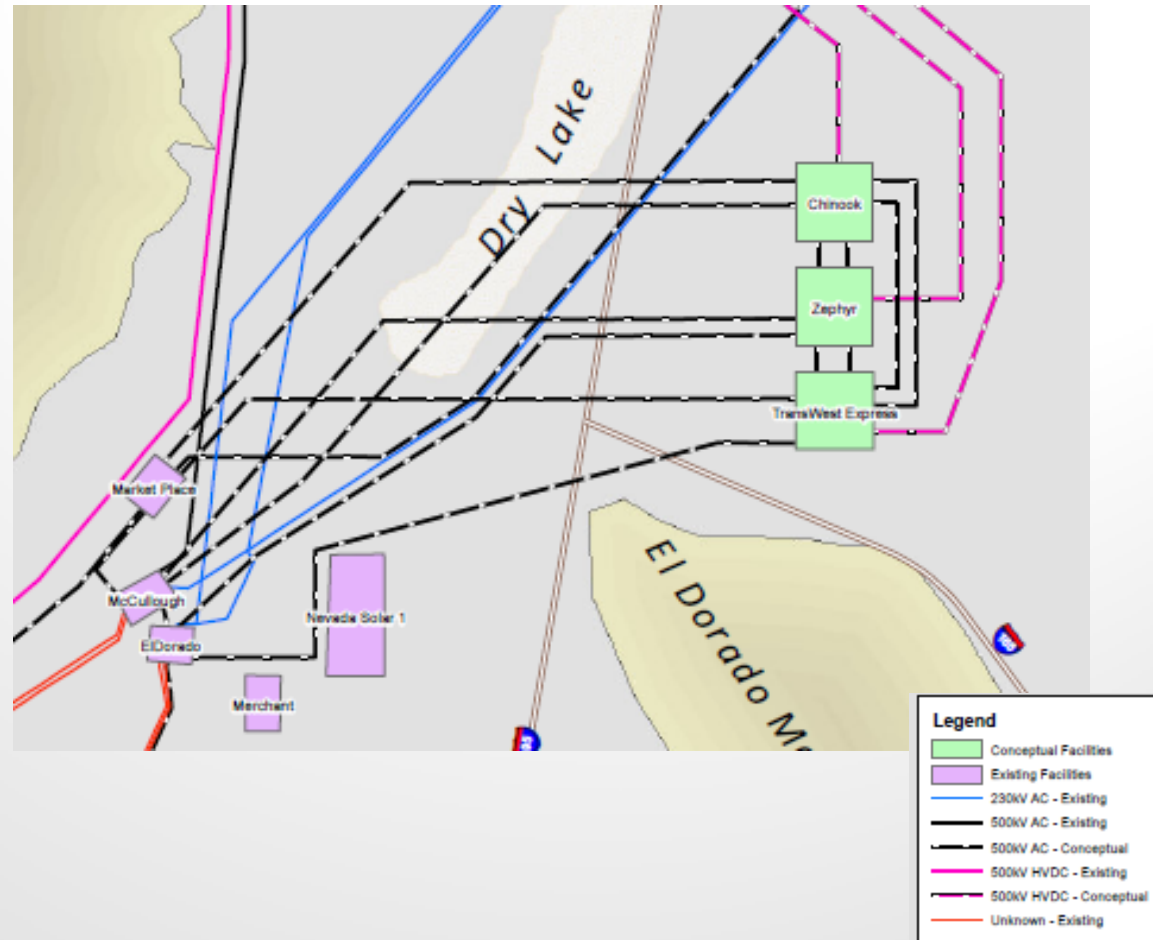
EVSG Concept 2a

- DC Stations west of the Interstates
- Each DC station connects to two AC and two DC stations
- New DC stations connect to each other on the AC side



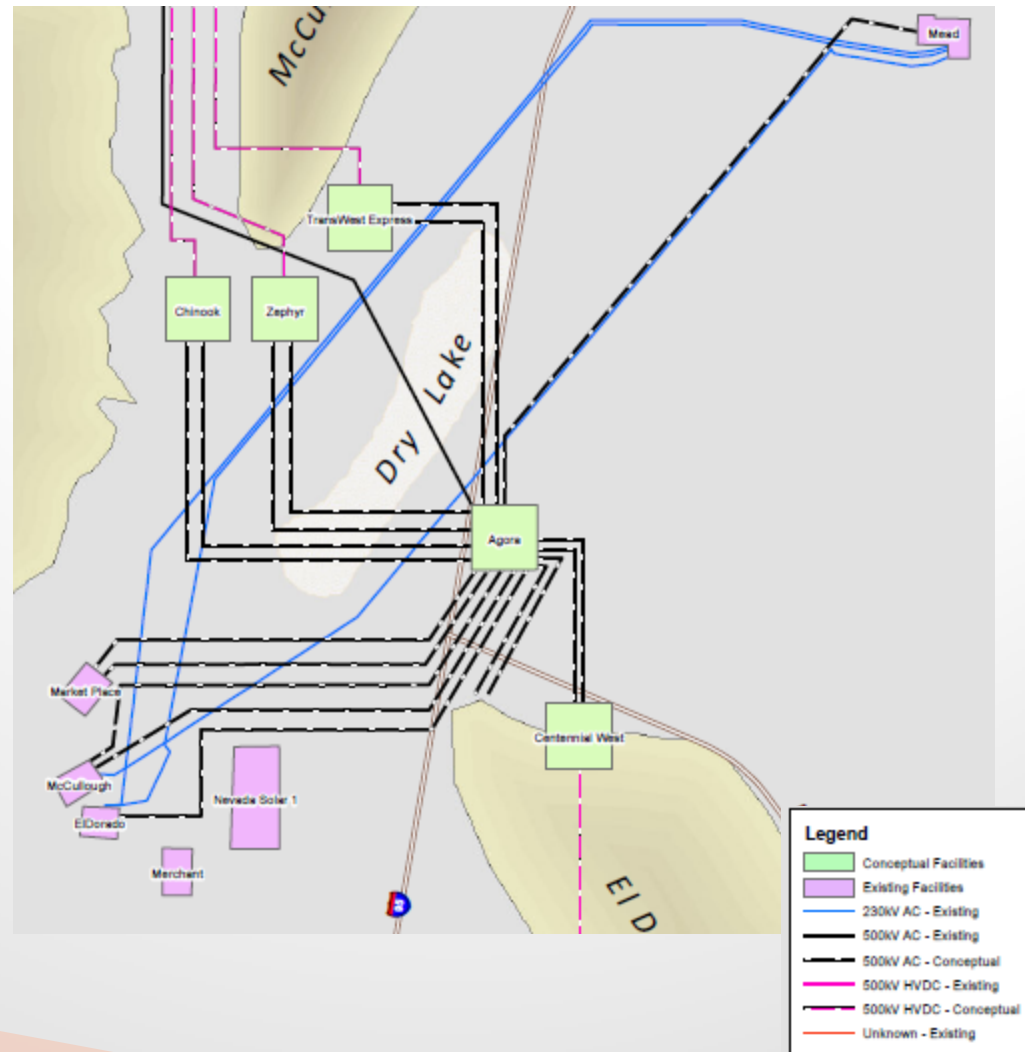
EVSG Concept 2b

- DC Stations east of the Interstates
- Each DC station connects to two AC and two DC stations
- New DC stations connect to each other on the AC side



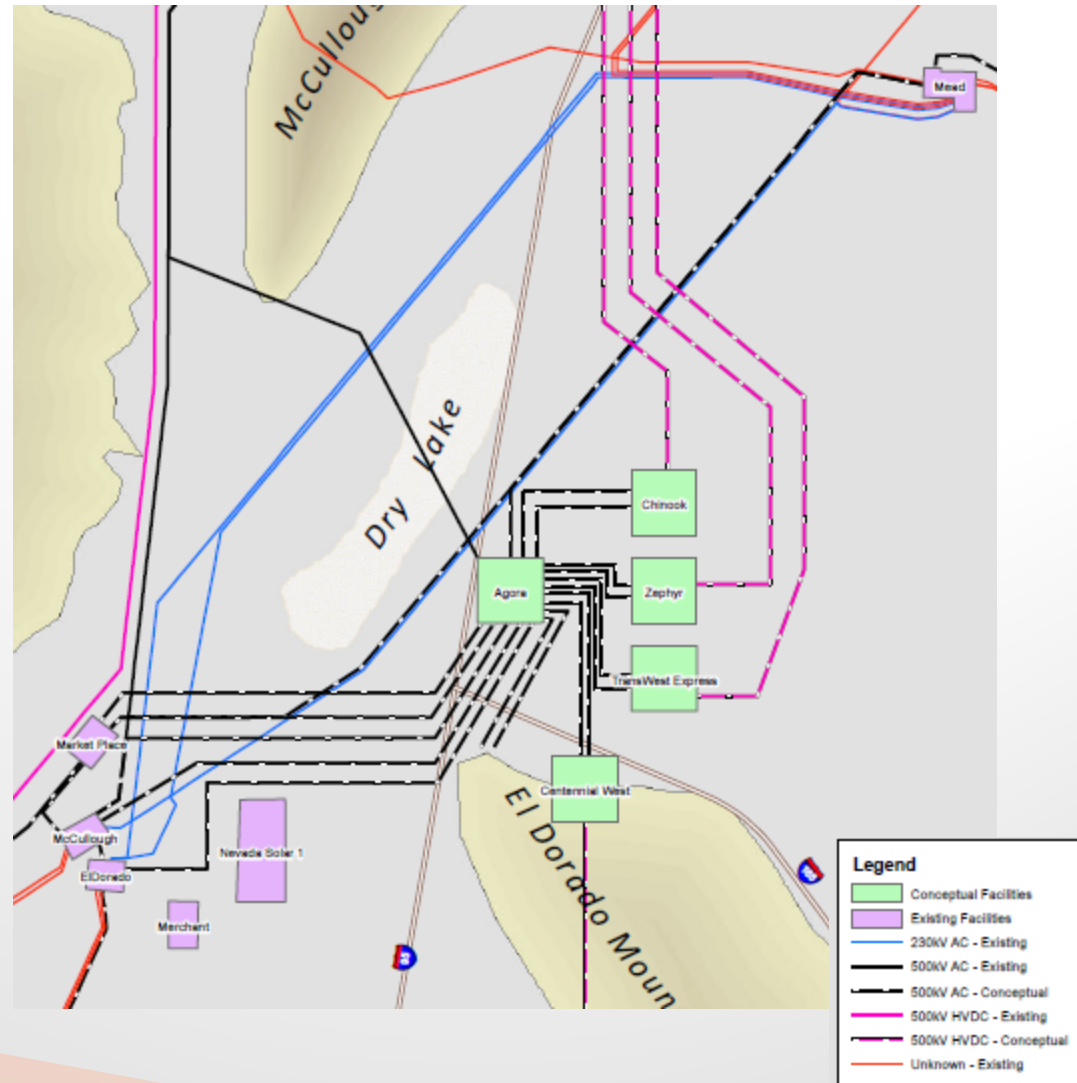
EVSG Concept 3a

- DC Stations west of the Interstates
- Each DC station connects to a new “marketplace” substation called Agora
- No DC-DC station ties
- Includes the Centennial West project



EVSG Concept 3b

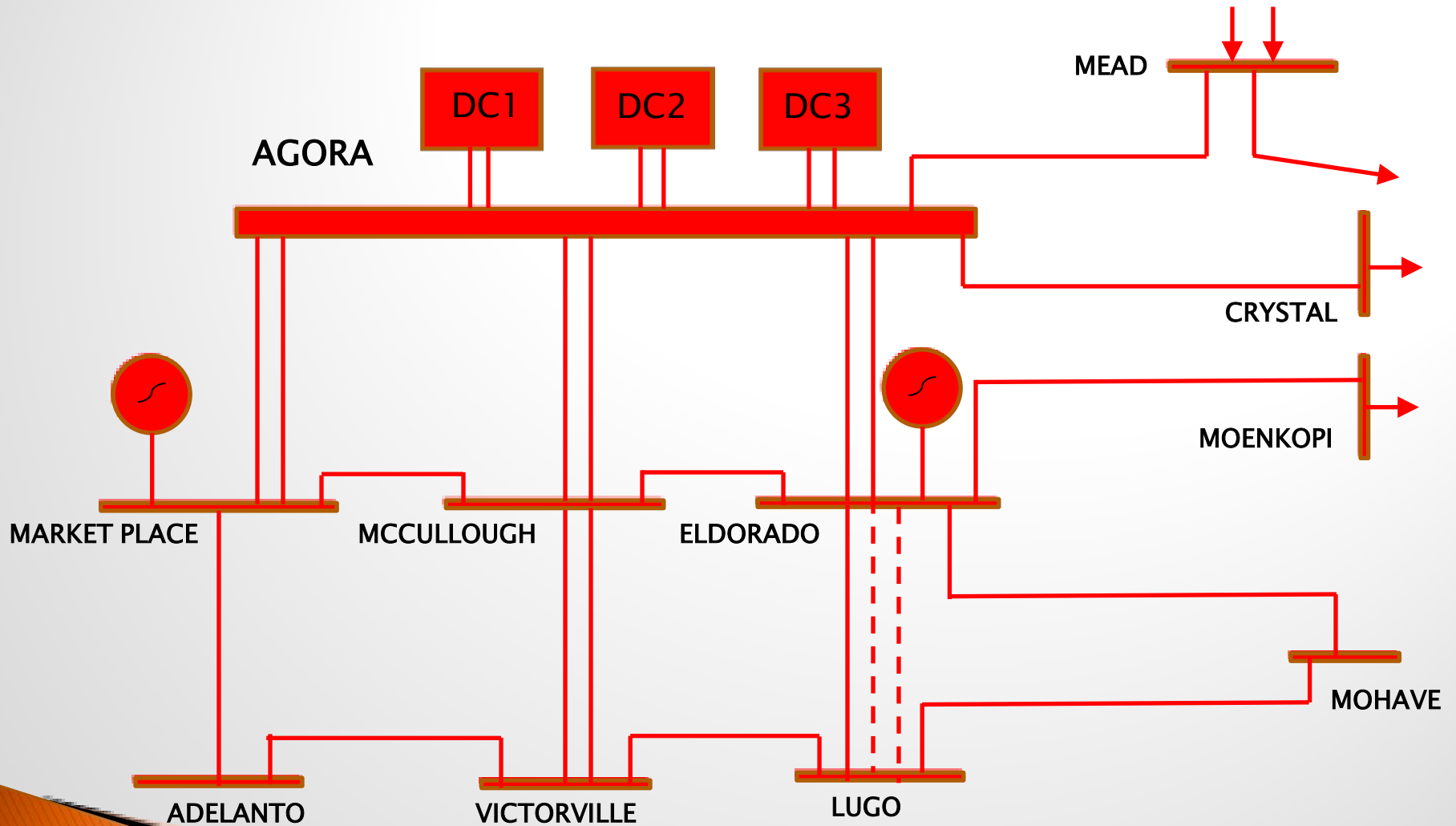
- DC Stations west of the Interstates
- Each DC station connects to a new “marketplace” substation called Agora
- No DC-DC station ties
- Includes the Centennial West project



EVSG Study Plan – January 2011

- ▶ This **high level feasibility** study plan has been developed to model the conceptual plans for the termination stations proposed within the Eldorado Valley, as well as the potential impacts and benefits for new facilities that are planned to interconnect to the proposed termination stations.
- ▶ The study plan will not model specific projects, but will model a single injection level at **Agora** and document the impacts to the existing system by noting the loadings under normal and emergency single system conditions (N-0 and N-1 Only)
- ▶ From this base analysis, **incremental 500kV** will be modeled from the Eldorado Valley area to the **southern California** area load center and perform a similar analysis to determine the potential incremental increase in transfer capability.
- ▶ Line Flow and Outage **Distribution Factors** will be noted for the base system as well as the post 500kV line case to assist with the predictive analysis on the capabilities of the Eldorado Valley area system (230kV and above).

AGORA Conceptual 500kV Plan



EVSG – Progress Report

- ▶ Initial study work has been completed.
- ▶ Results are currently being compiled for review with the EVSG technical group.
- ▶ Initial Draft report is under development and scheduled to be complete Q4 2011.
- ▶ Next Steps will depend on EVSG interests.