

**GLENBROOK HIGH SCHOOLS  
District Business Office**

**TO: Dr. Mike Riggle**

**FROM: Kimberly Ptak**

**DATE: July 28, 2014**

**RE: Award of Exterior LED Lighting Bid**

**Recommendation**

It is recommended that the Board of Education award the exterior lighting LED retrofit bid to Ensol Energy Management Solutions in the amount of \$180,234 for work at GBN and GBS.

The district was awarded lighting grants from the Illinois Clean Energy Community Foundation in the amount of \$21,886 and the Illinois Department of Commerce and Economic Opportunity in the amount of \$90,506. The grants make the net cost to the district \$67,842. Estimated annual savings is \$17,000 per year, which equates to a 4 year payback. In addition, there is estimated savings of \$7,000 per year in bulbs and ballasts for the exterior lighting which will not need to be replaced.

**Background**

The scope of the project includes an LED retrofit of the current pole mounted, metal halide parking lot light fixtures (quantity 137) as well as the majority of perimeter building mounted light fixtures, both wall-mount and canopy recessed (quantity 253). The current parking lot fixture wattage is 465 watt; this will be reduced to 107 watts. The wall-mounted light wattage is between 50-250 watts and will be reduced by 50-75% depending on the fixture type.

The process for doing the retrofit involves keeping the existing pole and fixture "head" and removing the inner ballast, lamp, socket and reflector and installing an LED module on an aluminum plate. For additional savings, there is a power module application allowing the customer to operate lamps at 100% output for the first 5 hours of operation, dim by 50% for the next 6 hours of late night operation and then ramp back up to 100% for the last hour of operation.

Use this link for a brief overview of the retrofit process: <http://vimeo.com/60755473>

A full fixture replacement was considered, however the additional cost to replace the fixtures was estimated at \$95,000. The current exterior fixtures were reviewed and are in good condition and do not show any signs of leakage, rusting or seepage.

Pricing includes labor to do the work. There is a 4-6 week lead time for the material and work will be coordinated with the buildings when school is not in session. There is a ten year warranty for repair, parts and labor with the manufacturer, Global Tech.

**Benefits of LED Retrofit**

- Reduced energy usage - estimated at \$17K per year
- Reduced maintenance – 100,000 hours maintenance free – estimated supply savings of \$7,000/year
- Life expectancy increases from 4 years to 15+ years.
- 10-year manufacturer warranty – parts and labor
- Directional Light – More evenly distributed, less light loss

**Bids**

Ensol Energy Management Solutions	\$180,234
Carey Electric	\$194,700
Prospect Electric	\$201,000
JASCO Electric	\$247,656
Utility Dynamics	\$289,675
Estimate	\$195,000