



City of Lawrence  
KANSAS

# GREEN BONDS

ANNUAL REPORT  
MAY 2018



# PROJECT SELECTION

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The City of Lawrence is committed to building a more sustainable community. In 2017, Lawrence became the first community in the State of Kansas to issue Green Bonds. The purpose of the “Green Bond” designation is to allow holders of the Green Bonds to invest directly in projects that are beneficial to the environment. Lawrence’s Green Bonds financed a wide variety of high impact energy efficiency and environmental improvement projects for various City facilities, which will directly reduce energy use, greenhouse gas emissions, and save tax dollars.

Specific high impact projects were selected based upon a third party Investment Grade Audit that quantified the energy savings associated with each of the various projects in City facilities. The Investment Grade Audit established baseline energy use for each facility and projected savings for each energy conservation measure.

According to the most recent greenhouse gas (GHG) inventory of City operations, energy use in buildings and facilities accounted for 54% of municipal GHG emissions. The community-wide GHG inventory attributed 66% of GHG emissions to commercial and residential energy use. The City of Lawrence is leading by example. The reduction of greenhouse gas emissions attributed to these high impact projects directly supports the recommendations in the City’s Climate Protection Plan and climate change mitigation efforts.

# IMPACT REPORTING

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As of May 2018, 95% of the high impact projects have been executed. Beginning June 2019 (18 months after construction completion), the City will receive a third party measurement and verification report on the selected high impact projects annually for three years. The measurement and verification report will compare the projected energy savings to the achieved energy savings, and will be used to validate the city's energy performance contract. When the projects are fully implemented, the City is projected to save 3,201 tons of CO<sub>2</sub>e annually, which is equivalent to the avoidance of burning 3,502,188 pounds of coal. The following page includes a description of the funded projects, cost, and anticipated environmental benefits.



**\$11,375,000**  
allocation

**36**  
projects

**1,000,000+**  
square feet

## heating & cooling improvements

**\$5,066,900**

- Replaced air-cooled chillers, water boilers, filtration systems, a pool water boiler, dehumidification units, and air handler and condensing units.
- Installed HVAC systems, central plant boiler system, supplemental heat at building entry, and new and expanded use of air control system to include energy savings control strategies.
- Replaced old systems with high efficiency systems or different technology.

## renewable energy

**\$241,300**

- Installed a new 100 kW rooftop solar PV system

## building weatherization

**\$1,182,000**

- Eliminated outdoor air infiltration for 23 buildings.
- Replaced outdated and inefficient windows in City Hall.
- Repaired and retrofitted roof with white TPO membrane.

## lighting efficiency

**\$4,383,000**

- Upgraded indoor and outdoor lighting to LEDs at 35 buildings.
- Upgraded outdoor lighting to LEDs at 26 parks.

**3,201 tonnes**

**annual avoided greenhouse gas  
emissions**

# CONTACT US

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