TOWN OF MOUNTAIN VILLAGE
GREEN TEAM COMMITTEE MEETING
TUESDAY, JULY 27, 2021, 2:00 PM
TO BE HELD AT TOWN HALL
CONFERENCE ROOM

Item	Time	Min	Presenter	Type	
1.	2:00		Berry		Call to Order
2.	2:00	5	Berry	Public Comment	Public Comment on Non-Agenda Items
3.	2:05	5	Miller	Action	Approval of the June 15, 2021, Regular Green Team Committee Meeting Minutes
4.	2:10	10	Berry	Informational	Plastic Bag discussion
5.	2:20	10	Dohnal/Felicelli	Informational	EV charging stations
6.	2:30	30	Lotus Engineering & Sustainability	Action	Approval of 2020 government, community, and regional GHG reports
7.	3:00	5	Prohaska	Informational	Solar Subcommittee Update
8.	3:05	5	Greenspan/Meredith	Informational	Clean Up Day Subcommittee Update
9.	3:10	10	Johansson	Informational	Voluntary Single-Use Plastics Reduction Incentive Subcommittee / Planet Over Plastics Update
10.	3:20	5	Berry/Greenspan	Informational	Composting Subcommittee Update
11.	3:25	5	Berry	Informational	Other Business
12.	3:30		Berry		Adjourn

TOWN OF MOUNTAIN VILLAGE
MINUTES OF THE JUNE 15, 2021
GREEN TEAM MEETING DRAFT

The meeting of the Green Team Committee was called to order by Patrick Berry on Tuesday, June 15, 2021, at 2:02 p.m. via Zoom.

Zoom Attendance:

The following Green Team Committee members were present:

Patrick Berry, Chair and Mountain Village Town Council
Erin Kress, Telluride Ski and Golf Company
Cath Jett, Mountain Village Resident
Jonathan Greenspan, Mountain Village Resident
Jonette Bronson, Mountain Village Resident
Marla Meridith, Telluride Mountain Village Owner's Association
Inga Johansson, Alternate Seat

The following were absent:

Marti Prohaska, Vice Chair and Mountain Village Town Council

The following were also in attendance:

Zoe Dohnal, Business Development & Sustainability Director (Staff)
Christina Lambert, Senior Deputy Town Clerk (Staff)
Delanie Young
Todd Brown
Doug Tooley

Public Comment on Non-Agenda Items:

Agenda Item 2- There was no public comment.

Consideration of Approval of Minutes:

Agenda Item 3- May 4, 2021, Green Team Committee Meeting Minutes

On a **MOTION** by Patrick Berry and seconded by Jonathan Greenspan, the Green Team Committee voted unanimously to approve the May 4, 2021, meeting minutes as presented.

Discussion and Committee Follow Up/Next Steps:

- Agenda Item 4- Dirty Sturdy Composting Proposal and Recommendation:
  - **NEXT STEPS:** Zoe Dohnal presented this item to the committee and discussion took place.

- We cannot give special treatment to single organizations.
- We would like Dirty Sturdy to apply for a grant so that the Town can consider giving him money through the proper process.
- We can help with marketing efforts including social media, email blasts, door hangers, direct mailer, etc.
- We cannot give Dirty Study money directly from the Green Team budget.
- The Green Team Committee is in favor of making the following recommendation to Dirty Sturdy: We encourage Dirty Sturdy to apply for a TMV Grant. We will provide support through marketing if desired.

➢ Agenda Item 5- Village Market Compostable Bags:

- **NEXT STEPS:** Zoe Dohnal presented this item to the committee and discussion took place.
- Zoe showed an example of an option for a compostable bag.
- The Village Market will be ordering bags in October.
- After a lengthy discussion, the Green Team Committee decided that this item needs to be added to a future agenda.

➢ Agenda Item 6- Community Based Social Marketing (CBSM) Masters Training:

- **NEXT STEPS:** Inga Johansson presented this item to the committee and discussion took place.
- It will cost $4,950 to complete the master's coaching (Inga already completed the 1st training that is required for at least one member of the team prior to signing up for the master's training).
- You can have up to 5 members on your team.
- Inga will provide the contact information in the Zoom chat.
- Staff does see value in this and feel that Zoe's new employee would be a good member of the team.
- Inga will provide all requested information in a proposal and Christina will send it to the committee.
- Patrick would like for Marti to weigh in on this topic and to be involved.

➢ Agenda Item 7- Solar Subcommittee Update:

- **NEXT STEPS:** Zoe Dohnal presented this item to the committee and discussion took place.
- The program has been very successful!
- We pushed the deadline until today.
- We may want to start talking about the future since the program did so well.
- Solar United was a huge part of the success of the program.

- Agenda Item 8- Clean Up Day Subcommittee Update:

  - **NEXT STEPS:** Jonathan Greenspan and Marla Meridith presented this item to the committee and discussion took place.
  - The clean-up day is on August 21st.
  - The application process has been started but Zoe is still waiting on some things.
  - The subcommittee has not met but will try to meet next week.
  - We will start marketing when the event is approved.
  - Jonathan would like to meet regarding getting different groups together to partner and combine clean up days.
  - Zoe would like to join the meeting to help things move forward.

- Agenda Item 9- Voluntary Single-Use Plastics Reduction Incentive Subcommittee / Planet Over Plastics Update:

  - **NEXT STEPS:** Inga Johansson presented this item to the committee and discussion took place.
  - There is nothing new to report.

- Agenda Item 10- Composting Subcommittee Update:

  - **NEXT STEPS:** Jonathan Greenspan presented this item to the committee and discussion took place.
  - We will need to get tother to meet as a subcommittee to get a better strategy.
  - Jonathan wants to introduce some new possibilities on composting systems.

Other Business:

Agenda Item 11-

Zoe Dohnal gave a kind shout out to Christina Lambert since it is her last Green Team Committee meeting.

Delaine Young stated that she got a letter regarding the safety of our water to encourage people to stop drinking bottled water. She will bring this up to EAP.

Patrick Berry requested that we meet in person moving forward. Zoom will still be available through Zoe's computer if someone cannot make the meeting in person.

There being no further business, on a **MOTION** by Patrick Berry and seconded by Jonathan Greenspan, the Green Team Committee voted unanimously to adjourn the meeting at 3:29 p.m.

Reminder:

The next Green Team Committee meeting will take place on Tuesday, July 27, 2021, at 2:00 p.m. in Mountain Village Town Hall.

Respectfully submitted,

Christina Lambert

Senior Deputy Town Clerk
Town of Mountain Village

Your PERSONAL, GREEN "fueling station" is here!

SAN MIGUEL POWER ASSOCIATION

Touchstone Energy® Cooperatives
The power of human connections®

Community Benefits of EV's (Electric Vehicles)

- Clean air (improvement in air quality)
- Lower Transportation Costs for community
- Available EV Charging raises property values and rental interest.
- Helps achieve climate goals and reduce GHG's.
- EV and Smart Charging will help create more resilient local grids in the future.
- Drastically reduced noise pollution.

Preparing for the Future

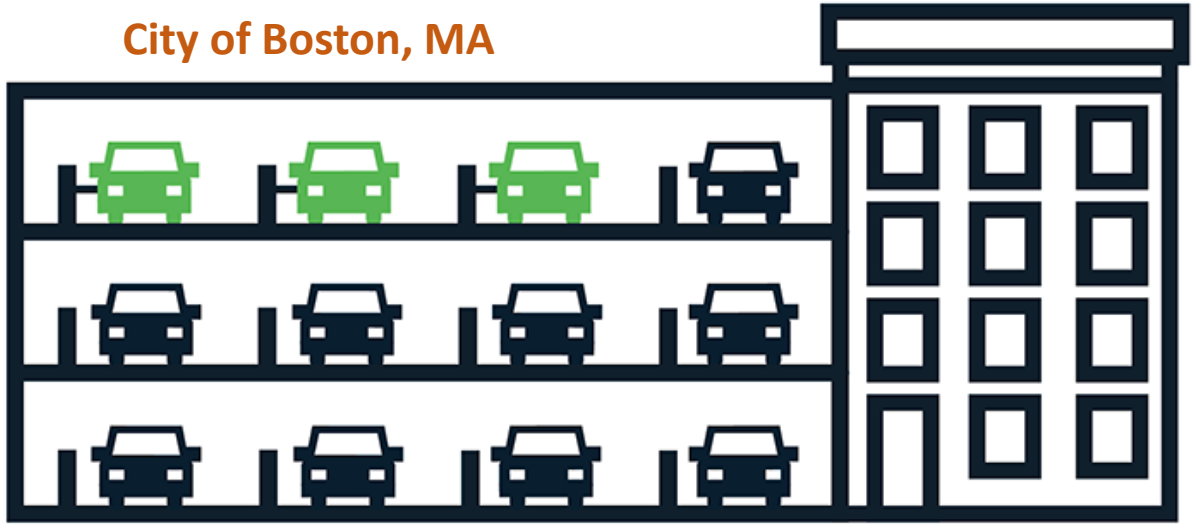
- 80% of EV charging is done at home
  - It's convenient
  - It's less expensive
  - It saves time and community parking space/resources

How much fuel is being wasted here while waiting to get… "more fuel?"

Next Steps…

- Make new homes/businesses “EV Ready”
  - Pre-wire for Home EV Chargers (Install conduit/wire/plug)
    - Cost during construction (roughly $300-$600)
      - VS
    - Cost to retrofit wiring later (roughly $1500-$5000)

City of Boston, MA



EV CHARGING STATIONS EV READY CHARGING STATIONS

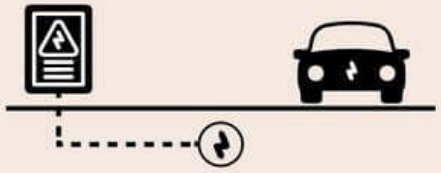
Large project review developments must equip **25%** *of their total parking spaces to be EVSE (electric vehicle supply equipment) installed and the remaining* **75%** *of the total spaces to be EV (electric vehicle) ready.*

1. EV-Capable

   Install electrical panel capacity with a dedicated branch circuit and a continuous raceway from the panel to the future EV parking spot.

   Aspen, CO: 3% of parking is EV-Capable (IBC)

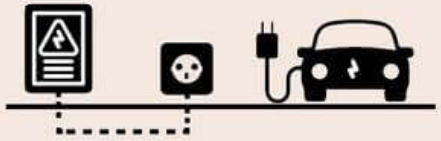
   Atlanta, GA: 20% is EV-Capable (Ordinance)



2. EVSE-Ready Outlet

   Install electrical panel capacity and raceway with conduit to terminate in a junction box or 240-volt charging outlet (typical clothing dryer outlet).

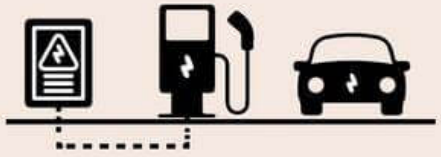
   Boulder, CO: 10% of parking is EV-Ready Outlet



3. EVSE-Installed

   Install a minimum number of Level 2 EV charging stations.

   Palo Alto, CA: 5-10% of parking is EV-Installed



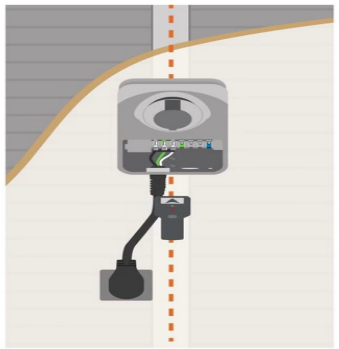
Room to Grow…

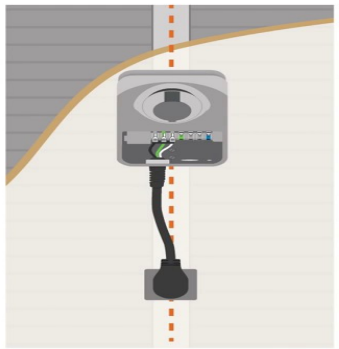
We don’t have to install all the chargers today…

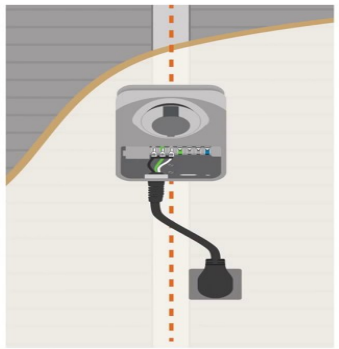
- Wiring is a major portion of the cost, especially retrofits.
  - Step 1: Prewire for EV Chargers on all new construction
  - Step 2: Install the actual EV Chargers as needed/desired
    - *These steps can be combined
- Many EV’s come with an EV Charger.

- SMPA currently has rebates that cover up to 50% of the cost of EV Chargers

Level 2 Residential/Private Commercial Charger
• 50% cost match of EV charging equipment and electric service installation up to $500 maximum







EV-Ready Outlet
(Required by code)

Portable Level 2 EV Charger
(User-supplied)*

Moral of the Story is….

If you are building a new home, one of the wisest investments you can make is making that home “EV Ready” now.

It will:

- Save owners hundreds/thousands of dollars of installation costs in the future, for just a small premium today.
- Increase the value and marketability of your home.
- Encourage the purchase of Electric Vehicles and helps reduces GHG’s.
- Possibly help the grid resiliency in the future. (Smart Charging)

Questions?

SAN MIGUEL POWER ASSOCIATION

Touchstone Energy® Cooperatives

Phil Zimmer
Energy Services Executive
San Miguel Power Association
(970)626-5549 Ext 206
phil.zimmer@smpa.com

Town of Mountain Village's 2020 Emissions Inventory Results

Green Team Committee Meeting

July 27, 2021

Welcome!

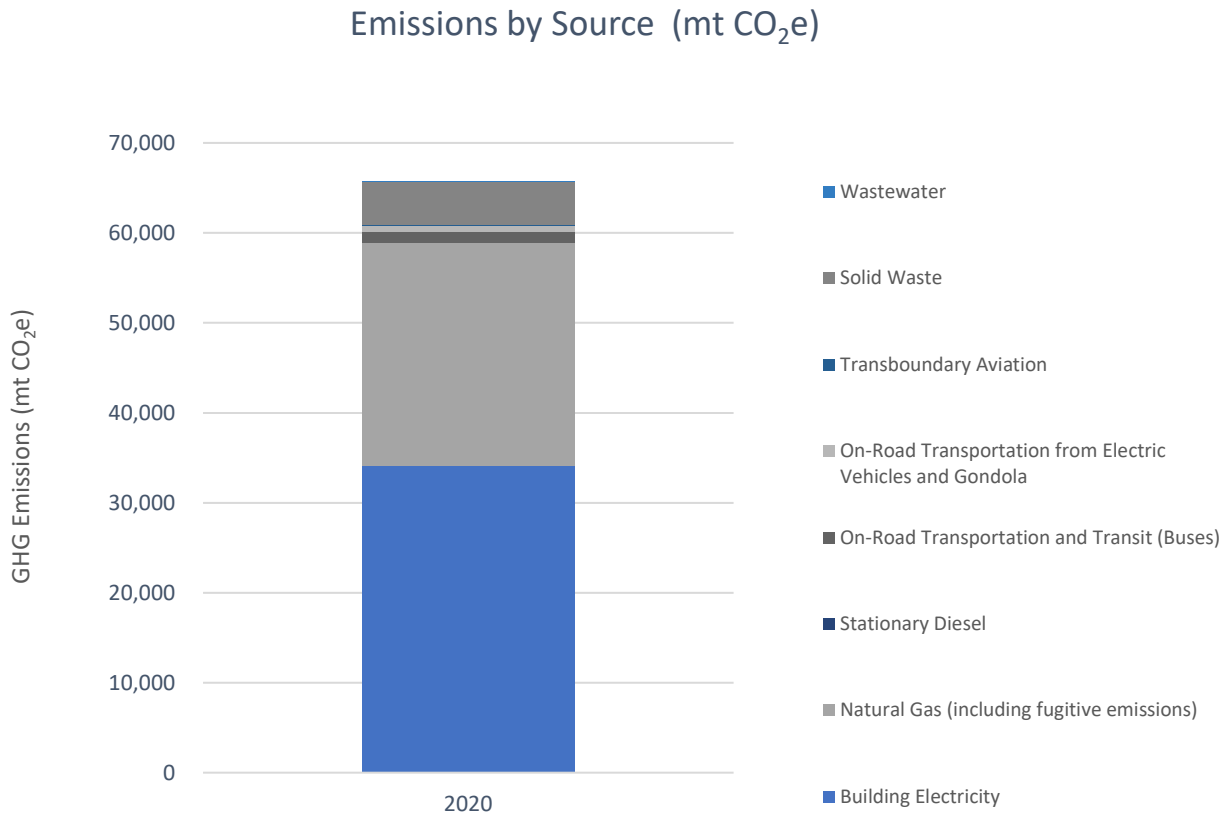
Today's Conversation:

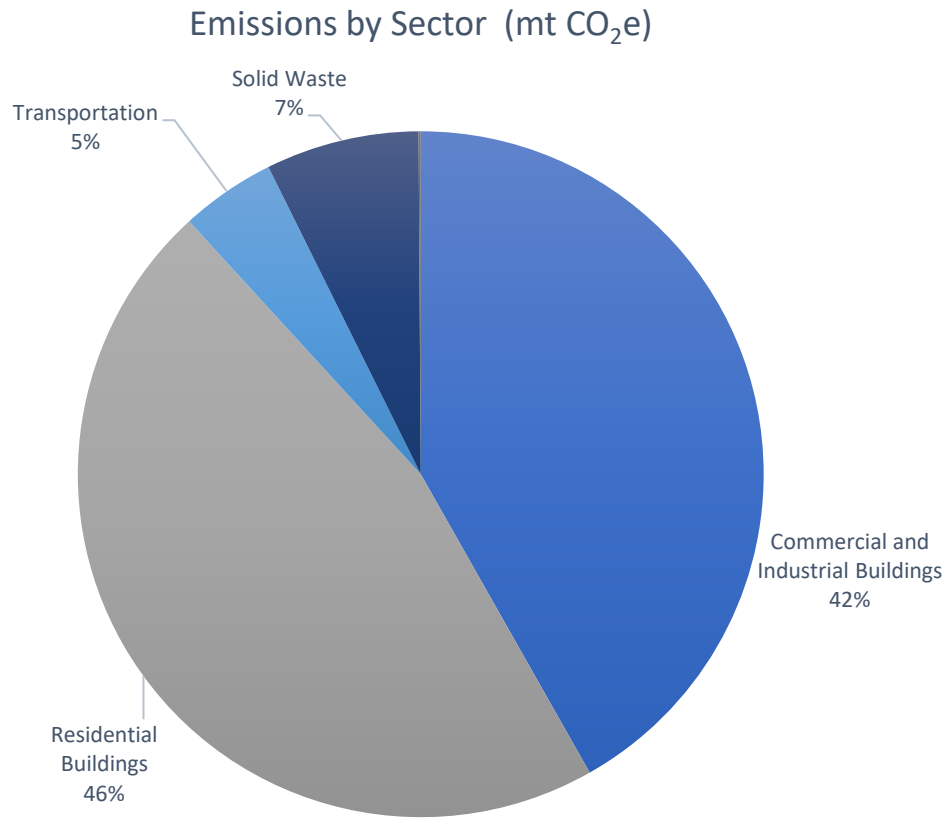
- Review the 2020 Community Inventory
  - Compare to 2019 results
- Review the 2020 Municipal Inventory
  - Compare to 2019 results
- Review the 2020 Regional Inventory

Mountain Village's Community-Wide Emissions

2020 Community Inventory

Mountain Villages' Community GHG Emissions (mt CO_2e)





Mountain Village's total emissions value for 2020 was 66,867 mt CO_2e. This represents a 10 percent reduction from the updated 2019 emissions value.

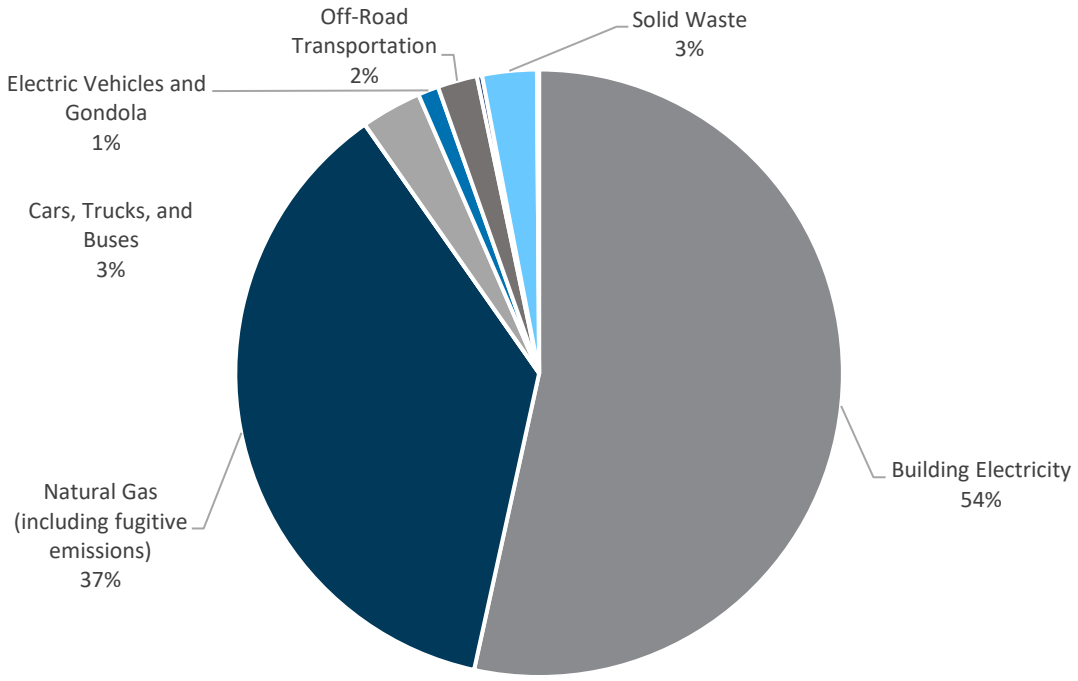
Mountain Villages' Emissions by Sector Comparison

Sector	Emissions (mt CO_2e)		% Change between 2019 and 2020
	2019	2020	
Commercial and Industrial Buildings	32,532	27,906	-14%
Residential Buildings	34,317	30,975	-10%
Transportation (with transboundary aviation)	4,972	3,095	-38%
Solid Waste	2,147	4,825	125%
Wastewater Treatment	86	67	-22%
Total (with transboundary aviation)	**74,053**	**66,867**	**-10%**

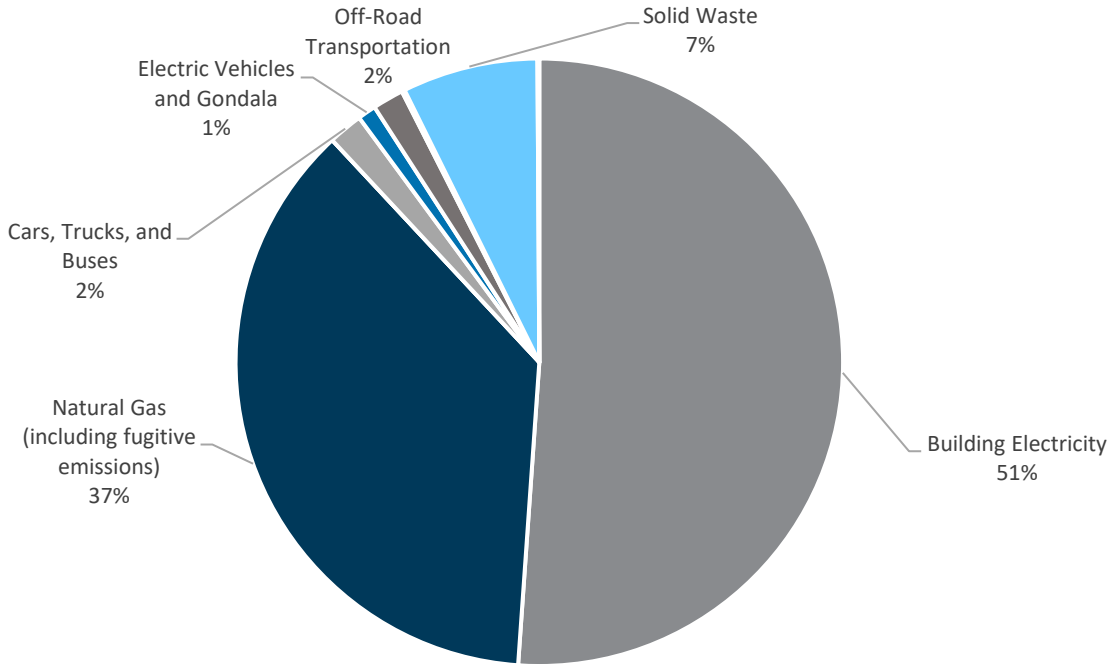
Mountain Villages' Emissions by Source Comparison

Source	Emissions (mt CO_2e)		% Change between 2019 and 2020
	2019	2020	
Building Electricity	39,572	34,179	-14%
Natural Gas (including fugitive emissions)	27,277	24,702	-9%
Stationary Diesel	0	0	0%
On-Road Transportation and Transit (Buses)	2,390	1,229	-49%
On-Road Transportation from Electric Vehicles and Gondola	813	653	-20%
Off-Road Transportation	1,563	1,105	-29%
Transboundary Aviation	206	107	-48%
In-Boundary Aviation	0	0	0%
Solid Waste	2,147	4,825	125%
Wastewater	86	67	-22%
Total (with transboundary aviation)	**74,053**	**66,867**	**-10%**

Mountain Villages' Emissions by Source Comparison



2019

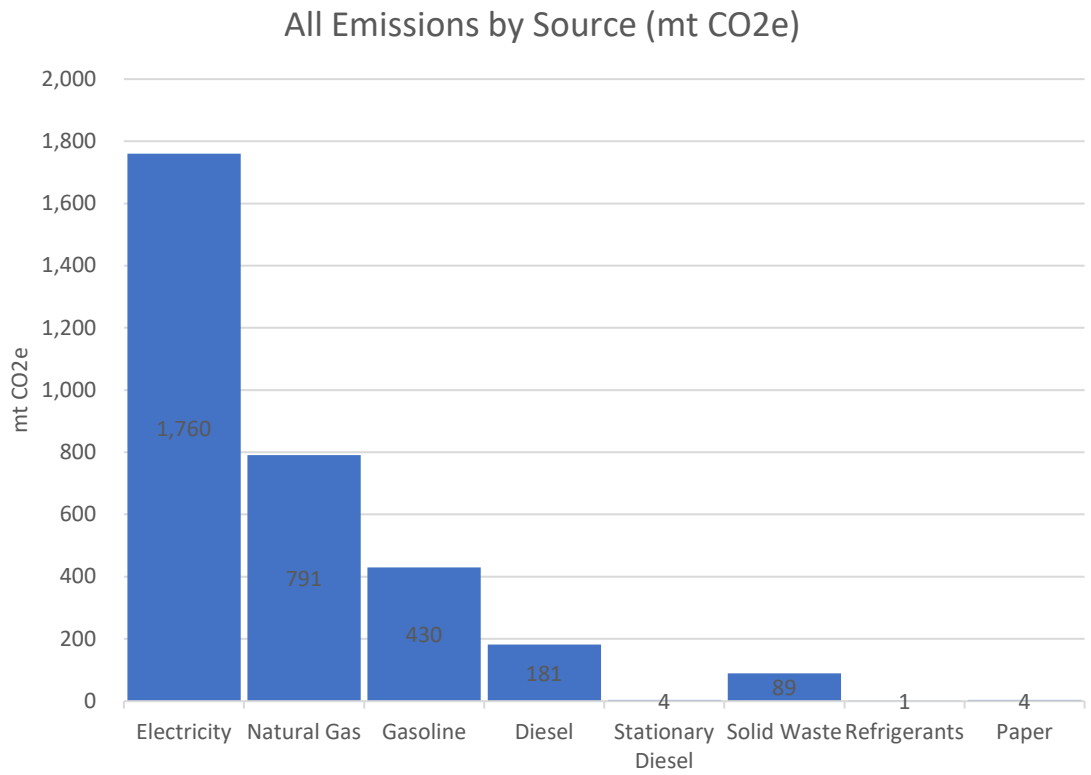


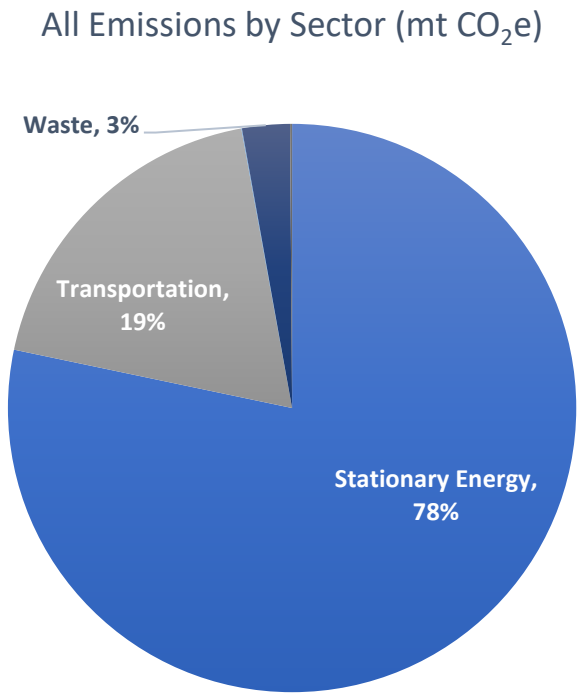
2020

Mountain Village's Operational Emissions

2020 Municipal Inventory

Mountain Villages' Operational GHG Emissions (mt CO_2e)





Mountain Village's operational emissions for 2020 were 3,260 mt CO_2e. This represents a 25 percent reduction from the updated 2020 emissions value.

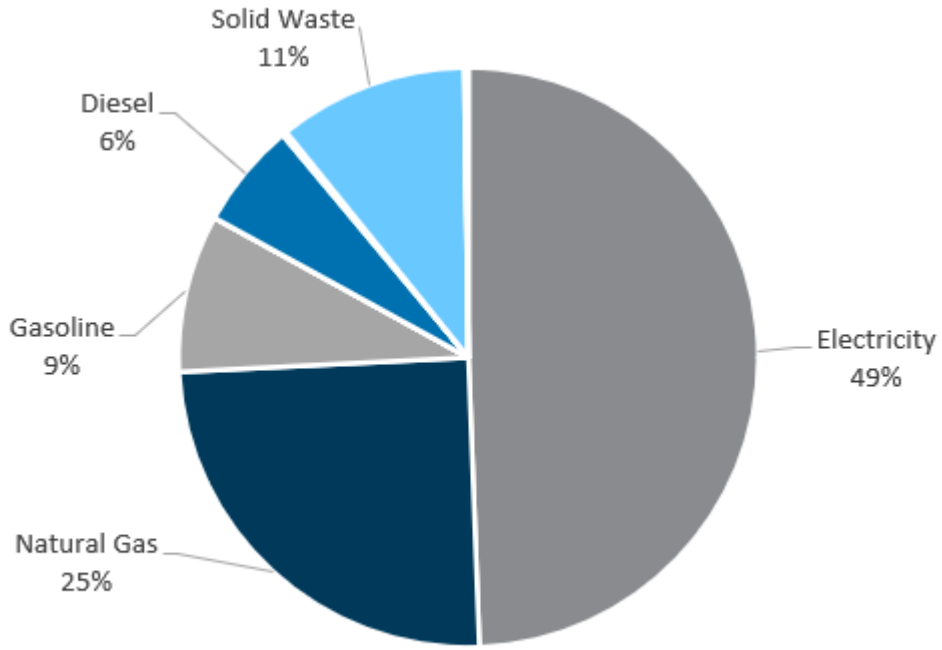
Mountain Villages' Municipal Emissions by Sector Comparison

Emission Sector	Emissions (mt CO2e)		% Change between 2019 and 2020
	2019	2020	
Stationary Energy	3,241	2,552	-21%
Transportation	641	614	-4%
Industrial Processes and Product Use	1	1	0%
Waste	461	89	-81%
Consumption Based	9	4	-59%
Total	**4,353**	**3,260**	**-25%**

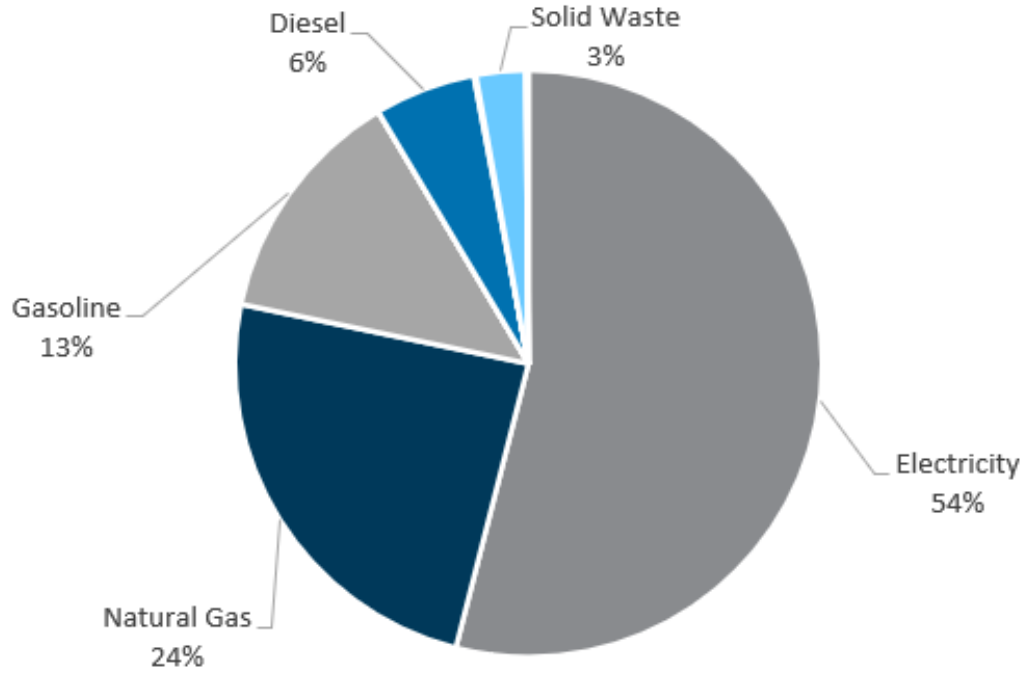
Mountain Villages' Municipal Emissions by Source Comparison

Emission Source	Emissions (mt CO2e)		% Change between 2019 and 2020
	2019	2020	
Electricity	2,150	1,760	-18%
Natural Gas	1,080	791	-27%
Gasoline	383	430	12%
Ethanol	0	0	0%
Diesel	258	181	-30%
Stationary Diesel	11	4	-62%
Biodiesel	0.00	0	0%
Aviation	0.45	0	-100%
Solid Waste	461	89	-81%
Refrigerants	1	1	0%
Paper	9	4	-59%
Total	**4,353**	**3,260**	**-25%**

Mountain Villages' Municipal Emissions by Source Comparison



2019



2020

Regional GHG Emissions

2020 San Miguel and Ouray County Inventory

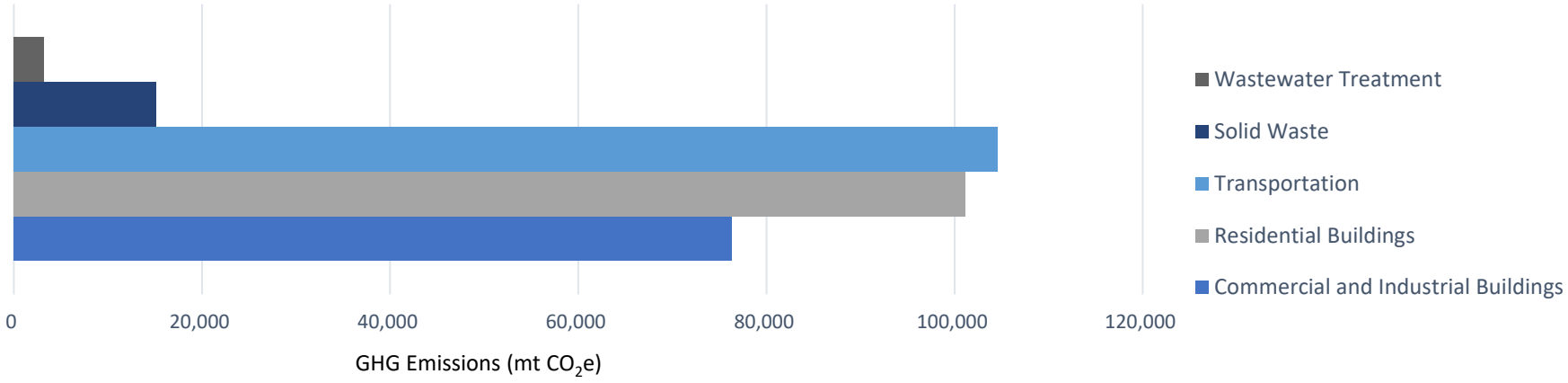
Regional GHG Emissions (mt CO_2e)

Community	Emissions (mt CO_2e)
San Miguel County	204,357
Ouray County	98,835
Mountain Village	66,867
Norwood	4,261
Telluride	44,904
Ouray	15,351
Ridgway	12,630

Total regional emissions for all of San Miguel and Ouray Counties is 306,009 mt CO_2e.

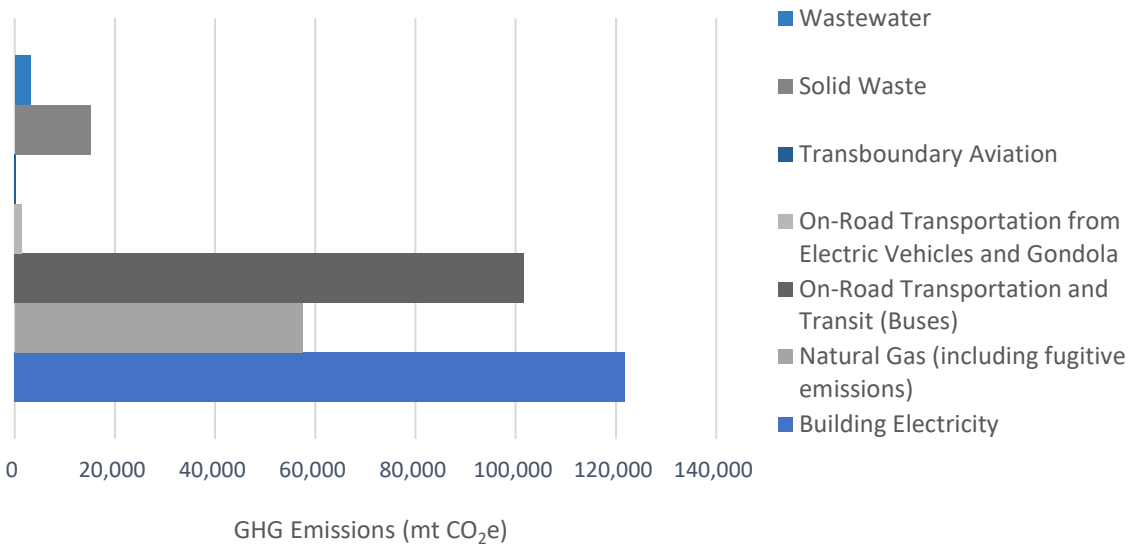
Regional Emissions by Sector

Sector	Emissions (mt CO_2e)	Percentage of Total
Commercial and Industrial Buildings	76,353	25%
Residential Buildings	101,125	33%
Fugitive Emissions	5,680	2%
Transportation	104,524	34%
Solid Waste	15,147	5%
Wastewater Treatment	3,180	1%
Total Emissions	**306,009**	**100%**



Regional Emissions by Source

Emission Source	Emissions (mt CO_2e)	Percentage of Total
Building Electricity	121,844	40%
Natural Gas (including fugitive emissions)	57,448	19%
Oil and Gas Wells	3,866	1%
On-Road Transportation and Transit (Buses)	101,668	33%
On-Road Transportation from Electric Vehicles and Gondola	1,462	0%
Off-Road Transportation	1,105	0%
Transboundary Aviation	287	0%
Solid Waste	15,147	5%
Wastewater	3,180	1%
Total	**306,009**	**100%**



Thank You!

- Julia Newman: Julia@lotussustainability.com
- Rachel Meier: Rachel@lotussustainability.com

lotus
engineering & sustainability

Town of Mountain Village
Memo: Comparing 2019 and 2020 Community GHG Emissions

July 2021

INTRODUCTION

The Town of Mountain Village (Mountain Village / the Town) first began participating in regional greenhouse gas (GHG) emissions analyses in 2010 and has continued to regularly analyze community-generated emissions for the years 2019 and 2020. This memo is intended to provide a comparison between the results of the 2019 and 2020 inventories.

INVENTORY COMPARISON

METHODOLOGY

The 2019 and 2020 emissions inventories were conducted using the same methodology (i.e., the Global Protocol for Community-Scale Greenhouse Gas Emissions [GPC] BASIC approach); both inventories also include emissions caused by transboundary aviation activities (i.e., flights occurring outside of the Town's boundaries but attributable to the Town and its residents). The same assumptions were used to conduct both inventories, except where unique assumptions were made regarding data for the 2020 inventory to account for the impact of the COVID-19 pandemic, and in some cases the assumptions, data, or emissions factors for the 2019 inventory were updated when the 2020 inventory was completed to account for the most recent data available.[1]

INVENTORY RESULTS

In 2019, activities in Mountain Village resulted in 74,053 metric tons of carbon dioxide equivalents (mt CO_2e), including emissions from transboundary aviation. Emissions in 2020 are estimated to have decreased by 10 percent for a final 2020 emissions value of 66,867 mt CO_2e. The reduction in emissions between the two years is in large part a result of reduced activity in the community due to the impacts of the COVID-19 pandemic. As the entire country effectively went into 'lockdown' in March of 2020, many economic activities, including the tourism industry,

[1] Therefore, this memo compares the results of the 2020 inventory and the updated 2019 inventory, provided to Mountain Village in July of 2021.

ground to a sudden halt, resulting a reduction in energy use and travel across the community. Details on emissions by sector are provided in Table 1 and emissions by source are provided in Table 2 and Figures 1 and 2, and further detail is provided in the text below.

Table 1. Mountain Village's emissions by sector in 2019 and 2020 (mt CO_2e).

Sector	Emissions (mt CO_2e)		% Change between 2019 and 2020
	2019	2020	
Commercial and Industrial Buildings	32,532	27,906	-14%
Residential Buildings	34,317	30,975	-10%
Transportation (with transboundary aviation)	4,972	3,095	-38%
Solid Waste	2,147	4,825	125%
Wastewater Treatment	86	67	-22%
Total (with transboundary aviation)	**74,053**	**66,867**	**-10%**

Table 2: Mountain Village's emissions by source in 2019 and 2020 (mt CO_2e)

Source	Emissions (mt CO_2e)		% Change between 2019 and 2020
	2019	2020	
Building Electricity	39,572	34,179	-14%
Natural Gas (including fugitive emissions)	27,277	24,702	-9%
Stationary Diesel	0	0	0%
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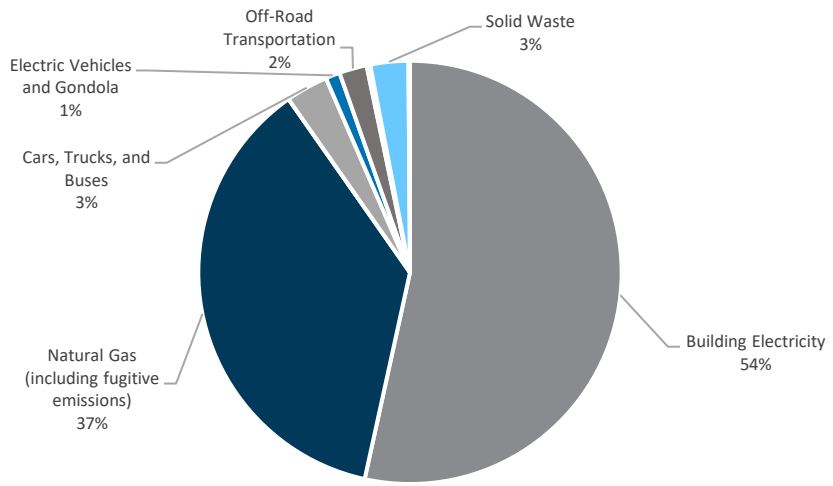

Figure 1: Mountain Village's 2019 emissions by source.

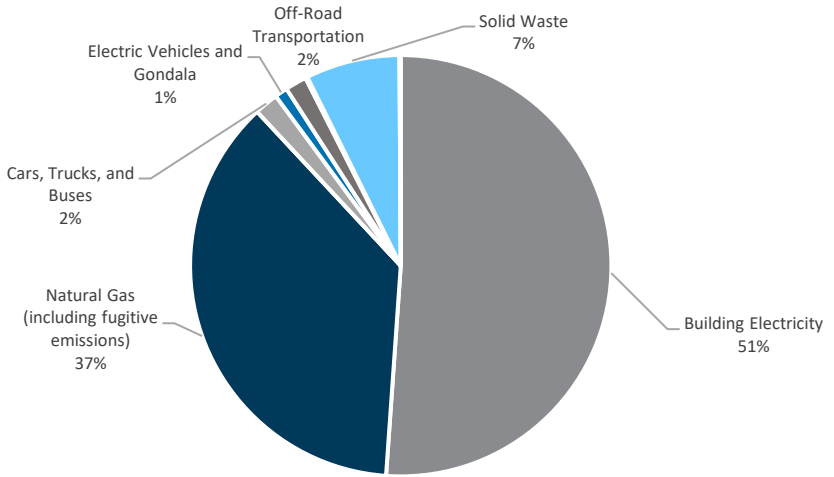

Figure 2: Mountain Village's 2020 emissions by source.

Stationary Energy

Emissions resulting from energy used in buildings in Mountain Village declined between 2019 and 2020. Emissions from electricity use declined by 14 percent, while emissions from natural gas use declined by nine percent.

The electricity supplied to the community from San Miguel Power Association had an almost nine percent lower emissions factor in 2020 than 2019, driving the majority of the reductions in emissions from electricity. The remaining reductions in emissions from electricity used in the community, as well as the reduction in emissions from natural gas used in the community, is likely driven by a combination of more efficient energy use across the community as well as the impacts of the COVID-19 pandemic. Because Mountain Village's population fluctuates with tourists throughout the year, the lockdown and resulting reduction in tourism activity in the community likely resulted in less energy being used in homes, including second homes and vacation homes, and hotels, shops, and other commercial buildings. Emissions from commercial buildings declined slightly more than emissions from residential buildings (a 14 percent reduction compared to a 10 percent reduction, respectively).

In 2021, both the 2019 and 2020 emissions inventories were updated to reflect the most recent data from the Environmental Protection Agency's eGRID tool on methane (CH_4) and nitrous oxide (N_2O) emissions from electricity.

TRANSPORTATION

Emissions declined between 2019 and 2020 across all transportation activities within Mountain Village. Again, this reduction is in large part driven by the impacts of the COVID-19 pandemic. As a result of the crisis, vehicular travel declined sharply during the spring months when Colorado implemented stay-at-home orders, and across the state of Colorado it is estimated that 10-15 percent fewer miles were traveled on the State's roadways for the entirety of 2020 as compared to previous years.[2] Therefore, emissions from on-road transportation via cars, trucks, and buses declined by nearly half (49 percent), while emissions from transportation activities powered by electricity (i.e., electric vehicles [EVs] and the gondola) declined by 20 percent. It should be noted that the methodology for estimating emissions attributable to the commercial building sector from EVs was updated in 2020 to reflect the same methodology that is used in the residential sector; this resulted in a reduction in the amount of electricity assumed to be used to charge EVs at commercial buildings.

In 2021, both the 2019 and 2020 inventories were updated to include emissions from off-road vehicles, including all-terrain vehicles (ATVs), snowcats, and similar types of off-highway vehicles. This activity occurred at the ski area predominantly, and because the ski area saw far less traffic in 2020 as compared to 2019, emissions from off-road vehicles declined by 29 percent.

Likewise, due to the COVID-19 pandemic, air travel attributable to Mountain Village declined sharply in 2020, resulting in nearly half of the emissions resulting from this source as occurred in 2019 (i.e., a 48 percent reduction).

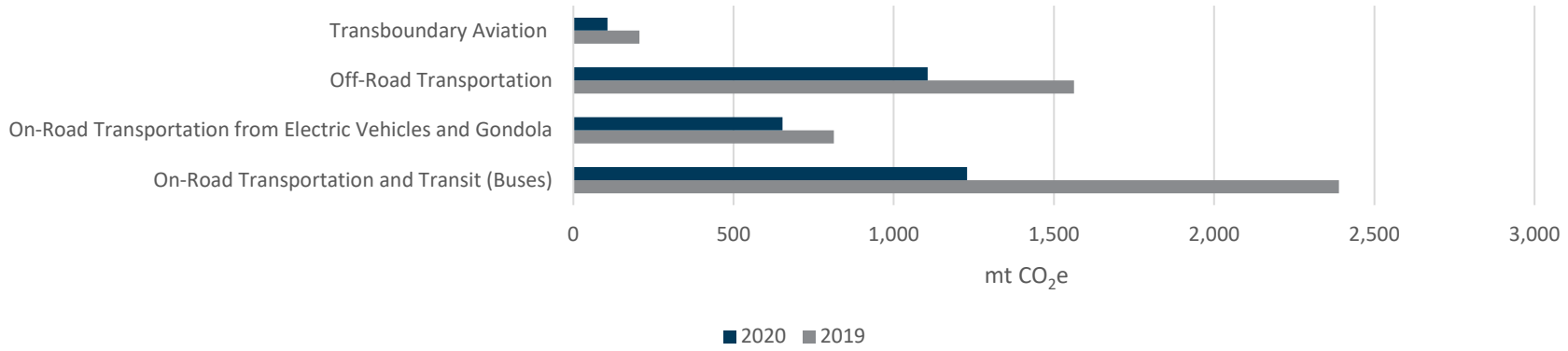

Figure 3: Mountain Village's transportation emissions by source.

[2] Based on conversations with experts at the Colorado Department of Transportation.

In 2020, both the 2019 and 2020 emissions inventories were updated to reflect the most recent data from The Climate Registry on methane (CH_4) and nitrous oxide (N_2O) emissions from vehicle activity.

Waste

The waste sector is the only sector where emissions for Mountain Village increased between 2019 and 2020. With little knowledge on how the COVID-19 pandemic spread at the time, during April and May of 2020 all recycling that was collected by Bruin in Mountain Village was taken directly to the landfill and was not diverted. Additionally, the increased use of single-use items (e.g., disposable food service items, gloves and masks) increased the number of materials being used, and eventually disposed of, in the community over the course of the whole year. The result was a 125 percent increase in emissions coming from solid waste disposed of in the landfill. At the same time, emissions from wastewater decline by 22 percent, driven by the reduced population in the community (specifically, fewer tourists) over the entirety of 2020 as compared to 2019.

In 2020 the waste calculations for both years (2019 and 2020) were updated to account for contamination within the recycling stream by adding contamination totals to landfilled waste values, based on the assumption that contaminated recycling will be taken by the hauler to the landfill rather than a materials recovery facility.

CONCLUSION

Emissions in Mountain Village were estimated to be significantly lower in 2020 than in 2019. While this may be encouraging news, the data and national trends in economic and emission data indicated that the reductions were largely a result of impacts of COVID-19 rather than specific work being done within the community to reduce emissions. As the concerns related to the pandemic recede and economic and tourist activity in the community begins to rebound, Mountain Village should continue to encourage residents and visitors to make sustainable and climate-friendly choices in how they use energy, travel, and purchase, use, and dispose of materials.

Town of Mountain Village
Memo: Comparing 2019 and 2020 Municipal GHG Emissions

July 2021

INTRODUCTION

The Town of Mountain Village (Mountain Village / the Town) first began analyzing greenhouse gas (GHG) emissions from municipal operations in 2016 and has continued to regularly analyze emissions generated from municipal operations, including for the years 2019 and 2020. This memo is intended to provide a comparison between the results of the 2019 and 2020 inventories.

INVENTORY COMPARISON

METHODOLOGY

The 2019 and 2020 emissions inventories were conducted using the same methodology (i.e., the Local Government Operations Protocol); both inventories also include emissions generated by the consumption of paper in municipal operations. The same assumptions were used to conduct both inventories, except where unique assumptions were made regarding data for the 2020 inventory to account for the impact of the COVID-19 pandemic. In some cases, the assumptions, data, or emissions factors for the 2019 inventory were updated when the 2020 inventory was completed to account for the most recent data available.[1]

INVENTORY RESULTS

In 2019, activities in Mountain Village's municipal operations resulted in 4,353 metric tons of carbon dioxide equivalent (mt CO_2e). Emissions in 2020 are estimated to have decreased by 25 percent for a final 2020 emissions value of 3,260 mt CO_2e. The reduction in emissions between the two years is in large part a result of reduced activity in the Town's operations due to the impacts of the COVID-19 pandemic. As the entire country effectively went into 'lockdown' in March of 2020, many employees moved to working from home full-time. Some staff were also furloughed, as some of the activities related to supporting economic and tourism activities in the Town were halted. Details on emissions by

[1] Therefore, this memo compares the results of the 2020 inventory and the updated 2019 inventory, provided to Mountain Village in July of 2021.

sector are provided in Table 1 and emissions by source are provided in Table 2 and Figures 1 and 2, and further detail is provided in the text below.

Table 1. Mountain Village's municipal emissions by sector in 2019 and 2020 (mt CO_2e).

Emission Sector	Emissions (mt CO2e)		% Change between 2019 and 2020
	2019	2020	
Stationary Energy	3,241	2,552	-21%
Transportation	641	614	-4%
Industrial Processes and Product Use	1	1	0%
Waste	461	89	-81%
Consumption Based	9	4	-59%
Total	**4,353**	**3,260**	**-25%**

Table 2: Mountain Village's municipal emissions by source in 2019 and 2020 (mt CO_2e)

Emission Source	Emissions (mt CO2e)		% Change between 2019 and 2020
	2019	2020	
Electricity	2,150	1,760	-18%
Natural Gas	1,080	791	-27%
Gasoline	383	430	12%
Ethanol	0	0	0%
Diesel	258	181	-30%
Stationary Diesel	11	4	-62%
Biodiesel	0.00	0	0%
Aviation	0.45	0	-100%
Solid Waste	461	89	-81%
Refrigerants	1	1	0%
Paper	9	4	-59%
Total	**4,353**	**3,260**	**-25%**

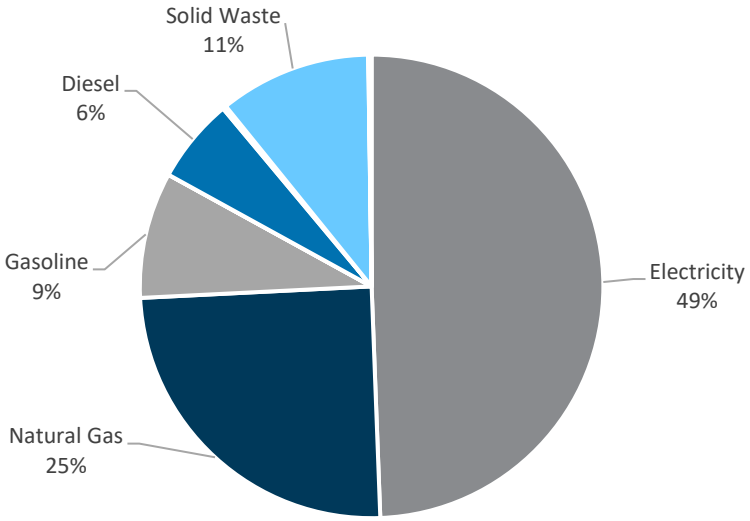

Figure 1: Mountain Village's 2019 municipal emissions by source.

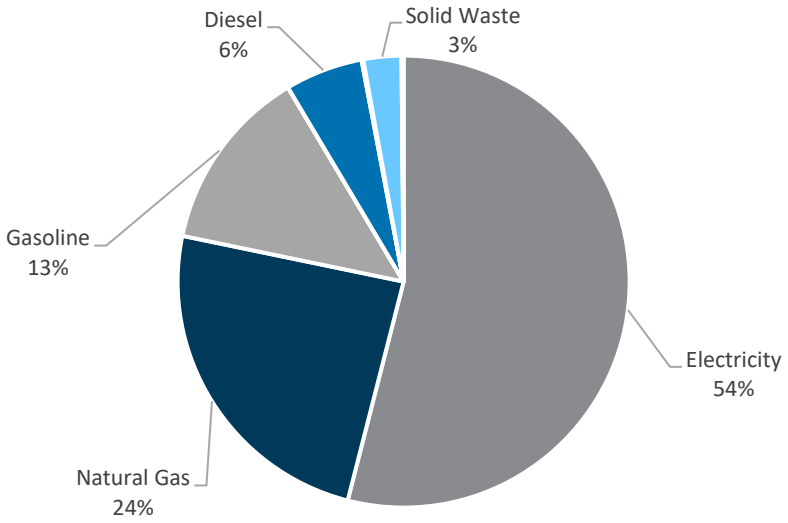

Figure 2: Mountain Village's 2020 municipal emissions by source.

Stationary Energy

Emissions resulting from energy used in buildings owned and operated by Mountain Village declined between 2019 and 2020. Emissions from electricity use declined by 18 percent, while emissions from natural gas use declined by 27 percent.

The electricity supplied to the Town from San Miguel Power Association had an almost 9 percent lower emissions factor in 2020 than 2019, driving some of the reductions in emissions from electricity. The remaining reductions in emissions from electricity used in the Town's buildings, as well as the reduction in emissions from natural gas used, is primarily driven by the buildings being much less occupied in 2020 as compared to 2019 as a result of the COVID-19 pandemic. A large part of the Town's workforce was either working remotely or furloughed for a significant portion of the year, resulting in a significant reduction in energy use in Town facilities. Additionally, snowmelt systems may not have been deployed to the degree that they are in a 'normal' year because of the reduced population and traffic at facilities, which also contributes to a reduction in natural gas use at facilities.

In 2021, both the 2019 and 2020 emissions inventories were updated to reflect the most recent data from the Environmental Protection Agency's eGRID tool on methane (CH_4) and nitrous oxide (N_2O) emissions from electricity.

Transportation

Emissions for transportation activities declined by four percent between 2019 and 2020 across all transportation activities measured for the Town's operations. Again, this reduction is in large part driven by the impacts of the COVID-19 pandemic. Interestingly, emissions from the Town's own fleet of gasoline and diesel vehicles increased by 23 percent in 2020 as compared to 2019; emissions from the Town's equipment (i.e., lawnmowers, snowmobiles, skid steers, etc.) declined by 38 percent, while emissions from stationary diesel used to power the gondola generators declined by 59 percent.

As a result of the COVID-19 crisis, many employees began working from home in March or April and did not return to the office regularly until early 2021. Because an updated commuting survey was not completed in 2020, 2019 data was used to estimate 2020 commuting activities, including an assumption that commuting activities remained the same as in 2019 for the months of January through March, and then were 50 percent of normal activities for April through December.

No business travel occurred for Mountain Village's operations in 2020.

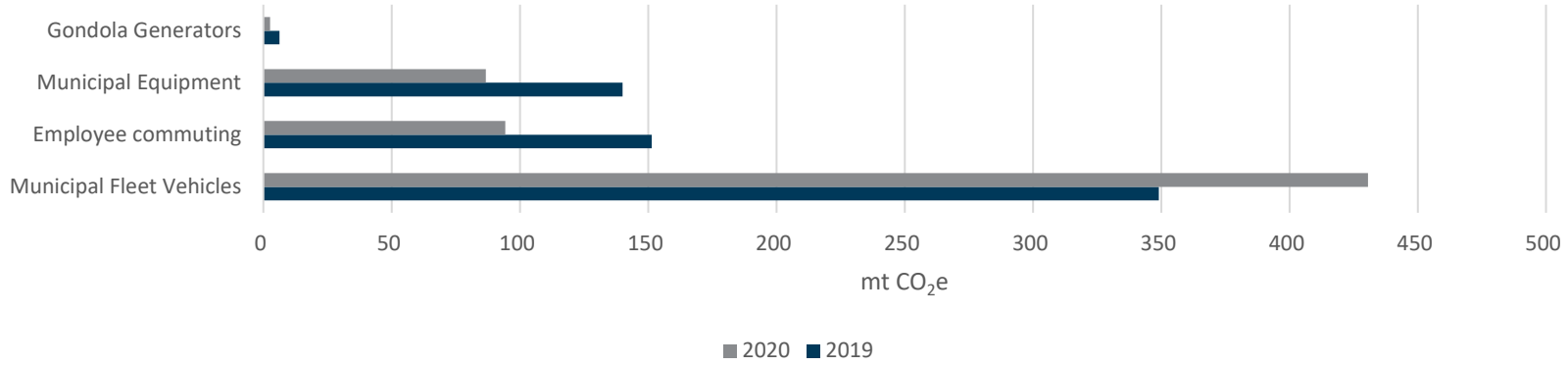

Figure 3: Mountain Village's municipal transportation emissions by source.

In 2021, both the 2019 and 2020 emissions inventories were updated to reflect the most recent data from The Climate Registry on methane (CH_4) and nitrous oxide (N_2O) emissions from vehicle activity.

Waste

Waste emissions decreased by 81 percent in 2020 as compared to 2019, driven again by reduced occupancy in Town facilities and therefore less trash being generated in those facilities. Mountain Village is not able to provide data on waste and recycling collected at municipal facilities, therefore assumptions must be made. In 2020, the standard assumption (used in 2019) that one pound of solid waste is produced per 100 square feet of office per day was utilized, but it was assumed that the Town's offices were only fully occupied for 10 weeks of the year (rather than the 50 weeks assumed in 2019). This results in a significant reduction in the amount of waste presumed to be generated by Town operations.

Refrigerants

There were no changes in the use of refrigerants between 2019 and 2020.

Paper Use

In 2020, total paper use, and therefore emissions resulting from paper use, declined by 59 percent. This is a result of decreased occupancy in Mountain Village's offices and facilities due to the COVID-19 pandemic.

CONCLUSION

Emissions from Town operations in Mountain Village were estimated to be significantly lower (i.e., reduced by one quarter) in 2020 than in 2019. While this may be encouraging news, these changes are in large part a result of impacts of COVID-19 rather than specific work being done within the Town's operations to reduce emissions. As the concerns related to the pandemic recede and municipal operations return to a state of normalcy, Mountain Village should continue to encourage employees and Town staff to make sustainable and climate-friendly choices in how they use energy, travel, and purchase, use, and dispose of materials. Mountain Village may be able to leverage certain lessons learned from the pandemic, such as how to effectively manage remote workers and utilize virtual working tools, in order to maintain some of the reductions in emissions from commuting and business travel.