

# Aggregated Energy Efficiency Measures

## Street Light Improvement Initiative

Street lighting constitutes a significant portion of a municipal government's electricity costs and greenhouse gas emissions. Upgrading street lighting systems by replacing existing equipment with more energy efficient technologies presents a compelling opportunity for municipalities to reduce energy bills, maintenance costs and greenhouse gas emissions while enhancing the overall performance and efficiency of lighting systems.

SoCalREC's **Street Light Improvement Initiative** helps municipalities achieve high impact savings from energy efficient street lighting upgrades by offering free assistance to:

### 1 Identify Savings Opportunities and Build Project Support

SoCalREC provides local governments with a financial feasibility analysis for street lighting improvement projects. This preliminary report helps cities build their business case for projects by quantifying the estimated annual net savings, capital costs, expected rebates and other financial metrics that enable municipalities to make an informed decision.

### 2 Procure Services Through a Qualified Contractor

SoCalREC has competitively-selected a short list of pre-qualified contractors to provide **Street Lighting Upgrade** (LED or Induction) and **Street Lighting Conversion** (5kV series circuit lights) services to municipalities in the region through a Request for Qualifications (RFQ) solicitation that aligns with local government procurement guidelines. SoCalREC can support municipalities through the entire procurement process, including selecting a vendor, obtaining customized quotes, completing the utility rebate application, providing specifications and contractual language, and drafting a staff report to obtain project approval from the city's governing board.

### 3 Finance the Project

SoCalREC's Public Agency Master Lease Initiative offers flexible term financing for projects over \$250,000. Small projects can be aggregated to meet the minimum threshold.

## LED/Induction Lighting Benefits

- ✓ Energy savings between 35 - 70% by switching from high-intensity discharge (HID) to LED or induction lamps
- ✓ Longer life, lower maintenance costs
- ✓ Higher quality light output
- ✓ Instant-on with no run-up or re-strike delays
- ✓ Lower environmental footprint
- ✓ Opportunity to implement programmable controls



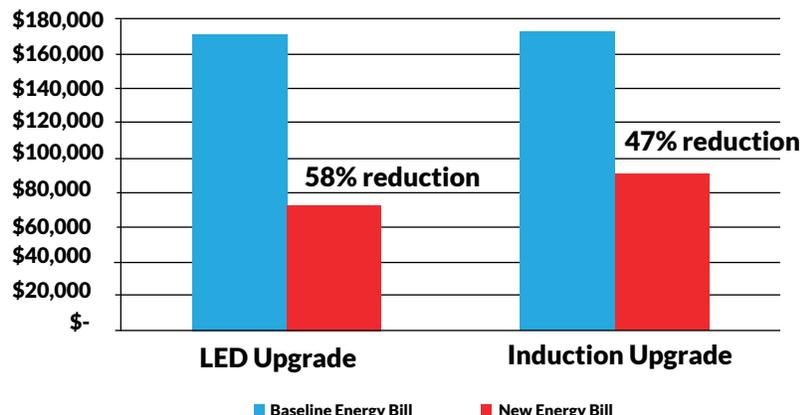
# Sample Financial Feasibility Analysis

Based on sample inventory of 4,097 city-owned street lights.

Project Summary:	LED Upgrade	Induction Upgrade
Project cost <sup>1</sup>	\$1,709,655	\$1,606,454
Utility rebate <sup>2</sup>	\$112,627	\$33,953
Expected energy savings (kWh)	1,407,833	1,131,767
% Bill cost reduction	58%	47%
Energy cost savings	\$99,731	\$80,174
O&M cost savings	\$98,328	\$98,328
Annual cost savings <sup>3</sup>	\$198,059	\$178,502
Simple payback period	8.1 years	8.8 years
Return on investment (ROI)	12%	11%

SoCalREC Master Lease Financing Option	LED Upgrade	Induction Upgrade
Annual cost savings	\$198,059	\$178,502
Annual lease payments <sup>4</sup>	\$151,410	\$142,270
<b>Net Annual Cash Flow</b>	<b>\$46,649</b>	<b>\$36,232</b>
<b>Net Present Value (NPV)<sup>5</sup></b>	<b>\$669,521</b>	<b>\$466,491</b>

## Expected Annual Energy Bill Reduction



### Notes:

- <sup>1</sup> Uses the lowest pricing estimate of three pre-qualified contractors on SoCalREC's short list for the given sample inventory.
- <sup>2</sup> Based on calculated annual energy savings. LGP cities can see a larger incentive based on their status in SCE's Energy Leader Partnership Program.
- <sup>3</sup> Estimated annual energy cost savings based on SCE rates (as of Jan. 2013). Assumes operations and maintenance (O&M) cost savings due to longer expected useful life of LED/induction products (i.e. avoided relamping costs) and O&M expenses of \$3.50/lamp/month for HPS lamps and \$1.50/lamp/month once upgraded to LED or induction.
- <sup>4</sup> Assumes SoCalREC master lease financing used to cover one-time project cost, plus 2% lease issuance fee, at 3.5% interest for 15 year term. Lease approval and terms are dependent on project and city's credit rating. Other financing options such as on-bill financing can be explored and/or combined.
- <sup>5</sup> Typically, any positive net present value (NPV>=0) indicates a worthwhile investment. NPV calculation with financing assumes no initial cash outlay through use of SoCalREC Public Agency Master Lease financing option, annual lease payments as calculated above, and annual savings conservatively held constant over 15-year period (i.e. no electricity rate or O&M cost escalations, which would generate greater future cost savings). Time period based on assumed LED/Induction useful life of approximately 15 years.

SoCalREC is an impartial and technology-neutral third party. The primary mission of SoCalREC is supporting local governments in achieving energy savings.

## Other offerings include:

- Public Agency Pool Pump Variable Frequency Drive (VFD) Initiative
- Enterprise Energy Management Information System (EEMIS)
- Public Agency Master Lease Initiative

# SoCalREC

TAKE ACTION

CONTACT US TODAY



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SOUTHERN CALIFORNIA REGIONAL ENERGY CENTER



The Southern California Regional Energy Center (SoCalREC) supports public agencies in achieving greater reductions in energy use by taking a regional approach to energy efficiency improvements and it is designed to complement SCE's existing Local Government Partnerships (LGP). SoCalREC was established by Los Angeles County and the City of Huntington Beach in collaboration with Southern California Edison and the U.S. Department of Energy. This program is funded in part by California utility ratepayers and administered by Southern California Edison under the auspices of the California Public Utility Commission.