WRCOG Regional Streetlight Program
Regional Streetlight Program Objectives

1. Assistance with streetlight system purchase agreement from SCE
2. Identify and facilitate financing for acquisition and retrofit
3. Retrofit all streetlamps to LED
4. Regional operations / maintenance services
5. Energy consumption reductions
6. Enable revenue generating opportunities and “smart city” applications
7. Reduce local and statewide energy and greenhouse gas emissions
## Regional Status

<table>
<thead>
<tr>
<th>City</th>
<th>City approves agreement to purchase streetlights</th>
<th>City approves amendment to PSA</th>
<th>SCE executes agreement</th>
<th>SCE sends to CPUC</th>
<th>CPUC approves streetlight transfer</th>
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<tr>
<td>Eastvale</td>
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</tbody>
</table>

**Total Streetlights to be acquired from SCE (within western Riverside County): 47,753**

**20-year regional net savings = $59.6 million ($2 - $11 million per jurisdiction)**
Program to-date

• December 2014
  - WRCOG directed to develop Regional Streetlight Program

• 2015
  - Support jurisdictions assess the feasibility of streetlight ownership

• 2016
  - Implement Streetlight Demonstration Area; Develop streetlight design standards; Identify financing opportunity (Banc of America)

• 2017
  - 11 Jurisdictions approve purchasing streetlights from SCE; Identify retrofit and operations & maintenance service provider (Siemens);

• 2018
  - Identify LED fixture(s) for retrofit; Transition and retrofit Streetlights.
Financing Structure

- March 2016: Released RFB for financing
- Banc of America Leasing & Capital, LLC
- Term: 15 years, plus installation of up to 15 months
- Finance amount: Amount adequate to purchase and retrofit LED all streetlights and any reasonable related soft costs, plus 5% contingency
- Payments: Semi-annual payments
- Revenue Generation: Unrestricted by Bank
Retrofit, O&M service provider

- March 2017: WRCOG released an RFP to identify a vendor that can provide cost-effective regional acquisition cut-over, retrofit, operation and maintenance with increased level of service
- Siemens: cost competitive, achieved economies of scale, strong references, and experience working through streetlight acquisition and transition processes
- Scope of work includes:
  - Installation of LED lights, routine maintenance, quarterly night checks, installation of house-side shields, LED warranty management, installation of streetlight pole tags, and photocell, call center & customer service web portal administration.
Siemens ITS Service - Unmatched local customer presence

LED Streetlight Conversions
- >200,000 nationwide
- >30,000 in Southern California

Nationwide Maintenance Contracts
- 10,000 traffic signalized intersections
- 400,000 streetlights

Southern California Maintenance Contracts
- 105 Traffic Signal including ~25,000 safety lights
- 11 Streetlight supporting 75,000 Streetlights
Maintenance technology enabling success

Key Benefits

• Work order management
• Outage reporting
• Standard offering
  
• Service Request Management including time stamping and dispatching.

• Agency Information Management, including contacts, billing information, etc.

• Inventory control, including real-time tracking of available and installed equipment.

• Report Generation, including invoices, materials use, etc.
Streetlight Demonstration Area

- Demonstration Area – City of Hemet
  - 12 Outdoor LED lighting manufacturers with over 150 unique LED fixtures
  - WRCOG conducted 5 guided tours: Late 2016, Early 2017
    - Partnered with local transit agency
  - Participation from 35+ agencies
    - Over 120 attendees (elected officials, public safety officials, city staff, residents, professional and hobby astronomers)
  - Participants provided feedback via electronic and physical survey’s to help narrow down preferred lighting fixtures to implement in communities
Streetlight Demonstration Area findings

- Highest rated scene; 2700K signalized intersection.
- Amber LED and yellow filtered LED were the least preferred of the LED technologies by most group.
  - Public Safety staff preferred white light sources over amber color lights.
- Highest rated residential lights included house side shields. Reinforcing the idea that people do not want light trespass on their lawns, and windows.
LED Fixture Selection – Request for Quotation

- September 2017: WRCOG released an RFQ to solicit suppliers interested in providing Western Riverside County jurisdictions with LED lights for replacement of jurisdiction-owned streetlights
- Board recommendation (no executed contract, yet)
  - California Electric Supply / General Electric (GE)
- Meets jurisdictions existing standards, Mt. Palomar and American Medical Association recommendations
- 43% more cost effective than conservative estimates
- 61-69% more energy efficient
- Consistently meets and exceeds existing lighting conditions
LED Fixture Selection Exercise

- Sample existing system on Bellota
  - 55W; Low-Pressure sodium (LPS)
- Request proposers to recommend their lighting fixture to match and/or enhance the existing lighting on this system. Photometrics required.
What’s next for us?

As of December 2017, a total of 12 million small cells have been deployed worldwide, with forecasts as high as 70 million by the year 2025.
Questions?

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