## Memorandum City of Lawrence City Manager's Office

To:	David L. Corliss, City Manager							
	Mayor Dever & City Commission							
From:	Eileen Horn, Sustainability Coordinator							
CC:	Management Team							
Date:	March 3, 2014							

## Re: Annual Report on City Energy Usage and Cost

The City utilizes EnergyCAP to track usage and cost of our major utilities and fuel sources: electricity, natural gas, diesel fuel, unleaded gasoline, and water. Electricity accounts for nearly 2/3 of the City's energy costs.

In 2013, the City spent \$5,136,527 on energy to heat/cool our buildings and fuel our fleets.



### ENERGY USAGE & COST:

The City's energy usage and cost in 2013 (compared to 2012) for <u>all</u> departments:

**Electricity:** Decreased 11.5% (-\$287,985) **Natural Gas:** Increased 9.2% (+\$88,351) **Diesel Fuel:** Increased 4.9% (+ \$32,443) **Unleaded Fuel:** Usage flat 0% (-\$24,599)

A department-by-department breakdown is provided on page 2.

#### Major driving factors include:

- Electricity: The summer of 2013 was cooler and wetter than the hot, dry summer of 2012, with 15% fewer cooling degree days. Therefore, air conditioning load was reduced in city buildings compared to 2012. Also, water production at the Kaw and Clinton plants was lower than 2012, resulting in reduced electricity use at the Kaw Plant (used 9% less) and Clinton Plant (used 15.3% less). Kaw and Clinton are the largest single consumers of kWh.
- **Natural Gas:** The colder temperatures in spring 2013 and winter 2013-2014 have increased demand for heating fuel. Compared to 2012, we saw a 38% increase in heating degree days.
- **Diesel Fuel & Unleaded:** Usage of these fuels is highly variable in key departments (i.e. Police, Fire/Med) whose usage depends upon call volume.

	Natural Gas Usage (Therms daily average):			Electricity Usage (KWH daily average):			Diesel Usage (GAL daily average):			Gasoline Usage (GAL daily average):		
Department:	2012	2013	% change:	2012	2013	% change:	2012	2013	% change:	2012	2013	% change:
Fire/Med	123.08	152.44	23.9%	4,606.52	3,971.38	-13.8%	107.09	101.92	-4.8%	28.27	26.97	-4.6%
Parks & Rec	367.04	418.70	14.1%	11,673.62	11,509.30	-1.4%	20.38	19.94	-2.2%	52.22	50.21	-3.8%
Police	14.77	14.05	-4.9%	2,129.86	1,953.00	-8.3%	n/a	n/a	n/a	279.36	278.38	-0.4%
Public Works	194.50	234.25	20.4%	28,465.52	23,569.76	-17.2%	473.57	503.70	6.4%	93.90	102.27	8.9%
Utilities	408.11	389.40	-4.6%	53,271.60	47,625.56	-10.6%	56.62	64.45	13.8%	59.53	55.42	-6.9%
All City	1,107.50	1,208.84	9.2%	100,147.12	88,629.00	-11.5%	657.66	690.01	4.9%	513.28	513.25	0.0%

Figure 2. Energy usage (daily average) per department: 2012 & 2013

Energy efficiency and conservation are a priority for city departments. By utilizing both the monthly EnergyCAP tracking and the real-time data provided by smart meters, the cross-departmental Energy Management Team is able to track progress on efficiency savings and identify energy usage irregularities quickly.

# **Progress continues in our efforts to identify key opportunities for energy efficiency and conservation**. The following is a list of energy-saving initiatives in 2013:

- LED lighting installations and retrofits throughout various facilities: Vermont St. parking garage, Fire Station #2 (exterior and interior), parking lot 16, exterior lights at Stone Barn, Central Maintenance Garage, Street Division building, Pinckney tunnel project, Holcom west parking lot, South Park administration building, Indoor Aquatic Center, treatment basin lights at Kaw Water Plant, and 70% of basin lights at WWTP.
- Compressed natural gas (CNG): A new CNG fueling station was installed at the city's maintenance garage, and will be used by four CNG vehicles in our fleet.
- Construction of LEED-eligible Library with high efficiency HVAC system, high R-value insulation, and efficient windows.
- Installation of a 25' solar photovoltaic and LED parking lot light outside of City Hall.
- Installation of thermostats on engine block heaters for street division vehicles. These thermostats ensure that heaters are only utilized when temperatures are low.
- Lawrence was identified by the American Council for an Energy Efficient Economy as an "innovative" community for our energy efficiency projects. Therefore, we are one of several pilot communities for the launch of an EE scorecard that communities can use to benchmark energy efficiency policies and programs. <u>http://www.aceee.org/local-policy/scoring-tool</u>