

MEMORANDUM

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TO: UTILITIES ADVISORY COMMISSION

FROM: UTILITIES DEPARTMENT

DATE: JUNE 6, 2007

SUBJECT: UPDATE ON UNDERGROUNDING OF ELECTRIC UTILITIES

This is an informational report on the City's program to underground electric, telephone, and cable TV facilities and no action is required. Staff will return with any necessary policy changes for Utilities Advisory Commission consideration at a later date.

EXECUTIVE SUMMARY

Since 1965, approximately 45% of the City's electric, telephone, and Cable TV systems have been undergrounded. The majority of utility facility undergrounding that has occurred has been in the commercial areas of the City. This is partly because AT&T and Comcast participated in these areas as General Public Benefit projects under current California Public Utility Commission (CPUC) rules and therefore have reimbursed the City for costs to install substructure needed for undergrounding their facilities. In the residential areas in Palo Alto, electric facilities for approximately 2300 residences have been undergrounded out of a total of 16,400 residences. Nearly all remaining areas to be undergrounded are residential, and under the current CPUC requirements as explained below, AT&T and Comcast will not reimburse the City for costs associated with their substructure needs.

To give a perspective on this impact, the present cost to the City for undergrounding is about \$15,000 per home. This does not include the additional cost for each homeowner of about \$5,000 for their service conversion. If the City continues undergrounding without AT&T and Comcast reimbursements, the cost to the City per home increases to approximately \$20,000, an increase of 25%.

In the past, the City has funded the electric costs of general public interest and benefit undergrounding projects with 2% of its annual electric revenue. At the 2% rate, with reimbursements from AT&T and Comcast for the installation of their substructure, the City was able to underground its overhead facilities in areas covering between 150 and 200 homes per year. In the future, without these reimbursements, the City will no longer be able to underground facilities at the same rate without increasing the budget for this program or passing the additional costs onto the residents. If the City were to decide to continue the undergrounding program by funding the additional expenses, a determination would need to

be made as to the source of funding (Electric Fund (EU) or General Fund (GF)) that could legally be used for this purpose. Alternatively, if the additional costs were to be passed on to the residents, resident support of the additional expense would be necessary.

BACKGROUND

History of Undergrounding

The City of Palo Alto began a program to underground overhead electric, telephone, and cable TV facilities in 1965 with a project along Oregon Expressway. Since that time 42 Underground Districts have been formed (See Attachment A).

To establish the undergrounding program, the city amended the Municipal Code adding Chapter 12.16 titled Underground Utilities. In conjunction with the Municipal Code, Utility Rule and Regulation 17 was created (See Attachment E).

All new development after 1965 was required to have underground facilities. This requirement resulted in the undergrounding of electric facilities for most of the commercial areas outside of the older commercial developments in the University Avenue and California Avenue districts.

The main reasons for starting the undergrounding program in Palo Alto were to improve the aesthetics of the neighborhoods and to improve service reliability by reducing the impacts of weather on the electric distribution system.

Types of Underground Districts

Rules for establishing an underground district in the City are covered by Utility Rule and Regulation 17. This rule establishes three types of underground districts: General Public Benefit, Primarily of Local Public Benefit, and areas that do not qualify under the preceding types. General Public Benefit projects are established by the City and the City pays for the installation of the electric system in the public right-of-way (ROW) and the residents pay for conversion of the facilities on their property. In the remaining two conversion area types, the residents must request the underground district and fund the service conversion on their property as well as a portion of the utility costs in the public ROW.

Most of the projects completed have been established under the General Public Benefit provision.

Joint Construction

The poles within the City of Palo Alto are jointly owned with AT&T or in some cases jointly owned with AT&T and PG&E. Comcast leases space on the poles from AT&T for the attachment of cable TV cables. Due to the joint ownership of the poles, underground districts require agreement on the project boundaries of the other joint owners. Once agreement on the Underground District boundaries has been reached, the conduits and structures are jointly constructed. Joint construction is used to reduce costs and coordinate the construction to minimize impacts on the neighborhoods.

During the process of determining the boundaries of the project, AT&T must also determine the applicable section of the California Public Utilities Commission's (CPUC) Schedule A2 Rule 32 on undergrounding to use on the project. Rule 32 is similar to the City's Rule 17 in that it specifies the criteria for different levels of financial participation by AT&T.

The applicable section of Rule 32 is critical to the financial viability of the underground project. If a project qualifies under section A.1 of Rule 32, the project has been found to have General Public Benefits, and AT&T and Comcast fund all their improvements in the public right-of-way. If it is determined that Rule 32A.2 or 32A.3 are applicable to the project, the cost responsibility for the Cable TV and Telephone conduits and other structures shifts either to the City EU or GF or to the residents. In the past, once AT&T had determined that the proposed area did not qualify under Rule 32A.1 the City has cancelled the underground project because of the increased costs to the Electric Utility and moved forward on undergrounding projects in areas where the telephone company would participate. Currently there are only a few small areas where the telephone company will participate.

To facilitate the coordination between the parties in an Underground District, a master agreement has been signed by the City, AT&T, and Cable TV. This master agreement is amended each time an underground district is formed to include the new Underground District.

Funding for Underground Districts

General Benefit Undergrounding was funded at approximately 2% of annual electric revenues. Beginning in 1998, funding was reduced to 1% per year due to the need to shift electric resources to rebuilding aging infrastructure. The current funding which has been recently returned to 2% of annual electric revenues converts, on average, electric facilities for approximately 150 to 200 homes per year.

The reduction in funding to 1% of revenues for underground districts was initiated about 10 years ago due to the number of underground facilities reaching the end of their useful lives. Cables installed in the sixties and seventies had an expected cable life of 30 years. In the late nineties a significant portion of the city's underground system had exceeded its expected life and failures were beginning to occur at an increasing rate. To reduce the rate of failure an accelerated infrastructure program was initiated to replace the cables that had exceeded their life expectancy. Because of manpower constraints the underground program was temporarily scaled back.

It should be noted that the CPUC also limits the AT&T costs that are recoverable from its rate payers for funding General Public Benefit Undergrounding under Rule 32A.1. The restrictions on AT&T's funding would limit the City's ability to accelerate the undergrounding program beyond 2% of revenues and still receive the full rule 32A.1 level of participation from AT&T.

Budgeting

Funding for the Underground Districts is approved by the City Council during the annual budget process. In addition to the current fiscal year's funding, staff also provides four additional years of projected funding for proposed undergrounding projects. These future

projects are not approved for construction until the budget for these projects is approved each fiscal year. Each year staff reevaluates the future year recommendations and proposes changes based on additional information acquired since the last budget cycle including telephone company participation in covering project costs.

DISCUSSION

Selecting Underground Districts

Proposed undergrounding districts are determined by applying the priorities in Rule 17 and negotiations with AT&T (see Attachment E). The undergrounding of electrical lines is a joint process between the City and AT&T due to joint ownership of the poles. In addition to AT&T, Comcast leases pole space from AT&T and must also fund part of the underground costs to move their facilities.

When an underground district is being conceptualized, one part of the process is to reach a joint agreement with AT&T on the boundaries of the underground district. In almost all cases the City Electric Utility takes the lead in proposing boundaries for an underground project. When AT&T evaluates its interest in the underground district it must determine whether the proposed district meets criteria established by California Public Utilities Commission's (CPUC) Rule 32A.1 before committing to the project. Since their rules are not the same as ours, the boundaries must be negotiated with AT&T to establish mutually agreeable underground districts.

Recently we were advised by AT&T that the proposed underground district planned for FY 2007-08 did not qualify under section A.1 of Rule 32, and that AT&T would be unable to fund all the improvements in the public right-of-way, resulting in the cost responsibility for the telephone substructure shifting to the City or the residents within the proposed districts.

Future of Program

The overhead lines for approximately 14,100 homes remain to be undergrounded and the current program undergrounds facilities for approximately 200 homes per year.

If the City proceeds with the program without AT&T and Comcast reimbursements at the present funding rate of 2% of annual electric revenues, it is expected to take approximately 100 years more to complete the undergrounding of the entire city at a cost of \$296,100,000. This is based on the current value of the dollar. Under the current program the EF would be responsible for funding approximately \$225,600,000 and the property owners would be responsible for funding about \$70,500,000 of total cost.

If the City can successfully obtain a CPUC rule change that requires AT&T and Comcast to reimburse the City for their substructure costs, the remaining areas can be undergrounded in approximately 70 more years. The total cost for this would be \$211,500,000. The EF would be responsible for funding approximately \$141,000,000 and the property owners would be responsible for funding about \$70,500,000 of total cost. The EF costs would also be the same if the GF pays the telephone and cable company portion of the substructure costs.

It should be noted that an underground electric system has a design life of 30 to 40 years.

While the conduit and other substructure should last well beyond this timeframe, the electric

cable and equipment needs to be replaced about every 35 years on average. Currently, staff projects the need to rebuild 2 to 3 districts each year at an annual cost of \$1 Million to maintain an appropriate replacement cycle. Hence, with the present program funding level, the costs for undergrounding are approximately 3% annually to build a new district and rebuild 2 to 3 districts each year.

Interim Plan

In light of the recent position taken by AT&T, staff will jointly review potential project areas identified in Attachment D with AT&T to determine whether these areas qualify under Rule 32 A.1. If an agreement is reached with AT&T, then staff will obtain Council approval for undergrounding some of the areas shown in Attachment D and request that the budget approved for Underground District 45 (See attachment B for project area) be re-allocated to continue the undergrounding program in areas where staff reaches a participation agreement with the telephone and cable companies.

Interim Plan Schedule

Tentative schedules (Ref to Attachment B) for identified underground districts are shown in the table below.

UG District	Formation	Design	Construction	Completion
41	Oct 2005	Complete	In Progress	Mar 2008
43	Undecided			
43	Undecided			
45	FY-07/08	FY-07/08	FY-07/09	

RESOURCE IMPACTS

Funding for undergrounding overhead lines could change based on future policy decisions made to enable the undergrounding program to continue. The GF could be impacted if the appeal to the CPUC to amend the CPUC rules or guidelines to include residential areas in Cities that have completed undergrounding overhead lines in commercial areas within the City fails and a policy is set for the GF to pay for the cable and telephone company substructure costs. The Electric Fund Undergrounding budgets will also need to be increased if the EF pays for the telephone substructure costs and the projects continue at their current pace.

POLICY IMPLICATIONS

This project supports CPAU Key Strategy number 7 – Implement programs that improve quality of the environment and Supporting Objective number 2- Invest in utility infrastructure to deliver reliable service.

ATTACHMENTS:

A: Map - Existing Underground District

B: Map - CIP 2006-2011

C: Map - Proposed CIP 2007-2012

D: Map –Proposed Areas that May qualify under Rule 32 A.1

E: Rule and Regulation 17

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