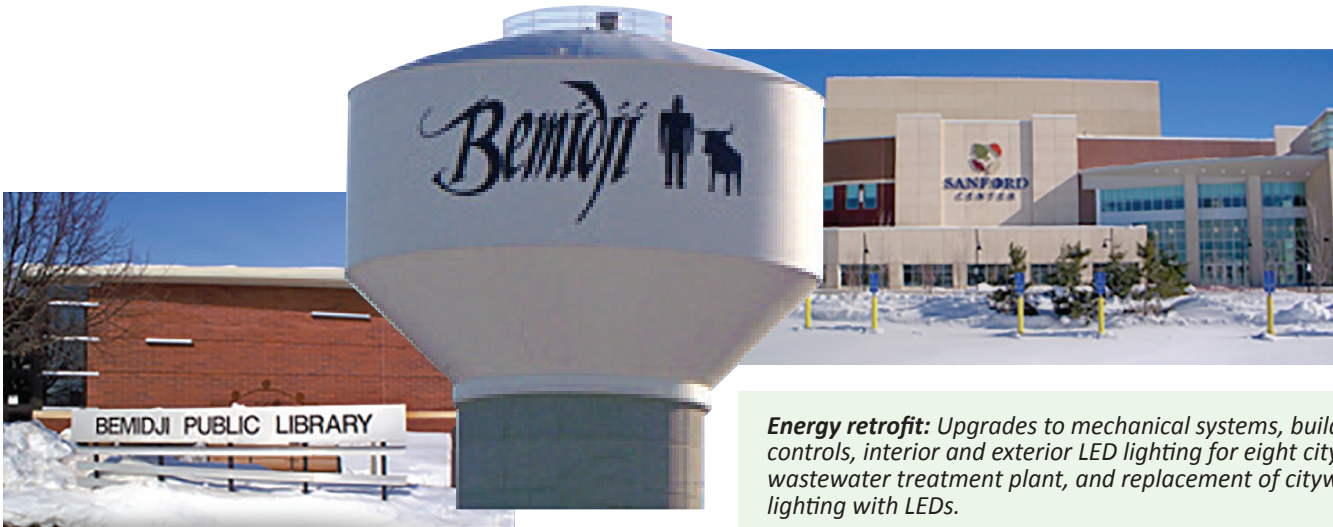


## Bemidji is first city to achieve energy efficiency upgrades with Minnesota GESP help



**Project Summary:** The City of Bemidji used an Energy Savings Performance Contract (ESPC) to upgrade eight city buildings, its wastewater treatment plant, and the city's streetlights. It was the first local government entity to use the state's Guaranteed Energy Savings Program (GESP) to oversee its project, which focused on improving lighting, energy management controls, and mechanical systems. The project was completed in December 2016 and is expected to yield annual energy savings of 15% and cost savings of more than \$126,000 per year. The city leveraged \$273,000 in previously approved capital improvement plan dollars, with no other upfront costs for the city and its taxpayers. The project is being paid for over 20 years via energy savings, which are guaranteed by Honeywell, the energy services company.

**Aims & Objectives:** Bemidji sought a cost-effective energy improvement plan that would be cash flow neutral. The city looked at energy savings as a great way to implement building upgrades while building on its sustainability efforts to be a good steward of the environment.

**Assessment & Energy Savings Performance Contract:** Following a preliminary assessment of energy needs and opportunities, Honeywell performed a detailed analysis of the potential savings and costs for each accepted energy and water savings measure. Utilizing the state's GESP Master Contract, the contractor prepared an Energy Savings Performance Contract proposal to design,

**Energy retrofit:** Upgrades to mechanical systems, building controls, interior and exterior LED lighting for eight city buildings, wastewater treatment plant, and replacement of citywide street lighting with LEDs.

**Cost:** \$2.45 million

**Annual energy savings:** 6,228 MMBtu (equivalent to reducing greenhouse gas emissions annually from 193 cars or CO<sup>2</sup> emissions from 96 homes)

**Annual cost savings:** \$126,000

**Energy services company:** Honeywell

**State assistance:** Guaranteed Energy Savings Program

**Utility rebates:** \$122,000

**Project completed:** December 2016

install, and monitor the energy and water saving measures proposed in the Investment Grade Audit Report. Terms included:

- Project guaranteed maximum price;
- Complete list of services to be provided as related to each cost;
- Term of the contract;
- Description of financing options and recommendations, including soliciting financing companies on behalf of the state institution and developing a lease purchase agreement with payment schedules and lender financing terms and schedules;
- Guaranteed energy, operation, and maintenance savings;

(over)

***"The biggest single benefit is that all of these infrastructure and capital improvements were done with basically no up-front cost. We made over \$2 million in upgrades to buildings and street lights without burdening our taxpayers."***

***—Rita Albrecht, Mayor of Bemidji***

- Explanation of how the savings will be calculated and adjusted; and
- Analysis of annual cash flow for the state institution during the contract term.

**Implementation:** Work was completed on eight city buildings and a wastewater treatment plant, and citywide improvements were made to street lighting and vending machines. Citywide, high pressure sodium and metal halide street lighting fixtures were retrofitted with light-emitting diode (LED) kits, and controls were installed to shut down beverage vending machines when not being used.

Three buildings—City Hall, Public Works, and the Sanford Center—received lighting retrofits, energy management system (EMS) and direct digital controls (DDC) recommissioning, and air leakage sealing; Public Works also had a cooling system upgrade. The Wastewater Treatment Facility, Chamber Building, and two liquor stores received lighting upgrades. The History Center had its existing DDC system recommissioned, while the Library received a lighting retrofit, DDC recommissioning, air leakage service, and two new hot water high-efficiency modulating boilers.



*Street lights were retrofitted with LED kits citywide.*

**Results/Benefits:** In 2018, Bemidji will document utility savings achieved in 2017 from its energy efficiency measures, as financed without bonding or raising taxes. Packaging energy efficiency upgrades in several buildings allowed Bemidji to do more on a quicker timeline than otherwise would have been possible, said Ron Eischens, Bemidji’s finance director. Bemidji lacked technical staff with specialization in energy efficiency, so it relied on Honeywell’s expertise. “The bidding and selection process was fully managed by Honeywell, which saved the city a lot of administrative time,” said Eischens. Due to the Guaranteed Energy Savings Program, “the performance contract also created competition among vendors bidding on individual projects, which meant many of the projects came in under budget and saved us money.”

What’s more, the energy services contract struck by Bemidji and Honeywell included collaboration with a third party, the Guaranteed Energy Services Program (GESP), which provided Bemidji support every step of the way. GESP, administered by the Minnesota Department of Commerce, provided transparency to the process by evaluating the technical and financial feasibility of ESCO proposals and by providing project technical assistance review for cash flow and the Measurement and Verification Plan.

“All of the things mentioned above are benefits of any performance contract project,” said Bemidji Mayor Rita Albrecht. “But what made using GESP particularly beneficial is that we received guidance from the experts at the Minnesota Department of Commerce who provided standard contracts and added certainty to the process.”

## ***What is the Guaranteed Energy Savings Program?***

The Guaranteed Energy Savings Program (GESP) is a procurement and financing mechanism that assists state agencies, local units of government, school districts, and institutions of higher education with the development, implementation, and ongoing measurement and verification of energy efficiency and/or renewable energy projects. Participants gain access to technical assistance from Commerce, pre-qualified Energy Services Companies, Master Contract, selection and procurement documents, and GESP staff oversight for each phase of the project that can last up to 25 years. The intent of the program is to maximize job creation and operational cost savings through investment in public facilities.

GESP is administered by the Minnesota Department of Commerce. It can help public entities:

- Solicit and award site-specific RFPs from pre-qualified Energy Services Companies (ESCO) to perform Energy Savings Performance Contracting (ESPC) services;
- Evaluate the technical and financial feasibility of ESCO proposals;
- Negotiate and award work order contracts to pre-qualified ESCOs to implement energy conservation measures;
- Offer project management oversight; and
- Ensure that the ESPC Measurement and Verification Plan is properly performed.

**For information on GESP, contact Pete Berger, GESP manager, at 651-539-1850 or [Peter.berger@state.mn.us](mailto:Peter.berger@state.mn.us).**