



STREETLIGHT OWNERSHIP STUDY FOR THE CITY OF LEWISVILLE, TX

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EXECUTIVE SUMMARY

The City of Lewisville, TX engaged Tanko Streetlighting, Inc. (Tanko Lighting) to develop a financial analysis of the ownership and operational options related to the streetlight assets located within the City. Currently, most of these assets are owned and maintained by the City’s local utilities, Texas-New Mexico Power (TNMP) and Denton County Electric Cooperative, Inc. (CoServ).

For this feasibility analysis of unmetered fixtures, Tanko Lighting reviewed approximately:

- 2,613 streetlight assets owned and maintained by TNMP and paid for by the City; and
- 824 streetlight assets owned and maintained by CoServ, also paid for by the City.

There are also several additional City-owned streetlights within the system, which were not included in the analysis.

We used the following methodology to complete this analysis:

- **Inventory Analysis:** Reviewed the City’s March 2025 TNMP and CoServ streetlight bills to determine the estimated current inventory of unmetered fixtures.
- **Rate Analysis:** Analyzed the current utility rates and the potential new rates to calculate the estimated impact of transitioning ownership of the system and converting to LED fixtures.
- **Ownership Analysis:** Evaluated previous municipal streetlight ownership transfers statewide, including purchase price and depreciation of the assets.
- **LED Conversion Analysis:** Developed budgetary estimates for the LED conversion costs based on average material, installation costs, and pricing in the City’s region.
- **Maintenance Analysis:** Estimated budget for the (post-ownership transfer) maintenance services based on the nationwide industry standard of services, average pricing in the region, and number of pole replacements in a given year for routine outsourced maintenance options.

Once the inventory and rates were considered, we analyzed three options regarding the ongoing operation of the City’s streetlight system:

- **Option 1:** Ownership Transfer from TNMP and CoServ to City, LED Conversion, Ongoing Maintenance
- **Option 2:** Continued Utility Ownership, Immediate Utility-Sponsored LED Conversion, No Acquisition
- **Option 3:** Status Quo (Baseline): Continued Utility Ownership, Annual 5% LED Conversion, No Acquisition

These options yielded the following results:

Option	Description	Est. Project Cost	20yr Op. Costs	20yr Op. Savings	ROI
Option 1	City-Owned LED Streetlight System	\$2,701,941	\$4,936,167	\$7,921,475	5.3 yrs
Option 2	Utility-Owned LED Streetlight System	\$371,964	\$18,921,792	(\$6,064,150)	N/A
Option 3	Status Quo (Baseline)	N/A	\$12,857,642	N/A	N/A

Based on the results of the analysis, Tanko Lighting recommends that the City:

1. **Proceed with Option 1 (Ownership Transfer and Conversion):** Proceed with exploring the concept of purchasing the streetlight system from TNMP and CoServ and converting the remaining HPS / MV fixtures to LED. This will allow the City to gain control over its streetlighting levels and maintenance of the system. **This option has the potential to save the City an estimated 74% on its annual energy and maintenance costs, or approximately \$7,921,475 over the next 20 years.**
2. **Proceed with an Audit and Data Reconciliation:** Proceed with a comprehensive streetlight audit and utility inventory reconciliation. This will allow the City to review a more accurate financial analysis and determine the financing implications for the full project.
3. **Connect with Tanko Lighting on Next Steps:** Our team is qualified to serve as a liaison between the City and TNMP and CoServ to update inventory, initiate a dialogue for ownership transfer, and create a conversion plan.

INTRODUCTION

The City of Lewisville, TX engaged Tanko Streetlighting, Inc. (Tanko Lighting) to develop a financial analysis of the ownership and operational options related to the streetlight assets located within the City. Currently, most of these assets are owned and maintained by the City's local utilities, Texas-New Mexico Power (TNMP) and Denton County Electric Cooperative, Inc. (CoServ).

Given the high cost of electricity and maintenance associated with utility ownership of the system, the City requested that Tanko Lighting explore the impact of municipalizing these assets, as well as the costs and benefits associated with ongoing direct ownership, operations, and maintenance of the streetlight system. This is an exciting endeavor, because if the analysis proves that streetlight ownership is financially advantageous to the City, it is a rare opportunity to obtain cash savings from a capital improvement project. If an ownership transfer is feasible, subsequent steps (such as an audit, data reconciliation, and appraisal) will confirm the fair market value of the streetlight system within the City of Lewisville.

Municipal streetlight ownership is common practice in most states. Several states, including Massachusetts (Mass. Gen. Laws ch. 164 § 34A), Maine (Me. Stat. tit. 35-A § 2523), Maryland (Md. Local Gov't §1-1309), New York (NY PBS § 70-A), and Rhode Island (R.I. Gen. Laws § 39-30), have legislation to streamline the path to the municipal acquisition of utility-owned streetlights. Additionally, other states – such as Connecticut – have case law enshrining a municipality's right to purchase streetlight assets from an investor-owned utility. Further, other states – such as Colorado – have standing rate cases with the states' public utilities commissions that enable municipalities to purchase streetlights from investor-owned utilities. And finally, there are many states where municipalities utilize legal processes to acquire the streetlight system from utilities – including Texas. The typical reasons for municipal streetlight acquisitions from utilities include significant cost savings and enhanced control over the right-of-way infrastructure. See the table below for Tanko Lighting's list of estimated municipal streetlight acquisitions in key states. Note that the table below only includes municipal acquisitions and is not representative of total municipal streetlight ownership overall in each state (i.e., it does not include municipalities that have always owned their streetlights).

Estimated Municipal Streetlight Acquisitions by State ¹	
State	Estimated Number of Municipal Acquisitions
Texas	4
California	85
Colorado	10
Connecticut	50
Maine	15
Massachusetts	80
New Hampshire	12
New York	10
Rhode Island	30

Historically in Texas, streetlight systems have been owned predominantly by investor-owned utilities (IOUs) and electric cooperative corporations. Over the decades, some municipalities, such as Arlington, Fort Worth, and Wichita Falls, have purchased their streetlights from their respective IOUs. Additionally, in 2020, the City of Cedar Park, TX purchased 3,669 streetlight fixtures from its utility – Pedernales Electric Cooperative – for a total purchase price of \$452,924.64 (or approximately \$123 per fixture), based on Net Book Value². This streetlight purchase saved the City approximately \$417,787 annually – which was 75 percent of its previous electricity bill³. In addition, the City of Cedar Park was able to utilize its own crews to maintain the newly-purchased streetlight system, which dramatically improved repair response times⁴.

¹ Based on Tanko Lighting's proprietary database of national streetlight acquisitions.

² *Agreement Regarding Conveyance of Certain Area Lighting Assets* between City of Cedar Park, TX and Pedernales Electric Cooperative, Inc., September 3, 2020.

³ *Cedar Park plans to buy 3,772 street lights to save taxpayers \$417K annually*, Josh Moniz, Hill Country News, August 31, 2020.

⁴ *Ibid.*

Both nationally and in Texas, the model proven to be the most advantageous for a municipality is the one in which it owns its streetlight system. Thus, this analysis of the feasibility of streetlight acquisition is an important step in the City's determination of its options.

For this feasibility analysis of unmetered fixtures, Tanko Lighting reviewed approximately:

- 2,613 streetlight assets owned and maintained by TNMP and paid for by the City; and
- 824 streetlight assets owned and maintained by CoServ, also paid for by the City.

There are also several additional City-owned streetlights within the system, which were not included in the analysis.

Please note that this evaluation is intended to be a completely exploratory document. All outcomes are contextually viewed from a perspective of possible or potential. The information provided in no way leads to any predetermination of the City's approach. It is merely intended to be a guide to analyze the financial and logistical hypothetical feasibilities of the various options presented.

Qualifications

Tanko Lighting has had a singular focus since 2003 – municipal streetlighting. Our firm provides project management, field services, strategic consulting, data analysis, maintenance services, and technical support capabilities that support three primary operations – municipal streetlight ownership, Light Emitting Diode (LED) streetlight conversion, and ongoing streetlight maintenance services – nationwide.

Our firm holds electrical contractor licenses in the States of California and Arizona. Our founder and Chief Executive Officer (CEO), Jason Tanko, is an electrical and utility engineer with almost thirty years of technical experience, including a previous position as a utility engineer for a state-regulated investor-owned utility (IOU) in Washington State. Additionally, our firm is a Certified Contractor by the Commonwealth of Massachusetts' Division of Capital Management and Maintenance (DCAMM), a Qualified Vendor with the Connecticut Conference of Municipalities, a registered Energy Services Company (ESCO) with the United States Department of Energy, and a registered Small Business Entity with the Small Business Administration.

Our technical streetlight experience is extensive. We have been involved in over 280 municipal streetlight contracts, representing more than 940,000 streetlight fixtures nationwide. Further, our work has included over 130 streetlight acquisition projects nationwide with 22 different utilities in 13 states, which represents more than 533,000 streetlights. Additionally, we have directly maintained streetlight systems for 26 municipalities, representing more than 70,000 streetlights.

Additionally, we developed a legal library containing the first national municipal streetlight acquisition database, which took years to research, distill, and develop. We gathered data on municipal codes, case law, state rates, utility commission decisions, pole attachment agreements, historical documentation, and legislation. The result is a database which contains comprehensive information on hundreds of successful cases nationwide, including legal strategies utilized, purchase price, and much more.

Tanko Lighting is a nationally recognized expert in municipal streetlighting. Our technical expertise, field experience, and deep understanding of municipal streetlight best practices ensure that our team is highly qualified to provide the findings and recommendations in this report. To learn more, please visit our website at www.tankolighting.com.

Streetlight Basics

A streetlight is commonly defined as a light fixture that illuminates a road, usually mounted on a pole (made of wood, metal, or concrete) located in the public right-of-way (ROW). Streetlights are routinely equipped with sensors (photocells) that automatically turn them on at dusk and off at sunrise, with an average operation time of approximately 4,000 hours per year.

A streetlight is typically comprised of six parts – the pole, arm, fixture (head), foundation/pole base (in some cases), internal wiring, and photocell – see Figure 1 for more details. While there are many styles of streetlight fixtures, they are generally categorized as either cobra head or decorative fixtures – see Figure 2 for more details.

There are two main types of streetlight poles – distribution poles or standalone poles – see Figure 3 for more details. Generally, distribution poles are wood and utilized by the utility for various distribution of electricity and communications-related functions; therefore, only the arm, wire to the fixture, and fixture are dedicated explicitly to streetlighting. Standalone poles are usually comprised of wood, metal, or concrete, with all components, including the pole, arm, and fixture, existing primarily for the streetlight – see Figure 3 for more details.

Figure 1



Figure 2



Figure 3



Streetlight components have a rated useful life – which is not the point of catastrophic failure but is instead the point in which an uptick in failures (maybe a few a year) commences due to the start of steady attrition. After the rated useful life, streetlight components typically need more maintenance and repair or need to be replaced entirely. Although it can vary by manufacturer and products, the typical rated useful lives for streetlight components are:

- Fixture: 25-year rated useful life
- Non-Wood Pole: 75+ years rated useful life (non-non wood pole)
- Wood Pole: 50+ years rated useful life (wood pole)
- Arms: 100+ years rated useful life
- Wiring: 35+ years rated useful life

Rated Useful Life
The point in which attrition starts for streetlight fixtures, poles, arms, and wiring.

Given that much of the streetlight infrastructure development in the United States involved IOUs – which are regulated by a central agency (the Federal Energy Regulatory Commission) – the way in which the distribution systems, construction standards, electrical requirements, accounting methods, and designs of streetlight systems were implemented is rather uniform in every state. This standardization is part of the greater national uniformity of electrical equipment – such as poles, underground/overhead wiring, switches, transformers, and substations – designed to be similar for efficiency and safety. This is evident during national emergencies, when utility crews from other states are deployed to a state with an electrical emergency, and the out-of-state crews can quickly, safely, and effectively repair the impacted electrical system. As a result, the structure and components of a municipal streetlight system in Texas are virtually identical to those in every other state.

Streetlights exist for public safety purposes, identical to a municipality’s inherent stewardship of maintaining the ROW for signs, signals, road striping, street sweeping, tree trimming, police and fire purposes, etc. Streetlights help drivers navigate streets within a city safely to avoid accidents with pedestrians, bicyclists, animals, vehicles, and other road hazards. Streetlights also assist first responders and law enforcement, encouraging continued economic investment along commercial corridors and community development. As such,

streetlights are an important public policy issue, because the value of a properly operating, updated, and efficient streetlight system has significant implications for the public – in terms of public safety, the aesthetics of a community, and the efficient use of taxpayer funds.

Streetlight Ownership

There are essentially two main elements involved in municipal streetlight operations – ownership and maintenance. These elements are typically structured in one of two ways:

- **Municipal Ownership:** The municipality owns the streetlight system and is responsible for maintaining it (either directly, or through an outsourced maintenance contract with a qualified electrical contractor). The municipality pays the utility for the electricity used by the streetlights based on a regulated rate on its monthly utility bills.
- **Utility Ownership:** The utility owns the streetlight system and is responsible for maintaining it. The municipality pays the utility for the electricity and use of the streetlight system, as well as maintenance services, through a specified and regulated rate on its monthly utility bills.

Both ownership structures also involve options regarding the lamp type of streetlight fixtures used. Many municipal streetlight systems throughout the United States (regardless of ownership structure) have transitioned to Light Emitting Diode (LED) streetlight fixtures, which is a proven technology that dramatically reduces energy use, while improving the quality of light on streets. Streetlight fixture types are typically determined and retrofitted under the umbrella of maintenance/operations.

Challenges of Utility Streetlight Ownership

Utility-owned streetlights involve higher electricity and maintenance rates for municipalities than municipal-owned streetlights. Despite the higher rates, utilities often fail to provide timely service for maintenance needs or accounting oversight to remedy streetlight inventory billing issues. It is not uncommon for utility-owned systems to experience outage rates as high as 15-20%. As a result, municipalities are typically charged by utilities for streetlights even if they are not operating or have been removed, regardless of the rate – which means that the utility has no financial incentive to perform maintenance.

Benefits of Municipal Streetlight Ownership

Municipal ownership of the entire streetlight system not only allows the municipality to control the management of the system within its geographic borders, but it also involves tremendous cost savings – particularly related to maintenance and energy. There are many advantages to a municipality obtaining ownership of the streetlight system. Some of these include:

- Improved health and public safety for residents resulting from improved lighting.
- Improved visibility for drivers and color distinctions.
- Decreased crime within a city.
- Control over a city-wide service in the public right-of-way (ROW).
- A municipality can operate the entire streetlight system with direct accountability because it has a duty to serve the public.
- A municipality can obtain cash savings from a capital infrastructure project.
- Enhancement of nighttime commerce.
- Significant maintenance and electricity cost savings.
- Faster response times for maintenance, knockdowns, and replacements – which encourages nighttime commerce and safe outdoor activities for better community health.
- Accurate record-keeping and billing, which has saved many communities a significant amount of additional funding.
- Cohesive and intentional updates to the design of the streetlight system to prevent over or under-lighting.
- Investment in the future of the community. The savings from streetlight measures can be invested in other initiatives, programs, or needs for residents.
- Contribution to the greater state and global efforts to reduce greenhouse gases.
- Alignment with existing resident expectations that the city already owns the streetlight system.
- Preservation of the dark sky and a potential draw for visitors.
- Smart City capabilities, including controls, dimming, city-wide Wi-Fi, air quality monitoring, and other services.

Responsibilities of Streetlight Ownership

Owning and maintaining a streetlight system involves thoughtful planning and management. A municipality must be responsible for a variety of elements involved with owning the streetlight infrastructure, including:

- Maintaining standards and design improvements – particularly for new installations via developers.
- Proactive planning to optimize the system (such as through an LED conversion and/or installation of Smart City control elements).
- Implementation of maintenance services (typically outsourced).
- Quality control (including ensuring prompt outage/repair remedy response times).

Most cities minimize risks via proactive planning and best practices, including:

- Knockdowns:
 - Requiring response times of 2 – 4 hours of notification from in-house or outsourced crews.
 - Ensuring the site is immediately cleaned of all debris and free of electrical hazards.
 - Coordinating with the utility to ensure service is disconnected until a replacement can be installed.
 - Developing protocols to process insurance claims (for knockdown accidents).
- Wiring:
 - When a city owns a streetlight with underground wiring, there is a point of demarcation that defines the municipal assets versus the utility assets. Ideally, this happens in the base of the pole (see Figure 4), which means that the underground wiring is the responsibility of the utility. Even in cases where the demarcation happens at the utility connection in a pull box near the streetlight, it still means that the municipality has minimal wiring for which it is responsible.
 - When a city owns a streetlight with overhead wiring, it owns the wiring between each streetlight. While this requires some maintenance, it is more easily accessible than underground wiring and thus simpler to maintain.
 - For any underground wiring owned by the municipality, routinely tracking permits and identifying the contractor or entity responsible for the damage to the underground repair and pursuing reimbursement for the repair costs is a standard practice that minimizes risks and costs to a city. Additionally, developing a Streetlight Master Plan is an effective way to identify policies to future proof the system from additional risks by limiting the amount of underground wire a city owns (such as requiring the utility to extend its wiring all the way to the pole or to a pull box within 5 feet of the pole for all new streetlight installations in intersections).

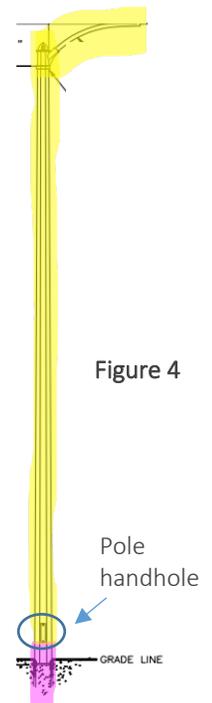


Figure 4

In general, although there are risks and responsibilities involved with municipal streetlight ownership, they are no greater than the risks involved with any infrastructure for which a city is responsible – especially if a city already owns some of the streetlight assets.

Legal Implications of Streetlight Ownership

Even when a city owns a handful of streetlights within the system, it already has legal responsibilities. Purchasing additional streetlights will not necessarily change these. However, it is important for a city to be prepared for the added infrastructure. Most cities do this by:

- Reviewing any local streetlight design standards or requirements.
- Reviewing local and state legal concepts of “municipal immunity” to confirm that they apply to the streetlight infrastructure in the right-of-way.
- Adding the acquired streetlights assets to insurance policies and confirming coverage and the claims process in the event of a knockdown or accident.
- Limiting exposure to complexities (such as Labor and Industries-related issues) by outsourcing maintenance services.
- Conducting a comprehensive GIS inventory audit and then periodic updates (e.g., every five years) to ensure a proper understanding of the assets in the field.
- Developing ongoing records of maintenance updates – including locations, dates, issues reported, remedies, etc. – to prove proper system maintenance and no operational negligence.

- Where appropriate, utilizing Smart City controls to provide additional data, time-stamped records of outages, and remedies that can be admissible in a court of law to demonstrate the level of proper maintenance of the system.

Streetlight Maintenance

Maintenance is a critical factor, which must be considered when contemplating the operations of a streetlight system. Streetlight maintenance typically involves both routine and emergency support. Routine maintenance includes responding to outages and repair needs, ideally within a few days of a reported issue. Emergency maintenance includes 24-hour availability to respond within 2 – 4 hours of a pole knockdown, electrical hazard, or other public safety issue involving the streetlight system.

It is also important to keep the streetlight system updated with current design standards and energy efficient fixtures to maximize the benefits and reduce potential issues or liability. When a utility owns a city's streetlights, by default, the maintenance is outsourced to the utility – but this is not optimal and very inefficient.

Municipalities that own streetlights but do not have established infrastructure departments to support streetlight responsibilities outsource via contracting to a maintenance management consultant for the administrative aspects, as well as to a qualified local electrical contractor.

When a municipality outsources to streetlight experts, it ensures that the system is properly maintained. This ultimately provides the following benefits:

- Serves as a cost-effective way of maintaining the system without having to invest in new equipment.
- Leverages taxpayer funds into the hands of qualified local contractors.
- Reduces burden on staff.
- Allows for flexible contract terms in the event that a contractor fails to perform.
- Ensures guaranteed timely repairs.

The City of Lewisville is aware of the challenges involved with the fact that most of its streetlight system is currently owned by two utilities. The remainder of this report analyzes whether owning the streetlights is a financially feasible option for the City, versus continued utility ownership.

FEASIBILITY ANALYSIS REPORT

Methodology

Tanko Lighting used the following methodology to complete this analysis:

- **Inventory Analysis:** Reviewed the City's March 2025 TNMP and CoServ streetlight bills to determine the estimated current inventory of unmetered fixtures.
- **Rate Analysis:** Analyzed the current electricity rates and the potential new rates to calculate the estimated impact of transitioning ownership of the system and converting to LED fixtures.
- **Ownership Analysis:** Evaluated previous municipal streetlight ownership transfers statewide, including purchase price and depreciation of the assets⁵. Incorporated estimated purchase price for the TNMP and CoServ-owned systems of approximately \$1,031,100 total or approximately \$300 per fixture⁶.
- **LED Conversion Analysis:** Developed budgetary estimates for the LED conversion costs based on average material, installation costs, and pricing in the City's region. Incorporated estimated conversion costs for a TNMP and CoServ-sponsored LED conversion of \$371,964 total or \$104 per TNMP fixture and \$150 per CoServ.
- **Maintenance Analysis:** Estimated budget for the (post-ownership transfer) maintenance services based on the nationwide industry standard of services, average pricing in the region, and number of pole replacements in a given year for routine outsourced maintenance options⁷.

Inventory Analysis

The first step in developing the analysis was to determine the City's current unmetered streetlight inventory and understand the existing fixture types, wattages, and poles within the system for which the City is currently being billed.

The City's March 2025 TNMP and CoServ streetlight bills were reviewed to estimate the current billing inventory. Although the City's inventory was also examined, it was ultimately not used due to key missing information, such as quantities, lamp types, and wattages. Below, in Tables 1 and 2, are the current inventories categorized based on the March 2025 billing data. It should be noted that TNMP's table includes more detailed information, reflecting the complexities of its billing structure (see the TNMP Streetlight Rates section for further details), whereas CoServ's billing process is more simplified and straightforward.

⁵ Based on Tanko Lighting's proprietary database of national streetlight acquisitions.

⁶ Note that this is an estimate only and could vary based on actual utility contribution amounts.

⁷ The estimated maintenance costs are based on routine maintenance services and materials only. Emergency services, such as knockdowns and underground wiring repairs are excluded because they are on an as-needed basis, can be recouped via third party insurance carriers (for knockdowns), and can vary from year to year.

Table 1 – TNMP Billing Inventory

Existing Pole Material	Existing Pole Configuration	Existing Lamp Type and Wattage	Quantity
Wood Pole	Overhead Service*	175W MV	114
Ornamental Pole	Overhead Service*	175W MV	2
Wood Pole	Underground Service	175W MV	137
Ornamental Pole	Underground Service	175W MV	98
Wood Pole	Overhead Service*	400W MV	32
Ornamental Pole	Overhead Service*	400W MV	5
Wood Pole	Underground Service	100W HPS	152
Wood Pole	Overhead Service*	100W HPS	259
Ornamental Pole	Overhead Service*	100W HPS	10
Ornamental Pole	Underground Service	100W HPS	854
Ornamental Pole**	Underground Service*	100W HPS	4
Wood Pole	Overhead Service*	150W HPS	1
Ornamental Pole	Twin Fixture Overhead Service*	150W HPS	7
Wood Pole	Overhead Service*	200W HPS	245
Wood Pole	Underground Service	200W HPS	29
Ornamental Pole	Overhead Service*	200W HPS	202
Ornamental Pole	Twin Fixture Overhead Service*	200W HPS	376
Ornamental Pole	Twin Fixture Underground Service*	200W HPS	6
Wood Pole	Overhead Service*	250W HPS	1
Ornamental Pole	Overhead Service*	250W HPS	3
Wood Pole**	Overhead Service*	250W HPS	4
Wood Pole**	Overhead Service*	40W LED	72
Total Fixture Quantity			2,613

*Although the service type – “Underground” or “Overhead Service” is not specified in the bills, we were able to assume the type based on the current rate amount billed and this same service type was used to calculate future costs as well. However, only a physical inspection, along with a thorough data and billing reconciliation, can confirm service type details with complete accuracy.

**Although the Pole Material is not specified in the bills, we were able to assume the material based on the current rate amount billed and this same material type was used to calculate future costs as well. However, only a physical inspection, along with a thorough data and billing reconciliation, can confirm pole material details with complete accuracy.

Table 2 – CoServ Billing Inventory

Existing Lamp Type and Wattage	Quantity
175W MV	435
100W HSP	117
150W HPS	138
250W HPS	14
55W LED	2
100W LED	51
140W LED	67
Total Fixture Quantity	824



Streetlighting Rates

The next step in the analysis was to review the streetlight rate options available to the City based on ownership structure, fixture technology, and maintenance structure.

Utility companies bill customers for electricity via rates for specific purposes – like streetlighting. Most utilities categorize streetlights into several rates for billing purposes – often differentiated by metered or unmetered systems, technology (Light Emitting Diode (LED) vs. High Pressure Sodium (HPS)), and customer-owned vs. utility-owned (which also include maintenance fees). For all cities that have an IOU, their rates are regulated by state public utility commissions, and the other nonprofit utilities are governed by a mix of state and federal regulations.

Streetlight Rate
The amount a utility charges for electricity (and sometimes maintenance) for each streetlight fixture.

One additional element that factors into streetlight rates are utility riders. These are additional charges or credits that are applied by the utility on top of the rate that are based on such items as franchise fees, cost recovery factors (e.g., natural disaster costs), transmission fees, etc. These charges are typically billed or credited based kilowatt hour (kWh) usage.

Maintenance Analysis

Depending on the ownership structure, streetlight rates may or may not include maintenance fees. To estimate current and future maintenance costs, we used the following assumptions in our analysis of rates and costs:

- **Utility-Owned Streetlights:** Maintenance costs are included in the streetlight rates.
- **Customer-Owned Streetlights:** Maintenance costs are handled directly by the City and are in addition to the customer-owned streetlight rates.
 - Routine maintenance and materials costs were only considered, based on the fact that emergency services, such as knockdowns and underground wiring repairs, are on an as-needed basis, can be recouped via third party insurance carriers (for knockdowns), and can vary from year to year.
 - Maintenance services are outsourced to a qualified local contractor.
 - Budgetary pricing based on the average monthly cost per LED fixture within the ten-year warranty of \$2.00.⁸
 - Budgetary pricing based on the average monthly cost per LED fixture after the ten-year warranty of \$2.50.⁹

TNMP's Streetlight Rates

The most critical factor in the City's options moving forward is TNMP's streetlight rate schedule because TNMP currently owns the most streetlights in the City. The City's current streetlight rate is for TNMP-owned non-LED fixtures.¹⁰ Find a copy of TNMP's current streetlight rates in Appendix D.

To understand the rates, it is best to consider the most common fixture in the City – the 100w, High Pressure Sodium (HPS), underground-fed (U/G), Ornamental Pole (O/P), single lamp, TNMP-owned fixture. This fixture represents 854 streetlights in the City, or approximately 33% of the TNMP-owned system. See the current rate for this fixture in Figure 5 below:

Figure 5

Schedule IV –Ornamental Pole (per lamp charge)			
		Distribution Facilities Charge	
		One Lamp Per Pole	Two Lamps Per Pole
8150 lumen	– 175 watt MV	\$10.40	-
21500 lumen	– 400 watt MV	-	\$10.47
9500 lumen	– 100 watt HPS	\$10.42	\$8.06
22000 lumen	– 200 watt HPS	\$13.94	\$10.41

⁸ Based on Tanko Lighting's nationwide experience directly contracting with municipalities for streetlight maintenance.

⁹ Ibid.

¹⁰ Based on Texas-New Mexico Power's Streetlight Service rate effective September 1, 2020, TNMP-Owned Rate: Roadway Lighting Service- Schedules I, II, III, & IV, page 106

Currently, the City is paying \$10.42 per fixture per month (cost includes energy and maintenance). When TNMP converts that fixture to LED, the rate cost for the LED equivalent wattage (35W LED) increases to \$28.01 per fixture per month (cost includes energy and maintenance) found in column C of Figure 6 below¹¹. Once all 854 fixtures are converted to LED, this fixture type will cost the City an additional \$15,022 per month in rate fees alone.

Figure 6

Schedule V – LED Street Lighting

Wattage Range	kWh	Cobra Wood	Cobra Head Ornamental		Double Cobra Ornamental		Historical Post-Top Underground		Customer-Owned
		O/H (A)	O/H (B)	U/G (C)	O/H (D)	U/G (E)	Fiberglass (F)	Steel/Conc. (G)	(H)
20-60	15	\$12.81	\$24.32	\$28.01	\$31.84	\$35.47	\$17.09	\$32.77	\$0.65
61-100	28								\$1.21
101-130	42	\$16.05	\$27.56	\$31.24	\$36.91	\$40.55			\$1.81
131-165	50								\$2.16
166-200	62								\$2.68
201-300	83	\$21.63	\$33.14	\$36.83	\$46.04	\$49.68			\$3.58

Alternatively, the City could also consider the ‘Customer Owned’ rate (includes energy only because the City will be directly responsible for maintenance), of \$0.65 per fixture per month, found in the same LED rate in Figure 6 above. This would move the City from the current rate of \$10.42 per fixture per month, to \$0.65 per fixture per month once the City owns the streetlighting system and converts it to LED. Once all 854 fixtures are converted to LED under the customer-owned rate schedule, this fixture type would save the City \$8,044 per month (compared to its current TNMP-owned HPS rate of \$10.42) in rate fees alone.

Unfortunately, TNMP’s streetlight rate schedules do not include the additional rider fees and credits in the rate tables but lists them in separate sections. To understand the true cost of the streetlight rates, a comparison of the total unit fixture cost – that includes the rates as well as the riders – is also necessary.

Total Unit Fixture Cost
The amount a utility charges for electricity, maintenance, and riders.

The City is currently paying TNMP a total unit fixture cost (which includes energy and maintenance costs, as well as rider fees and credits) of approximately \$16.67 per 100w HPS fixture per month. If the City shifts to the ‘TNMP Owned LED Rate’, the total unit fixture cost increases to approximately \$29.03 per fixture per month. In contrast, if the City shifts to the ‘Customer Owned LED Rate’, the total unit fixture cost to the City will be approximately \$3.67 per fixture per month, a savings of \$25.36 per fixture per month compared to the ‘TNMP Owned LED Rate’.

The table below provides an analysis of the current quantities, types of existing fixtures, and a comparison of the City’s rate options (contrasted by Current HPS/MV rate for TNMP and City-Owned, as well as LED rates). The total unit cost reflects energy, maintenance, and rider fees and credits.

¹¹ Based on Texas-New Mexico Power’s Streetlight Service rate effective September 1, 2020, TNMP-Owned Roadway Lighting Service – Schedule V – LED Street Lighting, page 107.

Table 3 – TNMP Rate Comparison

Existing Pole Material	Existing Pole Configuration	Existing Lamp Type and Wattage	Assumed Tanko Replacement Fixture	Quantity	Current TNMP HPS/MV Rate	Current TNMP HPS/MV Total Unit Cost ^D	TNMP- Owned LED Rate	TNMP- Owned LED Total Unit Cost ^D	City-Owned TNMP LED Rate	City-Owned TNMP Total Unit LED Cost ^D
Wood Pole	Overhead Service ^A	175W MV	35W LED	114	\$5.02	\$13.82	\$12.81	\$13.83	\$0.65	\$3.67
Ornamental Pole	Overhead Service ^A	175W MV	35W LED	2	\$9.76	\$18.67	\$24.32	\$25.34	\$0.65	\$3.67
Wood Pole	Underground Service	175W MV	35W LED	137	\$5.67	\$14.49	\$12.81 ^E	\$13.83	\$0.65	\$3.67
Ornamental Pole	Underground Service	175W MV	35W LED	98	\$10.40	\$19.32	\$28.01	\$29.03	\$0.65	\$3.67
Wood Pole	Overhead Service ^A	400W MV	85W LED	32	\$9.70	\$28.98	\$16.05 ^F	\$18.98	\$1.21	\$5.68
Ornamental Pole	Overhead Service ^A	400W MV	85W LED	5	\$18.65	\$32.09	\$27.56 ^F	\$30.49	\$1.21	\$5.68
Wood Pole	Underground Service	100W HPS	35W LED	152	\$7.22	\$13.50	\$12.81 ^E	\$13.83	\$0.65	\$3.67
Wood Pole	Overhead Service ^A	100W HPS	35W LED	259	\$6.44	\$12.70	\$12.81	\$13.83	\$0.65	\$3.67
Ornamental Pole	Overhead Service ^A	100W HPS	35W LED	10	\$9.53	\$15.86	\$24.32	\$25.34	\$0.65	\$3.67
Ornamental Pole	Underground Service	100W HPS	35W LED	854	\$10.42	\$16.67	\$28.01	\$29.03	\$0.65	\$3.67
Ornamental Pole ^B	Underground Service ^A	100W HPS	35W LED	4	\$10.42	\$25.53	\$28.01	\$13.83	\$0.65	\$3.67
Wood Pole	Overhead Service ^A	150W HPS	45W LED	1	\$7.47	\$15.95	\$12.81	\$14.12	\$0.65	\$3.96
Ornamental Pole	Twin Fixture Overhead Service ^A	150W HPS	45W LED	7	\$12.12 ^C	\$20.71	\$31.84	\$33.15	\$0.65	\$3.96

Existing Pole Material	Existing Pole Configuration	Existing Lamp Type and Wattage	Assumed Tanko Replacement Fixture	Quantity	Current TNMP HPS/MV Rate	Current TNMP HPS/MV Total Unit Cost ^D	TNMP- Owned LED Rate	TNMP- Owned LED Total Unit Cost ^D	City- Owned TNMP LED Rate	City-Owned TNMP Total Unit LED Cost ^D
Wood Pole	Overhead Service ^A	200W HPS	60W LED	245	\$7.99	\$22.04	\$12.81	\$14.55	\$0.65	\$4.39
Wood Pole	Underground Service	200W HPS	60W LED	29	\$8.78	\$18.40	\$12.81 ^F	\$14.55	\$0.65	\$4.39
Wood Pole ^B	Overhead Service ^A	250W HPS	60W LED	6	\$7.99	\$17.59	\$12.81	\$14.55	\$0.65	\$4.39
Ornamental Pole	Overhead Service ^A	200W HPS	60W LED	183	\$12.90	\$23.58	\$24.32	\$26.06	\$0.65	\$4.39
Ornamental Pole	Twin Fixture Overhead Service ^A	200W HPS	60W LED	376	\$9.20	\$20.06	\$31.84	\$33.58	\$0.65	\$4.39
Ornamental Pole	Twin Fixture Underground Service ^A	200W HPS	60W LED	19	\$10.41	\$18.83	\$35.47	\$37.21	\$0.65	\$4.39
Wood Pole	Overhead Service ^A	250W HPS	85W LED	1	\$8.74	\$22.04	\$16.05 ^F	\$18.98	\$1.21	\$5.68
Ornamental Pole	Overhead Service ^A	250W HPS	85W LED	2	\$14.53	\$27.95	\$27.56 ^F	\$30.49	\$1.21	\$5.68
Ornamental Pole	Twin Fixture Overhead Service ^A	250W HPS	85W LED	1	\$10.64	\$23.98	\$36.91 ^F	\$39.84	\$1.21	\$5.68
Wood Pole ^B	Overhead Service ^A	250W HPS	85W LED	4	\$8.74	\$20.82	\$16.05 ^F	\$18.98	\$1.21	\$5.68
Wood Pole ^B	Overhead Service ^A	40W LED	N/A	72	\$12.81	\$17.59	\$12.81	\$17.59	\$0.65	\$3.67

A – Although the service type – “Underground” or “Overhead Service” is not specified in the bills, we were able to assume the type based on the current rate amount billed and this same service type was used to calculate future costs as well. However, only a physical inspection, along with a thorough data and billing reconciliation, can confirm service type details with complete accuracy.

B – Although the Pole Material is not specified in the bills, we were able to assume the material based on the current rate amount billed and this same material type was used to calculate future costs as well. However, only a physical inspection, along with a thorough data and billing reconciliation, can confirm pole material details with complete accuracy.

C – There is no twin rate listed for this configuration. The price used was for a single lamp per pole, the total unit cost is based on the actual billing rate.

D – Costs are rounded to the nearest whole cent.

E – There is no underground wood pole LED service rate. Instead, the overhead wood pole rate was used.

F – There the utility owned wattages are limited. Instead, the 101-130 wattage price was used, since the utility would likely replace the existing fixture with a higher wattage.



CoServ's Streetlight Rates

While the shift from HPS/MV to LED conversion is unfavorable with TNMP, CoServ's utility-owned rates provide modest savings. Find a copy of CoServ's current streetlight rates in Appendix E.

To understand the rates, it is best to consider the most common CoServ fixture in the City – the 175W Mercury Vapor (MV) CoServ-owned fixture. This fixture represents 435 streetlights in the City, or approximately 53% of the CoServ-owned system. See the current rate for this fixture in Figure 7 below:

Figure 7

(1) Lights owned and maintained by the Cooperative (Customer shall pay either (a) or (b):

(a) Non-LED Light Charge:

50 Watt	\$10.73
70 Watt	\$10.73 [CLOSED]
75 Watt	[CLOSED]
96 Watt	[CLOSED]
100 Watt	\$10.73
150 Watt	\$11.76
175 Watt	\$12.28 [CLOSED]
200 Watt	\$14.81 [CLOSED]
250 Watt	\$16.49
400 Watt	\$23.48

Currently, the City is paying \$12.28 per fixture per month for a 175W MV (cost includes energy and maintenance). When CoServ converts that fixture to LED, the cost for the LED equivalent wattage (35W LED) decreases to \$10.73 per fixture per month (cost includes energy and maintenance), as found in Figure 8 below¹². Once all 435 fixtures are converted to LED, this fixture type will save the City \$674.25 per month.

Figure 8

(b) LED Light Charge:

30-44 Watt	\$10.73
45-59 Watt	\$10.73
60-74 Watt	\$10.73
75-89 Watt	\$10.73
90-104 Watt	\$10.73
105-119 Watt	\$10.73
120-134 Watt	\$10.73
135-149 Watt	\$10.73
150-164 Watt	\$11.76
165-179 Watt	\$11.76
180-194 Watt	\$12.28
195-209 Watt	\$14.81
210-224 Watt	\$14.81

Alternatively, the City could also consider the 'Customer Owned' rate (includes energy only because the City will be directly responsible for maintenance), of \$2.62 per fixture per month, found in the Customer-owned LED rate¹³ in Figure 9 below. This would move the City from the current rate of \$12.28 per fixture per month to \$2.62 per fixture per month once the City owns the streetlighting system and converts it to LED. Once all 435 fixtures are converted to LED under this rate schedule, this fixture type would save the City \$4,202.10 per month (compared to its current CoServ-owned HPS rate of \$12.28).

¹² CoServ's Lighting Service Rate effective January 1, 2025: Lighting Service Rate: Lights owned and maintained the Cooperative on page 22

¹³ CoServ's Lighting Service Rate effective January 1, 2025: Lighting Service Rate: Customer owned and maintained lights on page 22

Figure 9

(b) Non-Metered LED Lighting.

30-44 Watt	\$2.62
45-59 Watt	\$3.52
60-74 Watt	\$4.41
75-89 Watt	\$5.31
90-104 Watt	\$5.96
105-119 Watt	\$6.28
120-134 Watt	\$7.06
135-149 Watt	\$7.86
150-164 Watt	\$8.12
165-179 Watt	\$9.23
180-194 Watt	\$10.23

Unfortunately, CoServ’s streetlight rate schedules do not include the additional rider fees in the rate tables but list them in separate sections. To understand the true cost of the streetlight rates, a comparison of the total unit fixture cost – that includes the rates as well as the riders – is also necessary.

The City is currently paying CoServ a total unit fixture cost (which includes energy and maintenance costs, as well as ride fees) of approximately \$12.62 per 100w HPS fixture per month. If the City shifts to the ‘CoServ Owned & Maintained LED Rate’, the total unit fixture cost decreases to approximately \$10.82 per fixture per month rate. If the City shifts to the ‘Customer Owned LED Rate’, the total unit fixture cost to the City will be approximately \$4.62 per fixture per month, a savings of \$8 per fixture per month compared to the ‘CoServ Owned LED Rate’.

It is important to note that CoServ’s base energy costs are higher than TNMP’s. This is likely due to CoServ’s higher operating costs associated with being a smaller not-for-profit cooperative.

Table 4 below provides an analysis of the current quantities, types of existing fixtures, and a comparison of the City’s rate options (contrasted by the Current HPS/MV rate for CoServ and City-Owned, as well as LED rates). The total unit cost reflects energy, maintenance, and rider fees.

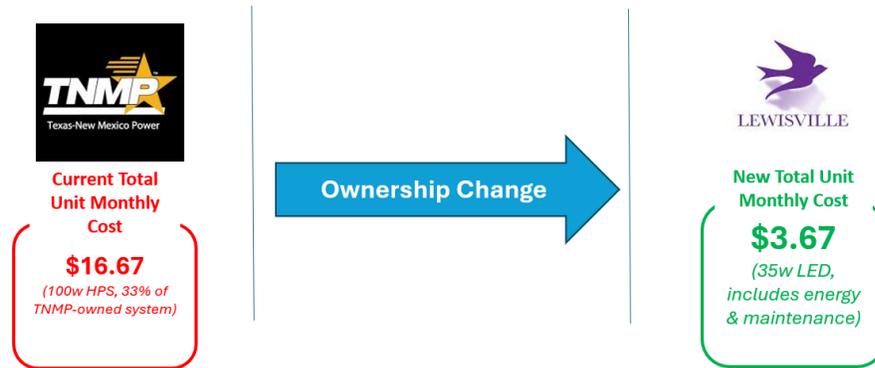
Table 4 – CoServ Rate Comparison

Existing Lamp Type and Wattage	Assumed Tanko Replacement Fixture	Quantity	Current CoServ HPS/MV Rate	Current CoServ HPS/MV Total Unit Cost*	CoServ-Owned LED Rate	CoServ-Owned LED Total Unit Cost*	City-Owned CoServ LED Rate	City-Owned CoServ Total Unit LED Cost*
175W MV	35W LED	435	\$12.28	\$12.62	\$10.73	\$10.82	\$2.62	\$4.68
100W HSP	35W LED	117	\$10.73	\$11.96	\$10.73	\$10.82	\$2.62	\$4.68
150W HPS	45W LED	138	\$11.76	\$12.05	\$10.73	\$10.82	\$3.52	\$5.60
250W HPS	100W LED	14	\$16.49	\$16.98	\$10.73	\$10.89	\$5.96	\$8.13
55W LED	N/A	2	\$10.73	\$10.82	\$10.73	\$10.82	\$3.52	\$5.61
100W LED	N/A	51	\$10.73	\$10.89	\$10.73	\$10.89	\$5.96	\$8.13
140W LED	N/A	67	\$10.73	\$10.96	\$10.73	\$10.96	\$7.86	\$10.09

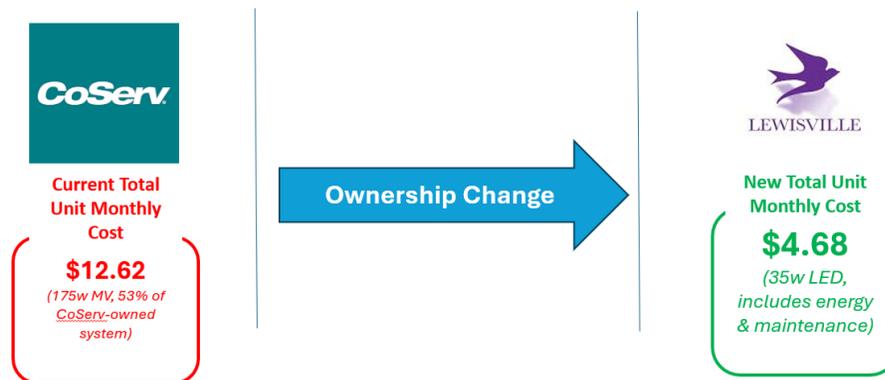
*Costs are rounded to the nearest whole cent.

While the estimated savings from a municipal streetlight acquisition and LED conversion may initially seem too good to be true, they are just a simple equation entirely based on the vast difference between the utility rates. See the two diagrams below for how simple the comparison is between the City’s current TNMP and CoServ rates and what the rates would be if the City owned LED fixtures:

TNMP Rate Change | Cost Reduction Per-Fixture



CoServ Rate Change | Cost Reduction Per-Fixture



The vast savings that are realized from changing streetlight rates are why hundreds of other cities and towns nationwide have opted to purchase and LED convert their streetlight systems. Based on our research, none of these cities have ever sold the streetlight system back to the utility once purchased.

Options

Once the inventory and rates were considered, three options resulted regarding the ongoing operation of the City's streetlight system:

- **Option 1: Ownership Transfer from TNMP and CoServ to City, LED Conversion, Ongoing Maintenance**
 - With this option, ownership of the City's streetlight system will be transferred from TNMP and CoServ to the City. The City would convert all remaining HPS streetlights to LED, as well as be responsible for maintaining the entire streetlight system via either internal staff or a third-party qualified contractor. The standalone streetlight poles would be fully transitioned to City ownership. The distribution poles would remain owned by TNMP and CoServ, but the arms and fixtures would be fully transitioned to City ownership.
 - Further, with this option, the City would:
 - Transfer all streetlights on the utility-owned electricity rate (TNMP: Roadway Lighting Service and CoServ: Lighting Service Utility-Owned Rates) to a municipal-owned electricity flat rate (TNMP: Roadway Lighting Service and CoServ: Lighting Service Muni-owned Rate). See appendix B for more details.
 - Eliminate the maintenance fees previously included in TNMP and CoServ's Utility-Owned Rates.
 - After the LED conversion of all remaining HPS fixtures, transfer to (reduced) LED fixture electricity rates.
 - Maintain the system via its own crews or a qualified contractor.
 - Have the option to employ smart systems management and explore third party attachments.

- Option 1 is estimated to cost the City approximately **\$2,701,941** upfront for ownership and conversion.
 - This option results in approximately **74%** savings – or approximately **\$508,555** in its first year.
 - The payback period is approximately **5.3 years** based on energy and maintenance savings.
 - The City would **save** an estimated total of **\$7,921,475 on its current costs** over 20 years based on energy and maintenance.
- **Option 2: Utility-Sponsored LED Conversion, No Acquisition** – TNMP and CoServ will convert the streetlights to LED and continue to own and maintain the system. TNMP and CoServ, in their sole discretion, will determine the timeline and order in which lights are replaced. With this option the City would:
 - Assume a negotiated one-time upfront cost to replace the existing fixture with an LED fixture.
 - Based on TNMP’s rates, it charges \$104 per fixture if the City requests that a fixture be converted to LED, and capped at 1,000 fixtures per year. However, TNMP converts at no additional cost if the conversion is done upon the end of useful life of an HPS or MV fixture.
 - For simplicity, for this project, we assumed a cost to the City of \$104 for TNMP to convert the fixtures, with no annual cap.
 - CoServ’s rate schedule does not supply a per fixture conversion cost. An inquiry was submitted to the utility to confirm its conversion costs for 55W LED and 100W LED replacements (wattages listed are Tanko’s assumed wattage replacements based on CoServ’s offerings). Despite multiple attempts to reach them, CoServ was not able to supply the cost for either replacement wattage. In the absence of utility-provided figures, an average industry cost of \$150 per fixture has been assumed based on similar LED replacement installations.
 - Continue to pay the maintenance fee included in TNMP and CoServ’s streetlight service rates (TNMP: Roadway Lighting Service and CoServ: Lighting Service Utility-Owned Rates).
 - Option 2 is estimated to cost the City approximately **\$371,964** total or approximately **\$115 per fixture** for the upfront LED conversion.
 - This option results in approximately **25%** increase in costs in the first year. There is no payback period.
 - The City would **spend** an estimated total of **\$6,064,150 more** than its current costs over the next 20 years.
 - **Option 3: Status Quo (Baseline): Continued Utility Ownership** – Annual 5% LED Conversion, No Acquisition
 - With this option, the City would continue with existing operations. Unlike Option 2, which assumes the City will pay to convert the entire system at once, Option 3 involves replacing fixtures upon failure, resulting in an approximate annual LED conversion attrition rate of 5%, with no additional charges to the City (other than the new LED rate schedule).
 - TNMP and CoServ would continue to own, operate, and maintain the 2,613 fixtures (TNMP) and 824 fixtures (CoServ) with this scenario.
 - For the streetlighting owned by TNMP and CoServ, the City would continue to have no direct oversight of the fixtures or design of the system, nor control over the efficiency with which they are maintained.
 - Under the best-case option, the City’s energy and maintenance costs would remain the same in the short term. However, when fixtures fail as they come to the end of their useful life and are converted to LED, the TNMP bill will increase significantly.
 - The CoServ bill will remain relatively similar – see rate explanations in CoServ’s Streetlight Rates section, above.

Note that all options included an annual 4% estimated federal inflation rate and an annual estimated 1% utility cost escalation rate.

These options yielded the following results:

Table 5 – Comparison of Options

Option	Description	Est. Project Cost	20yr Op. Costs	20yr Op. Savings	ROI
Option 1	City-Owned LED Streetlight System	\$2,701,941	\$4,936,167	\$7,921,475	5.3 yrs
Option 2	Utility-Owned LED Streetlight System	\$371,964	\$18,921,792	(\$6,064,150)	N/A
Option 3	Status Quo (Baseline)	N/A	\$12,857,642	N/A	N/A

Please find more details on the results of the analysis in the next section.

Detailed Results

Once the three options were established, a financial analysis was conducted, which yielded the following results.



Summary of Financial Analyses – Lewisville, TX
 May 31, 2025

Option Details	Option 1	Option 2
System Ownership	Acquired by Municipality	Owned by Utilities
LED Conversion	Converted by Municipality	Converted by Utilities
Maintenance	Maintained by Municipality	Maintained by Utilities
Project Overview		
Total Cost (<i>Ownership + Conversion</i>)	\$2,701,941	\$371,964
20 Year Savings	\$7,921,475	(\$6,064,150)
Payback Period (<i>Energy + Maintenance Savings</i>)	5.38	0
Assumptions & Notes		
Utility Asset Purchase or Buyout Cost (<i>estimated cost of utility streetlight purchase or HPS streetlight buyout</i>)	\$1,031,100	
Tanko Fees		
Ownership Support Fees (<i>Audit, Utility Negotiation, Final Asset Transfer, etc.</i>)	\$473,405	
LED Conversion Fees (<i>Material, Installation, Construction Management</i>)	\$1,197,436	\$371,964
Net Project Cost	\$2,701,941	\$371,964
Assumptions & Notes		
Quantity of Lights Included in Analysis	3,437	3,437
Option 1: Purchase Cost per Light	\$300	-
Option 2: Utility Conversion Cost per Light		\$115
Rate of Old System	Company Owned	Company Owned
Rate of New System	Municipally Owned	Company Owned
Federal Inflation Rate	4.00%	4.00%
Utility Cost Inflation Rate	1.00%	1.00%
Estimates are calculated using Net Future Values		



Summary of Financial Analyses – Lewisville, TX
 May 31, 2025

Option Details	Option 1			Option 2		
System Ownership	Acquired by Municipality			Owned by Utilities		
LED Conversion	Converted by Municipality			Converted by Utilities		
Maintenance	Maintained by Municipality			Maintained by Utilities		
Year 1 Analysis	Option 3	New	Savings	Option 3	New	Savings
Energy Usage [kWh]	2,426,440	628,460	1,797,980	2,426,440	681,020	1,745,420
Utility Bill Cost	\$687,021	\$95,978	\$591,043	\$687,021	\$859,339	-\$172,318
Maintenance Cost	Included in current Utility Bill Costs	\$82,488	-\$82,488	Included in current Utility Bill Costs		
Total	\$687,021	\$178,466	\$508,555	\$687,021	\$859,339	-\$172,318
20 Year Analysis	Option 3	New	Savings	Option 3	New	Savings
Energy Usage [kWh]	13,620,400	12,569,200	1,051,200	13,620,400	13,620,400	0
Utility Bill Cost	\$12,857,642	\$2,113,340	\$10,744,303	\$12,857,642	\$18,921,792	(6,064,150)
Maintenance Cost	Included in current Utility Bill Costs	\$2,822,828	(2,822,828)	Included in current Utility Bill Costs		
Total	\$12,857,642	\$4,936,167	\$7,921,475	\$12,857,642	\$18,921,792	-\$6,064,150



Chart 1, and 2 below compare the costs and benefits for Options 1, 2, and 3. Note that Option 3 is represented by the current costs, as Option 3 involves the City continuing with the status quo.

The costs and savings listed below are associated with the total unit fixture costs (comprised of annual energy, maintenance, and rider charges only), and do not include the upfront cost to purchase the system.

For detailed costs associated with the project (including acquisition cost, and projected return on investment), please refer to Appendix B: Financial Analysis & Assumptions.

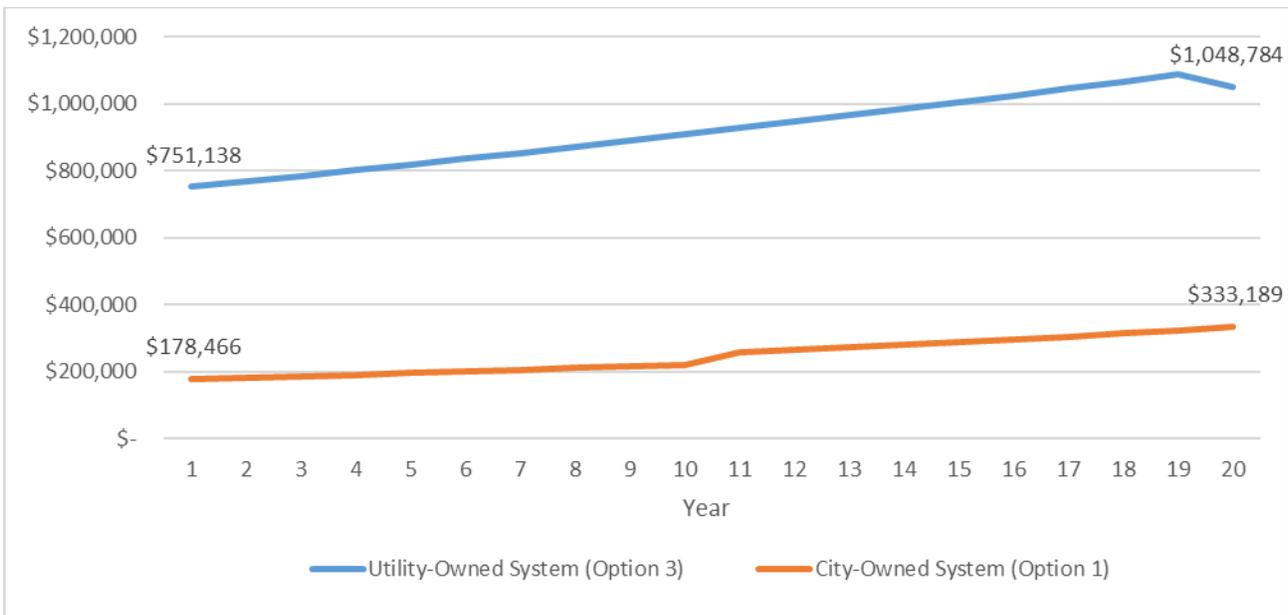
Option 1: Ownership Transfer from TNMP and CoServ to City, LED Conversion, Ongoing Maintenance

This chart represents the total unit fixture costs to the City for the next 20 years, including energy, maintenance, and rider charges.

- The blue line represents Option 3, in which the existing, utility-owned streetlight system is gradually converted to LED at the rate of 5% per year.
- The orange line reflects Option 2, a City-owned, fully LED-converted system.

Note that under the existing rates, TNMP and CoServ-owned (TNMP: Roadway Lighting Service and CoServ: Lighting Service Utility-Owned Rates) streetlights include both energy and maintenance costs on the City’s monthly utility bill.

Chart 1 – Operations Cost Comparison Based on Ownership

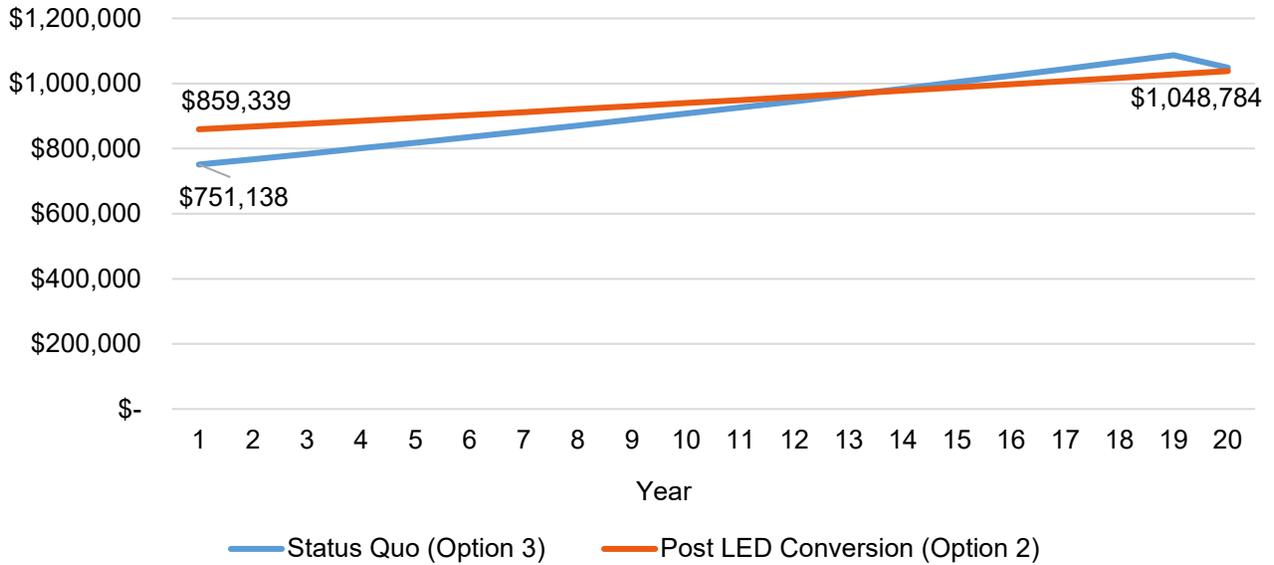


Option 2: Utility-Sponsored LED Conversion, No Acquisition

This chart represents the total unit fixture costs, including energy, maintenance, and rider costs, for the next 20 years for the existing.

- The blue line represents Option 3, in which the existing, utility-owned streetlight system is gradually converted to LED at the rate of 5% per year.
- The orange line depicts Option 2, where the Utility-owned streetlight system undergoes a full, systemwide LED conversion at the outset.

Chart 2 – Status Quo vs. Post-Utility LED Conversion Operating Costs



RECOMMENDATIONS & CONCLUSIONS

Tanko Lighting recommends that the City:

1. **Proceed with Option 1 (Ownership Transfer and Conversion)**: Proceed with exploring the concept of purchasing the streetlight system from TNMP and CoServ and converting the remaining HPS / MV fixtures to LED. This will allow the City to gain control over its streetlighting levels and maintenance of the system. This option also has the potential to save the City an estimated 62% on its annual energy and maintenance costs, or approximately \$7,921,475 over the next 20 years. In order to see savings as quickly as possible, Tanko Lighting recommends taking steps to purchase the utility-owned lights. While Option 1 has higher initial upfront costs, the City would see significantly higher long-term savings.

The main justifications for purchasing the utility-owned system are:

1. **Improved public safety and right-of-way control**. Given the City's responsibility for public safety in the right-of-way, a City-owned system would give the City direct control over the lighting system, levels, and coverage. This would ensure a modernized system designed to City specifications, well-lit streets, quicker outage responses, and safer environments for motorists, pedestrians, cyclists, and other roadway users.
2. **Increased ability to actualize energy savings**. Given that with Option 2, the City will likely wait for the LED conversion to be completed because TNMP and CoServ will be on their own timeline (unless an agreement can be reached), owning the system will enable the City to expedite the LED conversion and actualize energy savings faster. While there will be minimal monetary savings with CoServ, anytime an HPS or MV fixture is converted by TNMP, the City's bills will increase despite the energy savings.

This option demonstrates that streetlight ownership is financially advantageous to the City. This is a rare opportunity because most City projects that involve infrastructure improvements only involve costs. In contrast, this project will enable the City to obtain cash savings from a capital improvement project.

3. **Improved response time for repairs**. The most common complaint voiced to Tanko Lighting by municipalities with utility-owned systems is that maintenance service timelines are slow, and the infrastructure is not well maintained. While the utility will still play a role in the overall health of the system, the City will be able to dispatch its maintenance crews or contractor at the pace that it determines is appropriate to address the issues.
4. **Lower maintenance costs for the City**. The City would have the option to provide or outsource ongoing maintenance for the system, thus removing the high maintenance fees included in TNMP and CoServ's Company Owned streetlight rates (TNMP: Roadway Lighting Service and CoServ: Lighting Service Utility-Owned Rate).

If the City decides to pursue the potential acquisition, negotiation would be the recommended initial approach. Tanko Lighting has gathered a significant amount of research, documentation, and streetlight specific knowledge that would be highly beneficial if the City decides to pursue negotiations. If the City decides to pursue acquisition and negotiations are stalled, there are additional strategies that Tanko Lighting can support to ensure a successful acquisition (see Recommendation 3).

2. **Proceed with an Audit and Data Reconciliation**: Proceed with a comprehensive streetlight audit and utility inventory reconciliation. While the utility bills provided by the City were helpful in estimating the quantity of streetlights in the existing system, Tanko Lighting suggests that the City proceed with a comprehensive audit to collect more information. This will help evaluate the current condition of the system, especially in regard to the standalone poles, as well as assist in defining the current value of the system. This will allow the City to review a more accurate financial analysis and determine the financing implications for the full project. It will also provide the City with an updated understanding of its streetlighting system. For an outline of the full project process, please see Appendix B: Ownership Transfer & Ongoing Maintenance Processes.

3. **Connect with Tanko Lighting on Next Steps:** Tanko Lighting is the most nationally experienced company with municipal streetlight ownership transfers. As such, our team is qualified to serve as a liaison between the City and TNMP and CoServ to update inventory, initiate a dialogue for ownership transfer, and create a conversion plan.

The City has never undertaken a complex project such as this one. Here are the reasons why the City needs Tanko Lighting as its expert:

- Our experience is unparalleled. We have more than 130 similar municipal streetlight acquisitions under our belt.
- We have extensive public utilities commission experience.
- We are experts on utility asset valuation and how to properly develop the sale price.
- We will serve as an advocate and lead negotiator on behalf of the City for this project, which preserves any good relations the City currently has with its utilities.
- We are experts in the following:
 - Utility separation requirements
 - Field data collection and Geographic Information Systems (GIS) mapping of the inventory
 - LED design and conversion
 - Contractor solicitation and management for installation and maintenance
 - Streetlight Master Plans
 - Streetlight maintenance
 - Long-term streetlight planning

Connect with our team to review options and next steps.

APPENDICES

- **Appendix A – Streetlight Project Overview**
- **Appendix B – Financial Analyses & Assumptions**
- **Appendix C – Ownership Transfer, & Ongoing Maintenance Processes**
- **Appendix D – TNMP Streetlight Rates**
- **Appendix C – CoServ Streetlight Rates**

Appendix A – Streetlight Project Overview

Estimated Costs & Timeline

- **Project Development - (Q3-Q4 2025)**
 - Exploratory Negotiations = \$10,000
 - Audit / Inventory Reconciliation = \$223,405
 - Streetlight Master Plan = \$35,000
 - **Total Project Development Costs – Estimated = \$268,405**

- **Streetlight System Purchase - (Q1 2026)**
 - Final Purchase and Sale
 - Maintenance Prep
 - Deficiency Analysis
 - **Total Streetlight System Purchase - Estimated \$1,504,604**
 - Tanko Fees (\$205,099)

- **LED Conversion & Maintenance - (Q2-Q4 2026, after acquisition)**
 - Lighting Design
 - LED Replacement / Pole Labelling
 - Ongoing Maintenance
 - **Total LED Conversion & Maintenance - Estimated \$1,246,698**

- **Subtotal - \$2,751,203**

- **Requested Budget Amount - \$3M**

Appendix B – Financial Analysis & Assumptions

Assumptions

The following assumptions were made to determine the results for this report:

- Materials
 - Reputable fixture manufacturers and recent fixture pricing
 - Photocells
- Labor
 - Per fixture installation rates from qualified electrical workers in the region (budgetary)
 - Labor costs included installation, photocell, and any required ancillary materials
- Utility
 - Existing rate:
 - TNMP's Roadway Lighting Service effective September 1, 2020
 - Utility-Owned Monthly Rate: Company-Owned Transmission and Distribution Charges Schedule I, II, III, & IV on pages 105-107
 - CoServ's Lighting Service Rate effective January 1, 2025:
 - Utility-Owned Monthly Rate: Lights owned and maintained the Cooperative on pages 21 and 22
 - Municipal-owned rate:
 - TNMP's Roadway Lighting Service effective September 1, 2020
 - Utility-Owned Monthly Rate: Public Highway Lighting Service Schedule V- LED Streetlighting on page 107
 - CoServ's Lighting Service Rate effective January 1, 2025:
 - Muni-Owned Rate: Customer owned and Customer maintained lights on page 22 and 23
 - Monthly rates:
 - The City's TNMP and CoServ's March 2025 streetlight bills and TNMP and CoServ's Streetlight rates were utilized to determine monthly rates.
 - Purchase price (Option 1):
 - Estimated to be approximately \$1,031,100, or approximately \$300 per fixture.
 - TNMP and CoServ-initiated LED Conversion (Option 2):
 - Based on TNMP's rates, it charges \$104 per fixture if the City requests that a fixture be converted to LED, and capped at 1,000 fixtures per year. However, TNMP converts at no additional cost if the conversion is done upon the end of useful life of an HPS or MV fixture.
 - For simplicity, for this project, we assumed a cost to the City of \$104 for TNMP to convert the fixtures, with no annual cap.
 - Note that CoServ's rate does not supply a per fixture conversion cost. An inquiry was submitted to the utility to confirm its conversion costs for 55W LED and 100W LED replacements (wattages listed are Tanko's assumed wattage replacements based on CoServ's offerings). Despite multiple attempts to reach them, CoServ was not able to supply the cost for either replacement wattage. In the absence of utility-provided figures, an average industry cost of \$150 per fixture has been assumed based on similar LED replacement installations.
- Quantities and Lamp Type
 - Quantity and existing lamp type derived from data provided by in the City's March 2025 TNMP and CoServ's streetlights.
 - 2,613 TNMP-owned (Utility-Owned Rate) streetlight fixtures
 - 824 CoServ-owned (Utility-Owned Rate) streetlight fixtures
 - Existing lamp type (see table below)
- Preliminary watt-for-watt design replacement of existing fixtures
 - 20% ballast factor applied to HPS wattages (not shown in table)
 - These assumed replacement fixtures and wattages are based on what we have seen be most successful in our nationwide conversion experience, and manufacturer lumen standards for LED replacements.

Watt-for-Watt Design Replacement

Existing Fixture	Option 1: Assumed Tanko Replacement Fixture	Option 2: TNMP and CoServ Replacement Fixture	Fixture Quantity
175W MV	35W LED Cobra Head	35W LED Cobra Head	786
400W MV	85W LED Cobra Head	101W LED Cobra Head	37
100W HPS	35W LED Cobra Head	35W LED Cobra Head	1396
150W HPS	45W LED Cobra Head	45W LED Cobra Head	146
200W HPS	60W LED Cobra Head	60W LED Cobra Head	858
250W HPS	85W LED Cobra Head	101W LED Cobra Head	22
Existing LED	N/A	N/A	192

- Federal Inflation Rate: 4%
- Energy Cost Inflation Rate: 1%
 - Note that 1% is a conservative estimate as this rate can reach about 3%
- Sales Tax Rate: 0%
- Budgetary Maintenance Program Costs
 - Option 1:
 - \$2.00/pole/month cost for LED fixtures (during 10-year warranty period)
 - \$2.50/pole/month cost for LED fixtures (post 10-year warranty period)
 - Time & Materials repair work (based on qualified electrical workers in the region)
 - Emergency costs assumed recuperated through insurance
 - Average call-out frequency, hourly pricing, and batched responses

Appendix C – Option 1: Ownership Transfer, and Maintenance Processes

The outline below explains Tanko Lighting’s process for the potential streetlight ownership transfer, and ongoing maintenance. This is intended to provide the City with more information, should it choose to proceed with Option 1 and the ownership transfer of its streetlights. This outline shows an approximate 12-month project. Often, the longest delays come from utility processes, including ownership transfer paperwork and discrepancy reviewing. Please note that while some project processes can overlap with utility timelines, others are dependent on utility or City actions before proceeding. Tanko Lighting will coordinate with the City, utility, and other project partners to ensure that the project is completed in a prompt and reasonable timeframe.

1. Audit & Data Reconciliation -
 - a. Perform a comprehensive streetlight audit ~ 5-6 weeks
 - i. Tanko Lighting performs an in-field audit in which an auditor visits and collects approximately 30 attributes at each streetlight fixture. These data points will be reviewed by our in-house data analysts for quality control and will help to evaluate the Net Book Value of the system and the condition of the system, especially in regard to the standalone poles that would be purchased in the ownership transfer phase.
 - b. Reconcile the in-field conditions with the utility inventory: ~ 6-8 weeks
 - i. The project data analyst will compare the data collected during the audit to TNMP and CoServ’s billing inventories for the City and produce a concise report highlighting all discrepancies.
2. Ownership Transfer – Timeline is utility-dependent
 - a. Provide ownership transfer assistance:
 - i. Tanko Lighting will work with TNMP and CoServ to help guide the City through the ownership transfer process. We suggest that municipalities buy the system as-is and then work with the utility to reconcile the inventory in a second or “true-up” phase. This ensures that the City starts to realize savings immediately and is not delayed by a minority of discrepancies.
 - b. Validate and reconcile the inventory:
 - i. Using the audit and data reconciliation report, Tanko Lighting will work with the City to update the inventory and confirm all eligible lights have transferred ownership.
3. Design & Procurement – Design: ~ 6-8 weeks; Materials lead time: 6-8 weeks
 - a. Design a custom streetlighting system:
 - i. Tanko Lighting uses industry-accepted standards, as well as the data collected during the audit, as guidelines, while working closely with the City to develop a customized proposed streetlight design that matches its needs.
 - b. Guide the City with fixture selection:
 - i. Tanko Lighting will work with the City to educate all stakeholders on the available fixture models, the important features to consider, and how best to meet the City’s needs.
 - c. Manage procurement and logistics:
 - i. Tanko Lighting will work with the City to order and to coordinate delivery for all materials.
4. Installation ~ 8 - 10 weeks
 - a. Manage the installation:
 - i. Tanko Lighting will work with the City to determine the best procurement options for the installer. The project manager will manage all aspects of the installation and meet all City requirements.
 - ii. Tanko Lighting provides data collection devices to the installers and creates custom installation maps (paper and digital) for clean, easy installation.
 - iii. Installation rates vary by project, but the City should expect about 20-30 installs per crew per day. The installer checks the voltage, troubleshoots the fixture to confirm that it is functioning properly, and reports any in-field issues when discovered.
 - iv. Tanko Lighting will review all data provided by the installer for any discrepancies.

5. Final Reporting ~ 3-5 weeks
 - a. Submit the utility rate change:
 - i. Tanko Lighting will produce and submit all required documentation for TNMP and CoServ's rate change processes.
 - b. Provide the final streetlight data
 - i. Tanko Lighting will provide a final project deliverable to assist the City with managing the new streetlight system. This will be a final report summarizing the project with updated financial models.
6. Ongoing Maintenance
 - a. Assist the City with choosing a maintenance program:
 - i. There are multiple options that the City can choose for ongoing maintenance.
 1. City Maintenance:
 - a. With this option, the City would utilize its internal staff to maintain the streetlight system. Maintenance services provided by City employees could potentially include re-lamping, preventative maintenance, emergency services (knockdown streetlight poles), day-to-day maintenance (including day burners), utility engagement, locates, etc.
 2. Outsourced Maintenance:
 - a. With this option, the City would outsource the streetlight maintenance services to a qualified contractor. The contractor would be responsible for both routine and emergency maintenance needs, in addition to having contractually obligated and guaranteed response times. Typically, an outsourced maintenance contract involves a scope of work that includes administrative support (outage, dispatch, and tracking/reporting), as well as routine and emergency services:
 - i. Unit Price + Hourly Rates: A fixed unit price based on a dollar amount per streetlight per month that includes routine maintenance services and administration, along with hourly rates for emergency services billed on a time and materials basis; or
 - ii. Hourly Rates: Hourly rates for administrative support, as well as both routine and emergency services billed on a time and materials basis.
 - ii. Tanko Lighting will help the City to understand the process and requirements, as well as assist with procuring a maintenance contractor. Recommended maintenance programs typically include:
 1. A monthly per-pole administrative fee (usually \$1-2 per pole per month). This monthly fee provides:
 - a. An online work request management system
 - b. Administrative support to City staff
 - c. The establishment and management of a streetlight outage call center
 - d. The intake and processing of outage reports, warranty related repairs, and utility repair requests
 - e. Time-sensitive dispatch of the subcontractor
 2. Time and materials invoicing for maintenance work for all streetlight maintenance-related labor performed in the field. Tanko Lighting recommends compiling non-urgent reports until there are enough to batch together for a full or half day of work, to minimize additional travel surcharges and maximize value if time and materials-related work is billed at an hourly minimum.
 3. Emergency services, which encompass all pole knockdowns and other streetlight-related public safety hazards on City-owned poles. A 24-hour call center or contact number (and usually a 2-6 hour response time) are guaranteed, depending on the City's requirements.
 4. Administrative support for reports on streetlights not owned by the City. If maintenance is required, Tanko will provide the City with all relevant information about the report in order for the City to coordinate directly with the utility and/or appropriate entity for repair.
 - iii. An example of a non-emergency call would be as follows:
 1. A resident reports an outage through the call center or online form.

2. The maintenance project manager confirms the location and all relevant information in the streetlight data and adds it to the pending maintenance list.
 3. The maintenance project manager provides the list to the City for approval and dispatches the contractor to address the issues.
- iv. An example of an emergency call would be as follows:
1. A pole is knocked down after hours, around 10pm.
 2. Either the City, first responders, or a bystander will call the call center number and report the emergency.
 3. The call center will dispatch the contractor directly and the contractor will arrive at the site within the contracted response time.



TEXAS- NEW MEXICO POWER COMPANY

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**TARIFF
FOR
RETAIL DELIVERY SERVICE**

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6.1.1.1.6 LIGHTING SERVICE

ROADWAY LIGHTING SERVICE

AVAILABILITY

The service provided pursuant to this Tariff is for any end-use customer for roadway lighting service where existing facilities have adequate capacity and suitable voltage.

TYPE OF SERVICE

Unmetered, automatically controlled, overhead lighting service operating from dusk to dawn. The Company will install, operate and maintain such lighting. Lights will be mounted on an existing service pole or poles and such service will be limited to 120 volt service.

MONTHLY RATE

I. Transmission and Distribution Charges:

OVERHEAD SERVICE

Schedule I –Wood Pole (per lamp charge)

	Distribution Facilities <u>Charge</u>	
8150 lumen – 175 watt MV	\$5.02	Closed
21500 lumen – 400 watt MV	\$9.43	Closed
9500 lumen – 100 watt HPS	\$6.44	
16000 lumen – 150 watt HPS	\$7.47	Closed
22000 lumen – 200 watt HPS	\$7.99	
27500 lumen – 250 watt HPS	\$8.74	Closed
50000 lumen – 400 watt HPS	\$9.70	Closed

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Schedule II –Ornamental Pole (per lamp charge)

	<u>Distribution Facilities Charge</u>		
	<u>1 Lamp Per Pole</u>	<u>2 Lamps Per Pole</u>	
8150 lumen – 175 watt MV	\$9.76	-	Closed
21500 lumen – 400 watt MV	\$12.47	\$10.45	Closed
9500 lumen – 100 watt HPS	\$9.53	-	
16000 lumen – 150 watt HPS	\$12.12	-	Closed
22000 lumen – 200 watt HPS	\$12.90	\$9.20	
27500 lumen – 250 watt HPS	\$14.53	\$10.64	Closed
50000 lumen – 400 watt HPS	\$18.65	\$18.65	Closed

UNDERGROUND SERVICE

Schedule III –Wood Pole (per lamp charge)

	<u>Distribution Facilities Charge</u>	
3500 lumen – 100 watt MV	\$5.18	Closed
8150 lumen – 175 watt MV	\$5.67	Closed
21500 lumen – 400 watt MV	\$11.22	Closed
9500 lumen – 100 watt HPS	\$7.22	
22000 lumen – 200 watt HPS	\$8.78	

Schedule IV –Ornamental Pole (per lamp charge)

	<u>Distribution Facilities Charge</u>		
	<u>One Lamp Per Pole</u>	<u>Two Lamps Per Pole</u>	
8150 lumen – 175 watt MV	\$10.40	-	Closed
21500 lumen – 400 watt MV	-	\$10.47	Closed
9500 lumen – 100 watt HPS	\$10.42	\$8.06	
22000 lumen – 200 watt HPS	\$13.94	\$10.41	

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PUBLIC HIGHWAY LIGHTING SERVICE

Schedule V – LED Street Lighting

Wattage	kWh	Cobra	Cobra Head		Double Cobra		Historical Post-Top		Customer- Owned
		Wood	Ornamental	U/G	Ornamental	O/H	U/G	Fiberglass	
Range		O/H (A)	O/H (B)	U/G (C)	O/H (D)	U/G (E)	Fiberglass (F)	Steel/Conc. (G)	(H)
20-60	15	\$12.81	\$24.32	\$28.01	\$31.84	\$35.47	\$17.09	\$32.77	\$0.65
61-100	28								\$1.21
101-130	42	\$16.05	\$27.56	\$31.24	\$36.91	\$40.55			\$1.81
131-165	50								\$2.16
166-200	62								\$2.68
201-300	83	\$21.63	\$33.14	\$36.83	\$46.04	\$49.68			\$3.58

METERED LIGHTING SERVICE

Schedule VI – (Restricted Use)

	Distribution Facilities Charge
Metered Series Service	\$0.039480 per kWh
Other Metered Service	\$0.039480 per kWh
Public Facilities Metered Service	\$0.039480 per kWh
II. System Benefit Fund Charge:	See Rider SBF
III. Transition Charge:	Not Applicable
IV. Nuclear Decommissioning Charge:	Not Applicable
V. Transmission Cost Recovery Factor:	See Rider TCRF
VIII. Other Charges and Credits:	See Rider CMC See Rider CTC See Rider EECRF See Rider HCRF See Rider RCE

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See Rider ERP
See Rider DCRF

COMPANY SPECIFIC APPLICATIONS

Minimum Bill

A minimum bill shall be charged based upon the monthly per lamp charge.

Service Schedules

Schedule I Company installed, owned, operated, and maintained overhead wired roadway lights mounted on wood poles on public roadways at the request of a governmental subdivision.

Schedule II Company owned, operated and maintained multiple overhead wired roadway lighting system mounted on ornamental poles on public roadways at the request of a governmental subdivision.

Schedule III Company installed, owned, operated, and maintained underground wired roadway lighting system mounted on wood poles on public roadways at the request of a governmental subdivision where the Company has paid the installed cost of such system.

Schedule IV Company installed, owned, operated, and maintained underground wired roadway lighting system mounted on ornamental poles on public roadways at the request of a governmental subdivision where the Company has paid the installed cost of such system.

Schedule V LED roadway lights mounted on wood, ornamental (steel or concrete) or historical (fiberglass, steel or concrete) poles on public roadways at the request of a governmental subdivision.

- A. Company installed, owned, operated and maintained cobra head LED street light mounted on a 35' wood pole with a cobra head arm, served overhead.
- B. Company installed, owned, operated and maintained cobra head LED street light mounted on a 35' ornamental (steel or concrete) pole with a cobra head arm, served overhead.
- C. Same as (B), served underground.
- D. Two Company installed, owned, operated and maintained cobra head LED street lights mounted on a 35' ornamental (steel or concrete) pole with 2 cobra head arms, served overhead.
- E. Same as (D), served underground.
- F. Company installed, owned, operated and maintained historical post-top LED street light mounted on a fiberglass historical pole, served underground.

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- G. Same as (F), mounted on a steel or concrete historical pole.
- H. Customer installed, owned, operated and maintained LED street lights, or where a governmental subdivision has installed and owns the system for use by the customer, and Company supplies distribution delivery service for the operation of the street lights. Company makes all connections and disconnections to its distribution system. An Agreement for Street Lighting Service is required for service under this Schedule V (H).

Schedule VI

- A. Metered Series Service is limited to existing roadway lighting systems being maintained by the Company prior to September 1999. These systems will be replaced as soon as feasibly possible, with service to be provided under one of the previous schedules of roadway lighting service.
- B. Other Metered Service will be used as the basis for determining the appropriate monthly per lamp charge for such facilities where Company supplies service to customer for operation of lighting system, which is customer installed, owned, operated, and maintained, or where a governmental subdivision has installed and owns the system for use by customer. Company will provide normal lamp replacements in accordance with the contract. Service under this sub-schedule will apply to developing the monthly rate for all roadway traffic signals owned and maintained by a governmental unit.
- C. Public Facilities Metered Service is to serve lighting facilities for public use that are not located on roadways, and where the lighting is separately metered.

Replacement of Lamps and Glassware

Company will install, own, operate and maintain all street lights including normal replacement of lamps and glassware at no cost to customer under Schedule I, II, III, and IV above. Company reserves the right to charge customer for replacement of lamps and glassware any time more than two calls per year become necessary due to vandalism or other causes over and above regular maintenance in accordance with the terms set out on TNMP's Miscellaneous Charges tariff, Security Light Repair Charge.

Lamp Burning Hours

The Company will cause the street lights operated by it to be lighted at nightfall and to remain lighted until dawn. End-use customer will so control the street lighting operated by it so that the total burning hours will not exceed 4,000 hours in each year.

Lumens

Lumens as used will be the nominal rating of approximate initial lumens rated by manufacturer.

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Facilities Charge Calculation

The monthly kWh used by the lamps in the operation of street lighting system will be estimated as follows:

$$\frac{\text{Total watts connected including ballast} \times 333 \text{ hours}}{1,000} = \text{kWh}$$

Type of Lamps and Ornamental Poles

All street lamps, glassware and ornamental poles shall be of a type normally used by Company and in accordance with standards established by Company.

Special Facilities

If the end-user requires special facilities to be installed or replaced, including ornamental standards or fixtures which are not in accordance with Company standards, the end-use customer will make a non-refundable contribution equal to the difference in the cost of such facilities and the installed cost of standard facilities; for other special facilities, end-use customer will make a non-refundable contribution equal to installed cost.

Conversion or Replacement of Facilities

The Company will convert or replace existing Company-owned functioning street lights to a different size or type of Company-owned street light upon request and payment by customer of \$104 for each street light to cover the cost of removal and the average undepreciated cost of the existing street light. Customer will pay the current rate for the replacement street light.

The Company will limit the conversion of functioning mercury vapor and high pressure sodium street lights to any LED street light option to a maximum of 1,000 street lights per year.

Replacement of Damaged or Failed Facilities

If a Company-owned street light is damaged or fails, or if replacement lamps are no longer available, the Company will replace the street light with the closest available equivalent high pressure sodium or LED street light. Customer will pay the current rate for the replacement street light.

NOTICE

This Rate Schedule is subject to the Company's Tariff and Applicable Legal Authorities.

**TEXAS-NEW MEXICO POWER COMPANY
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6.1. Rate Schedules

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NON-ROADWAY OUTDOOR LIGHTING SERVICE (CLOSED)

AVAILABILITY

The service provided pursuant to this Tariff is for any end-use customer for non-roadway outdoor lighting service where existing facilities have adequate capacity and suitable voltage. Lighting service under this schedule applies to non-roadway lighting facilities requested by the Retail Energy Provider (REP) on behalf of a customer connected to Company's distribution system.

TYPE OF SERVICE _Unmetered, automatically controlled, overhead lighting service operating from dusk to dawn. The Company will operate and maintain such lighting. Lights will be mounted on an existing service pole or poles and such service will be limited to 120 volt service.

Pricing under this Tariff will cover costs to serve these facilities includes the amounts included in FERC Accounts 371 and 371.1, which were previously collected under Rider CES-Competitive Energy Services.

MONTHLY RATE

I. Transmission and Distribution Charges:

	<u>Charge per Lamp</u>
175 w MV Lamp-Nite Lite	\$8.27
400 w MV Lamp-Nite Lite	\$9.41
100 w HPS Lamp-Nite Lite	\$8.05
200 w HPS Lamp-Nite Lite	\$12.54
400 w MV Lamp-Flood Light	\$13.36
1000 w MV Lamp-Flood Light	\$23.64
400 w HA Lamp-Flood Light	\$13.48
1000 w HA Lamp-Flood Light	\$24.27
250 w HPS Lamp-Flood Light	\$13.49
400 w HPS Lamp-Flood Light	\$15.50
48 w LED – Nite Lite	\$9.79
125 w LED – Flood Light	\$16.92
250 w LED – Flood Light	\$23.28

MV = Mercury Vapor, HPS = High Pressure Sodium, HA = Metal Halide

- | | |
|--|----------------|
| II. System Benefit Fund Charge: | See Rider SBF |
| III. Transition Charge: | Not Applicable |
| IV. Nuclear Decommissioning Charge: | Not Applicable |

TARIFF FOR ELECTRIC SERVICE

**Denton County Electric Cooperative, Inc.,
d/b/a CoServ Electric**

(Effective as of January 1, 2025)

Tariff for Electric Service
Denton County Electric Cooperative, Inc., d/b/a CoServ Electric
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370.25	Permanent Electric Service
370.26	Permanent Installation
370.27	Person
370.28	Point of Delivery
370.29	Power
370.30	Power Factor
370.31	Service Drop
370.32	Service Entrance Conductors
370.33	Tariff
370.34	Temporary Electric Service
370.35	Transmission Service
370.36	Transmission Service Customer
370.37	Volt
370.38	Volt-Ampere(s)

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370.39 Watt
370.40 Watt-Hour

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(2) Any amount authorized under the Cooperative's line extension policy for amortization of line extension costs.

E. Billing Adjustments.

This rate is subject to all applicable billing adjustments.

F. Agreement.

Electric Service pursuant to this rate schedule is month-to-month with no minimum term or cancellation fee, except that an Agreement for Electric Service with a term of one (1) year or more may be required by the Cooperative in accordance with the applicable line extension policy. This rate schedule may be changed by order or consent of regulatory authorities having jurisdiction or, if none, by the Cooperative's board of directors. Electric Service hereunder is subject to this Tariff.

202.6 **[RESERVED]**

202.7 **[RESERVED]**

202.8 Lighting Service Rate.

A. Application.

Applicable to Customers taking the type of service described in this rate schedule for lighting use. Not applicable for temporary, construction or shared service.

B. Type of Service.

Single-phase or three-phase service, as determined by the Cooperative, at the Cooperative's standard secondary distribution voltages.

C. Monthly Rate.

Each billing period the Customer shall be obligated to pay the following charges:

(1) Lights owned and maintained by the Cooperative (Customer shall pay either (a) or (b):

(a) Non-LED Light Charge:

50 Watt	\$10.73
70 Watt	\$10.73 [CLOSED]
75 Watt	[CLOSED]
96 Watt	[CLOSED]
100 Watt	\$10.73
150 Watt	\$11.76

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175 Watt	\$12.28 [CLOSED]
200 Watt	\$14.81 [CLOSED]
250 Watt	\$16.49
400 Watt	\$23.48

(b) LED Light Charge:

30-44 Watt	\$10.73
45-59 Watt	\$10.73
60-74 Watt	\$10.73
75-89 Watt	\$10.73
90-104 Watt	\$10.73
105-119 Watt	\$10.73
120-134 Watt	\$10.73
135-149 Watt	\$10.73
150-164 Watt	\$11.76
165-179 Watt	\$11.76
180-194 Watt	\$12.28
195-209 Watt	\$14.81
210-224 Watt	\$14.81

(2) Customer owned and Customer maintained lights:

(a) Non-Metered Non-LED Lighting.

100 Watt	\$5.96
150 Watt	\$8.12
175 Watt	\$9.23
200 Watt	[CLOSED]
250 Watt	[CLOSED]
400 Watt	[CLOSED]
1000 Watt	[CLOSED]

(b) Non-Metered LED Lighting.

30-44 Watt	\$2.62
45-59 Watt	\$3.52
60-74 Watt	\$4.41
75-89 Watt	\$5.31
90-104 Watt	\$5.96
105-119 Watt	\$6.28
120-134 Watt	\$7.06
135-149 Watt	\$7.86
150-164 Watt	\$8.12
165-179 Watt	\$9.23
180-194 Watt	\$10.23

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195-209 Watt	\$11.02
210-224 Watt	\$11.82

D. Billing Adjustments.

This rate is subject to all applicable billing adjustments. Billing adjustments each billing period shall be based on the following estimates of energy usage if energy usage is not metered:

Non-LED Light Energy Usage:

50 Watt	20 kWh
70 Watt	40 kWh
75 Watt	40 kWh
96 Watt	40 kWh
100 Watt	40 kWh
150 Watt	60 kWh
175 Watt	70 kWh
200 Watt	80 kWh
250 Watt	100 kWh
400 Watt	160 kWh
1000 Watt	400 kWh

LED Light Energy Usage:

30-44 Watt	15 kWh
45-59 Watt	20 kWh
60-74 Watt	28 kWh
75-89 Watt	33 kWh
90-104 Watt	38 kWh
105-119 Watt	45 kWh
120-134 Watt	51 kWh
135-149 Watt	57 kWh
150-164 Watt	63 kWh
165-179 Watt	69 kWh
180-194 Watt	75 kWh
195-209 Watt	82 kWh
210-224 Watt	87 kWh

E. Repair and Maintenance of Cooperative-Owned Lighting Facilities.

The Cooperative shall repair and maintain lighting facilities owned by the Cooperative in accordance with its then-current policies. Typical repair and maintenance consists of (i) the repair or replacement of the pole and/or fixture, or any individual component associated with the pole or fixture, when such pole, fixture or component has failed or malfunctioned or has been damaged to the extent that the lighting facility(ies) cannot operate safely and effectively, and (ii) cleaning of lens at the time of bulb replacement. Typical repair and

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maintenance does not include painting or straightening of poles unless the Cooperative determines that painting or straightening of poles is necessary for safety or operational purposes.

202.9 College and University Rate. [CLOSED as of January 1, 2021.]

A. Application.

Applicable for Electric Service to any facility of any four (4) year state university upper level institution, Texas state technical college, or college to which the Cooperative is required to discount the base rates, as provided in PURA 95, Section 2.2141. The provisions of the applicable rate schedule are modified only as shown herein.

B. Type of Service.

Single-phase or three-phase service at the Cooperative's standard secondary distribution voltages, where available. Where service of the type desired by Customer is not already available at the Point of Delivery, additional charges and special contract arrangements may be required prior to service being furnished.

C. Monthly Rate.

Each billing period the Customer shall be obligated to pay the following charges:

(1) Non-Demand Metered Accounts (under 35 kW).

(a) Customer Charge: \$20.00 per Meter for the availability of Electric Service; and

(b) Energy Charge:

Summer

May through
October billing
periods, inclusive:

\$0.122153 per kWh
for all kWh

Winter

November through
April billing
periods, inclusive:

First 700 kWh at \$0.122153 per kWh
Over 700 kWh at \$0.113773 per kWh

This charge for the delivery of energy shall be applied to all kWh usage during each billing period for service locations which are not demand metered; or

(2) Demand Metered Accounts (35 kW or greater).

(a) Customer Charge: \$35.00 per Meter for the availability of