

1. **ENN NAME**

PNM Streetlight Conversion

2 **PROJECT ADDRESS**

Citywide

3 **DESCRIPTION**

The City of Santa Fe has collaborated with the Public Service Company of New Mexico (PNM) to draft a conversion agreement with the purpose of changing some of the luminaries in the streetlights PNM owns and maintains within the City to meet the community-guided design standards approved by the Governing Body in May 2021 and match what is already installed on city-owned streetlights. These dark-sky approved luminaires use Light Emitting Diodes (LED) technology to lower power consumption and extend the lifespan in contrast to the existing Mercury Vapor (MV) and High-Pressure Sodium (HPS) currently in PNM-owned streetlights.

PNM currently owns and maintains 2,057 streetlights out of approximately 5,500 within the city. The current budget for the project is \$525,000 and PNM estimates approximately 1,100 streetlights would be able to be converted based on the current budget. Public Works proposes to prioritize streetlights for conversion based on the cost of each type of conversion (HPS and Mercury Vapor) and wattage of the bulb (100W, 175W, 250W, and 400W).

4 **APPLICANT**

Public Works

5 **STAFF**

Mike Dalmolin, City of Santa Fe Traffic Operations
Engineer, mrdalmolin@santafenm.gov, (505) 469-9447

6 **MEETING LOCATION**

Join Zoom Meeting

[https://santafenm-gov.zoom.us/j/7891823684?
pwd=K2pEOGpNa0p2NmhvS0d2ajdpOTR4Zz09](https://santafenm-gov.zoom.us/j/7891823684?pwd=K2pEOGpNa0p2NmhvS0d2ajdpOTR4Zz09)

Meeting ID: 789 182 3684
Passcode: 8J5KrN

One tap mobile
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+17193594580,,7891823684#,,,,*054879# US

Dial by your location

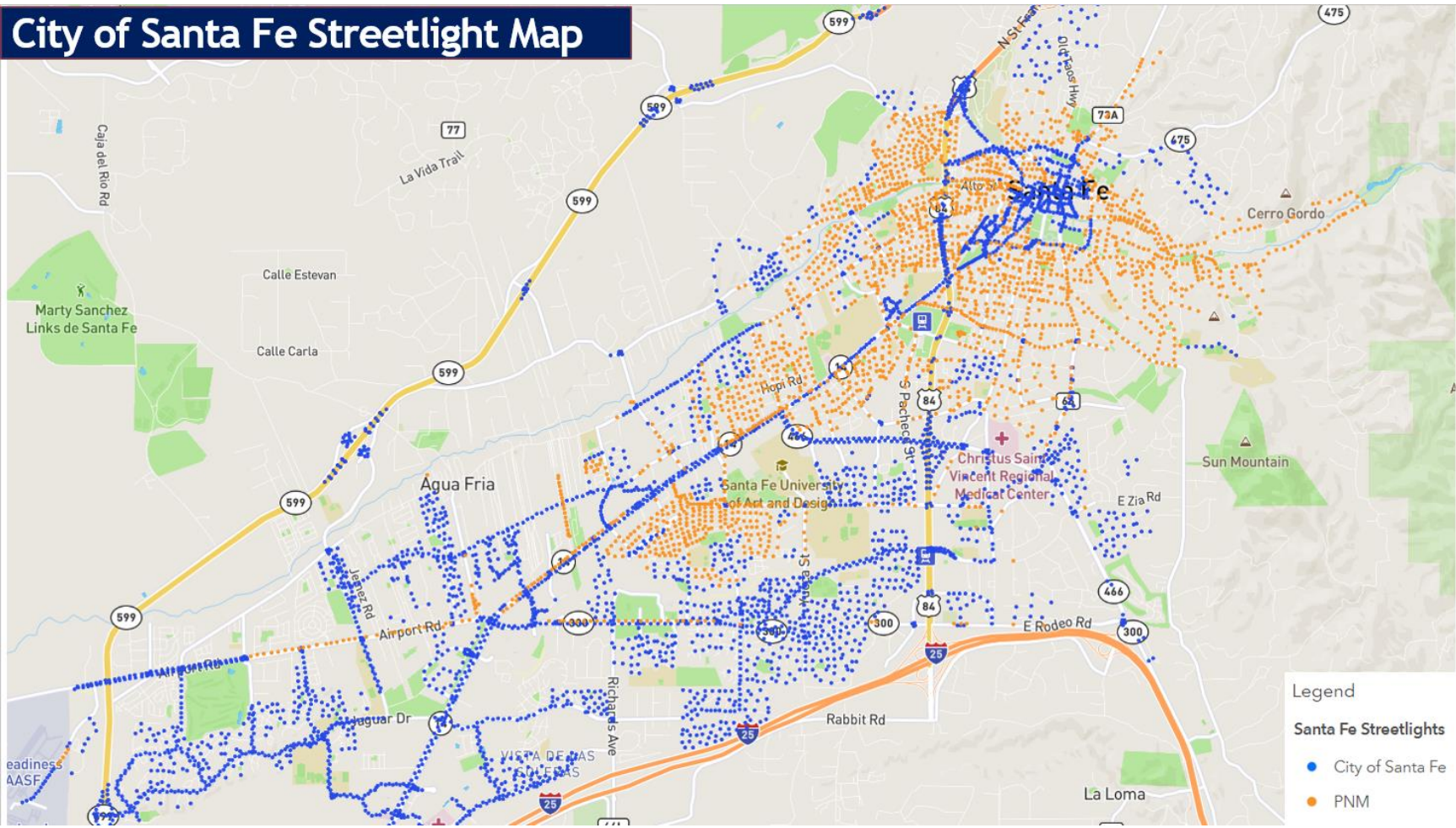
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- +1 719 359 4580 US
- +1 253 205 0468 US
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- +1 669 444 9171 US
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- +1 360 209 5623 US
- +1 386 347 5053 US
- +1 507 473 4847 US
- +1 564 217 2000 US
- +1 646 931 3860 US
- +1 689 278 1000 US
- +1 929 205 6099 US (New York)
- +1 301 715 8592 US (Washington DC)
- +1 305 224 1968 US
- +1 309 205 3325 US

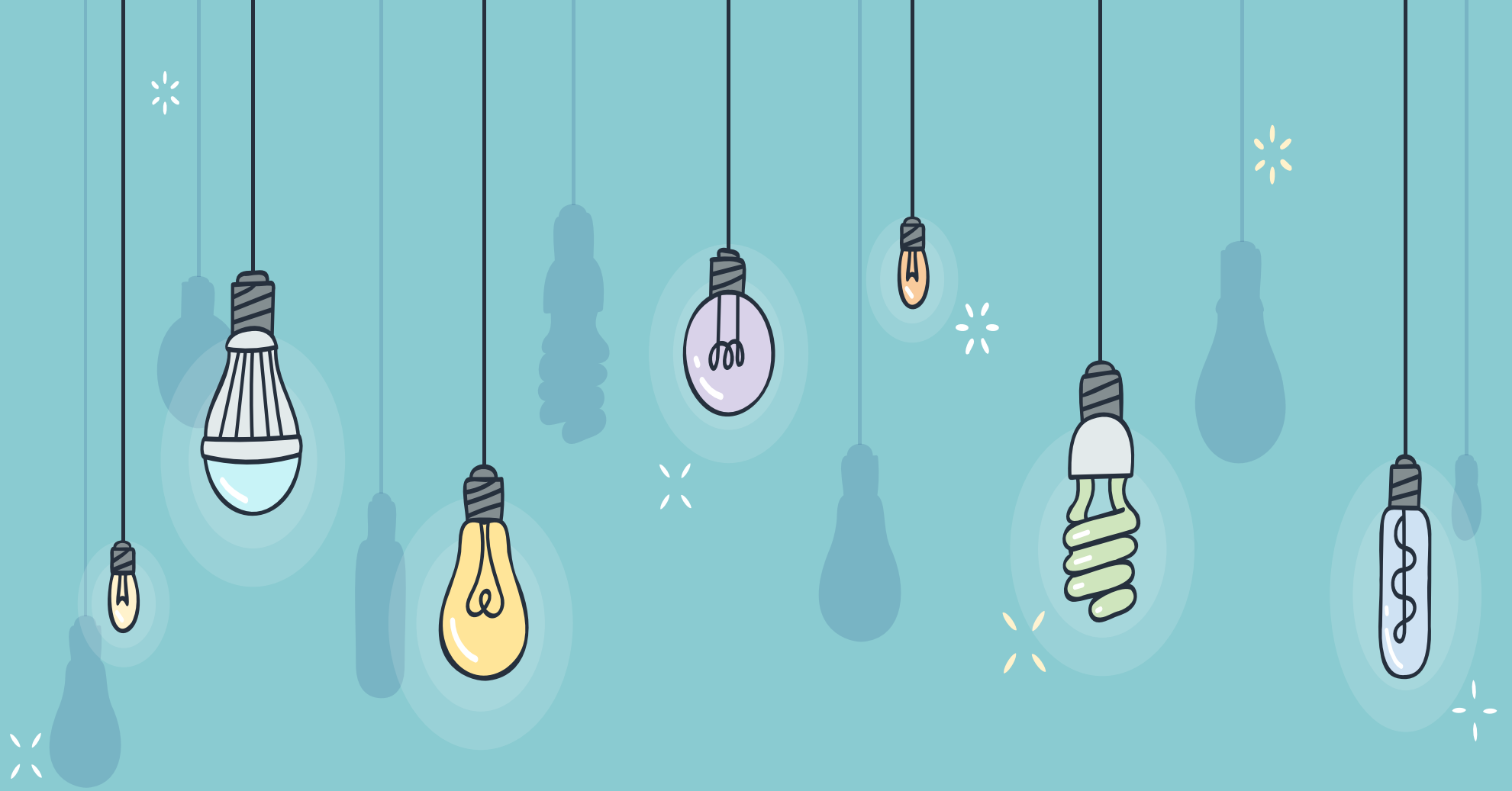
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Passcode: 054879

Find your local number: [https://santafenm-gov.zoom.us/j/7891823684?
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Persons with disabilities in need of special accommodations, or the hearing impaired needing an interpreter, please contact the Land Use Department at 505-955-6820 or gagurule@santafenm.gov 5 days prior to the meeting date.

City of Santa Fe Streetlight Map





Santa Fe Streetlight LED Conversion

Project Team - COSF and PNM



Michael Dalmolin, P.E.

Traffic Operations Engineer

Complete Streets Division

Manages Streetlight Program

 mrdalmolin@santafenm.gov



Jamie Aranda

Community Relations Manager

Local Government Affairs and
Community Relations Manager
for Northern New Mexico

 jamie.aranda@pnmresources.com



Regina Wheeler

Public Works Director

Acting Complete Streets Division
Director

 rawheeler@santafenm.gov



Sharon Martinez

Project Manager

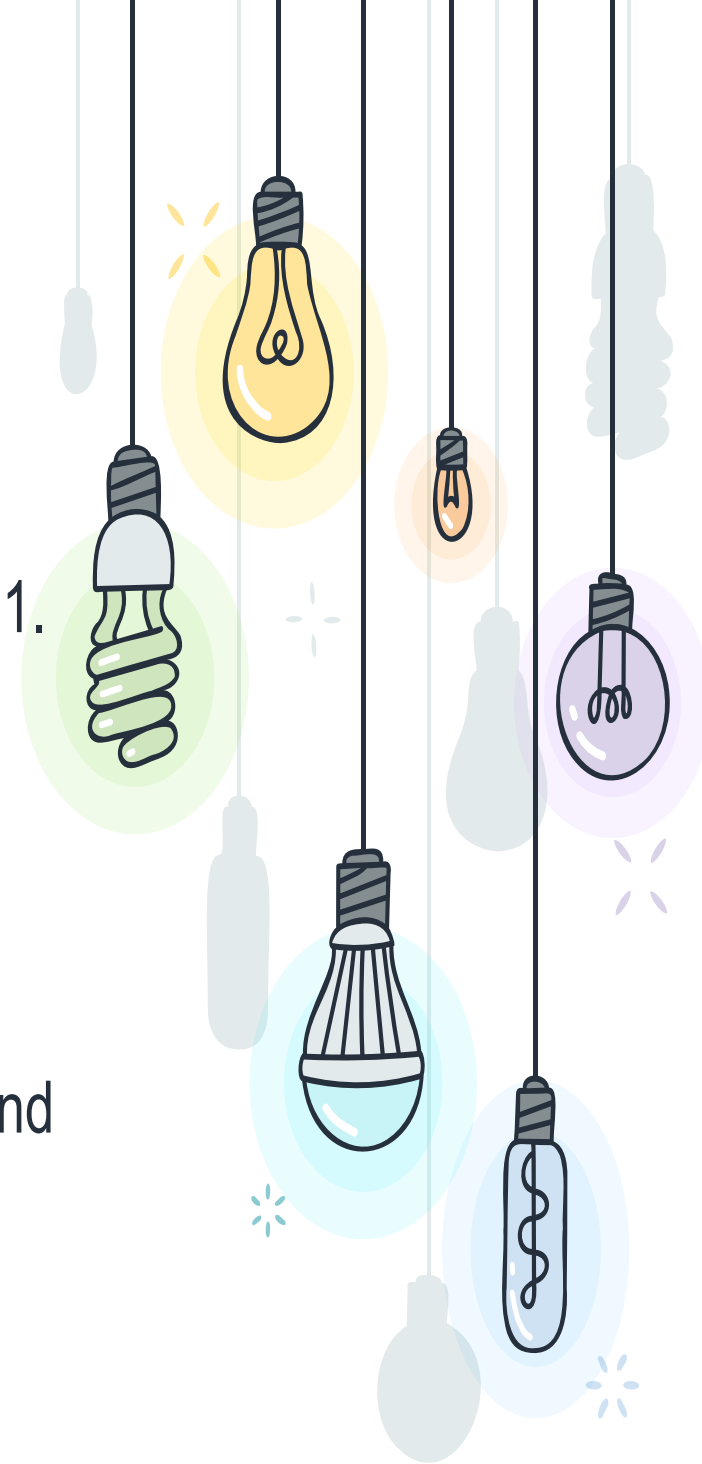
Oversees projects for PNM

 sharon.martinez@pnm.com



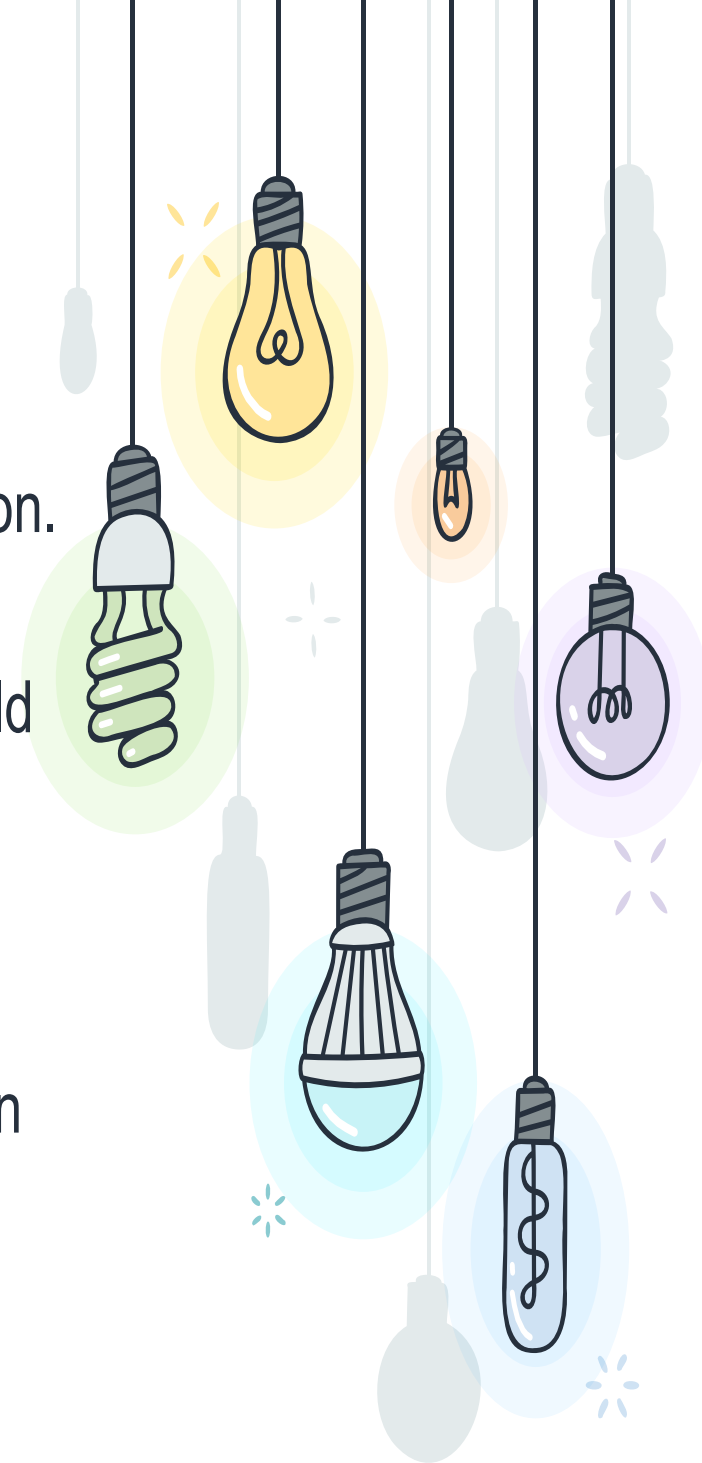
Project Goals: PNM-Owned Streetlight LED Conversion

- + Build upon Community Guided Lighting Design Principles adopted by Governing Body in May 2021.
- + Help achieve sustainability goals set in the Sustainable Santa Fe 25-Year Plan
- + Improve roadway safety for motorists, bicyclists, and pedestrians.



Project Overview: PNM-Owned Streetlight LED Conversion

- + City has allocated \$568,511 to the PNM Conversion.
- + PNM estimates half of their 2,057 streetlights would be converted with available funding.
- + \$135,000 is the estimated annual energy and maintenance savings to the City for this conversion project. Payoff period is less than 4 years.
- + Savings equate to 1,108,038 miles driven by an average gasoline-powered passenger vehicle.

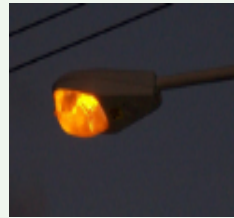


Streetlight Type Comparison



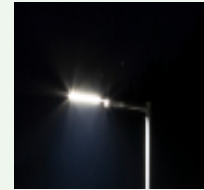
Mercury Vapor (MV)

- ❖ Began replacing incandescent bulbs in 1950s.
- ❖ **Efficacy:** 40-60 L/W,
- ❖ **Lifespan:** Up to 24,000 Hours
- ❖ **Color Rendering Index (CRI):** 15-50
- ❖ FDA: UV Radiation exposure possible.
- ❖ Hazardous Waste



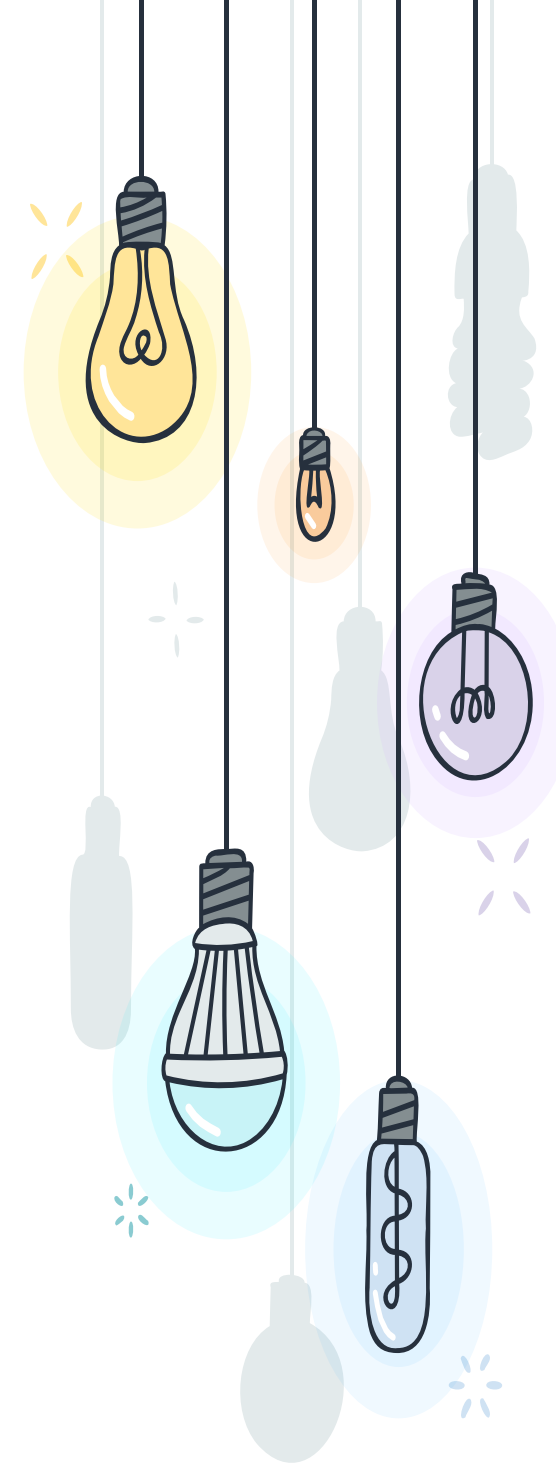
High Pressure Sodium (HPS)

- ❖ Began replacing Mercury Vapor bulbs in 1980s and 1990s.
- ❖ **Efficacy:** 70-140 L/W
- ❖ **Lifespan:** Up to 40,000 Hours
- ❖ **Color Rendering Index (CRI):** 22-30
- ❖ Hazardous Waste (Mercury)



Light Emitting Diodes (LED)

- ❖ Began replacing High Pressure Sodium (HPS) bulbs in 2010s
- ❖ **Efficacy:** 114-160 L/W
- ❖ **Lifespan:** Up to 100,000 Hours
- ❖ **Color Rendering Index (CRI):** 65-95
- ❖ Not considered Hazardous Waste



PNM or City Streetlights?



City: 2,057

**PNM is responsible for
Maintenance**

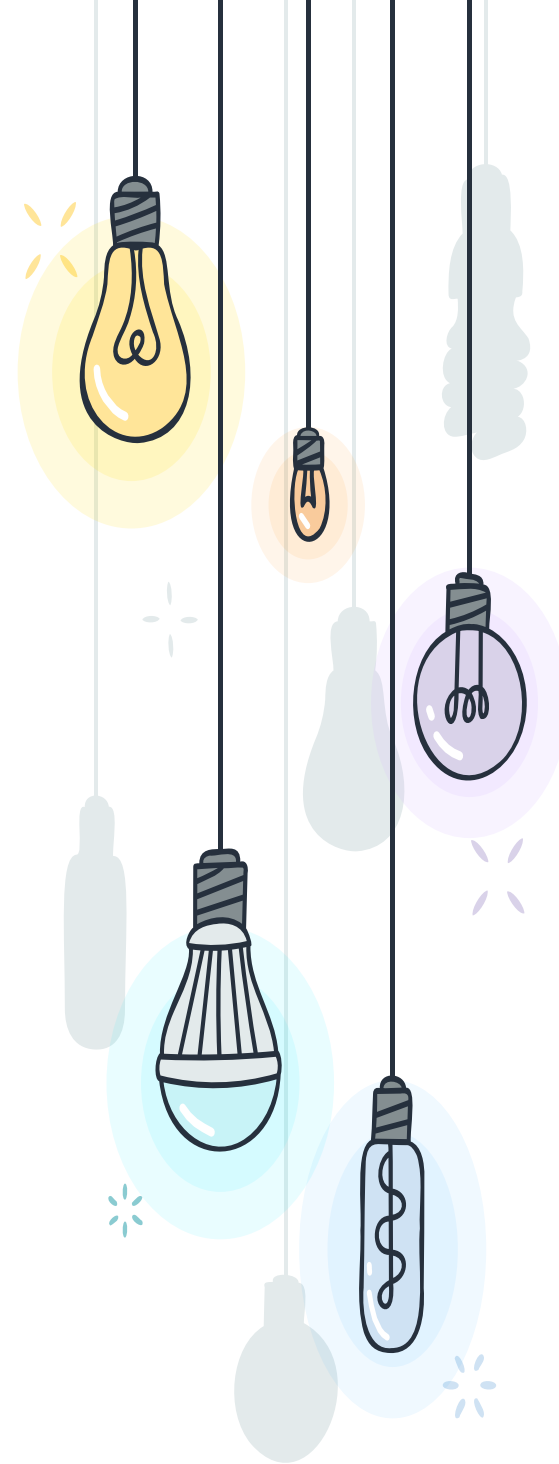
**Streetlights are Located on
Electric Poles**



**City-Owned Streetlights in
City: 3,499**

**City Contracts Dalkia for
Maintenance**

**Poles are Decorative or
NMDOT Standard**

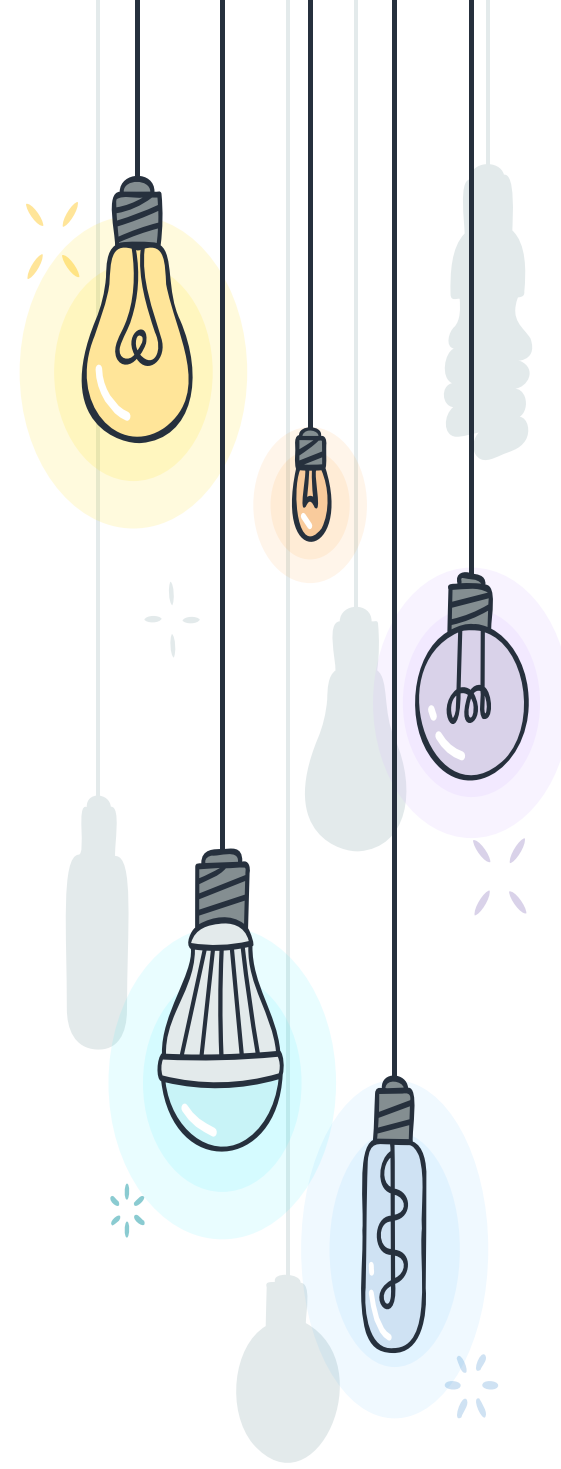


PNM LED Conversions



**City of Albuquerque:
11,000 streetlights
converted in 2019**

**City of Las Vegas (NM):
1,000 streetlights
converted in 2023**



City-Owned Conversion History

February
2021

City contracted with Dalkia Energy Solutions to convert 3,500 city-owned streetlights to LEDs

May 2021

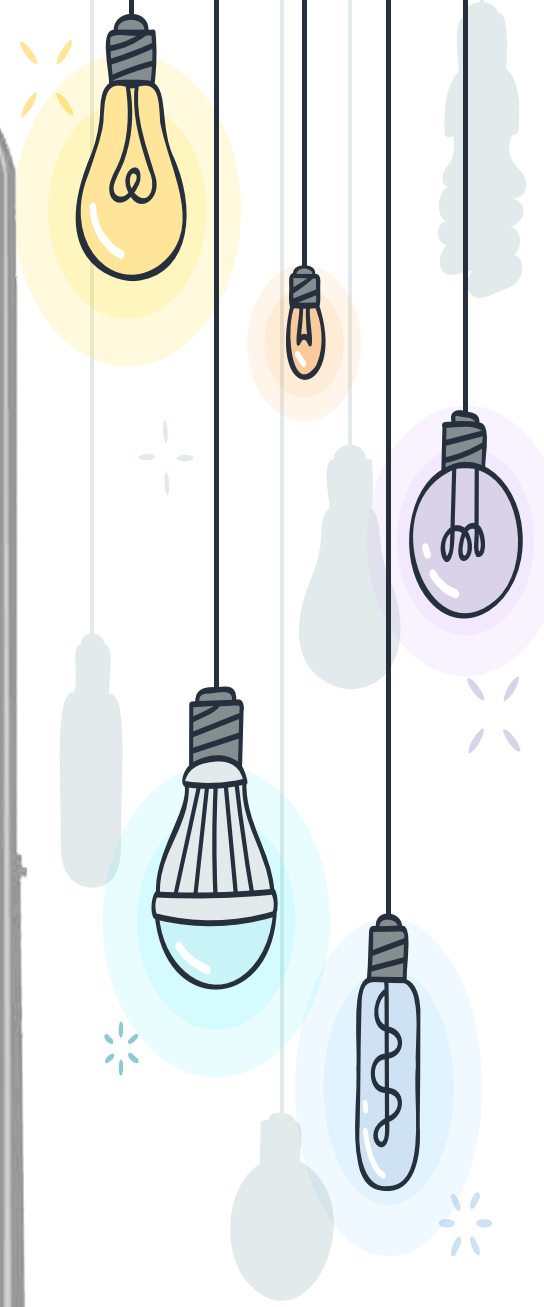
Governing Body approved community-guided lighting standards
International Dark Sky Association supported design standards

October
2021

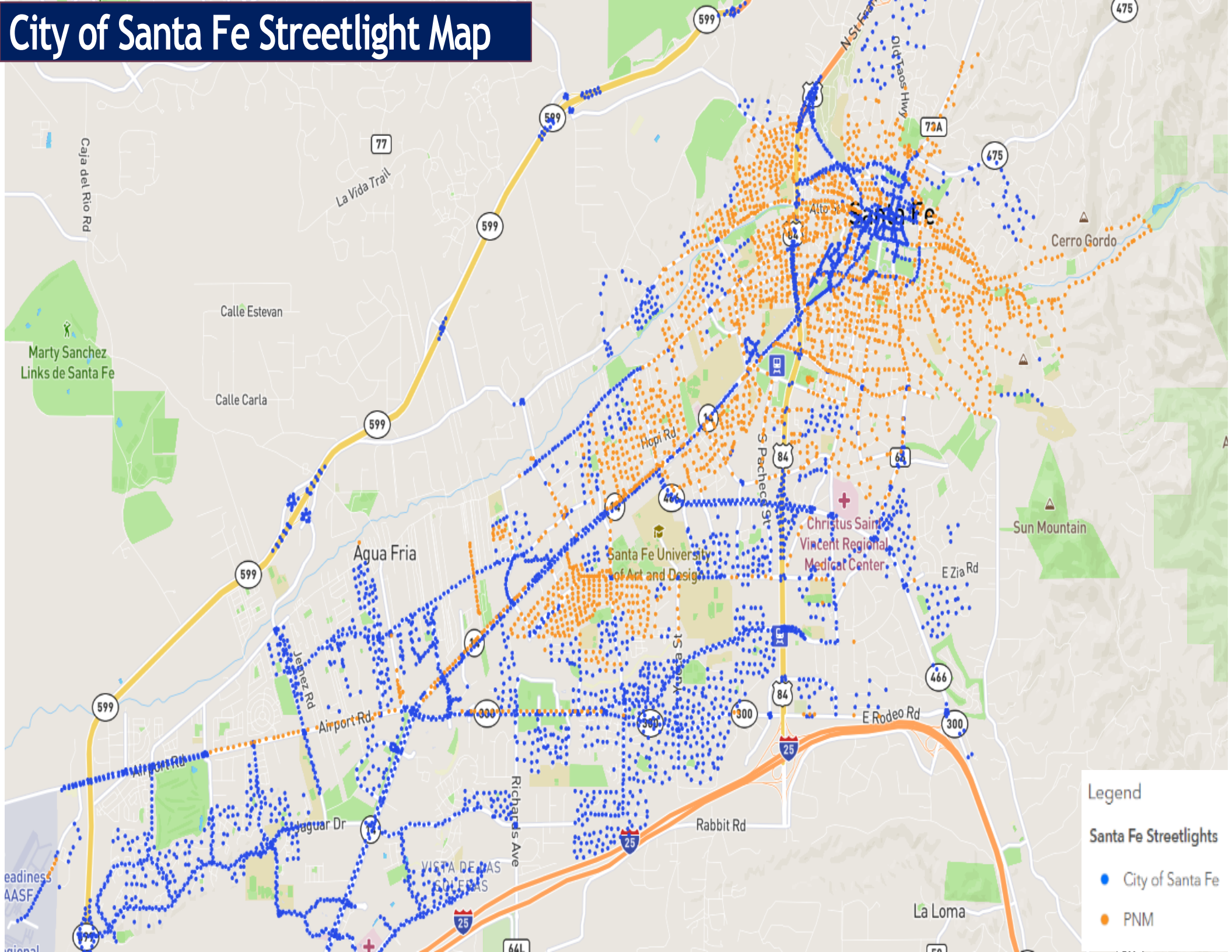
Dalkia Energy Solutions began converting streetlights to LEDs.

March 2022

Dalkia Energy Solutions completed LED conversion.



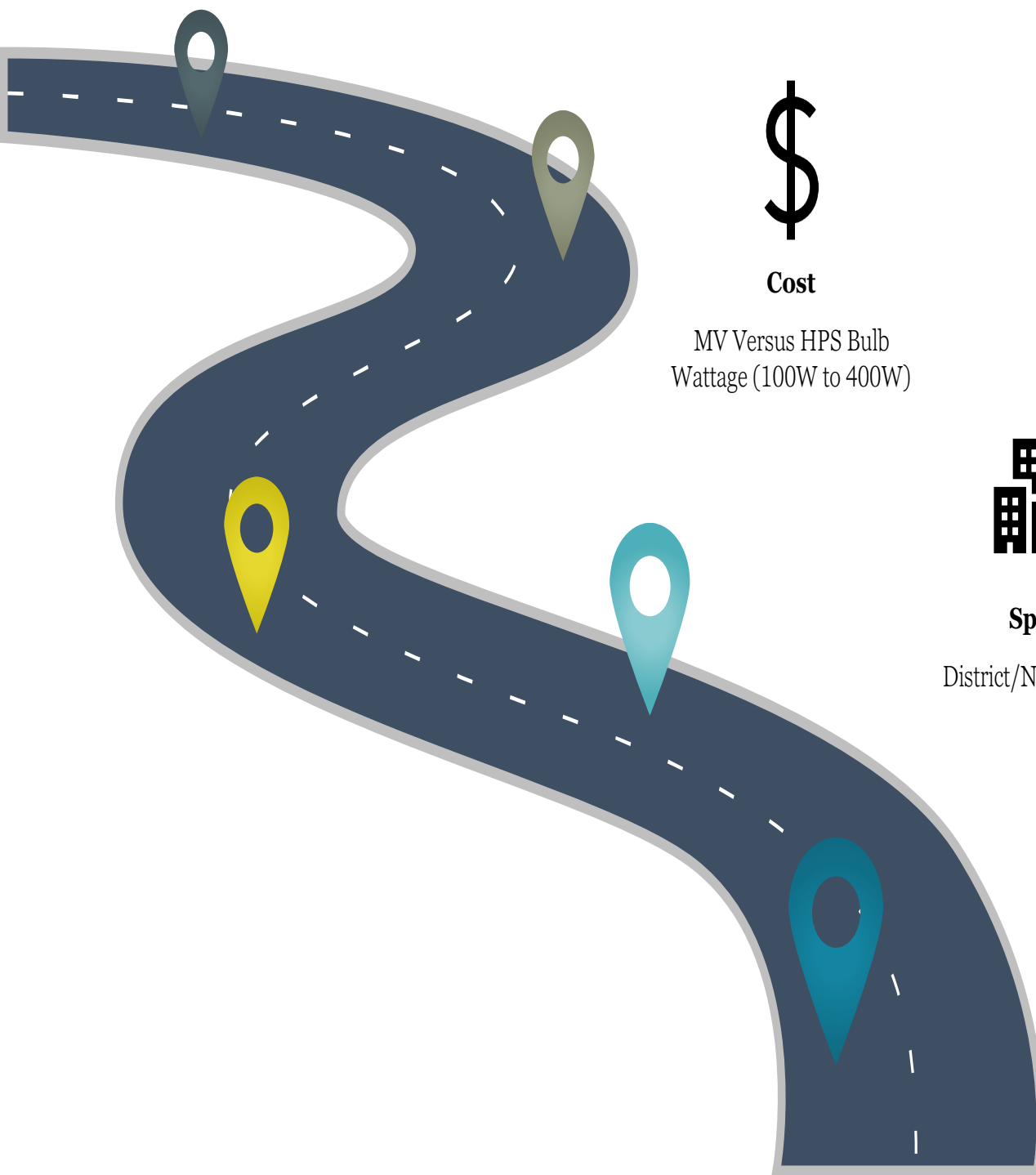
City of Santa Fe Streetlight Map



Legend

- Santa Fe Streetlights
- City of Santa Fe
- PNM

Conversion Criteria



Cost

MV Versus HPS Bulb
Wattage (100W to 400W)



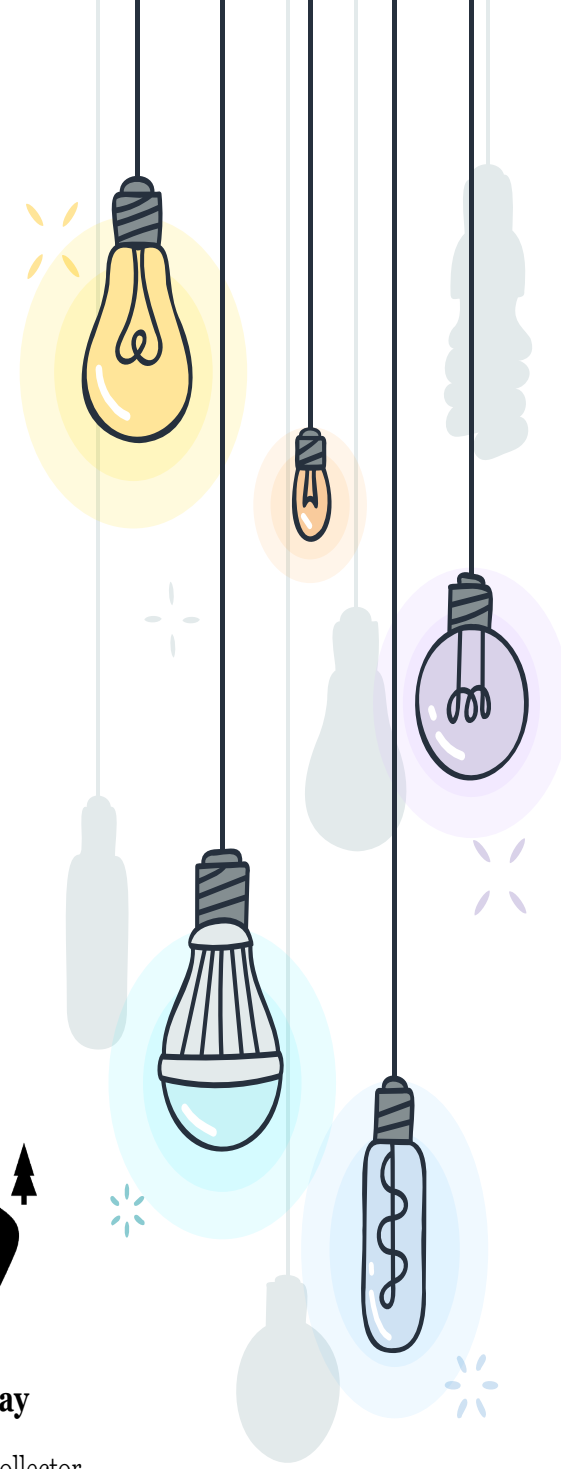
Spatial

District/Neighborhood

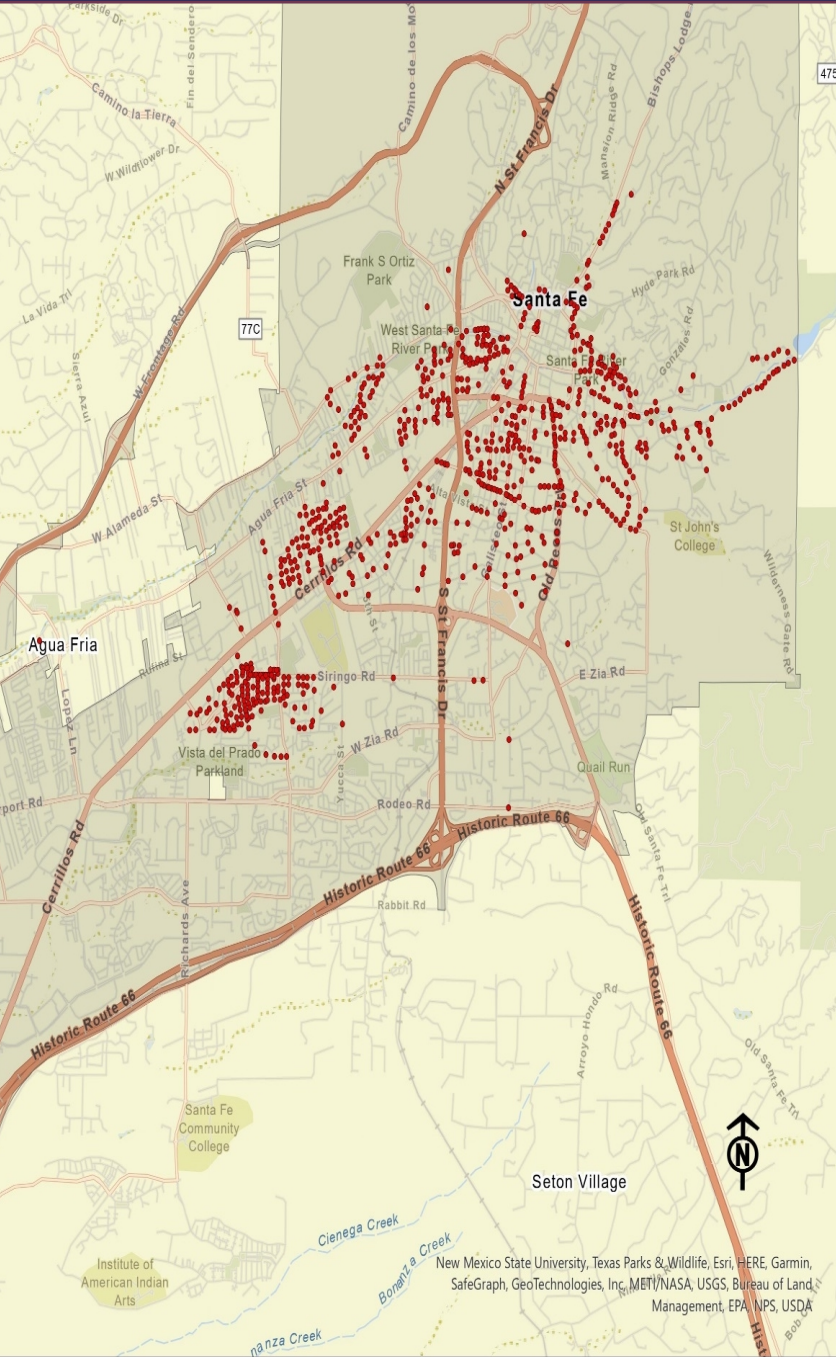


Roadway

Residential, Collector,
Arterial



Conversion Type: Mercury Vapor



PNM Owned 175w Streetlights

Streetlight (Count 837)
SF_City Limits

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Mercury Vapor (MV) Streetlights:

CCT Range:

3200K-6800K for MV

2000K-2200K for HPS

City Standards:

2700K for residential streets

3000K for other roadways

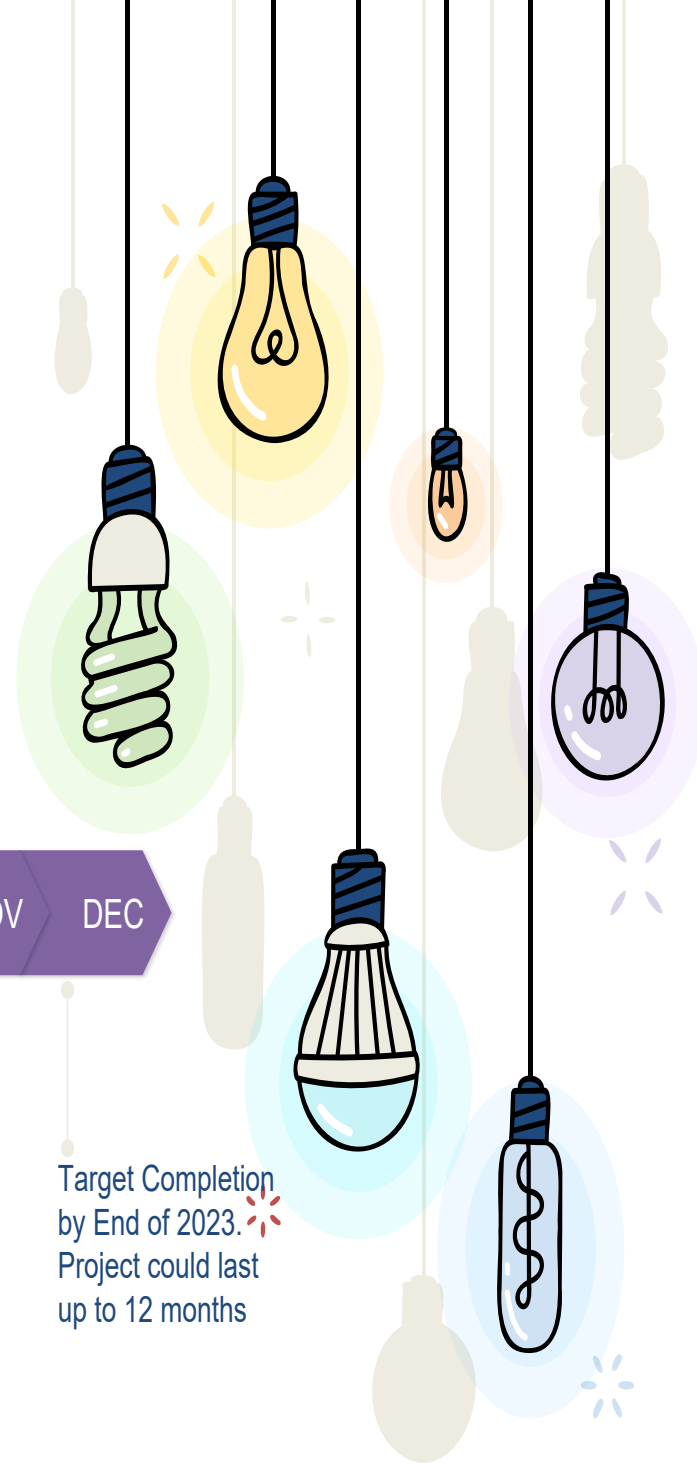
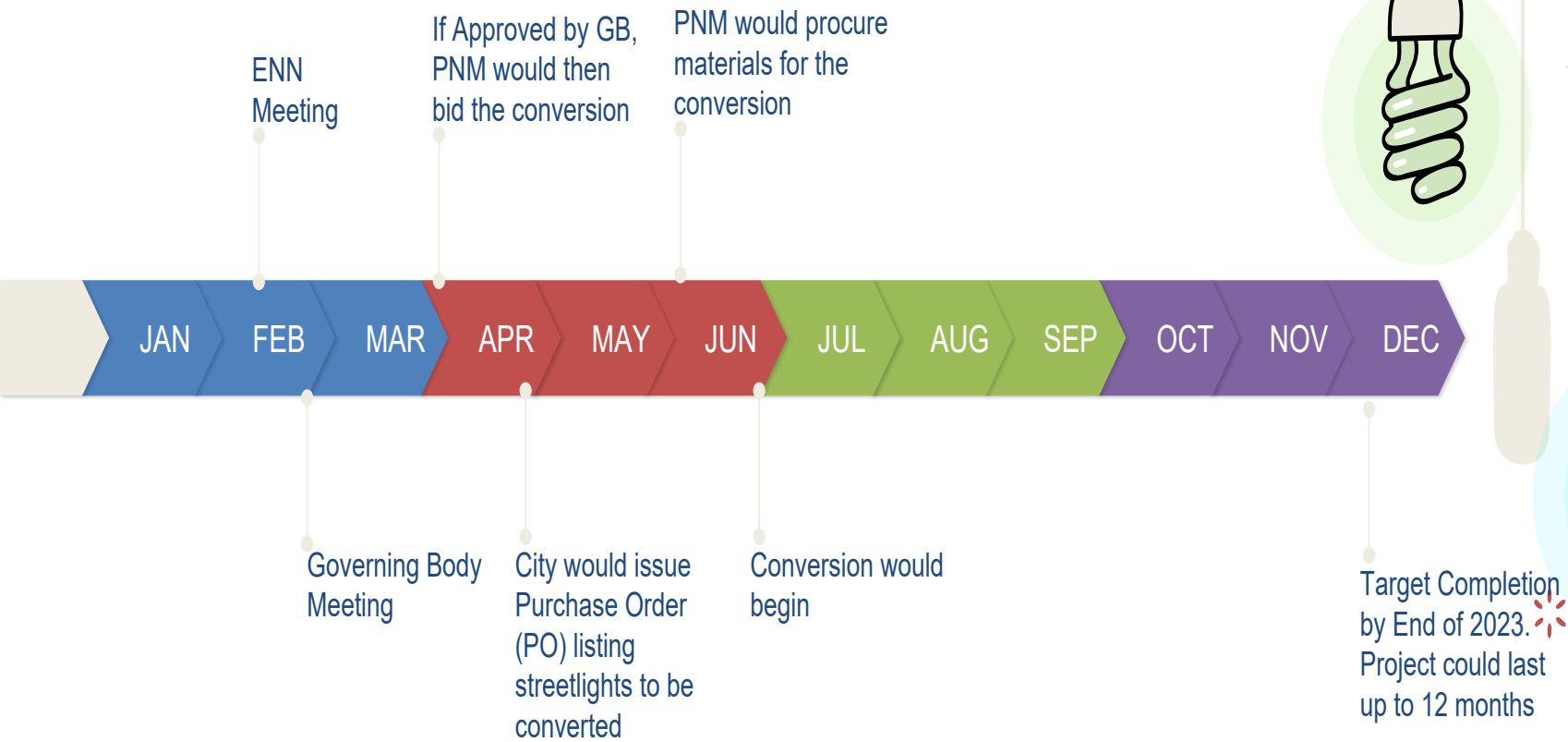
PNM Cost Per Streetlight:

MV 175W (Residential): \$14.14 per month

HPS 100W (Residential): \$12.02 per month

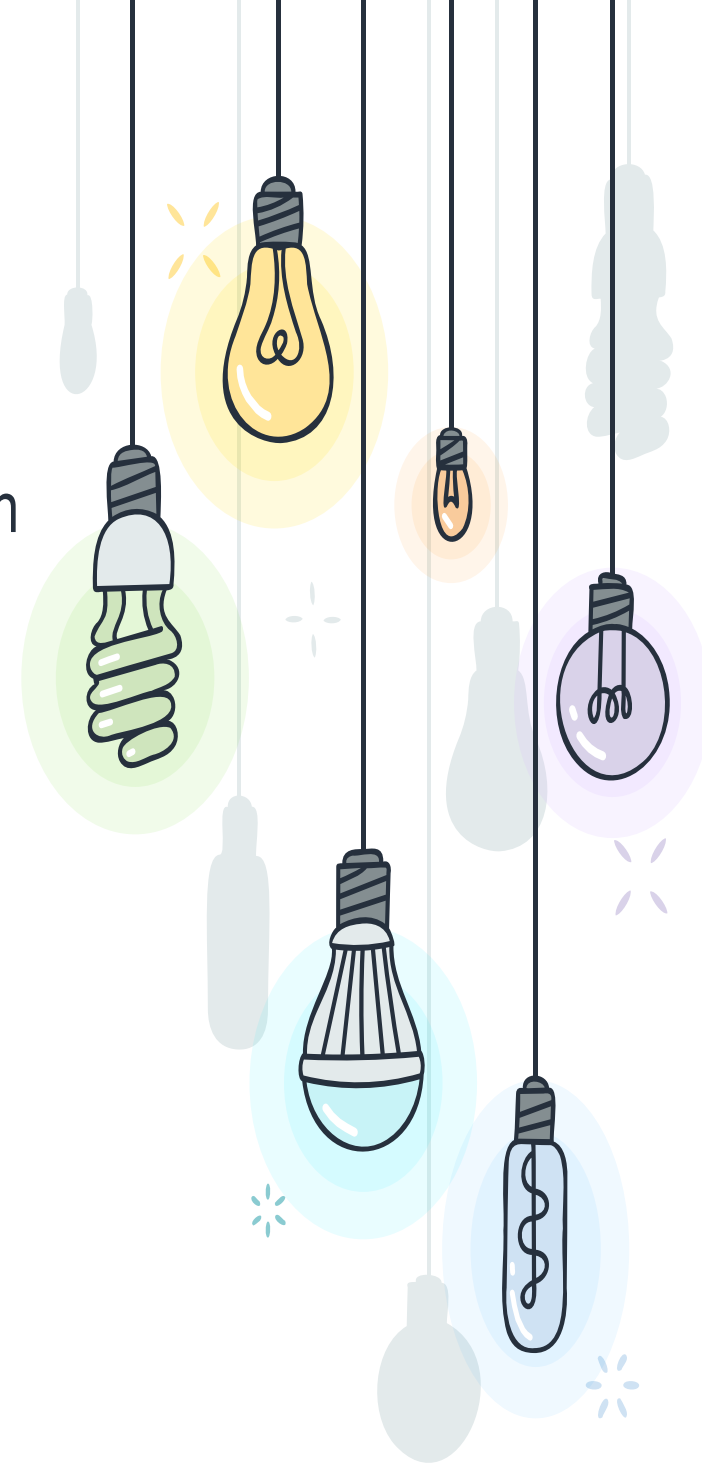


* Estimated Timeline



* Project Summary

- + If approved, over 4,500 out of 5,500 streetlights in the City would be converted to LEDs.
- + For remaining streetlights, PNM would convert to LEDs when a streetlight burns out.
- + Public Works lighting budget can fund additional conversions in batches in future years.



Conversion Website:

Map: Will my streetlight be converted?

LEDs: Learn about the community-guided lighting principles

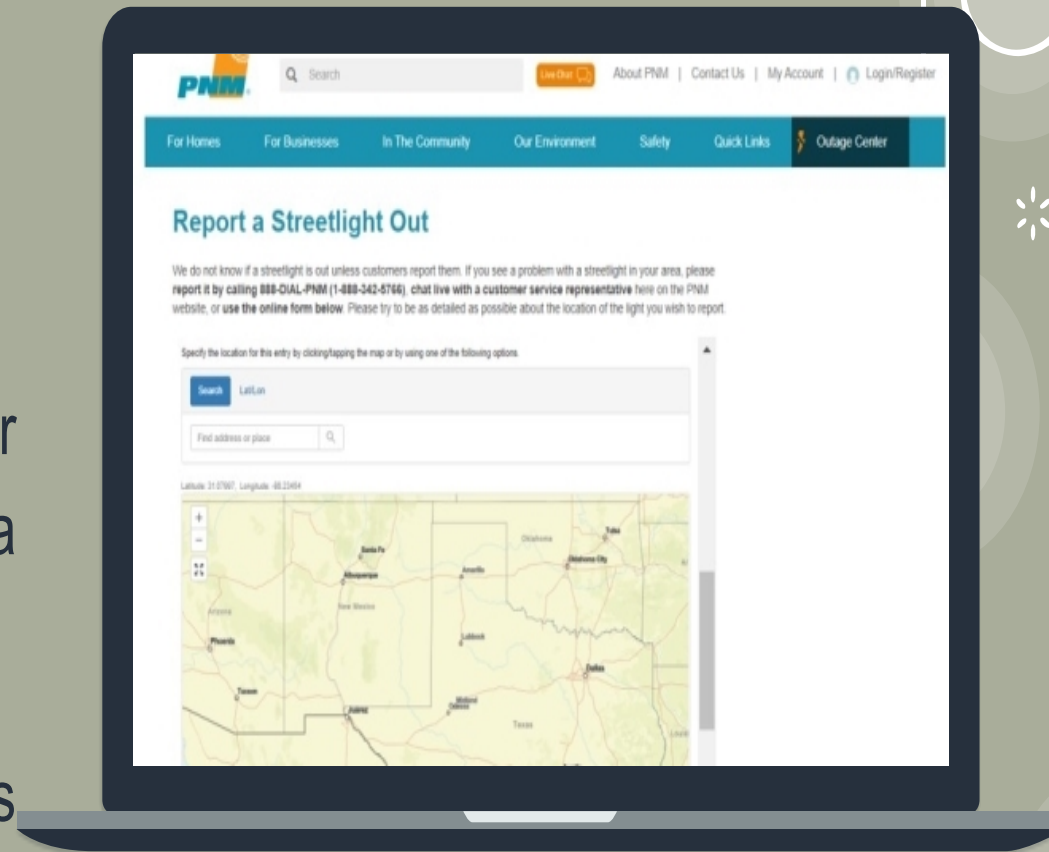


santafe.dalkiasolutions.com

PNM Website

Report an Outage: Enter an address and select a streetlight

FAQs: Common questions will be answered



pnm.com/streetlights

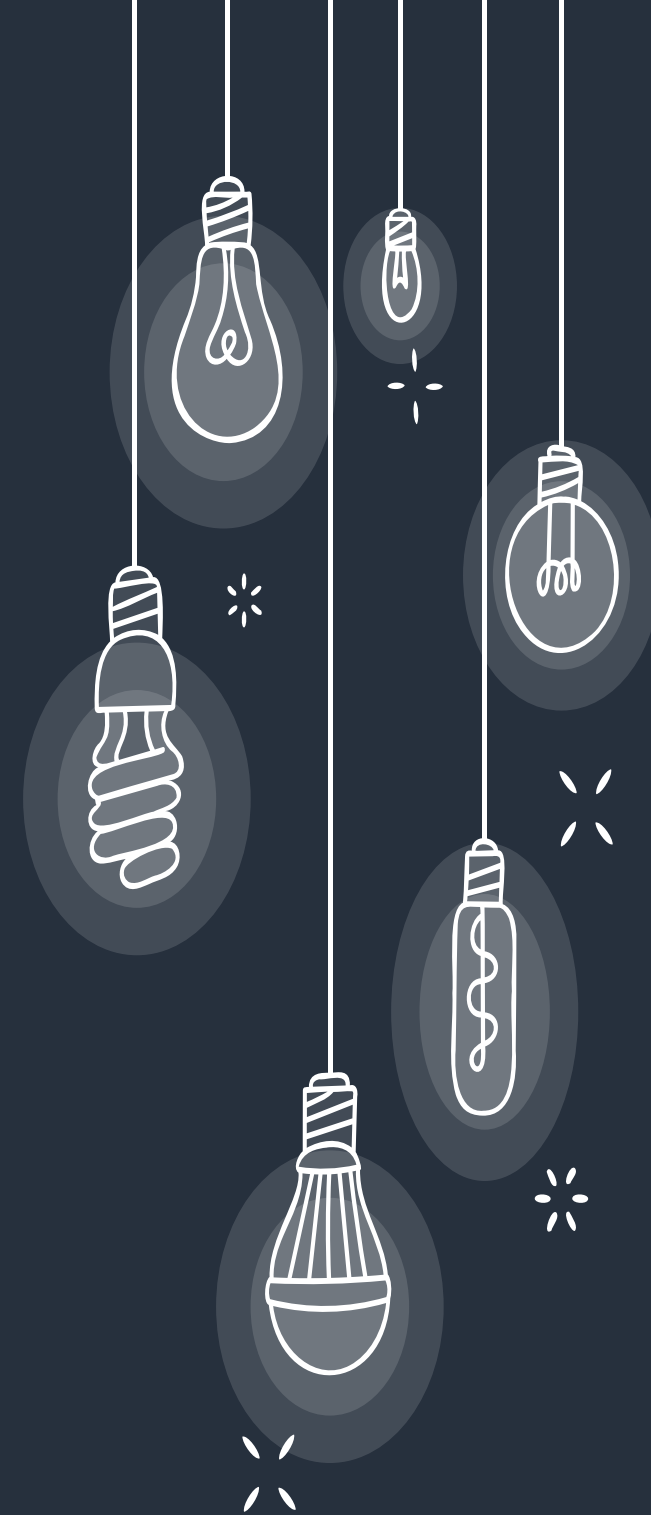
Questions/Comments

Online Attendees:

- + Type questions into Q&A icons
- + Raise your hand to speak and host will unmute you

Phone Attendees:

- + Host will ask if you want to speak



**LED Streetlight Conversion Project
Early Neighborhood Notification (ENN) Meeting**

Virtual Meeting to Be Held at 6 p.m. Thursday, February 22, 2024

The City of Santa Fe's Public Works Department will host a virtual Early Neighborhood Notification (ENN) meeting to provide information on the upcoming conversion of around 1,000 streetlights to energy-efficient LEDs. The meeting will take place at 6 p.m. on Thursday, February 22, via Zoom.

The City is preparing to enter the next phase of its LED conversion project, which will convert around half of the 2,057 PNM-owned streetlights on wooden poles within the City. The meeting will include a presentation on the project from Public Works and PNM representatives, followed by a Q&A. Attendees will have two minutes per question and will be limited to one question each until all present have had the opportunity to speak at least once.

In February 2021, the Governing Body approved the energy savings contract and in May 2021, the community approved the new lighting design for the LED conversion project. The first phase of the conversion took place on City-owned streetlights and cost \$2.5M; the work was completed in May 2022. The conversion has resulted in a \$250,000 per year savings on the City's electricity bill and 2.5 million kilowatt hours in energy savings per year.

Information on how to participate in the meeting via Zoom is available on the City of Santa Fe's PrimeGov meeting portal at <https://santafe.primegov.com/public/portal>. If you cannot attend this meeting, you can submit a written public comment by email (mrdalmolin@santafenm.gov), or by U.S. Postal Service (City of Santa Fe, ATTN: Michael Dalmolin, 1142 Siler Road, Building A, Santa Fe, NM 87507). Please include your full name and address. To be included in the official record and considered at the meeting, written public comment must be received no later than February 19, 2024.