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Audit Report

ELECTRIC LINE CONSTRUCTION

August 2005

Office of the City Auditor
Austin, Texas

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To: Mayor and Council

From: Stephen L. Morgan

Date: August 9, 2005

Subject: Report on Advisory Project - Electric Line Construction

I am pleased to present the Office of the City Auditor's report for our advisory project on Austin Energy (AE) Electric Line Construction. This report is part of our ongoing Austin Energy Audit Initiative whereby we analyze various aspects of AE's operations.

The purpose of this project was to verify that AE has adequate policies in place to guide decisions on when to bury power lines, and that they are complying with the policies. Also, in recognition of the significance of the changes to the design standards for commercial and retail development recently proposed by Council, we attempted to determine what risks AE faces related to moving lines underground in the Core Transit Corridors (CTC).

We found that AE's design standards are adequate and AE has been following them. However, the standards do not require city-wide underground line conversions, meaning AE faces significant challenges related to the CTC projects. Challenges include planning and funding the projects, as well as obtaining rights-of-way along the CTC routes and finding a way to convince other utilities to also move their lines underground.

We appreciate the cooperation we have received from staff and management at AE during this project, and look forward to our continuing efforts to improve the utility.

Thank you,

Stephen L. Morgan, CIA, CGAP, CFE, CGFM
City Auditor

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BACKGROUND

This project was included as part of the OCA CY 2005 Annual Service Plan because Council wanted more information about the process by which Austin Energy (AE) decides which distribution power lines will be above ground, versus which will be underground. Council had previously expressed interest in buried power lines in 1999, when they approved limited funding for buried power line projects and asked AE to provide a report on costs and reliability issues related to burying lines.

This subject could have significant financial and operational ramifications for AE. In May 2005 Council passed a resolution providing direction to City departments related to proposed design standards for commercial and retail development in the City. One of the new standards being considered would require Austin Energy to bury distribution lines in conjunction with sidewalk construction throughout the City, with priority given to fourteen designated key thoroughfares (“Core Transit Corridors” or “CTCs”).

Currently, there are over 5,000 miles of overhead lines and over 4,000 miles of underground lines in the AE service territory. The findings section of this report contains a discussion of how the determination is made on placement of distribution lines for new construction and redevelopment projects.

OBJECTIVES, SCOPE AND METHODOLOGY

Objectives

Our objectives for this project were to verify that AE has adequate policies in place to guide decisions on when to bury power lines, and to verify that AE is complying with those policies. In recognition of the significance of the proposed changes to the design standards for commercial and retail development, we also attempted to determine whether AE is prepared to plan and execute the Core Transit Corridor projects.

Scope

The scope of work included current AE policies and applicable City Ordinances related to placement of electric lines. We also reviewed current City programs, plans and initiatives to determine if any affect line placement. We reviewed AE construction records from 2004 and 2005 to the extent necessary to verify compliance with policies. Finally, we reviewed data from sources outside the City, including current information on prevailing policies on the burial of power lines versus placing them above ground.

Methodology

Our work included interviewing AE personnel about their existing policies and procedures, and analyzing financial records from 2000 through 2005, as well as construction records from 2004 and 2005, to confirm compliance with the policies. In addition, we visited sites in the AE service territory to verify the type of electric lines in place in order to compare with AE records.

We also interviewed other City personnel to determine if programs or projects from other departments will affect AE. We researched current City laws and ordinances, as well as current City plans and initiatives that could affect distribution line placement. We also researched electric industry policies and practices related to distribution line placement and related costs. Based on the information obtained we analyzed AE's policy to verify that it is in compliance with City Ordinances and adequate to guide the decision-making process on line placement. We also assessed whether AE is prepared to begin planning and executing the buried power line projects in the designated Core Transit Corridors.

This audit was conducted in accordance with Generally Accepted Government Auditing Standards, with the exception that we did not test for fraud.

AUDIT RESULTS

AE's design standards are adequate and AE has been following them, but the standards do not require city-wide underground line conversions, which means AE faces significant challenges related to the CTC projects.

While AE's design standards for buried power lines are adequate and the utility has been following them, the utility would have to assume additional financial responsibility in order to complete the CTC projects because the standards do not require that distribution lines outside the downtown area be buried. Council approved limited funding for underground conversion projects for FY 2001 and 2002 and asked AE to report on the requirements for such projects. AE completed one underground conversion project, but determined they were not feasible on a city-wide basis, and stopped funding them. Therefore, AE's long-term planning does not include underground line conversions, with the result that AE would have to incur additional costs to plan and execute the CTC projects. In addition, AE does not have a funding source for those projects, so the utility might have to make difficult funding decisions. The possible necessity of condemnation of properties to gain easements and the rights of other utilities to keep lines above ground would negatively affect AE's ability to complete the CTC projects.

AE design standards for electric line placement are adequate and the utility has been operating according to them. The standards have helped AE to achieve rate stability (base rates have not increased since 1994) while achieving reliability ratings for the electric system higher than the industry average. The standards require all new construction in the downtown area to include underground lines. Our work verified that this is taking place. Buried power lines are not required for projects outside the downtown area. Developers and builders decide whether the lines will be placed underground based on the economics of the project.

AE stated that most new development outside downtown includes buried power lines because developers believe buried lines will increase property value, and because it is less expensive to bury lines during initial construction than after the work is completed. Our work verified that several new developments completed in 2004 and 2005 included buried power lines. For redevelopment outside downtown, the decision on line placement is made on a project-by-project basis. The sights that we visited included both overhead and underground lines.

AE would have to assume additional financial responsibility to complete the CTC projects because its design standards do not require developers to bury power lines throughout the service territory. Builders and developers have assumed some of the financial responsibility for burying power lines for downtown redevelopment, as well as for new development outside downtown. However, for redevelopment in areas outside downtown, which include the Core Transit Corridors, AE would have to assume the financial and operational risk for burying lines where developers have not already done so.

AE determined that underground line conversions are not feasible, and thus has not been funding them. In September 1999 City Council directed AE to set aside \$3.5 million over two years for underground line conversion projects, and to provide Council with a report on cost and reliability issues related to burying power lines. AE budgeted \$2 million in each of FY 2001 and 2002 and spent about \$800,000 of that money on one project. However, AE's long term plans do not include city-wide underground line conversions because the utility determined it was not feasible to bury all distribution lines in the City. AE's reasons for believing it is not feasible include:

- It is cost prohibitive: the cost of burying all lines was estimated at greater than the value of the utility
- It is not beneficial on a financial or operational basis: conversion involves incurring costs to replace a working power line without a corresponding increase to revenues, material decrease in expenses, or significant increase to quality of service
- There are areas in the City where there is not adequate space to bury distribution lines, and AE may not be able to obtain an easement to complete the work
- Other utilities can still choose to keep their lines above ground even if AE buries its lines

AE relied on industry cost information to determine that conversions are cost prohibitive. It did not complete a comprehensive study of conversions, which might take into consideration opportunities for cost sharing, the effect on operation and maintenance costs, and the effect on reliability and quality of service. Further, it would be difficult to estimate the value of other benefits related to promoting increased mixed use infill development, such as impact to property values, transportation, aesthetics, and other issues that may not benefit electric ratepayers.

Because AE policy does not require redevelopment outside downtown to include buried power lines, AE does not have a plan for underground line conversions in the Core Transit Corridors. AE has begun to analyze the costs and technical requirements for the CTC projects. The utility intends to develop a plan that includes:

- A current, comprehensive inventory of existing infrastructure along the CTC routes, including existing lines for other City departments and private utilities.
- A map of the Rights-Of-Way along the CTC routes, and where the utility may need to purchase easements or go through condemnation proceedings
- Estimates of the materials required to complete the CTC projects
- Time estimates for completing the projects

AE stated that its rate structure is set based on distribution lines being overhead. Therefore, if the utility is required to convert distribution lines to underground, it would have to revisit the rate structure depending on the time frame for conversion.

AE would incur additional costs to plan and execute the CTC projects because they are not part of the utility's budget. Converting overhead lines to underground would require AE to purchase additional conduit for the underground lines. The utility stated it would also need additional FTEs to complete the conversion projects for the CTCs. These include designers to map out the requirements for each project, as well as real estate personnel to purchase rights-of-way and easements, and where necessary, to initiate condemnation proceedings along the CTC routes.

AE does not have a budgeted or identified funding source for the underground line conversions. As a result, the utility may face difficult decisions on funding alternatives, such as:

- Raising electric rates
- Issuing new debt for financing
- Implementing the projects over a long period of time to allow financing from current revenues
- Deferring other planned projects

AE estimated that the cost for the proposed CTC projects could be over \$180 million. Therefore, funding issues are a major part of planning for the underground line conversion projects.

Difficulty in obtaining the necessary easements would negatively affect AE's ability to complete projects in conjunction with sidewalk construction. AE will need to have adequate space in rights-of-way in order to complete underground line conversions. Where AE does not already have them, it will have to purchase easements. If the property owner does not want to sell an easement, AE may have to initiate condemnation proceedings to obtain it. AE has stated that these proceedings can be both expensive and time-consuming, and that there is no assurance AE will prevail. AE staff has asserted that there are areas where easements may not be obtainable. Where AE has to go to the time and expense to go through condemnation proceedings, it may have trouble coordinating its work with the Public Works Department (PWD) sidewalk construction.

AE cannot require other utilities to bury their lines. Even where AE removes its poles from the right-of-way, by law telecommunications utilities have the right to erect their own. In addition, roughly ten percent of the poles in Austin are owned by another utility, and that utility also has the right to purchase any pole that AE abandons and stay attached to it. The City Legal Department stated that where Public Works is attempting to improve the infrastructure through

widening or straightening the streets, the City can legally require the other utilities to relocate their lines, but not to bury them. Ultimately, if the other utilities refuse to bury their lines, there will be poles with overhead lines attached in areas where AE has incurred the cost to bury power lines.

City departments will lose out on opportunities to save time and money on construction projects if they do not coordinate their efforts. The proposed development standards would require AE to bury power lines in conjunction with sidewalk construction. However, AE and PWD have not coordinated on sidewalk construction that PWD has underway or is planning to complete. Unless city departments worked together to complete buried line projects, the projects would cost more and take more time than necessary.

In addition, AE could end up foregoing cost reimbursement for some of the projects if coordination does not occur. The City Legal Department has stated that, to the extent buried line projects can be undertaken where Public Works is attempting to improve the infrastructure through widening or straightening the streets, the City can require the utilities that are attached to AE poles to bear the cost of relocating their lines. This could be a substantial cost savings for AE.

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