

Meeting Date: 10/20/14

Submitting Dept: Energy Team

Presenter: Deanna Harger

Subject: Planet Footprint FY-14
Energy Report & General Update

Statement / Purpose:

To present to the Board of County Commissioners Teton County's FY-14 Quarter 4 Energy Report and give a general update on the projects and future proposed work by the Energy Team.

FY 14 Quarter 4 Report – Energy Report & Executive Summary

Annual Facilities Performance Summary:

When compared to the last fiscal year and the same period in the last fiscal year, energy consumption increased by 4%, electrical consumption increased by 5% and natural gas increased by 4%.

Since 2012, an upward trend has developed in multiple of our top 5 big energy consuming facilities. In addition, in FY-14 there was a substantial increase in energy consumption at some of the Fire Stations and at the Recycling Center. The Energy Team is working with these Departments to determine the cause of the increases.

During FY-14 three large on-site renewable energy projects were completed and two, energy efficient mechanical projects started. They include the projects at the Recreation Center, Court House, EOC and Recycling Center. These projects should substantially help reduce the organizations overall consumption and change the current upward trend.

Resource Charges

Teton County's total expenditure for electricity was \$248,163, for natural gas it was \$259,370, for a total annual expenditure for energy of \$507,533. Below is a list of the top 5 facilities with the highest annual expenditures

- Recreation Center spent \$194,101 – *see project update information below*
- Court House \$50, 680 - *see project update information below*
- Library spend \$44,934
- Recycling Center \$32,402 – *see project update information below*
- Jail \$31,111

Combined these top 5 facilities represent 74% of Teton County's total annual energy consumption.

- Recreation Center 40%
- Library 13% - *the library consumes more but pays less because of the grid tied photovoltaic system*
- Courthouse 10%
- Recycling Center 6%
- County Jail 5%

Energy Mix Trends:

Teton County's energy mix has been rather consistent since 2006. In FY 14 the percentages were:

- 54% was in the form of natural gas
- 46% was in the form of electricity

What is the Energy Team working on?

The energy team is using the data collected to inform how we should move forward. In response to our energy consumption increasing we are proposing to begin the following actions:

1. Employee Education – This is a proven method that creates results and with the help of Planet Footprint and staff sweat equity the cost will be very low.

- a. It has taken a while, but Planet Footprint's website is finally ready to automatically push out Performance Summaries directly to Key Staff and Facility Managers.
- b. In addition, we will be inviting key staff to meet with Planet Footprint directly to help educate them and strategize on reducing energy consumption in their operations and facilities
2. Tracking effectiveness and ROI on Energy Projects
 - a. We are taking advantage of a new service offered by Planet Footprint to track and analyze the effectiveness and actual ROI of energy projects at the Court House, Recycling Center and Recreation Center
3. Request funding for a second round of ECW SPET projects
 - a. After working closely with ECW and Lower Valley the Energy Team would like to propose 3 LED lighting retrofit projects for consideration.
4. Tapping into or revisiting all low or no cost available programs.
 - a. The team is looking for programs that will be effective and low cost including
 - b. Working with Tony Allen and Lower Valley
 - c. Utilizing Planet Footprint to the fullest
5. Green Fleets
 - a. We are beginning to collaborate with the Clean Energy Coalition, Green Fleets program to explore opportunities and understand how they can assist County Departments when considering new vehicles.
6. Signage – Telling our Story
 - a. The team is working with ECW and the PIO to get permanent signage up at the Recycling Center, educating the public about the project and how it was funded.
 - b. Working on finding a location and creating a display/signage in the Administration Building about Energy Conservation and completed projects.

Georgetown University Energy Prize

We have been coordinating with Energy Conservation Works in response to Teton County's successful selection as a quarter finalists. The Energy Team is excited to be a partner with ECW and our community in this competition. We have reached out to Phil Cameron and are meeting regularly to make sure Teton County is a productive partner.

There are benefits to the Energy Team and our organization by being part of the competition including:

- Knowledge networks that have opened up, I have been tapping into some of them including a webinar series sponsored by the Better Buildings Network.
- Caused more direct collaboration with Energy Conservation Works and the Town of Jackson

SPET Funded Project Update

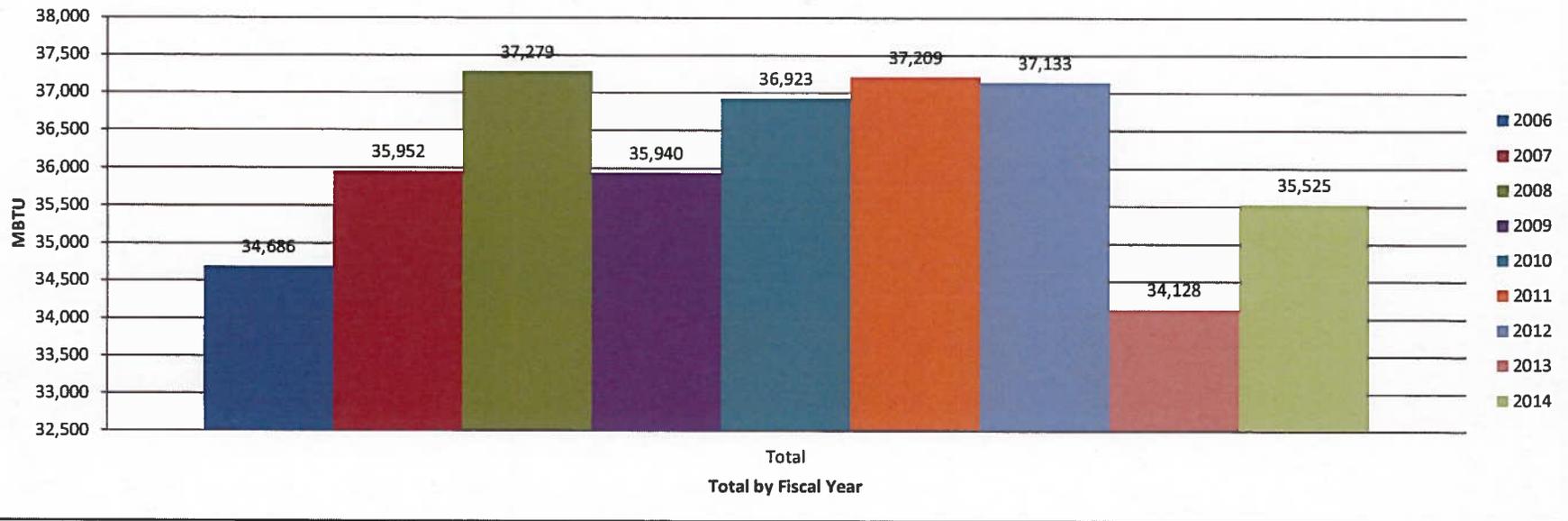
We are proud to give an update on the last round of projects that were funded through Energy Conservation Works and the Energy Mitigation Program.

- Court House High Efficiency Boiler Replacement.
 - This project was funded 100% through ECW
 - The new boilers have been installed and it is estimated this project will result in a 30% reduction in natural gas consumption
- Recreation Center Boilers – Part of the Solar Thermal System
 - 50% of this project was funded through ECW and 50% through EMP funds
 - The project is underway and is estimated to result in a 30% reduction in natural gas use
- Recycling Center Grid Tied Photo Voltaic Project
 - 50% of this project was funded through ECW and 50% through EMP funds
 - The 46 kW system is up and running and it is estimated it will produce 32% of the annual electrical demand for the facility

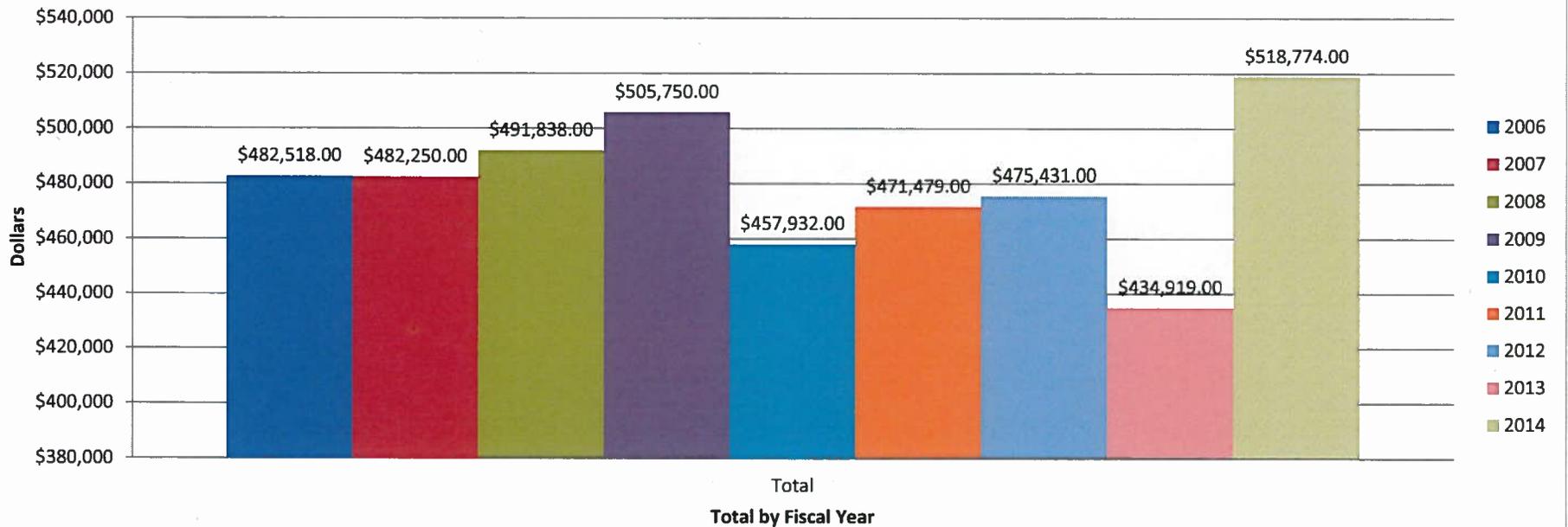
- Emergency Operation Center Grid Tied Photo Voltaic Project
 - 50% of this project was funded through ECW and 50% through EMP funds
 - The 28 KW system is up and running and it is estimated it will produce 35% of the annual electrical demand for the facility
- Administration Building Grid Tied Photo Voltaic Project
 - Will begin in the Spring of 2015
- As mentioned above, the Energy Team would like to propose 3 LED lighting retrofit projects in the Administration Building, Court House and Jail to ECW for consideration of SPET funding.



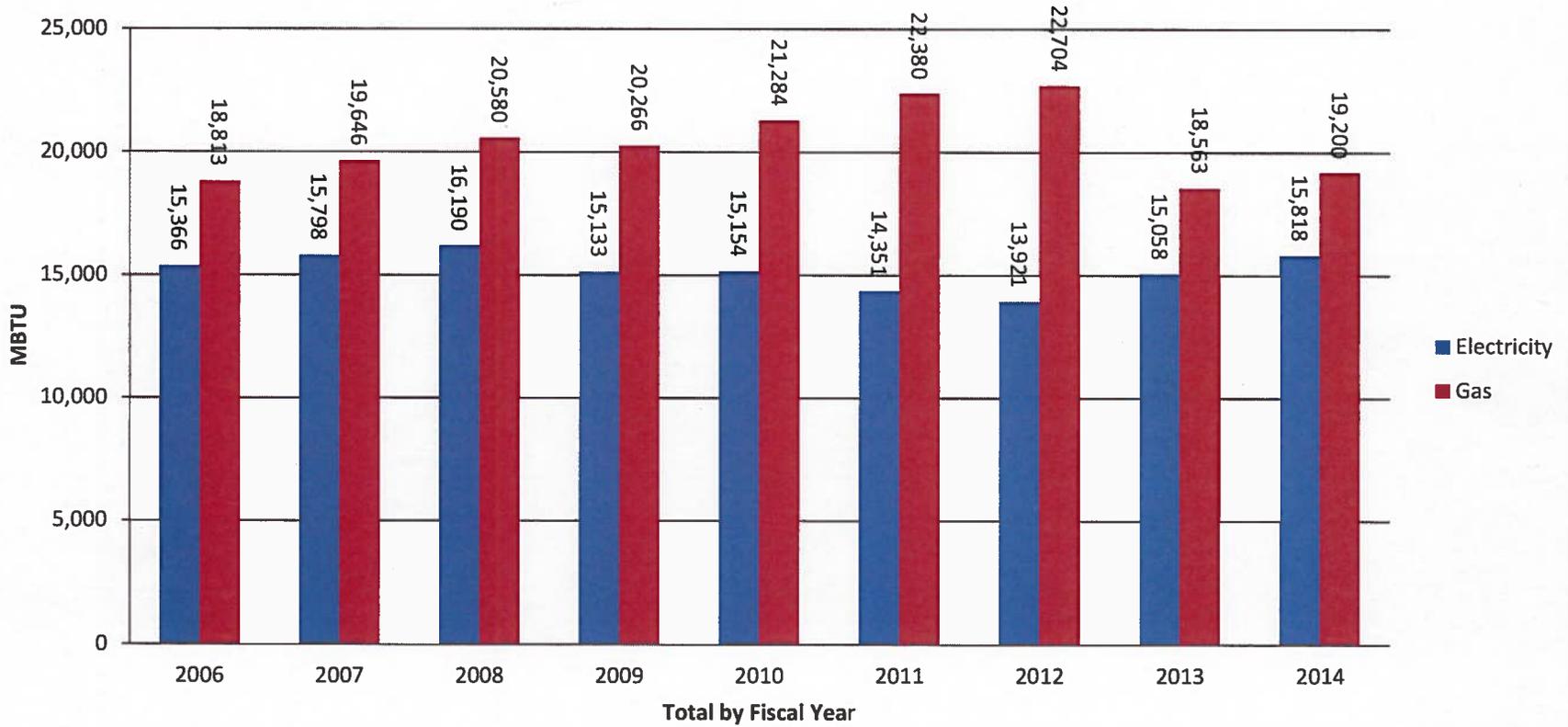
Teton County Facilities - Total Energy



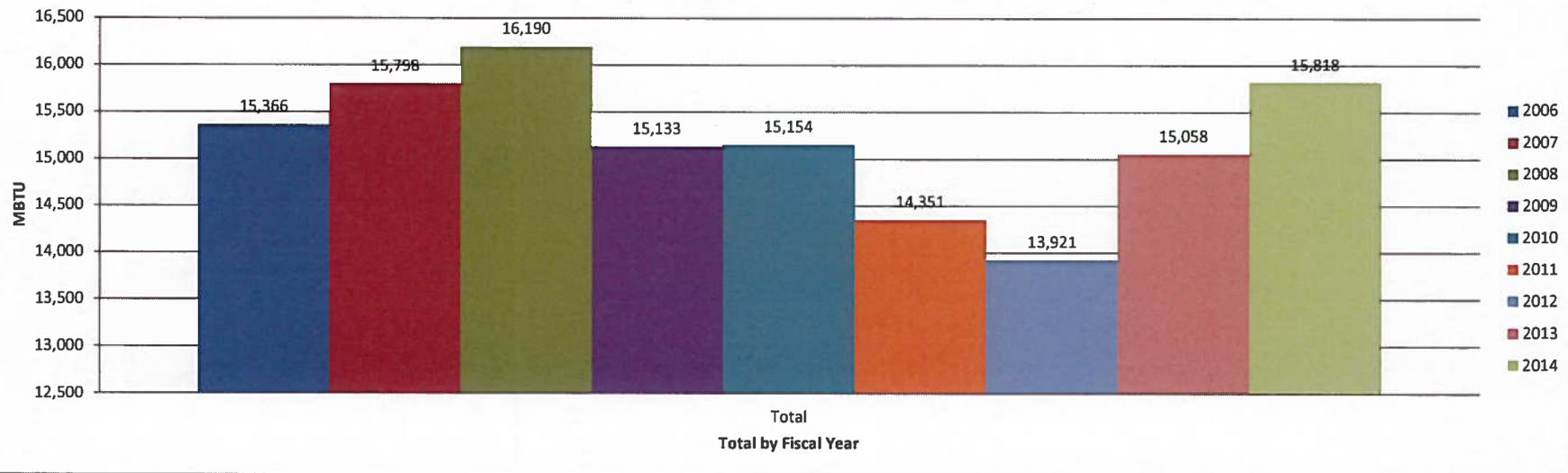
Teton County Facilities - Total Expenditure



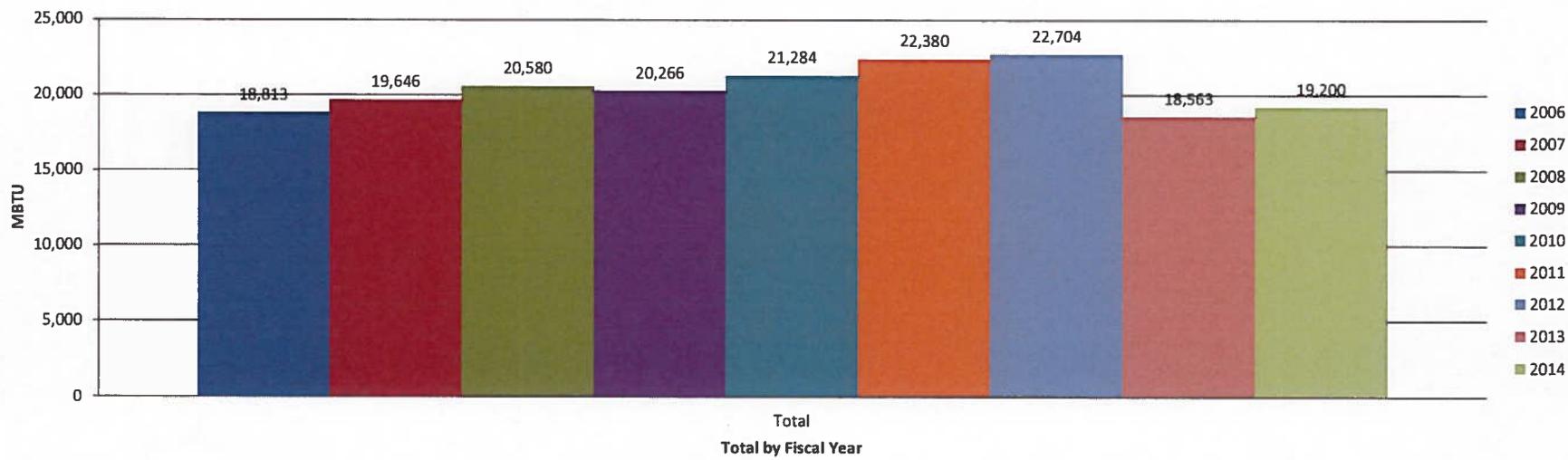
Teton County Facilities - Fuel Trends



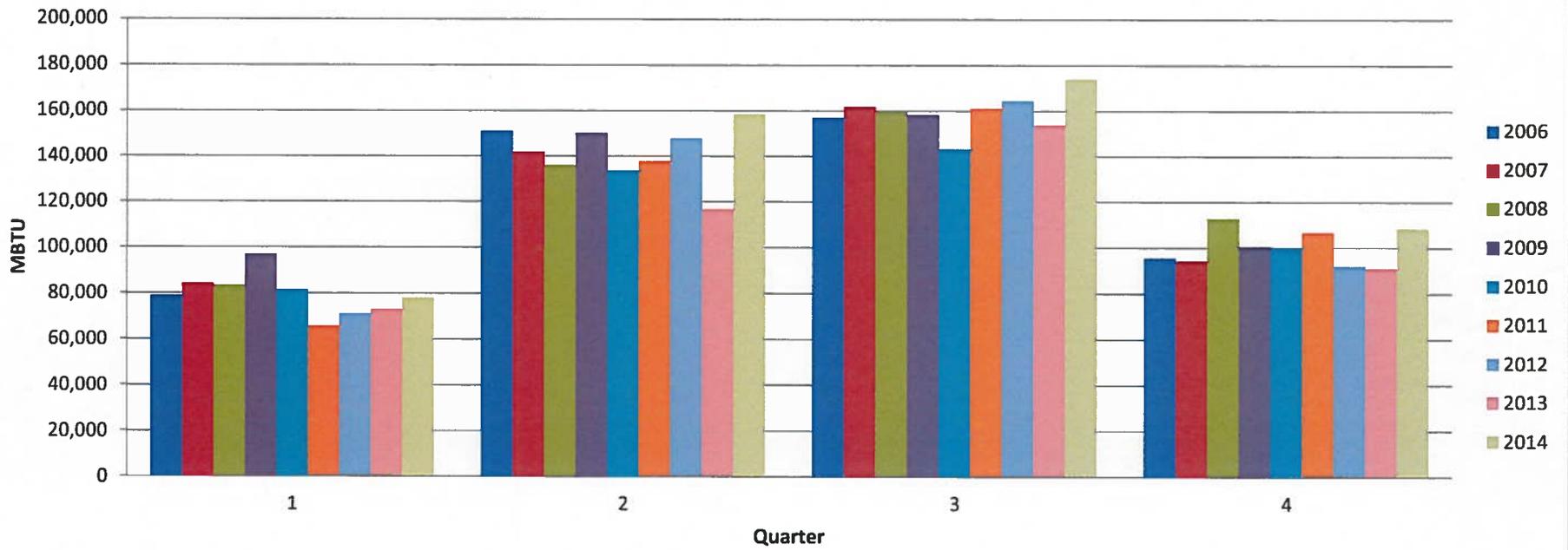
Teton County Facilities - Total Electricity



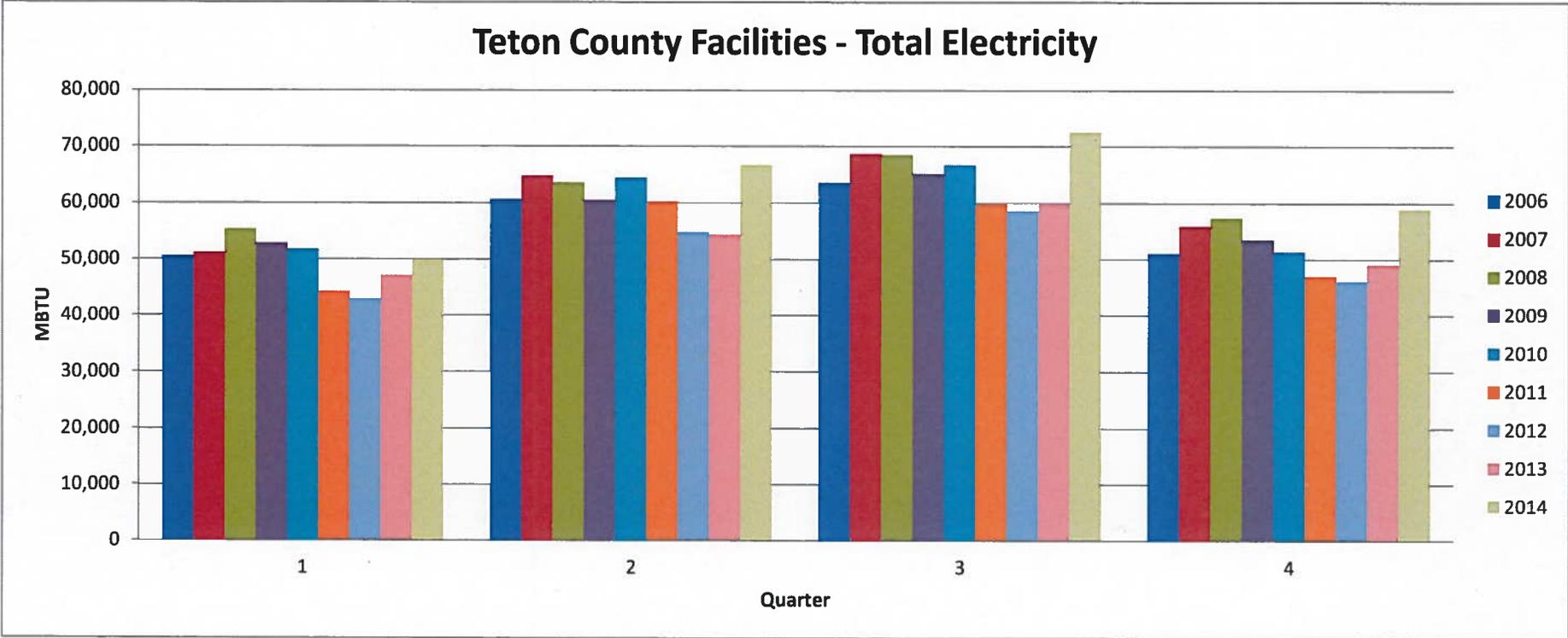
Teton County Facilities - Total Natural Gas



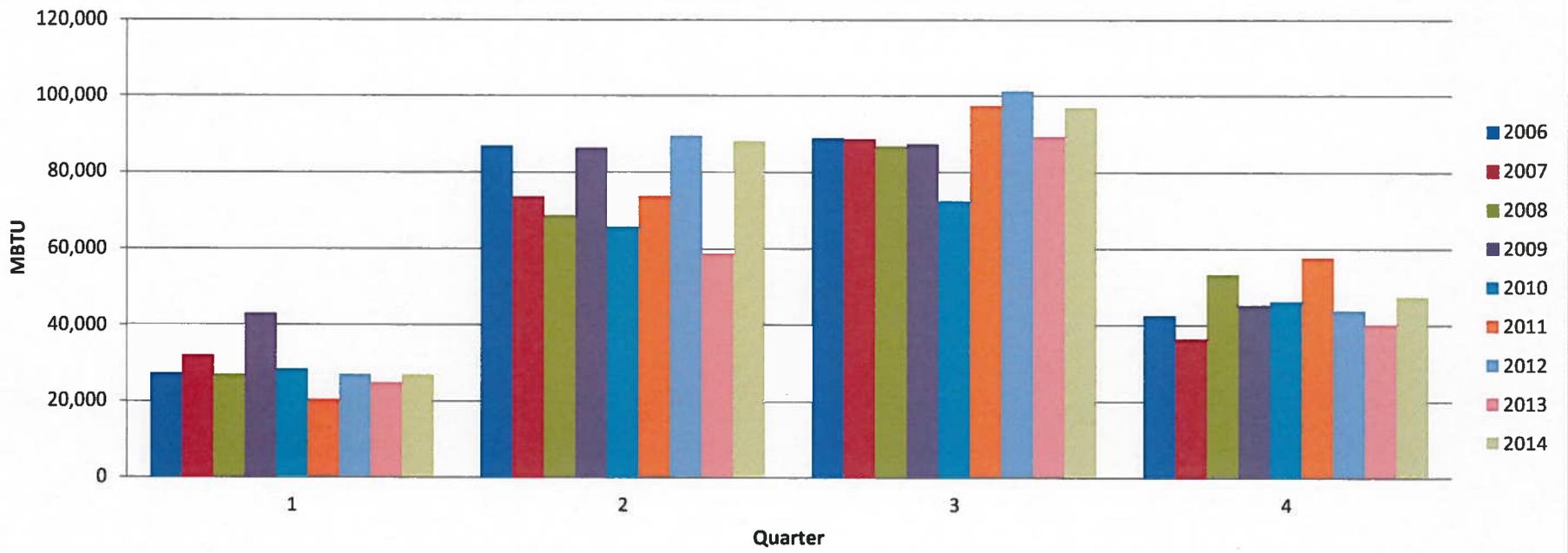
Teton County Facilities - Total Energy



Teton County Facilities - Total Electricity



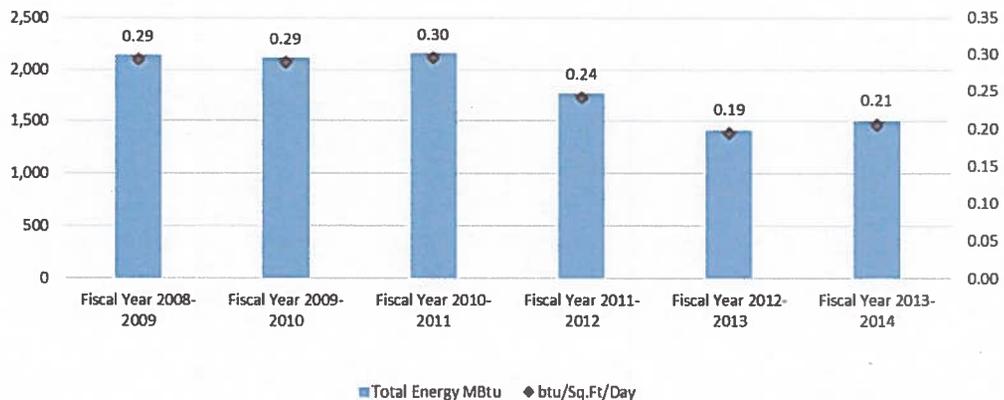
Teton County Facilities - Total Natural Gas



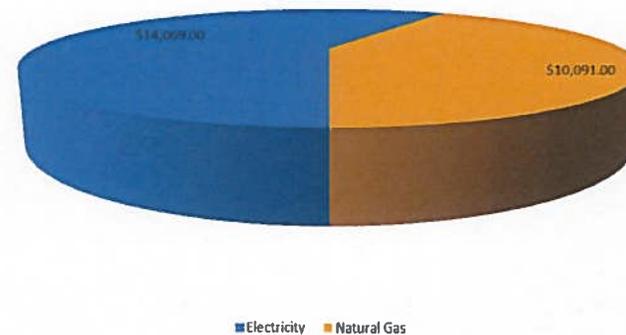
Property Summary



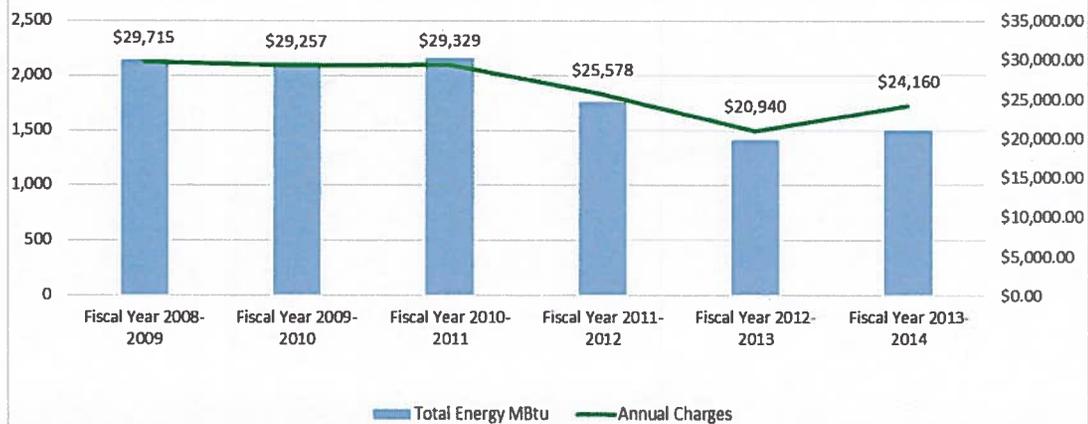
Administration Building Annual Energy Consumption per Sq. Ft. per Day



Administration Building Energy Cost Profile



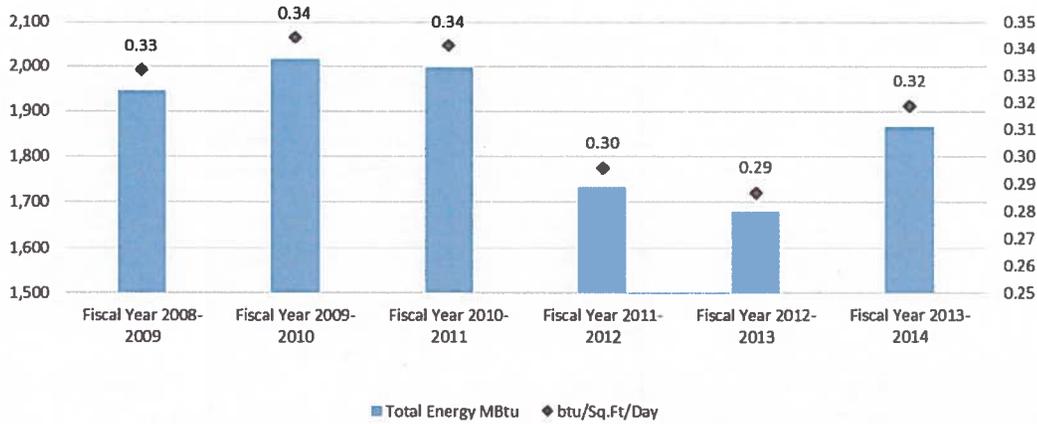
Administration Building Annual Energy Consumption & Costs



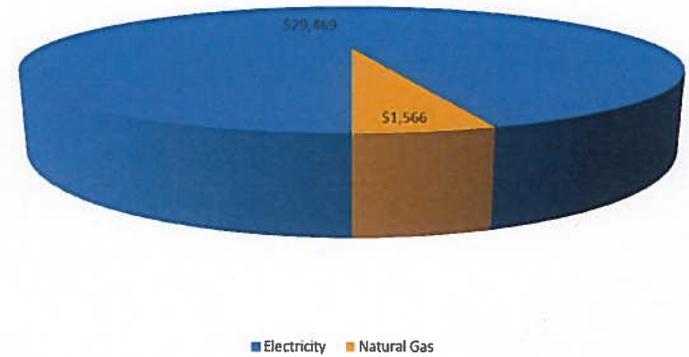
Property Summary



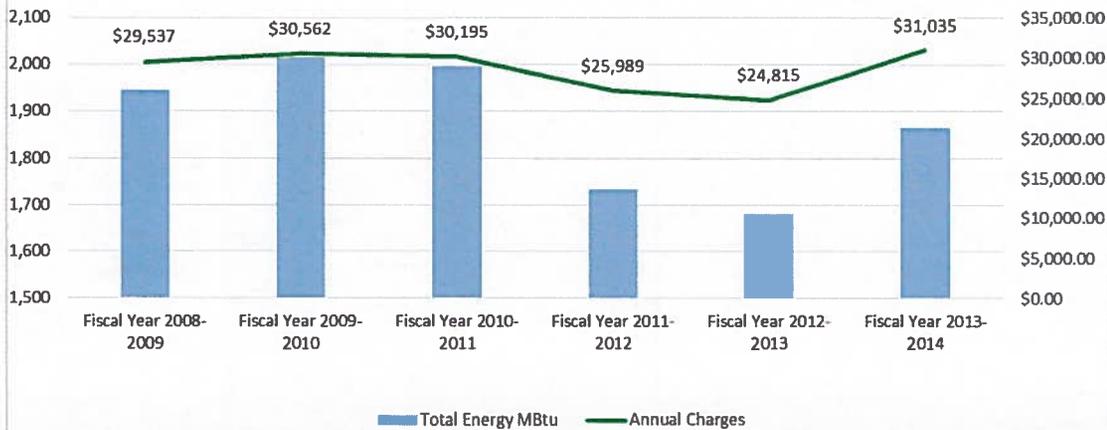
County Jail Annual Energy Consumption per Sq. Ft. per Day



County Jail Energy Cost Profile



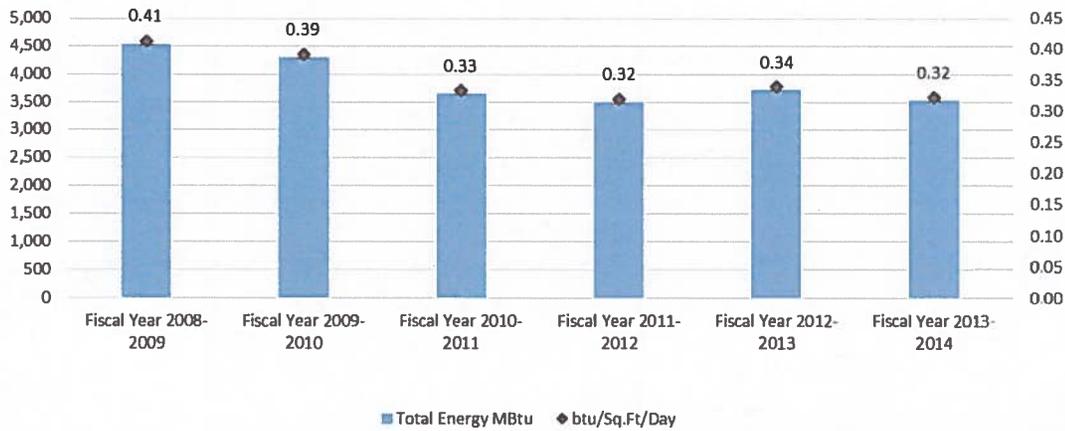
County Jail Annual Energy Consumption & Costs



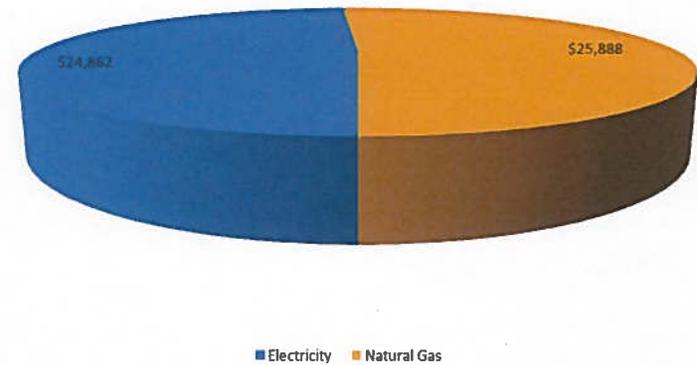
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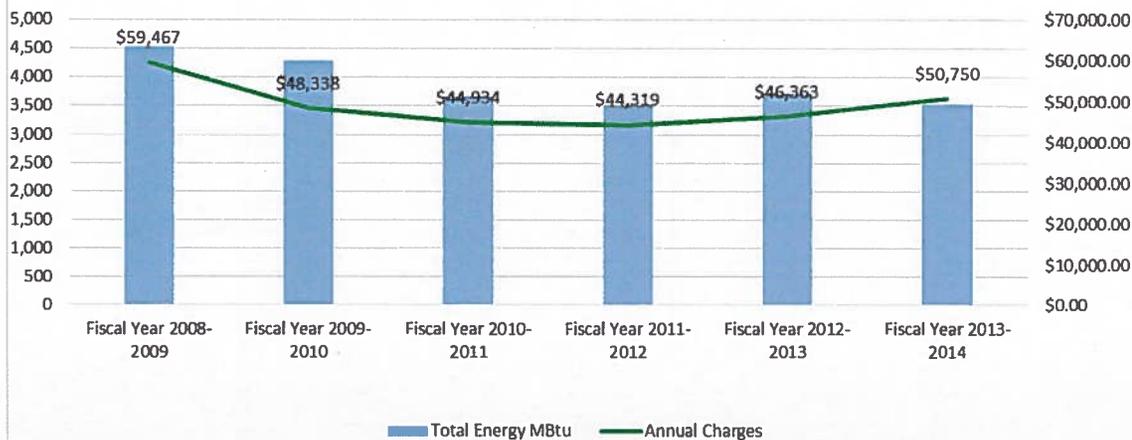
Court House Annual Energy Consumption per Sq. Ft. per Day



Court House Energy Cost Profile



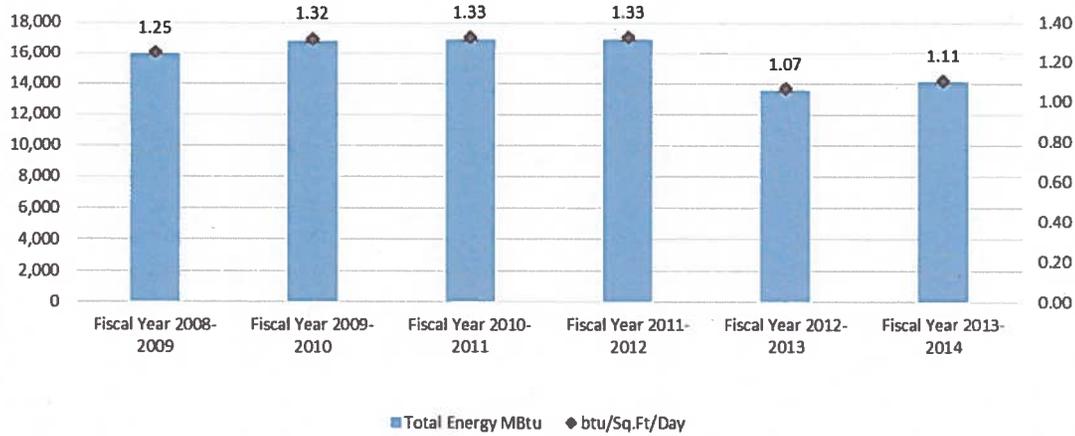
Court House Annual Energy Consumption & Costs



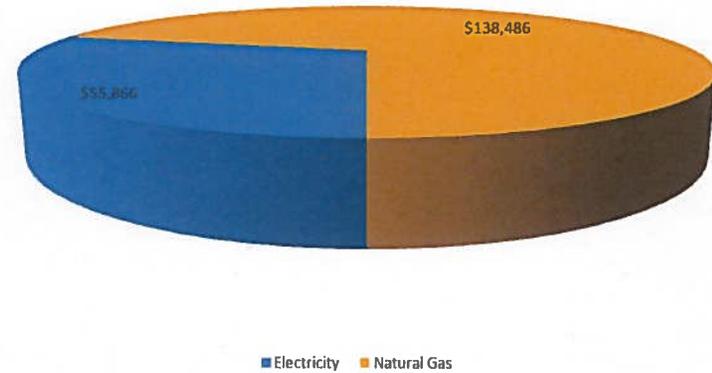
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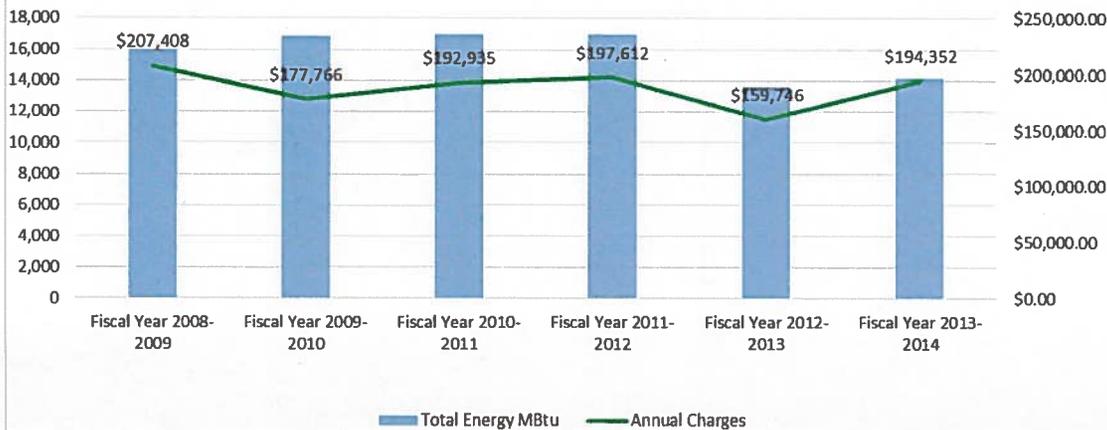
Recreation Center Annual Energy Consumption per Sq. Ft. per Day



Recreation Center Energy Cost Profile



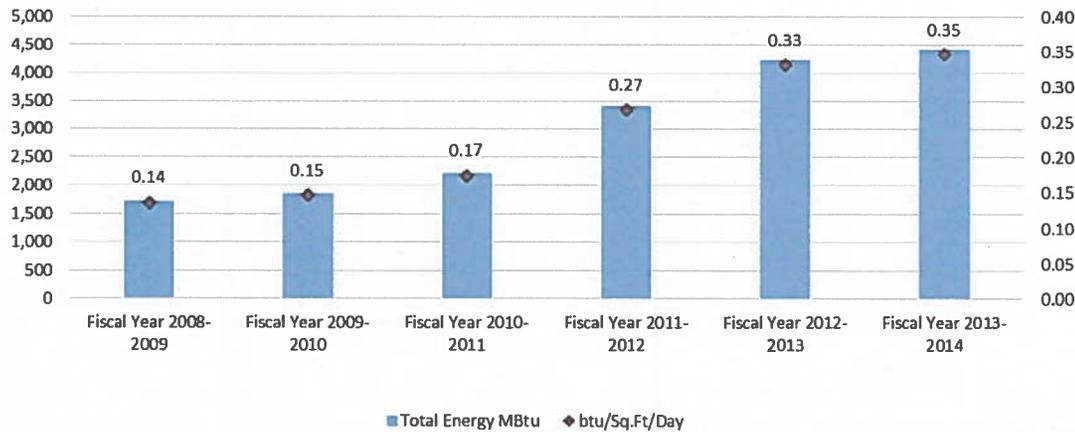
Recreation Center Annual Energy Consumption & Costs



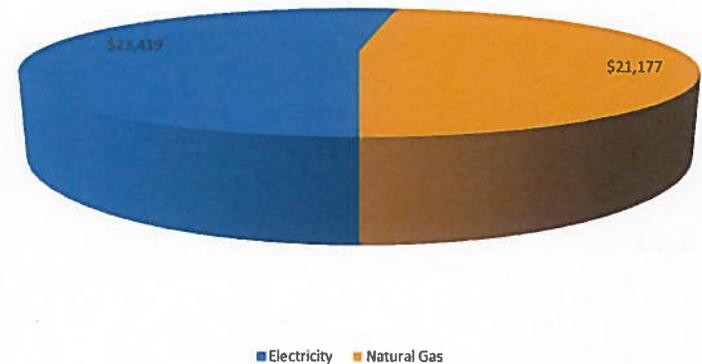
Property Summary



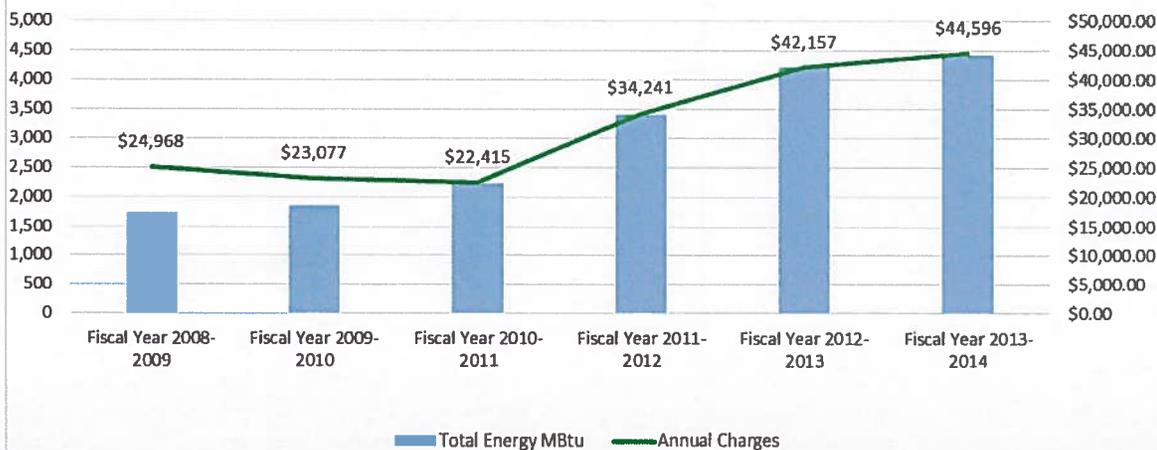
Library Annual Energy Consumption per Sq. Ft. per Day



Library Energy Cost Profile



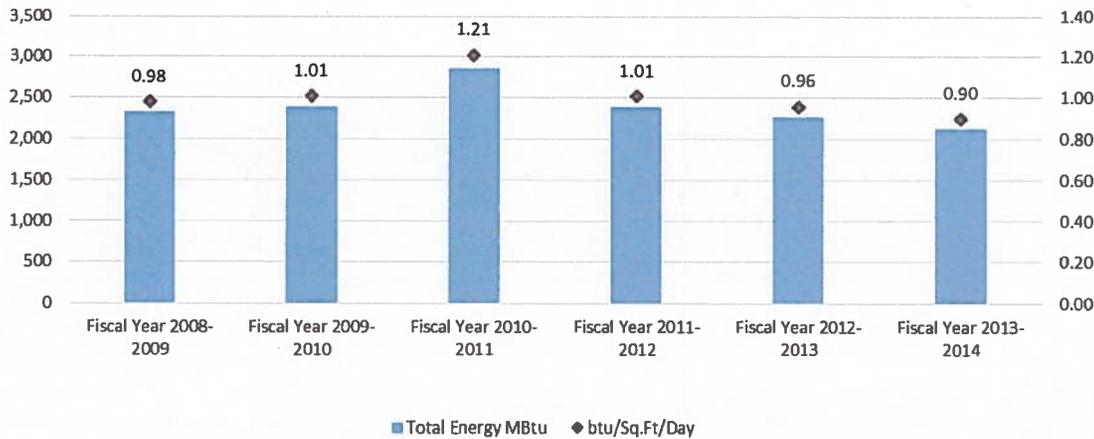
Library Annual Energy Consumption & Costs



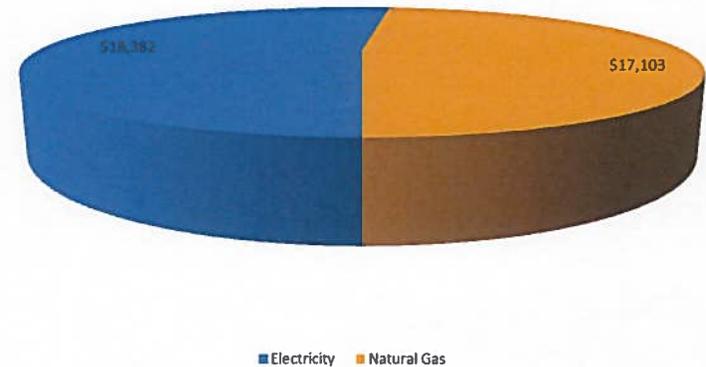
Property Summary



The Fair Annual Energy Consumption per Sq. Ft. per Day



The Fair Energy Cost Profile



The Fair Annual Energy Consumption & Costs

