Legistar # 090363
DISTRICT ALL

VILLAGE OF LOMBARD
REQUEST FOR BOARD OF TRUSTEES ACTION
For Inclusion on Board Agenda

_____	Resolution or Ordinance (Blue) _____*Waiver of First Requested*
_____	Recommendations of Boards, Commissions & Committees (Green)
X	Other Business (Pink)

TO: PRESIDENT AND BOARD OF TRUSTEES

FROM: David A. Hulseberg, Village Manager

DATE: June 9, 2009 (COW)(B of T) June 18, 2009

TITLE: Motion to Concur with Staff Recommendation of LED Streetlight Program for the Energy Efficiency and Conservation Block Grant

SUBMITTED BY: Carl Goldsmith, Director of Public Works
Timothy Sexton, Director of Finance

BACKGROUND/POLICY IMPLICATIONS:

Staff recommends that the Village Board concur with the recommendation to pursue the LED Streetlight Retrofit Program for the Energy Efficiency and Conservation Block Grant of $187,500 that the Village has been awarded. The application deadline for this grant is June 25, 2009.

Review (as necessary):
Village Attorney X_____ Date _____
Finance Director X_____ Date _____
Village Manager X_____ Date _____

NOTE: All materials must be submitted to and approved by the Village Manager's Office by 12:00 noon, Wednesday, prior to the Agenda Distribution.

To: David A. Hulseberg
Village Manager

From: Carl Goldsmith, Director of Public Works
Timothy Sexton, Director of Finance

Date: June 9, 2009

Subject: Energy Efficiency and Conservation Block Grant

On March 31, 2009, the Village was notified that we were awarded an Energy Efficiency and Conservation Block Grant (EECBG) in the amount of $187,500 as part of the American Recovery and Reinvestment Act of 2009. Since that time, staff has been evaluating projects that would qualify for this grant.

According to the grant application, the purpose of the EECBG Program is to assist eligible entities in creating and implementing strategies to:

- reduce fossil fuel emissions in a manner that is environmentally sustainable and, to the maximum extent practicable, maximizes benefits for local and regional communities; and
- reduce the total energy use of the eligible entities.

In accordance with these guidelines, staff recommends that the Village use the grant proceeds to pursue a LED Streetlight Retrofit Program over several blocks as a test of this technology (map of proposed area is attached). The retrofit program would involve changing **81** street lights to 100W LED street lights. The up-front cost for LED street lights is considerably more than the traditional street lights. However, the LED lights use considerably less electricity, resulting in significant savings in the long-term. As the grant program will cover the cost of retrofitting the street lights to LED's, the Village will benefit from lower electricity costs in the future.

The area selected for this program was chosen based upon several factors, including the following:

- Age and condition of current lighting system (poles are in acceptable condition)
- The desire to find a "break in systems" to ensure consistent lighting patterns
- Availability of retro-fit kit for the style of head

Based on staff's analysis (copy is attached), this program would have a payback period of just under five years without taking into account the grant paying for the upfront costs. Over a 15 year period, the net savings for the Village would be approximately $700,000, just by changing **81** street lights to LED's.

Therefore, staff recommends that the Village Board concur with the recommendation to pursue the LED Streetlight Retrofit Program for the Energy Efficiency and Conservation Block Grant of $187,500 that the Village has been awarded. The application deadline for this grant is June 25, 2009.

Village of Lombard
Cost-Benefit Analysis
LEDStreetlight Retrofit Program

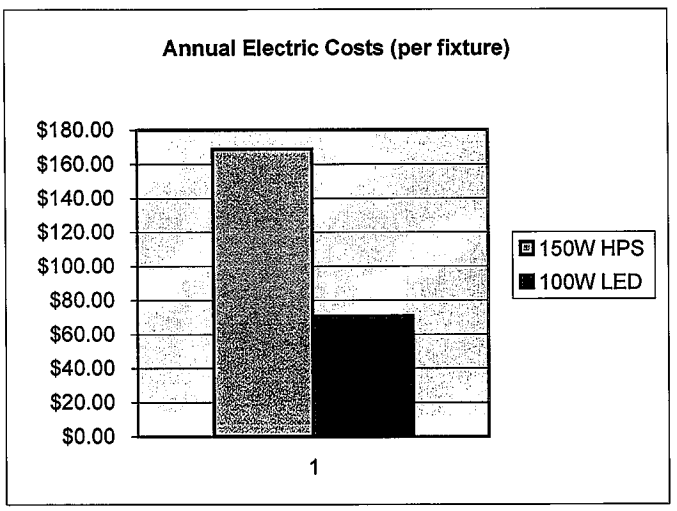
150W high pressure sodium vs. 100W LED street light

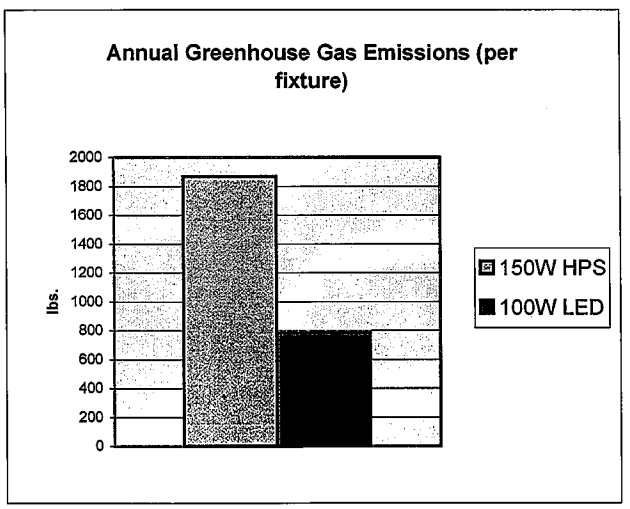
Assumptions

Average street lighting		4,000	hours per year
Electricty rate	$	0.14	per kwh
150W HPS purchase cost	$	25.00	
LED 120W cost	$	750.00	
HPS relamping cost	$	255.00	per light
Greenhouse gas emission		1.55	lb/kwh

Electricity

	150W HPS	*100W LED*
Power factor	0.83	0.95
Actual current draw	2.51	1.05
Annual electricity (kwh)	1204.82	505.26
Annual electricity cost	168.67	70.74
Annual greenhouse gas emission (lb.)	1867.471	783.153
Average product life (years)	3.00	15.00





Village of Lombard
Cost-Benefit Analysis
LED Streetlight Retrofit Program

15 Year Cost of Ownership Analysis

Year		HPS		LED
	1 $	448.67	$	1,075.74
	2 $	617.35	$	1,146.47
	3 $	786.02	$	1,217.21
	4 $	1,234.70	$	1,287.95
	5 $	1,403.37	$	1,358.69
	6 $	1,572.05	$	1,429.43
	7 $	2,020.72	$	1,500.17
	8 $	2,189.40	$	1,570.91
	9 $	2,358.07	$	1,641.65
	10 $	2,806.75	$	1,712.39
	11 $	2,975.42	$	1,783.13
	12 $	2,996.42	$	1,853.87
	13 $	3,445.10	$	1,924.61
	14 $	3,613.77	$	1,995.35
	15 $	3,782.45	$	2,066.09
Total Cost of Ownership (1 fixture)	$	32,250.28	$	23,563.70
Cost of Ownership (81 fixtures)	$	2,612,272.42	$	1,908,659.34
		15 Year Net Savings	***$***	***703,613.08***

Approximately 5 year Return-on-Investment

Village of Lombard
LED Change-Out Project

Phase I – [redacted]

Phase II – [redacted]