

CLACKAMAS COUNTY BOARD OF COUNTY COMMISSIONERS
Policy Session Worksheet

Presentation Date: 4/4/17 **Approx Start Time:** 1:30 PM **Approx Length:** 60 min

Presentation Title: Energy Conservation Progress Update

Department: Finance - Facilities Management; Transportation and Development -
Resource Conservation & Solid Waste

Presenters: Eli Seely, Facilities Management; Eben Polk, Resource Conservation &
Solid Waste

Other Invitees: Laurel Butman, Jeff Jorgensen, Cory Johnson

WHAT ACTION ARE YOU REQUESTING FROM THE BOARD?

None; this is a board briefing for informational purposes only.

EXECUTIVE SUMMARY:

Since 2014, the County has been participating in the Energy Trust of Oregon's Strategic Energy Management (SEM) program, to proactively reduce our energy consumption by targeting operational and behavioral opportunities. In February 2016, the Board adopted a County Energy Policy calling for a 5% cut in total energy consumption, by 2020, from where it was in 2014.

In 2015, our energy use dropped 4.9%, though the majority of that was due to warmer winter weather. In 2016, our energy use increased 0.86%. That increase can be traced to slightly cooler weather and increased building occupancy. Approximately 1% of the total drop over the last two years can be tied to specific conservation projects.

Electricity consumption dropped 1.9% in 2016, against an expected decrease of 0.5%. Natural gas consumption increased 6.5%, against an expected increase of 3.8%. Almost all of the additional drop in electricity, and 40% of the additional increase in gas was due to the reenabling of natural gas heating in the Brooks building. The remainder of the increase in gas usage is due to increased building occupancy.

Total costs dropped from approximately \$1,675,000 in 2014, to \$1,635,000 in 2015, and \$1,600,000 in 2016. Cost per kilowatt-hour of electricity has increased 3.4% over the last two years. Cost per therm of natural gas has dropped 9.7%. Portland General Electric has filed a request for a significant (as much as 6-7%) rate increase in 2018, while natural gas prices are likely to be flat or see a 1-2% increase.

The Energy Policy also commits staff to develop a proposal for a new construction efficiency standard for the County in 2017. We are currently researching such policies in other jurisdictions, and will bring a recommendation to the Board by the end of 2017. In addition, if the Board wishes to alter the policy goal in light of upcoming capital acquisitions, we will draft alternatives for that. Finally, the County Energy Team has been working on administrative policies around PC power management and office equipment to facilitate behavior change.

FINANCIAL IMPLICATIONS (current year and ongoing):

Is this item in your current budget? YES NO

What is the cost?
~\$45,000 (0.5 FTE)

What is the funding source?
Allocated costs

The County has avoided hundreds of thousands of dollars in annual energy costs by constructing energy-efficient buildings and upgrading older buildings. If our buildings used the same amount of energy per square foot now that they used in 2007, the County would have spent \$585,000 more on energy last year, and almost \$4 million total since 2008.

STRATEGIC PLAN ALIGNMENT:

How does this item align with your Department’s Strategic Business Plan goals?

Facilities Management has a performance target to reduce energy use in 10% of buildings each year. In 2016, 51% of county buildings reduced their energy use.

How does this item align with the County’s Performance Clackamas goals?

Reducing our energy use and expenditures supports the strategic priority to build public trust through good government. Additionally, pursuing reduced energy use demonstrates the County’s commitment to honor our natural resources.

LEGAL/POLICY REQUIREMENTS:

Oregon state law requires that 1.5% of the total project cost of public capital construction or renovations with a total cost greater than \$1 million be spent on green energy technology. All new construction is also subject to State Energy Efficiency Code.

PUBLIC/GOVERNMENTAL PARTICIPATION:

We are developing a public webpage that will detail our conservation activities. We also regularly collaborate with other local jurisdictions and the Energy Trust of Oregon to share ideas and solutions.

OPTIONS:

N/A

RECOMMENDATION: Information only, no recommendations at this time.

ATTACHMENTS:

County Energy Policy, dated February 4th, 2016
Supporting Slides

SUBMITTED BY: Eli Seely, Facilities Management

Division Director/Head Approval JJ

Department Director/Head Approval

County Administrator Approval LSB

For information on this issue or copies of attachments, please contact
Eli Seely @ 503-557-6425

**BEFORE THE BOARD OF COUNTY COMMISSIONERS
OF CLACKAMAS COUNTY, STATE OF OREGON**

A Resolution Adopting a County
Energy Policy and Goals

Resolution No. 2016-08

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WHEREAS, Clackamas County is committed to good governance and the judicious use of taxpayer funds; and

WHEREAS, since 2007, the County has pursued a variety of energy efficiency projects which have resulted in energy use reductions totaling 5.7% annually and a cumulative savings of \$2.9 million; and

WHEREAS the County intends to deliberately and systematically pursue further energy savings;

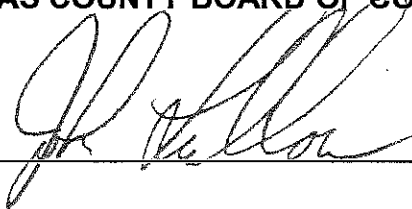
NOW, THEREFORE, the Clackamas County Board of Commissioners do hereby resolve:

1. Adopt the energy policy and goals contained in the attachment.
2. Direct County staff to undertake the activities described in the attachment in order to accomplish said goals.

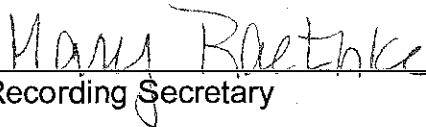
Dated this 4th day of February, 2016

CLACKAMAS COUNTY BOARD OF COMMISSIONERS

Chair



Recording Secretary





**Energy
Management**
Energy Policy & Goals

POLICY:	Energy
DATE:	1/27/2016
REVISION:	1.0
REVIEW:	Annual
Approved BCC:	TBD
Board Agenda #:	TBD

Clackamas County Energy Policy and Goals

Purpose

Clackamas County's energy policy is intended to promote and sustain the fiscally and environmentally responsible use of energy in accomplishing the County's mission to serve the public. It adopts strategic energy management to incorporate the goal of improved energy efficiency into the County's planning and operational decisions. Efficient use of electricity, natural gas, and fuel throughout County operations will minimize costs and increase resources available for serving the public, helping to build public trust, maintain strong infrastructure, and reduce wasted natural resources.

Energy Goals

- Reduce energy consumption in County facilities by 5% from 2014 baseline by 2020.
- By 2017, establish a benchmark that ensures that new construction and major renovations result in buildings that exceed code-required energy performance by a minimum percentage to be determined.
- By 2019, set a goal for increasing use of renewable energy, through purchasing or on-site generation.

Guiding Principles

The County will:

- Take a whole-organization approach to improving energy efficiency.
- Maintain and use buildings efficiently, integrating energy efficiency into decision-making for operations, maintenance, and occupancy, including facilities and other long-term plans.
- Build, purchase, and/or remodel buildings and equipment to ensure high energy performance by including energy use and total cost to own and operate as a criterion during design and acquisition decisions.
- Engage County employees at all levels to create a culture of energy conservation.
- Invest in energy management projects and programs that yield a positive return, and reinvest a portion of those returns in further savings.
- Identify and draw on outside financial incentives, rebates, grants, and technical expertise.
- Establish energy use goals and adopt and maintain an action plan to achieve continuous improvement.
- Monitor and report progress using standardized performance indicators.

Performance Metrics

Energy consumption will be tracked with the following metrics, which the energy team may modify as necessary:

- Total energy consumption by building and countywide
- Energy consumption per square foot
- Total cost of energy and annual savings
- Building energy use benchmarked against similar buildings

Energy Team

At the discretion of County Administration, department leaders or their direct reporting representatives shall participate on a County energy team. This team shall meet no less than quarterly in order to manage and implement the energy action plan, identify and prioritize opportunities for action, monitor and report on energy use, and suggest revisions to this policy. Members of the team will lead efforts to identify and evaluate the feasibility and operational implications of energy-saving opportunities in their respective areas of expertise.

The team may recommend projects and programs in four areas: Behavior change, operations and maintenance practices, procurement policies and standards, and capital projects. They may also recommend administrative policies for the consideration of the County Administrator. When evaluating which projects and programs to pursue and/or recommend, the team shall consider:

- Total impact on energy consumption
- Return on investment/payback time
- Feasibility
- Impact on employee comfort, safety, and wellness
- Minimizing disruption to operations and maintaining high quality service
- Alignment with long-term plans



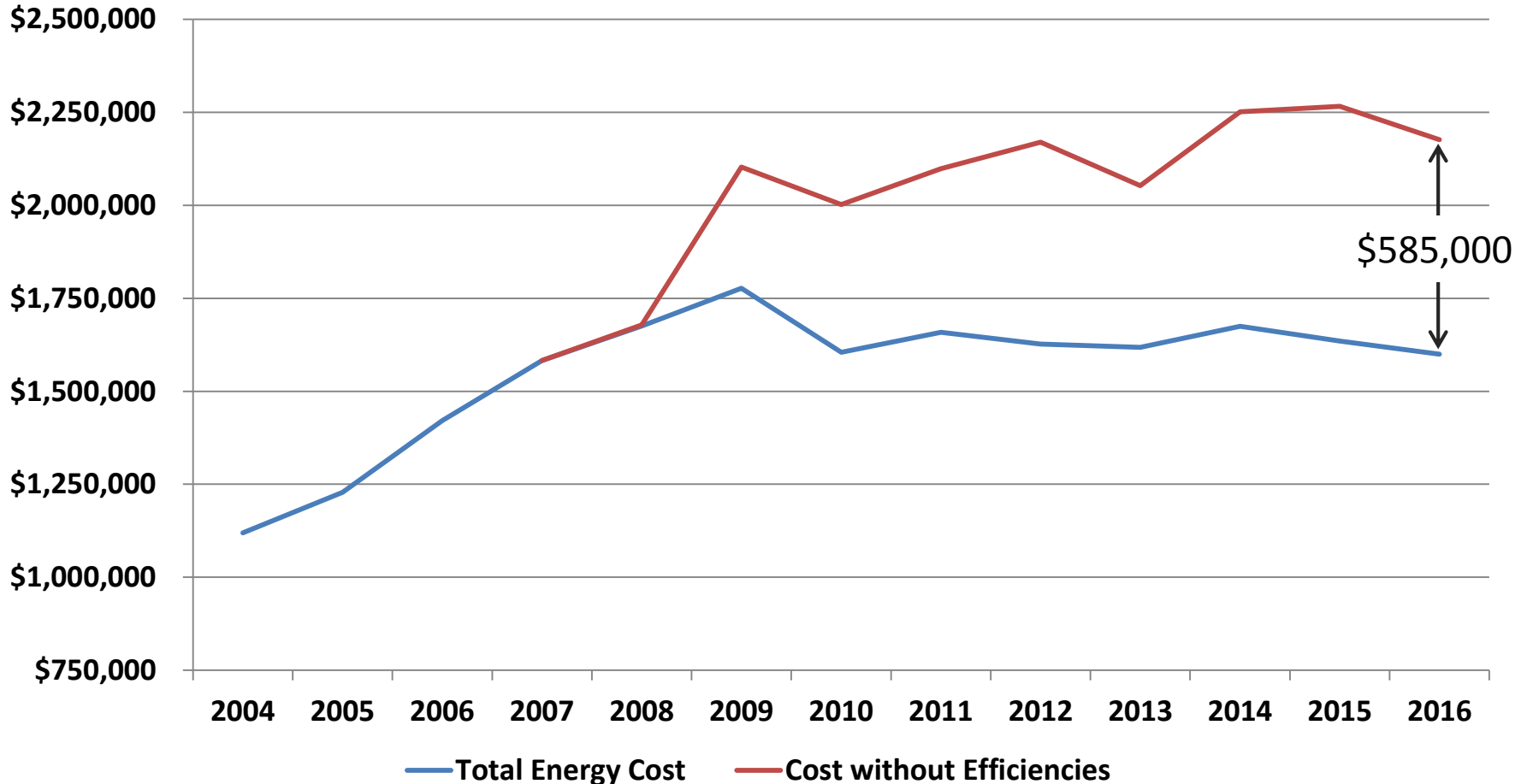
4/4/17 BCC Policy Session:

Clackamas County Energy Conservation

Supporting Slides

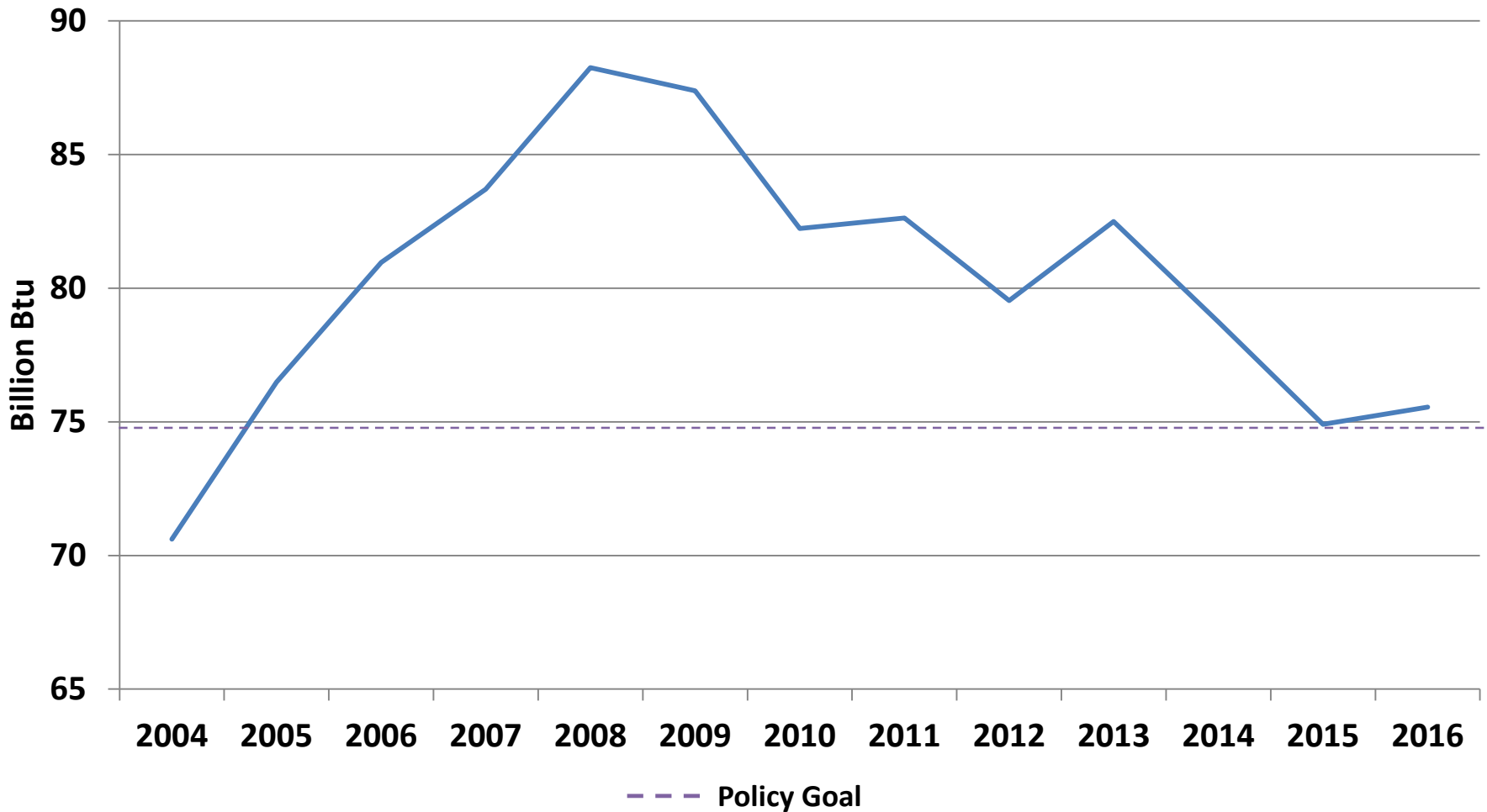
County Energy Use Trends

Total Cost of Energy



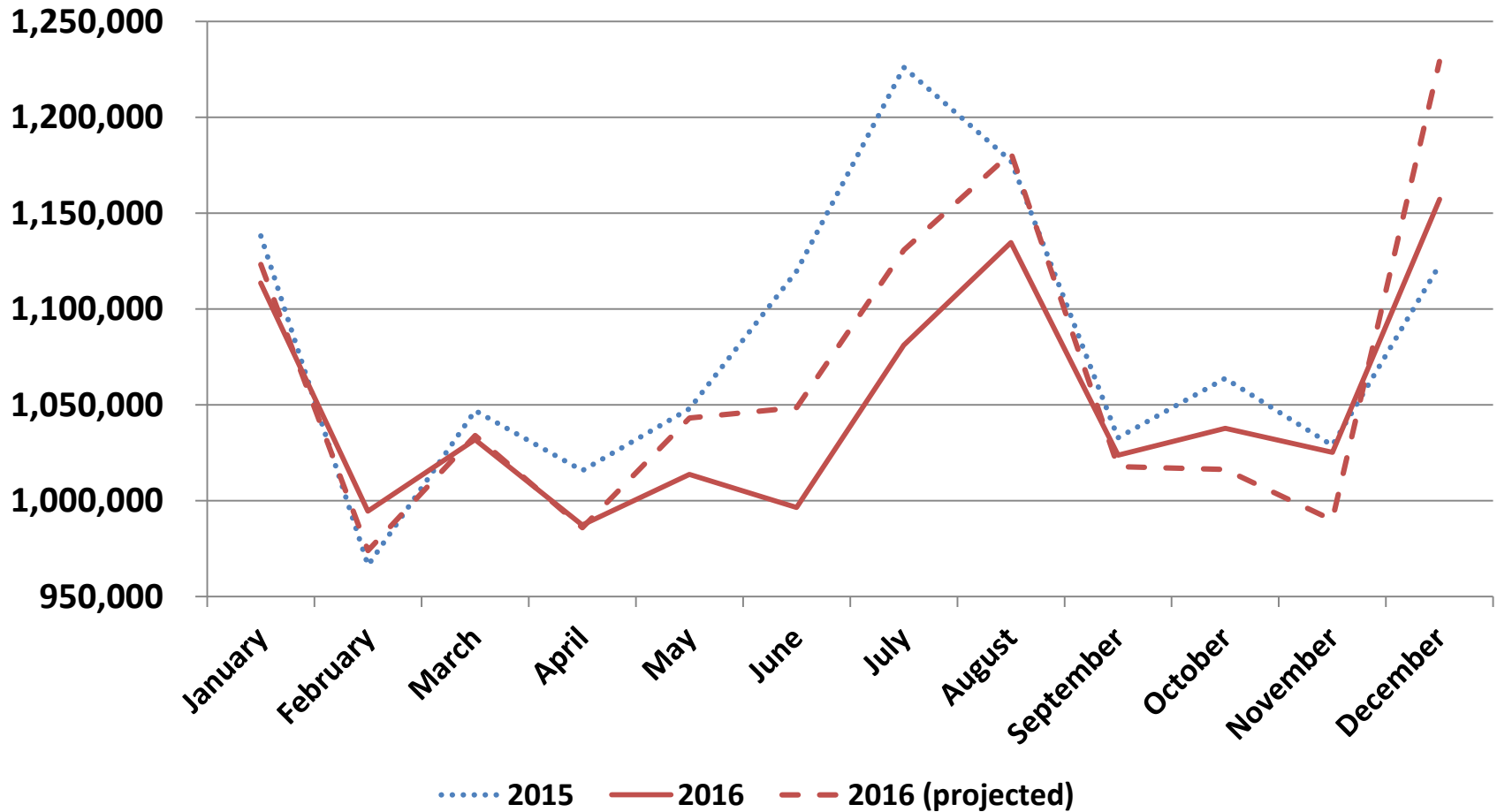
County Energy Use Trends

Total Energy Consumption



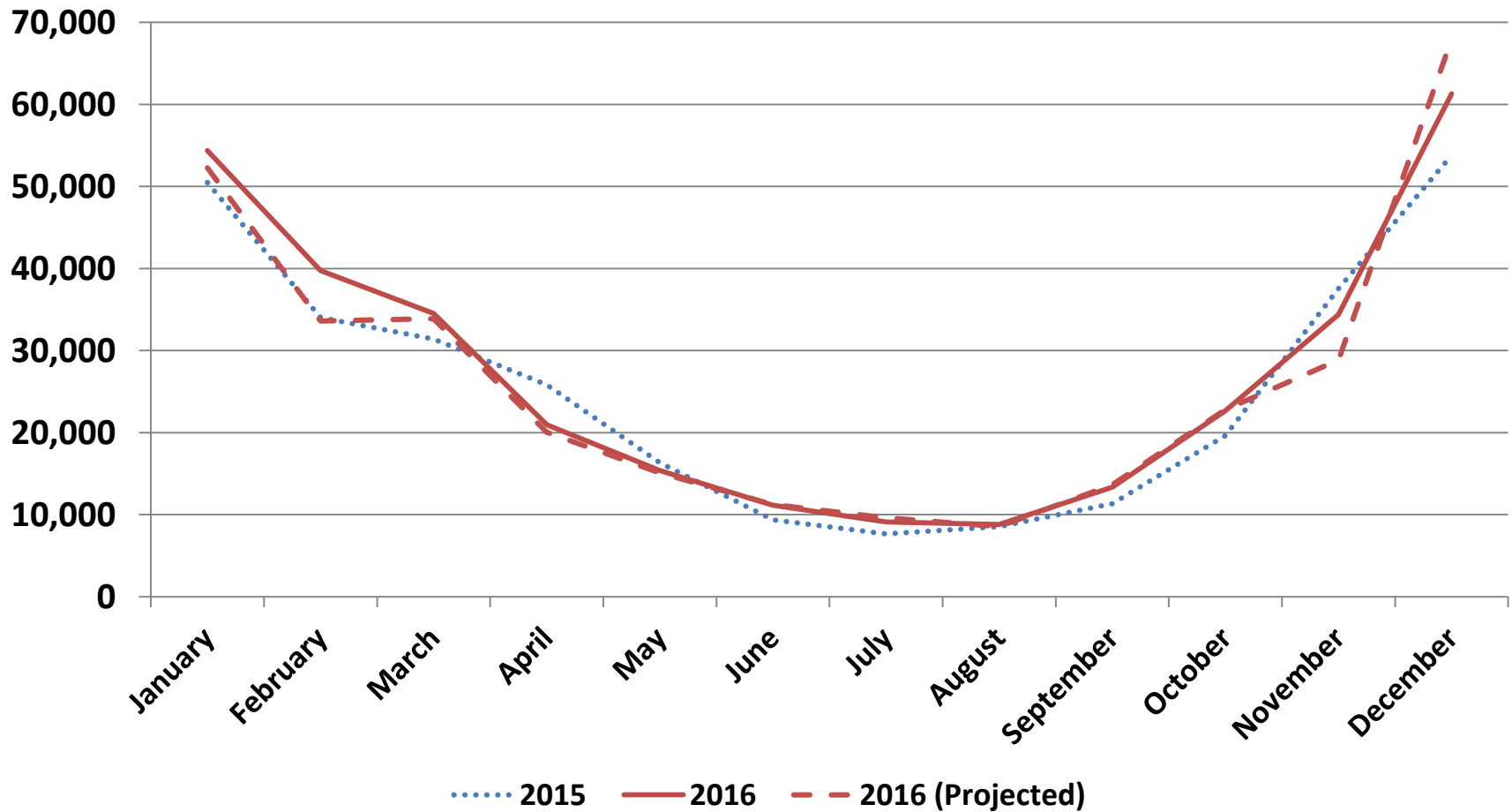
County Energy Use Trends

Electricity Consumption (kWh)



County Energy Use Trends

Natural Gas Consumption (Therms)



Recent Activities

Improved building programming in Brooks, Public Safety Training Center, and McCoy buildings

Lighting retrofits in Development Services parking garage

Replacement of roof and heating/ventilation/air conditioning units Jail

Near Future

Exterior lighting retrofits in parking lots

Heating/ventilation/air conditioning upgrades for Stokes Building and Public Safety Training Center

Employee engagement

Administrative policies

New construction efficiency standard

Possible significant electric rate increase