



CITY OF MARSHALL

COMMISSION AGENDA INFORMATION SHEET:

MEETING DATE: October 27, 2016

PROJECT: Consider a report regarding conversion of street lights to LED lighting. (Public Services Director)

DESCRIPTION:

Initiated by an investigation request from Commissioner Gloria Moon two years ago, we began a program of replacing City owned street lights with more energy efficient and longer lasting LED street lighting fixtures. As a reminder, with the exception of the street lights located on the traffic light poles at highway intersections on Highway 59 (TxDOT responsibility), the City owns and is responsible for the electric bill and maintenance of 178 street lights on Highway 59, from Highway 43 North, southward to Interstate 20. We also own and maintain all of the “antique” street lights in the downtown business district.

At this point, cities can convert to LED street lighting, but only if the lights are metered separately, because the Texas Public Utility Commission (PUC) still has not set a standard billing rate for LED lights as they have for regular street lights. Until the PUC sets a uniform rate for LED street lighting, we will be limited to converting street lights which can be metered. The industry standard pay-back for converting to LED lighting is approximately 2 to 2-1/2 years, if you convert from high pressure sodium (HPS).

In late 2015, we began replacing bad street light fixtures on Highway 59 with new LED technology fixtures (bright white lighting), rather than re-installing old technology HPS lights (yellow type lighting). If an HPS bulb goes out, we replace it with a HPS bulb; but normally it's the fixture that goes bad because of their age. When an entire street light fixture goes bad, we replace the old fixture with a new LED fixture, which costs approximately \$640; the cost of an old technology HPS fixture is approximately \$618 (just \$22 difference).

Over the last year, we have replaced fourteen (14) old HPS street lights with new LED fixtures. You can easily notice the LED lights on Highway 59, because they put out a bright white light – it’s obvious when you are looking for the difference in the lighting. Bottom line, we are currently replacing the old HPS lights on Highway 59 through attrition and expect to have them all replaced in five or six years, at no real added expense to our budget.

COST:

N/A – report.

FUNDING:

Acct. Name & No
N/A

Original Budget
N/A

RECOMMENDED CITY COMMISSION ACTION:

Consider a report regarding conversion of street lights to LED lighting.

CITY CONTACT: J. C. Hughes, Public Services Director

ATTACHMENTS:

N/A

Cc: File

Better Lighting Using Less Energy

Leotek Electronics USA presents the GreenCobra™ LED street light - enabling cities to achieve significant energy savings AND substantially improve the color and uniformity of their outdoor lighting.

The pictures below tell the story of the GreenCobra™. Traditional High Pressure Sodium "Cobra Head" style street lights (shown on the left) dump too much yellow light near the pole and spill excessive light behind the pole into neighbor's yards and windows. This is wasted light and wasted energy. At the same time, there are very dark areas in between the poles that can create very hazardous conditions.

The picture on the right shows the same street illuminated with the Leotek LED GreenCobra™ units. Notice that the light is much more uniform without either the wasted light below the pole or the dark spots in between. Also, most people find the crisp "white light" produced by the LEDs to greatly improve visibility and make it easier to clearly identify colors and details.

Alameda, California



Before

70W HPS Drop Glass Cobra Heads
System Power - 95 Watts



After

40 LED Leotek GreenCobra™
System Power - 47 Watts

High performance LEDs and precision optical systems:

- Eliminate hazardous dark spots between poles
- Substantially reduce wasteful dumps of light directly below the street light.
- Shield unwanted light from trespassing into residential windows
- Create a highly uniform white light on the roadway enhancing night time visibility
- Minimize direct uplift from the luminaire AND the reflected light from the roadway which contributes to urban sky glow.