Legislation Details (With Text)

File #:	24-1200	**Version:** 2	**Name:**	7/15/24 - LED Streetlight Conversion	
Type:	Resolution		**Status:**	Passed	
File created:	7/15/2024		**In control:**	City Council	
On agenda:	8/8/2024		**Final action:**	8/8/2024	
Enactment date:	8/8/2024		**Enactment #:**	R-24-326	

Title: Resolution to Accept Carbon Reduction Program Grant Funds from Southeast Michigan Council of Governments, Execute a Contract with DTE Energy to Convert DTE Streetlights to LED Technology ($1,250,000.00) and Appropriate Funding (8 Votes Required)

Sponsors:

Indexes:

Code sections:

Attachments: 1. Attachment 1 to Purchase Agreement-Streetlight Locations Map.pdf, 2. LED Conversion Cut Sheet-58w 2700K LED.pdf, 3. 24DTEStreetlightLEDNarrative.pdf, 4. CRP SignaturePage.pdf, 5. CRP Program Applicatin.pdf, 6. Staff Memo - 8.8.24 CC Meeting Item DC-1 - DTE LED Conversion Project.pdf, 7. REVISED Purchase Agreement - HID Conversion - City of Ann Arbor-Revised 8-1-24.pdf, 8. GCM2_58w_2700K_with House_Side_Shield_Photometrics.pdf, 9. GCM H-Series_House-Side-Shield-Drawing.pdf, 10. Purchase Agreement - HID Conversion - City of Ann Arbor-06032024.pdf

Date	Ver.	Action By	Action	Result
8/8/2024	2	City Council		
8/8/2024	2	City Council	Approved	Pass
7/15/2024	1	City Council		
7/15/2024	1	City Council	Amended	
7/15/2024	2	City Council	Postponed	Pass

Resolution to Accept Carbon Reduction Program Grant Funds from Southeast Michigan Council of Governments, Execute a Contract with DTE Energy to Convert DTE Streetlights to LED Technology ($1,250,000.00) and Appropriate Funding **(8 Votes Required)**
Attached for your review and consideration is a resolution authorizing acceptance of Carbon Reduction Program grant funds, and authorizing execution of a contract with DTE Energy, to convert DTE streetlights to Light Emitting Diode (LED) technology.

There are over 9,000 streetlights in the City of Ann Arbor public rights-of-way, with the majority - over 5,000 - owned and maintained by DTE Energy. A majority of the DTE streetlight subgroup - 4,087 - use high pressure sodium (HPS) technology, which is becoming obsolete. Conversion of all streetlights to light-emitting diode (LED) technology would be 1.2-3 times more efficient and has been a policy goal of the City's for several years, most recently formalized in the A^2Zero Carbon Neutrality plan. In addition to the positive environmental impact due to less electricity used by LED streetlights, a conversion would also result in ongoing financial savings through reduced energy use resulting in lower cost burden to the City to lease these assets from DTE. Lastly, the conversion is expected to result in less outages since LED streetlights have generally been shown to be more reliable and have a longer lifespan than other fixture types.

In 2021, City staff asked DTE to prepare an estimate of the cost required to convert all remaining HPS lights to LED. The project cost estimate provided at that time was $1.24 million, without a clear funding source for the upfront capital costs. In 2023, staff were able to find a funding source to assist with 80% of the capital costs of the project by applying for the newly established Carbon Reduction Program grant administered by the Southeast Michigan Council of Governments (SEMCOG).

Prior to the implementation of the citywide conversion, staff identified a potential issue in the specific LED streetlight fixture that has been used as a standard by DTE in past years: the streetlight's color temperature. While City owned LED streetlights and DTE non-LED streetlights have typically been a "warmer" color temperature (2700-3000K), DTE's standard LED fixture is a "cooler" 4000K. This issue, as well as the concern that the wattage of DTE's standard fixtures may be higher, were raised by community advocates interested in both preserving "dark skies" by reducing extraneous light pollution and reducing municipal energy usage more generally.

To gauge community support for different lighting options, staff worked with DTE to install streetlights with different wattage/color temperature combinations. These combinations were informed by discussions with community advocates as well as public feedback received by staff to existing 4000K lights. Staff created a webpage <https://www.a2gov.org/departments/engineering/transportation/Pages/LED-Streetlight-Conversion-Project-(DTE).aspx> and public engagement opportunity to collect feedback on these options, ultimately recommending a 58W/2700K streetlight fixture as the citywide default. Staff have noted that in certain cases - in particular, along major roads at uncontrolled crosswalks - higher wattages and/or color temperatures would still be required for reasons of pedestrian safety and visibility, which would be served through DTE's standard LED fixtures.

As noted on the project webpage's FAQ, a number of factors went into the final decision to select the 58W/2700K streetlight fixtures. First, these light fixtures being owned and maintained by DTE is an inherent limitation on the City's control in this space. Furthermore, as these fixtures represent a special-order item with DTE, there are additional operational impacts to consider. While there is no additional cost for the proposed fixture type, DTE does not stock them directly; in order to perform routine maintenance and replacement in a timely fashion, DTE requires that the City procure and stock additional fixtures beyond the quantity of 4,087 lights that will be converted. This complicates the possibility of ordering multiple types of light fixtures - as requested by some advocates and members of the public through engagement effort - which would require additional staff capacity to assure that the correct fixture is installed in each location, as well as maintaining a stock of multiple types of lights. After negotiations with DTE and internal staff discussion, staff recommend procuring an additional 80 fixtures as overstock (approximately 2% of the total quantity).

As the grant funding provided by the Carbon Reduction Program is intended to be obligated in federal fiscal year 2024 (ending September 30, 2024), prompt Council action is requested to ensure that project funding is not jeopardized by delay. City staff have been informed that if the project were not obligated in FY24, the next opportunity would be in FY27, with an uncertain prospect of success.

Budget/Fiscal Impact: The total project is anticipated to not exceed $1,250,000.00. Grant funding through the Carbon Reduction Program will account for 80% ($980,000.00) of the total capital project cost. A local match is required for the remaining 20% ($245,000.00) and an additional $25,000.00 will be needed to procure the overstock. The City's total contribution of $270,000.00 will be paid through Climate Action Millage fund. Note that this amount reflects the grant award and anticipated overstock

costs. These project costs may come down as further refinement of the number of streetlights slated for upgrade as part of this project change. Operational savings are estimated to be over $300,000.00 annually. Consequently, the return on investment for the City's match to this project may be realized in as little as one year.

Prepared by: Nicholas Hutchinson, City Engineer
Skye Stewart, Public Services Area Chief of Staff
Reviewed by: Sue F. McCormick, Interim Public Services Administrator
Approved by: Milton Dohoney Jr., City Administrator

Whereas, The City's 2020 A^2Zero Carbon Neutrality Plan outlines a specific action related to powering street lighting and traffic signals with LED technology;

Whereas, A significant majority of remaining non-LED streetlights are owned and maintained by DTE Energy;

Whereas, Conversion of the 4,087 remining non-LED DTE streetlights requires a capital investment be made to DTE;

Whereas, City staff have received grant funding through the Carbon Reduction Program for 80% of the project's initial cost estimate, requiring the remaining 20% and any additional costs to be borne by the City;

Whereas, The conversion of DTEs streetlights to DTE is expected to realize an operational cost savings to the City of $300,000.00 annually under the current rate structure;

Whereas, This project must be obligated in federal fiscal year 2024 in order to accept Carbon Reduction Program grant funding; and

Whereas, Public engagement was conducted to determine preferences among streetlight fixtures with different color temperature and wattages and this suggested action is consistent with that feedback;

RESOLVED, That the City Council accept the Carbon Reduction Program grant funding in the amount of $980,000.00 from SEMCOG to support the conversion of DTE streetlights to LED technology and provide the local match of $270,000.00;

RESOLVED, That the City Council approve the Purchase Agreement with DTE Energy for LED streetlight conversion in an amount not to exceed $1,250,000.00, to convert most streetlight fixtures to LED with a wattage of 58W and a color temperature of 2700K;

RESOLVED; That City Council appropriates $980,000.00 to the FY25 Engineering Budget in the Major Grants Programs fund with the source of revenue being the Carbon Reduction Program grant from SEMCOG;

RESOLVED; That City Council appropriates $270,000.00 to the FY25 Engineering Budget in the Major Grants Programs fund with the source of revenue being the Climate Action Millage fund;

RESOLVED, That City Council's approval is based on the understanding that DTE will, at the time of installation and at no additional cost to the City, utilize luminaires that meet shielding criteria as determined by the City to minimize light trespass or glare onto private property, to the extent

practicable, and Council further directs the City Administrator to request that the Purchase Agreement be amended to reflect this understanding;

RESOLVED; That all amounts herein are without regard to fiscal year;

RESOLVD, That the Mayor and City Clerk be authorized and directed to execute said agreements after approval as to form by the City Attorney and approval as to substance by the City Administrator; and

RESOLVED, That the City Administrator be authorized to take the necessary administrative actions to implement this resolution.

As Amended and Postponed by Ann Arbor City Council on July 15, 2024