

2011 MAR 10 PM 1:30

TO: Office of the City Administrator  
ATTN: Dan Lindheim  
FROM: Public Works Agency  
DATE: March 22, 2011

RE: Follow-up informational Report on the Pacific Gas and Electric's Comprehensive Tree Pruning Program for Trees under High Voltage Power Lines

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## **SUMMARY**

On September 29, 2009, the Public Works Committee heard a report on the Pacific Gas and Electric (PG&E) tree pruning program for trees under high voltage lines. The Committee asked that additional information be provided on tree pruning collaboration between the City and PG&E. The questions included: What information does the City receive from PG&E? How are pruning efforts communicated and coordinated? Is PG&E meeting their scope? This informational report provides answers to these questions.

## **FISCAL IMPACT**

This is an informational report and there is no direct fiscal impact.

## **BACKGROUND**

PG&E operates and maintains an extensive electricity distribution system from the power plant to the individual customer's home or business. The distribution system consists of primary or high voltage lines typically seen running from pole to pole at the highest pole arm. Secondary or lower voltage lines are seen on the lower pole arm and individual or house "drop" connects to the home or business.

PG&E prunes trees for high voltage power line clearance throughout the City except areas where power lines have been undergrounded. Pruning is required to prevent damage to the high voltage lines and to prevent electrical arcing or an electrical short that could cause an interruption of service or a fire. PG&E does not prune trees for lower voltage lines or house drop clearance. PG&E inspects all power lines annually and determines which trees need pruning. Trees are pruned every two to three years depending on the tree's rate of growth and the clearance from the high voltage lines.

## **KEY ISSUES**

### **Information Received From PG&E**

- Each month, PG&E sends the City a list of addresses that have been inspected and the tree species scheduled to be pruned from high voltage wires. (See Exhibit A.) The City's Arboricultural Inspector reviews the list, conducts site visits and then approves or denies the tree pruning request.

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- PG&E and the City communicate via e-mail and telephone to coordinate and resolve tree pruning issues. Site meetings are held to discuss specific tree issues. PG&E's contractor (Davey Tree Service) works quickly and it is challenging for City staff (due to limited staffing) to keep up with their pruning schedule.

### Tree Pruning Techniques

- Each tree is unique and pruning for high voltage clearance can be visually jarring when a mature tree is flat-topped or side pruned. The Arboricultural Inspector works with PG&E to minimize the visual effects, but in most cases, the wrong tree species is growing underneath the high voltage lines. When the 10' clearance must be met, flat topping or side pruning is the only option. (See Exhibit B for photographs of "side pruning.")
- Prior to budget reductions, PG&E and City performed an annual tree pruning technique called, "pollarding." (See Exhibit C.) This formal style of pruning was performed in Sobrante Village, Lakeshore Homes, Sheffield Village, and other locations with sycamore trees. PG&E would pollard the trees growing under the high voltage lines, and the City would pollard the trees across the street to match and give a sense of uniformity. Pollarding was performed during the winter and early spring while the trees were dormant. This technique was especially effective because it kept the tree's overall height from interfering with the high voltage lines. Pollarding requires a 6-person tree pruning crew plus equipment and this service was eliminated in the 2008-09 42% reduction to the Tree staff. Trees that were pollarded and grow under high voltage lines will continue to be pollarded by PG&E. However, the City will not be able to pollard the other trees and this will result in an uneven neighborhood appearance.

### PG&E's Overall Scope

- Under emergency situations where PG&E is the first responder, the high voltage lines are de-energized so the tree work can be performed. If there is a hazardous tree that requires removal, PG&E's contractor will cut back the tree to provide the City with 10' clearance space so City staff can remove the tree. This type of operation is closely coordinated between PG&E, their contractor and City staff
- Continued public education is needed to ensure the appropriate tree species are planted so they do not grow up and interfere with high voltage lines or other utilities. The City provides a list of approved species for street tree plantings.

### SUSTAINABLE OPPORTUNITIES

Economic: Tree maintenance is an essential service and a potential source for "green job" opportunities.

Environmental: Trees are essential for a healthy and sustainable environment. Tree pruning is necessary to shape trees and to minimize conflicts with high voltage lines.

Social Equity: PG&E electrical lines and tree pruning activities occur in almost every neighborhood and this is a critical component of PG&E's electrical distribution system maintenance program.

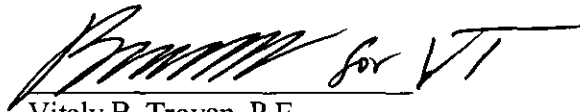
#### DISABILITY AND SENIOR CITIZEN ACCESS

Residents with special needs and senior citizens often require electrical devices and an uninterrupted electricity service is essential for their comfort and well-being. PG&E and City must coordinate efforts to minimize electrical disruptions caused by trees.

#### ACTION REQUESTED OF THE CITY COUNCIL

Staff requests that the City Council receive this report.

Respectfully submitted,



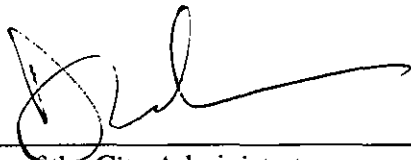
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APPROVED AND FORWARDED TO  
THE PUBLIC WORKS COMMITTEE:



Office of the City Administrator

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Attachment:

Exhibit A – Sample PG&E Line Clearance Activity Report

Exhibit B – Side pruning photographs

Exhibit C – Pollarding photographs



**Pacific Gas & Electric**  
**Line Clearance Activity Report**  
 East Bay

**Vegetation Management**

City: **OAKLAND**  
 Circuit: **SUBSTATION K 1103 (0012101103)**

Address	Owner	Species	Qty	Trim	DBH	Clr Crew	Tree Comments	Insp
5948 Albambra Ave	Priv/City	Elm Amer/Eur	1.00	Overhang	6	16 LA	NEAR TOP O/ CUT BANK.PNT@RD.	NNSO
	Private	Elm Amer/Eur	1.00	Br Trim	3	14 LA	UP ON BANK/CNP.2 STEMS.PNT@RD.	NNSO
5927 Almaden Ln	Priv/City	Birch	1.00	TopDirecti	12	14 LA	IFO ADD.POTENTIAL LINE SAG.GET	NNSO
	Priv/City	Vine	0.50	Br Trim	1	25 LA	ON POLE R-O-DVWY.	NNSO
0 Broadway Terr	Private	Maple	1.00	TopDirecti	5	20 LA	12FT PAST OAKC.PINK RIBON.	NNSO
	Private	Coast Live Oak	1.00	Side	33	12 LA	UNDR LINES,TTT.BHD PINK	NNSO
	State HWY	Coast Live Oak	1.00	TopDhecti	33	14 LA	2XSTEM BELOW LINES NEARISH PATH.	NNSO
	State HWY	Coast Live Oak	1.00	TopDirecti	35	13 CA	UPHILL/O/LINE.TT LG BRANCH UNDER	NNSO
150 Capricorn Ave	Private	Other	1.00	Side	20	10 LA	XSTM.NR PLUMS & COTONEASTER.PNT@	NNSO
	Private	Mootery Pine	1.00	Overhang	28	10 LA	TREE @ DVWY.TTL.CHECK WINDSWAY &	NNSO
	Private	Plum	1.00	TopDirecti	4	16 LA	OUT-O-ORDR.30FT B4 ENDPole UNDER	NNSO
166 Capricorn Ave	Private	Blue Gum	1.00	FP-Ov A	22	LA	RMV DEAD OV 2SKY.HAUL ALSO.	NNSO
	Private	Monterey Pine	1.00	TopDirecti	20	11 LA	AT BANK.PAINT ON RD.	NNSO
	Private	Plum	1.00	TopDirecti	25	16 LA	XSTM. FRNT RIGHT NEAR #188	NNSO
210 Capricorn Ave	Private	Redwood	1.00	Side	13	6 LA	IFO ADD.TRIM IN ALL DIRECTIONS.	NNSO
241 Capricorn Ave	Private	Pine	1.00	TopDirecti	13	12 LA	FTYD-L IRO FNCE.CNP.	NNSO
	Private	Pittosporum	1.00	TopDirecti	16	11 LA	2XSTEM.CNP.	NNSO
	Private	Redwood	1.00	Side	30	10 LA	WINDSWAY.TTT.CNP.TRIMDOWN 11	NNSO
291 Capricorn Ave	Private	Maple	1.00	TopDirecti	12	15 LA	NEXT TO STEPS.	NNSO
301 Capricorn Ave	Priv/City	Pittosporum	1.00	TopDirecti	20	9 LA	XSTEM LAYING ON SIDE DOWNSLOPE B4	NNSO
	Priv/City	Vine	0.50	Br Trim	1	30 LA	FRONT RIGHT ON POLE.CL XFRMR.	NNSO
368 Capricorn Ave	Private	Coast Live Oak	1.00	Side	12	8 LA	IRO MLBX L-O OTHER OAK NX2	NNSO
376 Capricorn Ave	Private	Coast Live Oak	1.00	TopDirecti	12	7 LA	INSIDE FENCE. UPSLOPE @ POLE.CNP.	NNSO
398 Capricorn Ave	Priv/City	Plum	1.00	TopDirecti	25	20 LA	5XSTEM. K/O STAIRS	NNSO
	Private	Coast Live Oak	1.00	TopDirecti	18	8 LA	R-O & IFO STAIRS IN IVY.	NNSO
	Private	Plum	1.00	TopDirecti	19	20 LA	XSTM. ON CUT BANK L-O-STAIRS.	NNSO
400 Capricorn Ave	Private	Elm Amer/Eur	1.00	TopDirecti	12	15 LA	2XSTEM.BEHIND POLE.	NNSO
450 Capricorn Ave	Private	Blue Gum	1.00	FP-Ov A	46	RC	UPHILL PAST POLE.RMV DEAD OV	NNSO
	Private	Coast Live Oak	4.00	TopDirecti	9	8 LA	NXT ADD, UPSLOPE BHD POLE	NNSO
	Private	Coast Live Oak	1.00	TopDirecti	12	9 LA	L-O-POLE.	NNSO
	Private	Coast Live Oak	1.00	TopDirecti	5	8 LA	8FT UPHILL-O-PREV OAKC.CNP.	NNSO
	Private	Coast Live Oak	2.00	TopDirecti	8	10 LA	END SPAN NR 2 LARGE PINES	NNSO
	Private	Monterey Pine	1.00	Side	28	10 LA	UNDRPRN & CLR DEAD BRNCHES	NNSO

Exhibit B: Examples of "side pruning" for high voltage line clearance.

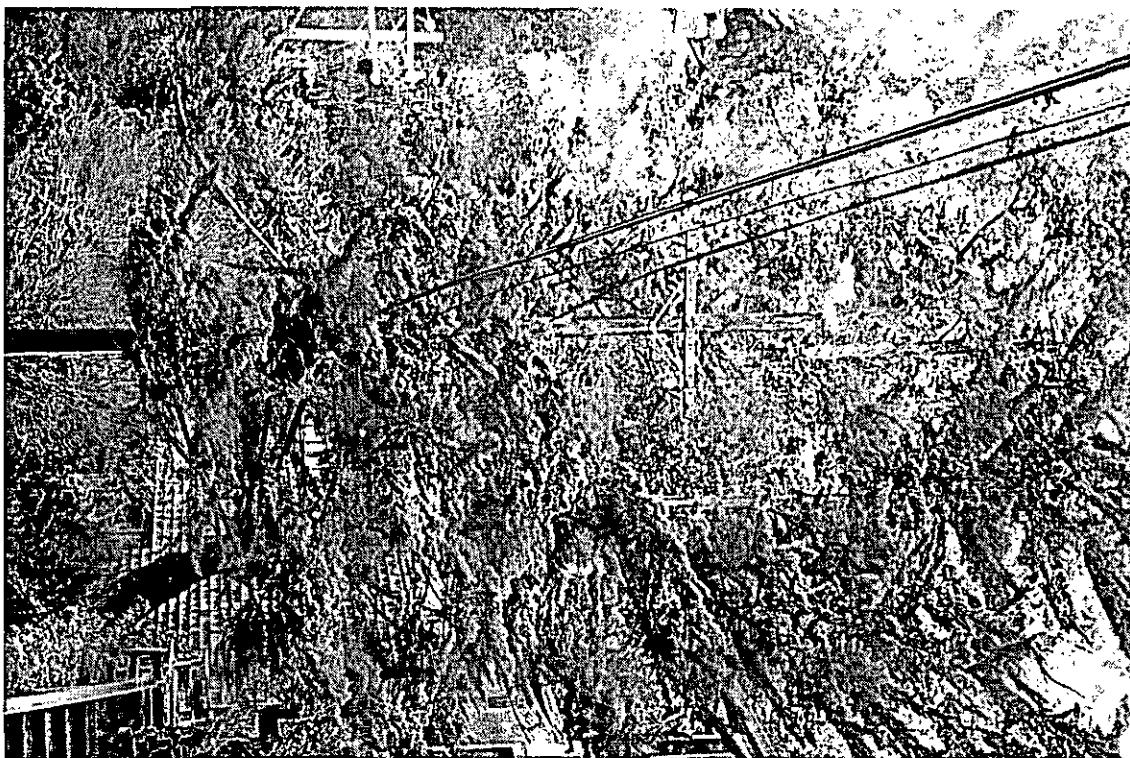
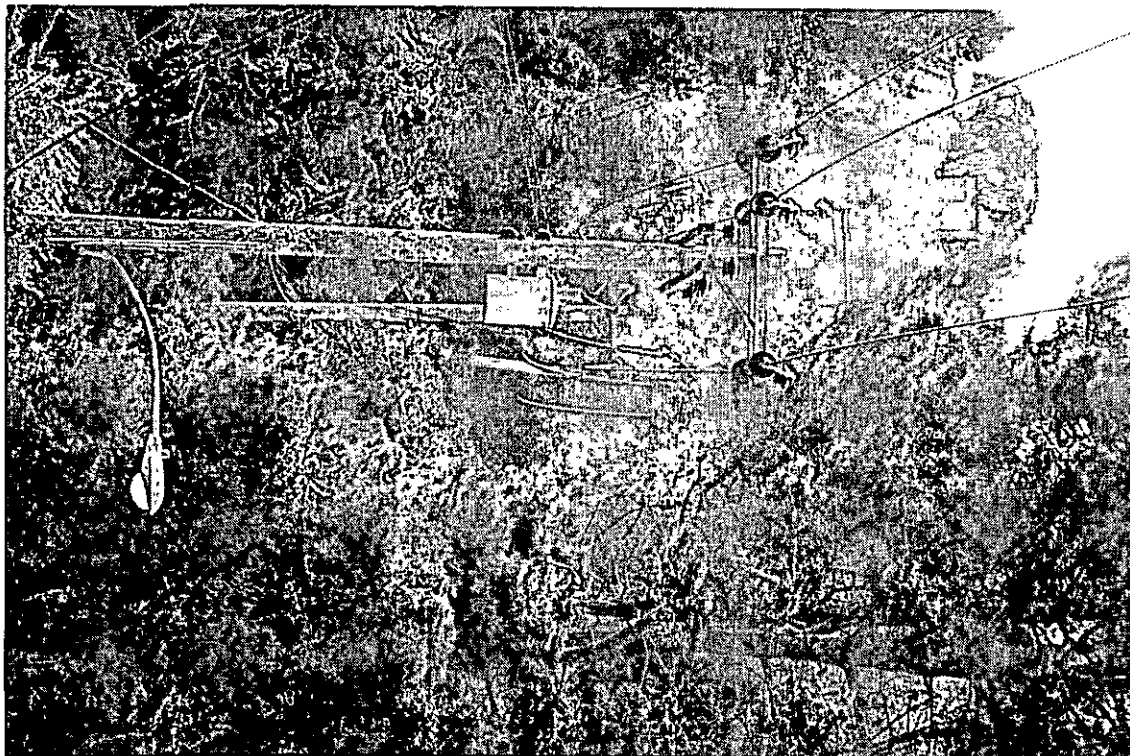




Exhibit C: Examples of pollarding for high voltage line clearance.