

Review Southern California Edison (SCE) Streetlight Valuation and Acquisition Process, and Discuss Option to Retrofit SCE-Owned Street Lights

Sona Coffee, Environmental Programs Manager
City Council Meeting
September 20, 2016



Presentation Agenda

- ▶ Streetlight Background
- ▶ Three Options to Explore:
 1. SCE Streetlight Purchase
 2. Streetlight Retrofit to LED
 3. Participation in SCE Option-E program
- ▶ Revenue Generation
- ▶ City Council Discussion & Direction



Streetlight Background

- ▶ 1,900 streetlights in the City
 - Most use high pressure sodium (not energy efficient or easy to maintain)
- ▶ City can purchase approx. 900 streetlights from SCE
- ▶ Goal is to retrofit to LEDs to reduce energy consumption and maintenance needs
- ▶ July 2015: Following 6/2015 study session, City Council approved \$10,000 to SCE to conduct streetlight valuation
- ▶ SCE Valuation Summary (Attachment 1) estimates a purchase cost of \$711,911; further analysis shows this cost could be approximately \$813,738



3.

Three Options to Explore

1. Purchase eligible SCE-owned streetlights (approximately 800-900)
2. Retrofit eligible streetlights to LED technology
3. Participate in SCE's Option-E financing to retrofit non-sellable SCE-owned streetlights to LEDs (approximately 900)



4.

1. Purchase Eligible SCE-Owned Streetlights

Estimated Purchase Cost Between \$711,911 - \$813,738
(depending on streetlight valuation)

Streetlights would switch from the higher "LS-1" rate to the "LS-2" rate
(There will be no change in energy consumption at this stage)

Immediate cost savings = \$87,558/year

City will take on maintenance of streetlights

Added Maintenance Costs = \$32,482

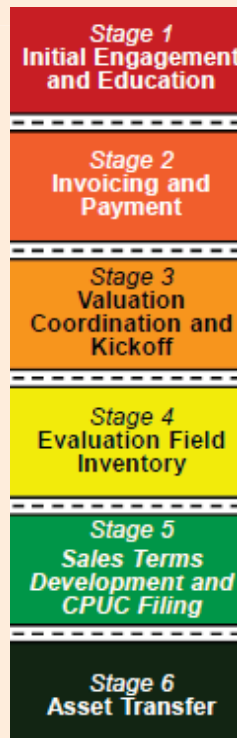
Expected cost savings of \$55,000/year is associated with this ownership transfer and change in utility rate

Approximate 15 year payback on the investment

5.

Streetlight Acquisition Process

- ▶ Valuation was received June 2016, starting the 1-year time frame to complete the streetlight acquisition
- ▶ If City Council decides to move forward SCE will prepare a Sales Terms agreement and file with the CA Public Utilities Commission (CPUC)



6.

2. Retrofit Eligible Streetlights to LED Technology

Goal: Retrofit Streetlights to LED Technology to Reduce Energy Consumption

- LED retrofit costs approximately \$380,000 (net cost after incentives)
- Savings of \$42,000/year in reduced maintenance and electricity costs
- Annual CO2 emissions savings of 92 metric tons
- This measure has an estimated 11-year lifecycle payback



7.

Benefits & Impacts of LED Retrofit

Benefits of LED Retrofit:

Cost Reduction
(electricity and maintenance)

Greenhouse Gas Emission Reduction

Improved Visibility

Potential Impacts:

- Discomfort/glare
- Damage to Retina and
- Impact on Circadian Rhythmicity

How to Address Potential Impacts:

- Cooler and dimmer LEDs are preferable in residential areas
- Shielding will minimize glare and other impacts to human and environmental health



8.

3. Participate in Option-E to Retrofit Non-Sellable SCE-Owned Streetlights

- Streetlights that remain under SCE ownership can be converted to LEDs to reduce energy consumption, and electricity costs paid by the City
- Annual 60 metric ton reduction of CO2 emissions
- After the 20-year, interest-free, repayment, the City receives cost-savings of approximately \$30,000/year

Option-E Program Payment:

20-year on-bill payment of
\$326.40/streetlight

-- OR --

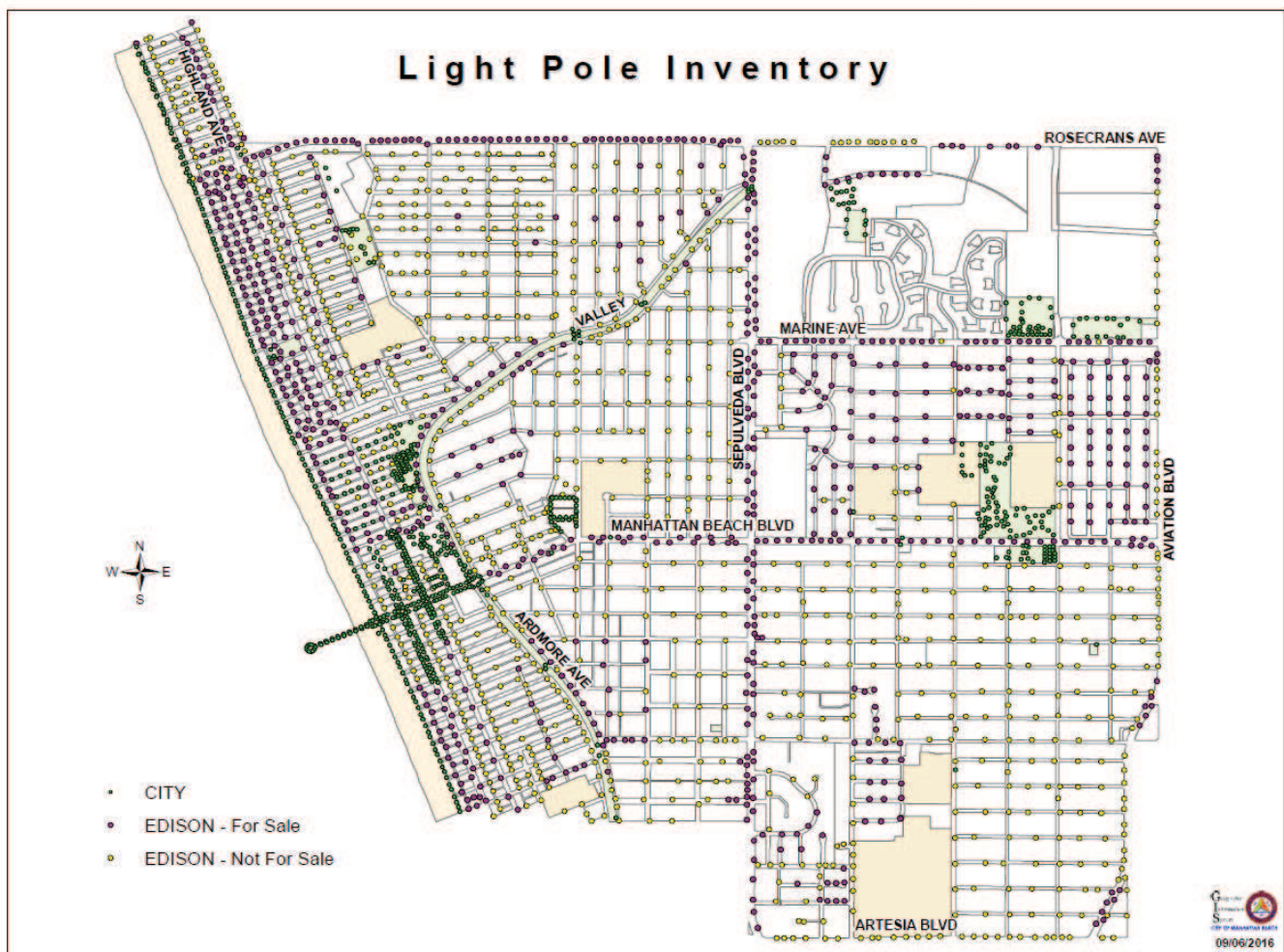
Upfront, lump sum payment; could range
between \$400-\$900/streetlight

SCE will limit Option-E projects due to capital constraints. Local government customers that are interested in participating will be placed in queue after signing the agreement for service

Smart Poles & Revenue Generation

- ▶ Revenue generation possibilities associated with purchasing streetlights:
 - Wi-Fi
 - Cameras
 - Mobile Service (Centralizing Micro Cell Technology)
 - Traffic Data
 - Lighting Controls
 - Utility Metering
 - Temperature & Air Quality Sensors
 - Gunshot Detection
- ▶ “Smart pole” features are estimated to bring in an annual revenue of over \$330,000





City Council Direction Needed

- ▶ Staff seeks City Council approval to:
 - Participate in the streetlight acquisition process with SCE
 - Begin the RFP process to retrofit the newly purchased streetlights to LED technology to reduce energy consumption and electricity-related costs
 - Retrofit the remaining SCE-owned lights through the Option-E program



Discussion & Questions

13.



Additional Slides



Policy Alternative #1

Forego Participation in SCE Streetlight Purchase Program

- ▶ **Pros:** The City would avoid the upfront cost of approximately \$711,911 to \$813,738 in order to complete the streetlight purchase from SCE
- ▶ **Cons:** The City would not obtain ownership of the eligible streetlights, and would not see the benefits of a reduced utility rate, potential revenue generation or any energy savings and carbon reductions from future conversion of the streetlights to LED technology.



15.

Policy Alternative #2

Participate in SCE's Option-E Program on a Citywide Scale

- ▶ **Pros:** The City would avoid the upfront cost required to complete the streetlight purchase from SCE. The City would benefit from reduced energy consumption and carbon reductions.
- ▶ **Cons:** The City would not see the benefits of potential revenue generation. The lights would remain under the higher LS-1 utility rate



16.