

**DESCRIPTION OF APPROVED PROJECT
TRI-VALLEY 2002 CAPACITY INCREASE PROJECT**

1 INTRODUCTION

This section describes the project as approved by the CPUC on October 11, 2001.

2 DESCRIPTION OF THE APPROVED PROJECT

The project as proposed by PG&E would have included approximately 20.7 miles of 230 kV overhead double-circuit transmission line, approximately 2.7 miles of 230 kV underground double-circuit transmission line, two new distribution substations, modifications to an existing substation, and an underground/overhead transition station. This included 10 miles of overhead transmission line for Phase 2 of the project (this phase was not approved by the CPUC).

Table 1 illustrates the project as approved by the CPUC. The approved project includes a total of about 2.5 miles of 230 kV overhead double-circuit transmission line and 11.8 miles of underground line. The CPUC approved the substations as proposed by PG&E.

Table 1. Length of Segments (Overhead vs. Underground)

Approved Route Segment	Total Length of Transmission Line Segment (Approximate)	Length of Overhead Line (Approximate)	Length of Underground Line (Approximate)
Pleasanton Area			
Zone 7 Water Plant to Vineyard Substation	5.9	0	5.9
Dublin/San Ramon Area			
Proposed Dublin Substation and Transmission Line (Corner of North Livermore Avenue/Manning Road to Dublin Substation)	5.0	2.5	2.5
North Livermore Area			
P3: Proposed Substation with 2.4 Miles Underground (May School Road) and P2 (along North Livermore Ave. from May School to Manning)	P2: 1	0	1
	P3: 2.4	0	2.4
TOTAL	14.3	2.5	11.8

2.1 OVERVIEW OF THE APPROVED PROJECT

The Tri-Valley 2002 Capacity Increase Project was proposed by Pacific Gas and Electric Company (PG&E Co.) to serve the projected electric demand in the Cities of Dublin, Livermore, Pleasanton, and San Ramon, and in portions of unincorporated Alameda and Contra Costa Counties adjacent to these cities. The major elements of the approved project are:

Pleasanton Area:

- Modification of the existing Vineyard Substation (in Pleasanton) to include a 230 kV transmission interconnection.
- Installation of 5.9 miles of 230 kV underground double-circuit transmission line to serve the Vineyard Substation, and a transition structure near the Del Valle Water Treatment Plant to convert the 230 kV overhead transmission line to an underground cable system.

North Livermore Area Substation:

- Construction of a proposed North Livermore Substation, located 3 miles north of Interstate 580 at the intersection of May School Road and North Livermore Avenue.

Dublin Area Substation:

- Construction of a proposed Dublin Substation, located 3 miles north of Interstate 580 and 1 mile east of Tassajara Road in Contra Costa County.

North Livermore and Dublin Areas Transmission Lines:

- Installation of 8.4 miles of new 230 kV of underground and 2.5 miles of overhead double-circuit transmission line. Five miles (2.5 overhead; 2.5 underground) would be within PG&E Co.'s existing vacant easement.

PLEASANTON AREA (SOUTH AREA) PROJECT COMPONENTS

The approved Project in the Pleasanton Area includes:

- Construction of 5.9 miles of all underground transmission line mostly along Vineyard Avenue.
- Modification of the Vineyard Substation to accommodate the new 230 kV transmission circuits.
- Installation of additional 21 kV distribution circuits from Vineyard Substation.

Vineyard Substation Modification. One existing 60/21 kV transformer bank would be replaced with a 230/21 transformer bank. Accordingly, the existing 230/60/21 kV transformer bank would be changed from 60 kV to 230 kV. The existing 60 kV circuit switches would be changed to 230 kV switches. Three existing 60 kV overhead line terminations would be removed and two new 230 kV underground cable termination stations would be installed. One 230 kV power circuit breaker would be installed for 230 kV underground cable line. Two 21 kV outlet circuits would be built. The area that would be occupied by the new equipment is within the existing footprint of the substation.

Overhead-to-Underground Transition Structure. The transition structure would be constructed adjacent to the Contra Costa-Newark transmission line, near the Del Valle Water Treatment Plant. The transition structure would consist of two dead-end structures for terminating both 230 kV overhead circuits, two low-profile support structures for cable terminations and lightning arresters, and two splice vaults for splicing cables and facilitating access for future repairs to the cables or cable terminations. Other equipment located at the site would include cable sheath arresters, conductor jumpers, grounding conductors, fiber-optic facilities, fencing, and outdoor lighting. The layout would require an area of approximately 0.2 acres including vehicle access, and would be graded flat or in a terraced layout.

230 kV Transmission Line. The approved South Area route begins at the existing Contra Costa-Newark transmission line immediately southwest of the Zone 7 Del Valle water treatment plant, on private property. An overhead-underground transition station would be constructed adjacent to the Contra Costa-Newark line. From this point, the line would be placed underground immediately west of Foley Road, within two private property parcels, continuing west/northwest adjacent to Foley Road, just outside of the roadway right-of-way. Where Foley Road and Vineyard Avenue intersect, the underground transmission line would turn west along Vineyard Avenue, crossing Highway 84.

From Highway 84, the underground route would be located in the firebreak road south of Vineyard Avenue, past Isabel Avenue (where a bored crossing beneath the roadway would likely be required). From Isabel Avenue, the underground line would continue along the firebreak road for approximately 0.9 miles until the point at which New Vineyard Avenue diverges to the northwest. The underground line would continue along New Vineyard Avenue (within the roadway or immediately adjacent to it) until it reconverges with (Old) Vineyard Avenue. PG&E is required to consult with local jurisdictions regarding

the exact placement of all underground segments. Where Vineyard Avenue becomes a divided roadway, the transmission line would be installed within the roadway. The transmission line travels underground on Vineyard Avenue to Bernal Avenue. Where Vineyard Avenue meets Bernal Avenue, the line would turn north on Bernal Avenue (still underground), and into the Vineyard Substation. Based on PG&E's estimates the total length of this route is 5.72 miles, all underground.

NORTH LIVERMORE AREA PROJECT COMPONENTS

North Livermore Substation. The North Livermore Substation would be identical to the Dublin Substation in terms of the size, layout, and equipment (see description in Section 2.5, below). It would be constructed inside an earthen landscaped berm, with a pre-cast concrete wall structure and vegetation appropriate for the setting. The substation would be set back approximately 60 feet from North Livermore Avenue to allow for any future widening of the roadway. The setback would also accommodate the length of driveway required to handle a mobile tractor-trailer in the event of a transformer exchange, which would allow the normal traffic flow on North Livermore Avenue to be uninterrupted.

230 kV Transmission Line to North Livermore Substation. A tap and an overhead/underground transition station would be constructed approximately 0.25 miles north of where the eastern extension of May School would meet the Contra Costa-Newark line, just west of the existing Contra Costa-Newark transmission line. The transmission line would be installed underground, due west to Dagnino Road, then south along the road to May School Road where it would turn west again, following May School Road to the North Livermore substation. The substation would be located immediately west of the intersection of May School Road at North Livermore Avenue.

Dublin Area Project Components

Dublin Substation. The Dublin Substation, a new 230 kV substation, would be constructed to serve the load growth north of Interstate 580. A new 230 kV transmission line in PG&E Co.'s existing vacant right-of-way would serve this substation. The Dublin Substation would have an associated distribution system to provide power to customers. Detailed information on construction methods is provided in Section B.3.

The Dublin Substation would be located just north of PG&E Co.'s existing right-of-way, approximately one mile east of the proposed extension of Tassajara Road in Contra Costa County. The proposed substation site is located in rolling rangeland used for cattle grazing. PG&E Co. proposes to construct the Dublin Substation without landscape screening during its initial years of operation. According to PG&E Co., the remote ranch parcel is north of an approved development within Alameda County, and south and east of approved development in Contra Costa County. PG&E Co. estimates that it may be 10 to 15 years before the Dublin Substation site becomes surrounded by residential development. Once development agreements have been finalized, PG&E Co. would install landscape measures appropriate to the surrounding setting and uses. The original purchase of 5 acres would allow for the additional placement of appropriate screening around the working substation without service interruptions. Approximately 0.4 miles of existing rocky farm road would be improved to allow for two-way construction traffic. An additional 0.5 miles of new all-weather access road would need to be built to the substation.

The Dublin Substation would be an un-staffed and fenced, remote-controlled facility on 5-acre parcels (see Figure 1 for a plan view of the substation). The substation would require weekly inspections of equipment for normal maintenance. During emergency operations, there may be numerous visits by up to 10 persons for switching and repair work.

230 kV Transmission Line. The transmission line to the proposed Dublin substation would leave the North Livermore substation underground, heading north, parallel to and just west of North Livermore Avenue, to Manning Road (one mile) where the route would turn west. From the corner of Manning Road and North Livermore Avenue, the route would continue to follow PG&E's existing but vacant right-of-way for approximately 5 miles, nearly due west, to the proposed Dublin substation. The route would remain underground for approximately 2.5 miles to milepost B15. The westernmost 2 miles of undergrounding result from Mitigation Measure V-3. Thus, the only portion of the approved transmission lines to run overhead will be the segment from B15 to the new Dublin substation, which totals approximately 2.5 miles.

Distribution Lines. Ultimately, distribution circuit construction from the Dublin Substation would involve the installation of twelve 21 kV distribution circuits, with some potentially located in PG&E Co. easements. The 21 kV distribution circuits would be a combination of overhead conductors on poles and underground cable in conduit.