

**TOWN OF MOUNTAIN VILLAGE
GREEN TEAM COMMITTEE MEETING**

TUESDAY, AUGUST 28, 2018, 2:00 PM

**3rd FLOOR CONFERENCE ROOM, MOUNTAIN VILLAGE MUNICIPAL BUILDING
411 MOUNTAIN VILLAGE BLVD, MOUNTAIN VILLAGE, COLORADO**

AGENDA

Item #	Time	
1.	2:00	Call to Order
2.	2:05	Approval of the July 31, 2018 Minutes Approval of the August 14, 2018 Minutes
3.	2:10	Discussion & Updates Regarding: A. Adding a franchise fee to San Miguel Power Association's bills for use on renewable energy projects i.e. solar farms, etc. (5 Mins) B. Review and recommendation to town council regarding possible energy code, REMP, and/or building code amendments to prioritize based upon greatest carbon reductions. (Haynes, Know and Wheels, 25 Mins) C. Review and recommendation to town council regarding eco action partners scope of work for 2019. (Knox, 15 Mins)
4.	2:55	Next Steps
5.	2:58	Other Business
6.	3:00	Adjourn

**TOWN OF MOUNTAIN VILLAGE
MINUTES OF THE JULY 31, 2018
GREEN TEAM MEETING DRAFT**

The meeting of the Green Team Committee was called to order by Marti Prohaska on Tuesday, July 31, 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:

Marti Prohaska, Chair and Mountain Village Resident
Patrick Berry, Mountain Village Town Council
Savanna Wagner, At Large Member
Jeff Proteau, Telluride Ski and Golf Company
Garrett Brafford, Telluride Mountain Village Owner's Association

The following Green Team Committee members were present by phone:

Jonathan Greenspan, Vice Chair and Mountain Village Resident

The following were also in attendance:

Kim Montgomery, Town Manager (Staff)
Christina Lambert, Administrative Services Coordinator (Staff)
Zoe Dohnal, Business Development & Community Engagement Coordinator (Staff)
Finn Kjome, Director of Public Works (Staff)
Cath Jett, Mountain Village Resident

The following Green Team Committee and Staff members were absent:

Bruce MacIntire, Mountain Village Town Council
Michelle Haynes, Director of Planning and Development Services (Staff)

Consideration of Approval of Minutes:

June 26, 2018 Green Team Committee Meeting Minutes

On a **MOTION** by Jonathan Greenspan and seconded by Savanna Wagner, the Green Team Committee voted unanimously to approve the June 26, 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:** Request permission to use the Meadows location. Determine budget and potential expenses. Request prize options and donations from local businesses. Create a list or map with specific areas to focus on clean-up. Create a master map for the registration table. Speak with Steve from the Market about food options (finger foods). Arrange drinks, drink containers and ice. Coordinate set up and break down of event including tables and trash bins. Deal with parking situation. Gather and order all necessary supplies (paper plates, napkins, cups, garbage bags, gloves, raffle tickets, first aid kit, etc.). Finalize a flyer or poster to hand out to local businesses. Meet with local businesses to educate them about the Green Team Committee and about the upcoming event. Focus on creating media, email blast, Facebook page and getting the word out. Create a google doc to sign up and help manage the event.
 - **SPECIAL MEETING DATE:** Cleanup Day Special Meeting: Tuesday, August 14, 2018 at **3 p.m.** in Mountain Village Town Hall.

- Straw Program Update:
 - **NEXT STEPS:** Jonathan Greenspan will present an executive summary from the Ecology Commission at the next regular Green Team Committee meeting on August 28, 2018. He will provide this information to the Green Team Committee staff no later than the packet deadline (8.23.18 at noon). The information will be discussed at the Green Team meeting and the final information will be provided to the Mountain Village Town Council. The Green Team Committee will provide the information to staff no later than the September Town Council meeting agenda/packet deadlines. This agenda item will be continued to another upcoming meeting if more time is needed.

Other Business:

- Upcoming Meeting Dates, Times and Locations:
 - Christina Lambert informed the Green Team Committee of upcoming scheduling conflicts with the Town Hall Conference Room on August 28 and September 25. The meeting dates and times have not changed but the location has been moved to the Mountain Village Municipal Building Conference Room (3rd floor of the Fire Station). Christina will send out an email with this information to the committee and staff.

There being no further business, on a **MOTION** by Savanna Wagner and seconded by Marti Prohaska, the Green Team Committee voted unanimously to adjourn the meeting at 3:07 p.m.

Reminder:

The next special Green Team Committee meeting will take place on Tuesday, August 14, 2018 at **3:00 p.m.** in Mountain Village Town Hall.

The next regular Green Team Committee meeting will take place on Tuesday, August 28, 2018 at 2:00 p.m. in the Municipal Building conference room (3rd floor of the fire station).

Respectfully submitted,

Christina Lambert

Administrative Services Coordinator

**TOWN OF MOUNTAIN VILLAGE
MINUTES OF THE AUGUST 14, 2018
SPECIAL GREEN TEAM MEETING DRAFT**

The meeting of the Green Team Committee was called to order by Marti Prohaska on Tuesday, August 14, 2018 at 3:03 p.m. in Mountain Village Town Hall, 455 Mountain Village Boulevard, Mountain Village, Colorado.

Attendance:

The following Green Team Committee members were present:

Marti Prohaska, Chair and Mountain Village Resident
Jonathan Greenspan, Vice Chair and Mountain Village Resident
Bruce MacIntire, Mountain Village Town Council
Patrick Berry, Mountain Village Town Council
Savanna Wagner, At Large Member
Jeff Proteau, Telluride Ski and Golf Company
Heidi Stenhammer, Telluride Mountain Village Owner's Association

The following Green Team Committee and Staff members were absent:

Garrett Brafford, Telluride Mountain Village Owner's Association
Michelle Haynes, Director of Planning and Development Services (Staff)

The following were also in attendance:

Kim Montgomery, Town Manager (Staff)
Christina Lambert, Administrative Services Coordinator (Staff)
Zoe Dohnal, Business Development & Community Engagement Coordinator (Staff)
Finn Kjome, Director of Public Works (Staff)
Heather Knox, Executive Director- Eco Action Partners
Cath Jett, Mountain Village Resident

Discussion and Committee Follow Up/Next Steps:

- Community Cleanup Day Update:
 - **DISCUSSION AND NEXT STEPS:**
 - We still need to finalize the zone map. Kim Montgomery will email Finn Kjome the details.
 - We will request that Ron Cheroske reprint the new master map.
 - Marti Prohaska will lead a group of kids at the event.
 - Marti's daughter is the president of the Earth Guardians and she will also be part of this group.

- Parking will be located at the Meadows Parking Lot.
- Finn Kjome will arrange 2 tents, 4 tables and 2 Porta-a-Potty's.
- Porta-a-Potty's will be dropped off on Friday and picked up on Sunday.
- Zoe Dohnal will locate hand sanitizer and sunblock for the event.
- We will continue to spread the word and collect prizes up until the event.
- The prizes will be collected and stored in Zoe's office.
- Jonathan Greenspan will run the registration station with at least one additional volunteer. Registration will start at 11:30 a.m. Committee will ask attendees if they would like to join our email list. Attendees will need to print their name on the signup sheet and provide their email address.
- We are encouraging participants to bring their own gloves. We will have one box of plastic gloves for those in need.
- Brett Button will supply two 55-gallon trash bins, and two 55-gallon recycling bins. He will then pick up the full bins, on Saturday at 4:30 p.m.
- We will have at least 3 different best trash awards. We will provide prizes and extra raffle tickets to the winners of the awards. Marti will MC the awards.
- The three awards are 1. Most Unique 2. Most Valuable 3. Overall Best Find. These titles may change closer to the event.
- The awards will begin around 3 p.m.
- Savanna Wagner will create a poster about the raffle. This poster will be posted near the registration table.
- Zoe Dohnal and Savanna Wagner will work on creating an informational board with Green Team Committee and incentive program information. The board will be near the registration table on an easel.
- We are providing food from the Mountain Village Market for 70 people. The food will include: Food for 70 people, Finger food, small in size, Meat Wraps and Veggie Wraps (cut into small slices), Meat Sandwiches and Veggie Sandwiches (cut into small slices/pieces), Large bowl(s) of fruit, Large veggie tray(s), Mayo, Mustard (for sandwiches) and Ranch Dip (for vegi's), Large bowl(s) of Potato Chips, Cookies and Brownies (cut into small bite sized pieces).
- Tyler Moorfield will pick up the food from the market at 1:30 p.m.
- Savanna will pick up plates, toothpicks and napkins. We will encourage attendees to bring their own reusable dishes and water bottles. We will provide extra raffle tickets for those who bring reusable dishes.
- Zoe and Savanna have started putting posters up. Additional posters were given out at the meeting for committee members to help post.
- Zoe will meet with Bill Kight regarding the Telluride Planet and KOTO doing a story on the event. She will also talk to Bill about getting the word out via e-blast, social media and other marketing methods.

Other Business:

- New TMVOA Green Team Committee Representative
 - TMVOA requested to change their Green Team Committee representative from Garrett Brafford to Heidi Stenhammer. The Green Team Committee received this request in an email and discussed at the meeting. Heidi attended the meeting in place of Garrett. The Green Team Committee unanimously **APPROVED** this change and Heidi Stenhammer is now an official member of the Green Team Committee.

There being no further business, on a **MOTION** by Marti Prohaska and seconded by Patrick Berry, the Green Team Committee voted unanimously to adjourn the meeting at 4:50 p.m.

Reminder:

The next Green Team Committee meeting will take place on Tuesday, August 28, 2018 at 2:00 p.m. on the 3rd floor of the Mountain Village Municipal Building (Fire Station).

Respectfully submitted,

Christina Lambert

Administrative Services Coordinator



**PLANNING AND DEVELOPMENT SERVICES
DEPARTMENT**
455 Mountain Village Blvd.
Mountain Village, CO 81435
(970) 728-1392

Agenda Item No. 3b

TO: Green Team

FROM: **Kim Wheels, EcoAction Partners &** Michelle Haynes, Planning and Development Services Director

FOR: Meeting of August 28, 2018

DATE: August 23, 2018

RE: Building Code and REMP **Additional Carbon Reducing** Measures: A Recommendation to Town Council

ATTACHMENTS:

- Slides from the August 16, 2018 EcoAction Presentation
- Matrix for discussion

SUMMARY

As part of the EcoAction Partners presentation to Town Council on August 16, 2018, EcoAction Partners provided a list of possible recommendations to Town Council as a means to further reduce Greenhouse Gas (GHG) Emissions associated with new construction.

BACKGROUND

Existing buildings and new construction constitute 50% of the region and the communities Greenhouse Gas Emissions. EcoAction Partners and the Planning Director in conjunction with building official input, met to strategize and discuss possible amendments to the upcoming 2018 building code adoption in advance of the Town Council presentation and now for the Green Team recommendation. All recommendations were vetted with the Town of Mountain Village staff prior to the Town Council presentation.

RECOMMENDATIONS

	Item	Comments	Implementation
A	Require house electricity offset of 100% through Green Blocks, on-site renewable energy or other equivalent	The Town of Telluride and County have administered this requirement since 2010. The standard is 8 green blocks per 2,000 square feet. The cost is \$1.00 per block per month	Add language when the 2018 Building Code is adopted EASY TO ADMINISTER IF ADOPTED. DIFFICULT TO ENFORCE IN PERPETUITY TO BE DISCUSSED HOWEVER, SMPA IS DEVELOPING A METHOD TO CREATE EASE IN ANNUAL COMPLIANCE TRACKING FOR BUILDING DEPARTMENTS

B	Incentivize less than 3000 sf & net zero including passive solar home construction	We currently have incentives in place so that if followed a building permit is free. This would be an additional incentive	Add language when the 2018 Building Code is adopted. Decide if free building permit is enough of an incentive or can there be more? IT WOULD BE NICE TO HAVE SOME CARROTS NOT ALL FINANCIAL PENALTIES. THIS COULD BE AN INCENTIVE
C	Eliminate or reduce the 1,000 sf of snowmelt exemption	1,000 sf of snowmelt costs \$16,748 that is paid into the REMP fund prior to issuance of a building permit.	Add language when the 2018 Building Code is adopted. EASY TO ADMINISTER IF ADOPTED.
D	Reduce HERS Scores for larger homes, creating a new category beyond "13,000 SF & larger"	Already Tiered, slight tweaks needed	Add language when the 2018 Building Code is adopted. MODEST AMENDMENT ARE DESIRED BY THE TOWN AND ALREADY TIERED
E	Modify language regarding use of REMP funds to allow use for "greenhouse gas (GHG)" (addition in quotes) and energy reducing projects and programs	Creates more flexibility in the use of REMP funds to achieve a broader range of	EASY TO MODIFY
F	Consider REMP fees for outdoor fireplaces, infrared heaters and/or natural gas offset requirements as a whole	We are seeing increased heating of exterior spaces with infrared heaters and outdoor fireplaces. We could consider capturing this through the REMP worksheet and an associated fee.	This would require a flat rate or analysis to be including in the REMP worksheet MODERATE TO MODIFY REMP DEPENDING UPON FLAT RATE OR TECHNICAL USE ANALYSIS

MAINTAIN EXISTING REGULATIONS & PROGRAMS

- Continue double-incentive for on-site renewable energy mitigation

POLICY RELATED RECOMMENDATIONS

- Promote SMPA Green Blocks & efficiency programs along with MV incentives
- Franchise fees for electricity & natural gas: Develop agreements with utilities & use funds for GHG-reduction projects / programs
- Collaborate with SMPA, EcoAP & others to support new Community Solar Farm development & include as a REMP option
- Restructure the mv solar incentive program to garner greater participation

Please refer to supporting documents for additional information.

ANALYSIS

All the recommendations are incremental ways to reduce or off-set long term energy consumption associated with the construction and function of new single-family homes. Staff recommends that we balance those recommendations that simply continue to hit the pocket books of owners, in a community where our residents already believe our building costs are too high and prohibitive versus incentives or carrots.

Reducing energy consumption in the existing built environment is the larger challenge and a positive long-term goal for the green team. For example, proactively understanding emerging technologies regarding snow melt, reducing energy use in existing homes and commercial buildings and understanding whether retrofitting solar reduced energy consumption are important topics to consider.

Staff also recommends that the Green Team decide on a meaningful project utilizing the existing REMP funds that will further achieve our energy and environmental goals. This also helps sell the REMP program to the public if they know the projects the money is being utilized for. Additional education regarding the value of Green Blocks is important as well.

RECOMMENDED MOTION

The Green Team Recommends to Town Council adoption or modification of the following prioritized GHG emissions reduction efforts to be implemented with the 2018 Building Code adoption.

[insert recommendations here]

And recommends they be implemented with the 2018 building code adoption process expected to occur either in the fall of 2018 or spring of 2019.

/mbh

Building Energy Code is an Opportunity!



- ◆ Best time to reduce building energy use is prior to & during construction
- ◆ Once home is built & systems installed, more difficult to improve efficiency
- ◆ MV current energy code is progressive, but there is still opportunity for reducing home energy use
- ◆ Current code allows for 1000 SF of unmitigated snowmelt per home
- ◆ Energy use of recently permitted buildings is not yet impacting GHG Inventory

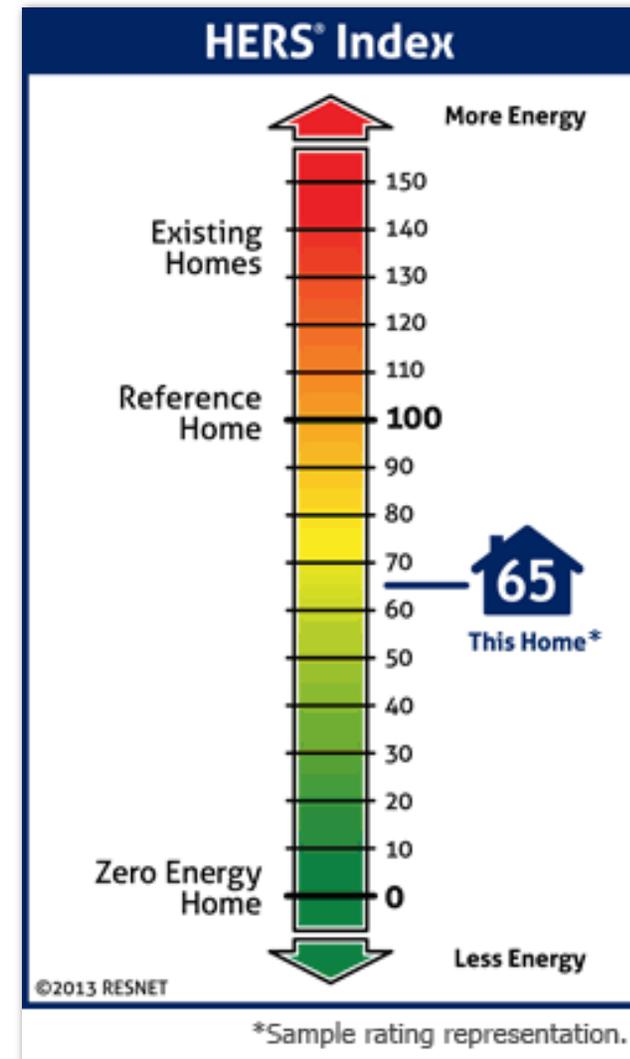
Suggestions for Mountain Village to reduce Emissions



- ◆ Building Energy Code Adoption: 2018 IECC with amendments that progress energy efficiency
 - ◆ Improves energy efficiency of residential & commercial buildings
 - ◆ Maximum ERI (HERS) score for our climate zone is 61
 - ◆ Reconsider size categories & HERS scores
 - ◆ Begin with homes smaller than 7000 SF
 - ◆ Scale toward Net Zero home as size increases
 - ◆ Require house electricity offset of 100%, through Green Blocks, on-site renewable energy, or other equivalent
 - ◆ Consider natural gas offset requirement, Green Blocks or equivalent
 - ◆ Incentivize small homes < 3000 SF & net-zero, passive home construction through financial or expedited process
 - ◆ Require solar panels on all new construction, utilizing available financing incentives to make it worthwhile

Home Energy Rating System (HERS)

- ◆ Energy Analysis for total home
- ◆ Building Thermal Envelope, Mechanical systems, Appliances & Lighting
- ◆ Based on 2003 IECC
- ◆ 100% = baseline code home
- ◆ Score 65 = 35% better than 2003 IECC code home



Suggestions for Mountain Village to reduce Emissions



- ◆ Renewable Energy Mitigation Program (REMP):
 - ◆ Eliminate or reduce free 1000 SF of snowmelt allowed
 - ◆ Address outdoor fireplaces and infrared heaters
 - ◆ Continue double-incentive for on-site renewable energy mitigation

- ◆ REMF Funds:
 - ◆ EcoAction Partners to update calculation methodology
 - ◆ Modify verbage to allow use of funds for “greenhouse gas (GHG) ” and energy reducing projects & programs
 - ◆ Consider using REMF funds for community grant program
 - ◆ Collaborate with SMPA, EcoAP & others to support new Community Solar Farm development & include as a REMF option

Suggestions for Mountain Village to reduce Emissions



- ◆ Promote SMPA Green Blocks & efficiency programs along with MV Incentives
- ◆ Franchise fees for electricity & natural gas
 - ◆ Develop agreements with utilities & use funds for GHG-reduction projects / programs
- ◆ Community Programs
 - ◆ Continued MV program development & implementation
 - ◆ Continued participation in regional programs



CARE/SMPA IQ Program

Assisting lower income families with energy efficiency improvements to their residences

Free energy assessment that prioritizes cost effective energy efficiency improvements (up to \$3000) for qualified residents, which are then implemented at no cost.

End of 2017: 58 residents had qualified; 49 served

Improvement examples: Air sealing, insulation, and new refrigerators and boilers.

Equates to approximately **1,300 therms** saved and **6.95 metric tons of carbon** reduced.

www.ecoactionpartners.org

Mountain Village Recommendations	comments	GHG rewards
Building Energy Code Adoption:		
< 2018 IECC with amendments that progress energy efficiency		
< Improves energy efficiency of residential & commercial buildings		
ERI / HERS Scores	maximize home efficiency at design/build	high
< Maximum ERI (HERS) score for our climate zone is 61		
< Reduce HERS Scores for larger homes, creating a new category beyond "13,000 SF & larger"		
< Scale toward Net Zero home as size increases		
< Require house electricity offset of 100%, through Green Blocks, on-site renewable energy, or other equivalent	Already existing in Telluride & SMC code. Previously was in MV code. Easy to implement. SMPA developing annual tracking method. Telluride 8 GB per 2000 SF. Kim W. is reviewing specific HERS ratings for actual estimated electricity use.	high
< Consider natural gas offset requirement, Green Blocks or equivalent	new possibility with Green Blocks, being suggested for Telluride & SMC codes also.	high
< Incentivize small homes < 3000 SF & net-zero, passive home construction through financial or expedited process	MV currently has incentives in place so that if followed a building permit is free. This would be an additional incentive	
< More compelling solar incentives for the community, utilizing available financing incentives to make it worthwhile	feasibility / realistic for all homes, how about require "solar-ready" (conduits installed)	
Renewable Energy Mitigation Program (REMP):		
< Eliminate or reduce free 1000 SF of snowmelt allowed	Easy to implement, Council discussion. Easy - hits the pocket book	high, discussion of calculation
< Address outdoor fireplaces and infrared heaters	Randy desires based on high % of homes installing. Easy - hits the pocket book	high

⟨ Continue double-incentive for on-site renewable energy mitigation	Easy, emphasizes priority of program vs. fee collection. Existing - Keep in place	
⟨ EcoAction Partners to update calculation methodology	Easy, minimal/ no change to fee this time	
⟨ Modify verbage to allow use of funds for “greenhouse gas (GHG)” and energy reducing projects & programs	Easy, will broaden use of funds and GHG reduction possibilities	
⟨ Consider using REMP funds for community grant program	Town currently utilizes for Town Projects. EcoAP will also propose Community Grant Program in scope of services. Increased communication about projects implemented is important.	
⟨ Collaborate with SMPA, EcoAP & others to support new Community Solar Farm development & include as a REMP option	Highly desired by Randy, supports priority of REMP	
Others:		
⟨ Promote SMPA Green Blocks & efficiency programs along with MV Incentives	Relatively easy	
⟨ Franchise fees for electricity & natural gas: Develop agreements with utilities & use funds for GHG-reduction projects / programs	new concept for funding programs, incentivizes reduced consumption. MV staff is looking into existing franchise agreement & renewal timing	depends upon how funds are utilized
Community Programs:		
⟨ Continued MV program development & implementation	community engagement	
⟨ Continued participation in regional programs	community engagement	

ECOACTION PARTNERS



Memo

To: Mountain Village Town Council
From: Heather Knox & Kim Wheels
Date: July 11, 2018
Re: EcoAction Partners 2018 Update

EcoAction Partners mission is to track regional GHG emissions and coordinate programs that reduce energy and waste.

EcoAction Partners developed, tracked and has reported on our region's Green House Gas (GHG) Emissions since 2010. We share our data, and present to participating governments and other entities on the extensive information we collect, from electricity and natural gas use, to water, weather, waste, and resident and visitor populations, and more. EcoAction Partners continues to guide regional governments and citizens on ways to reduce our region's GHG emissions by providing programs to reduce energy and waste.

As requested by Mountain Village, EcoAction Partners is working on a Mountain Village specific Green House Gas Inventory that will be available by the end of 2018. Isolating a single jurisdiction from the San Miguel County inventory requires looking at how our regional assets are split between jurisdictions. A meeting was held on July 11 between government representatives and staff from Mountain Village, the Town of Telluride, and San Miguel County to review and discuss how regional assets are divided between jurisdictions. The meeting was very productive, and for the most part, with a few minor changes, the shared assets will continue to follow how they were laid out initially. A summary of these assets and how they are currently divided are included following this memo.

Additionally, the 2018/2019 EcoAction Partners Full Work Plan is attached for your reference. Select projects and programs are highlighted below. Presentation slides with charts and recommendations are attached for review prior to the meeting. The Town of Mountain Village 2017 annual Energy Use & Greenhouse Gas Report is also included.

A. Ophir Composting Project

EcoAction Partners was awarded an RREO Mini-Grant for \$9,959.49 to purchase 2 Earth Cube Composters, some additional supplies, and educational materials for Community Composting for the Town of Ophir. The program was implemented early April, and without a doubt, the Ophir community has embraced composting! It is clear based on the numbers of participants and volumes thus far, that the 2 Earth Cubes are not enough. We are strategizing ways to get another one or two units for Ophir.

Overall the Ophir Community Composting Project has been an exciting learning experience for all. The Ophir Self Reliance Committee has been involved and assisted in many ways. In the first month the Earth Cube diverted 620 pounds of food waste, and 1,830 pounds, as of July 5, 2018. The two batches have gone through the composting process. There are still things we are learning, including the best process for unloading the composter, and the best brown matter/bulking agents, and more.

RREO Mini-Grants, which go up to \$25k, are a great opportunity for waste diversion, recycling, and composting projects in other locations in our region. The grants are due in late fall, so identifying locations for composting is a priority. For a variety of reasons, it is recommended that individual entities apply (instead of EcoAction applying as how we have done in the past). EcoAction is eager to assist any local entity with this grant process, and to provide guidance, estimated diversion and environmental benefits, verbiage for the grants, and the educational materials that were created for Ophir. Please let us know if there is a location we can partner on for composting in Mountain Village.

Locations that are currently considering composting include:

- Mountain Village: Mountain Village Green Team is offering up to \$5K as an incentive for composting equipment. This could provide valuable matching funds that the granting entity likes to see, for small scale or a larger, more automated composting system in MV.
- Town of Ridgway
- Town of Telluride – HOA locations or affordable housing areas?
- Lawson Hill – the Lawson neighborhood has expressed a desire to compost. The HOA needs more information prior to approving this project; EcoAction Partners is providing information and guidance.

B. Energy Outreach CO/SMIPA IQ Update

Energy Outreach Colorado partnered with SMIPA to brand Energy Outreach's CARE Program as the SMIPA Income Qualified (IQ) Weatherization Program. SMIPA then added a solar component. The program

supports the region's low and middle-income households by providing a free energy assessment that prioritizes cost effective energy efficiency improvements (up to \$3000) for qualified residents, which are then implemented at no cost. Once participants go through the program, they are eligible for free solar panels to off-set a portion of the homes' energy use in the SMPA IQ solar array.

EcoAction Partners was selected by Energy Outreach Colorado to operate the CARE/SMPA IQ Weatherization Program, and we have been providing this service since the program was introduced to the SMPA service territory in 2016.

New in 2018, Black Hills joined in funding the program in a more significant way, supporting gas related improvements beyond what the previous rebates allowed. Now qualifying Black Hills customers can get up to \$8K for improvements of a new high efficiency furnace (amazing!) We aren't allowed to publish the amount because it is strictly on a need basis, but we are now able to provide beyond the standard "boiler clean and tune up".

For the SMPA IQ Weatherization/CARE Program, as of the end of 2017, 58 residents have qualified and 49 had been served, receiving improvements like air sealing, insulation, and new refrigerators and boilers. This equates to approximately **1,300 therms** saved and **6.95 metric tons of carbon** reduced.

For Mountain Village, **13** Mountain Village residences have been served to-date, which includes **12** Village Court units. As requested by Energy Outreach Colorado, thank you to Mountain Village for contributing toward the purchase of new refrigerators for the Income Qualified individuals/families in VCA.

EcoAction just completed our annual inspections with Energy Outreach CO on homes they selected that we served. Our inspection, on May 31, went very well. Energy Outreach CO continues to be pleased with EcoAction Partners work in the SMPA service territory.

C. Truth or Dare Update

Truth or Dare is a weeklong, school-based educational program for regional school children focused on saving energy and reducing waste. Students gain valuable knowledge on how to reduce their carbon footprint through small actions like carpooling/walking, unplugging electrical gadgets, and recycling. Using a point based system, students track their habits. EAP then summarizes the GHG emissions reduced by each student. Since 2014 this program has been presented to over 1400 students in 5 different school districts. We estimate that in 2017 regional students collectively reduced over 25,000 lbs. of carbon emissions. Since the program's inception, the amount is well over 60,000 lbs. of carbon reduced. We have found that kids

often share their enthusiasm with their parents, leading to more households engaged in sustainability efforts.

Thus far in 2018 the following schools participated: Telluride Intermediate School, The Mountain School, the Norwood school, and Ouray. The students in Ouray also decided to create and publish a book about the program to help other students in “reducing their carbon footprint”. The Nucla/Naturita Schools and the Ridgway School have asked to run it in the fall next year. For the four participating schools 28,334 pounds of carbon were saved during that week of Truth or Dare. If students continued those habits beyond that week, it is estimated that over 900,000 pounds of carbon would be saved annually, which is equivalent to 408.2 metric tons of carbon annually.

D. Green Lights LED Discounted Lightbulb Program Running May 28 – July 31

EcoAction Partners Greenlights LED Program is in progress and available until July 31! The Greenlights LED Program helps residents and businesses switch to LED bulbs to save money and reduce energy use by leveraging up to a 75% off rebate. Each SMPA meter is allowed to order up to 50 bulbs. By 2017, 483 San Miguel Power Association members purchased 9,965 bulbs, reducing GHG emissions annually by 113.65 metric tons for the lifespan of the bulbs. EAP provides education region-wide on how effective this simple change can be to protecting our environment. Thank you to Mountain Village for participating!

Currently San Miguel Power Association and regional governments are again supporting the “Greenlights” LED Program. Participating governments include: San Miguel & Ouray Counties, Mountain Village, Telluride, Ridgway, and Ouray. EcoAction Partners received a grant from the Telluride Foundation which provides funds for SMPA Members in Rico and Montrose County to participate in Greenlights.

Results from **2017 Greenlights** for Mountain Village & other jurisdictions are as follows:

2017 GREENLIGHTS COMMUNITY BULB PURCHASE REPORT										
Jurisdiction	Maximum	Total Orders	Total Bulbs	Total Watts	Kilowatts Hrs/Year Saved*	CO2 Saved**	CO2 Metric Ton***	Total SMPA Rebates	Total Government Funds Utilized	
Mountain Village	\$2,000.00	17	528	5,648	9,277	17,348	7.87	\$3,061.63	\$1,530.81	
Telluride	\$3,000.00	16	314	3,269	5,370	10,041	4.56	\$1,756.48	\$878.24	
San Miguel County	\$3,000.00	23	626	8,395	13,789	25,786	11.70	\$2,933.37	\$1,466.68	
Ridgway	\$1,000.00	14	282	2,493	4,095	7,657	3.47	\$1,174.08	\$587.04	
Ouray	\$1,000.00	8	145	1,742	2,860	5,349	2.43	\$877.11	\$438.55	
Ouray County	\$1,166.37	15	402	4,389	7,208	13,479	6.12	\$2,332.74	\$1,166.37	
Rico, Nucla, Naturita	\$2,500.00	16	405	4,052	6,656	12,446	5.65	\$1,654.09	\$1,051.95	
Total	\$6,166.37	53	1,234	12,675	20,819	38,932	17.66	\$6,038.01	\$3,243.91	

For 2018 the program is currently in process and we are seeing orders coming in from Mountain Village again. EcoAction Partners will provide jurisdiction-specific results from Greenlights for 2018 when the program culminates. Thank you again for participating in this regional program.

E. Regional Spring Clean Up & E-Waste

EcoAction Partners was pleased to provide Electronics Recycling Services at the Telluride/SMC Community Spring Clean Up that happened in Carhenge Parking Lot May 18 - 20. Electronics recycling was provided by vendor, CORRecycling out of Grand Junction. It all went smoothly, and two 20 yard dumpsters were filled with of electronics for recycling.

F. Events Compost Recycling & Trash Update

EcoAction Partners continues to assist Telluride and Mountain Village Festivals and Events with Compost, Recycling, and Trash (CRT) services, as well as providing guidance on products to purchase to minimize waste and increase diversion. In addition to numerous festivals, EcoAction Partners provided CRT services for the Fireman's Picnic in Telluride on the 4th of July, as well as on-going services at the Sunset Concert Series in Mountain Village.

G. Green Business Certification

EcoAction Partners Green Business Certification Program helps businesses lower GHG emissions and gain financial savings through energy efficiency efforts. EAP completes an energy assessment then provides recommendations for improvements to conserve energy and reduce waste. EAP helps businesses establish achievable goals and incentivizes them to track their energy usage. Once certified, EAP promotes business' achievements. Currently 30+ regional businesses participate. In Mountain Village more than 13 businesses and lodging properties are certified, totaling over **600,000 Mountain Village commercial ft²**. Of note, we are assisting Telluride Ski and Golf Company toward certification of all of their properties, businesses, and renting businesses; and Telluride Sports is using the program for all 9 of their stores in Mountain Village, Telluride, and Vail.

H. Mountain Village Green Team

EcoAction Partners is pleased to participate in the Mountain Village Green Team meetings. We believe this is a valuable platform to discuss and collaborate on Green initiatives with Mountain Village staff, businesses and owners.

**SMC Shared Resources Meeting for GHG Inventories
Wednesday July 11, 10-12 at WPL Telluride Room**

The aim of this meeting is to reach consensus as to how the GHG emissions associated with each shared resource will be assigned between the Telluride & Mountain Village GHG Inventories. Allocations for Telluride’s inventories from 2010-2017 are explained below, along with associated Mountain Village analyses. The SMC inventory includes all jurisdictions (including Telluride & MV) and thus is inclusive of these resources.

Allocation methodologies to consider for each resource:

- Location of utility billing
- % of county population
- Is data available to parse resources between communities?
- Allocation of tourist impact to Telluride & Mountain Village versus rest of SMC or greater region?

Regionally Shared Resources

Wastewater Treatment Plant – Telluride & MV & SMC subdivisions

MV: 15% ownership, \$30,000 toward solar PV system, 35% of use

Towns working toward Regional Sewer District (~5 years?)

- Electricity & natural gas: 100% to Telluride
- Biogas emissions (nitrogen & methane) from all 10,000+ visitors: 100% assigned to Telluride
- *Could allocate all of the above based on % of use*

*WasteWater analysis charts (no impact to GHG Inventory emissions)

35% assigned to MV, 65% assigned to Telluride.

(For improved Telluride analysis – breakout SMC subdivision population)

*Food GHG emissions are calculated using WWTP population accounting

35% assigned to MV

65% assigned to Telluride, minus SMC subdivision population of 1035

Gondola – eliminates vehicle traffic between MV & Telluride

100% of electricity & offset assigned to MV.

Natural gas & diesel use allocated to MV.

- TMVOA (through TMV electricity bills) purchases Green Blocks to offset electricity use by 100% (actually over by 30,000 kWh currently), so electricity use does not show up in GHG pie.
- Reallocate extra Green Blocks for other TMVOA electricity? Or natural gas & diesel use of gondola?

Telluride Ski & Golf – operations in MV, Telluride, & County land

100% of electricity & natural gas allocated to MV currently

- Prior to purchase of the peaks, TSG energy use was 3% of total county energy use (Btus), 7% of MV Energy Use, 11-12% of Energy Emissions
- 2015 analysis (incl Peaks) – TSG was 17% of MV's Energy emissions
- TSG operations:
 - Office space & Businesses in MV core
 - The Peaks & other lodging
 - On-mountain operations
 - Conference Center
 - Telluride - Base of Gondola & Lift 7 operations
- *Could ask for TSG assistance in separating utility bills based on location of service, to reassign emissions accordingly*

Regional airports – serve region

- Telluride airport: 100% allocated to SMC (50/50 between Telluride & MV)
- 65% of Montrose airport to San Miguel & Ouray Counties
 - 100% assigned to SMC currently
 - assigned to Telluride as % population of SMC
 - What % of people stop & stay in Ouray County?
- *Better visitor / traveler data needed - info requested of Matt Skinner*

Vehicle Transportation – data provided per county

Emissions assigned to Telluride as % population of SMC

- Vehicles & CDOT studies are basis for current Inventory
- Transit Services (some shared among jurisdictions)
- *Traffic count data for Telluride & MV would provide better data specific to community driving, but wouldn't account for distance of travel to each town*

Telluride Festivals – all 3 governments resources utilized

Electricity & water use tied to Telluride Town Park

- Located in Telluride Town Park
- Gondola used
- Camping in outlying areas, with school bus transportation
- People travel to region for festivals
- Benefits all businesses

Mountain Village Sunset Series – MV resources

- Located in Mountain Village
- Gondola used
- Regional benefit

Others – serve region, allocated by location

- Wilkinson Public Library - Telluride
- Telluride Medical Center – Telluride
- Telluride School District – Telluride
- Telluride Mountain School - SMC

Data Gaps

Trash & Recycling –

- Bruin provides data per jurisdiction. Has not provided for 2017. Telluride fined Bruin for lack of 2016 & 2017 data. Bruin data is only part of the waste picture.
- Waste Management – Private company, data not available. Require in contracts? MV contract required it. Is it still being provided?
- 2017 Regional & SMC Inventories – data from EcoAction Partner’s Regional Waste Diversion Study. 2015 data trash & recycling per jurisdiction

Transportation –

- Region 10 study data not applicable. It focuses on gaps in transit services.
- CDOT data tracks highway travel only, not all roads.
- Registered vehicles in counties relies upon average CO annual mileage.
- Off-Road vehicle use is increasing, but not accounted for.

Affordable Housing –

- Regional impacts on transit studies & transportation emissions
- GHG calculation could be done to compare impacts of reducing commute mileage for local employees

Food -

- Population-based calculation, including visitors. Telluride is based on 65% of WWTP, minus estimated SMC subdivision population served by WWTP (~1035). Mountain Village would be 35% of WWTP population.
- A food study would be helpful for more accurate food emissions & tracking reduction associated with farmers markets & programs.

Propane data –

- Estimate from 2010
- Private companies, updated data not currently available



2018 & 2019 Work Plan

ENERGY

Measurable Outcomes

GOAL: Reduce Energy Related Green House Gas Emissions by 20% by 2020.

Objective 1. Assist Residents, Visitors, Business & Governments in Achieving Community Reduction of Energy Use.

General Program Actions:

- 1 Annually update & maintain GHG Inventory; track progress toward goals, analyze Energy Use for SMC & Ouray County
- 2 Maintain Website with Energy Information as a Central Resource.
- 3 Share GHG data for research and community benefit.
- 4 Market and operate Green Lights LED Program to Promote Energy Efficient lighting in the SMPA territory.
- 6 Conduct Roundtables, Outreach & Educational Events Throughout Region.
- 7 Convene and lead "Umbrella Meeting" to Showcase Partners & Programs.
- 8 Provide general Energy Efficiency Outreach, i.e., Utility Rebates, Energy Audit Programs, **C-Pace**
- 9 Coordinate efforts with the Carbon Neutral Coalition; present SMC-specific GHG Inventory & update annually.
- 10 Network with other organizations in the state to exchange program information, successes, lessons learned, etc.

GHG emissions tracking, present results
 # hits on page, actions taken
 community projects/benefits
 # bulbs sold, members served, kWhrs & GHG saved
 # of events and attendees
 # of attendees

Residents Actions:

- 1 SMPA IQ - Market and operate program to Income Qualified Residents for Energy Audits & improvements
- 2 Operate "Truth or Dare" Energy Efficiency Education Program in Local Schools.

served, #improvements, est GHG savings
 # schools , # students, # actions, GHG savings

Business Community Actions:

- 1 Develop, Implement and Manage Lodging Energy Efficiency Program with HOA and Property Managers.
- 2 Manage and Promote "Green Business Certification" Program.
- 3 Promote C-PACE to help commercial clients complete energy efficiency & renewable energy improvements

of participants, establishment of baseline
 # of businesses involved
 # of businesses involved

Government Related Actions:

- 1 Implement "Sneffels Community Energy Board Sustainability Action Plan", with priorities as chosen by Board.
- 2 Respond to government's technical assistance needs per specific contracts (community-specific GHG Inventories, project GHG calculations GHG/energy/\$\$ savings; Policies & Programs implemented,etc.
- 3 Greening Govt - serve as local point of contact for govt efforts to reduce their carbon footprints. GHG/Energy/\$\$ savings, Policies & Programs implemented,etc.
- 4 REMP Program Consulting, as Needed.
- 5 Offer Green Grants Program for REMP fund uses for communities who choose Grants implemented, GHG savings per grant



2018 & 2019 Work Plan

WASTE

Measurable Outcomes

Goal: To increase waste diversion activities to meet zero waste goals in the region.

Objective 1: Research, establish baseline data and report on waste volume

Actions:

- | | | |
|---|---|--------------------------------------|
| 1 | Work with govts to improve data availability from Bruin & Waste Management | report published, posted on web site |
| 2 | Maintain records of waste volume/lbs. hauled and or diverted at festivals/events . | report published, posted on web site |

Objective 2: Decrease waste through Composting, Reduce, Reuse, Recycle, Rethink, Refuse strategies

Actions:

- | | | |
|---|--|--|
| 1 | Complete Ophir Composting Final Report for RREO | report submitted, Ophir Composting success publicized |
| 2 | Promote waste diverted through Ophir composting project, and assist other HOAs/communities with Waste Grants, Educational materials & Start up | Volum waste diverted through Composting, # of other locations composting |
| a | Work with individuals and govts on increasing composting knowledge/implementation | Educational pieces created, participation rates |
| b | Assist govts with regulations to encourage use of recyclable and compostable materials as appropriate | Research conducted and relayed |
| 3 | Operate, contract and promote electronics recycling at Spring Cleanup and Fall E-cycle. | Volume of items, # volunteers |
| 4 | Assist govts and businesses with Zero Waste Projects | Projects completed, publicized |
| 3 | Promote Zero Waste aspects of Sustainable Business Consulting program | # entities using reusable products, and adding recycling services |

Objective 3: Increase events using CRT services.

Actions:

- | | | |
|---|--|---|
| 1 | Increase number of contacts and events requesting CRT services by promotion, education & outreach. | # of events, # staff, |
| 2 | Identify specific items needed for contracts and obtain contracts for all CRT services. | Number of contracts obtained, income, % CRT tracked |
| 3 | Assist smaller events with limited budgets by develop training programs and utilizing volunteers. | Number of festivals trained |
| 4 | Work with local govts. on special events contracts requiring CRT. | Checklists incorporated into Gov. contracts |
| 5 | Recruit and train and adequate # of volunteers to staff CRT events. | # of vols, hours, |

ECOACTION PARTNERS



Mission Statement:

EcoAction Partners tracks regional greenhouse gas emissions and coordinates programs that reduce energy and waste.

www.ecoactionpartners.org

2018 Update

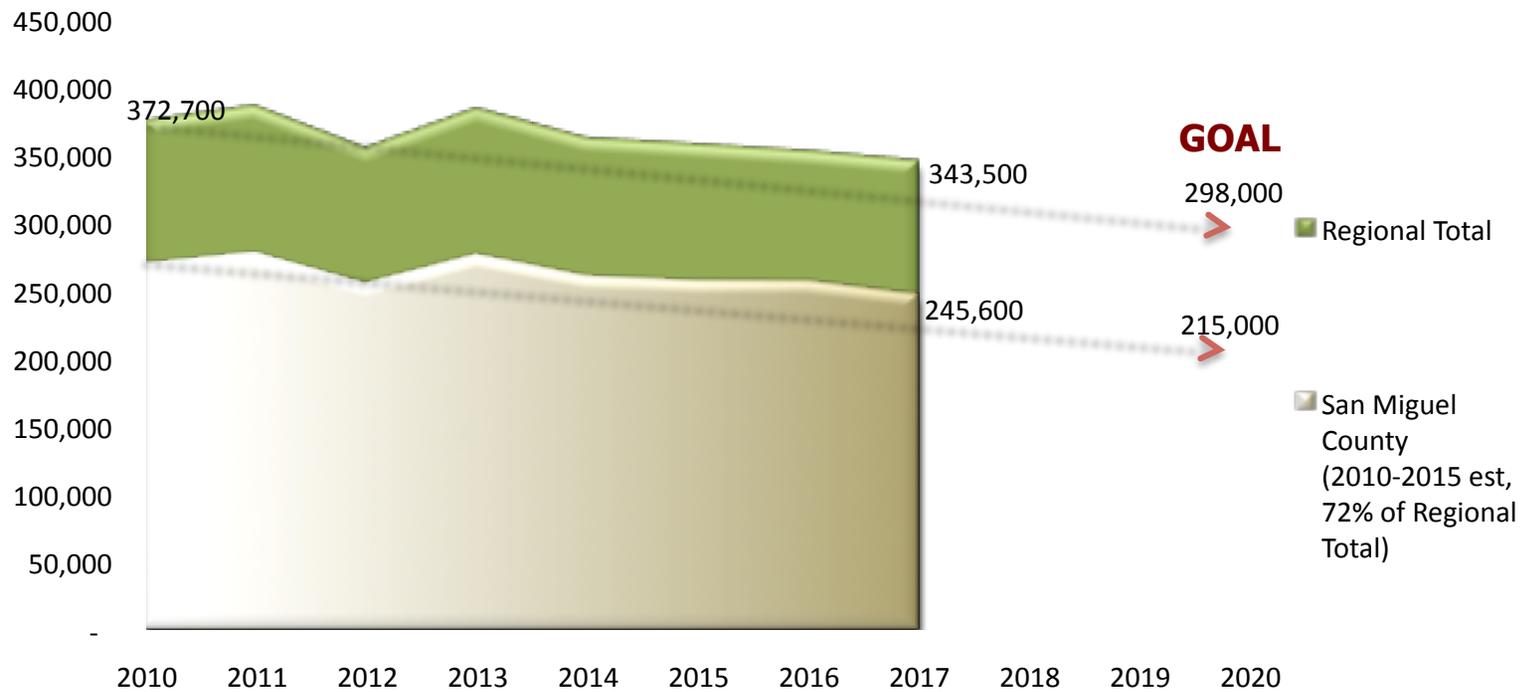


- ◆ 2017 Regional GHG Inventory
- ◆ 2017 Mountain Village Community Energy Use
- ◆ Highlighted Programs:
 - ◆ Greenlights
 - ◆ Ophir Composting Program
 - ◆ Truth or Dare
- ◆ Commercial PACE
- ◆ Suggestions:
 - ◆ Building Energy Codes & Smart Building Program Update
- ◆ 2017 Mountain Village Government Energy Use

Total GHG Emissions



Ouray & San Miguel Counties Regional GHG Emissions (mtCO₂e)



www.ecoactionpartners.org

GHG Emissions Categories

ECOACTION PARTNERS

Materials, Food & Waste 23%



Transportation
*Vehicles & Airplanes
27%



50%

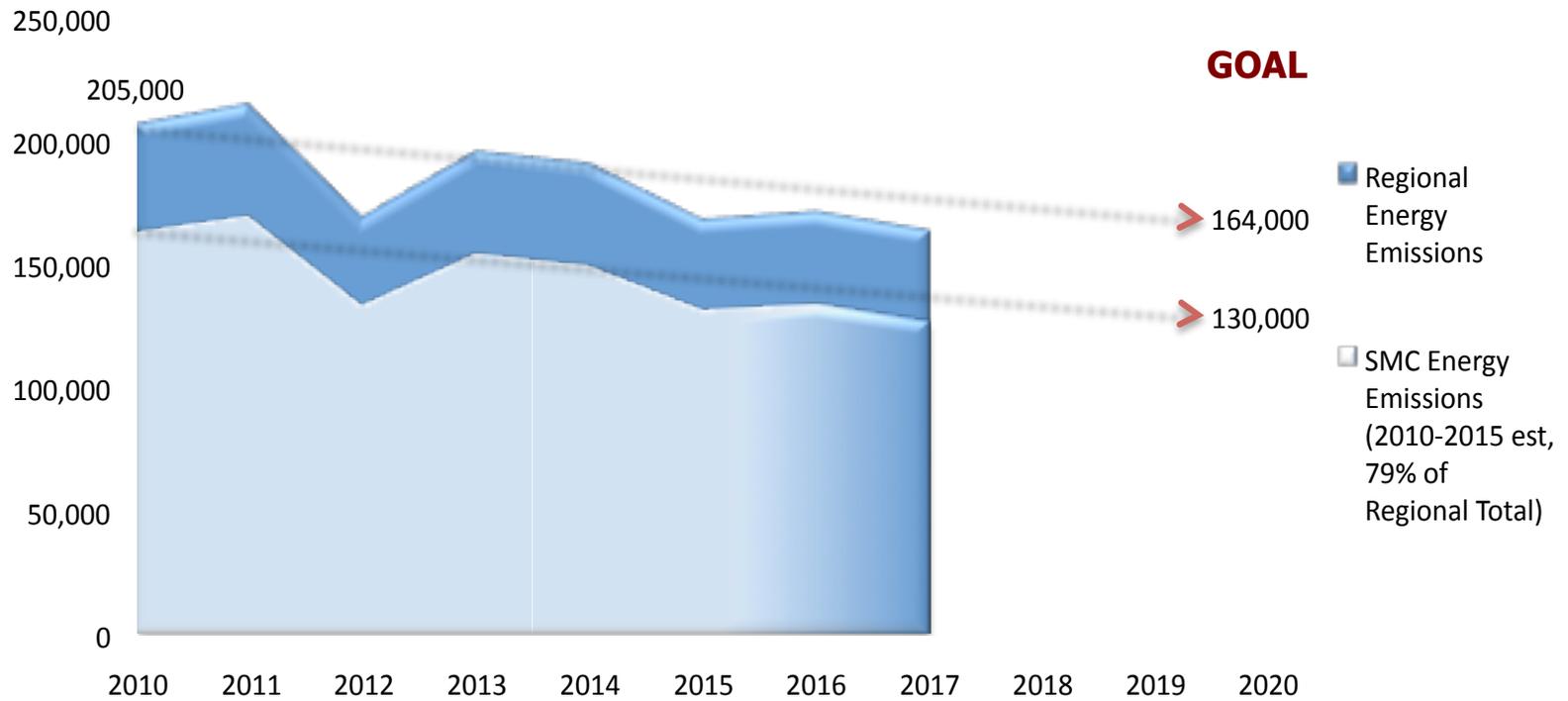
Electricity & Natural Gas

*mostly Building energy use

Energy Use Emissions



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

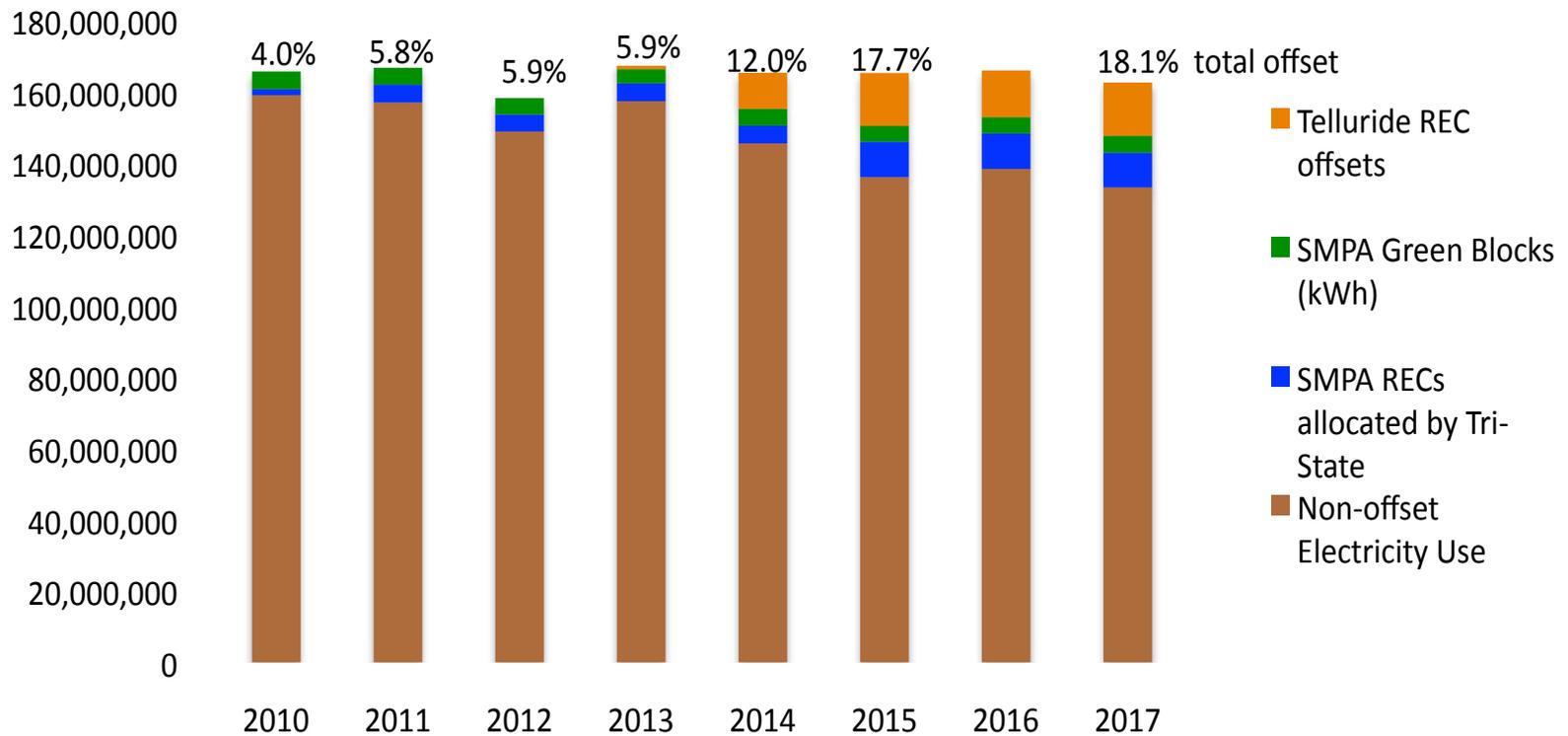


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Regional Electricity

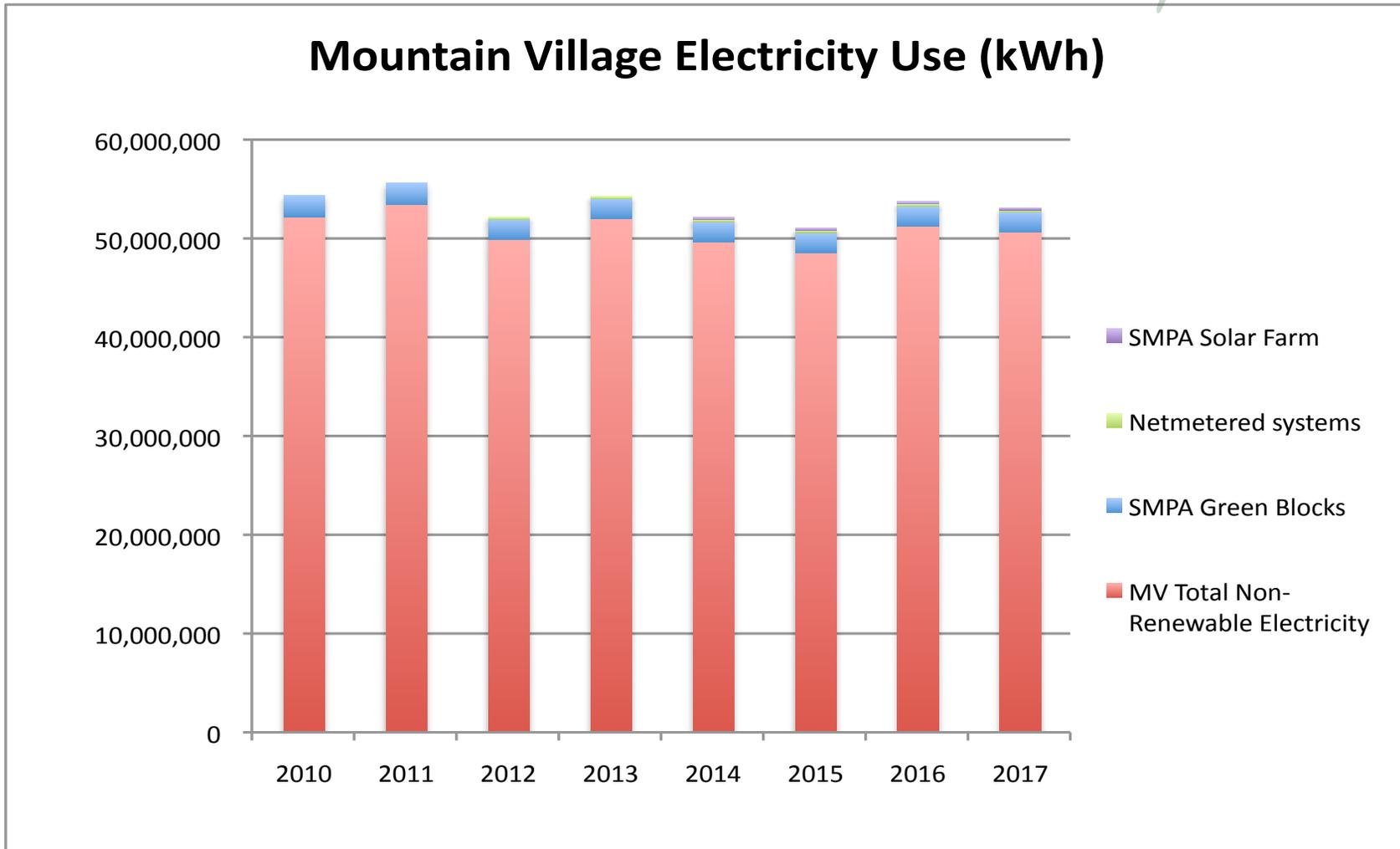


Regional Electricity Use (kWh) with Renewable Energy Credit Offsets

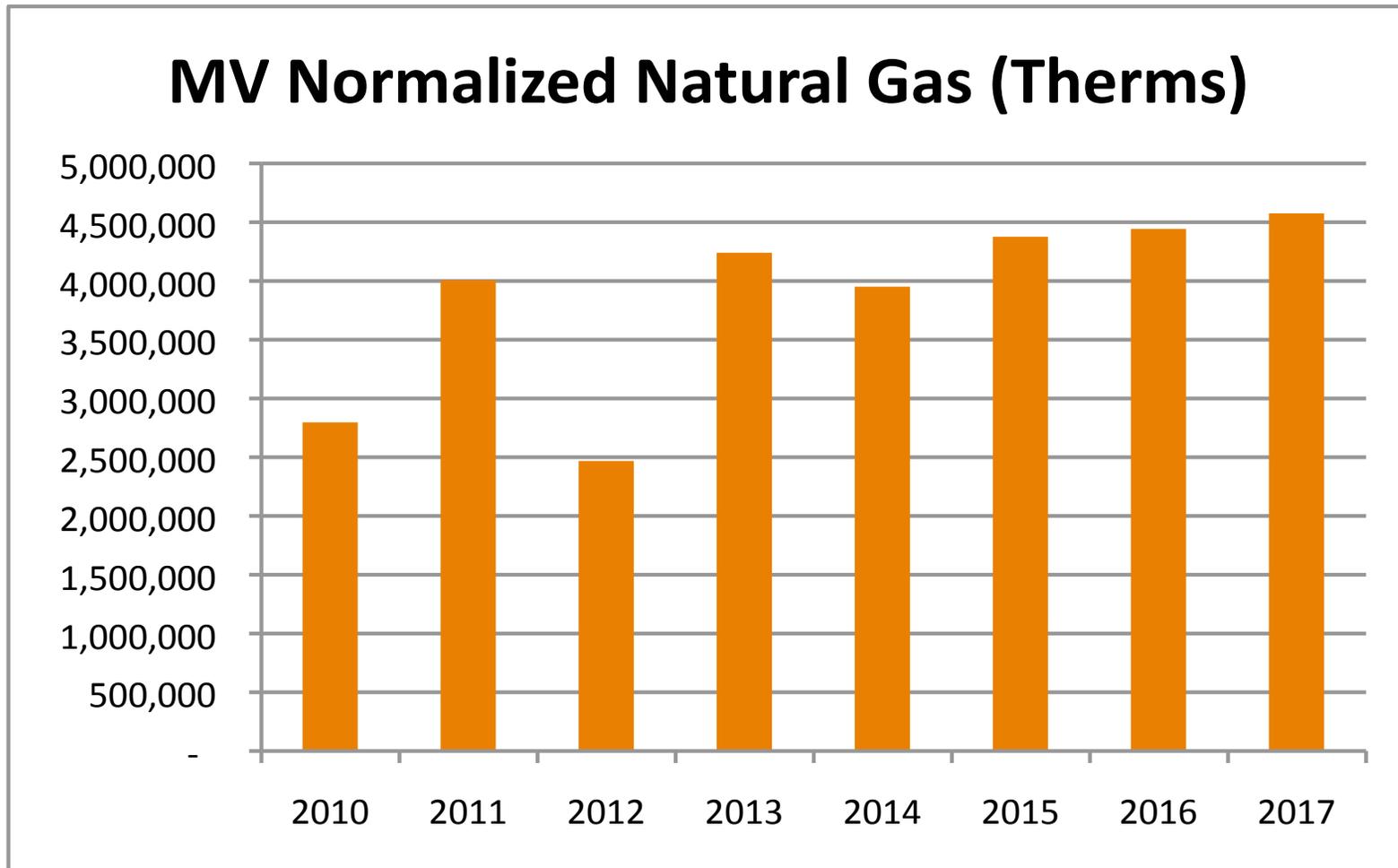


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MV Electricity



MV Natural Gas



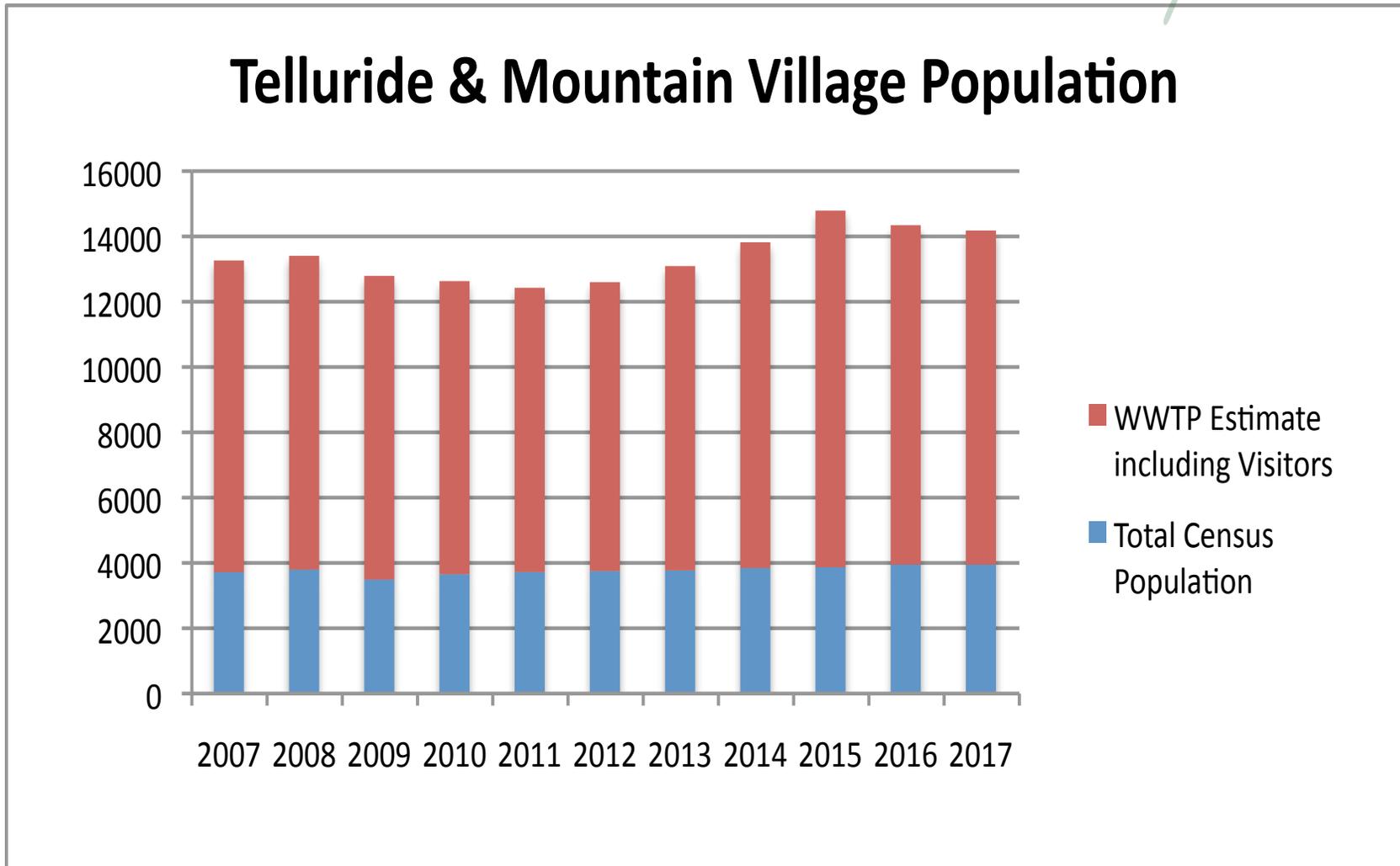
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Energy Use Variables:

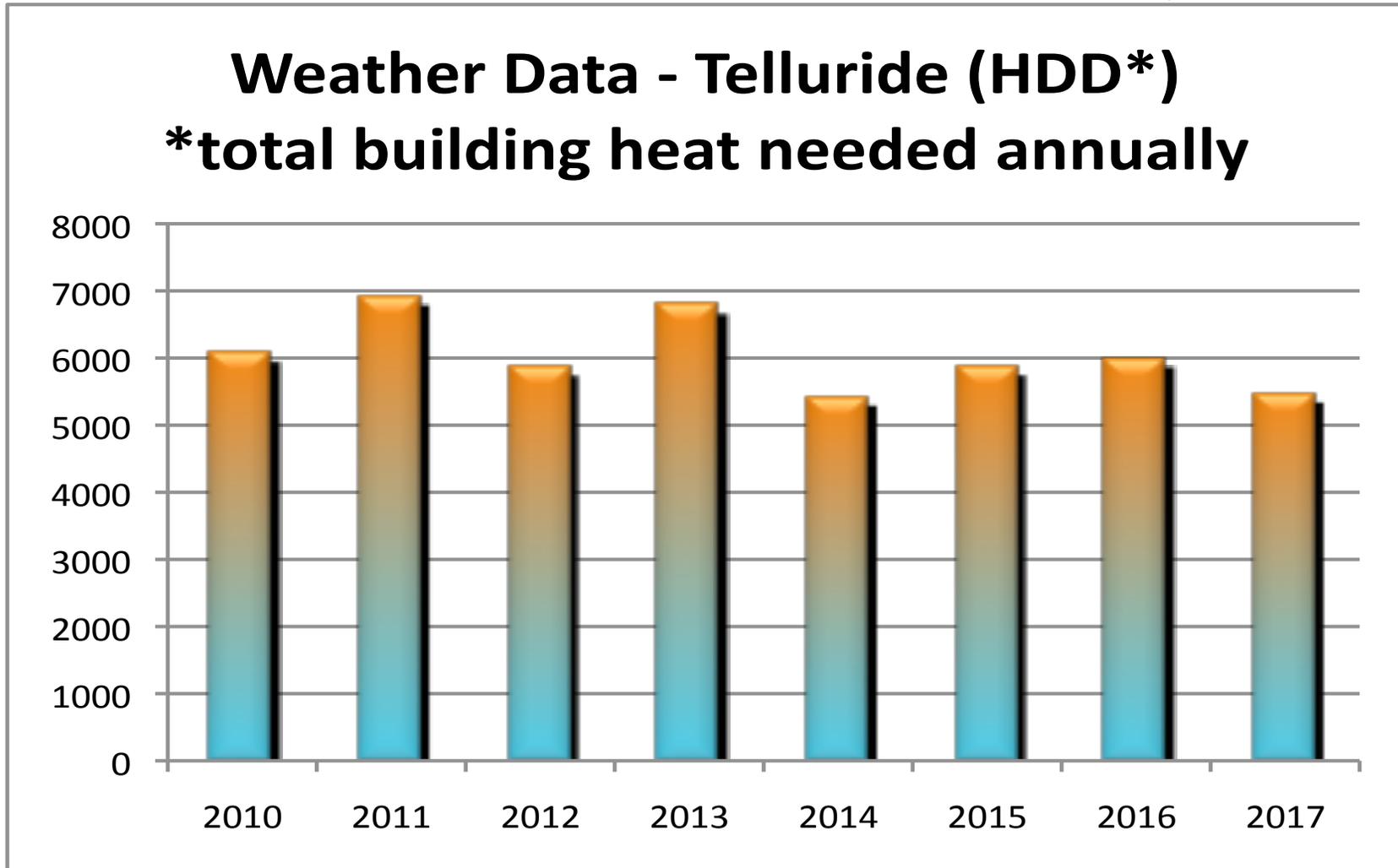


- ◆ Population – Census & Visitors
- ◆ Weather:
 - ◆ Winter (& Summer) Temperatures
 - ◆ Snowfall
- ◆ Economy:
 - ◆ New Construction
 - ◆ Hotel Occupancy
 - ◆ Restaurants & Businesses

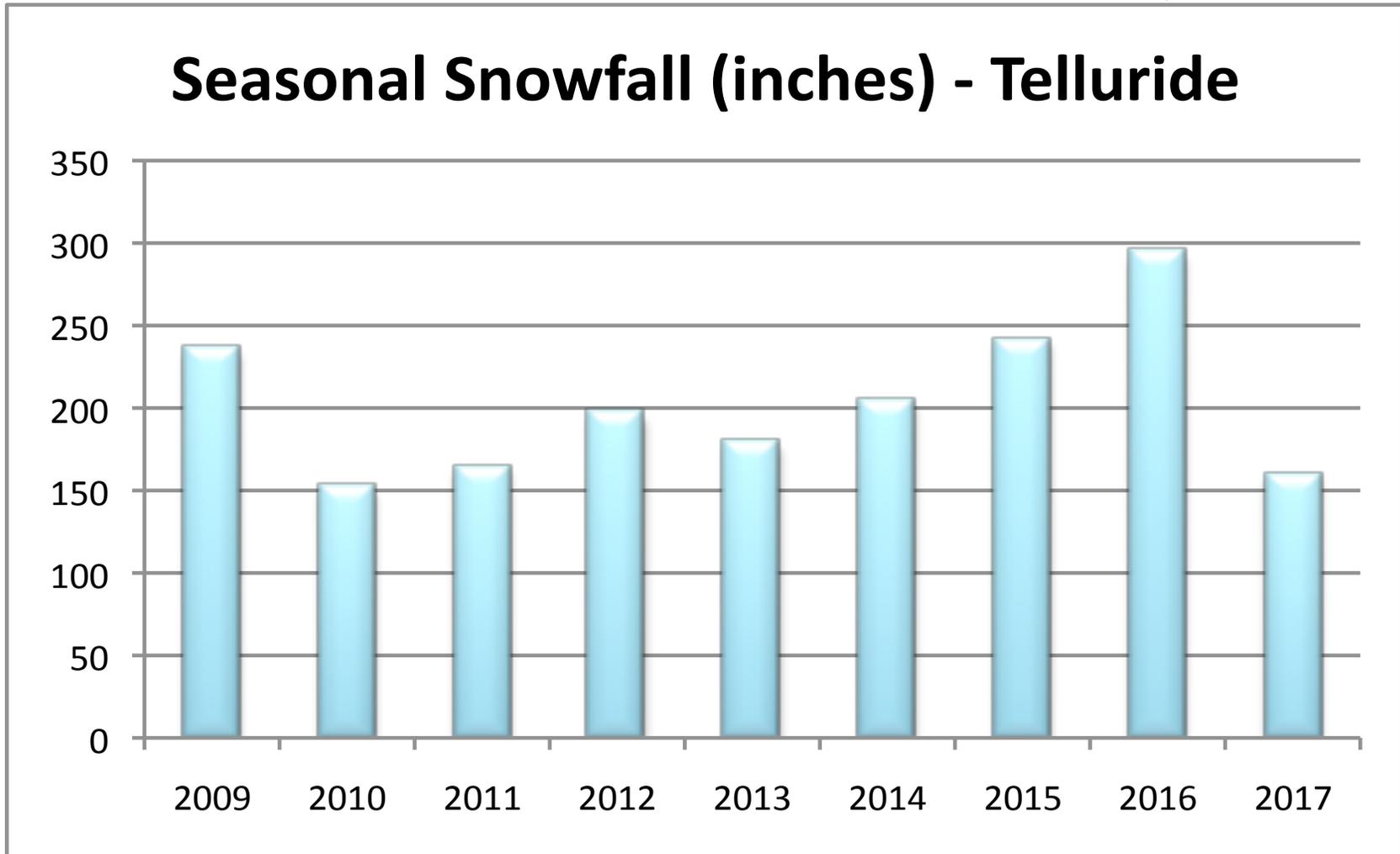
Population



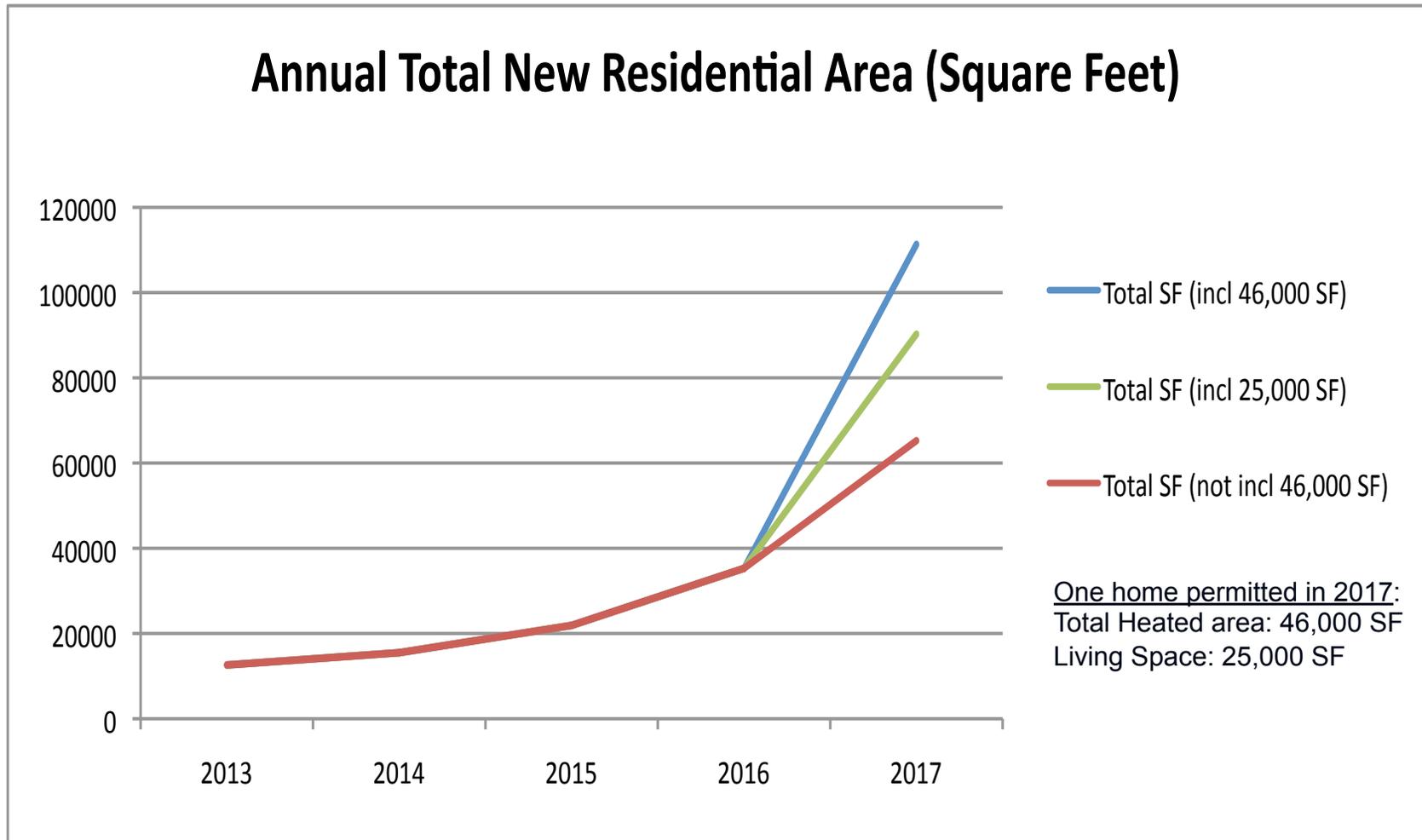
Weather: Temperature



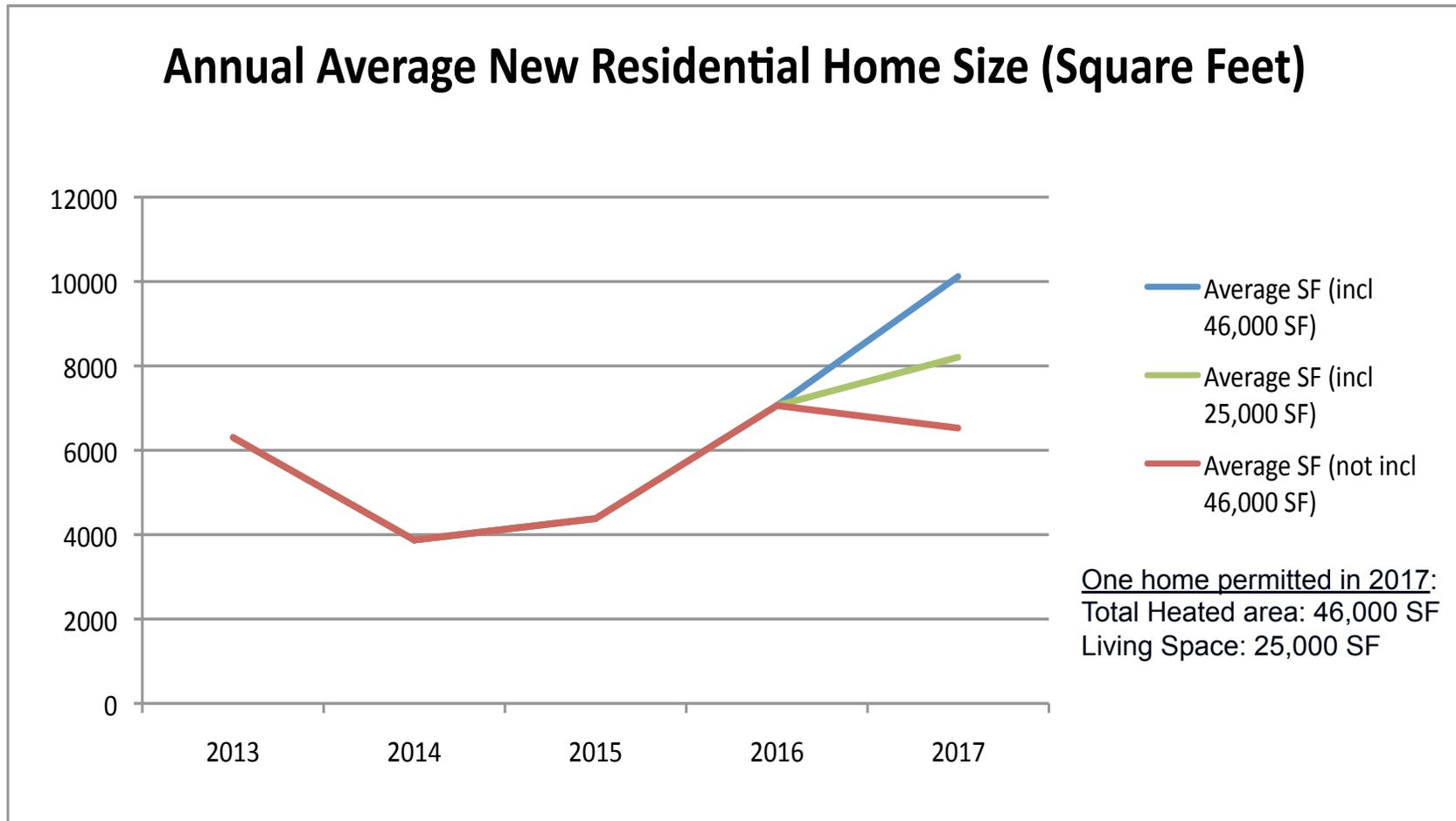
Weather: Temperature



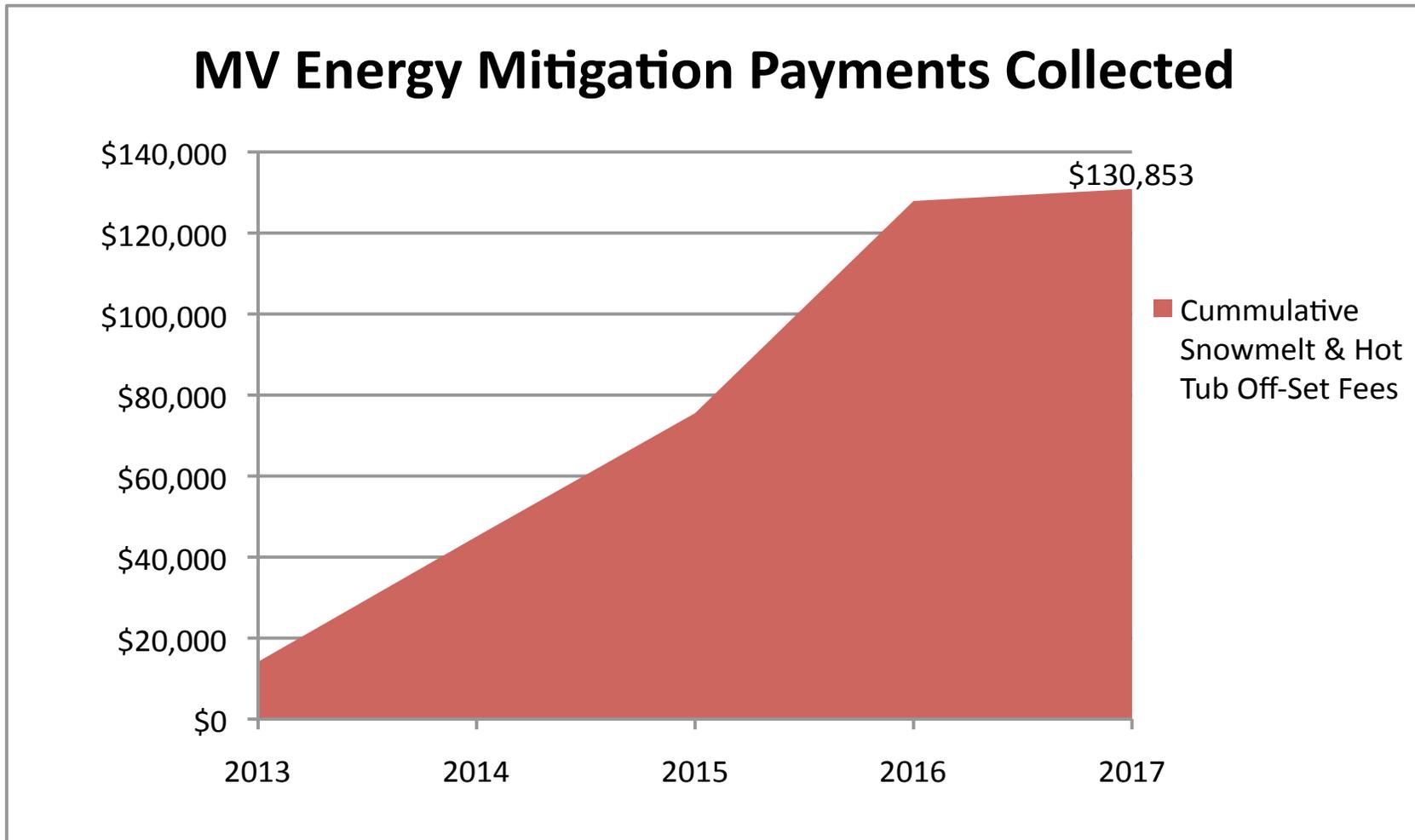
MV Construction:



MV Construction:



MV Construction:



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Suggestions for Mountain Village to reduce Emissions



- ◆ Building Energy Code Adoption: 2018 IECC with amendments that progress energy efficiency
 - ◆ Improves energy efficiency of residential & commercial buildings
 - ◆ Maximum HERS score in our climate zone is 61
 - ◆ Reconsider size categories & HERS scores for larger homes
 - ◆ Require house electricity offset of 100%, through Green Blocks, on-site renewable energy, or other equivalent
 - ◆ Incentivize small homes < 3000 SF & net-zero, passive home construction through financial or expedited process
- ◆ Renewable Energy Mitigation Program (REMP):
 - ◆ Eliminate or reduce free 1000 SF of snowmelt allowed
 - ◆ Address outdoor fireplaces and infrared heaters
 - ◆ Continue double-incentive for on-site renewable energy mitigation

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Suggestions for Mountain Village to reduce Emissions



- ◆ REMP Funds:
 - ◆ EcoAction Partners to update calculation methodology
 - ◆ Modify verbage to allow use of funds for “greenhouse gas (GHG) ” and energy reducing projects & programs
 - ◆ Consider using REMP funds for community grant program
 - ◆ Collaborate with SMPA, EcoAP & others to support new Community Solar Farm development & include as a REMP option
- ◆ Promote SMPA Green Blocks along with MV Incentives
- ◆ Require solar panels on all new construction, utilizing available financing incentives to make it worthwhile
- ◆ Franchise fees for electricity & natural gas
 - ◆ Develop agreements with utilities & use funds for GHG-reduction projects / programs

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Other EcoAP support to Mountain Village



- ◆ MV GHG Inventory Development
- ◆ Composting Incentive Program Implementation
 - ◆ EcoAction Partners available to assist applicants
- ◆ Farm to Table Program
 - ◆ EcoAction Partners will calculate GHG emissions savings
- ◆ Sunset Concert Series
 - ◆ EcoAction Partners assisting MV with waste reduction
- ◆ Waste contract data
 - ◆ Analyze & utilize collected data
- ◆ Update Gondola offset calculation
- ◆ Government efficiency, renewable energy & offset projects
 - ◆ Ongoing support

TO: MOUNTAIN VILLAGE MAYOR AND TOWN COUNCIL
FROM: KIM WHEELS, ECOACTION PARTNERS
SUBJECT: 2017 GOVERNMENT ENERGY USE AND GREENHOUSE GAS REPORT
DATE: JULY 12, 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.

VCA staff is proactively replacing appliances in 2018 and 2019.

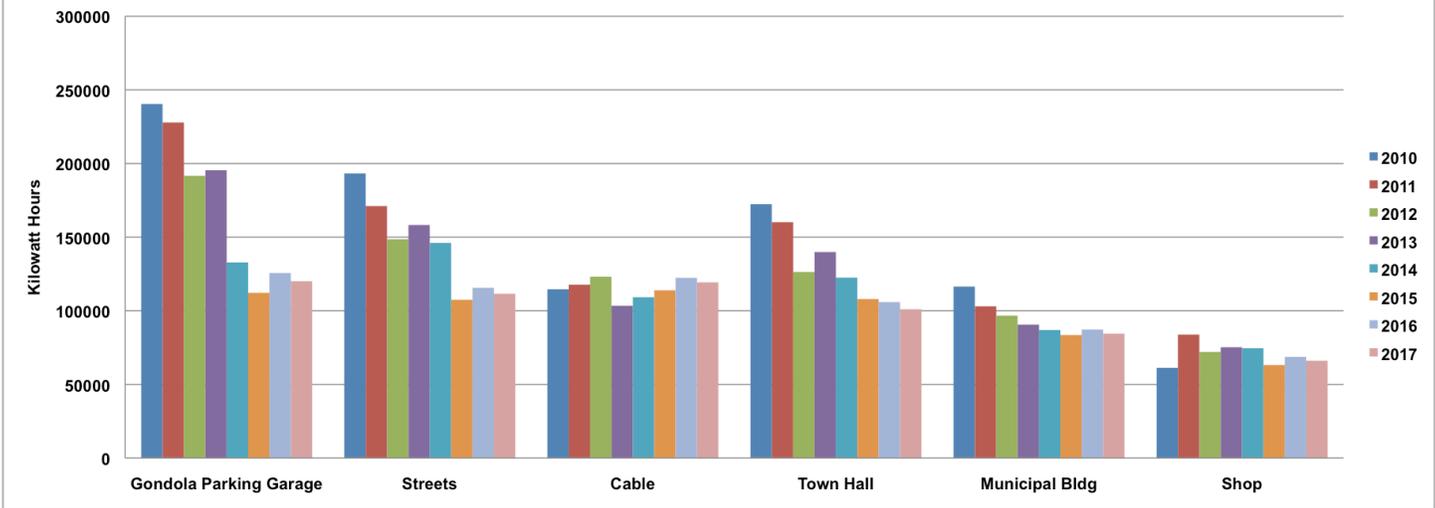
NOTE: VCA IS NOT INCLUDED IN OVERALL GOVERNMENT EMISSIONS TOTALS.

- **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. Total fuel costs were just over \$100,000 (\$103,741).
- The **gondola** electricity use decreased about 4% from 2016 to 2017, despite the additional morning run time of the gondola in 2017. The gondola electricity use was about 17% below 2010 baseline levels.

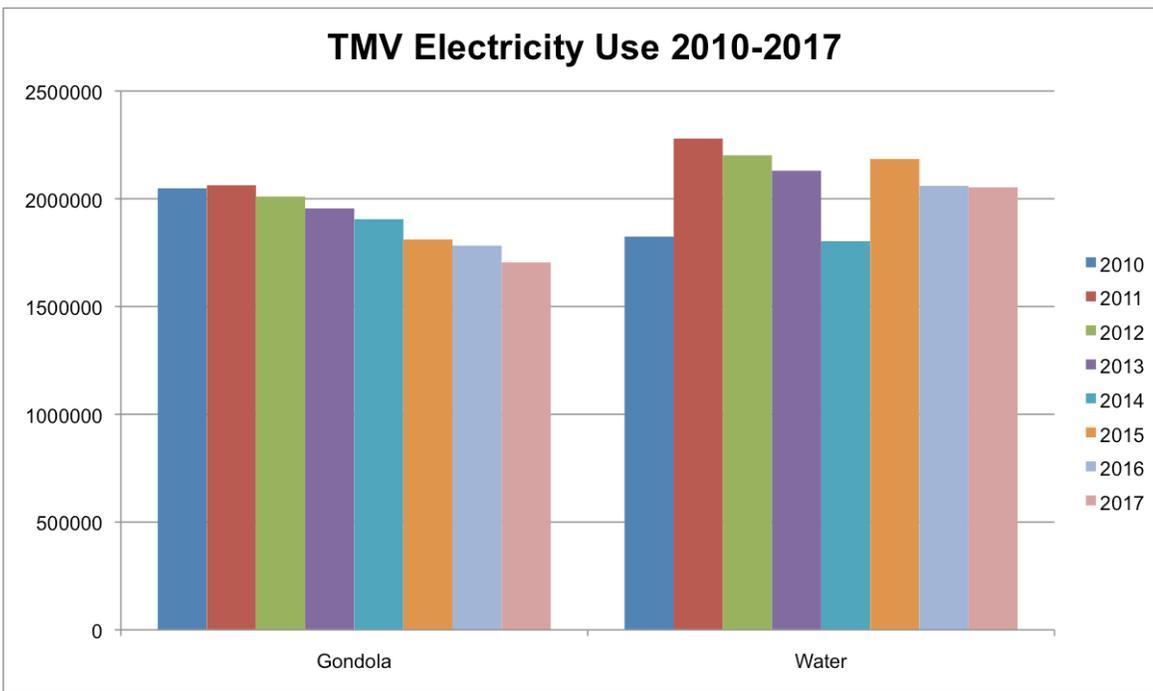
TMVOA and TMV continue to partner to offset 100% of its traditional electricity use through the purchase of **Green Blocks**, renewable energy credits from SMPA. TMVOA and TMV staff are looking at possibilities to reallocate Green Blocks that are being purchased in excess of the current gondola electricity usage.

- The **water department** experienced a very slight (0.3%) decrease in electricity compared to 2016 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.

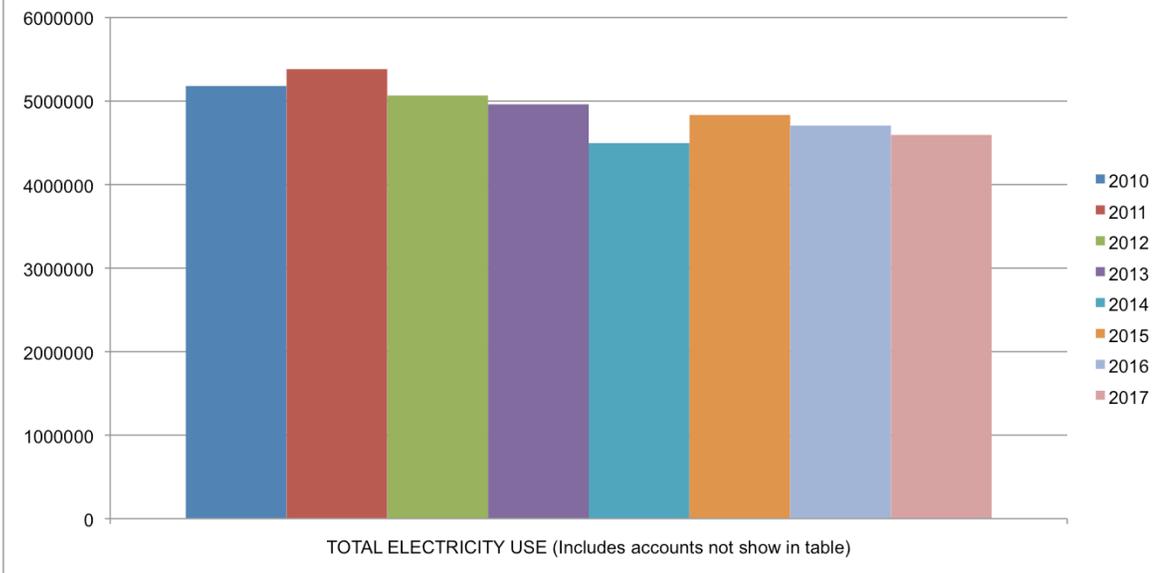
TMV Electricity Use 2010-2017



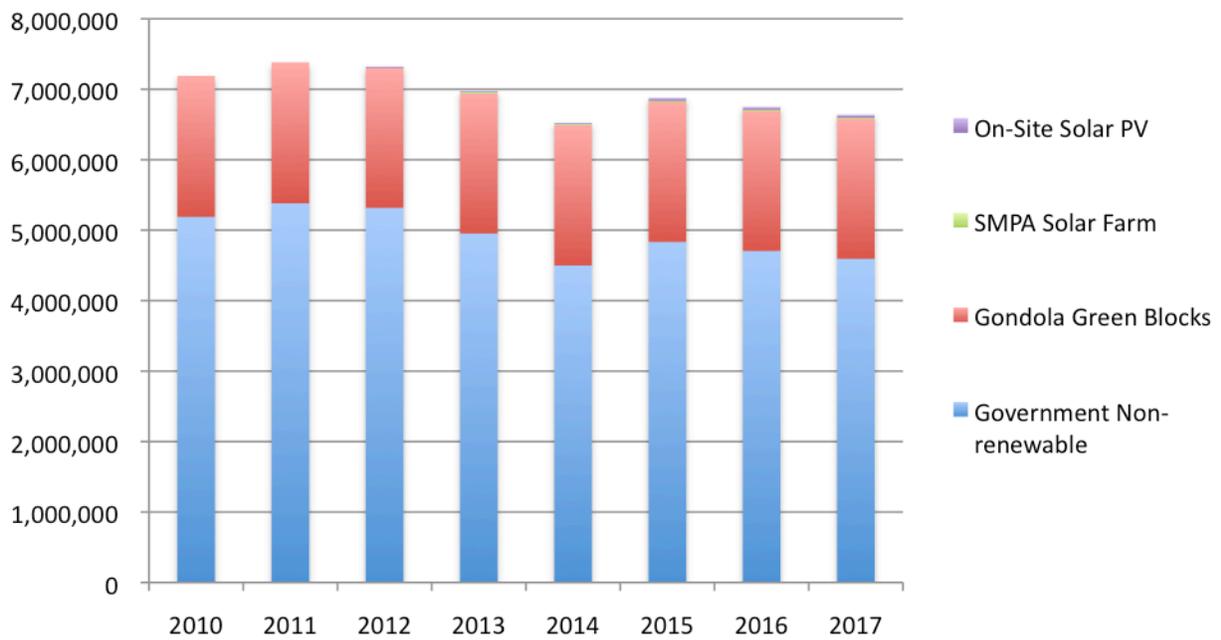
TMV Electricity Use 2010-2017



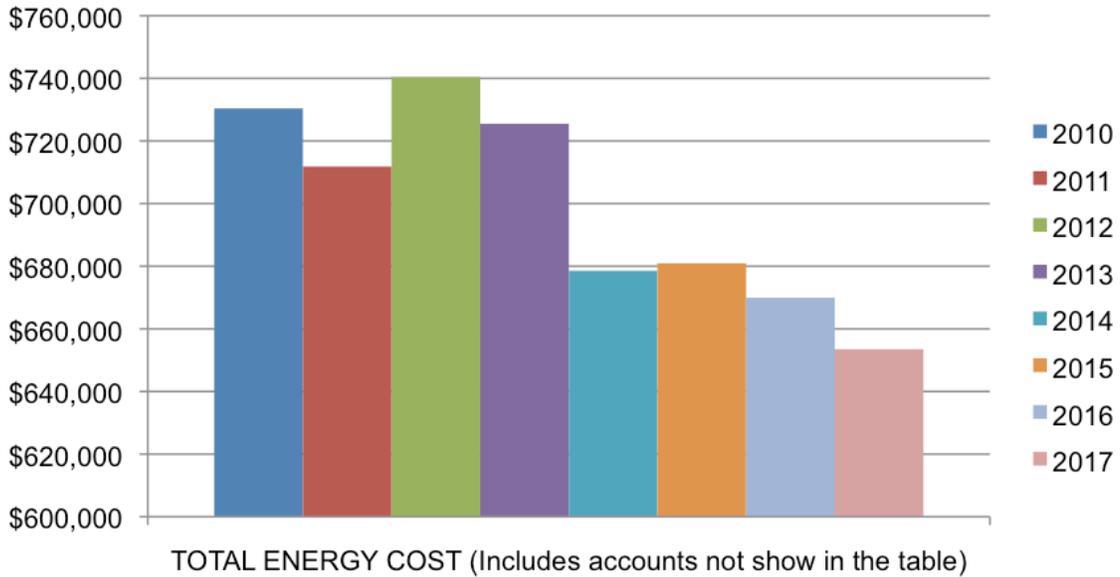
Total TMV Electricity Use 2010-2017



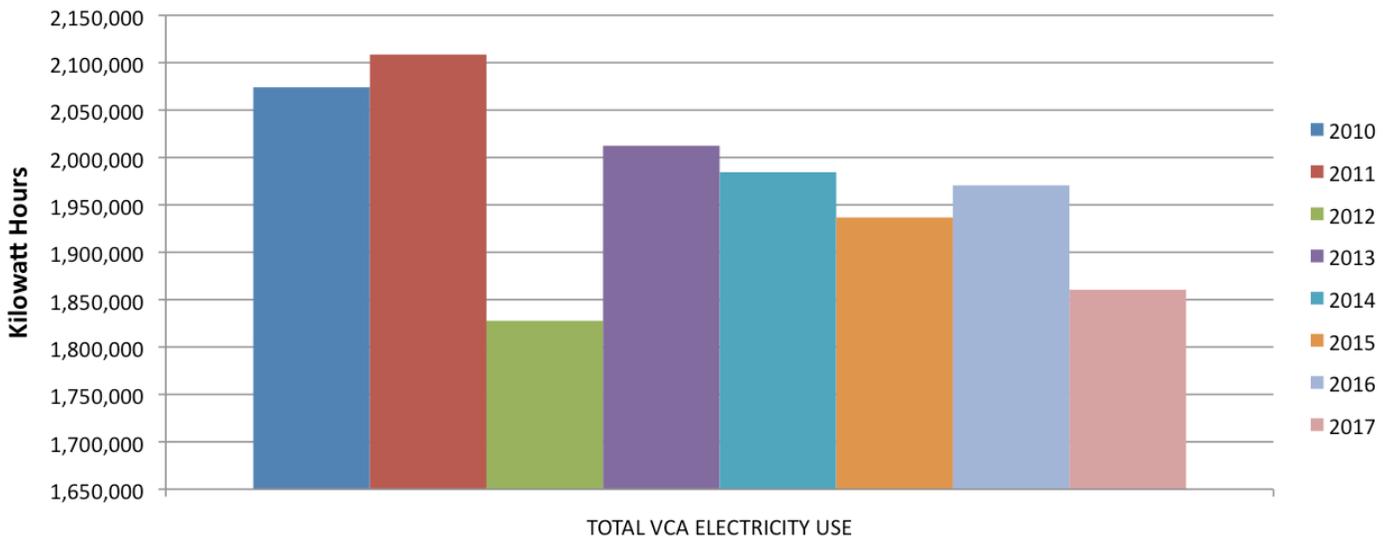
TMV Government Electricity Analysis (kWh)



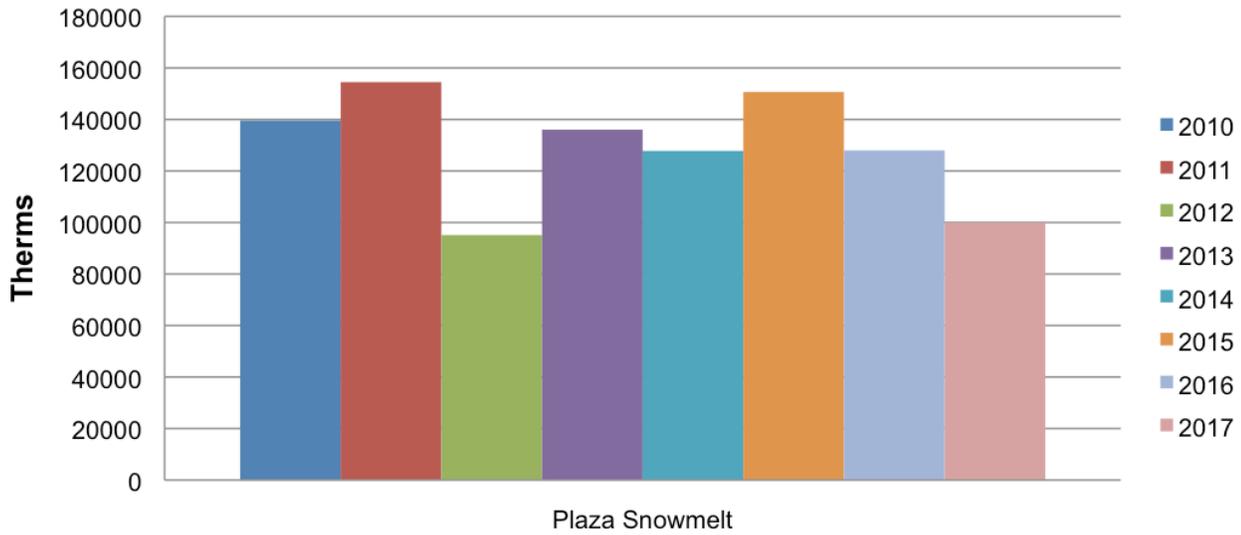
TOTAL TMV ELECTRICITY COST 2010-2017



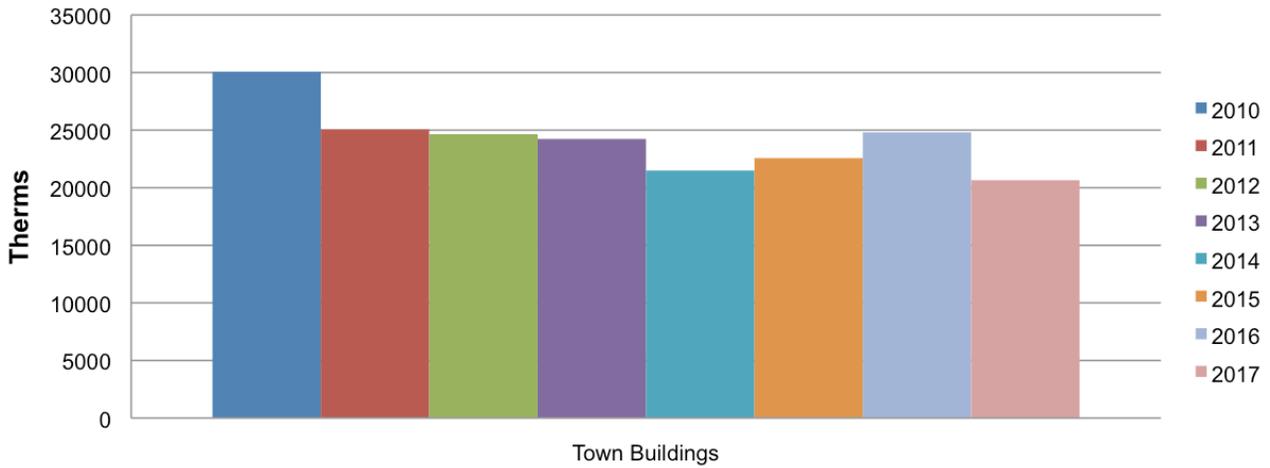
VCA Electricity Use 2010-2017



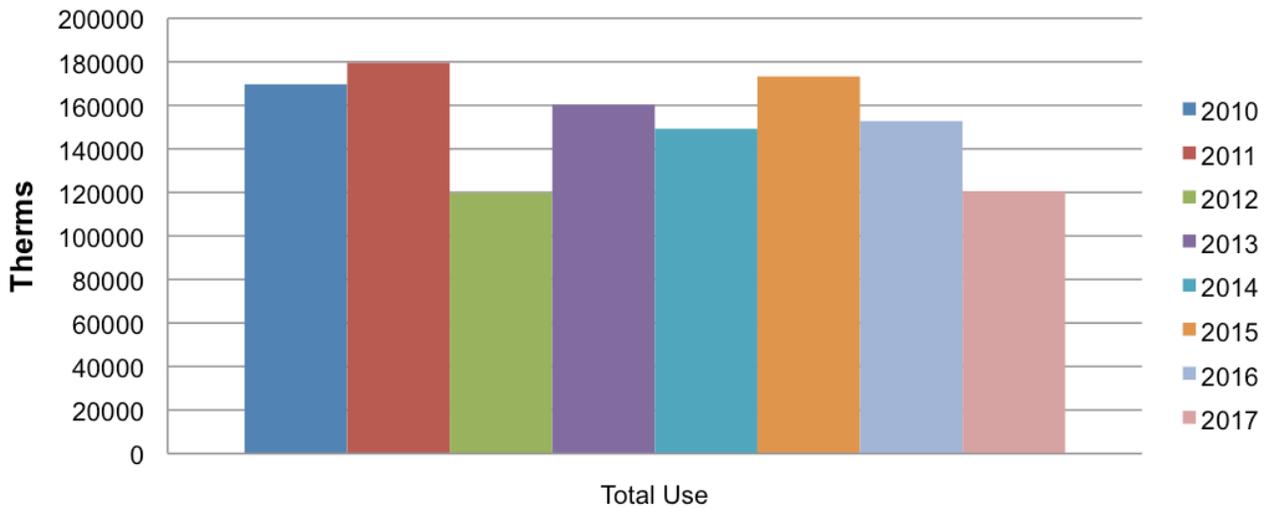
Plaza Snowmelt Natural Gas Use 2010-2017



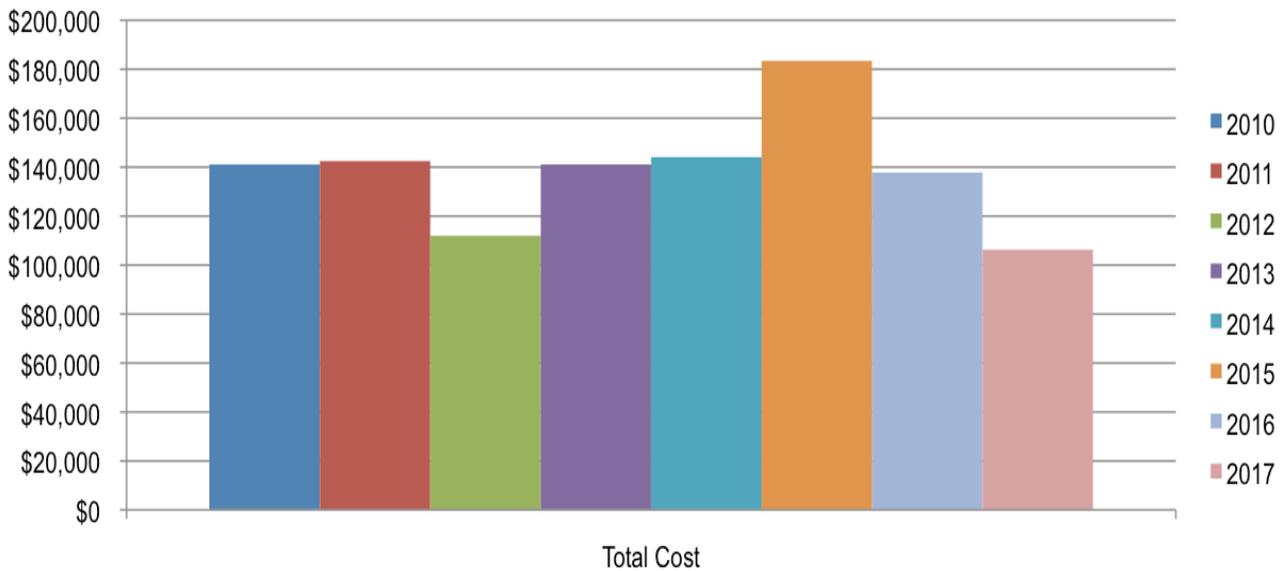
TMV Government Buildings Natural Gas Use 2010-2017



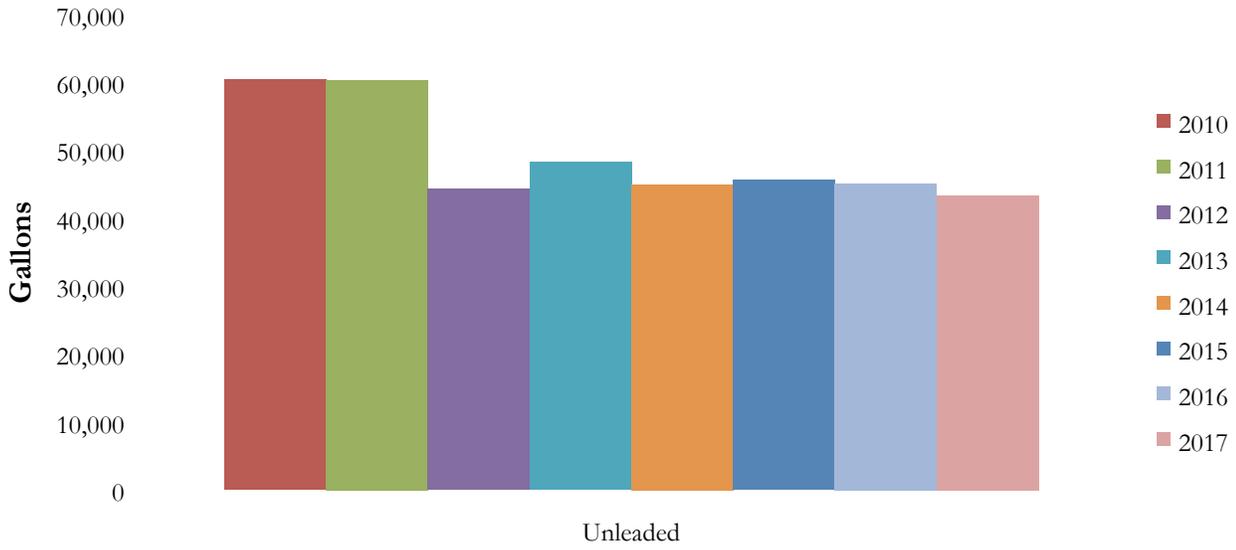
TMV Government Natural Gas Use 2010-2017



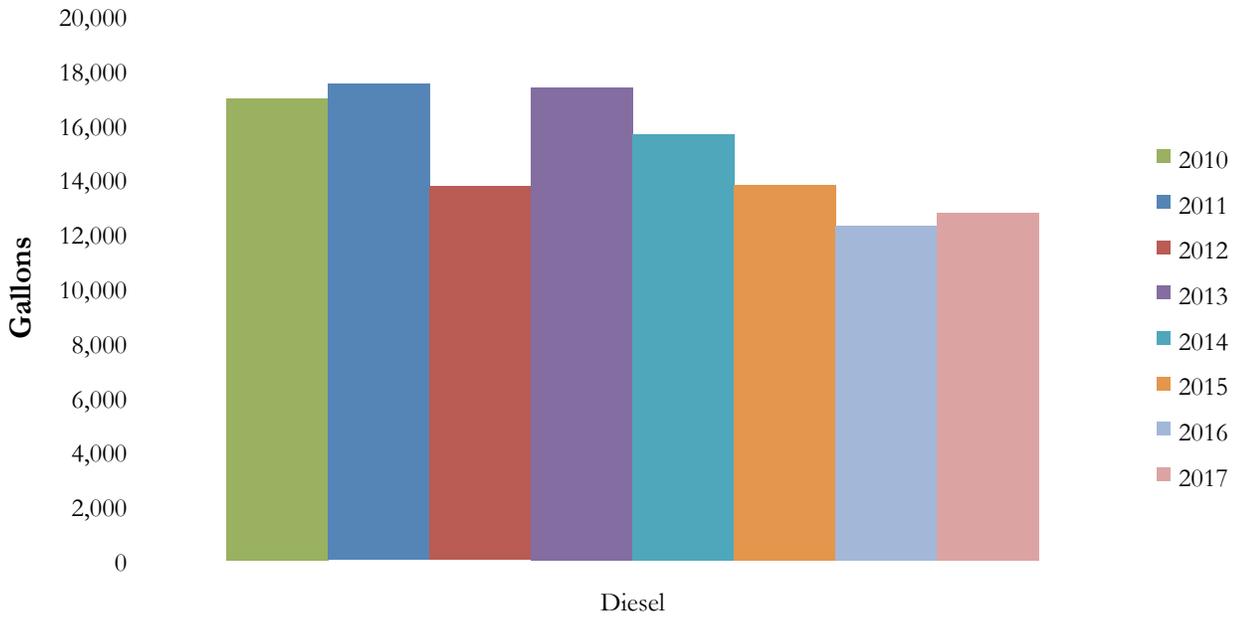
TMV Government Natural Gas Cost 2010-2017



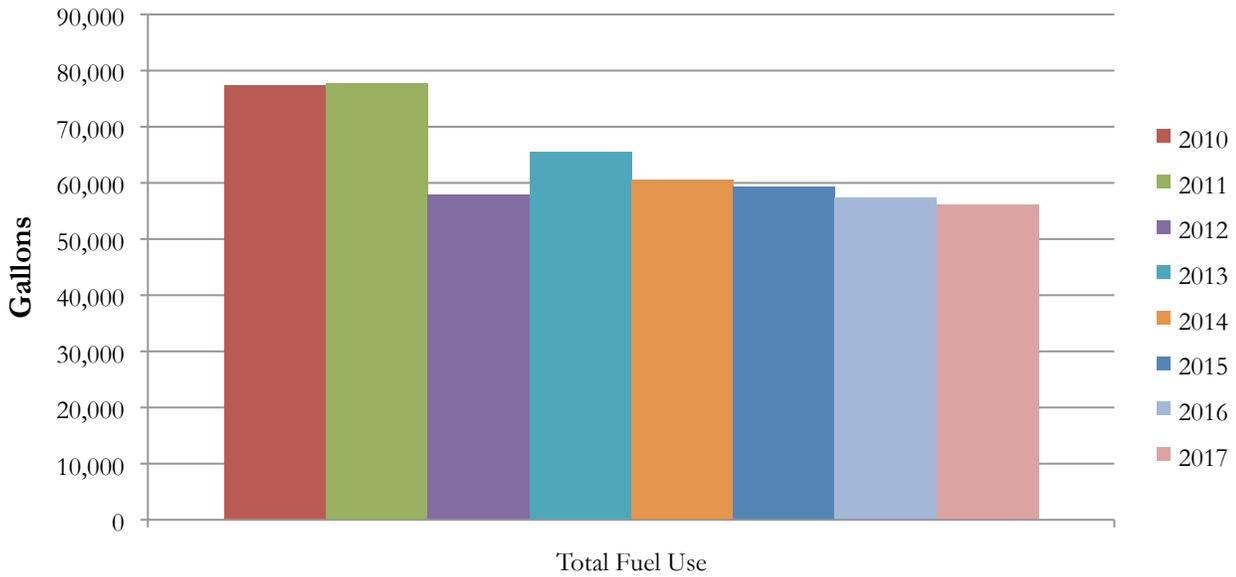
TMV Gasoline Use 2010-2017



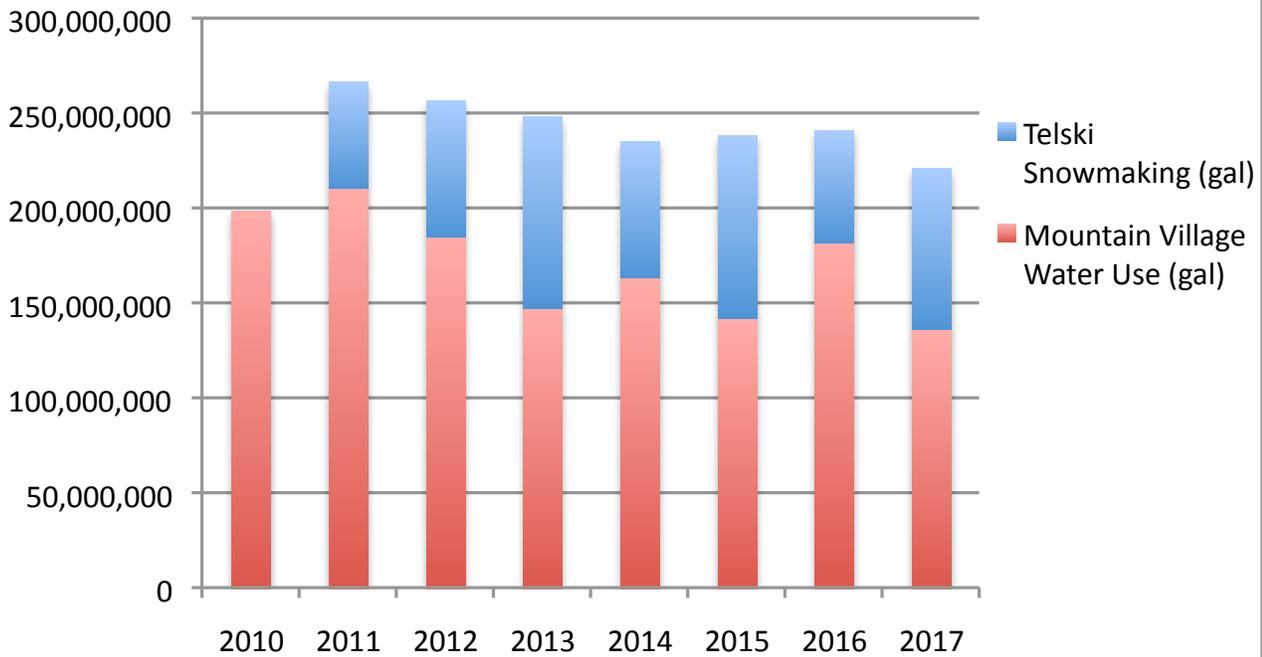
TMV Diesel Use 2010-2017



TMV TOTAL FUEL USE 2010-2017

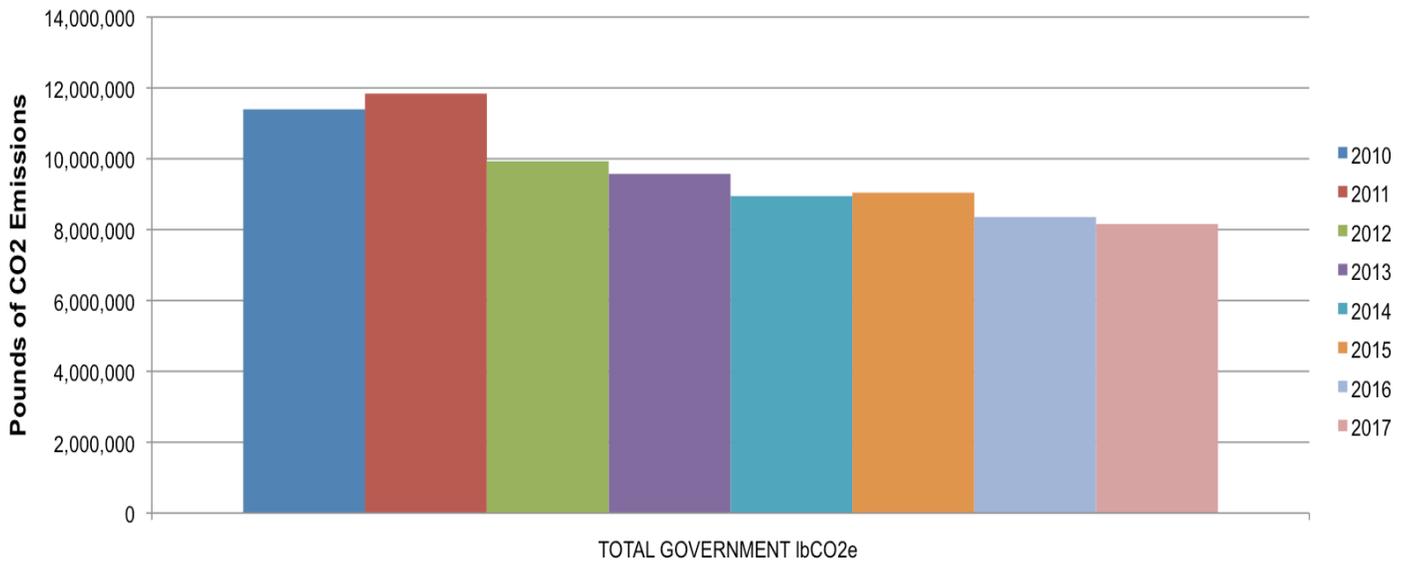


Mountain Village Water Supply

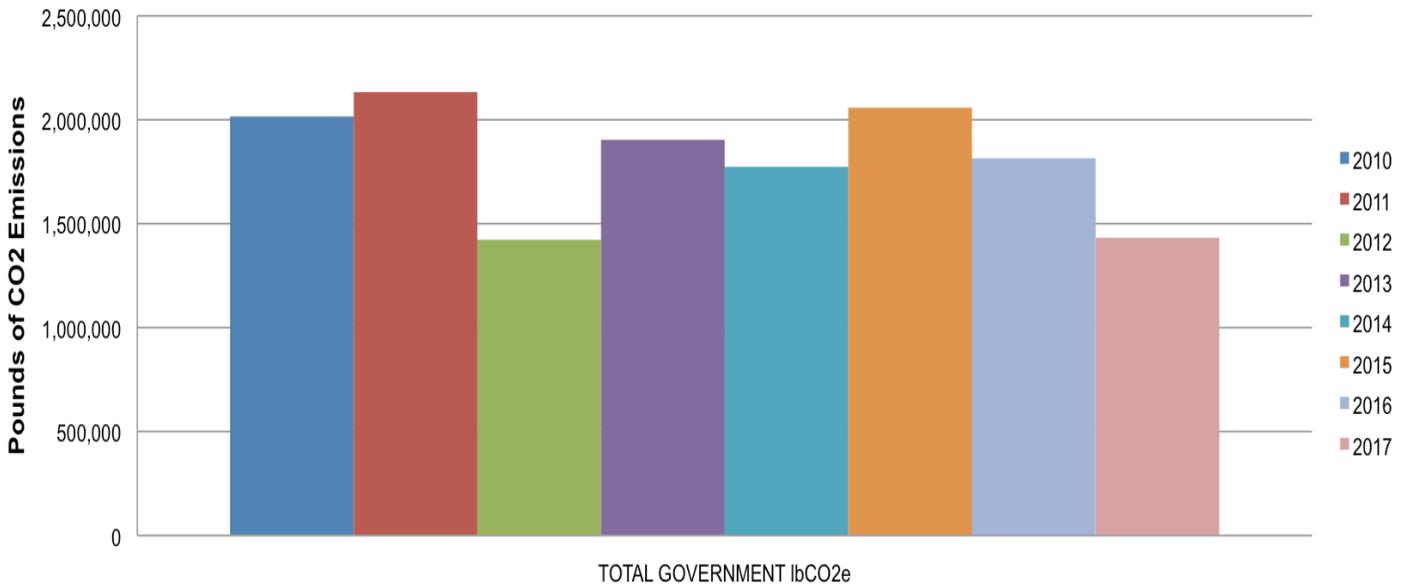


*2010 Snowmaking water data not available

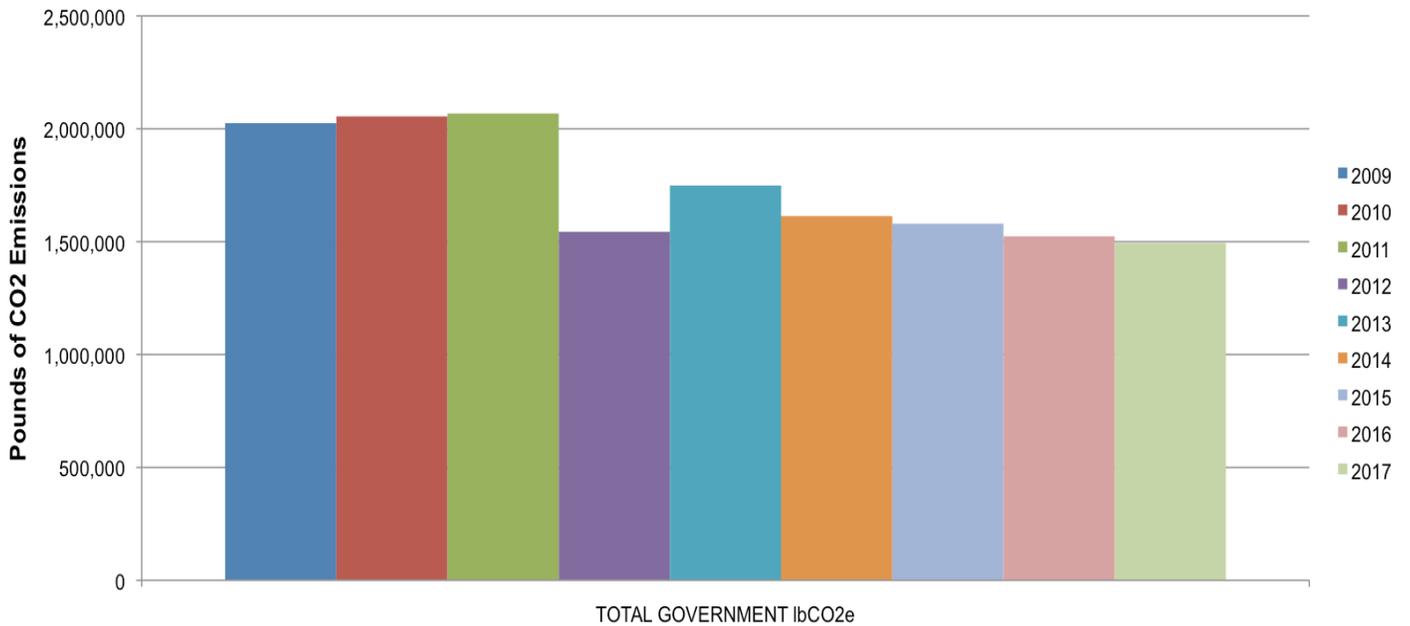
Government Electricity CO2 Emissions 2010-2017



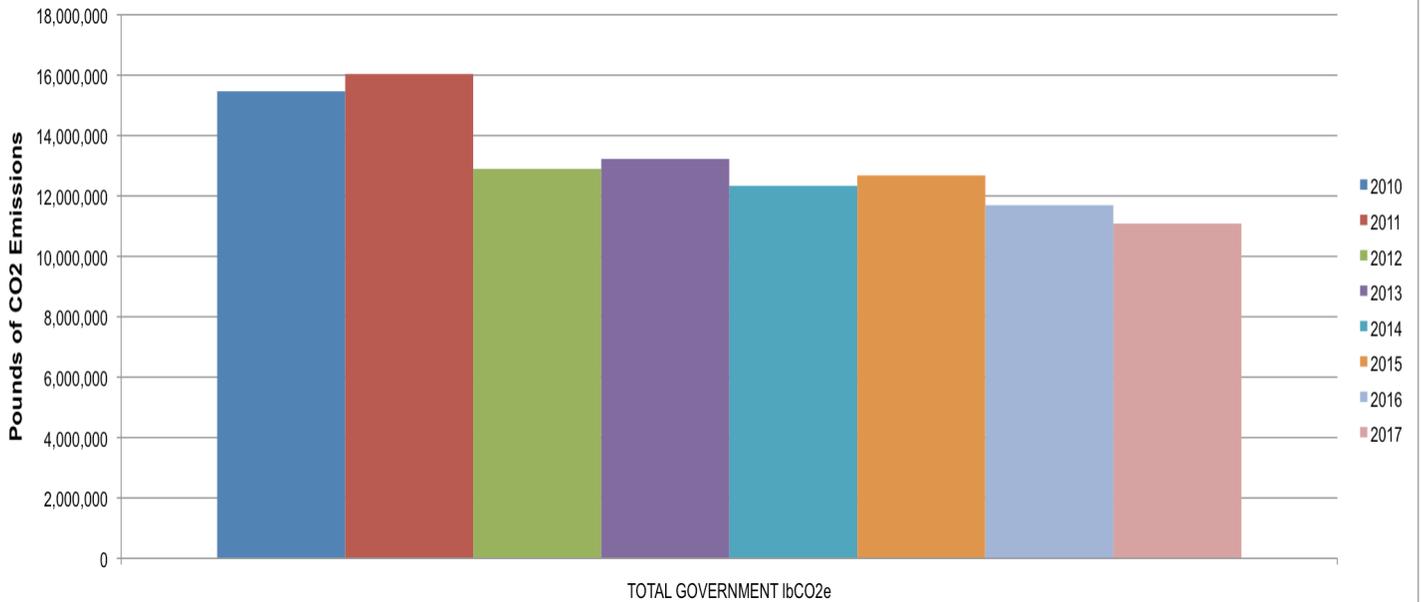
Government Natural Gas CO2 Emissions 2010-2017



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)



To: Mountain Village Green Team
From: Heather Knox & Kim Wheels, EcoAction Partners
RE: EcoAction Partners 2019 Service Offerings for the Town of Mountain Village

EcoAction Partners is seeking guidance from the **Mountain Village Green Team** on the services that EcoAction Partners has historically provided to, and been funded by, the Town of Mountain Village. Green Team input is requested on which services are valued, and therefore should be contracted with the Town, and which services fill broader community needs, that then should be considered for the Town of Mountain Village Grant Program, and/or through the TMVOA Grant cycle or TMVOA contract.

Thank you very much for considering EcoAction Partners' offerings. We are working to prepare a budget for each item to present to you at the Green Team meeting. We look forward to your input and guidance.

Background

EcoAction Partners mission is to track regional GHG emissions and coordinate programs that reduce energy and waste.

EcoAction Partners, previously named The New Community Coalition, was formed in 2007 by and for the governments of Telluride, Mountain Village & San Miguel County to serve as a central sustainability organization for our region and to coordinate and communicate on sustainability programs. In 2010, a grant awarded to EcoAction Partners to work with the University of Colorado at Denver Center for Sustainable Infrastructure Systems guided the development of a comprehensive GHG Inventory baseline report for San Miguel and Ouray Counties*. Since then, EcoAction Partners updates the report annually and performs further analysis of energy use and emissions factors at both regional and local levels. This information is presented annually to the government and community, along with the measurable outcomes from EcoAction Partners' programs.

The GHG Inventory data collected and analyzed is extensive, and aggregates emissions from utility energy, transportation (including airline travel), waste, food, and other trans-boundary contributions,

along with water, weather, waste, and resident and visitor populations, and more. EcoAction Partners continues to guide regional governments and citizens on ways to reduce our region's GHG emissions by providing programs to reduce energy and waste. Seven-year data trends reflect progress toward the region's goal of reducing emissions 20% by 2020 from the 2010 baseline in the context of our region's weather, economic, visitor and population fluctuations.

EcoAction Partners interprets annual GHG reporting results by working with the Sneffels Energy Board, a group of local leaders coordinated by EcoAction Partners to facilitate intergovernmental collaboration and cooperation on GHG reduction goals, and each of the government's Energy Action Coordinators (or as appointed). The information is then shared with each government and their communities to facilitate continued progress towards reduction goals. Ongoing analysis of the energy usage data helps determine success of energy efficiency programs, renewable energy projects, and where to continue to direct efforts.

In addition, in 2018, EcoAction Partners recently revisited the **division of shared Regional Assets per Jurisdiction**. Questions were brought to our attention as to how our region's assets are allocated per jurisdiction. Many of the decisions on how the assets are allocated were determined a number of years ago. Thus, EcoAction Partners coordinated and facilitated meetings with a sub-group of the Sneffels Energy Board, and with leaders from Mountain Village, Telluride, San Miguel County and Telluride Ski and Golf, to discuss and determine allocations of GHG emissions associated with the following community assets:

- *Regional airports*
- *Waste Water Treatment Plant*
- *Gondola*
- *Telluride Ski and Golf's utilities including water use*
- *Festival impacts*

EcoAction Partners will provide a detailed list of how these community assets are allocated and include this in our annual report and presentation to each jurisdiction's Town Council. The decisions made on these allocations will remain in effect for an agreed upon period of time by the group (3 – 5 years) at which point they will be revisited again.

EcoAction Partners Suggested Contract Services for Mountain Village

- A. **Mountain Village Community GHG Inventory:** Using the regional GHG Inventory based on the Global Greenhouse Gas protocol and methodologies, EcoAction Partners is currently in-process of developing the Town of Mountain Village community-specific GHG inventory from 2017 data which is inclusive of government, businesses, residents and visitors. This inventory allows analysis of the GHG emissions of the broader Mountain Village Community, to help Mountain Village Green Team, staff and council understand where the Town of Mountain Village stands as compared to the whole. This data tracks with the municipal boundary of the town and town facilities and allows analysis of GHG, electricity and natural gas emissions from year to year. The analysis assists Mountain Village with prioritizing and addressing key GHG emission sources.
- B. **Regional GHG Inventory:** In addition to the Town of Mountain Village GHG report, EcoAction Partners collects, records and presents on the GHG Emissions for the Ouray and San Miguel County region, as well as just the SMC GHG emissions as a service for San Miguel County. This GHG Inventory was developed through a grant program with the University of Colorado at Denver as an instrument to create a baseline, track and thus help reduce regional GHG emissions. Regional reporting supports the regional governments' adoption of the goal to reduce GHG emissions 20% by 2020 from a 2010 baseline. This regional work includes analysis of variations from year to year, improving on data and calculations, and in-depth work currently being completed to update methodologies to comply with the most recent Greenhouse Gas Protocol for Cities.
- Suggestions for Mountain Village community GHG reductions:** Along with the annual Mountain Village GHG Inventory and Energy Use Analysis presentation, EcoAction Partners works with town staff to provide specific top suggestions on ways to reduce the Mountain Village community's GHG emissions. Analysis of the positive impact of adopting specific recommendations is provided annually to the Town of MV Green Team, Council and staff.
- C. **Assistance to Energy Action Coordinator (Michelle Haynes) on Analysis of Governmental Energy Use and Special Projects:** As requested, EcoAction Partners will provide input, guidance, or further analysis on anomalies related to government energy use data, and Special Projects. Examples of Special Projects include:
- a) Government efficiency, renewable energy & offset project consulting as needed
 - b) Update Gondola GHG offset calculation
 - c) Farm to Table Program: EcoAction Partners will calculate GHG emissions savings

- d) Sunset Concert Series plastic cup recycling recommendations (#5 vs. #7)
- e) Sunset Concert Series trash & recycling sorting
- f) MV Waste contract data: Analyze & utilize collected data
- g) MV specific study on GHG emission comparison between snowmelt systems and shoveling / hauling
- h) Assistance on the MV Composting Incentive Program
- i) GHG Analysis of existing MV incentive programs
- j) Regional calculation of the GHG benefits related to local affordable housing

D. Mountain Village Green Team: EcoAction Partners is pleased to attend MV Green Team meetings to share regional programs, perspective, and efforts, and provide guidance to the Green Team. EcoAction Partners offers the Green Team experiential expertise and can assist with prioritizing programs to maximize GHG reduction for the town.

E. Sneffels Energy Board: The Sneffels Energy Board is an EcoAction Partners original program that formed to support a 2010-2013 grant from the previous Colorado Governor's Energy Office. This group meets quarterly to share information and experiences, participate in regional programs, and identify new opportunities. Regional leaders from San Miguel County, and all jurisdictions within SMC (Telluride, Mountain Village, Ophir, Norwood), along with Ouray County, and all jurisdictions within Ouray County (City of Ouray, Ridgway, and greater Ouray County), as well as SMPA and community groups (ROCC) participate and collaborate on setting and accomplishing sustainability goals, and share efforts and progress toward reducing GHG emissions. Advantages of this regional approach include a stronger voice to influence political change, greater leverage for grants, the ability to address regional challenges together, such as the 5% cap on SMPA locally produced renewable energy that Tri-State implements, and the sharing of best practices.

Since inception, a Mountain Village Town Council member and MV staff participate in the quarterly Sneffels Energy Board meetings, and to learn about new energy efficiency opportunities, to collaborate regionally with other jurisdictions on projects and programs focused on GHG emissions reduction, and to report back to Town Council and staff from the Sneffels Energy Board meetings.

F. Building Energy Code Updates: Continue to provide information and assistance to the Mountain Village Planning and Building Department and other regional building departments as needed for updating the Building Energy Code to the 2018 International Energy Conservation Code with appropriate amendments for our climate and building environment. Working toward all regional jurisdictions being on same code with the necessary energy code amendments to

maintain progressive energy code. EcoAction Partners will coordinate training opportunities through the State of CO for building departments, contractors, architects, & rest of building community, on an as needed and available basis.

Update REMP calculations: Mountain Village’s Renewable Energy Mitigation Program (REMP) will be updated in consistency with current energy mitigation costs and updating calculations for other jurisdictions. The updated energy mitigation fee calculations address exterior energy use – snowmelt systems, heated garages, outdoor pools & spas, and more. Additional modification services will be available as needed for additional negotiable cost, such as adding a community solar array option if and when that becomes available, and the analysis of best practices for snowmelt systems. Additionally, if REMP calculations are needed for a specific building project, EcoAction Partners can and will provide this service.

G. OPTIONAL: Mountain Village REMP Green Project Grant Program (\$50,000-\$100,000):

EcoAction Partners will operate the REMP Green Project Grant Program for the Mountain Village Community, with funding amount as allocated by Michelle from the REMP budget. The goal will be to maximize GHG savings resulting from granting of funding (typical return of up to 10:1), through leveraging other available funding and prioritizing energy efficiency. This program will be ongoing, with a specific annual application timeframe, and a deadline for project implementation as agreed upon by the Mountain Village Green Team. It is recommended that this committee consists of 1 each (MV Green Team, MV Town Council member, MV Town staff, and 1 community member) or as determined by the town, who will approve grant applications, communicate to MV Green Team & Town Council, and guide EcoAP staff. Of the TEMP funds allocated, 85% would go directly toward awarding grant projects, and 15% would be allocated to EcoAP to cover grantee assistance in calculating energy/GHG savings, coordination of grant review with the committee, administration and monitoring services. Results from the 2015 SMC Green Grants Program available upon request.

H. NEW SMPA Community Solar Farm (pending): EcoAP is working with SMPA to gather support and the efforts needed to implement the development of a new SMPA community solar array, which would then be available as an option for REMP and for other community members to purchase.

I. Greenlights LED Program: Encouraging residents and businesses to switch to LED lighting by providing a combined rebate from SMPA (50%) and government (25%) for up to 75% off the purchase of new LED bulbs. Each government commits a “matching” portion. Results from MV Greenlights LED Program from 2017 are as follows:

2017 GREENLIGHTS COMMUNITY BULB PURCHASE REPORT

Jurisdiction	Maximum	Total Orders	Total Bulbs	Total Watts	Kilowatts Hrs/Year Saved*	CO2 Saved**	CO2 Metric Ton***	Total SMPA Rebates	Total Government Funds Utilized
Mountain Village	\$2,000.00	17	528	5,648	9,277	17,348	7.87	\$3,061.63	\$1,530.81
Telluride	\$3,000.00	16	314	3,269	5,370	10,041	4.56	\$1,756.48	\$878.24
San Miguel County	\$3,000.00	23	626	8,395	13,789	25,786	11.70	\$2,933.37	\$1,466.68
Ridgway	\$1,000.00	14	282	2,493	4,095	7,657	3.47	\$1,174.08	\$587.04
Ouray	\$1,000.00	8	145	1,742	2,860	5,349	2.43	\$877.11	\$438.55
Ouray County	\$1,166.37	15	402	4,389	7,208	13,479	6.12	\$2,332.74	\$1,166.37
Rico, Nucla, Naturita	\$2,500.00	16	405	4,052	6,656	12,446	5.65	\$1,654.09	\$1,051.95
Total	\$6,166.37	53	1,234	12,675	20,819	38,932	17.66	\$6,038.01	\$3,243.91

The Greenlights 2018 results will be provided once available.

The rebate match is an additional fee that goes directly to help the consumer. For 2019, \$800 - \$1200 is suggested.

- J. **SMPA Income Qualified (IQ) Program:** The SMPA IQ program was developed in partnership with Energy Outreach Colorado and San Miguel Power Association. This program supports the region's low and middle-income households by providing a free energy assessment that prioritizes cost effective energy efficiency improvements (up to \$3000) for qualified residents, which are then implemented at no cost to the resident. Once participants go through the program, they are eligible for free solar panels in the SMPA IQ solar array to off-set a portion of the residence's energy use.

EcoAction Partners was selected by Energy Outreach Colorado to operate the CARE/SMPA IQ Weatherization Program, and we have been providing this service to the SMPA service territory since the program was introduced in 2016.

New in 2018, Black Hills joined in funding the program in a more significant way, supporting gas related improvements beyond what the previous rebates allowed.

Results for the SMPA IQ Weatherization Program, as of July 2018, 70 residents have been served, receiving improvements like air sealing, insulation, and new refrigerators and boilers. This equates to approximately **1,800 therms** saved and **7.95 metric tons of carbon** reduced annually.

Of the 70 served, 13 of those are Mountain Village residents/families who not only received free weatherization services, but also solar panels in the IQ Solar array. Mountain Village also benefits by receiving free or discounted refrigerators for those who live in Village Court Apartment units; refrigerators have been provided for 12 VCA units to-date. After multiple applications, Energy Outreach asked for a landlord contribution of \$250 per refrigerator for VCA

units going forward – thank you to MV for agreeing to this, so we can continue this work in VCA now and in the future. For 2019, an additional refrigerator allocation will likely be needed; \$1000 - \$1500 is suggested.

EcoAction Partners Suggested Grant Services for Mountain Village

In addition to the outlined services below EcoAction Partners provides the following general resources that would not exist without our organization: Energy efficiency programs, website resources, monthly newsletters and updates, GHG data which will also be made available online this year, overall GHG reduction efforts, educational programs, forums, meetings, and other energy related events and services, and as an umbrella organization for other appropriate programs.

- K. Promote SMPA Rebates and Alpine Bank Energy Loan Program:** For Mountain Village residents that don't qualify for the Income Qualified Weatherization Program, but want to make energy efficiency improvements to their homes, EcoAction Partners promotes the SMPA Rebates that are offered to all SMPA members as a helpful way to save money through making energy efficiency improvements. For those that need a financing tool for larger scale improvements, EcoAction Partners worked with Alpine bank to develop the Alpine Energy Loan Program, which offers a way for residents to finance energy efficiency and renewable energy improvements.
- L. Truth or Dare School Program:** EcoAction Partners' Truth or Dare Program is a weeklong, school-based educational program for regional school children focused on saving energy and reducing waste. Students gain valuable knowledge on how to reduce their carbon footprint through small actions like carpooling/walking, unplugging electrical gadgets, and recycling. Using a point based system, students track their habits. EcoAction Partners then summarizes the GHG emissions reduced by each student, and per grade level and by the school as a whole. Through this program, we have found that kids often share their enthusiasm with their parents, leading to more households engaged in sustainability efforts. Prizes are provided by SMPA and awarded to top performing individual students and classrooms. Since 2014 the Truth or Dare program has been presented to over 1,400 students in 5 school districts. It is estimated that if students continued these habits for the entire year 2017 participating students would collectively reduce over 25,000 pounds of carbon emissions annually. Since the program's inception in

2014, if habits continued indefinitely the cumulative reduction would be well over 60,000 pounds of carbon reduced.

M. Energy Efficiency & Waste Reduction Assistance to the Telluride Schools:

EcoAction Partners is pleased to be working with the Telluride School District on energy efficiency and waste reduction efforts, in particular we are currently helping TSD transition to metal silverware, because of the pending Telluride single-use plastic-ware ban. Additionally in the past we have worked with TSD on solutions for sports equipment so students can take the bus instead of every parent having to drive student equipment. This is an on-going effort, without one simple solution, but we will continue this work in 2019.

N. E-Waste Service at Spring Clean Up: EcoAction Partners contracts the service of Electronics Recycling at the Telluride/SMC Community Clean Up days that happen in Carhenge Parking Lot, typically mid-May. Electronics recycling is provided by vendor, CORRecycling out of Grand Junction. In 2018, two 20 yard dumpsters were filled with of electronics for recycling.

O. Carbon Neutral Coalition: Following the 2017 MountainFilm symposium topic, “The New Normal”, EcoAction Partners worked with MountainFilm and the Pinhead Climate Institute, to create the Carbon Neutral Coalition (CNC). Other organizations have since joined. The CNC meets monthly seeking solutions on areas that have the highest impact on our region’s greenhouse gas emissions.

EcoAction Partners Suggested MV Grant OR TMVOA Services?

P. Green Business Certification: EcoAction Partners’ Green Business Certification Program helps Mountain Village and regional businesses lower GHG emissions and gain financial savings through energy efficiency efforts. EAP completes an energy assessment then provides recommendations for improvements to conserve energy and reduce waste. EAP helps businesses establish achievable goals and incentivizes them to track their energy usage. Once certified, EcoAction Partners then promotes businesses’ achievements as a green marketing benefit and to assist other businesses in learning from their peers. EcoAction Partners offers a Property Management Program assisting lodging properties and businesses care-taking second homes. Currently 30+ regional businesses participate. In Mountain Village more than 13 businesses and lodging properties are certified, totaling over 600,000 Mountain Village commercial square feet. Of note, ALL of the Telluride Ski and Golf Company businesses are certified or working toward certification.

Promote C-PACE: San Miguel County recently adopted C-PACE, which stands for Commercial Property Assessed Clean Energy. This program allows commercial owners to take a property assessment to make energy efficiency and renewable energy capital improvements on their property. EcoAction Partners is assisting with marketing this program to commercial property owners needing energy efficiency improvements, and to all Green Certified Businesses.

- Q. **Festival CRT Services:** EcoAction Partners, previously The New Community Coalition, developed the Festival Compost Recycling Trash Program (CRT) for Telluride in 2008, and EcoAction has been providing these services to festivals to help meet the Town of Telluride's waste requirements ever since. EcoAction Partners provides guidance to the festivals on products to purchase in order to minimize waste and increase diversion, expertise on CRT station set-up as well as event day on-site CRT management services at numerous festivals. EcoAction Partners has been pleased to provide recycling sorting services to TMVOA for the Sunset Concert Series for the last 2 seasons. New this year, a contract was in place with TMVOA for this service – Thank you, TMVOA!

Additionally, for the broader region, EcoAction Partners monitors and is involved with supporting overall regional waste services. This effort is challenging but critical for support of a Level 2 commercial composting center, which would also take bio-solids from the waste water treatment plant, become viable in a closer location, such as Olathe, CO.

- R. **Neighborhood Composting:** EcoAction Partners has a neighborhood composting pilot program currently in process in the town of Ophir. For this composting project, EcoAction for was awarded an RREO Mini-Grant for \$9,959.49 to purchase 2 Earth Cube Composters, some additional supplies, and educational materials for Ophir. The program was implemented in early April 2018, and without a doubt, the Ophir community has embraced composting! It is clear based on the numbers of participants and volumes thus far, that the 2 Earth Cubes are not enough. We are strategizing ways to get another one or two units for Ophir.

Overall the Ophir Community Composting Project has been an overwhelming success & an exciting learning experience. The Ophir Self Reliance Committee has been involved and assisted in many ways. Over 80% of the community is participating, and as of July 26, 2018 the Earth Cubes have diverted 2,385 pounds of waste and put them to beneficial use.

RREO Mini-Grants, which go up to \$25k, are a great opportunity for waste diversion, recycling, and composting projects in other locations in our region. The grants are due in late fall, so identifying locations for composting is a priority. It is recommended that EcoAction Partners writes the grant, but the jurisdiction or larger entity apply. EcoAction is eager to identify other

neighborhood composting locations and implement. Regional locations considering composting include:

- Mountain Village: Mountain Village Green Team is offering up to \$5K as an incentive for composting equipment. This could provide valuable matching funds that the granting entity likes to see, for small scale or a larger, more automated composting system in MV. Suggested locations could include: VCA & Grocery store food waste, Peaks or other hotels in the MV Core, and Mountain Village Meadows.
- Town of Telluride: Location identified by the new round-about being planned near Shandoka.
- Lawson Hill: The Lawson residents have expressed a desire to compost. The HOA is apprehensive; EcoAction Partners is providing information and guidance.
- Town of Ridgway

Additionally, EcoAction Partners is happy to assist Mountain Village with the composting incentive program by providing guidance on locations and/or to any businesses, individuals, HOA's, etc interested in composting needing more information on equipment types, capacity, and more.