

Development Policies
City of Oak Ridge, Tennessee
Electrical Distribution

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City Manager

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DEVELOPMENT POLICIES
CITY OF OAK RIDGE, TENNESSEE
ELECTRIC DEPARTMENT

1 Introduction

The City of Oak Ridge offers a variety of services to its citizens. These include provision of electric power through its electric distribution system. The Electric System functions through an integrated series of laws, contracts and policies.

The purpose of this document is to summarize the policies of the City of Oak Ridge Electric Department with regard to electrical extensions. It is designed to be helpful to land developers, contractors and new customers in our City.

The administration of the policies outlined in this document is the responsibility of the Electric Department. That Department stands ready to answer questions or supply additional information about your specific project.

All Distribution of power is subject to the Rules and Regulations for Distribution of Power by the City of Oak Ridge. The Rules and Regulations are adopted by ordinance of the City and are available to all customers.

2 Justified Investment

2.1 The Concept of Justified Investment

Justified investment is a concept under which the expected revenue from a particular project is compared with the capital, maintenance and operation costs of infrastructure for that project¹. At the minimum justified investment, the debt service generated by a project is covered by the electric rates and contributes to the routine maintenance and operation needs of the system. The justified investment is equivalent to the expected annual gross income from the project.

Where analysis shows that the revenue will not cover the installation, the City requires an upfront cost payment for the difference. If a dramatic expansion of the system is required, or if cost recovery is believed to be over a long period, the developer may be required to pay part or all of the expansion cost up front and be partially reimbursed as development takes place for the first five years, up to a defined amount.

2.2 Upsizing Infrastructure for City Needs

In some cases, the Electric Department may need to increase the size and capacity of infrastructure installed in a development in order to provide service or alternate feeds to other customers on land not under the control of the developer. In those cases, the cost of additional equipment or infrastructure installed by the City will not be charged against the development, and the cost of increasing the size of developer installed conduit or other improvements shall be credited toward meeting the justified investment.

¹ Because of their long life and re-usable nature, the cost of transformers is not normally included in justified investment calculations.

2.3 Incremental Payment of the Cost of the Backbone

If a development is configured in such a fashion that the construction of a central power feed (termed a backbone) is required to serve the development, and if the total load of the development is anticipated to exceed five thousand kilowatts, the City Manager, at his option, may enter into an agreement to accept incremental payment of the cost of the backbone. Under these circumstances, the cost of the backbone will be charged on a per-lot basis distributed over the first third of the lots developed in the subdivision. Incremental payments will be made on a lot-by-lot basis at such time that the developer requests installation of electric infrastructure to the lot. Agreements to provide incremental payment will include provisions to protect the City in case the land is sold without the payment being made, being normally a lien on the property to be released when the developer's portion of the backbone cost is paid. Note: It is not the intent of this paragraph to change the total investment required by either the City or the developer, such investment being calculated based on the justified investment as outlined above.

3 Residential Developments

3.1 Overhead Residential Policy

3.1.1 Primary Extension² Policy for Residential Areas

Installation of overhead electric lines within residential developments is generally performed without cost. It is the philosophy of the City that overhead service represents the "basic service level" that is provided for in the rate structure. All such projects, however, must meet the "justified investment" in order to be fully funded by the City.

3.1.2 Individual Services for Residences

Individual overhead services for residential loads are installed at no cost to the owner. In residential neighborhoods, several houses are normally fed from a single transformer, so sometime easements can be required.

In cases where a home is far removed from the transformer location, a primary (high voltage) extension is required.³ This is because of the voltage loss that occurs at lower voltages over significant distances.

In either case, the City requires that the property owner provide a clear path for the service installation, including tree trimming or removal and easements as appropriate.

² A primary extension is one where high voltage lines (13.2 kV) are built into an area. Normally, these lines serve large numbers of customers, but in some circumstances (such as a keyhole lot) a primary extension may be required for a single residential customer.

³ Individual services are typically low voltage feeds (120/240 volt for residential) to a single customer. In overhead areas, this would typically be the wire from the transformer on the pole to the customer's weather head.

3.2 Underground Residential Policy

3.2.1 Primary Extension Policy for Residential Areas

The customer is required to install conduits, vaults and other equipment required for electrical installation. City forces install the underground cables, transformers and make all connections. The cost of the City's investment, however, is limited to the justified investment for the subdivision, as described below.

For subdivisions over ten lots, a ten year build out would be assumed for revenue calculations. Anticipated revenue at the three year mark (33% complete) would be used in calculating the justified investment. If permanent meter installation in the development exceeds this expectation, the developer is generally entitled to a refund of any invested monies sufficient to reflect the actual justified investment for that portion of the development completed at the three year mark.

Standards and specified required inspections are available through the Department.

3.2.2 Individual Services for Residences

3.2.2.1 Residential Services in Underground Areas

The customer is responsible for installing the conduit for services and connecting to stubouts provided in the distribution system. Where such stubouts have not been provided, the customer is not allowed to penetrate vaults or other structures that contain energized parts. Conduits should be extended to an agreed location and the City will make the required connections.

Standards and specified required inspections are available through the Department.

3.2.2.2 Underground Services in Overhead Areas

For new construction, if a resident in an overhead area requests underground service, the customer shall meet the requirements of section 3.2.2.1 above, excepting that extra materials must be provided and installed in accordance with standard drawings in the customer handbook.

If a resident in an overhead area wishes to convert an existing overhead service to an underground service, then in addition to the items listed above, an estimate is prepared for the cost of the work required and must be paid before work begins. The homeowner is allowed to make in-kind contributions, such as trenching and conduit, to offset the cost of the service.

Note: The City will not accept wire pulled in by any other party. In cases where contractors have pulled in wire, we have removed it and returned it to the contractor.

3.3 Residential Street Lighting Policy

Street lighting in residential areas is intended to provide minimum guidance for vehicular traffic and for pedestrians. It is not intended to provide uniform lighting or security for the residents. Lights are normally placed approximately every two hundred fifty feet and at intersections.

For overhead areas, street lighting is attached to every other pole. Depending on the circumstances a variety of lighting heads may be used, ranging from 100 to 450 watts.

For underground residential areas, the City offers two types of lights. The standard underground light is mounted on a fiberglass pole and has a plain profile. A decorative light is available for the difference in cost between the two fixtures.⁴

Public street lighting is not available outside of the City limits.

4 Commercial Developments

4.1 Overhead Extensions Policy

4.1.1 Existing Overhead Primary Extension Policy for Commercial Areas

Overhead electric lines are installed into commercial areas under the justified investment policy. Anticipated loads normally justify the costs.

In cases where the costs are excessive or income may be uncertain, the City may require up front cash contributions for the work with or without reimbursement, establish minimum bills, or to seek other aid to construction.

4.1.2 Individual Services for Commercial Installations

Due to transformer stocking issues and the desire of the City to avoid "platform substation" construction, overhead electric services are not always available for commercial services. Where they are, the services are installed under the justified investment policy. The City maintains the service up to the weather head.

In cases where the costs are excessive or income may be uncertain, the City may require up front cash contributions for the work with or without reimbursement, establish minimum bills, or to seek other aid to construction.

Note that there are defined limits to the voltage/phase/load combinations supplied by the City.

4.1.3 Justified Investment

Commercial subdivision build out is estimated to occur over a ten year period. Using this formula, revenue projections at the end of the first three years (33% complete) are used in calculating the justified investment. If build out in the development exceeds this expectation, the developer may be entitled to a refund of invested monies sufficient to reflect the actual justified investment for that portion of the development completed at the three year mark.

⁴ The standard decorative light was chosen after reviewing available options with a number of developers. The City does not supply a wide variety of lights due to the need to stock spare poles, fixtures and parts.

4.2 Underground Commercial Extension Policy

4.2.1 Existing Underground Primary Extension Policy for Commercial Areas

Developers of underground commercial areas are required to install all conduit and vaults for primary cable. The City installs the cable, subject to justified investment considerations.

Standards and specified required inspections are available through the Department.

4.2.2 Individual Underground Services for Commercial Installations

The owners are required to install primary conduit to a designated point on the property line and to place a concrete transformer pad to City specifications. The contractor also installs all secondary conduits and pulls all secondary wire.

The City maintains the primary side of the installation and provides the transformer. The owner maintains all secondary wiring.

Standards and specified required inspections are available through the Department.

Commercial subdivision build out is estimated to occur over a ten year period. Using this formula, revenue projections at the end of the first three years (33% complete) are used in calculating the justified investment. If build out in development exceeds this expectation, the developer may be entitled to a refund of invested monies sufficient to reflect the actual justified investment for that portion of the development completed at the three year mark.

4.3 Street Lighting Policy for Commercial Areas

When a commercial area is developed in overhead areas, street lighting is attached to every other pole if the distribution system is near the roadway. Depending on the circumstances a variety of lighting heads may be used, ranging from 100 to 450 watts. Upon specific request and unusual circumstances, the City may install additional lighting, but this is rare.

In new underground commercial parks, the developer of the property is responsible for the lighting. The improvements should be installed as part of the development and dedicated to the City for maintenance. Standard specifications are available for the lights and poles.

Public street lighting is not available outside the City limits.

5 Miscellaneous Policy Items

5.1 Upgrading of Existing Services

The upgrading of electric service is considered to be the same as a new service. As such, the City uses the justified cost investment approach to evaluate investment.

In the majority of cases, the additional loads that drive the upgrade easily justify the investments required by the City. This is especially true in commercial settings. Costs associated with the relocation of the service itself (for example moving a transformer to make room for a building expansion) are considered part of the upgrade and are covered by justified investment. Costs associated with relocation of lines, streetlights, anchors or other improvements outside of the service itself (for example to make room

for the building or parking lot or that improve aesthetics) are not covered under justified investment and are billed at full cost (see section 5.3)

5.2 Second Voltage Services to a Structure

In cases where a single customer desires more than one voltage to a building, the City will attempt to comply given that a specified set of safety related conditions are met. The customer, however, must pay the full cost of providing the second voltage. In these cases, the customer must evaluate the costs of the second voltage in comparison with providing for his own internal voltage transformation or other solutions.

5.3 Relocation of Existing Facilities

It is the position of the City that all electric lines in the City give evidence in fact that they are necessary and part of an overall operating system with a right to occupy their position in space.

The City receives numerous requests to relocate our facilities. Whenever we replace a pole, we relocate the pole to a property line whenever feasible. We do not, however, relocate poles upon request without charge. It is the position of the City that all costs associated with the relocation of specific facilities should be borne by the party requesting (and benefiting from) the relocation.

In terms of a development project, we believe that the cost of relocation of lines is a specific component to be considered in the particular layout version of the project. We have consistently stated that the lines were present when the project was envisioned, and that if the lines impacted the value of a property or project, such impact has been in place since the lines were constructed. We are willing and able to provide cost estimates to help developers or builders evaluate the cost of their projects. The City has never believed that the ratepayers should be responsible for expenses generated by these private concerns.

5.4 Contribution toward Substation Construction

The City's policy is that commercial loads that require an addition to a substation must bear the cost of the expansion. Specific negotiations with the customer are required.

5.5 Redundant Services

It is the practice of the City to offer only one feed from one circuit to a customer. When a customer requires a second feed, it can be installed for cost. If the load is of such magnitude as to require reservation of capacity at a second substation, the cost of that reservation is included in the cost calculated.

The City does not purchase, install or maintain the transfer switch required for a customer to be fed from two circuits. In cases where customers have been fed from two different City-supplied transformers, they have been required to purchase one of the units.

ELECTRIC DEPARTMENT MEMORANDUM
05-07

DATE: May 6, 2005

TO: James R. O'Connor, City Manager

FROM: Jack L. Suggs, Electrical Director

SUBJECT: REVISION TO SUBDIVISION DEVELOPMENT POLICIES

The attached resolution authorizes changes to the Electric Department's "Development Policies, City of Oak Ridge Electrical Distribution" dated November 2000. This policy manual was approved by City Council with resolution 12-182-00 on December 4, 2000.

Prior to the adoption of the new policy, through both resolution and ordinance, the Electric System was suffering financially from a policy that basically paid for the installation of underground electric systems in new developments. The electric rates were experiencing tremendous pressure, and TVA, as the City's regulator, was expressing concern over the expenditures. The new policy shifted some of the cost of the electrical portion of development away from the City's rate payers and to the developers.

Over the years since its adoption, three issues have arisen with respect to the resolution adopted policies. The intent of the attached resolution is to address these issues and to provide more flexibility to developers and the City without additional cost.

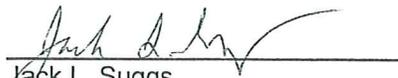
The first change is the addition of paragraph 2.2. The intent of the paragraph is to protect the developers from incurring cost for improvements needed for proper system operation, but not related to their subdivision. Although no developer has been charged to date for such extra cost, the wording is intended to provide assurance of Council intent in the future.

The second change is the addition of paragraph 2.3. During the development of Rarity Ridge, it became apparent that under some conditions, developers might be responsible for huge up front costs that were payable before the first lot could receive power. The Council entered into an agreement regarding Rarity Ridge to spread these up front cost over (roughly) the first third of the development. This paragraph makes the option available for other large developments with similar configurations. It also specifies that some type of protection for the City's investment is to be provided in these cases; normally a lien automatically released as payment is made.

The third and final change is a modification to our policy concerning underground electric services in overhead areas. The initial policy considered customers who had existing overhead services that would be abandoned and replaced with underground facilities. In this case, the full cost of the new service was to be recovered because service was already available. We have run into several cases, however, where new underground services were constructed for new homes in areas that could arguably be called overhead areas. In these cases staff believes it is appropriate to give the property owner the option of an underground service without unduly penalizing them because of the location of the property. The policy modification treats new underground services identically, regardless of where they are located.

The only substantial economic impact of the proposed changes will be the absorbing of the initial cost of subdivision backbones until development takes place. Since the actual installation of these backbones can normally be staged to some degree, this is not believed to be significant to the fund or rates. There will be some assumption of risk- if the subdivision was not to be constructed- but the existence of liens should provide adequate protection.

Staff recommends approval of the attached resolution, implementing the changes outlined above.



Jack L. Suggs
Electrical Director

City Manager's Comments:

I have reviewed the above issue and recommend Council action as outlined in this document.



James R. O'Connor

5/12/05
Date

ADMINISTRATIVE ACTION REFERRAL
City of Oak Ridge, Tennessee

CC: MEB
Mark
Original → Missy

RECEIVED
2005 JUN -1 AM 10:43

CITY OF OAK RIDGE
ELECTRICAL DEPARTMENT

TO: Electrical Director* ✓

FROM: City Manager

DATE: May 24, 2005

DESCRIPTION OF SUBJECT: RESOLUTION NO. 5-57-05

A resolution approving revised policies regarding electrical distribution, entitled "Development Policies, City of Oak Ridge, Tennessee, Electrical Distribution," dated November 2000 and revised May 2005.

TYPE OF MEETING:
CITY COUNCIL MEETING

DATE OF MEETING:
May 23, 2005

ACTION TAKEN:

Adopted

ADMINISTRATIVE ACTION REQUESTED:

- To Comply
- To investigate; report recommendations to this office
- No report necessary; information only
- Coordinate with
- See remarks

ATTACHMENTS

Resolution No. 5-57-05

City Manager's Office

RESOLUTION

WHEREAS, City Code Section 19-107 governs the conditions under which the City will provide underground utilities; and

WHEREAS, said section requires City Council to approve by resolution development policies regarding electrical distribution; and

WHEREAS, by Resolution 12-182-00, City Council adopted a document entitled "Development Policies, City of Oak Ridge, Electrical Distribution," dated November 2000; and

WHEREAS, some issues have arisen regarding the application of these policies and the City desires to make some modifications to address those issues and to provide more flexibility to developers without additional cost to the City; and

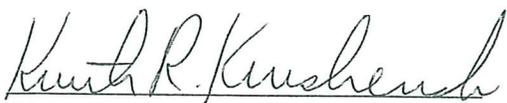
WHEREAS, the City Manager recommends approval of the attached revised development policies.

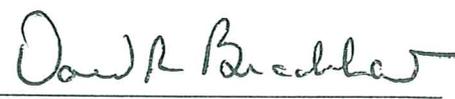
NOW, THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE CITY OF OAK RIDGE, TENNESSEE:

That the recommendation of the City Manager is hereby approved and the attached document entitled "Development Policies, City of Oak Ridge, Tennessee, Electrical Distribution," dated November 2000 and revised May 2005, is hereby approved.

This the 23rd day of May 2005.

APPROVED AS TO FORM AND LEGALITY:


City Attorney


Mayor


City Clerk