

**TOWN OF MOUNTAIN VILLAGE
GREEN TEAM COMMITTEE MEETING
TUESDAY, JUNE 26, 2018, 2:00 PM
2nd FLOOR CONFERENCE ROOM, MOUNTAIN VILLAGE TOWN HALL
455 MOUNTAIN VILLAGE BLVD, MOUNTAIN VILLAGE, COLORADO
AGENDA**

Item #	Time	
1.	2:00	Call to Order
2.	2:03	Approval of the May 22, 2018 Minutes
3.	2:05	Discussion & Updates Regarding: <ul style="list-style-type: none"> A. Community Cleanup Day Update (Savanna Wagner) 5 mins B. Plastic Straw Ban Initiative (Jonathan Greenspan) 5 mins <ul style="list-style-type: none"> • Update Regarding TMV discussion C. Commercial Property Assessed Clean Energy: C-PACE (EcoAction Partners) 5 mins D. Volunteer Schedule Regarding Farm to Community Booth at the Market on the Plaza (Michelle Haynes) 5 mins E. GHG Discussion & EcoAction Partners Presentation (EcoAction Partners) 30 mins
4.	2:55	Next Steps
5.	2:58	Other Business
6.	3:00	Adjourn

**TOWN OF MOUNTAIN VILLAGE
MINUTES OF THE MAY 22, 2018
GREEN TEAM MEETING DRAFT**

The meeting of the Green Team Committee was called to order by Jonathan Greenspan on Tuesday, May 22, 2018 at 2:04 p.m. in Mountain Village Town Hall, 455 Mountain Village Boulevard, Mountain Village, Colorado.

Attendance:

The following Green Team Committee members were present:

Jonathan Greenspan, Vice Chair and Mountain Village Resident
Patrick Berry, Mountain Village Town Council
Savanna Wagner, At Large Member
Jeff Proteau, Telluride Ski and Golf Company

The following Green Team Committee and Staff members were absent:

Marti Prohaska, Chair and Mountain Village Resident
Bruce MacIntire, Mountain Village Town Council
Garrett Brafford, Telluride Mountain Village Owner's Association
Kim Montgomery, Town Manager (Staff)

The following were also in attendance:

Michelle Haynes, Director of Planning and Development Services (Staff)
Christina Lambert, Administrative Services Coordinator (Staff)
Heather Knox, Executive Director- Eco Action Partners
Cath Jett, Mountain Village Resident

Consideration of Approval of Minutes:

March 27, 2018 Green Team Committee Meeting Minutes

On a **MOTION** by Patrick Berry and seconded by Savanna Wagner, the Green Team Committee voted unanimously to approve the March 27, 2018 meeting minutes as presented.

Consideration of Approval of Minutes:

April 24, 2018 Green Team Committee Meeting Minutes

On a **MOTION** by Patrick Berry and seconded by Savanna Wagner, the Green Team Committee voted unanimously to approve the April 24, 2018 meeting minutes as presented.

Discussion and Committee Follow Up/Next Steps:

- Community Cleanup Day Update:
 - The Green Team Committee **DIRECTED** Savanna Wagner to continue to take the lead on the community clean-up day. Savanna will request assistance from other Green Team members and staff as desired or when needed.
 - **NEXT STEPS:** Decide on an official date and event time frame. Select a location and request permission to use the location. Create a draft Agenda. Determine budget and potential expenses. Look into a band or other family friendly entertainment options. Consider prize options and donations. Create a list of specific areas to focus on clean-up. Create and print a flyer to hand out to local businesses. Meet with local businesses to educate them about the Green Team Committee and about the upcoming event.

- Straw Program Update:
 - **NEXT STEPS:** Jonathan Greenspan will continue to gather information for the Green Team. This information will be discussed and can be used to present to the Mountain Village Town Council to request a potential future ordinance as needed.
 - Jonathan will present this topic at the June 6, 2018 Ecology Commission meeting.
 - Jonathan plans to reach out to Koto and the Telluride Daily Planet to talk about eliminating or reducing straws.
 - Jonathan is going to talk to local businesses to help educate them about the importance of eliminating or reducing straws.
 - Jonathan will create a list of other types of bans in other communities.
 - Jonathan will speak with distributors about adding paper straws to their catalogs so local businesses have the option to purchase these products.

- Sunset Concert Series Zero Waste Compostable Cups Update:
 - Garrett Brafford was not present at the meeting. The Green Team Committee decided that this agenda item should be **CONTINUED** to the next meeting.

- Town Council/CSA Program Update:
 - Discussion took place and Michelle Haynes provided updates to the committee.

- Compost Program Update:
 - Discussion took place and Michelle Haynes provided updates to the committee. Sam Starr is working on getting the application on the Town of Mountain Village website.

Other Business:

- Bike Week
 - The Green Team Committee **DIRECTED** Patrick Berry and Heather Knox to continue to take the lead on this item. Staff is responsible for food (heathy breakfast snacks), pop-up tents, table and chairs. Heather Knox will send out an email to provide additional information. The event date is Wednesday, May 30.

There being no further business, on a **MOTION** by Patrick Berry and seconded by Jeff Proteau, the Green Team Committee voted unanimously to adjourn the meeting at 2:59 p.m.

Reminder:

The next Green Team Committee meeting will take place on Tuesday, June 26, 2018 at 2:00 p.m.

Respectfully submitted,

Christina Lambert

Administrative Services Coordinator

Dear Editor,

The lasting and detrimental effects that plastic waste is having on wildlife and the planet seem to be in the news on a weekly basis. Millions have viewed the disturbing video of a sea turtle having a plastic straw removed from its nose with a pair of pliers. Sadly, this turtle was lucky: every year one million seabirds and 100,000 marine animals die due to ingested plastic.

Our coastal areas and marine environments pay the highest price for plastic pollution, but most oceanic plastic waste originates inland. Over 80% of the Great Pacific Garbage Patch is terrestrial trash. River systems deliver plastics from the interior of the US to our oceans. Telluride is connected by one such river system to the distant Gulf of California. In addition to the problems of unsightly waste and ingestion by wildlife, the toxic chemicals released as plastics degrade are polluting our environment.

It is this growing body of scientific and anecdotal evidence that has led to a growing movement to restrict or ban the use of plastic straws, plastic bags and other single-use plastic products. From Miami Beach, Florida to New Delhi, India to Taiwan restrictions and bans on a variety of single-use plastics are being legislated. The European Union recently announced a proposal to ban ten single-use items, including straws and plastic stirrers. Closer-to-home, Boulder launched its “Suck the Straws Out of Boulder” campaign in 2016.

The evidence of this mounting problem is so overwhelming that on January 26, 2018 the American Chemistry Council took a “formal product stewardship position aimed at encouraging consumers to use fewer plastic straws.” Consumers can participate in “**The Final Straw**” initiative to reduce plastic straws in our community by:

- 1) saying “no straw please”
- 2) asking restaurants and vendors to adopt a straw-on-request only policy
- 3) encouraging restaurants and vendors to switch to non-plastic straws
- 4) purchasing your own renewable, non-plastic straw

We, the undersigned organizations, are asking community members and visitors to engage with our local establishments and make personal choices that support the discontinued use of plastic straws in Telluride and Mountain Village.

Thank you,

An Overview

Fun Facts

Scientists believe that plastic waste in the world's oceans will literally outweigh all fish in the sea by 2050

Every day 500 million straws are thrown away in the US alone

July 11 is Colorado straw free day

Each year 8 million metric tons of plastic enter the world's oceans

American Chemistry Council-January 26, 2018-took a "formal product stewardship position aimed at encouraging consumers to use fewer plastic straws"

Every year one million sea birds and 100,000 marine animals die from plastic ingestion

Plastics release a variety of chemicals into our environment through degradation in oceans and landfills, and into our air through incineration. These chemicals can result in a host of adverse health affects in human and animal populations

Some places with restrictions or bans in place or under consideration:

Around the World

Taiwan restricted use of single use bags, straws, utensils and cups (Feb 2018)

UK announced 25 year plan to eliminate plastic waste (Jan 2018). The Queen banned plastic straws and bottles from the Royal Estate in Feb 2018.

New Delhi banned all forms of single-use plastic in 2017.

EU just announced proposal to ban ten single-use items that account for 70% of plastic waste there.

Closer to home

Malibu, CA banned the sale, distribution and use of straws, stirrers, cutlery (June 1, 2018)

Seattle, WA banned plastic straws and single-use utensils (July 1, 2018)

Ft. Myers, Florida banned distribution of plastic straws (Feb 2018)

California passed straw-on-request only ordinance (2018)

Boulder, CO has an initiative that includes an education campaign aimed to reduce use...."Suck the Straws out of Boulder". Singer Jack Johnson is a spokesperson for the campaign.

Your body and plastic toxins!

Plastic waste in our oceans begins to break down after only 1 year. The degradation of plastics results in the release of BPA and PS oligomer, which can cause hormone and reproductive disruption

Plastic waste is also burned, releasing a veritable smorgasbord of chemicals into the air supply. Not only do these chemicals add to climate change, they can affect living things by causing cancer, and disrupting reproductive, thyroid and respiratory functions. These disruptions increase heart disease and respiratory disease. Dioxins settle onto our food supply, and enter our bodies through ingestion. Furans, Mercury and Polychlorinated Biphenyls are inhaled.

These chemicals affect the health of human, animal, and plant populations.

Inefficient Building Costing You Money, Tenants? **COLORADO C-PACE CAN HELP.**

You already know that buildings with outdated energy equipment can cause your utility bills to soar. You also know that inefficient buildings are less competitive than their energy-efficient peers. But did you know that *upgrading your building can actually put money in your pocket?* It's possible with Colorado's C-PACE program!

HOW DOES C-PACE WORK?

C-PACE provides affordable, long-term financing for energy efficiency, water efficiency, and renewable energy projects. The financing is provided by private capital providers in an open market, so you can select the best terms. Repayment is facilitated through a voluntary assessment on your property (similar to a sewer assessment), and there is no money down and no personal guarantee required. *Best of all, in well-designed projects, the energy cost savings outweigh the C-PACE payments, improving your net operating income!*

HOW DO I GET STARTED?

Getting started with C-PACE is easy, and we'll walk you through every step of the process. Simply contact Colorado C-PACE to prequalify your project. We'll then work with your contractor to model different scenarios so you can see the projected outcome before you commit.

C-PACE: A SMARTER WAY TO IMPROVE YOUR BUILDING

- 100% financing (soft and hard costs)
- Cash-flow-positive projects
- No out-of-pocket costs
- No personal guarantees
- Long-term (up to 20 years)
- Lower utility bills
- Open-market financing
- Owner retains all tax incentives
- Can be combined with utility incentives
- Can be transferred upon sale and does not accelerate



ELIGIBLE PROPERTY TYPES

- Commercial
- Industrial and agricultural
- Nonprofit
- Multifamily (with 5+ units)

ELIGIBLE IMPROVEMENT EXAMPLES (Ask your contractor for specifics related to your property)

- Automated building controls
- Boilers, chillers, and furnaces
- Building envelope (insulation, windows)
- Combined heat and power systems (CHP)
- High-efficiency lighting
- Hot water systems
- HVAC upgrades and controls
- Solar PV and energy storage systems
- Recycled energy
- Roof upgrades
- Water efficiency
- More!

WHAT BUILDING OWNERS ACROSS THE COUNTRY ARE SAYING ABOUT C-PACE

“We knew the operating expenses of our building were high, but we were taking the typical approach by making our list and saying ‘Here’s everything we need to do at this property. What do we want to do and what can we push to the side and live with?’ C-PACE financing allowed us to address it all in one fell swoop. Anything that reduced our utility bill was eligible. We’re very excited, and tell people they should look into this.”

— *Brandon Hall and Brett Wilderman, principals, Forstone Capital*

USED C-PACE to upgrade:

- HVAC
- Controls
- Windows

C-PACE financing: \$2 million

Projected savings: Nearly \$250,000 annually

“We are thrilled to have a solar canopy project producing energy for us every day! It gives our employees protected parking areas and we were cash-flow positive on day one.”

— *Brok Thayn, Renewable Energy Division manager, Hunt Electric*

USED C-PACE to install:

- 25,125-watt solar canopy, which provides covered parking
- 4,320-watt rooftop system
- Battery backup system, Microgrid SCADA system
- Four electric vehicle charging stations

C-PACE financing: \$100,500

Projected savings: \$313,100 over the project’s lifetime

CONTACT COLORADO C-PACE TODAY TO LEARN MORE

Tracy Phillips, C-PACE program director: 720.933.8143 | tphillips@copace.com

Ken Gallagher, C-PACE program manager: 877.325.1882 | kgallagher@copace.com



Powered by:



In partnership with:



PACE

Property Assessed Clean Energy

WHAT IS PACE?

Property Assessed Clean Energy (PACE) is a financing mechanism that enables low-cost, long-term funding for energy efficiency, renewable energy and water conservation projects. PACE financing is repaid as an assessment on the property's regular tax bill, and is processed the same way as other local public benefit assessments (sidewalks, sewers) have been for decades. Depending on local legislation, PACE can be used for commercial, nonprofit and residential properties.

HOW DOES IT WORK?

PACE is a national initiative, but programs are established locally and tailored to meet regional market needs. State legislation is passed that authorizes municipalities to establish PACE programs, and local governments have developed a variety of program models that have been successfully implemented. Regardless of model, there are several keystones that hold true for every PACE program.

- PACE is voluntary for all parties involved.
- PACE can cover 100% of a project's hard and soft costs.
- Long financing terms up to 20 years.
- Can be combined with utility, local and federal incentive programs.
- Energy projects are permanently affixed to a property.
- The PACE assessment is filed with the local municipality as a lien on the property.

WHY IS IT SO POPULAR?

Property owners love PACE because they can fund projects with no out-of-pocket costs. Since PACE financing terms extend to 20 years, it's possible to undertake deep, comprehensive retrofits that have meaningful energy savings and a significant impact on the bottom line. The annual energy savings for a PACE project usually exceeds the annual assessment payment, so property owners are cash flow positive immediately. That means there are increased dollars that can be spent on other capital projects, budgetary expenses, or business expansion.

Local governments love PACE because it's an Economic Development initiative that lowers the cost of doing business in their community. It encourages new business owners to invest in the area, and creates jobs using the local workforce. PACE projects also have a positive impact of air quality, creating healthier, more livable neighborhoods.

HOW CAN I GET PACE?

www.PACENation.us has all the tools and resources you need to get started with PACE. Check to see if your state has passed a PACE statute, and if your area has an active program. If not, contact us to find out if there is a local initiative in development and we may be able to put you in touch with a working coalition. We look forward to hearing from you!

BENEFITS OF PACE

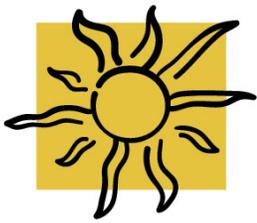


PACENation is the national, nonprofit advocate for PACE financing. We provide leadership, data, support and resources for the growing marketplace.

www.pacenation.us
info@pacenow.org

CITIZEN'S STATE BANK
15KW SOLAR SYSTEM
DESIGNED TO PRODUCE
100% OF THE ANNUAL
ELECTRIC NEEDS

\$ SMART



ALTERNATIVE
POWER
ENTERPRISES

CHANGING THE WAY WE GET OUR POWER

ENERGY

- CLEAN & RENEWABLE
- ADDS EQUITY VALUE
- IMMUNE FROM RISING POWER COSTS
- DESIGNED TO LAST 30-40 YEARS WITH LITTLE MAINTENANCE
- BATTERY BACK UP SYSTEMS AVAILABLE TO PROTECT FROM POWER OUTAGES

BUSINESS

- ZERO DOWN INVESTMENT*
- UP TO \$5,000 REBATE
- 30% TAX CREDIT
- 40% DEPRECIATION

**CONTACT US TO LEARN
HOW SMART SOLAR
IS FOR YOU**

*CPACE program coming soon



Memo

To: Mountain Village Green Team
From: Kim Wheels
Date: June 20, 2018
Re: Regional GHG Emissions & MV Energy Use – DRAFT charts for meeting on 6/26/18

Mountain Village Green Team,

On July 19, EcoAction Partners will be presenting to MV Town Council with an update on: Regional Greenhouse Gas Emissions, MV Energy Use, and highlights on EcoAction Partners' programs. As requested, I will be presenting the GHG & Energy charts to the Green Team on June 26, in order for us to discuss the information and for you to provide input and feedback to help the Council presentation be as productive and efficient as possible.

Included with this memo are DRAFT presentation slides to cover the GHG / Energy chart portion of the presentation, along with a list of proposed suggestions to make to Town Council to further address MV energy use, in order for you to review them ahead of time. The charts are all-inclusive, and thus more than I plan to actually present to Town Council, but I wanted to provide them all to you for discussion & prioritization purposes. Please note that efforts are on-going to improve upon the GHG data and calculations and thus subject to change, but the overall big picture analysis is typically not impacted.

I've also included a DRAFT 2017 report on MV government utility use and GHG emissions. It is similar to the reports provided by Deanna Drew in the past. This will also be presented on June 17. You will note some red text and question marks – these are items I need information on in order to update and finalized the report

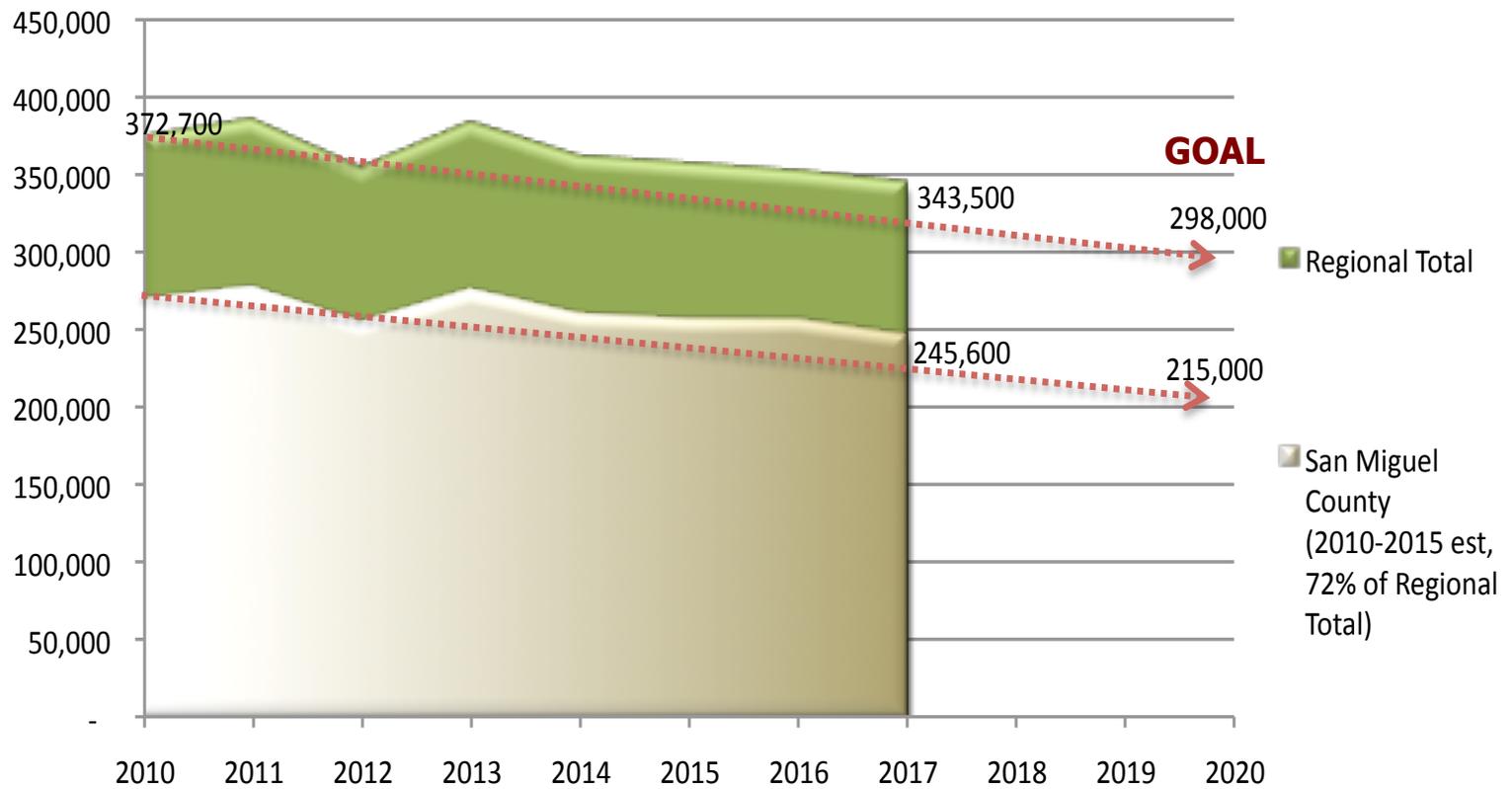
I look forward to presenting and discussing this information with you next Tuesday.

Sincerely,
Kim Wheels

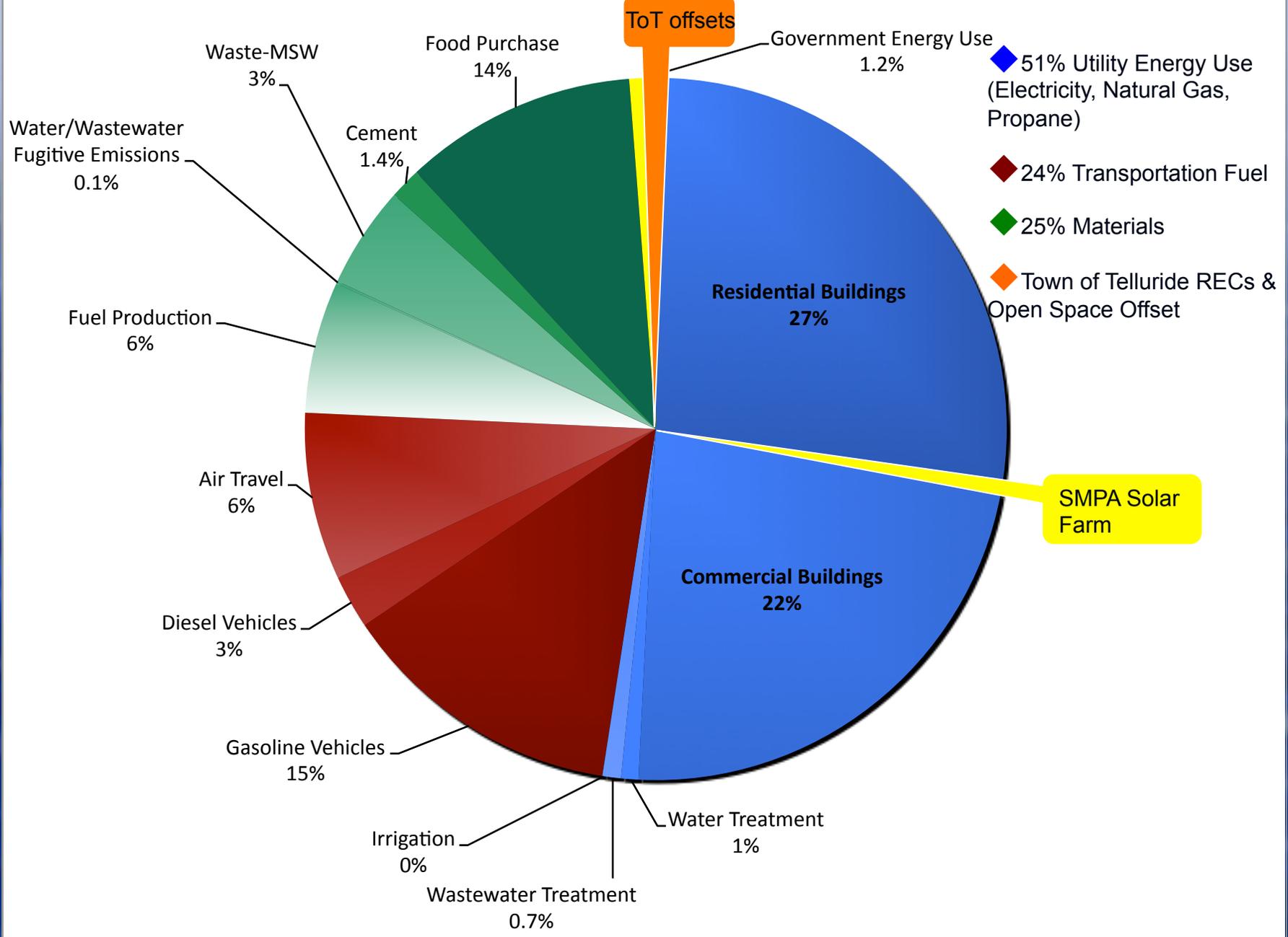
2018 Update

- ◆ 2017 Regional GHG Inventory
- ◆ 2017 Mountain Village Community Energy Use
- ◆ Highlighted Programs:
 - ◆ Greenlights
 - ◆ Ophir Composting Program
 - ◆ Truth or Dare
 - ◆ Building Energy Codes & REMP update
- ◆ 2017 Mountain Village Government Energy Use

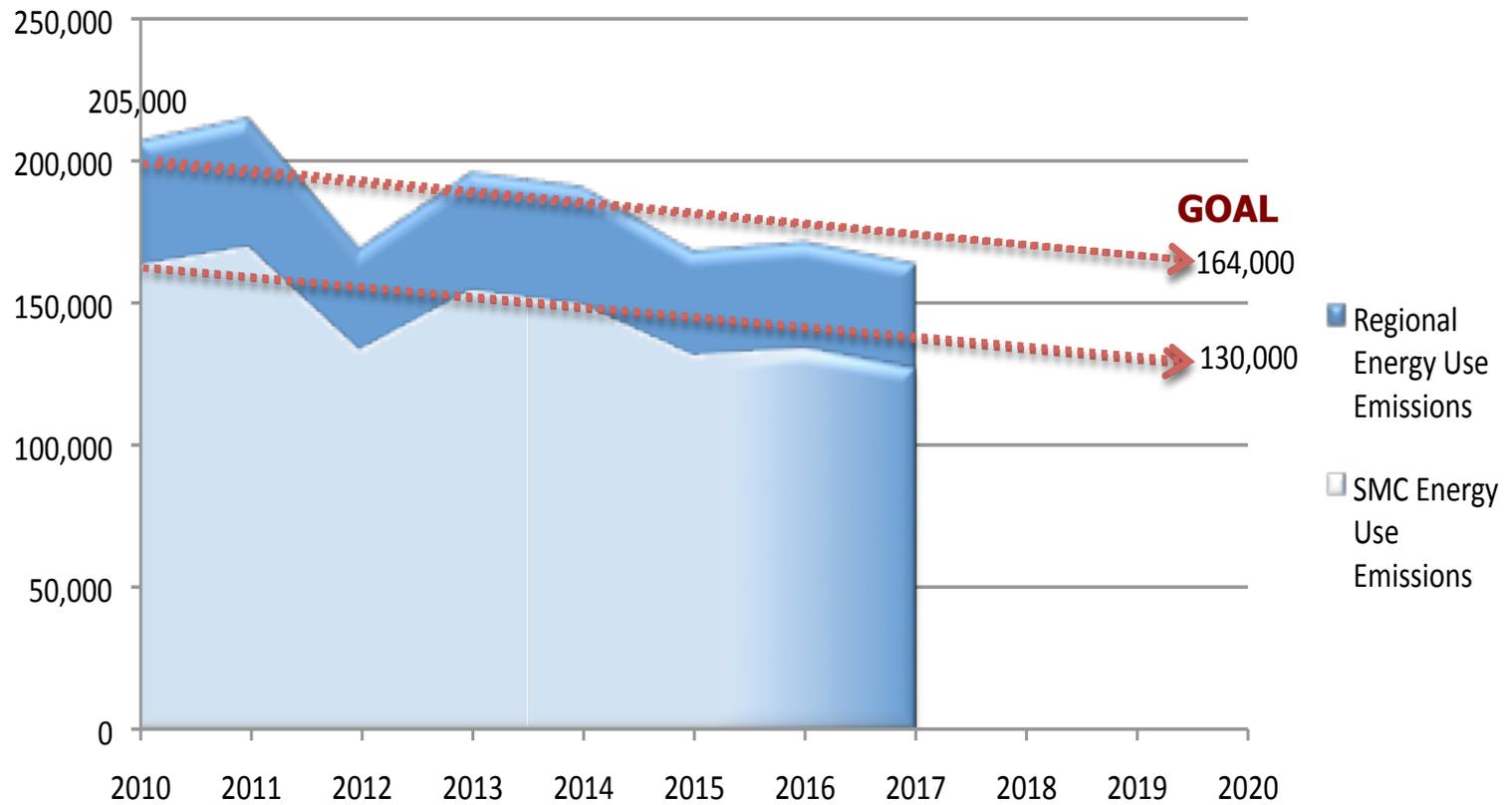
Ouray & San Miguel Counties Regional GHG Emissions (mtCO₂e)



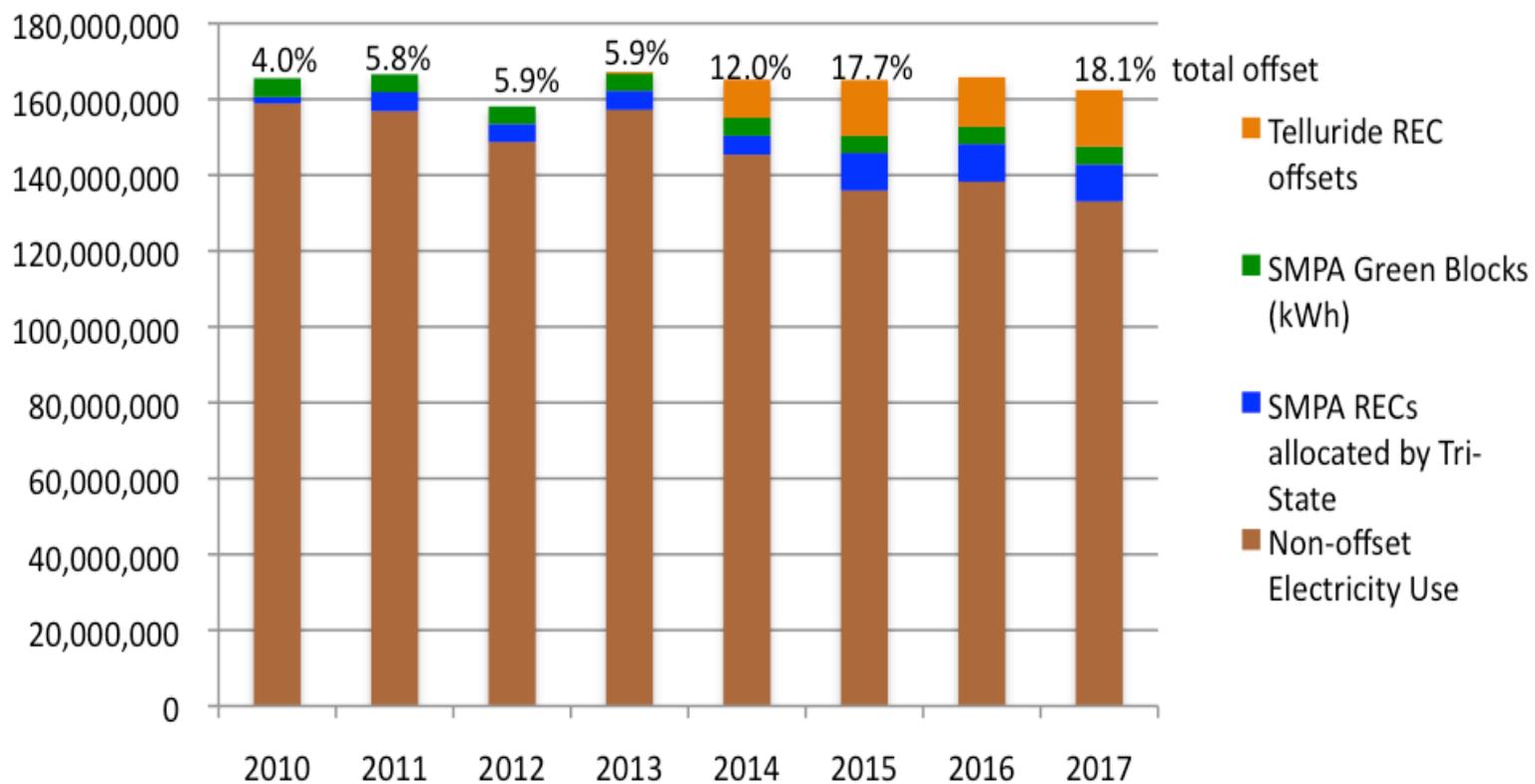
2017 GHG Inventory - San Miguel County (~246,000 mtCO₂e)



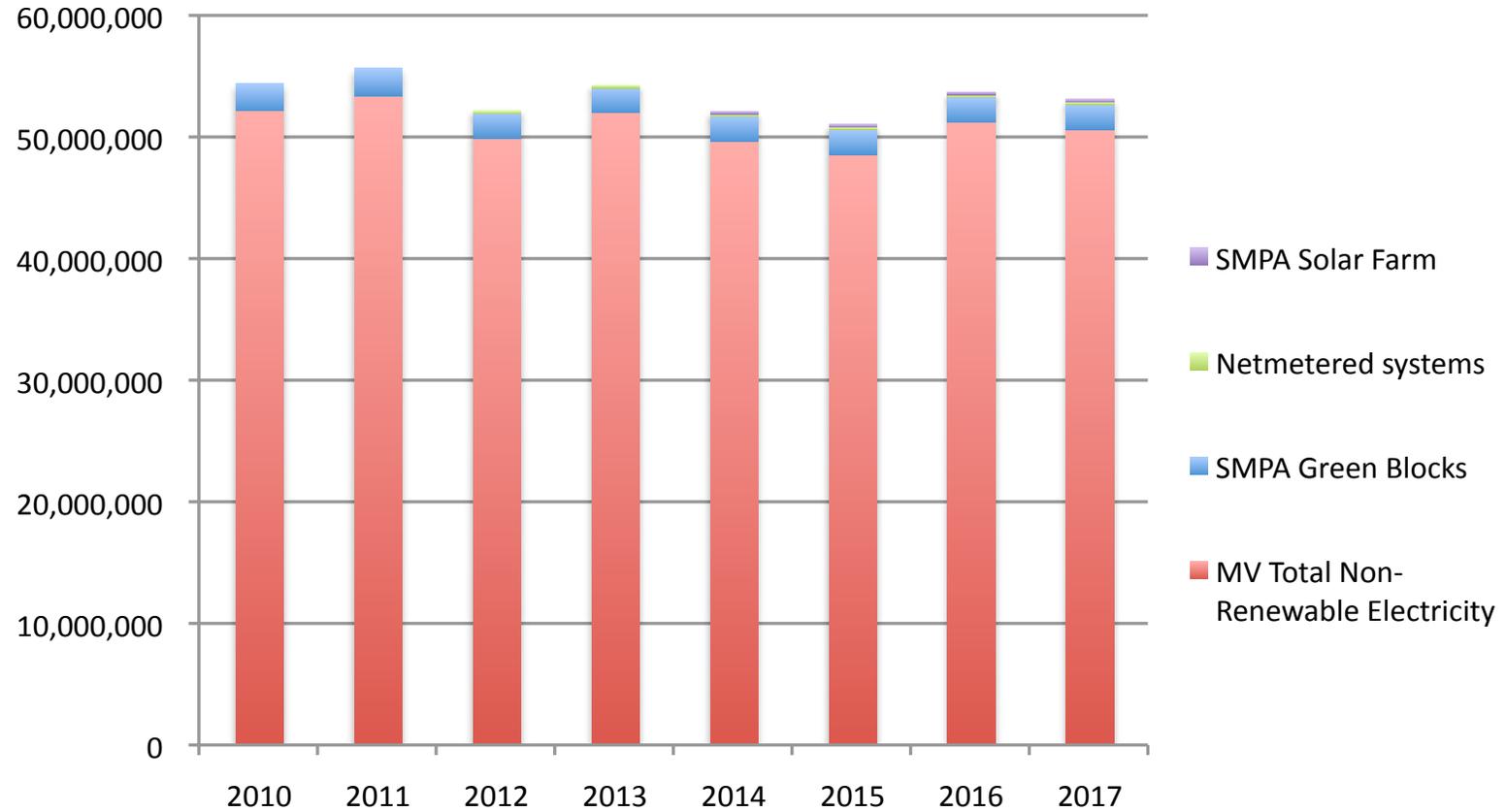
Ouray & San Miguel Counties Emissions from Energy Use (mtCO₂e)



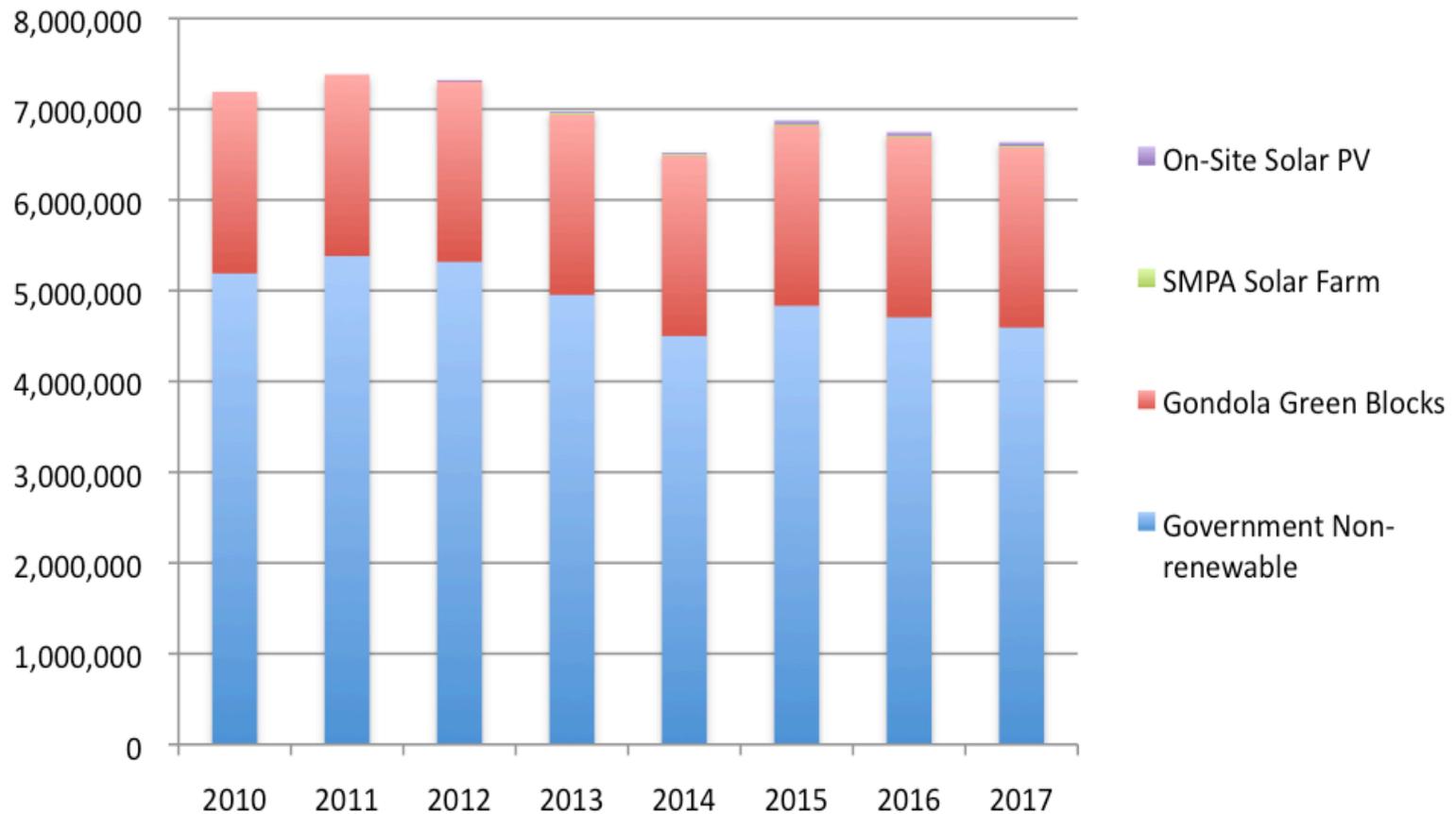
Regional Electricity Use Offset with Renewable Energy Credits (kWh)



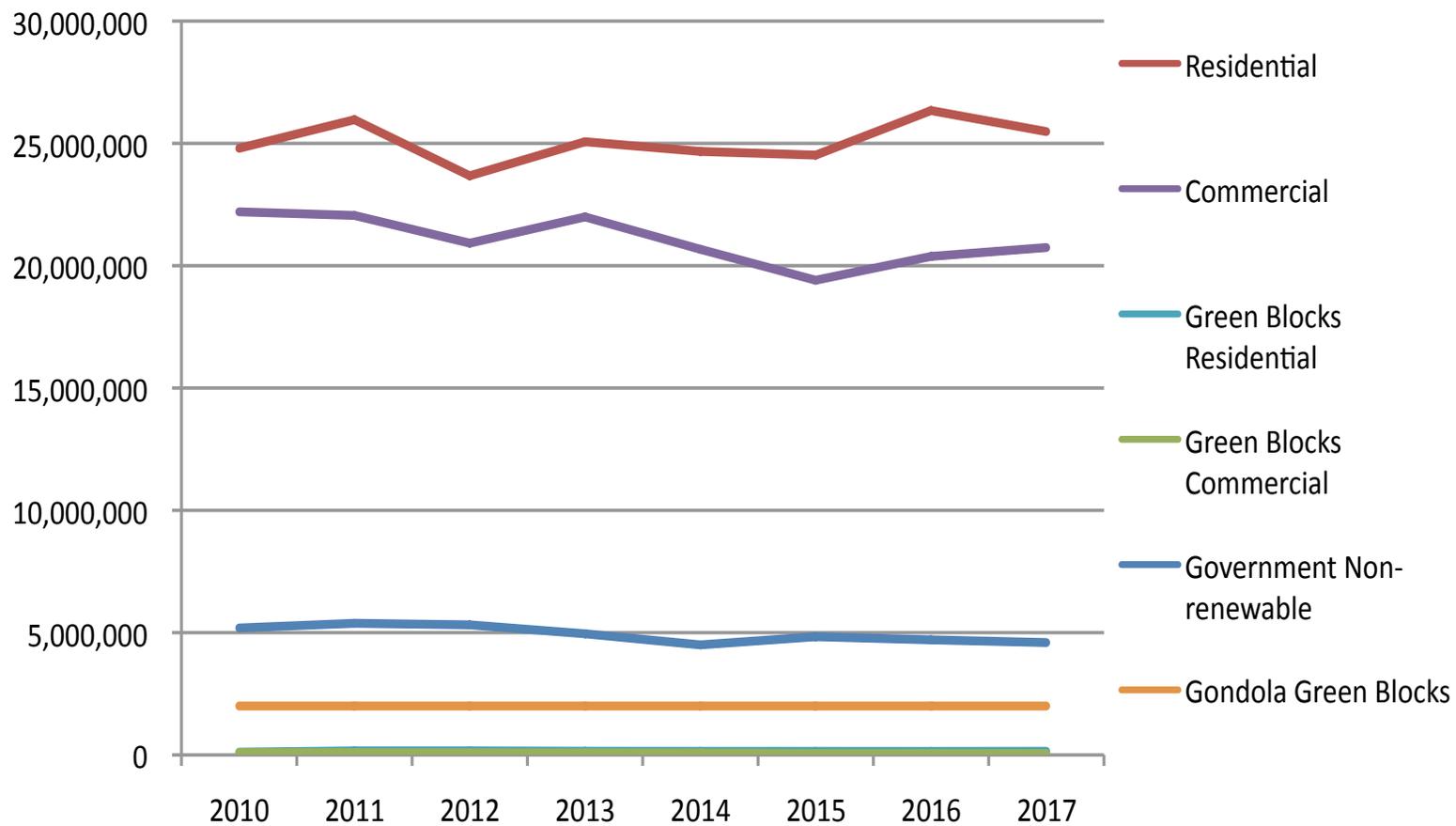
Mountain Village Electricity Analysis (kWh)



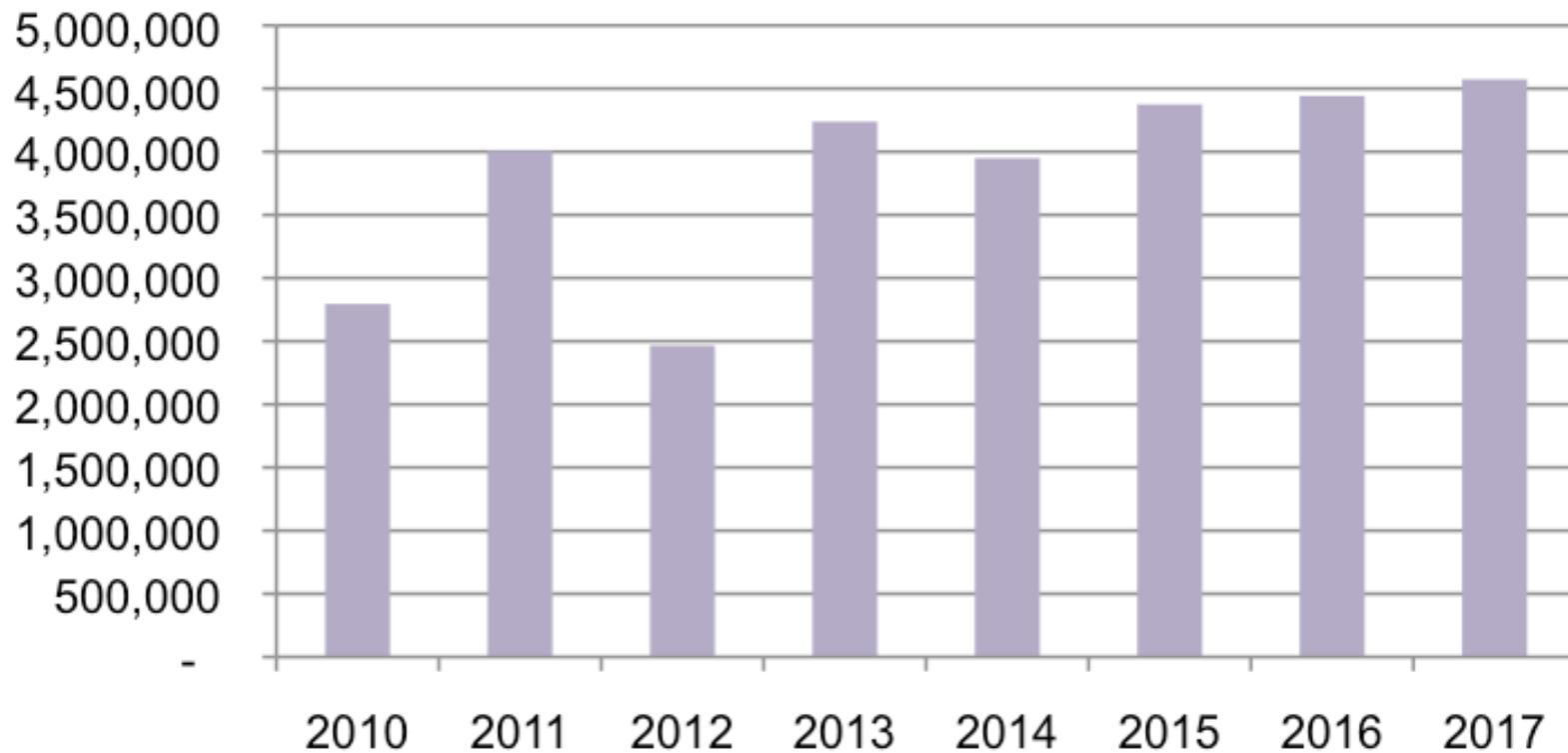
TMV Government Electricity Analysis (kWh)



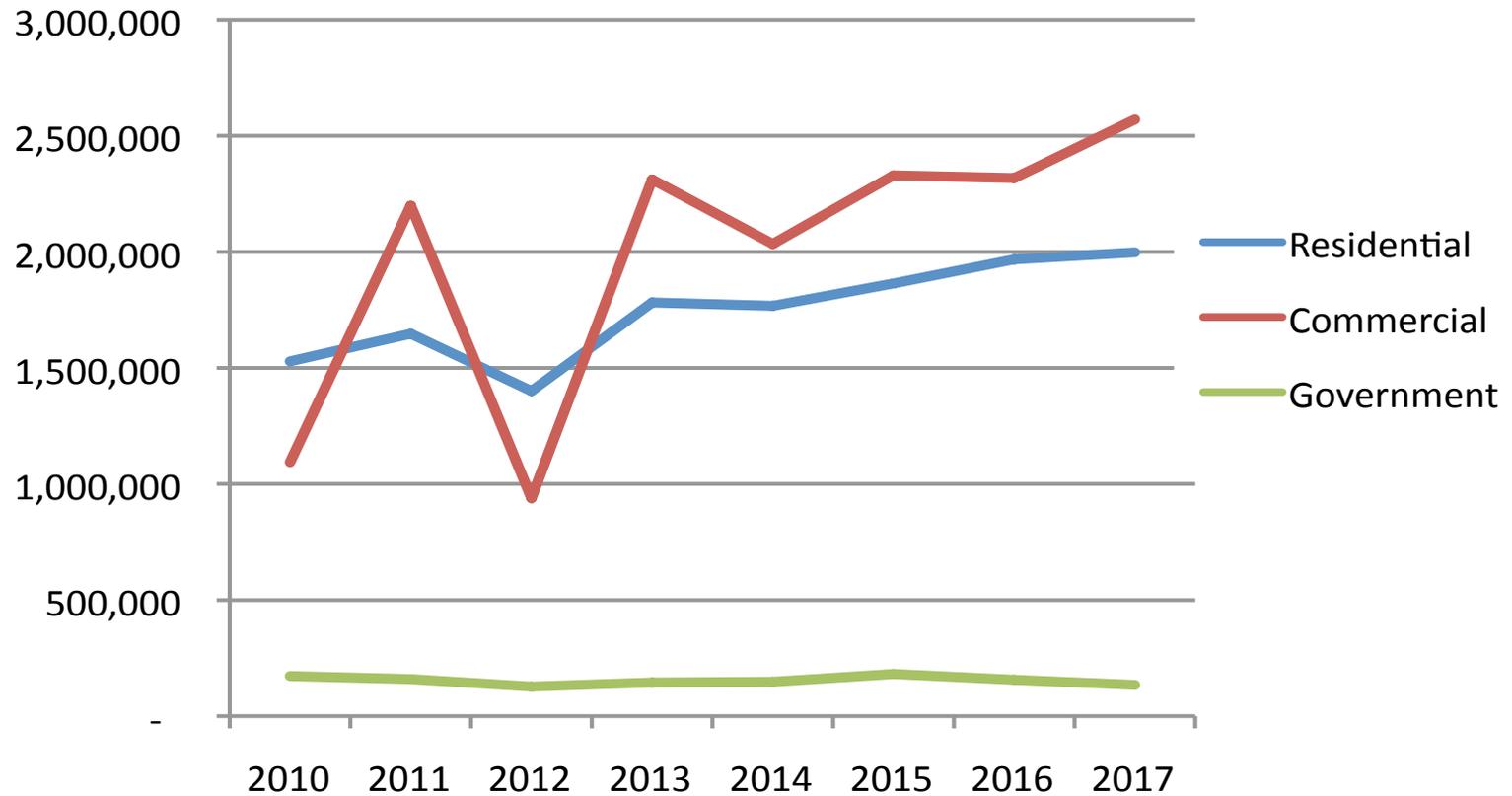
Mountain Village Electricity Use (kWh)



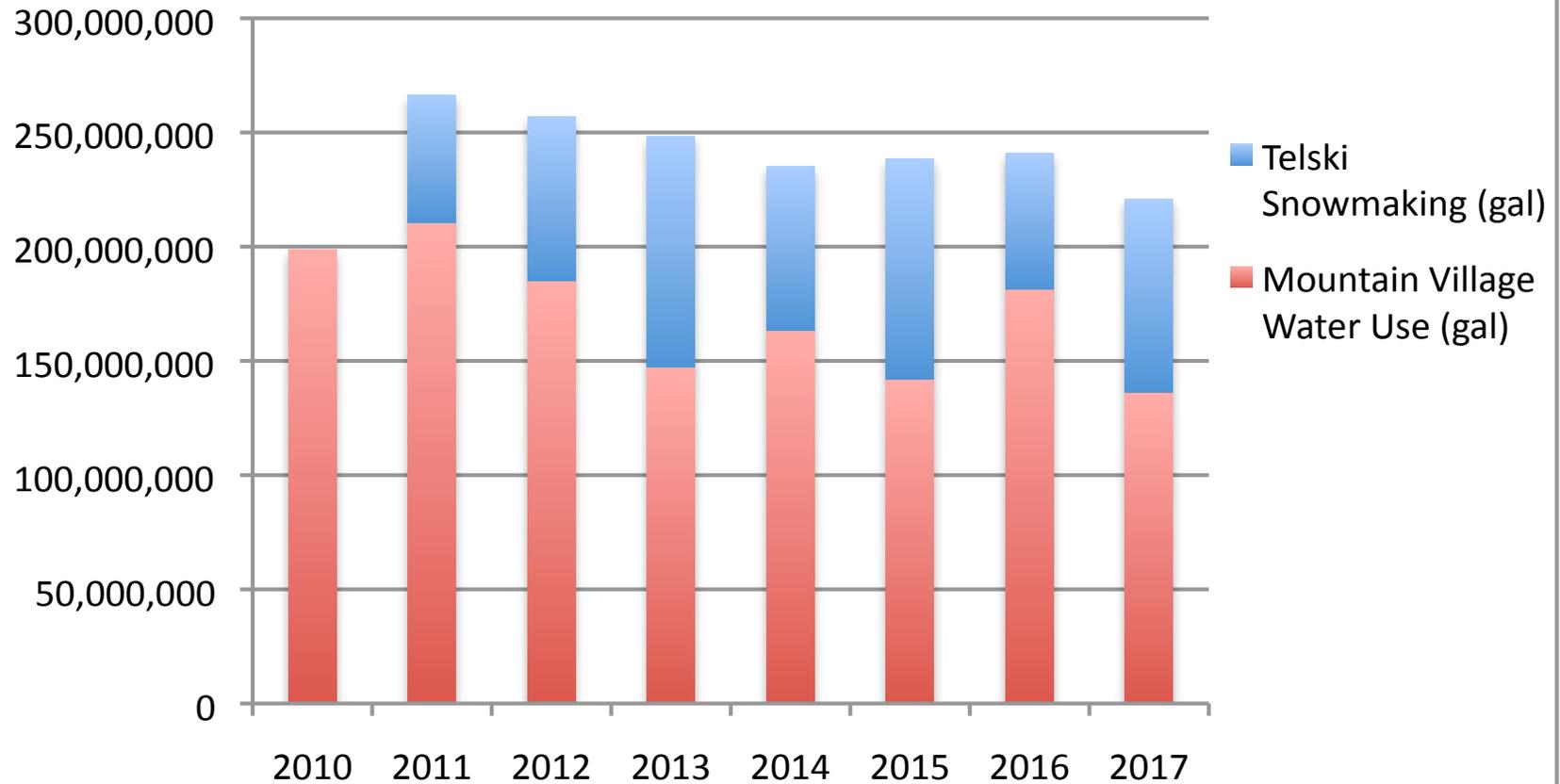
MV Normalized Natural Gas (Therms)



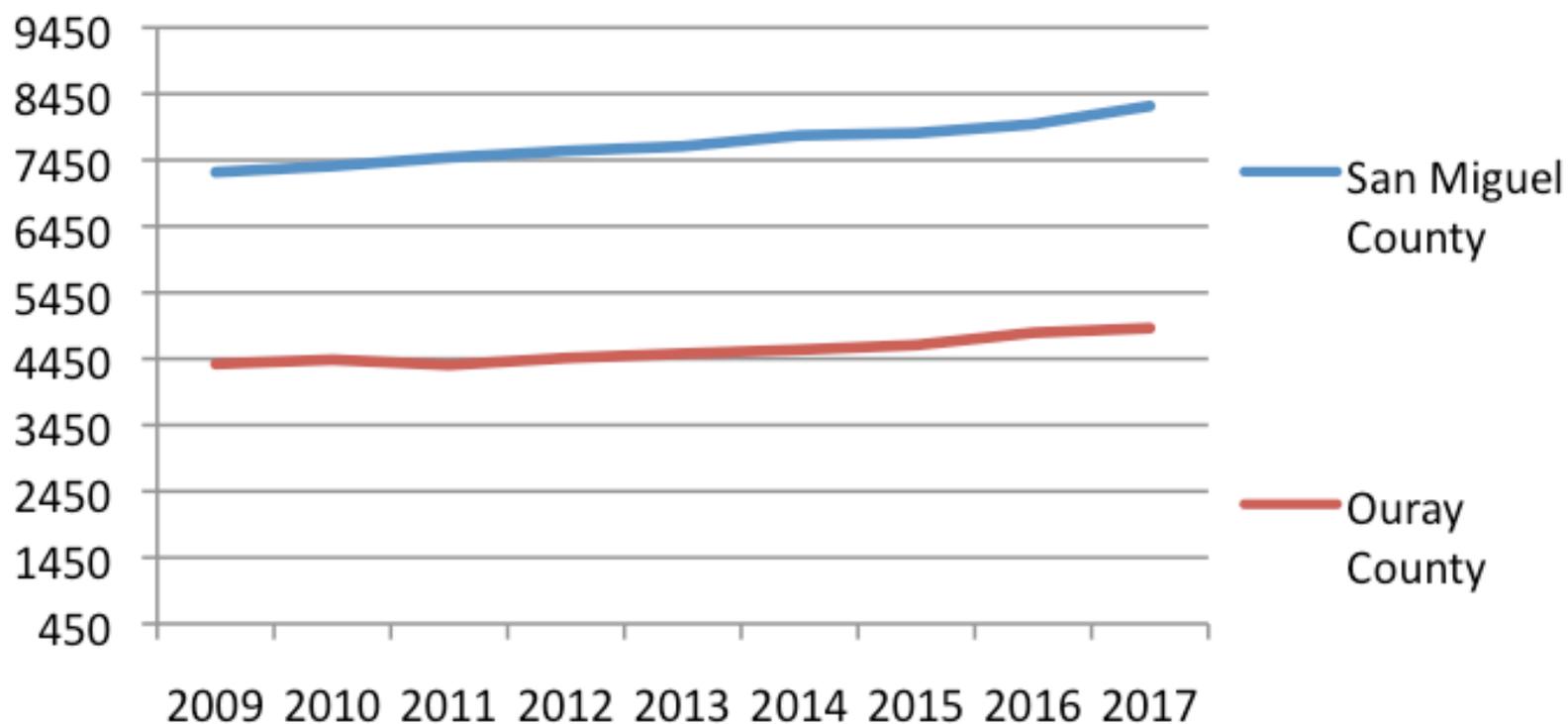
Mountain Village Natural Gas Use (Therms) - Normalized



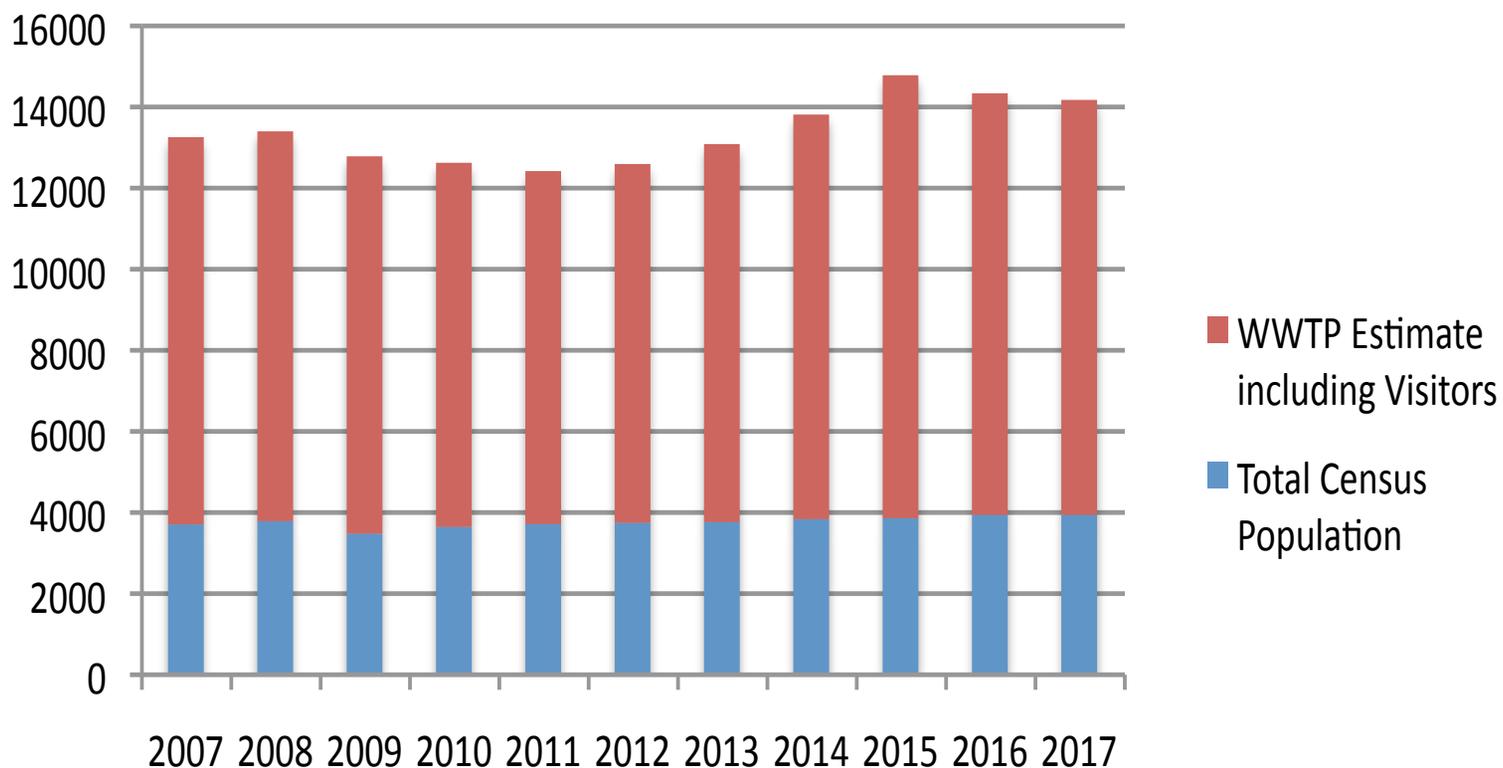
Mountain Village Water Supply



County Population (CO Census Data)

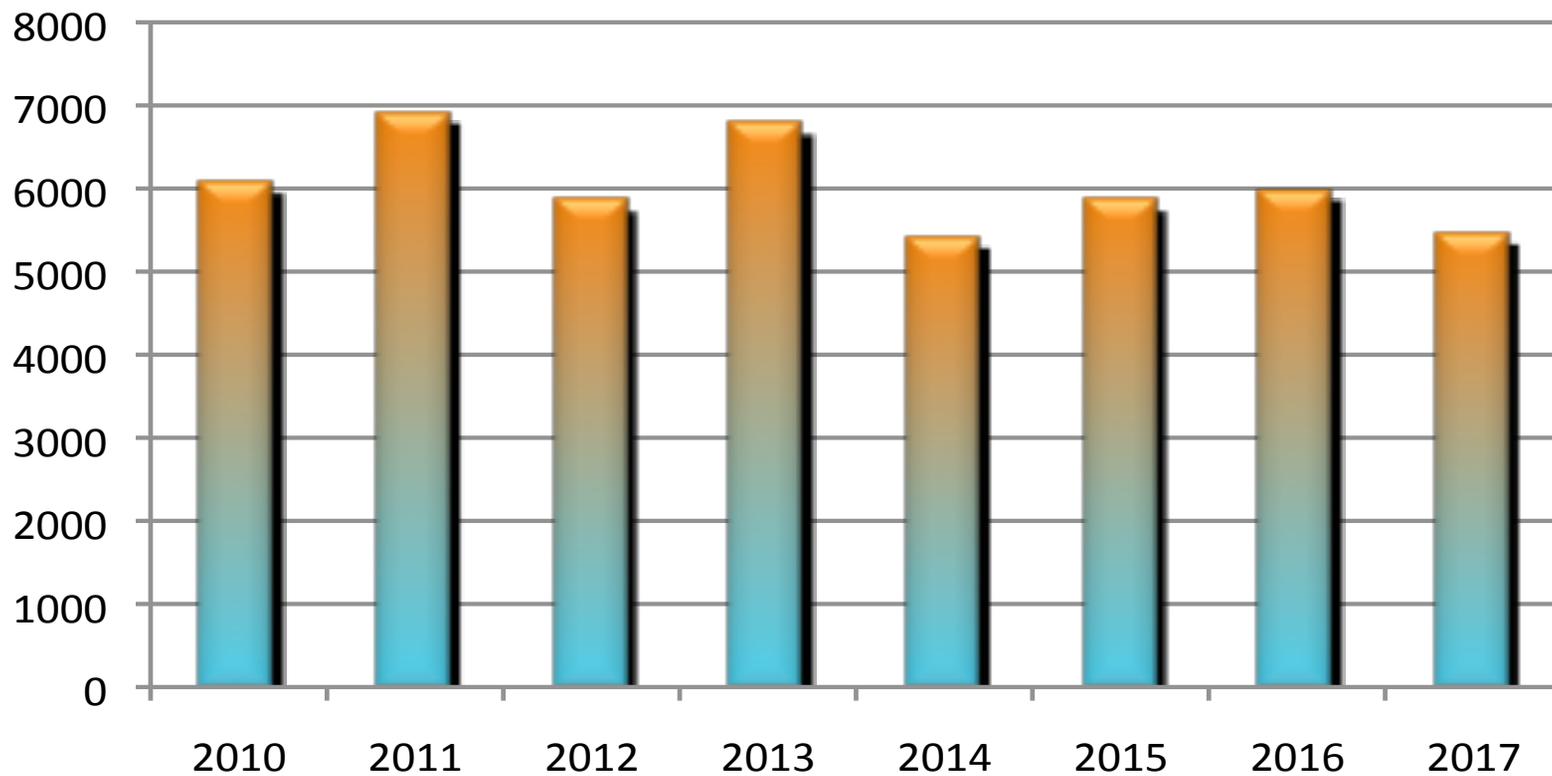


Telluride & Mountain Village Population

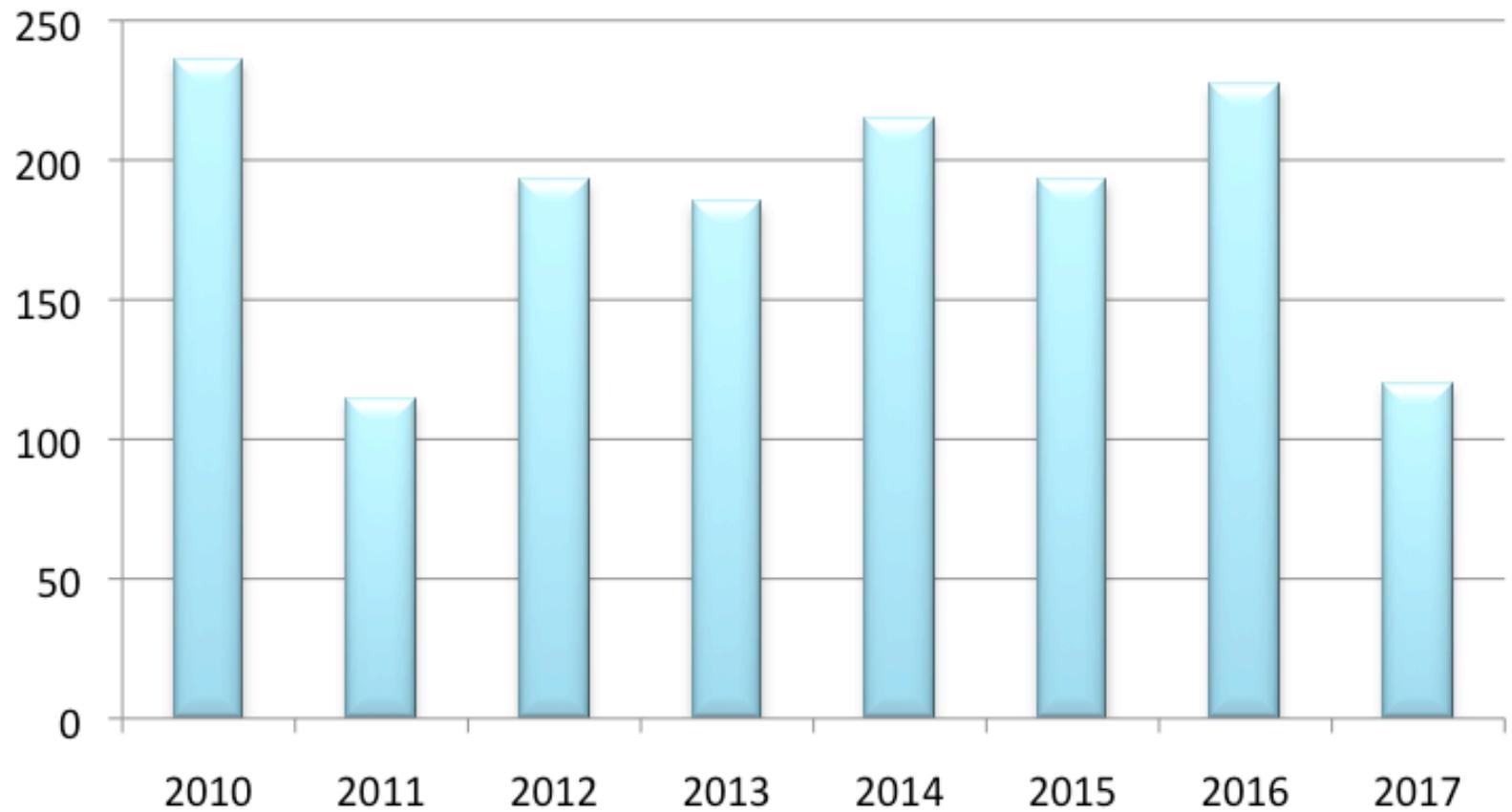


Weather Data - Telluride (HDD*)

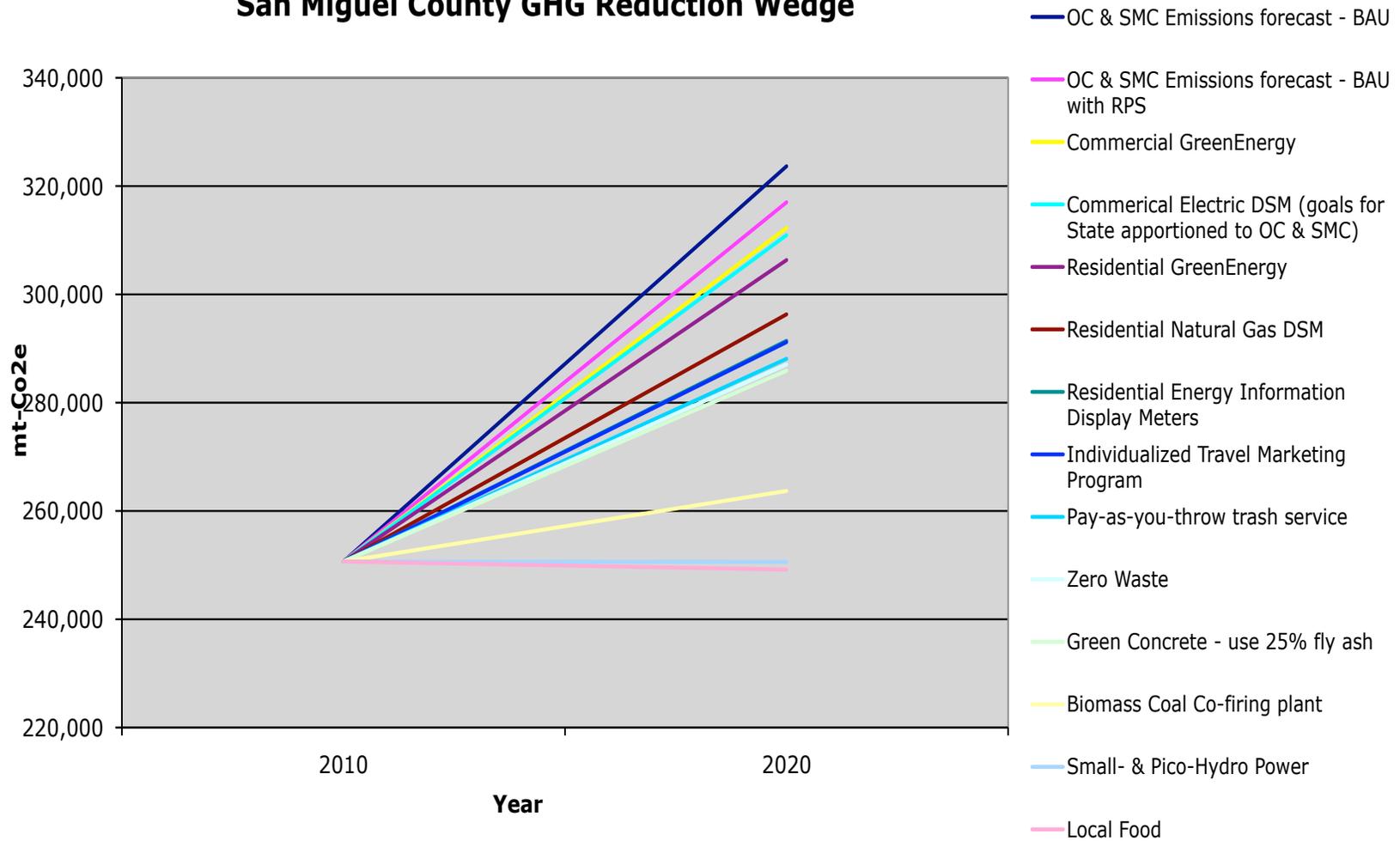
***total building heat needed annually**



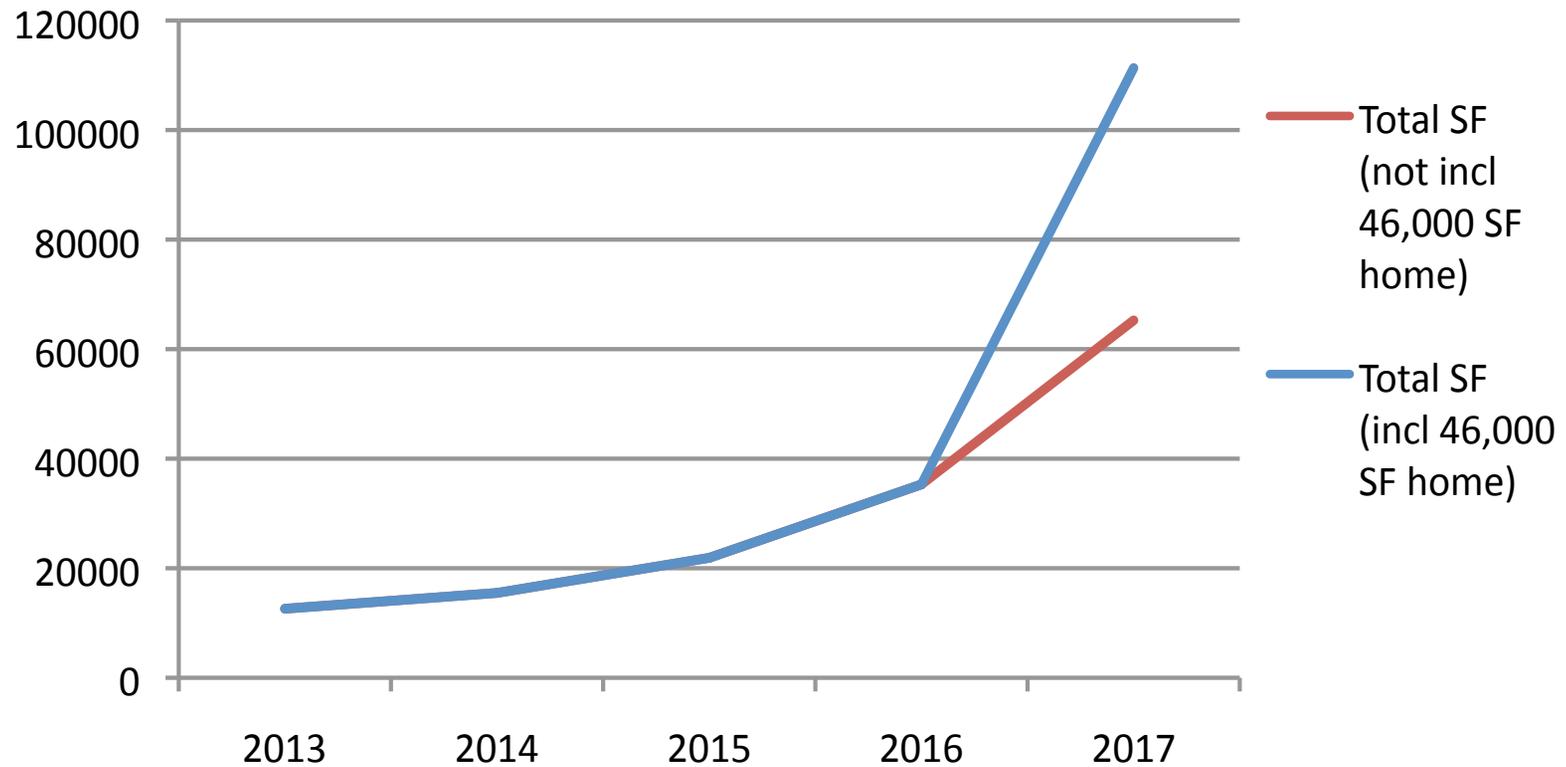
Annual Snowfall (inches) - Telluride



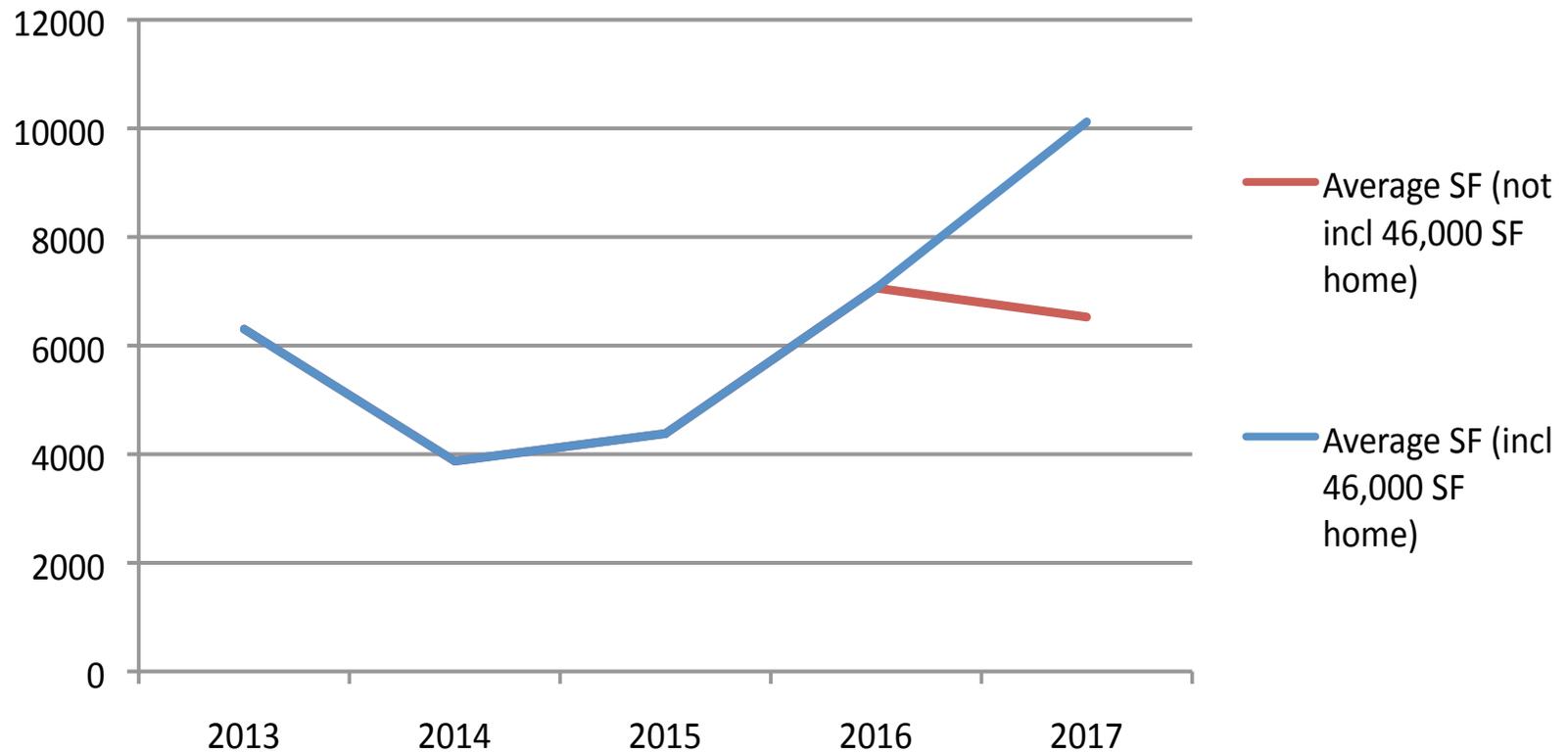
San Miguel County GHG Reduction Wedge



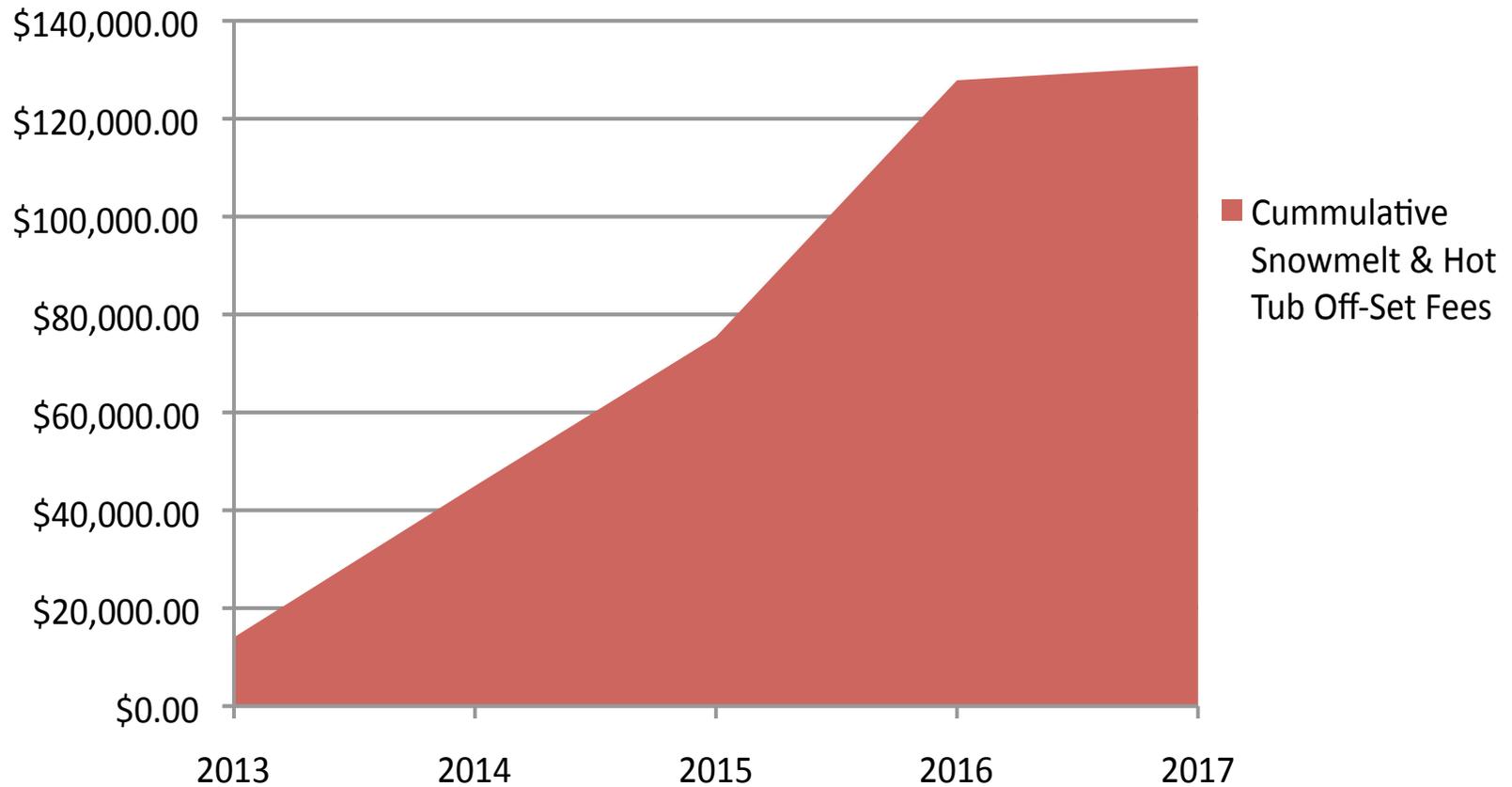
Annual Total New Residential Area (Square Feet)



Annual Average New Residential Home Size (Square Feet)



MV Energy Mitigation Payments Collected



Suggestions for Mountain Village Energy Emissions Reduction

- ◆ Building Energy Code Adoption: 2018 IECC with amendments that progress energy efficiency
 - ◆ Improves energy efficiency of commercial building construction
 - ◆ Reconsider size categories & HERS score requirements
- ◆ Exterior Energy Mitigation Program:
 - ◆ Eliminate or reduce free 1000 SF of snowmelt allowed
 - ◆ Address outdoor fireplaces
- ◆ Limit maximum house size – County limit is 10,000 SF
- ◆ Promote SMPA Green Blocks & MV Incentive Programs
- ◆ Higher priority for on-site renewable energy systems
- ◆ Government renewable & offset projects
- ◆ Consider using REMP funds for community grant program

TO: MOUNTAIN VILLAGE MAYOR AND TOWN COUNCIL
FROM: KIM WHEELS, ECOACTION PARTNERS
SUBJECT: 2017 GOVERNMENT ENERGY USE AND GREENHOUSE GAS REPORT
DATE: JULY 19, 2018

BACKGROUND

In 2009 the Town of Mountain Village along with Telluride and San Miguel County adopted a resolution to achieve a 20% reduction in greenhouse gas emissions by the year 2020. The new county-wide target is carbon neutrality.

The town is currently using 2010 as the baseline year for achieving this goal. All three governments are calculating GHG emissions by converting total electricity, natural gas, and fuel consumed by government operations to Carbon Dioxide emissions, a primary greenhouse gas, using a standardized EPA conversion. Note: this is a simplified greenhouse gas calculation and analysis.

2017 TMV GOVERNMENT ENERGY USE AND GHG EMISSIONS SUMMARY

- Overall, 2017 total government CO₂ emissions were slightly less (<1%) than 2016 levels; down 15% from average of previous years; **and down 28% from 2010 baseline** emission levels.
- CO₂ emissions from **natural gas were down 29%** from 2010 baseline levels; CO₂ emissions from **electricity were down 28%** from 2010 baseline levels; and CO₂ emissions from **fuel were down 27%** from 2010 baseline levels.
- **Natural gas** use was 21% lower in 2017 than 2016, and was 29% lower than the 2010 baseline. Most of the 2017 decrease is likely due to the mild winter temperatures and reduced snowfall, which impacted both building and plaza snowmelt natural gas usage.

Note: The rise and fall of natural gas use closely correlates with weather temperatures and snowfall amounts in our region.

- **Electricity use** in government facilities went down 2% in 2017 from 2016 levels. Overall, 2017 total electricity was 11% below 2010 baseline levels. All town systems experienced a slight decrease in electricity use from 2016 levels.

Note: Electricity use is also impacted by winter temperatures (though to a much lesser extent than natural gas). Visitor numbers likely also influence electricity use.

- **Village Court Apartments (VCA)** electricity use in 2017 went down 6% from 2016 levels, and was approximately 10% below 2010 baseline levels. Heating at VCA is provided by electricity, so the mild winter temperatures influenced this decrease in electricity use.

To be edited: Occupancy at VCA remained approximately the same in 2016 and 2017. VCA staff is conducting an inventory of their appliances to begin to develop a phased plan for efficiency upgrades throughout the housing complex.

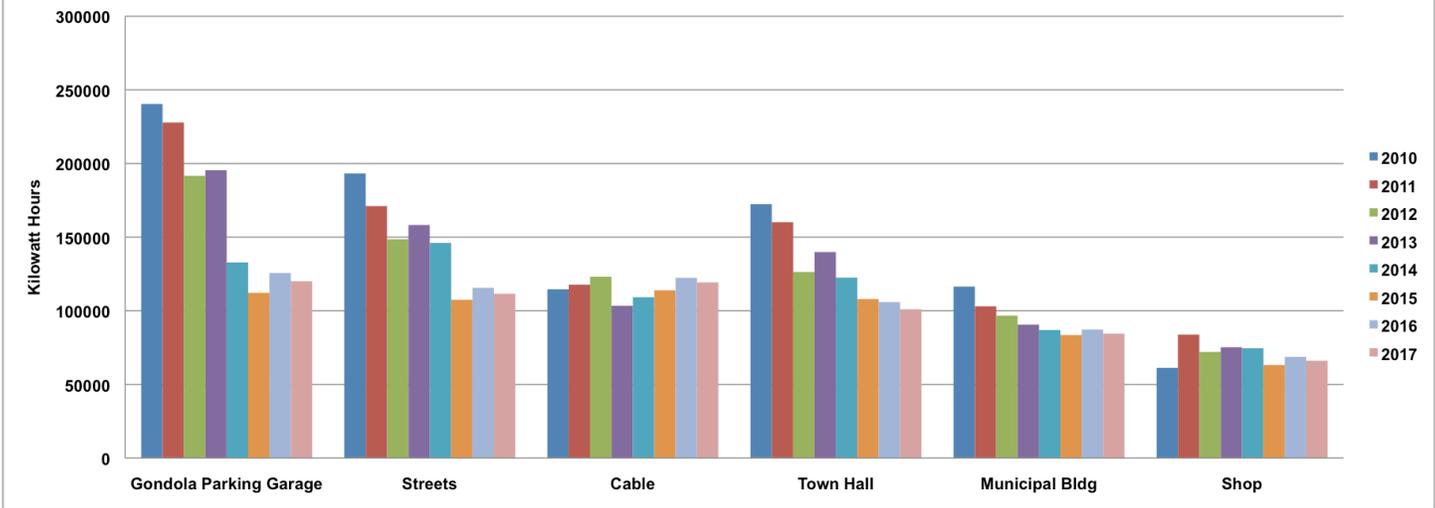
NOTE: VCA IS NOT INCLUDED IN OVERALL GOVERNMENT EMISSIONS TOTALS.

- **Total Fuel use** was slightly lower in 2017 (56,186 total gallons used) than 2016 with a decrease in unleaded fuel (-1,665 gal) and increase in diesel fuel (483 gal). This resulted in a 27% decrease in total annual fuel used compared to 2010 baseline levels.
- The **gondola** electricity use decreased about 4% from 2016 to 2017, and this could be attributed to the additional solar panel production or **decreased ridership?** **However, the additional morning run time of the gondola could cause this number to rise again in 2017.** The gondola electricity use was about 17% below 2010 baseline levels.

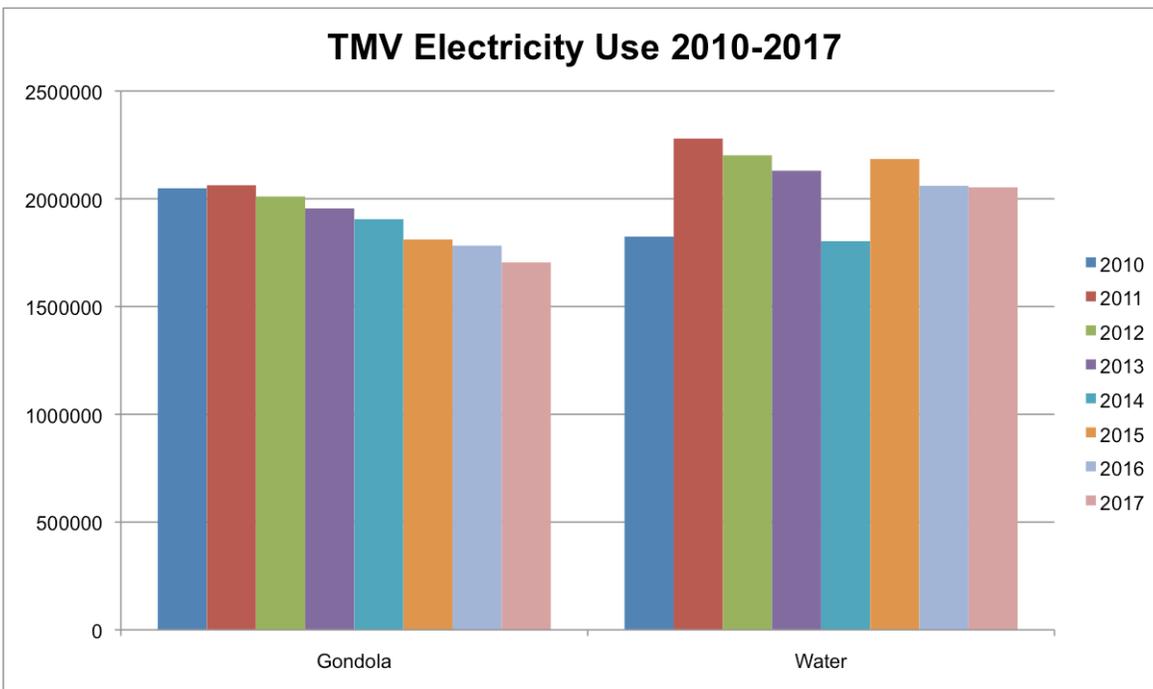
And, TMVOA (**or TMV?**) continues to offset 100% of its traditional electricity use through the purchase of **Green Blocks**, renewable energy credits from SMPA.

- The **water department** experienced a very slight (0.3%) decrease in electricity compared to 2015 usage. However, 2017 water department electricity remains up 13% from 2010 baseline levels.
- The **emissions factor** of our electricity from SMPA continues its downward trend. The emissions factor for 2016 & 2017 was 1.78 lbs. CO₂ per kilowatt hour of electricity used; down from the emissions factor of 2.2 lbs. CO₂/kwh for the baseline year of 2010. **According to the EPA, the national average is about 1.22 lbs. CO₂ per kwh.**

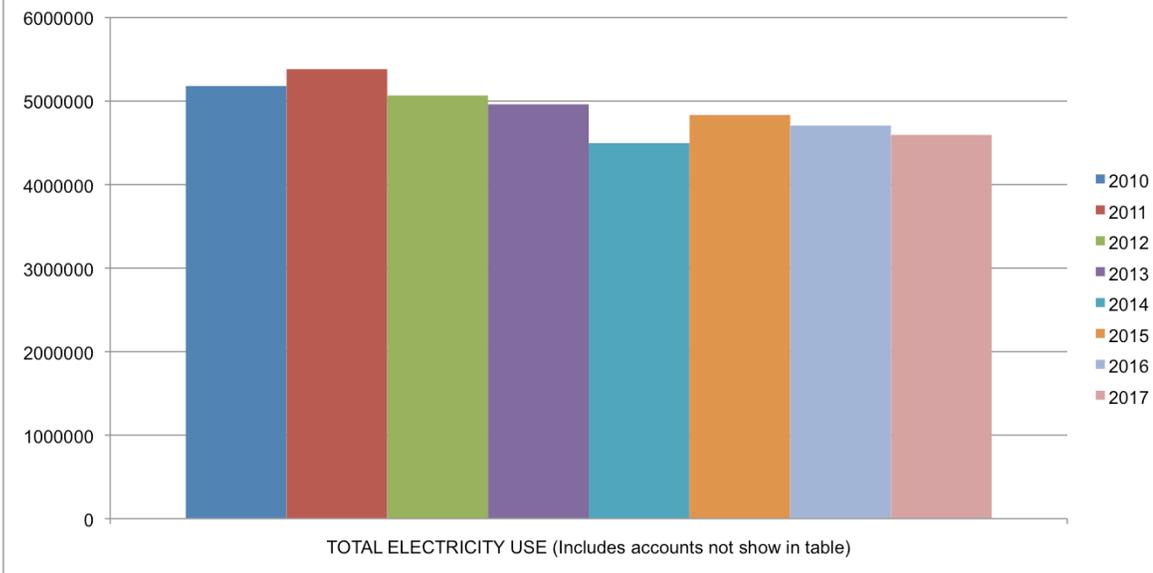
TMV Electricity Use 2010-2017



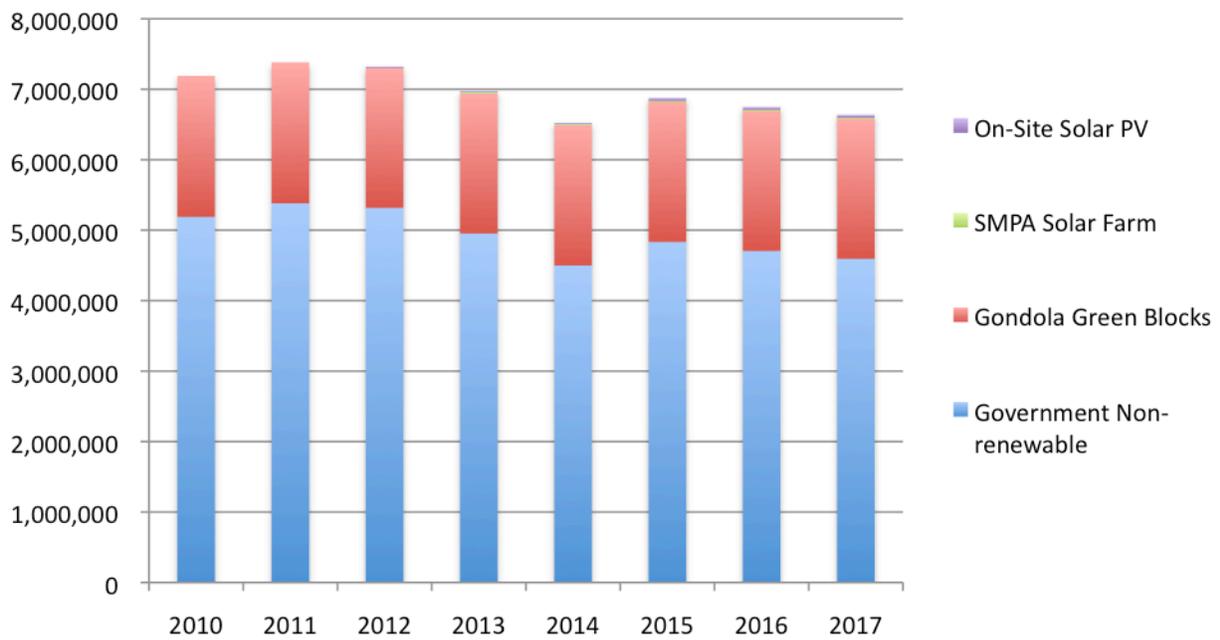
TMV Electricity Use 2010-2017



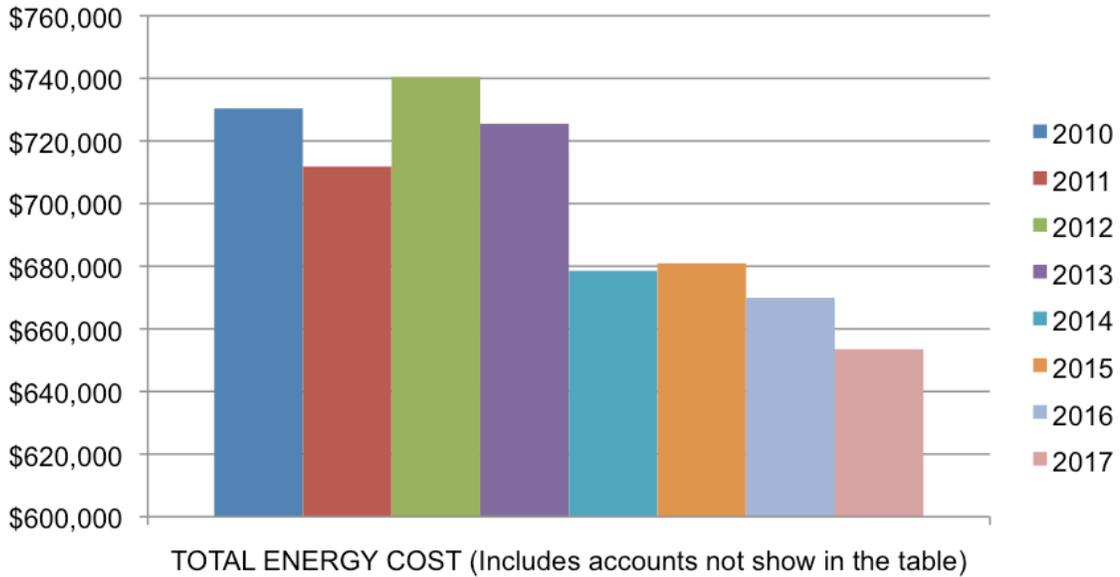
Total TMV Electricity Use 2010-2017



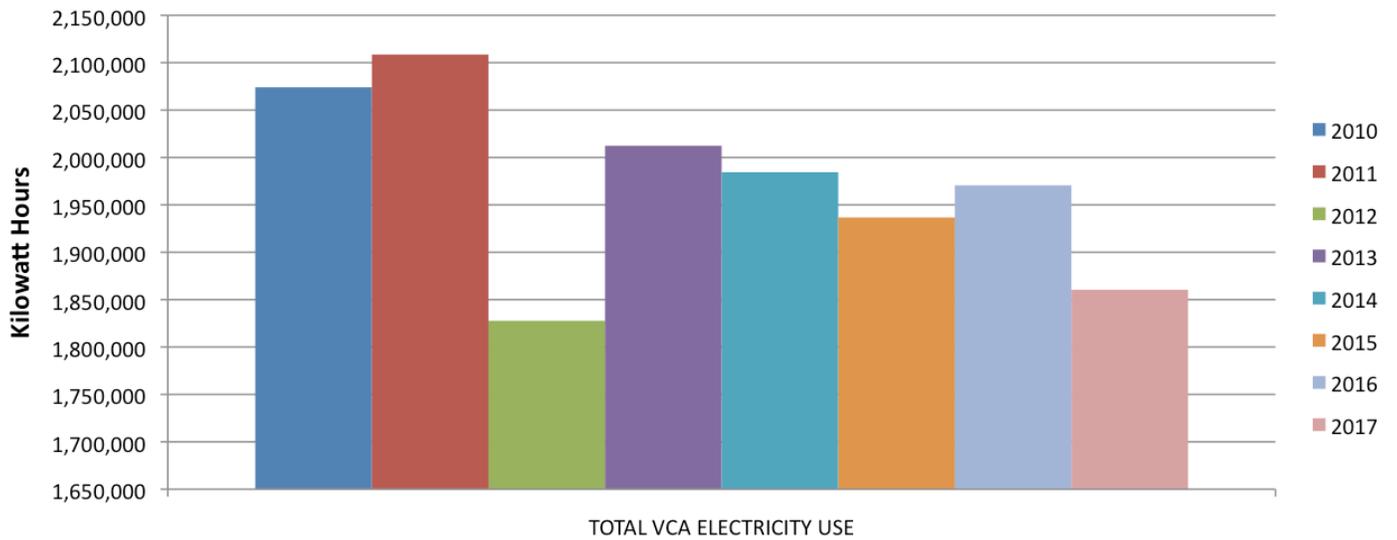
TMV Government Electricity Analysis (kWh)



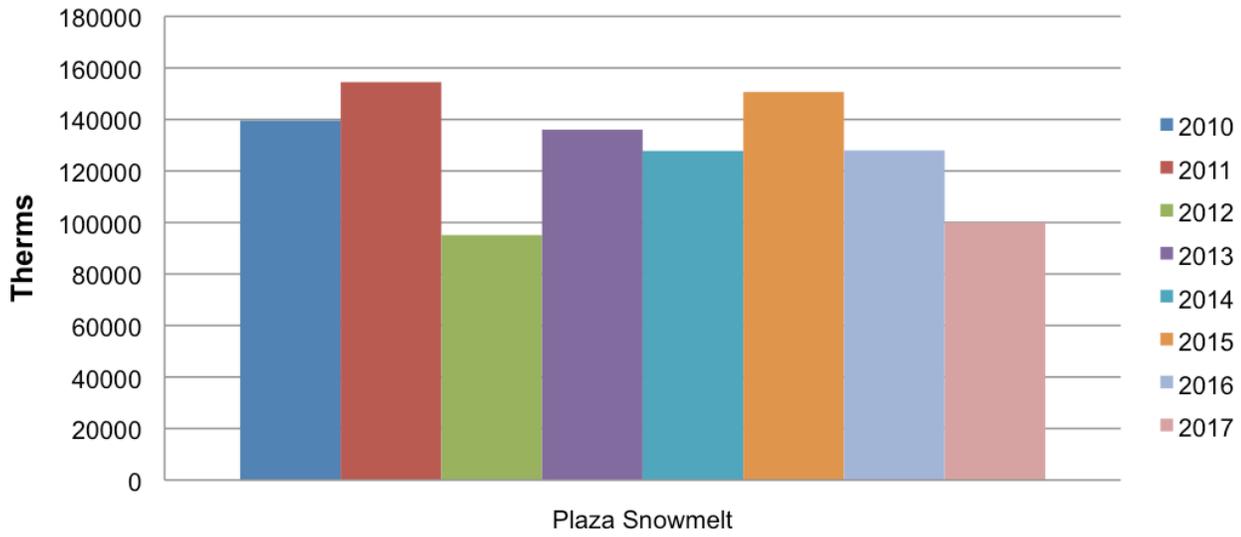
TOTAL TMV ELECTRICITY COST 2010-2017



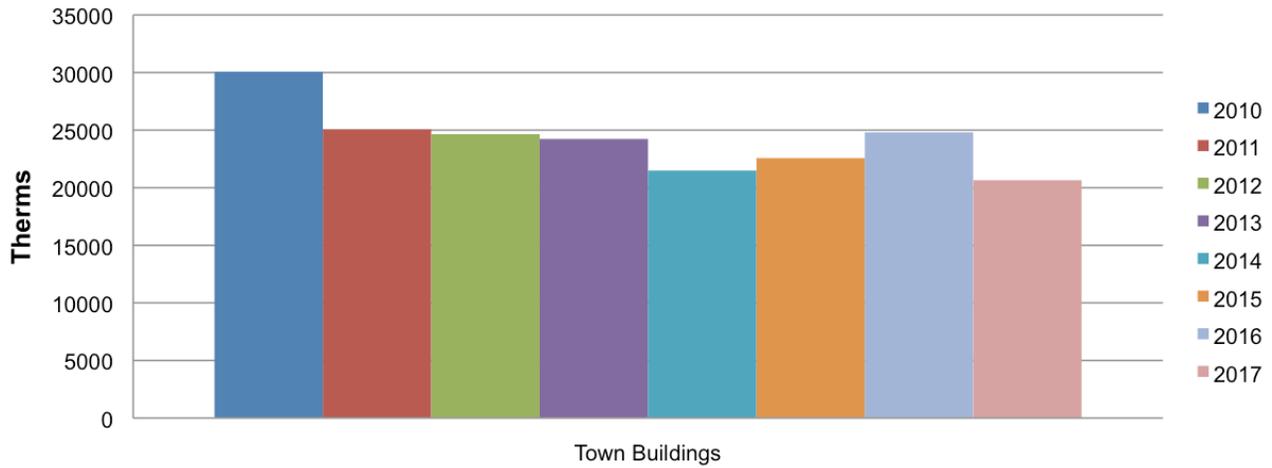
VCA Electricity Use 2010-2017



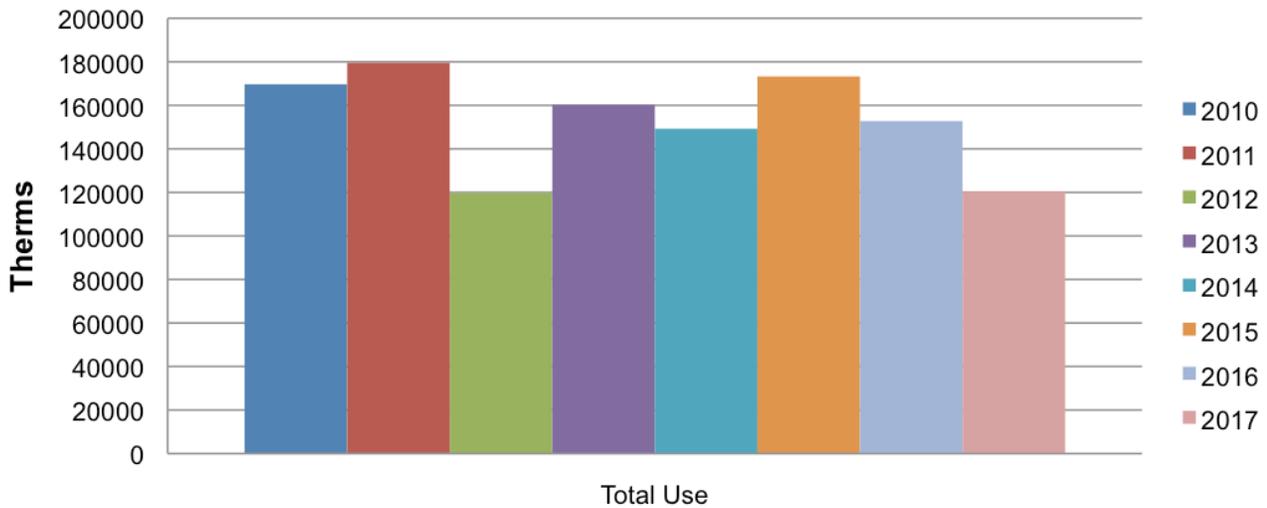
Plaza Snowmelt Natural Gas Use 2010-2017



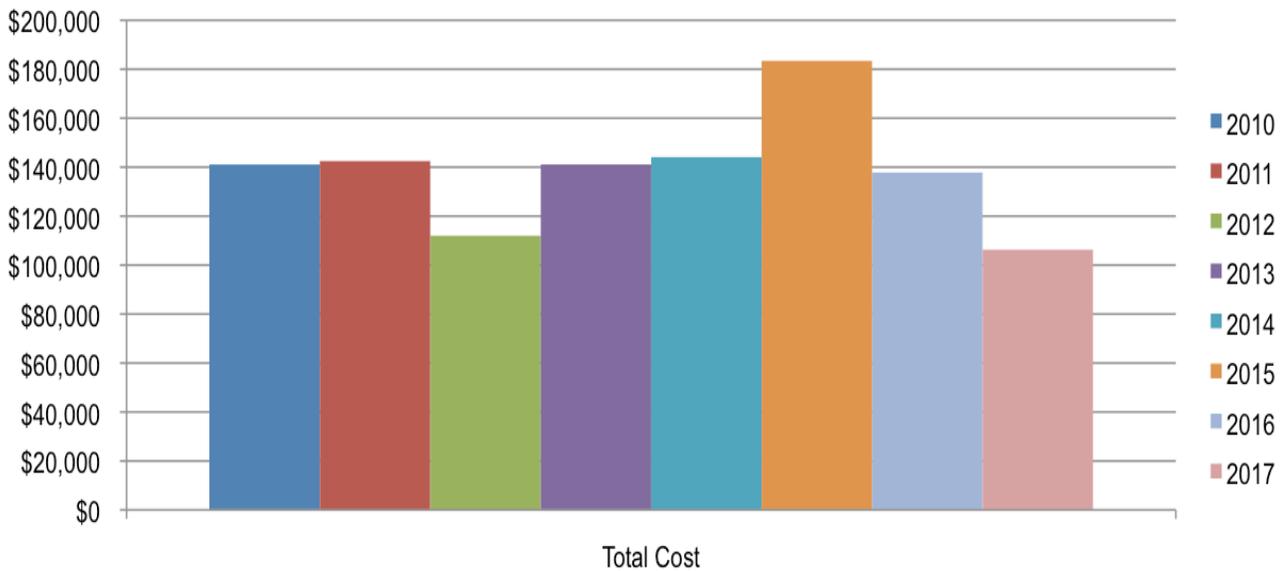
TMV Government Buildings Natural Gas Use 2010-2017



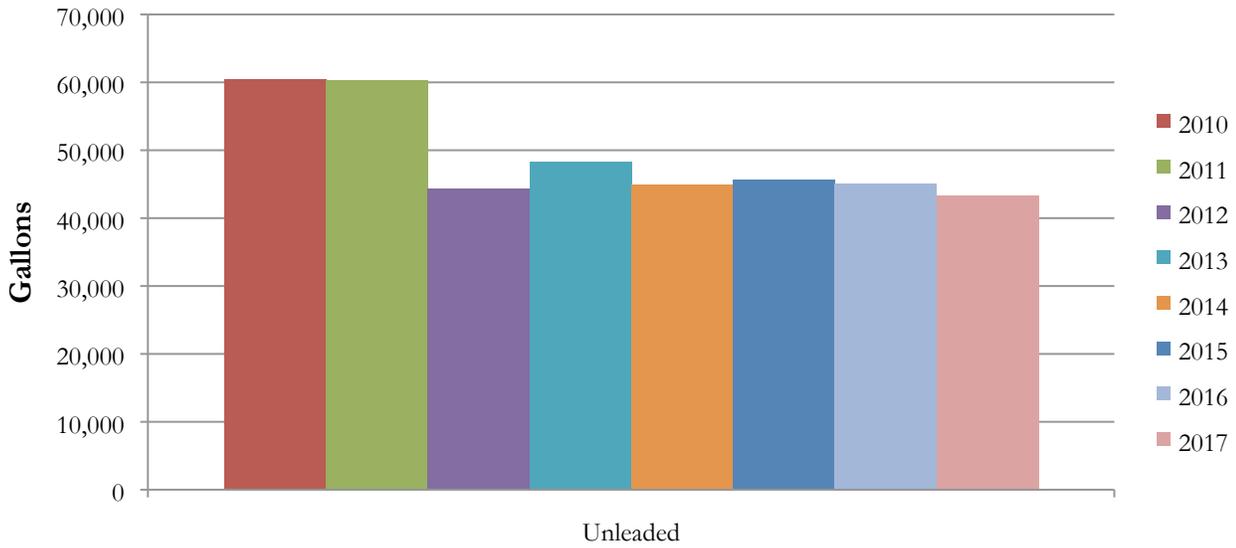
TMV Government Natural Gas Use 2010-2017



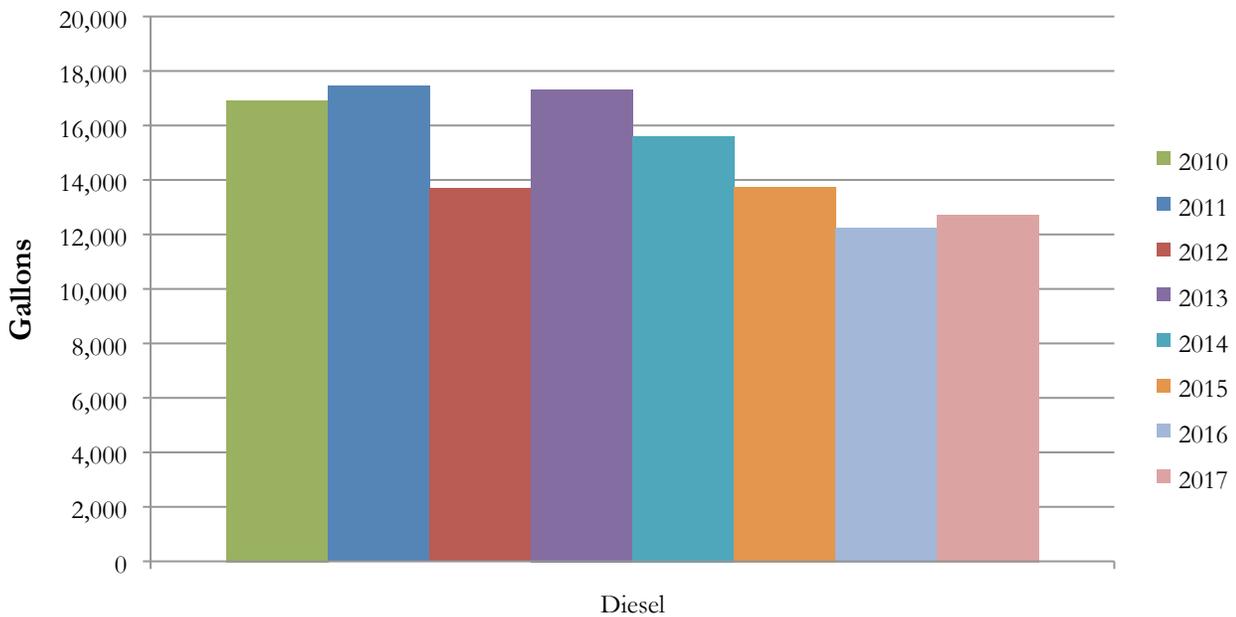
TMV Government Natural Gas Cost 2010-2017



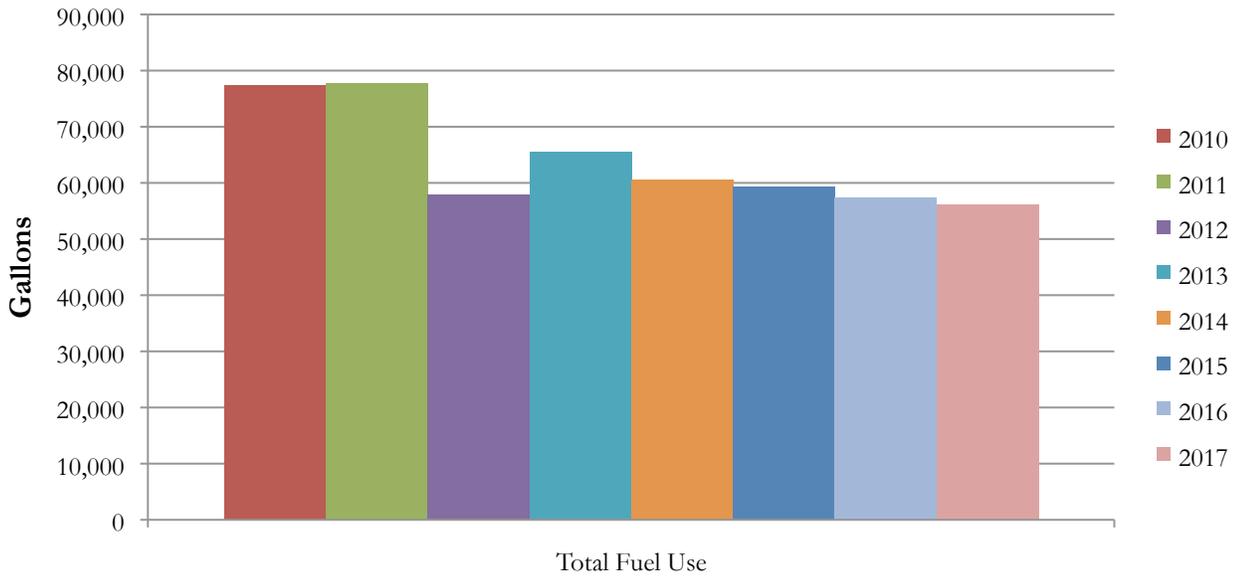
TMV Gasoline Use 2010-2017



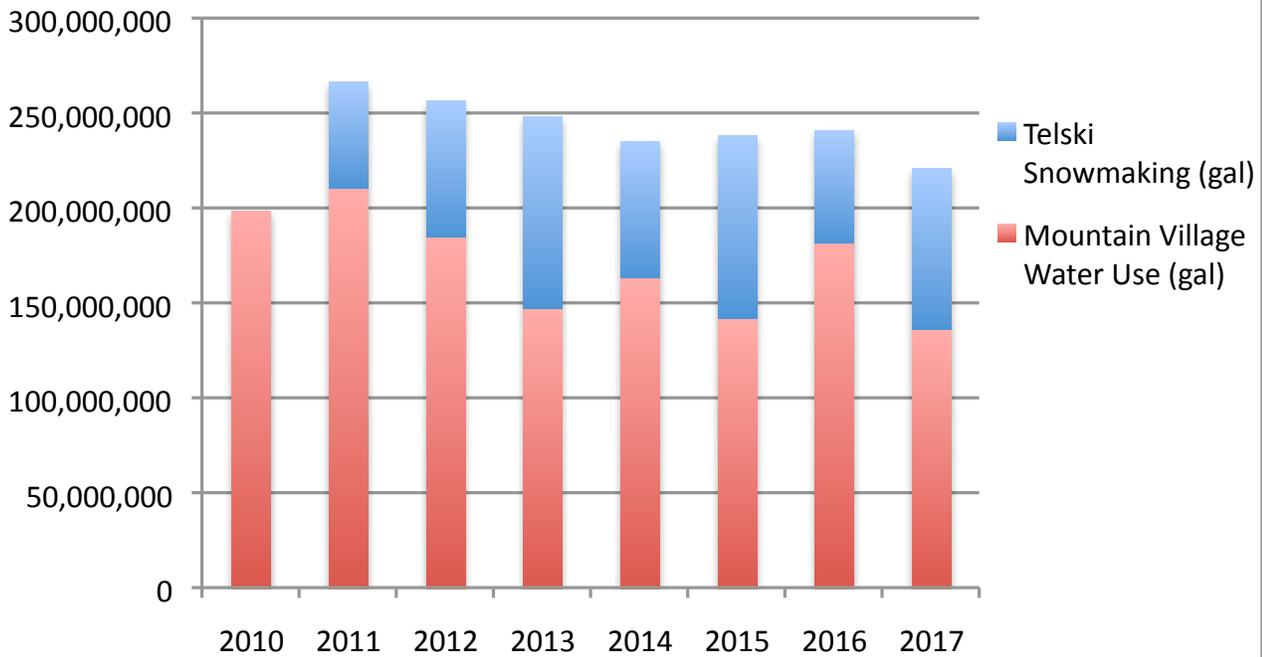
TMV Diesel Use 2010-2017



TMV TOTAL FUEL USE 2010-2017

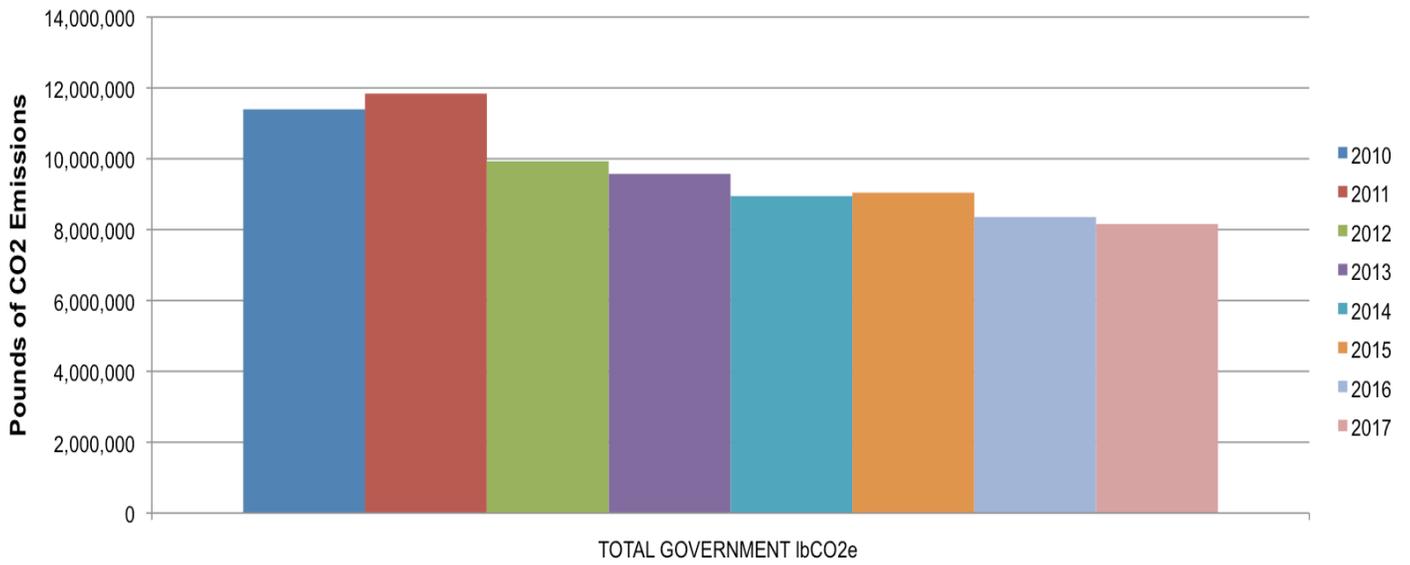


Mountain Village Water Supply

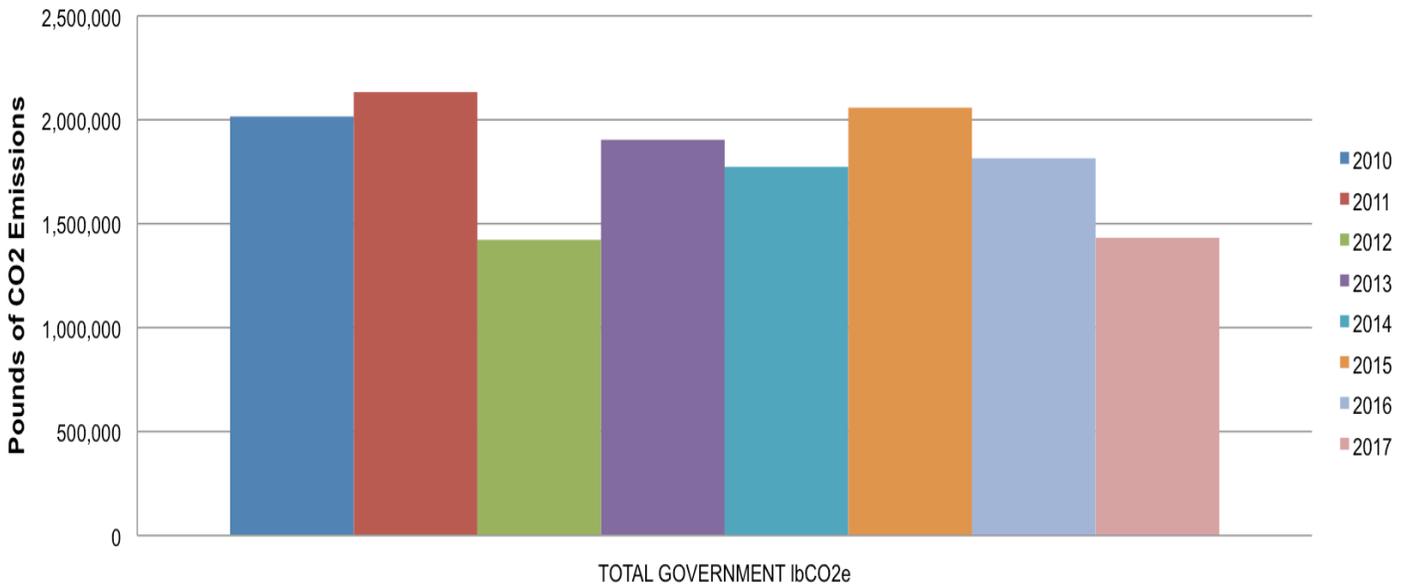


*2010 Snowmaking water data not available

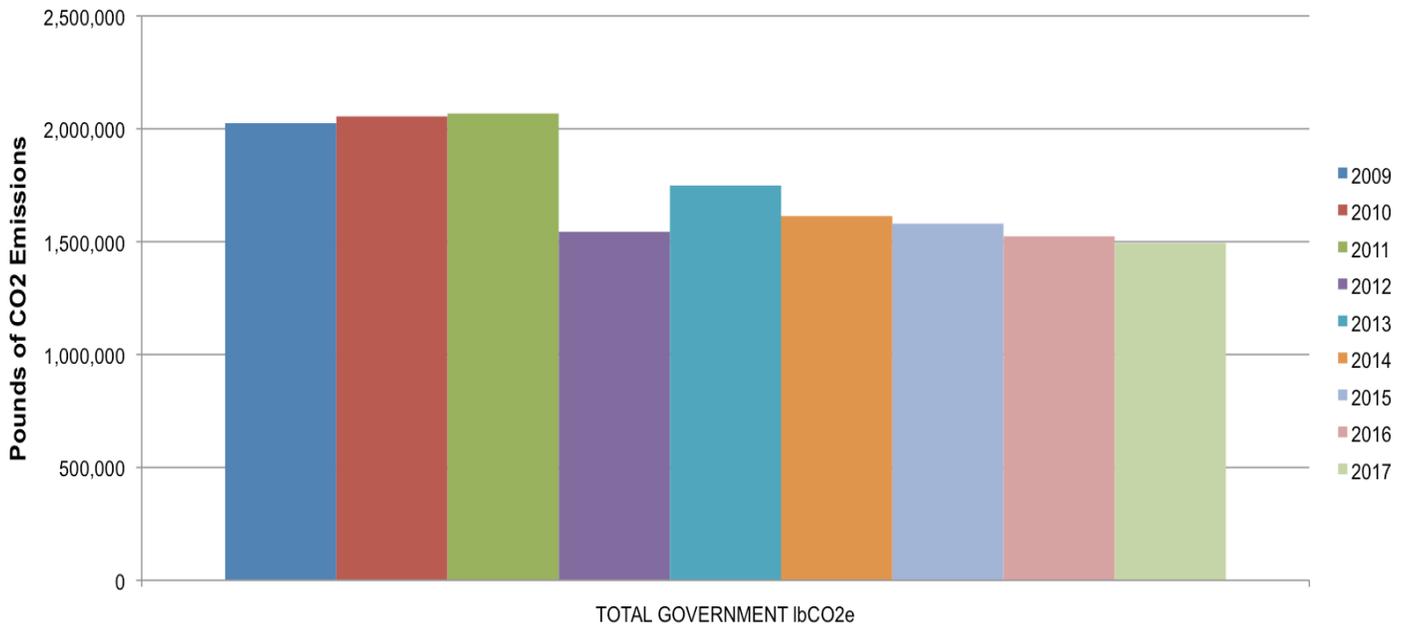
Government Electricity CO2 Emissions 2010-2017



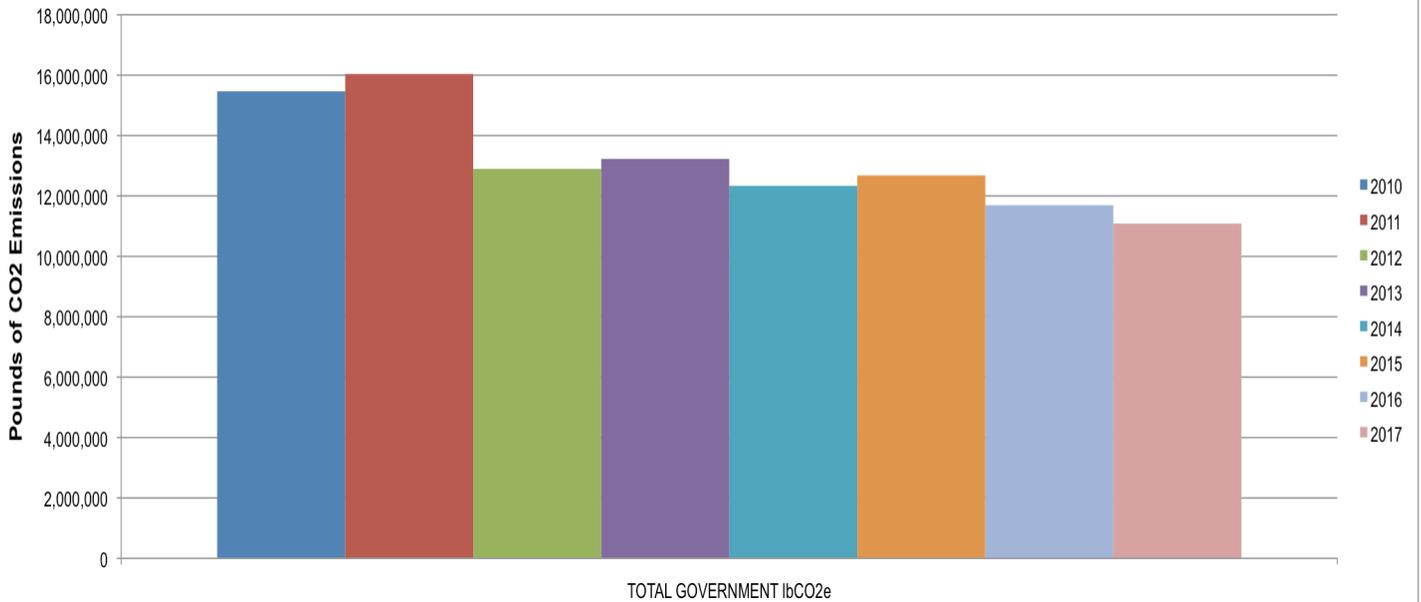
Government Natural Gas CO2 Emissions 2010-2017



Government Fuel CO2 Emissions 2009-2017



TOTAL Government CO2 Emissions 2010-2017



Conversion Factors Used:

TriState (SMPA): 2.2 lb CO2e/kWh (pre-2012) 1.96 lbCO2d/kWh (2012) 1.93 lbCO2e/kWh (2013)
 1.99 lbCO2e/kWh (2014) 1.871 lbCO2e/kWh (2015) 1.776 lbCO2e/kWh (2016-Present)

Black Hills Energy: 11.88 lbCO2e/therm

Gasoline: 26.22 lbCO2e/gallon (includes both tail-pipe and well-to-pump emissions)

Diesel: 27.81 lb CO2e/gallon (includes both tail-pipe and well-to-pump emissions)