Grand Rapids to invest $20M in LED streetlights

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GRAND RAPIDS, Mich. -- The city of Grand Rapids is embarking on an ambitious plan to install a $20 million LED streetlight system that eventually could monitor water meters and collect data about activity on the street.

City officials are proposing to overhaul the 17,800 streetlights in Grand Rapids with a $10 million bond in 2019 and another $10 million bond in 2022. The program is included in the city's fiscal 2019 budget proposal.

The $20 million project would put $12 million to infrastructure improvements that city officials say are long overdue, and $8 million to the purchase of the lights. Only the lights themselves would be replaced; the poles would remain the same.

Much of the infrastructure investment will go to upgrade wires and transformers the city's electric circuit that it operates in the core city. Grand Rapids buys electricity from Consumers Energy at a lower rate and runs its own utility to 108 buildings and streetlights in the area, said Mike Lunn, environmental services director for the city.

"That needs $8 to $10 million," Lunn said.

Infrastructure work would begin this summer. The entire project would take four to five years to complete, Lunn said.

Mayor Rosalynn Bliss said the city is anticipating part of the city's debt on the bond issue would be paid for through the energy savings gained by using LED lights.

Lunn said the energy savings from the LED lights will depend on the rate that Consumers Energy charges the city. The utility is attempting to double the cost of electricity it sells for streetlights from 8.3 cents per kilowatt hour to 16.5 cents, Lunn said. The Michigan Public Service Commission will decide the case.

The new LED lights will use about half of the electricity that the current lights use, Lunn said.

The city last made major changes to its streetlighting system about 40 years ago, when lights were switched to the current high-pressure sodium models. Since then, investments in streetlights have been reactionary, like when new buildings are built or roads are repaired.

The LED streetlights would be managed from one central location instead of turning on through sensors, as they transmit data using an 800 megahertz radio wave, Lunn said. The new management system would also be able to show if a light was burned out.

"The police will be able to control them and turn them up and down," Lunn said, explaining that motion sensors could also be added to brighten the lights or dim them depending on activity.

The same technology that allows the streetlights to be managed remotely also would allow the city to use the streetlights to collect data. Sensors could eventually be added to monitor parking spaces and pedestrian counts, Lunn said.

On the top of the list for Grand Rapids officials: they'd like to use the new streetlights to monitor water meters. This would require the city to upgrade its water meters to be "smart."

The cost of upgrading every water meter is not included in the $20 million, Lunn said. The city has about 80,000 water meters, and replaces up to 5,000 of them each year. A "smart" water meter costs about $90 more than the regular meter, Lunn said.

LED streetlights have been on the radar of the city commission for years. In 2015 the commission was considering spending $9.3 million to replace all of the city's lights with LED fixtures. The idea was scrapped then as the commission was concerned with putting money away into its savings.

In 2010 Grand Rapids entertained charging property owners a fee for streetlights, but scrapped that idea after voters approved a five-year income tax increase. Money from that tax has been put into a Transformation Fund to cover budget deficits and be spent on a variety of initiatives aimed at reducing the long-term ongoing cost of running city government.

In addition to the streetlight overhaul, the city is working on a plan to upgrade lights on Division Avenue.