

Decision on Alberhill Substation Project

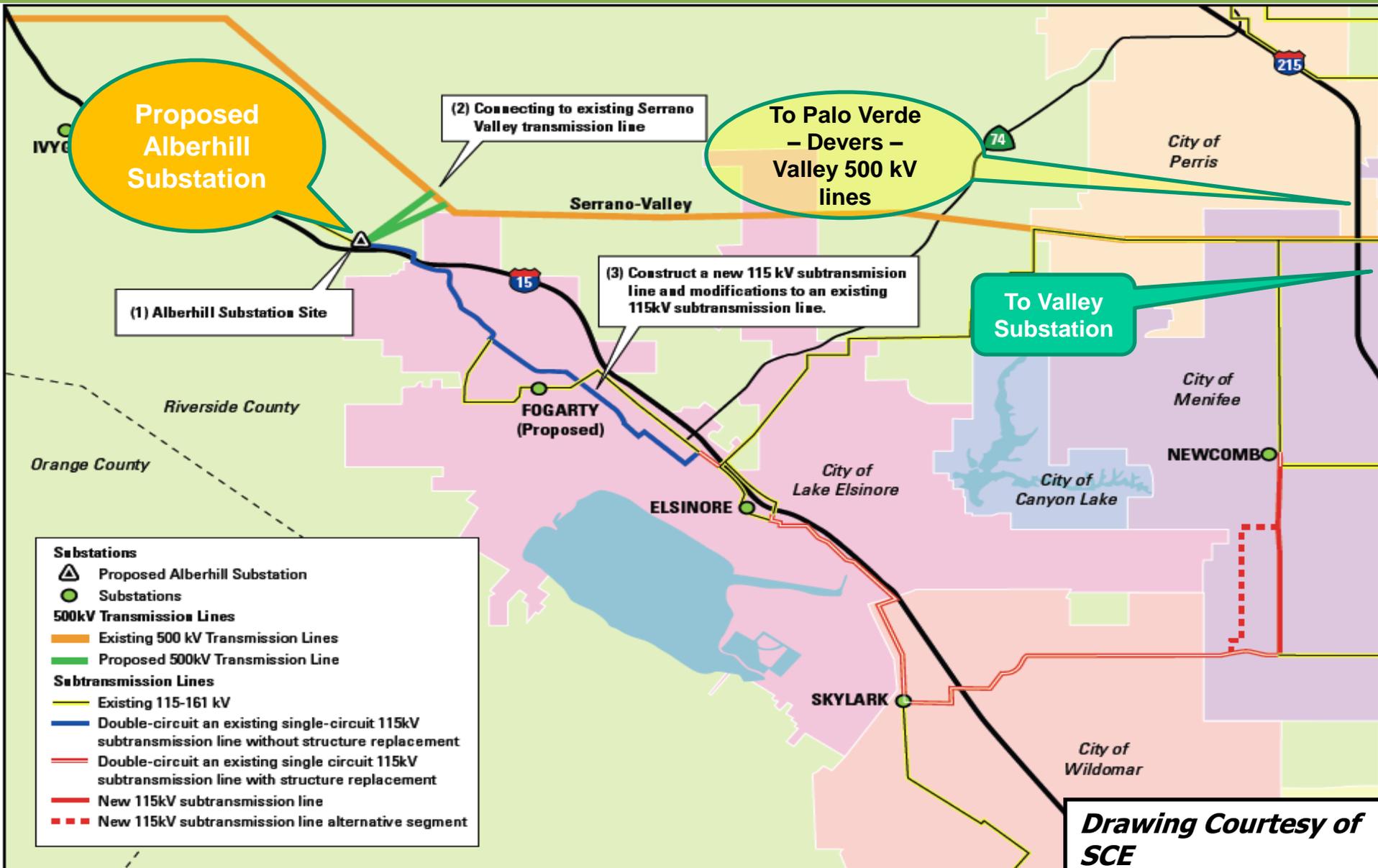
Ali Chowdhury
Director, Regional Transmission South

Board of Governors Meeting
General Session
December 16-17, 2009

New substation (Alberhill) is needed to address future overloading of existing SCE Valley Substation.

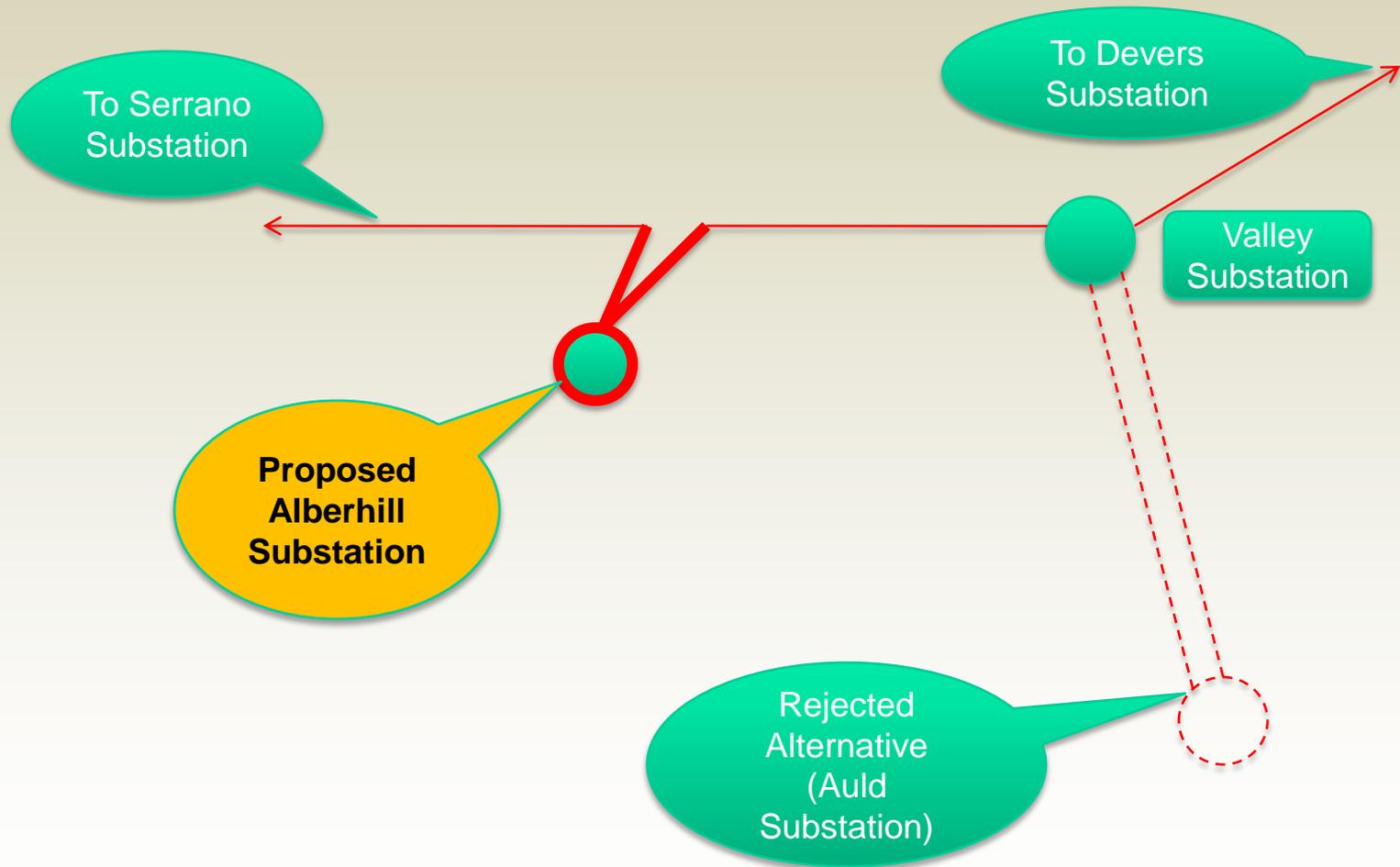
- Transformers serving Valley South system will exceed its load-carrying capability by summer 2014
- Valley Substation
 - Located in the southwestern Riverside County
 - Serves 325,000 metered customers in the San Jacinto Region
 - Part of the bulk south and southeastern SCE transmission system (Palo Verde – Devers – Valley – Serrano 500 kV lines)
 - Valley North and South systems are two separate systems
 - Maximum capability: 2,240 MW for both Valley North and South systems
 - Has four load-carrying 560 MVA 500/115 kV transformers

Proposed Alberhill Substation Project



Drawing Courtesy of SCE

Proposed Alberhill Substation Project (cont'd)



The recommended Alberhill project has the following elements:

■ Project Elements

- 500/115 kV substation
- Two 1.5-mile long new 500 kV lines
- 3-mile 115 kV subtransmission line
- Modifications to four existing 115 kV lines

The recommended Alberhill project has a total cost of \$315 million

- \$171 million Transmission Access Charge (TAC)
 - 2-1½ miles 500 kV transmission lines,
 - 500 kV switch rack, high-voltage portion of substation site, and
 - 500 kV transmission line R/W
- \$144 million SCE Retail Cost
 - 115 kV transmission lines,
 - transformers, and
 - low-voltage portion of substation site

The recommended project will provide these benefits:

- Mitigates 2014 loading concerns on Valley Substation
- Meets projected load growth in Riverside County
- Causes minimal environmental impact
- Minimizes load loss under a substation outage scenario

Alternatives were considered but rejected.

4 – Transmission alternatives

2 - Did not effectively address reliability issue

2 - Permitting difficulties

- Less effective reliability solutions

1 – Generation alternative

– Lower costs

– Effective solution

– Low probability of developing

- Air credit issues
- Does not yet have CEC approval
- No signed power purchase agreement