



Request for City Council Committee Action From the Department of Public Works

Date: January 8, 2007

To: Honorable Sandra Colvin Roy, Chair Transportation & Public Works Committee

Referral to: Honorable Paul Ostrow, Chair Ways & Means/Budget Committee

Subject: Appropriation Increase for Traffic Signal Indication LED Conversion Program

Recommendation:

- a. Increase the appropriation for the PW-Transportation Capital Agency in the Permanent Improvement Fund (4100-943-9440 TR703070) by \$387,209 and increase the revenue source (4100-943-9440 TR703070) by \$387,209 to be reimbursed by the Xcel Energy Utility Company rebate funds designated for energy consumption reduction programs.

Previous Directives:

- Resolution 2006R-333, 2006 Public Works Transportation Capital Improvement Fund TR003 (LED Replacement Program)
- Resolution 2005R-658, 2006 Public Works Transportation Capital Improvement Fund TR003 (LED Replacement Program)

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Approved by:

Steven A. Kotke, P.E., City Engineer, Director of Public Works

Presenters: Jon Wertjes, P.E., PTOE, Director, Traffic and Parking Services

Permanent Review Committee (PRC) Approval _____ Not applicable X

Policy review Group (PRG) Approval _____ Not applicable X

Financial Impact (Check those that apply)

No financial impact - or - Action is within current department budget (If checked, go directly to Background/Supporting Information)

Action requires an appropriation increase to the Capital Budget

Action requires an appropriation increase to the Operating Budget

Action provides increased revenue for appropriation increase

Action requires use of contingency or reserves

Business Plan: X Action is within the plan. Action requires a change to plan.

Other financial impact (Explain):

Request provided to department's Finance Dept. contact when provided to the Committee Coordinator

Community Impact

Neighborhood Notification: Not Applicable

City Goals: Maintain the physical infrastructure to ensure a healthy, vital and safe city

Comprehensive Plan: Consistent

Zoning Code: Consistent

Background/Supporting Information

Public Works is requesting an increase in the appropriation in the PW-Transportation Capital Agency in the Permanent Improvement Fund (4100-943-9440 TR703070) equal to the amount of the rebates (\$113,834 and \$193,375) that the City of Minneapolis has received in 2007 and will receive (approximately \$80,000) from Xcel Energy Utility Company. These rebates are a result of the PW Department program of converting existing traffic signal indication from the use of incandescent light source to LED illuminated signal indication in 2007. Appropriating the rebate will permit Transportation to convert more locations to lower power consuming LED indications.

LED Traffic Signal Conversion Program Summary

The City of Minneapolis is nearly finished the conversion of its traffic signal indications to a LED source of light. The traffic signals were illuminated with incandescent light bulbs and the LED's are much more energy efficient. An 8 inch indication uses 10 watts with the LED's vs. 69 watts with incandescent.

The program has been encouraged with financial help from the Xcel energy conservation program. This help comes in the form of rebates.

Here is a summary of the program to date:

Program	Reds	Pedestrian Indications	Greens	Totals
Years of Installation	1997-98	2004-05	2006-07	
Energy Savings per Year	1.9M kWh	3.3M kWh	1.6M kWh	6.8M kWh
Cost of Installation	\$900,000	\$439,000	\$450,000	\$1,789,000
Rebate from Xcel Energy	\$66,600	\$167,960	\$387,209	\$621,769
Net Cost to the City	\$833,400	\$271,040	\$62,791	\$1,167,231
Operating Cost Savings per Year (2007 \$'s)	\$137,000	\$230,000	\$117,000	\$484,000
CO ₂ Reduction (Tons)	2,036	3,535	1,714	7,285
Total Saving Since Installation	\$1,370,000	\$690,000	\$117,000	\$2,177,000

The program has been very successful on a number of fronts. LED lamps do not need to be replaced as often as incandescent bulbs and provide a better signal indication for pedestrians, bicyclist, and motorized traffic. This is in addition to reduced energy consumption, which offers a wide array of benefits to the city's bottom line and the environment:

- \$2.177 million (2007 dollars) in cost savings since the start of the program.
- Over the life of the program, approximately 809 homes could be powered for a year with the electricity saved by the LED conversions.
- Reduced energy needs saved 7,285 tons of CO₂ emissions from existing power plants.
- Saves nonrenewable natural resources such as natural gas, coal, and oil that are used to generate electricity.

By Council Members Colvin Roy and Ostrow

“Passage of a resolution to amend the 2007 general appropriation resolution to increase appropriation for Public Works for expenses related to capital projects by \$387,209 funded from the Xcel energy utility Company in the amount of \$387,209 (4100-943-9440 TR703070); amend the allocation of resources as follows: increase the revenue source (4100-943-3755 TR703070) by \$387,209.”